The Wyoming Valley Pennsylvania

Planning and Development Considerations



Wilbur Smith And Associates

ERRATA SHEET

The following statement was omitted from the inside of the front cover.

The preparation of the (report, map, document, etc.) was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended and as administered by the Bureau of Planning, Pennsylvania Department of Community Affairs.

Prepared with financial assistance provided by the Appalachian Regional Commission, authorized under Section 302 of the Appalachian Regional Development Act of 1965, as amended, 40 App. U.S.C. 302.

"This technical assistance study was accomplished by professional consultants under contract with the Economic Development Administration. The statement, findings, conclusions, recommendations, and other data in this report are solely those of the contractor and do not necessarily reflect the views of the Economic Development Administration."

The preparation of this report was financed in part by the Appalachian Regional Commission under Section 302 of the Appalachian Regional Development Act of 1965, as amended, App. U.S.C. 302; in part by the Department of Housing and Urban Development, under provisions of Section 701 of the Housing Act of 1954, as amended and as administered by the Bureau of Planning, Pennsylvania Department of Community Affairs; and in part by the Economic Development Administration.

PLANNING AND DEVELOPMENT CONSIDERATIONS

THE WYOMING VALLEY, PENNSYLVANIA

Wilbur Smith and Associates

DECEMBER 8, 1973

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TRANSPORTATION AND URBAN PLANNING CONSULTANTS
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December 8, 1973

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Economic Development Council
Of Northeastern Pennsylvania
Avoca, Pennsylvania

Mr. Edward Heiselberg, Director
Luzerne County Planning Commission
County Courthouse
Wilkes-Barre, Pennsylvania

Dear Sirs:

Enclosed you will find the final printing of the Planning and Development Considerations for the Wyoming Valley, Pennsylvania. The finals of the Flood Control Report and the School Facilities Report have also been forwarded.

It has been our pleasure to work with the various members of each staff over the preceding year. Each member has added invaluable information that has been incorporated into this study.

Respectfully submitted,

WILBUR SMITH AND ASSOCIATES

ACKNOWLEDGEMENT

We wish to express our graditude for the great assistance received from the Economic Development Council of Northeastern Pennsylvania and the Luzerne County Planning Commission during completion of the work involved in the Planning and Development Considerations for the Wyoming Valley, Pennsylvania. We wish to also thank the various Redevelopment Agencies, public officials and private individuals that have made our data gathering simpler and whose help and friendships have been most rewarding. We would also like to thank the many private citizens of the Valley and the Citizen Committees that have given us their help and understanding. Finally, our thanks are extended to the individuals within the State and Federal agencies that have helped us during the course of this study, these include:

Pennsylvania Department of Community Affairs;

Pennsylvania Office of State Planning and Development;

Federal Regional Council;

U. S. Department of Housing and Urban Development;

Army Corps of Engineers;

Economic Development Administration; and,

Appalachian Regional Commission.

We would like to offer a special thanks to Howard J. Grossman and Leonard W. Ziolkowski of the Economic Development Council of Northeastern Pennsylvania and Edward Heiselberg of the Luzerne County Planning Commission whose help has been most appreciated throughout the study.

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On June 23, 1972, tropical storm Agens hit northeastern Pennsylvania, causing one of the most devasting natural disasters in the nation's history. More than 25,000 homes were inundated and hundreds of businesses were destroyed or seriously damaged. Numerous roads and public facilities were damaged or destroyed. Every municipality in the Wyoming Valley from Pittston to Nanticoke in Luzerne County was affected. The impact was widened as the clean-up began: emergency housing in nearby communities subjected their services to sudden strain, sanitary landfills were prematurely exhausted by gargantuan amounts of debris; construction workers were in heavy demand, while unemployment soared, and decent housing, in short supply before the flood, became non-existent.

In addition to this staggering impact on the urban heartland of northeastern Pennsylvania, the wet weather preceding the flood and the widespread flash flooding which occurred during the storm left few areas of the seven-county region untouched. Agriculture was disrupted over most of the region and tourism was adversely affected also. The impact of the flood was not only regional in geography, it was also regional because of the inter-dependence of the devastated areas-economically and socially-with the "linear city" which extends from Carbondale to Nanticoke.

In order to evaluate the magnitude of the devastation, the Economic Development Council of Northeastern Pennsylvania (EDCNP) undertook a series of quick surveys to determine the amount of business and residential damage inflicted upon the hardest hit communities in the Wyoming Valley. By collecting this information the EDCNP hoped that the magnitude of damage could be better determined to initiate programs geared to the area. These early reports were distributed to legislators, federal, state and local officials and nonprofit agencies.

The immense regional impact necessitated a regional response. Cooperation was required among citizens, local governments, authorities, legislators, non-profit organizations and private businesses, as well as close liaison with Commonwealth and Federal agencies. A coordinated plan of action had to be adopted which would allow the region's institutions to combine their efforts and efficiently accomplish what was needed.

By the middle of August 1972, it was determined that a planning and development strategy and concept plan should be developed for the Wyoming Valley in order to help the various private and public corporations and agencies rebuild the communities and the economic base of the Wyoming Valley.

On August 28, 1972, the Economic Development Council of Northeastern Pennsylvania was officially notified by Mr. A. Edward Simon, Director of the Office of State Planning and Development, that it was designated as the "lead agency" in the preparation of a Disaster Recovery and Comprehensive Development Plan for the Region and for the coordination of all sub-regional planning efforts and plans within the framework of state-wide disaster recovery and comprehensive planning in Pennsylvania.

The EDCNP and the Luzerne County Planning Commission jointly responded to this need by reviewing the capabilities and availability of 20 nationally and internationally known consultant firms. After an initial "talent search" it was jointly decided that 12 firms should be formally contacted to respond to a joint Request For Proposal (RFP) for the Wyoming Valley Plan.

The five firms selected were interviewed on November 8, 1972 and shortly thereafter the consulting firm, Wilbur Smith and Associates, was hired.

In the ensuing months the EDCNP created several committees in an attempt to provide inputs to the Wyoming Valley Plan and also to review and comment on the draft reports

of the consultant. Some of the committees created were a Human Resources Committee composed of various social service agency representatives in the region; a Planning and Development Committee composed of various planning and industrial development agency representatives in Luzerne County; and a Governmental Affairs Committee, composed of local elected officials and municipal administrators of the municipalities directly affected by the flood.

CHAPTER 1

INTRODUCTION

This study conducted by Wilbur Smith and Associates is prepared under the sponsorship of the Luzerne County Planning Commission and the Economic Development Council of Northeastern Pennsylvania.

It is intended to establish a comprehensive framework by which future development within the study area can be guided. The study, which consists of three sections, presents the information, findings and recommendations resulting from the Wyoming Valley Comprehensive Planning Program.

The first two sections contain technical reports addressed to specific aspects of flood recovery and area development activities in the valley. These sections are:

1) General Base Studies
2) Government and Public Services

In contrast to the above specific area sections, the Planning and Development analysis section covers a variety of concerns related to short-range and long-range development strategies.

STUDY AREA BACKGROUND

The study area as defined by the Economic Development Council and the Luzerne County Planning Commission encompasses approximately 30 miles of the Susquehanna River between Shickshinny Borough and the Lackawanna County line.

The Wyoming Valley of Luzerne County is situated in Northeastern Pennsylvania and contains 45 of the county's 74 municipalities. The North Branch of the Susquehanna River bisects the 300.6 square mile Study Area. The City of Wilkes-Barre, which is located in the center of the Valley, is the largest municipality, principal trade center, and the County seat. Across the river from Wilkes-Barre is the Borough of Kingston and, together, they form the major activity node of the Wyoming Valley. Two additional nodes, the Cities of Pittston and Nanticoke, flank Wilkes-Barre along the river.

Most of the developed area within the Wyoming Valley is located along the natural flood plain of the Susquehanna River, with growth areas in Mountain Top and Back Mountain. The

Study Area has a present population of approximately 255,000 persons who occupy approximately 85,400 housing units and has a density of about 847 persons per square mile. The Study Area is 100 miles west of New York City, 70 miles north of Harrisburg and 220 miles east of Pittsburgh. Interstate Highways 80 and 81 transverse the area.

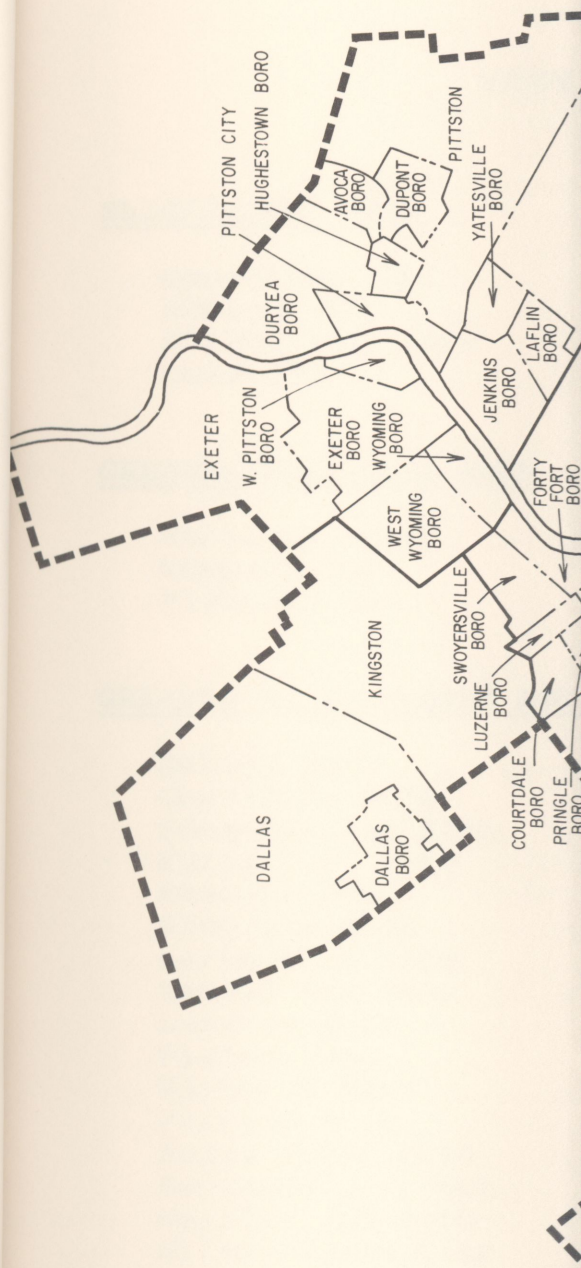
The municipalities of the Study Area, as shown in Figure 1, are distributed throughout the Wyoming Valley, but most are clustered along the river between the Cities of Nanticoke and Pittston. The 45 separate municipalities consist of three third class cities, 26 boroughs, and 16 townships, (Table 7). In 1970, the municipalities ranged in size from 327 persons in Laurel Run Borough to 58,856 persons in the City of Wilkes-Barre.

The Wyoming Valley is located within the ridge and valley province of the Appalachian Mountains and is contained by a series of high mountain ridges extending in a southwest to northeast direction. The alluvial valley floor, formed between the mountain ridges by the Susquehanna River, has produced flood plains of varying breadth. The fertile soil of these flood plains became the site of the colonial settlement of Wilkes-Barre.

The Wyoming Valley was first settled in 1759; Pittston and Plymouth Townships became the first incorporated municipalities in 1768. The county of Luzerne was established in 1786 and originally covered 3,700 square miles and had a population of approximately 2,700 persons. It was later subdivided into Lackawanna (1878), Wyoming (1842), Susquehanna (1810) and Bradford (1810) Counties. (Figure 2)

The oldest municipalities, in terms of date of incorporation, are Pittston and Plymouth Townships, having both been incorporated in 1768. These two townships are followed closely in date of incorporation by Hanover, Newport, and Exeter Townships, all of which were incorporated in 1790. Both Hanover and Newport were actually settled in 1772.

The oldest township in the valley, in terms of date of settlement, rather than incorporation, according to the publication entitled, ''Incorporation Dates for Pennsylvania Municipalities'' by the Commonwealth of Pennsylvania Department of Internal Affairs, dated 1965, was the Township of Plains which was settled in 1762. The municipality in the valley having the most recent date of incorporation is Dupont Borough which is listed as being incorporated March 26, 1917.



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ty in the valley having the most recent
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917.



FIGURE 1

WYOMING VALLEY STUDY AREA

Wilbur Smith and Associates

Table 1

STUDY AREA MUNICIPALITIES*

SHICKSHINNY AREA

Conyngham Twp.
Hunlock Twp.
Shickshinny Boro
Union Twp.

GREATER NANTICOKE AREA

Nanticoke City
Newport Twp.
Plymouth Twp.

GREATER WILKES-BARRE AREA

Ashley Boro
Courtdale Boro
Edwardsville Boro
Forty Fort Boro
Hanover Twp.
Kingston Boro
Larksville Boro
Laurel Run Boro
Luzerne Boro
Plains Twp.
Plymouth Boro
Pringle Boro
Sugar Notch Boro
Swoyersville Boro
Warrior Run Boro
Wilkes-Barre City
Wilkes-Barre Twp.

GREATER PITTSTON AREA

Avoca Boro
Dupont Boro
Duryea Boro
Exeter Boro
Exeter Twp.
Hughestown Boro
Jenkins Twp.
Laflin Boro
Pittston City
Pittston Twp.
W. Pittston Boro
W. Wyoming Boro
Wyoming Boro
Yatesville Boro

BACK MOUNTAIN AREA

Dallas Boro
Dallas Twp.
Kingston Twp.

MOUNTAIN TOP AREA

Fairview Twp.
Nuangola Boro
Rice Twp.
Wright Twp.

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* The study area was jointly delineated by the Economic Development Council of Northeastern Pennsylvania and the Luzerne County Planning Commission.

The Wyoming Valley was predominantly agricultural until the discovery of anthracite coal in 1825. The development of the coal industry caused the Valley to grow at a rapid rate. This increase was expedited when canal and railroad facilities were completed during the mid eighteen hundreds.

The latter half of the nineteenth century and the early part of the twentieth century saw this area develop into one of the leading centers of the world for anthracite coal. By 1930, the county's population crested at approximately 350,000 residents. During the 1940's, a growing textile and garment industry developed due to the Valley's low wages and surplus of female labor.

Since the depression of the 1930's, both the anthracite coal and garment industries faced stiff competition within their areas of commerce. The use of anthracite has been all but replaced by other fossil fuels and the garment industry has found it difficult to compete with clothing imports. The Wyoming Valley lost much of its economic base and entered a long period of depression, decline and high out-migration.

Between 1930 and 1960, the Wyoming Valley lost nearly one-third of its population and most of the coal industry, creating high unemployment within the Wyoming Valley. The 1960's saw an upturn in employment, with the unemployment rate dropping below the ten percent mark for the first time since the decline of the coal industry started.

New, light industries have begun to locate within the Study Area. Some of the most notable are: the Owens-Illinois Glass Company, the televeision picture tube plant in Jenkins Township, a large house trailer plant north of Pittston, Eberhard Faber, Foster Wheeler, RCA and numerous smaller companies that are in several new industrial parks.

In recent years, the development of the existing transportation system including rail service, major air service, (with the construction of the Wilkes-Barre/Scranton Airport), bus service, and a criss-crossing system of interstate highways, provides access to the Wyoming Valley from all parts of the East Coast.

Many of the problems created by coal mining are being removed. The burning culm banks are being extinguished and the scarred landscape is being changed into industrial parks, shopping centers and housing developments.

Like many of the older urbanized areas within the State, the Wyoming Valley has grown historically as an unorganized cluster

LEGEND:

COUNTY NAMES
ORIGINAL TOWNSHIPS
ORIGINAL TOWNSHIP DIVISIONS
SUBDIVISIONS
NO LONGER IN EXISTANCE

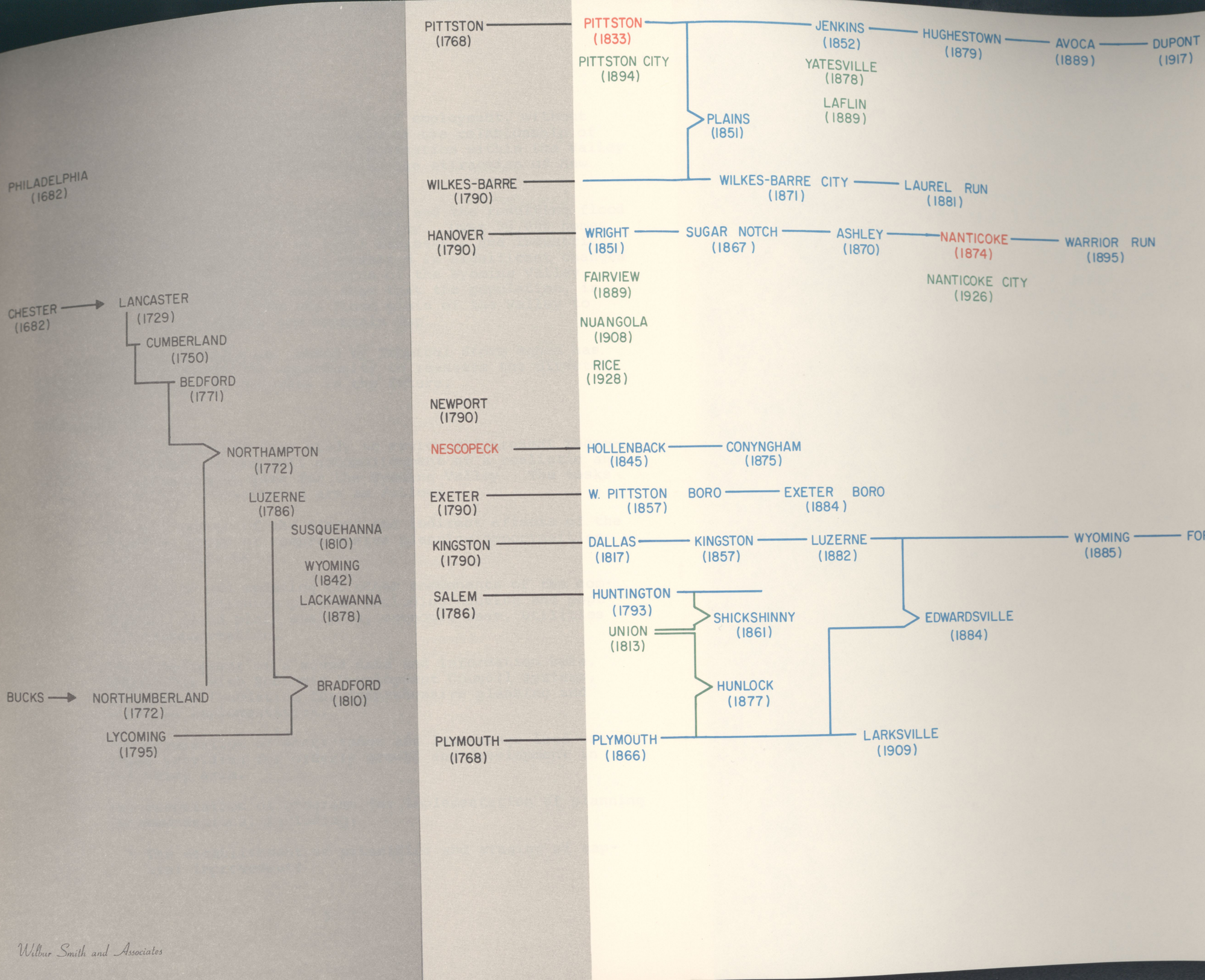
SWOYERSVILLE (1888) — COURTDALE (1897) — W. WYOMING (1898) — MARCY — PRINGLE

DURYEA (1891)

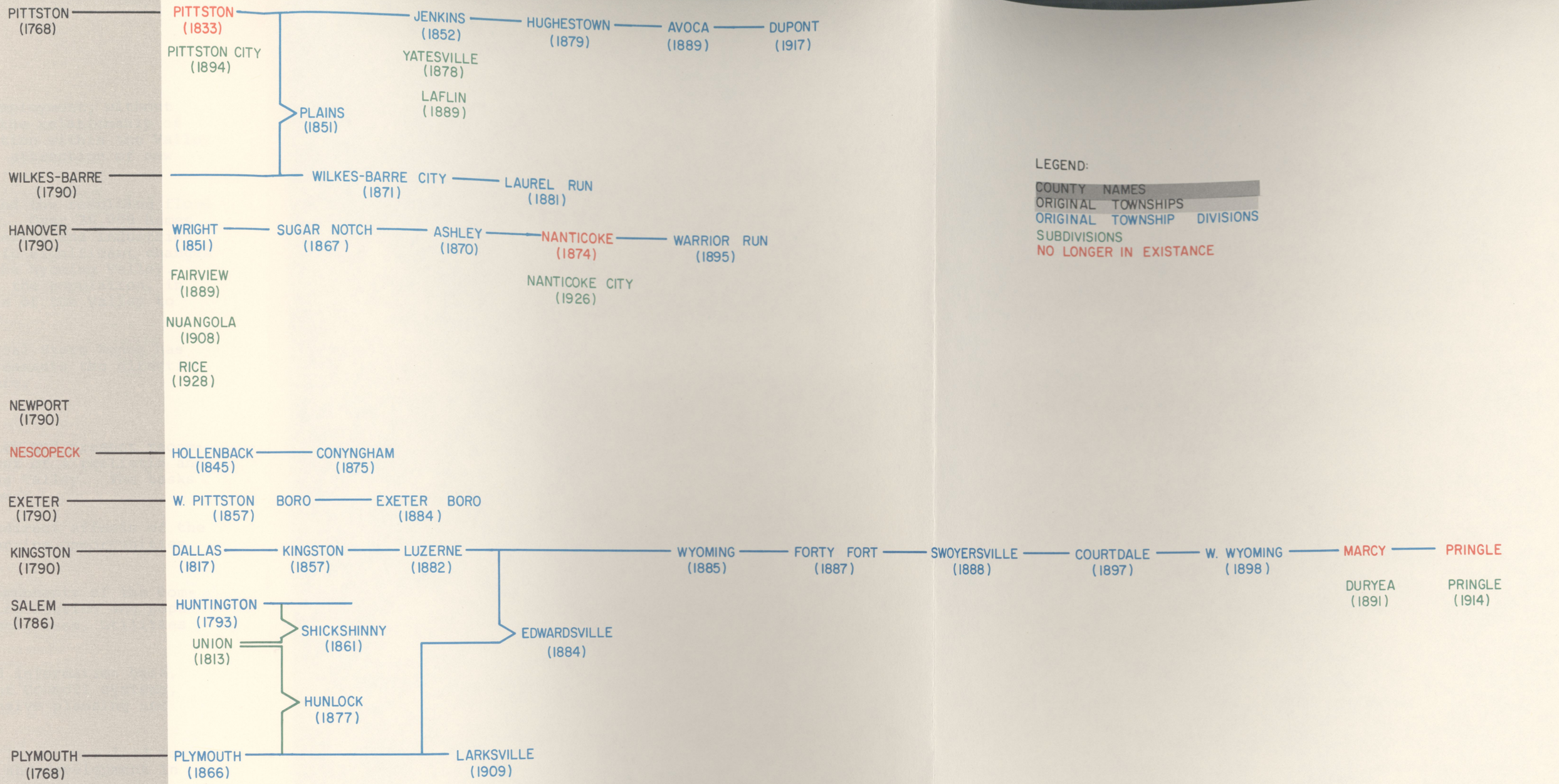
PRINGLE (1914)

DEVELOPMENT OF STUDY AREA MUNICIPALITIES

FIGURE 2



Wilbur Smith and Associates



DEVELOPMENT OF STUDY AREA MUNICIPALITIES

FIGURE 2

of communities around the basic places of employment, without thought of planned use of the landscape or the relationship of land use types. The lack of urban organization within the Valley has been one of the major deterrents to the attraction of new industry into the area.

In June of 1972, Tropical Storm Agnes and the resulting flood had a marked impact upon the Wyoming Valley. Over 25,000 homes in the Valley and a majority of small businesses and industries were affected by the flood. This resulted in significant changes in living, working and social patterns of the Wyoming Valley. Trends have been identified which show that the population, in some cases, is shifting from the flood plain of the Valley to the areas of Back Mountain and Mountain Top.

The massive destruction caused by Tropical Storm Agnes has given Valley residents the opportunity to reassess the direction in which the area will progress in the future.

STUDY PURPOSE

It is the purpose of this study to review and present recommendations concerning the full accomplishment of a realistic and effective comprehensive plan for the Wyoming Valley. The tasks in which work was concentrated are as follows:

1. The evaluation of the direct and indirect effects of the flood in terms of comprehensive planning opportunities and alternatives.

2. The review and updating of other components of the comprehensive planning program including housing and population, flood plain analysis, economic base, utilities and transportation.

3. The development of a sound data and information base, compatible with Economic Development Council systems, creating a foundation for comprehensive planning and planning implementation.

4. The preparation of short-range and long-range land use plans providing for orderly growth and development in the study area.

5. The preparation of programs for implementation of planning recommendations, including:

   - The establishment of priorities and staging of capital improvements

- Cost and revenue estimates

- Regulatory and control devices

- Federal, state and local assistance programs.

CHAPTER 2

SUMMARY

The Planning and Development Considerations for the Wyoming Valley were jointly requested by the Economic Development Council of Northeastern Pennsylvania and the Luzerne County Planning Commission as a result of the damage caused by Tropical Storm Agnes. The study began in November of 1972 and it was the charge of Wilbur Smith and Associates to finish all data gathering and analysis and have a draft submitted by January 15, 1973.

The events that have occurred since January, have been included where feasible so that this report could be as timely as possible in its recommendations. As is true in any planning document, updating will be necessary if the suggested plan is to stay current with the needs of the residents of the Wyoming Valley. This updating will be conducted by the Economic Development Council of Northeastern Pennsylvania and the Luzerne County Planning Commission.

Following is a brief summary of the major findings that came to light during the course of the study.

POPULATION

During the past forty years, the study area has lost population due to three major factors. (1) The birth rates have been steadily decreasing, dropping 26.1 percent during the decade of 1960-1970. (2) The death rate has remained stable. (3) The percent of the population over 65 years has been increasing; in 1960, persons 65 and over comprised 11.1 percent of the population; in 1970 this percentage had increased to 13.0 percent of the population. The increased proportion of elderly has caused the median age to increase to 36.3 years in 1970. This increase in the median age means that fewer women are in the child bearing years, supporting the fact that the birth rate is on a decline. The major reason for the declining population is the out-migration of the study area. In the years between 1960 and 1966, the study area lost 11,900 people. This decrease signaled the end of the historical population decline. By 1970, the bottom had been reached and a slow, but discernable, increase has been started. An increase of .46 percent per year was identified between 1970 and 1972 bringing the population to 256,940 persons. This increase will gain speed between 1972 and 1977 with a .89 percent increase per year bringing the total population in 1977 to 268,320 persons. The growth will then decline slightly to an

average of .78 percent per year increase bringing the year 2000 population to a total of 316,430 persons.

The flood has caused many variations in the population distribution of the study area. The growth areas of the study areas have been Mountain Top, Back Mountain, Hanover Township, and to a lesser degree Jenkins Township and Plymouth Borough. With the development of the HUD Emergency Trailer Parks, the flood affected population impacted many municipalities causing a need for increased services to be given to the temporary population. As the temporary population impact subsides, a normal rate of growth will develop to form a more stable pattern of increase.

The key to stabilization and the growth of the county's population still rests on the ability of the county to find suitable employment that will add not only economic growth, but also physical amenities to attract future employees.

HOUSING

If the age and condition of the housing structures within the Wyoming Valley can be disregarded, the supply of housing is sufficient at this time. However, once the age and condition are evaluated the need for additional housing becomes quite clear.

The housing demand of the future will be based upon the following six factors:

(1) Future population growth requiring more housing;
(2) Reduction of housing supplies due to initial urban renewal activities;
(3) Demolition of substandard units;
(4) Reduction of housing supplies due to road construction; and
(5) Generation of a five percent vacancy rate;
(6) Income sufficient to pay for decent housing or subsidized units.

The future housing growth, which was based upon future population increases, is projected to reach 44,000 units by 1977 and 111,590 units by 2000. This would be an increase of 33.7 percent in a 28 year period. The reduction of residential units due to initial urban renewal activities will delete approximately 3,000 units. This reduction will cause a critical shortage of housing units until these units can be replaced.

The demolition of substandard units will claim an additional few hundred units within the next 28 years; however, most substandard units are being included in the present urban renewal

projects. Highway construction will claim a few hundred units of housing and will not have a significant impact upon the future housing stock with the exception of Pringle Borough where the Cross Valley Expressway is programmed for construction.

In order for the supply and demand mechanism to work satisfactorily in the housing field, there must be a number of vacant units available at all times to allow not only mobility of residents within the Valley, but also room for new growth that would come into the Valley.

A five percent vacancy rate is suggested for the study area. This would necessitate an immediate increase of 1,000 units so that the suggested vacancy rate could be obtained. As a result of the present deficiency of the vacancy rate, demand is placed on the supply of units, not by particular households, but rather by the housing market itself.

The relationship of housing supply to housing demand will determine the future growth capabilities of municipalities. A municipality cannot grow if there is not a housing stock availability within that municipality. Before a family will move into an area, a dwelling unit must already exist. Housing and population are mutually interdependant, that is, each depends upon the other for growth. For the study area to achieve greater population ,it must also supply better housing opportunities.

ECONOMICS

The transition from a one-industry dependent area to an economy that is relatively diversified, and does not depend upon one specific industry for its livelihood, has come to an end with the advent of Agnes. This period of transition which can be referred to as the First Phase of Diversification was characterized by (a) quantity rather than quality in industrial development activities, (b) population stabilization, and (c) somewhat accelerated growth of non-manufacturing economic sectors during the latter half of the decade.

The Second Phase will be characterized by industrial development efforts that stress non-manufacturing over manufacturing activities, while the Third Phase will be composed of a highly selective program of development efforts that seek to attract manufacturing establishments that will be most suited for the economy of the area.

The economy is currently undergoing a period of necessary adjustment to the physical damage inflicted by the storm and the

subsequent changes in the economic structure. With the gradual conclusion of the flood recovery activities however, the economy will soon arrive at a status where long range trends will start to be identified. This should happen around the end of 1973 or the beginning of 1974. At this time, economic equilibrium will probably have been reached and dominant forces will start having a definite effect in shaping the future of the Valley.

Lastly, the Economic Research and Action Organization, the Human Resources Development Authority, the Luzerne County Planning Commission and the Economic Development Council of Northeastern Pennsylvania should all strive towards the goal of long range equilibrium between economic diversification leading to parallel growth of all sectors of the economy with a steady growth in average hourly earnings and hence a growth in the total personal income of the Valley's population.

LAND USE

The land use of the study area is divided into six broad categories; (1) residential, (2) commercial, (3) industrial, (4) public/semi-public, (5) recreation, and (6) open space/vacant. Residential land usage accounts for 9.0 percent of the total land within the study area. Commercial lands amount to 1.2 percent, industrial lands, 1.7 percent, public and semi-public areas, 5.4 percent, recreational areas, 2.6 percent, and lastly, open and vacant areas including vacant railroad lines and culm banks, 80.1 percent of the total land area within the study area. Of the 192,382 acres of land within the study area, 38,297 acres, or 19.9 percent, is developed and 154,085 acres, or 80.1 percent, is undeveloped.

The flood caused by Tropical Storm Agnes testifies to the need for stronger land use regulations in flood plain areas. Over 24,800 dwelling units were affected by flood waters, over 20 percent of the total housing units of the study area. The amount of damage varied considerably due to the proximity of the units to the flood plain. Municipalities such as Kinston Borough and Forty Fort Borough were almost entirely affected, other communities such as Nanticoke City lost only a small percentage of their area. The commercial areas that were most severely affected by the flooding were downtown Wilkes-Barre, Kingston, Forty Fort, Shickshinny, Plymouth and Edwardville.

Future residential land will be developed at a higher density in the Valley and at a lower density in the Back Mountain and Mountain Top Community Areas.

The development of the 154,085 acres of undeveloped land should be studied in two contexts: (1) Preservation of the environment and the use of mine scarred landscape as future development areas, and (2) the prohibition of development of the presently undeveloped floodway areas.

TRANSPORTATION

A very substantial increase in traffic volume seems to have occurred between 1964 and 1971 in the Study Area, in spite of a relatively stable level of population. This growth in traffic volume is probably attributable to a significant increase in the number of registered passenger cars, and a decrease in transit usage.

To provide a basis for appraising the current priorities for street improvement projects, existing (1971) ADT was measured against street capacity in selected corridors. Serious capacity deficiencies (greater than 50 percent) are noted in two corridors. These are the Market Street-North Street river crossings in central Wilkes-Barre and the eastern approach to Wilkes-Barre from Interstate Route 81. Corridors with 1971 volumes in excess of 25 to 50 percent include the PA Route 309 corridor in Courtdale, the Wyoming Avenue corridor in Forty Fort, and PA Route 309-River Road corridor to the northeast of Wilkes-Barre, and the corridor between Nanticoke and Wilkes-Barre.

The location and relative magnitude of existing capacity deficiencies echo the urgent need for two major expressway projects now listed as committed or high priority. These include the Valley section of the Cross Valley Expressway and the Downtown Distributor in Wilkes-Barre. The need for additional river-crossing capacity in central Wilkes-Barre is also obvious; early completion of proposed improvements in the North Street corridor, including a new river bridge, extension eastwardly to Interstate Route 81, and improvements to Pierce Street from Wyoming Avenue to the river is urged.

Construction of the Cross Valley Expressway can be expected to re-orient much of the travel to the Wilkes-Barre CBD. To accommodate these new travel patterns, the River Street project in Wilkes-Barre and Plains Township (previously listed with a deferred priority) should be considered as a high priority project.

The examination of existing capacity deficiencies tends to reinforce the high priority need for a number of arterial street

improvement projects, as listed in the LLTS* These projects are located in the more congested north-south corridors and are essential to the proper functioning of the Cross Valley Expressway and the Downtown Distributor.

TRANSIT

Prior to June, 1972, all transit service in the Wilkes-Barre urbanized area was provided by privately-owned companies. The two larger companies–Wilkes-Barre Transit and White Transit–carried over 96 percent of all riders, and the three small suburban companies the remaining 4 percent.

Transit riding in the Wilkes-Barre area has dropped sharply over the past decade. Based on the figures for Wilkes-Barre Transit Company, the largest carrier in the area, transit riding declined by 44 percent from 4.9 million to 2.7 million between 1960 and 1971.

The emergency free transit program had been highly successful, providing an increase of 80 percent in transit service over pre-floor levels, while ridership tripled from 10,000 to 30,000 daily trips. However, this effect has been limited in time. Figures for Wilkes-Barre Transit operations indicate that from a pre-flood daily patronage of about 8,500 riding rose to 24,000 during the free service period, and appears to be at about 14,000 per day under the new 15-cent fare. Daily bus miles have been adjusted from 6,400 to about 4,800.

At the end of the demonstration project, the transit system will be redesigned for permanent service, providing sufficient farebox revenue so that the operating deficit is within state and local funding capacity.

GOVERNMENTAL ORGANIZATION

Special consideration has been given to the unique governmental picture which exists in the Wyoming Valley. An unusually large number of municipal governments have their own elected officials and appointive officers, and have rendered urban type services, levied taxes, and have otherwise functioned as fiscal regulatory bodies. The fact that these municipalities have functioned independently within so small and densely populated an area, and have done so within the legal limits of one county, presents an unusual situtation for study.

The first priority toward a consideration of any type of governmental re-organization is the compilation of sufficient

* Luzerne-Lackawanna Transportation Study

statistical information concerning the actual type and degree of municipal services now being rendered to be able to prepare an accurate inventory of public services.

Concurrent with the beginning of the inventory of municipal and public services would be the appointment of a Citizens Steering Committee to investigate governmental reform. We recommend the County Manager form of government.

It is anticipated that the County will begin to assume a greater leadership role, as the one unit of local government having legal responsibility for the health and welfare of all of the people in Luzerne County.

We also recommend the following Countywide services to improve the present County conditions:

1. Centralized purchasing and warehousing.
2. Centralized vehicle maintenance and repair facilities.
3. Pooling of little used, heavy equipment such as drag lines, bulldozers, and ditching machines.
4. Countywide, uniform tax appraisal and regular updating of land values.
5. Centralized data processing and billing service available to all municipalities.
6. County paving and maintenance of all streets and roadways.
7. Countywide parks and recreation service.
8. County responsibility for maintenance, repair and operation of all levees and flood control devices.
9. Adoption of uniform building, plumbing, electric, gas, and minimum housing codes.
10. Countywide traffic control and signalization.
11. Adoption of minimum standards for sewage treatment and water quality applying to private utilities or special purpose authorities.

Most of the above list could be offered to the various municipalities as a service which they could take advantage of, as needed, by agreement to pay for services rendered. Of course, minimum participation would have to be guaranteed in some instances before the service could be initiated.

PUBLIC UTILITIES

The existing sewage treatment facilities should be upgraded so that there is complete secondary treatment capabilities by

1985 and advanced treatment by the year 2000. New treatment facilities should be built to secondary treatment levels initially with all new treatment facilities having advanced treatment capabilities after 1985.

Planned projections for the year 2000 include an increase of treatment and capacity for the Wyoming Valley Plant; an increase of capacity for the Dallas Area Municipal Authority Plant; the Lackawanna Valley Plant serving the Wyoming Valley; the Shcikchinny Area Plant; and the Mountain Top Area Plant.

The present trend toward higher water quality standards and more stringent water quality regulations would indicate that filtration may be required for all surface water sources in the future. If this occurs, the repair of leaking mains to reduce wastage may become more economical due to the higher cost of water treatment. A detailed engineering study of the water supply system of the Pennsylvania Water Company should be made to determine alternatives to the present condition which causes wastage of water. The determination of the long-run feasibility of such alternatives would be desirable.

The Pennsylvania Gas and Water Company is investigating preventive measures to lessen possibilities of future occurrences of flood damage. The location of telemetering and dispatching services from the North Street Bridge site to the site on East Northampton Street is planned as a permanent relocation to prevent damages to this facility. In addition, more adequate and permanent systems of valving off portions of the system are contemplated to facilitate the isolation of flooded areas in the future should flooding occur.

The electrical supply systems of Pennsylvania Power and Light Company and of UGI Corporation, Luzerne Electric Division were both damaged by flood waters. The electric companies were able to keep most of the overhead transmission and distribution facilities in service by operation of selective switching to isolate the inundated facilities of the system. Major damage was sustained by the underground network in the City of Wilkes-Barre; this service was interrupted for approximately

two weeks.

The recommendations focus on improved communication systems during times of disaster, the establishment of equipment safety procedures in times of flooding, and improved coordination between the electric companies and disaster agencies of the Federal government in setting up procedures to follow for obtaining electrical power for temporary homes in the event of future floods.

The telephone service was severely limited during the flood due to the loss of all toll facilities within the study area. Additionally, total loss of local services for several days compounded the problem in Wilkes-Barre, Kingston, and Plymouth.

The recommendations for improved telephone service centered on definite procedures to be followed during times of disaster, flood immunization of underground telephone facilities, movement of power equipment and emergency generators above present flood levels, and lastly, the provision of emergency circuits that are operated outside the flood prone areas, for use during emergencies.

SHORT-RANGE STRATEGY

The short-range strategy is separated into six sections: (1) Growth and Development Issues; (2) Economic Development; (3) Housing; (4) Government; (5) Urban Development; and (6) Development Controls. Each section gives the immediate activities that need to take place in order to bring the Wyoming Valley back to an era of responsive services to its residents.

The growth and development issues fall into three major categories: (1) the aging community environment; (2) the fragmentation of responses to flood recovery; and (3) the future areas of commitment. The aging community structure can be seen in the aging housing stock; over 82 percent of the total housing stock was built before 1940. This compares to approximately 30 to 35 percent nationally in other metropolitan areas. The leadership of the various municipalities within the study area has a noticeable lack of people between the ages of 30 and 50 years. This lack of elected leaders in the middle years shows that the community is not passing the responsibility of government on to the rising generations. The last area of concern in the aging community structure is the age of the public services. The educational buildings are aging rapidly and are obsolete when considering new educational techniques. The public utilities (e.g.

sewer and water) are older and should be either renewed or replaced in many parts of the study area. The aging structure has led to other problems within the flood recovery task.

The fragmentation of responses to flood recovery is, in many cases, a result of an aging community structure. The discontinuity of responses to similar urban renewal problems (e.g. land acquisition, repair of public utilities, land use, etc.) has resulted in a fragmented program. The continued fragmentation of the governmental structure has caused serious delays to flood recovery work and has caused several needed project parts to be deleted entirely. Lastly, the result of permissive use of land in flood plain areas has been handled differently in each municipality, ranging from flood plain ordinances to total inaction and disinterest.

The final section of the growth and development issues presents future issues, those issues that will affect the future development of the study area. The total community environment could be improved. A modern industry is looking not only for an employment reserve and a good geographical location, but also good school, hospitals and other community services along with new housing and a responsive municipal government. A second issue for future development is the manner in which the future land use is conceived. By use of the neighborhood concept, (detailed in the long range plan) a better Wyoming Valley will emerge through the cohesiveness of the member municipalities.

Economic development over the short-range is oriented predominantly towards a positioning for future benefits. The study area should gain greater knowledge of its position in the economic market of Northeastern Pennsylvania to gain an increased share of the present industrial growth. The knowledge necessary can be gained in a detailed economic study of the Wyoming Valley. This study would include (1) delineation of all economic sectors, (2) their relationship not only with each other, but also with existing human resources, and (3) the identification of the interaction of the Valley with the rest of the county, region or state. A new labor census would contribute knowledge of the human resources available within the study area. Lastly, the establishment of an economic monitoring system would supply the needed updating of information to allow for a current view of the study area's economy at all times.

The immediate impact of the housing industry has been felt to the greatest extent by the individual whose home was partially

or totally damaged by Tropical Storm Agnes. As a result of the demand for contractors generated by Tropical Storm Agnes, reputable builders for hire within the Valley are at a premimum. A Housing Market Council should be started so that a constant surveillance of the housing stock can be obtained, to constantly update the housing stock information. A re-evaluation of the site planning, tax structures, and placement of mobile homes should be started. A detailed structure analysis should be started for each municipality to determine the number and location of all substandard dwelling units. Lastly, before the majority of the construction is started, building andhousing codes should be adopted for all municipalities. These codes should be uniform so that all segments of the study area have the same protection.

The major recommendation for the near future in the field of government is that the Charter Study Commission be established and through them adopt Home Rule for Luzerne County. The appointment of a County Manager would be a major step leading to the establishment of county-wide services.

The development of urban resources, that presently exist, into a future reality must have planning in the immediate future. The coordination to assure that neighborhoods are not disrupted during renewal activities, that the religious institutions stay intact and that commercial areas do not control or become subordinate to the residential areas is a goal that must be stressed during the short range.

The development of national guidelines for growth must begin now. Improved developmental controls in the form of flood plain zoning, building and housing codes and planned residential developments should be adopted by the county and applied to all municipalities.

URBAN RENEWAL

There are presently 17 active urban renewal projects within the Wyoming Valley. They range in size from the largest financially, Wilkes-Barre Downtown, and the largest in acreage, Kingston Borough, to the smallest both in land area and cost, West Pittston Borough.

Recommendations are proposed for possible areas of acquisition and as to possible re-use of the land. The recommendations for land

reusage fall into the following categories: increased and improved open spaces, new neighborhood commercial areas, enlarged recreation areas for public schools, improved residential developments to allow for a more open feeling within a neighborhood, and improved site design for industrial areas.

The coordination of the urban renewal projects has been disjointed to some degree because of the lack of cooperation between the municipal officials and the redevelopment authorities. This lack of cooperation has caused a ''watering down'' of the redevelopment proposals and has been a general disservice to the residents of each municipality who, as a result, have not received greatest benefit for each renewal dollar spent. The lack of concentrated effort on the part of the municipalities to improve the Valley will hamper the future growth within the study area.

LONG-RANGE STRATEGY

The primary element of the Long-Range Development Plan is the redevelopment of neighborhood areas to achieve the importance they once had. The re-establishment and revitalization of the historic urban structure of the Valley will create an atmosphere of progress and rebirth. Twenty-one of the forty-five municipalities within the study area are smaller in population than those neighborhoods currently being created in new towns and large scale, planned unit development efforts.

In reviewing the Valley area and the major elements that determine its present urban structure, the most significant factors include the river, major topographic features, the past history of mines, the arterial road network, the railroads, the major activity centers, the European heritage, and most importantly the existing strong neighborhood pattern.

Historically, neighborhoods in the Valley grew up around one industry: mining. Often, land use was totally controlled by the mining companies, which tended to foster dense development. Miners in these early settlements were relocated European miners, and because of their heritage, they consciously or unconsciously created an urban form in the Valley similar to those in Europe. These neighborhoods are characterized by dense single-family and two-family dwellings along narrow streets, oriented to small community activity centers. This orientation has managed to survive in most neighborhoods.

The existing neighborhood framework, perhaps the greatest potential of the Valley, is just as vital to proper development of the area as the activity centers. However, a redefining

and revitalizing of the neighborhoods and their internal and external functioning is required, in that the present urban land use pattern tends to blur neighborhood identities. Both this urban conglomeration and poor visual appearance of the neighborhoods cause confusion as to neighborhood boundaries. This plan will emphasize providing this visual and functional order.

The physical environment of the area is also important, particularly in two respects. First, after the economic renewal undertaken over the years, there should be a great deal of pride in renewing the living environment of the area. A very small portion of the disposable income of the families in the Valley has gone into housing, and this has given rise to deteriorating housing conditions. Additionally, neighborhoods are often cluttered by power lines and other negative street elements. Secondly, if for no other reason, the area should be made more attractive to potential new residents and industry. Industrial incentives have changed in the past few years, and now, in order to attract quality industry, a quality environment for a future employee has become a major factor in industrial location decisions.

The same public dedication that obtained industrial park lands in the 1950's could be used to improve the physical environment of the Valley. This could include assuring open space and revitalizing neighborhood activity centers. In essence, this is taking commendable progress in economic development to the next logical step: the renewing of the urban development of the area. Of course, the ultimate test of the value of the Valley as a pleasant place to live will be whether or not people come to the area because of the living environment as well as for economic considerations.

CHAPTER 3

POPULATION ANALYSIS

The historic profile of Luzerne County's population has been characterized by a substantial decline since the early 1930's. This trend continued unchecked until the late 1960's when the rate of loss was eased, and by 1970 showed signs of bottoming out and producing a slight comeback. It is predicted that a modest increase will be seen between the present time and the entrance into the next century.

The effects of the out-migration over the past 40 years have drained the county to a residual, permanent population. The decline in population resulting from this out-migration has been particularly noted in the 18-24 age group, producing trends towards an aging population with an ever increasing percentage of the population over the age of 65.

Recently, the out-migration of young people has slowed, and current trends indicate that this age group is now staying in the county.

COMPOSITION OF POPULATION

The relative age composition of the population of Luzerne County is changing. A general lowering of the birthrate accounts for much of this change. The firth rate decreased from 182 births per thousand, between 1950 and 1960, to 134 births per thousand between 1960 and 1970. Growth in the young adult group is due in large measure to the much higher birthrate of past decades. In turn, the low birthrates of the 1920's and the 1930's explain in part the relative decline in the middle-age groups. Such variation in birthrate, over time and together with increases in life expectancy, account for most of the variation in relative age composition at the national level.

In Luzerne County, between 1960 and 1970, the age composition of the population changed significantly, as seen in Table 2. The trends toward an older population continued as increases were recorded in the 65 and over age group, and relative decreases took place in the groups under 19 years of age. The death rate has remained constant over the last 20 years.

In 1960 the under 19 age group comprised 32.4 percent of the County's population. By 1970, the proportion had dropped to 31.9 percent. This downward trend in the under 19 age group is due to two major causes: 1) a reduced birthrate that has been noted in local, state and national census figures, and 2) out-migration due to the lack of economic potential of young people in

Table 2

POPULATION COMPOSITION OF LUZERNE COUNTY
1960 - 1970

AGE (Yrs.)	1960(1) Number	1960(1) Percent	1970(2) Number	1970(2) Percent
Under 5	29,337	8.4	23,612	6.9
5-6	11,761	3.4	10,609	3.1
7-9	17,184	5.0	16,579	4.8
10-13	24,654	7.1	23,794	6.9
14	5,119	1.5	5,990	1.7
15	5,257	1.5	5,983	1.7
16-17	11,208	3.2	11,880	3.5
18-19	7,988	2.3	10,905	3.2
20	3,474	1.0	5,083	1.5
21-24	13,165	3.8	17,437	5.1
25-34	39,398	11.4	34,270	10.0
35-44	49,855	14.4	39,624	11.6
45-54	50,049	14.4	47,764	14.0
55-59	21,786	6.3	23,531	6.9
60-64	18,140	5.2	20,898	6.1
65-74	27,269	7.8	28,801	8.4
75 and over	11,328	3.3	15,541	4.5
TOTAL	346,972	100.0	342,301	100.0
Median Age	36.0		36.3	

Sources: (1) U.S. Census
(2) U.S. Census

the County. These factors, combined with growth in other age groups, account for the decline in this group's percentage of the total population.

The over 65 age group is growing rapidly within Luzerne County. In 1960, this age group comprised 11.1 percent of the total population and in 1970 13.0 percent were in the 65 and over age group. Nationally, the percent of persons over 65 years was 9.2 percent in 1960 and 9.9 percent in 1970. The increase in the growth rate of the over 65 age group within the County is due to 1) increases in life expectancy and 2) the reduction of young people through out-migration and low birthrates.

The data on median age also reflects the aging population within the County. In 1960, the median age was 36.0 years and by 1970 the median age had increased to 36.3 years. This trend toward an aging population is counter to both the state and national trends. For Pennsylvania, the median age was 32.0 years in 1960 and 31.0 years in 1970. The national figures were 29.5 and 28.3 years respectively.

The County's population losses were concentrated in two age groups: children under 14 years of age and adults in the 25-54 age categories. The changes in both of these groups are interrelated. Persons in the 25-54 age group are in their prime years of labor force participation. Faced with insufficient job prospects within the county, these persons have left in the past few years to seek job opportunities elsewhere.

Since persons in this age group are the most likely to have a family, their out-migration affects the proportion of the population in the under 14 age bracket. A drop in the birthrate among the child bearing population also explains the decline in the under 14 age bracket. This trend to smaller family size has also been noted in most of the school districts within the County.

Males account for 46.98 percent of the population in Luzerne County, or 88.6 males for every 100 females. In comparison, the United States has a ratio of 94.8 males for every 100 females, the State's ratio is 92.4 to every 100. This reflects the heavy out-migration of young men from the county in past years. Traditionally, men have been more inclinded to migrate from the area, to seek employment, than have women. The growing opportunity of employment within the Valley and the growing career orientation of women are expected to increase the sex ratio to near the state of national levels.

NET MIGRATION

During the period 1960 to 1966, the net migration was

11,900(1) and accounts for most of the population loss. Even though the out-migration has been greatly reduced in recent years, out-migration still exceeds in-migration. Population growth for the County still hinges on the success of stemming the flow of out-migration and spurring the flow of in-migration. Birth and death rates are less subject to local influence.

Out-migration and changes in the number of births and deaths over the last thirty years are the major factors that account for changes in overall population composition. The key to stabilizatio and increasing the County's population still rests on the ability to find suitable employment within Luzerne County.

MINORITY POPULATION

The racial composition of the County is almost entirely white. The 1970 U.S. Census reveals that there are approximately 2,300 non-whites in Luzerne County or about 0.7 percent of the total population. Most of the non-white population is concentrated in a few census tracts within the City of Wilkes-Barre.

GEOGRAPHICAL CHANGES IN POPULATION

The population of Luzerne County has experienced migration within its regional parts. Between the years 1960-1970, the County lost 4,643 persons. During the same time period the Study Area lost 8,770 persons, as shown in Table 3, while the area outside the Study Area increased by 4,127 persons. This loss of population within the Wyoming Valley Study Area is caused by two factors 1) internal migration and 2) an increased death rate within the Study Area.

In general, the greatest population losses occurred in areas along the flood plain, and in areas of mine subsidence (and) highway construction. Growth between 1960 and 1970 has been noted in the areas of Back Mountain and Mountain Top providing increases of 18.6 percent and 61.9 percent respectively.

The greatest amount of population change between 1960 and 1970 took place in Wright Township, where the population increased by 123.4 percent. Large gains were also recorded in Rice, Union, and Exeter Townships and Laflin Borough. Substantial losses were recorded in Wilkes-Barre, Hunlock and Newport Townships, and Laurel Run and Pringle Boroughs.

(1) Appalachian Regional Commission, Research Division, December 1969.

Table 3

1960-1970 POPULATION CHANGES

	1960	1970	Change
Luzerne County	346,972	342,329	-4643
Wyoming Valley Study Area	263,357	254,587	-8770
Outside Study Area	83,615	87,742	+4127

Sources: (1) 1960 Census

(2) 1970 Census

PROJECTIONS

The methods used in projecting future population to 1977 and 2000 involved numerous data inputs. In general, the methodology is based on the projection of existing data, using current growth trends, and giving consideration to trends in land-use, net migration and employment.

Existing regional and County population projections were compared, analyzed and adjusted to reflect current trends of growth. The projections made by the Appalachian Regional Commission fail to take into account the potential of Luzerne County. Present indications show that about 430,000 people will reside within the county in the year 2000.

All projections were first isolated by census tract, and studied in terms of historic trends in birth and death rates and net migration as detailed by the United States Census. The historical data was combined with interviews of local officials and a number of field surveys throughout the study area to derive the 1972 estimates.

Interest was focused on the impact of the floods resulting from Tropical Storm Agnes on the population of the Wyoming Valley. The estimates of the flood-affected population found in this report are based upon data obtained from interviews and material obtained from HUD and the Luzerne County Planning Commission. These post-flood 1972 population figures were used as a base for all future projections. The location and magnitude of the future developments were provided by the Luzerne County Planning Commission and EDCNP as well as other local officials. When estimated completion dates were not available, the dates were assumed based on the most current available. Future developmental factors were considered such as urban renewal, highway construction, flood impact, areas of mine subsidence, industrial parks and housing developments. After these considerations were analyzed, the individual projections were re-assembled into municipal units and checked with other existing projections to test the validity of their respective rates of growth.

The projected total for 1977 and 2000 was further checked by using the existing and projected employment factors, see Table 5.

Table 4

COMPARATIVE POPULATION PROJECTIONS
1960 - 2000

	1960(1)	1970(2)	1972	1977	2000
WYOMING VALLEY STUDY AREA					
Luzerne County Planning Commission	263,357	254,587	259,453*	271,510*	338,090
Solid Waste Study(3)	263,357	254,587	258,498*	268,335*	333,290
Wilbur Smith and Associates	263,357	254,587	256,940	268,320	316,430
LUZERNE COUNTY					

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Wilbur Smith and Associates	263,357	254,587	256,940	268,320	316,430
LUZERNE COUNTY					
Luzerne County Planning Commission	346,972	342,329	346,727*	365,034*	472,700
Alan M. Voorhees and Associates(4)	346,972	385,600*	398,200*	429,800*	574,900*
Appalachian Regional Commission(5)	346,972	342,329	343,400*	350,100*	358,000*
Wilbur Smith and Associates	346,972	342,329	342,600	353,700	429,200

* Interpolated to Target Years

Sources:
(1) 1960 Census
(2) 1970 Census
(3) Roy F. Weston, Inc. - Solid Waste Management Plan, p. 22, September 1972.
(4) Alan M. Voorhees and Associates - Luzerne-Lackawanna Transportation Study, Vol. III, p. 9, December 1970.
(5) Jerome P. Pickard for Appalachian Regional Commission, March 1972.

One of the greatest problems in projecting the population in Luzerne County has been to accurately predict the end of the 40-year trend of declining population and out-migration. Many of the projections made during the mid-sixties, were based on the assumption of increasing population that did not materialize until the early 1970's, (see Table 4). The existing population data shows a reduction in out-migration and decline of population, in the late 1960's and early 1970's. Between 1970 and 1972 the study area experienced a small but significant 0.4% per year increase. This indicates that the population has stabilized and it was assumed that a modest increase should be expected. After analysis of the economic and housing growth expected in the Valley, an assumed growth of 1 percent per year would be warranted.

The 1977 employment for the study area is expected to be approximately 111,200(2). Assuming that an unemployment rate of 5 percent or 6 percent would be valid in 1977, a work force of 117,052 or 118,298 would be available at that time. It is expected by that year that the labor participation rate will range from 56.5 percent to 59.5 percent(3). Each set of assumptions was then averaged and divided by the expected 1977 percentage of the total population eligible to make up the work force, to provide the total population.

For the year 2000, the method is much the same. The number of employed persons is expected to be 124,300. Providing the unemployment rate will drop to between 5 and 6 per cent, the work force will be between 129,479 and 130,842(2).

Assuming that by the year 2000 the labor participation rate will range from 60.5 percent to 63.5 percent(3), the average labor participation is then derived. The average is then divided by the expected 2000 percentage of the total population of eligible persons making up the work force, to provide the total population.

(2) Governor's Office of State Planning and Development. Historical Estimates and Projections of Employment by Industry and Labor Market (Rev. Sept. 1972). Labor Market 37, Wilkes-Barre-Hazleton.

(3) Projected from 1960-1970 Labor Force Characteristics, Commonwealth of Pennsylvania: Governor's Office of State Planning and Development.

Table 5

POPULATION PROJECTIONS -
EMPLOYMENT PARTICIPATION METHOD

1977

1. 1977 employment projection in study area = 111,200

2. Divide by unemployment factor to obtain number in labor force:

   (5 percent unemployment rate) 111,200 ÷ .95 = 117,052 (A)

   (6 percent unemployment rate) 111,200 ÷ .94 = 118,298 (B)

3. Divide labor force by labor participation rate to obtain population:

   (A) 117,052 ÷ .565 = 207,171 (C)

   (A) 117,052 ÷ .595 = 196,726 (D)

   (B) 118,298 ÷ .565 = 209,377 (E)

   (B) 118,298 ÷ .595 = 198,820 (F)

4. Averages: $\frac{(C) + (D)}{2}$ = 201,949 (G)

   $\frac{(E) + (F)}{2}$ = 204,098 (H)

5. Divide (G) and (H) by ratio of labor force to total population:

   (G) 201,949 ÷ .75 = 269,265

   (H) 204,098 ÷ .75 = 272,131

   Average = 270,698

Table 5 (Con't)

POPULATION PROJECTIONS -
EMPLOYMENT PARTICIPATION METHOD

2000

1. 2000 employment projection in study area = 124,300

2. Divide by unemployment factor to obtain the labor force:

   (5 percent unemployment rate) 124,300 ÷ .95 = 130,842 (A)

   (6 percent unemployment rate) 124,300 ÷ .94 = 132,245 (B)

3. Divide labor force by labor participation rate to obtain population:

   (A) 130,842 ÷ .605 = 216,268 (C)

   (A) 130,842 ÷ .635 = 206,050 (D)

   (B) 132,234 ÷ .605 = 218,568 (E)

   (B) 132,234 ÷ .635 = 208,242 (F)

4. Averages: $\frac{(C) + (D)}{2} = 211,159$ (G)

   $\frac{(E) + (F)}{2} = 213,405$ (H)

5. Divide (G) and (H) by ratio of labor force to total population:

   (G) 211,159 ÷ .68 = 310,528

   (H) 213,405 ÷ .68 = 313,831

   Average = 312,179

Source: Wilbur Smith and Associates.

Projecting population for the study area by political and census jurisdictions has been complicated by the uncertainty of development along the flood plain due to the June 1972 flood, and unforeseen growth in areas of higher elevations.

The temporary impact of the flood on the population distribution within the study area is detailed in Table 6. Because of the massive relocation of flood victims, only limited data is available. The flood impact population figures reflect a collection of all presently available information from local, state and federal sources. Due to the nature of the relocation data, these figures are not completely accurate but do quantify the known trends.

The grand total should be noted in a comparison between the Pre-Flood and Permanent Flood Impact figures. The difference between these two figures indicates the number of people moving out of the study area and not planning to return as a direct result of the flood.

The population projections by municipality (between the years 1960 and 2000) are shown in Table 7. Between 1960 and 1970, the population within the study area declined by 8,770 or about -3.3 percent. The greatest losses were noted in Laurel Run Borough (-61.8 percent), Pringle Borough (-18.5 percent) and Wilkes-Barre Township (-18.2 percent). Substantial losses were also seen in the municipalities of Sugar Notch Borough, Newport Township, Hunlock Township, Hughestown Borough and Yatesville Borough, as shown in Figure 3.

The decrease in population from Laurel Run Borough was due to subsidence and escaping gases from underground mining operations and the clearance projects associated with urban renewal.

The period between 1970 and 1972 produced indications of population growth, but this trend was retarded as a result of the flood. The projected permanent flood impact population figures for 1972 were used as the base year upon which all projections were based. These figures are based on the most current data that reflects the present post-flood conditions.

(3) Ibid.

Table 6

1972 BASE YEAR FLOOD ANALYSIS BY MUNICIPALITY

MUNICIPALITY	Pre-Flood(2)	Temporary Flood Impact(1)	Permanent Flood Impact(2)
SHICKSHINNY AREA			
Conyngham Twp.	1,700	1,730	1,690
Hunlock Twp.	1,820	1,820	1,810
Shickshinny Boro	1,690	1,660	1,680
Union Twp.	1,320	1,320	1,340
SUB-TOTAL	6,530	6,530	6,520
NANTICOKE AREA			
Nanticoke City	14,670	14,970	14,560
Newport Twp.	5,520	5,850	5,790
Plymouth Twp.	2,630	2,380	2,610
SUB-TOTAL	22,820	23,200	22,960
WILKES-BARRE AREA			
Ashley Boro	4,080	4,210	4,080
Courtdale Boro	1,060	1,060	1,060
Edwardsville Boro	5,670	5,240	5,620
Forty Fort Boro	6,120	5,550	6,080
Hanover Twp.	12,330	13,040	12,230
Kingston Boro	18,190	14,980	17,930
Larksville Boro	3,900	3,950	3,900
Laurel Run Boro	360	360	360
Luzerne Boro	4,450	4,480	4,420
Plains Twp.	11,190	11,530	11,100
Plymouth Boro	9,460	9,410	9,390
Pringle Boro	1,160	1,140	1,150
Sugar Notch Boro	1,340	1,360	1,340
Swoyersville Boro	6,890	6,770	6,840
Warrior Run Boro	820	830	820
Wilkes-Barre City	59,030	55,500	58,590
Wilkes-Barre Twp.	3,600	4,680	3,600
SUB-TOTAL	149,650	144,090	148,510

Table 6 (cont'd)

1972 BASE YEAR FLOOD ANALYSIS BY MUNICIPALITY

MUNICIPALITY	Pre-Flood(2)	Temporary Flood Impact(1)	Permanent Flood Impact(2)
PITTSTON AREA			
Avoca Boro	3,560	3,570	3,560
Dupont Boro	3,470	3,470	3,470
Duryea Boro	5,270	5,330	5,490
Exeter Boro	4,760	5,680	4,720
Exeter Twp.	2,010	2,020	2,030
Hughestown Boro	1,450	1,450	1,450
Jenkins Twp.	3,310	3,960	3,390
Laflin Boro	470	480	470
Pittston City	11,170	11,250	11,090
Pittston Twp.	3,760	3,760	3,820
W. Pittston Boro	7,080	7,080	7,030
W. Wyoming Boro	3,780	4,520	3,820
Wyoming Boro	4,280	4,370	4,250
Yatesville Boro	410	420	410
SUB-TOTAL	54,780	57,360	55,000
BACK MOUNTAIN AREA			
Dallas Boro	3,040	3,320	3,240
Dallas Twp.	5,730	5,730	5,930
Kingston Twp.	6,460	6,560	6,760
SUB-TOTAL	15,230	15,610	15,930
MOUNTAIN TOP AREA			
Fairview Twp.	2,760	2,840	2,800
Nuangola Boro	500	510	500
Rice Twp.	1,120	1,120	1,130
Wright Twp.	3,530	3,530	3,590
SUB-TOTAL	7,910	8,000	8,020
GRAND TOTAL	256,920	254,790	256,940

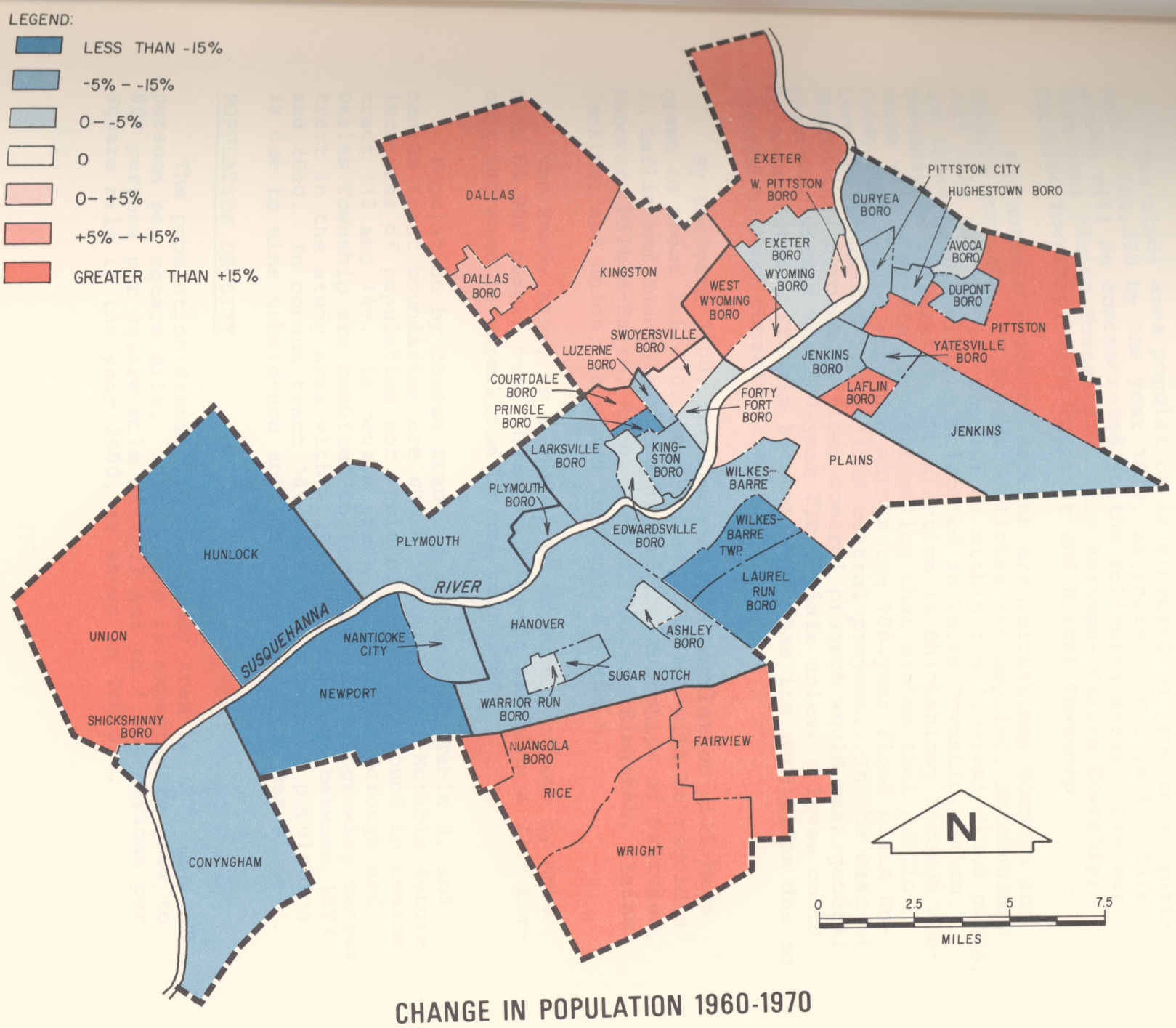
Source: (1) HUD Group Site Section
(2) Wilbur Smith and Associates

Table 7

STUDY AREA POPULATION BY MUNICIPALITY
1960 - 2000

MUNICIPALITY	1960	1970	CHANGE 1960-1970 Number	Percent	1972	1977	CHANGE 1972-1977 Number	Percent	1977	2000	CHANGE 1977-2000 Number	Percent	1972	2000	CHANGE 1972-2000 Number	Percent
SHICKSHINNY AREA																
Conyngham Twp.	1,819	1,693	-126	-6.9	1,690	1,690	0	0	1,690	1,860	+170	+10.1	1,690	1,860	+170	+10.1
Hunlock Twp.	2,057	1,744	-313	-15.2	1,810	1,840	+30	+1.7	1,840	1,860	+20	+1.1	1,810	1,860	+50	+2.8
Shickshinny Boro	1,843	1,685	-158	-8.5	1,680	880	-800	-47.6	880	950	+70	+8.0	1,680	950	-730	-43.5
Union Twp.	768	1,219	+451	+58.7	1,340	1,580	+240	+17.9	1,580	2,440	+860	+59.4	1,340	2,440	+1,100	+74.6
Sub-Total	6,487	6,341	-146	-2.2	6,520	5,990	-530	-8.1	5,990	7,110	+1,120	+18.7	6,520	7,110	+590	+9.0
NANTICOKE AREA																
Nanticoke City	15,601	14,638	-963	-6.2	14,560	14,760	+200	+1.4	14,760	15,160	+400	+2.7	14,560	15,160	+600	+4.1
Newport Twp.	7,083	6,002	-1,081	-15.3	5,790	6,090	+300	+5.1	6,090	6,670	+580	+9.5	5,790	6,670	+880	+15.1
Plymouth Twp.	2,783	2,614	-169	-6.1	2,610	2,560	-50	-1.9	2,560	2,590	+30	+1.2	2,610	2,590	-20	-0.8
Sub-Total	25,467	23,254	-2,213	-8.7	22,960	23,410	+450	+2.0	23,410	24,420	+1,010	+4.3	22,960	24,420	+1,460	+6.4
WILKES-BARRE AREA																
Ashley Boro	4,258	4,095	-163	-3.8	4,080	4,010	-70	-1.7	4,010	4,030	+20	+0.5	4,080	4,030	-50	-1.2
Courtdale Boro	845	1,027	+182	+21.5	1,060	1,140	+80	+7.5	1,140	1,480	+340	+29.8	1,060	1,480	+420	+39.6
Edwardsville Boro	5,711	5,633	-78	-1.4	5,620	5,780	+160	+2.8	5,780	5,920	+140	+2.4	5,620	5,920	+300	+5.3
Forty Fort Boro	6,431	6,114	-317	-4.9	6,080	6,130	+50	+0.8	6,130	6,420	+290	+4.7	6,080	6,420	+340	+5.6
Hanover Twp.	12,781	12,102	-679	-5.3	12,230	15,000	+2,770	+22.6	15,000	16,800	+1,800	+12.0	12,230	16,800	+4,570	+37.4
Kingston Boro	20,261	18,325	-1,936	-9.6	17,936	17,950	+20	+0.1	17,950	18,970	+1,020	+5.7	17,930	18,970	+1,040	+5.8
Larksville Boro	4,390	3,937	-453	-10.3	3,900	4,020	+120	+3.1	4,020	4,250	+230	+5.9	3,900	4,250	+350	+8.9
Laurel Run Boro	855	327	-528	-61.8	360	400	+40	+11.1	400	610	+210	+52.5	360	610	+250	+69.4
Luzerne Boro	5,118	4,504	-614	-12.0	4,420	4,500	+80	+1.8	4,500	4,600	+100	+2.2	4,420	4,600	+180	+4.1
Plains Twp.	10,995	11,481	+486	+4.4	11,100	12,390	+1,290	+11.6	12,390	15,000	+2,610	+21.1	11,000	15,000	+3,900	+35.1
Plymouth Boro	10,401	9,536	-865	-8.3	9,390	9,340	-50	-0.5	9,340	9,350	+10	+0.1	9,390	9,350	-40	-0.4
Pringle Boro	1,418	1,155	-263	-18.5	1,150	1,050	-100	-8.7	1,050	990	-60	-5.7	1,150	990	-160	-13.9
Sugar Notch Boro	1,524	1,333	-191	-12.5	1,340	1,330	-10	-0.7	1,330	1,380	+50	+3.8	1,340	1,380	+40	+3.0
Swoyersville Boro	6,751	6,786	+35	+0.5	6,840	7,000	+160	+2.3	7,000	7,930	+930	+13.3	6,840	7,930	+1,090	+15.9
Warrior Run Boro	833	816	-17	-2.0	820	820	0	0	820	880	+60	+7.3	820	880	+60	+7.3
Wilkes-Barre City	63,551	58,856	-4,695	-7.4	58,590	59,910	+1,320	+2.3	59,910	62,370	+2,460	+4.1	58,590	62,370	+3,780	+6.5
Wilkes-Barre Twp.	4,319	3,535	-784	-18.2	3,600	3,720	+120	+3.3	3,720	4,600	+880	+23.7	3,600	4,600	+1,000	+27.8
Sub-Total	160,442	149,562	-10,880	-6.8	148,510	154,490	+5,980	+4.0	154,490	165,580	+11,090	+7.2	148,510	165,580	+17,070	+11.5
PITTSTON AREA																
Avoca Boro	3,562	3,543	-19	-0.5	3,560	3,600	+40	+1.1	3,600	3,920	+320	+8.9	3,560	3,920	+360	+10.1
Dupont Boro	3,669	3,431	-238	-6.5	3,470	3,450	-20	-0.6	3,450	3,800	+350	+10.1	3,470	3,800	+330	+9.5
Duryea Boro	5,626	5,264	-362	-6.4	5,490	5,610	+120	+2.2	5,610	5,980	+370	+6.6	5,490	5,980	+490	+8.9
Exeter Boro	4,747	4,670	-77	-1.6	4,720	5,000	+280	+5.9	5,000	5,800	+800	+16.0	4,720	5,800	+1,080	+22.9
Exeter Twp.	1,309	1,869	+560	+42.9	2,030	2,450	+420	+20.7	2,450	3,860	+1,410	+57.6	2,030	3,860	+1,830	+90.1
Hughestown Boro	1,615	1,407	-208	-12.9	1,450	1,550	+100	+6.9	1,550	1,880	+330	+21.3	1,450	1,880	+430	+29.7
Jenkins Twp.	3,475	3,252	-223	-6.4	3,390	3,640	+250	+7.4	3,640	5,560	+1,920	+52.7	3,390	5,560	+2,170	+64.0
Laflin Boro	235	399	+164	+69.8	470	740	+270	+57.4	740	1,450	710	+95.9	470	1,450	+980	+208.5
Pittston City	12,407	11,113	-1,294	-10.4	11,090	11,070	-20	-0.2	11,070	13,150	+2,080	+18.8	11,090	13,150	+2,060	+18.6
Pittston Twp.	2,992	3,564	+572	+19.1	3,820	4,240	+420	+11.0	4,240	6,380	+2,140	+50.5	3,820	6,380	+2,560	+67.0
W. Pittston Boro	6,998	7,074	+86	+1.2	7,030	7,110	+80	+1.1	7,110	7,340	+230	+3.2	7,030	7,340	+310	+4.4
W. Wyoming Boro	3,166	3,659	+493	+15.6	3,820	4,160	+340	+8.9	4,160	5,620	+1,460	+35.1	3,820	5,620	+1,800	+47.1
Wyoming Boro	4,127	4,195	+68	+1.6	4,250	4,290	+40	+0.9	4,290	5,190	+900	+21.0	4,250	5,190	+940	+22.1
Yatesville Boro	472	407	-65	-13.8	410	420	+10	+2.4	420	580	+160	+38.1	410	580	+170	+41.5
Sub-total	54,400	53,847	-533	-1.0	55,000	57,330	+2,230	+4.2	57,330	70,510	+13,180	+23.0	55,000	70,510	+15,510	+28.2
BACK MOUNTAIN AREA																
Dallas Boro	2,229	2,398	+169	+7.6	3,240	3,440	+200	+6.2	3,440	5,530	+2,090	+60.8	3,240	5,530	+2,290	+70.0
Dallas Twp.	4,410	5,747	+1,337	+30.3	5,930	6,930	+1,000	+16.9	6,930	13,050	+6,120	+88.3	5,930	13,050	+7,120	+120.1
Kingston Twp.	5,450	6,196	+746	+13.7	6,760	7,010	+250	+3.7	7,010	10,690	+3,680	+52.5	6,760	10,690	+3,930	+58.1
Sub-Total	12,089	14,341	+2,252	+18.6	15,930	17,380	+1,450	+9.1	17,380	29,270	+11,890	+68.4	15,930	29,270	+13,340	+83.7
MOUNTAIN TOP AREA																
Fairview Twp.	2,061	2,658	+597	+29.0	2,800	3,320	+520	+18.6	3,320	5,300	+1,980	+59.6	2,800	5,300	+2,560	+91.4
Nuangola Boro	346	464	+118	+34.1	500	540	+40	+8.0	540	940	+400	+74.1	500	940	+440	+88.0
Rice Twp.	642	941	+299	+46.6	1,130	1,420	+290	+25.7	1,420	3,160	+1,740	+122.5	1,130	3,160	+2,030	+179.6
Wright Twp.	1,423	3,179	+1,756	+123.4	3,590	4,440	+850	+23.7	4,440	10,140	+5,700	+128.4	3,590	10,140	+6,550	+182.5
Sub-Total	4,472	7,242	+2,770	+61.9	8,020	9,720	+1,700	+21.2	9,720	19,540	+9,820	+101.0	8,020	19,540	+11,520	+143.6
TOTAL STUDY AREA	263,357	254,587	-8,770	-3.3	256,940	268,320	+11,380	+4.4	368,320	316,430	+48,110	+17.9	256,940	316,430	+59,490	+23.2

Sources: 1960 and 1970 figures - United States Census - Population
1972, 1977 and 2000 figures - Wilbur Smith and Associates (figures rounded to nearest 10)



CHANGE IN POPULATION 1960-1970

FIGURE 3

Wilbur Smith and Associates

The study area population is expected to grow to approximately 266,320 by the year 1977, as shown in Figure 4. This growth will be concentrated in the following areas: Hanover Township; Plains Township; Laflin Borough; Dallas Township; Fairview Township; Rice Township and Wright Township.

Two notable areas of decline are Shickshinny Borough and Pringle Borough. If federal policies are applied, Shickshinny will lose most of its population within the 100-year flood plain, and these people will be relocated in Union Township, Salem Township or in Berwick. This action in Shickshinny Borough conforms with a written federal policy that states that public funds will not be expended within the 100-year flood plain unless the funds are for a flood control project. In the case of Shickshinny Borough, a flood control project would mean general clearance within the 100-year flood plain unless a levee could be constructed. Pringle Borough will lose its population due to planned highway construction.

By the year 2000, the Study Area's population will have grown to about 316,430. Most of this growth will be recorded in Laflin and Nuangola Boroughs and the Townships of Fairview, Hanover, Wilkes-Barre, Rice, Wright, Dallas, Kingston, Plains, Jenkins, and Union, as shown in Figures 5 and 6.

The Study Area, as a whole, is expected to grow by more than 60,000 people over the next 28 years and show a 23.5 percent increase in population by the year 2000.

Population by census tract is included in Table 8, and census tract boundaries are shown in Figure 7. Notable future increases of population not included above are found in census tract 112 and 149. In census tract 112, Dallas Borough and Dallas Township are combined to form the fastest growing census tract in the study area with a 39 percent growth between 1972 and 2000. In census tract 149, a notable drop in population is due to mine subsidence and the escape of mine gases.

POPULATION DENSITY

The population density of the Study Area in 1972 was 853 persons per square mile. This figure is expected to grow to 888 persons per square mile by 1977 and to 1,054 persons per square mile in the year 2000, as shown in Table 9.

Table 8

STUDY AREA POPULATION BY CENSUS TRACT
1960 - 2000

MUNICIPALITY	Census Tract	1960	1970	CHANGE 1960-1970 Number	Percent	1972	1977	Number	Percent	1977	2000	CHANGE 1977-2000 Number	Percent	1972	2000	CHANGE 1972-2000 Number	Percent
City of Wilkes-Barre	1	3,690	3,646	-44	-1.2	3,600	3,650	+50	+1.4	3,650	3,800	+150	+4.1	3,600	3,800	+200	+5.6
	2	4,699	4,675	-24	-0.5	4,630	4,730	+100	+2.2	4,730	4,930	+200	+4.2	4,630	4,930	+300	+6.5
	3	2,339	2,767	+428	+18.3	2,740	2,820	+80	+2.9	2,820	2,930	+110	+3.9	2,740	2,930	+190	+6.9
	4	4,507	4,141	-366	-8.1	4,090	4,190	+100	+2.4	4,190	4,370	+180	+4.3	4,090	4,370	+280	+6.8
	5	5,683	4,279	-1,404	-24.7	4,220	4,310	+90	+2.1	4,310	4,490	+180	+4.2	4,220	4,490	+270	+6.4
	6	3,420	3,600	+180	+5.3	3,600	3,650	+50	+1.4	3,650	3,800	+150	+4.1	3,600	3,800	+200	+5.6
	7	5,663	5,115	-548	-9.7	5,120	5,220	+100	+2.0	5,220	5,430	+210	+4.0	5,120	5,430	+310	+6.1
	8	5,232	4,240	-992	-19.0	4,240	4,330	+90	+2.1	4,330	4,490	+160	+3.7	4,240	4,490	+250	+5.9
	9	5,457	5,346	-111	-2.0	5,350	5,460	+110	+2.1	5,460	5,680	+220	+4.0	5,350	5,680	+330	+6.2
	10	3,183	2,880	-303	-9.5	2,880	2,940	+60	+2.1	2,940	3,060	+120	+4.1	2,880	3,060	+180	+6.3
	11	2,107	2,025	-82	-3.9	2,000	2,040	+40	+2.0	2,040	2,120	+80	+3.9	2,000	2,120	+120	+6.0
	12	3,198	2,831	-367	-11.5	2,800	2,880	+80	+2.9	2,880	2,990	+110	+3.8	2,800	2,990	+190	+6.8
	13	3,506	3,145	-361	-10.3	3,150	3,240	+90	+2.9	3,240	3,370	+130	+4.0	3,150	3,370	+220	+7.0
	14	3,709	3,454	-255	-6.9	3,450	3,540	+90	+2.6	3,540	3,680	+140	+4.0	3,450	3,680	+230	+6.7
	15	3,612	3,215	-397	-11.0	3,220	3,310	+90	+2.8	3,310	3,430	+120	+3.6	3,220	3,430	+210	+6.5
	16	3,546	3,497	-49	-1.4	3,500	3,600	+100	+2.9	3,600	3,800	+200	+5.6	3,500	3,800	+300	+8.6
Sub-Total		63,551	58,856	-4,695	-7.4	58,590	59,910	+1,320	+2.3	59,910	62,370	+2,460	+4.1	58,590	62,370	+3,780	+6.5
Pittston Twp.	101	2,992	3,564	+572	+19.1	3,820	4,240	+420	+11.0	4,240	6,380	+2,140	+50.5	3,820	6,380	+2,560	+67.0
Dupont Boro	102	3,669	3,431	-283	-6.5	3,470	3,450	-20	-0.6	3,450	3,800	+350	+10.1	3,470	3,800	+330	+9.5
Avoca Boro	103	3,562	3,543	-19	-0.5	3,560	3,600	+40	+1.1	3,600	3,920	+320	+8.9	3,560	3,920	+360	+10.1
Hughestown Boro	104	1,615	1,407	-208	-12.9	1,450	1,550	+100	+6.9	1,550	1,880	+330	+21.3	1,450	1,880	+430	+29.7
Duryea Boro	105	5,626	5,264	-362	-6.4	5,490	5,610	+120	+2.2	5,610	5,980	+370	+6.6	5,490	5,980	+490	+8.9
Pittston City	106	2,236	1,802	-434	-19.4	1,800	1,800	0	0.0	1,800	2,130	+330	+18.3	1,800	2,130	+330	+18.3
	107	2,234	2,368	+134	+6.0	2,360	2,360	0	0.0	2,360	2,800	+440	+18.6	2,360	2,800	+440	+18.6
	108	5,136	4,330	-806	-15.7	4,320	4,310	-10	-0.2	4,310	5,120	+810	+18.8	4,320	5,120	+800	+18.5
Sub-Total	109	2,801	2,613	-188	-6.7	2,610	2,600	-10	-0.4	2,600	3,100	+500	+19.2	2,610	3,100	+490	+18.8
		12,407	11,113	-1,294	-10.4	11,090	11,070	-20	-0.2	11,070	13,150	+2,080	+18.8	11,090	13,150	+2,060	+18.6
W. Pittston Boro	110	6,998	7,074	+76	+1.1	7,030	7,110	+80	+1.1	7,110	7,340	+230	+3.2	7,030	7,340	+310	+4.4
Exeter Boro Exeter Twp.	111	6,056	6,539	+483	+8.0	6,750	7,450	+700	+10.4	7,450	9,660	+2,210	+29.7	6,750	9,660	+2,910	+43.1
Dallas Boro Dallas Twp.	112 part	6,639	8,145	+1,506	+22.7	9,170	10,370	+1,200	+13.1	10,370	18,580	+8,210	+79.2	9,170	18,580	+9,410	+102.6
Kingston Twp.	114	5,450	6,196	+746	+13.7	6,760	7,010	+250	+3.7	7,010	10,690	+3,680	+52.5	6,760	10,690	+3,930	+58.1
West Wyoming Boro	115	3,166	3,659	+493	+15.6	3,820	4,160	+340	+8.9	4,160	5,620	+1,460	+35.1	3,820	5,620	+1,800	+47.1
Wyoming Boro	116	4,127	4,195	+68	+1.6	4,250	4,290	+40	+0.9	4,290	5,190	+900	+21.0	4,250	5,190	+940	+22.1
Laflin Boro Jenkins Twp. Yatesville Boro	117	4,182	4,058	-124	-3.0	4,270	4,800	+530	+12.4	4,800	7,590	+2,790	+58.1	4,270	7,590	+3,320	+77.8
Plains Twp.	118	3,687	3,997	+310	+8.4	3,860	4,310	+450	+11.7	4,310	5,220	+910	+21.1	3,860	5,220	+1,360	+35.2
	119	4,199	4,675	+476	+11.3	4,520	5,040	+520	+11.5	5,040	6,100	+1,060	+21.0	4,520	6,100	+1,580	+35.0
Sub-Total	120	3,109	2,809	-300	-9.6	2,720	3,040	+320	+11.7	3,040	3,680	+640	+21.1	2,720	3,680	+960	+35.3
		10,995	11,481	+486	+4.4	11,100	12,390	+1,290	+11.6	12,390	15,000	+2,610	+21.0	11,100	15,000	+3,900	+35.1
Forty Fort Boro	121	6,431	6,114	-317	-4.9	6,080	6,130	+50	+0.8	6,130	6,420	+290	+4.7	6,080	6,420	+340	+5.6
Swoyersville Boro	122	6,751	6,786	+35	+0.5	6,840	7,000	+160	+2.3	7,000	7,930	+930	+13.3	6,840	7,930	+1,090	+15.9
Luzerne Boro	123	5,118	4,504	-614	-12.0	4,420	4,500	+80	+1.8	4,500	4,600	+100	+2.2	4,420	4,600	+180	+4.1
Kingston Boro	124	2,400	2,133	-267	-11.1	2,080	2,080	0	0.0	2,080	2,200	+120	+5.8	2,080	2,200	+120	+5.8
	125	1,723	1,512	-211	-12.2	1,490	1,490	0	0.0	1,490	1,580	+90	+6.0	1,490	1,580	+90	+6.0
	126	2,251	1,437	-814	-36.2	1,400	1,400	0	0.0	1,400	1,480	+80	+5.7	1,400	1,480	+80	+5.7
	127	2,299	2,011	-288	-12.5	1,980	1,970	-10	-0.5	1,970	2,090	+120	+6.1	1,980	2,090	+110	+5.6
	128	3,989	4,251	+262	+6.6	4,160	4,170	+10	+0.2	4,170	4,410	+240	+5.8	4,160	4,410	+250	+6.0
	129	2,282	2,208	-74	-3.2	2,160	2,160	0	0.0	2,160	2,280	+120	+5.6	2,160	2,280	+120	+5.6
	130	2,764	2,459	-305	-11.0	2,400	2,410	+10	+0.4	2,410	2,540	+130	+5.4	2,400	2,540	+140	+5.8
	131	2,553	2,314	-239	-9.4	2,260	2,270	+10	0.4	2,270	2,390	+120	+5.3	2,260	2,390	+130	+5.8
		20,261	18,325	-1,936	-9.6	17,930	17,950	+20	+0.1	17,950	18,970	+1020	+5.7	17,930	18,970	+1040	+5.8

Table 8

STUDY AREA POPULATION BY CENSUS TRACT (Con't)

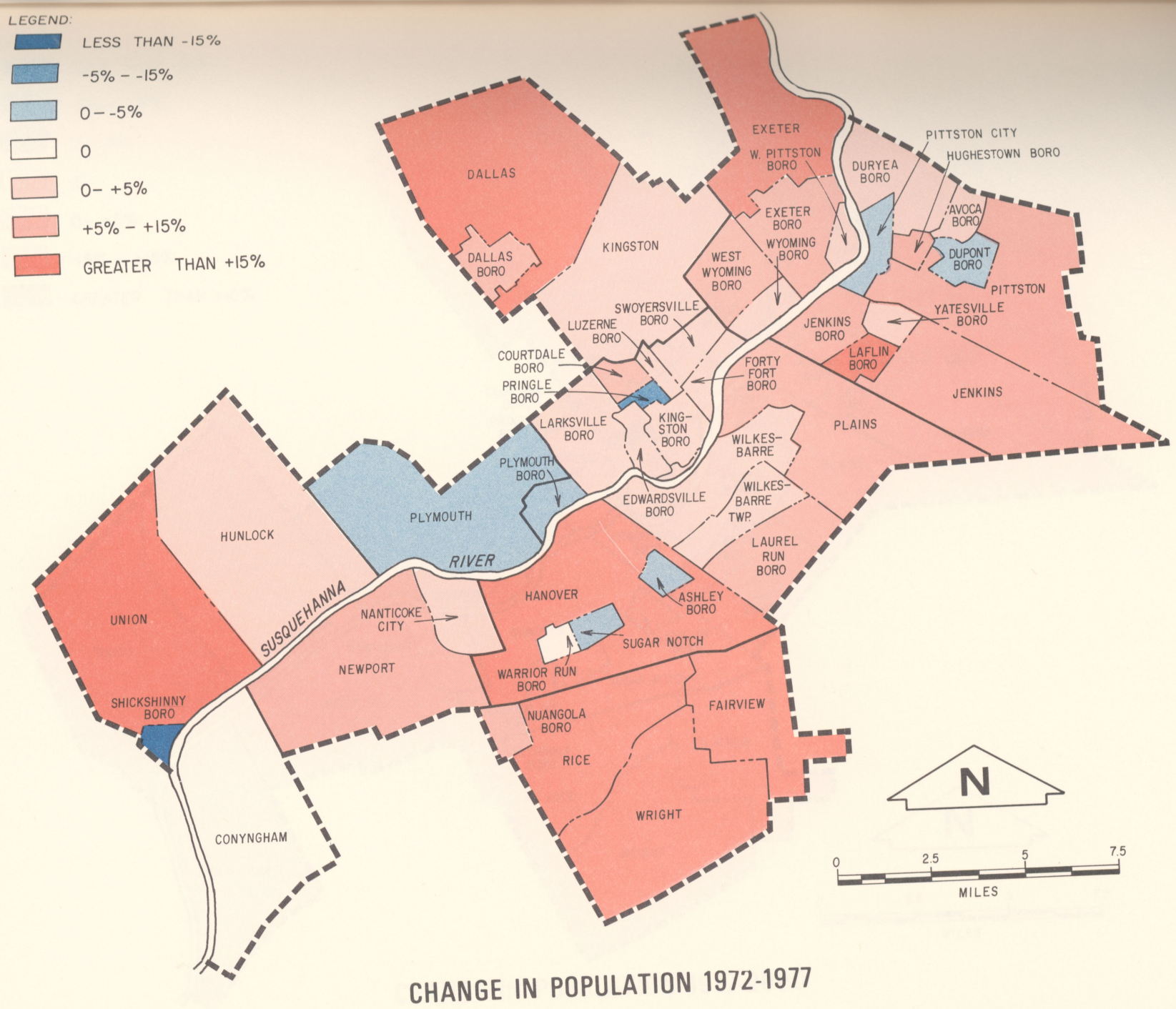
MUNICIPALITY	Census Tract	1960	1970	CHANGE 1960-1970 Number	Percent	1972	1977	Number	Percent	1977	2000	CHANGE 1977-2000 Number	Percent	1972	2000	CHANGE 1972-2000 Number	Percent
Edwardsville Boro	132	5,711	5,633	-78	-1.4	5,620	5,780	+160	+2.8	5,780	5,920	+140	+2.4	5,620	5,920	+300	+5.3
Courtdale Boro Pringle Boro	133	2,263	2,182	-81	-3.6	2,210	2,190	-20	-0.9	2,190	2,470	+280	+12.8	2,210	2,470	+260	+11.7
Larksville Boro	134	4,390	3,937	-453	-10.3	3,900	4,020	+120	-3.1	4,020	4,250	+230	+5.9	3,900	4,250	+350	+8.9
Plymouth Boro	135	2,216	1,829	-387	-17.5	1,800	1,790	-10	-0.6	1,790	1,790	0	0.0	1,800	1,760	-40	-2.2
	136	1,929	1,957	+28	+1.5	1,920	1,910	-10	-0.5	1,910	1,910	0	0.0	1,920	1,910	-10	-0.5
	137	3,675	3,455	-220	-6.0	3,400	3,380	-20	-0.6	3,380	3,390	+10	+0.3	3,400	3,390	-10	-0.3
	138	2,581	2,295	-286	-11.1	2,270	2,260	-10	-0.4	2,260	2,260	0	0	2,270	2,260	-10	-0.4
Sub-Total		10,401	9,536	-865	-8.3	9,390	9,340	-50	-0.5	9,340	9,350	+10	+0.1	9,390	9,350	-70	-0.7
Plymouth Twp.	139	2,783	2,614	-169	-6.1	2,610	2,560	-50	-1.9	2,560	2,590	+30	+1.2	2,610	2,590	-20	-0.8
Nanticoke City	140	2,472	2,106	-366	-14.8	2,100	2,130	+30	+1.4	2,130	2,180	+50	+2.3	2,100	2,180	+80	+3.8
	141	4,299	3,732	-567	-13.2	3,710	3,760	+50	+1.3	3,760	3,880	+120	+3.2	3,710	3,880	+170	+4.6
	142	3,728	3,587	-141	-3.8	3,560	3,620	+60	+1.7	3,620	3,710	+90	+2.5	3,560	3,710	+150	+4.2
	143	2,843	2,625	-218	-7.7	2,610	2,640	+30	+1.1	2,640	2,710	+70	+2.7	2,610	2,710	+100	+3.8
	144	2,259	2,588	+329	+14.6	2,580	2,610	+30	+1.2	2,610	2,680	+70	+2.7	2,580	2,680	+100	+3.9
Sub-Total		15,601	14,638	-963	-6.2	14,560	14,760	+200	+1.4	14,760	15,160	+400	+2.7	14,560	15,160	+600	+4.1
Hanover Twp.	145	2,692	2,585	-107	-4.0	2,620	3,210	+590	+27.5	3,210	3,600	+390	+12.1	2,620	3,600	+980	+37.4
	146	4,470	4,315	-155	-3.5	4,350	5,310	+960	+22.1	5,310	5,960	+650	+12.2	4,350	5,960	+1,610	+37.0
	147	2,288	2,363	+75	+3.3	2,380	2,930	+550	+23.1	2,930	3,280	+350	+11.9	2,380	3,280	+900	+37.8
	148	1,261	2,337	+1,076	+85.3	2,360	2,900	+540	+22.9	2,900	3,240	+340	+11.7	2,360	3,240	+880	+37.3
	149	2,070	502	-1,568	-75.7	520	650	+130	+25.0	650	720	+70	+10.8	520	720	+200	+38.5
Sub-Total		12,781	12,102	-679	-5.3	12,230	15,000	+2,770	+22.6	15,000	16,800	+1,800	+12.0	12,230	16,800	+4,570	+37.4
Warrior Run Boro Sugar Notch Boro	150	2,357	2,149	-208	-8.8	2,160	2,150	-10	-0.5	2,150	2,260	+110	+5.1	2,160	2,260	+100	+4.6
Ashley Boro	151	4,258	4,095	-163	-3.8	4,080	4,010	-70	-1.7	4,010	4,030	+20	+0.5	4,080	4,030	-50	-1.2
Wilkes-Barre Twp.	152	4,319	3,535	-784	-18.2	3,600	3,720	+120	+3.3	3,720	4,600	+880	+23.7	3,600	4,600	+1,000	+27.8
Laurel Run Boro	153 part	855	327	-528	-61.8	360	400	+40	+11.1	400	610	+210	+52.5	360	610	+250	+69.4
Wright Twp. Rice Twp. Nuangola Boro Fairview Twp.	155 part	4,472	7,242	+2,770	+61.9	8,020	9,720	+1,700	+21.2	9,720	19,540	+9,820	+101.0	8,020	19,540	+11,520	+143.6
Newport Twp.	156	7,083	6,002	-1,081	-15.3	5,790	6,090	+300	+5.1	6,090	6,670	+580	+9.5	5,790	6,670	+880	+15.1
Hunlock Twp. Union Twp.	157	2,825	2,963	+138	+4.9	3,150	3,420	+270	+8.6	3,420	4,300	+880	+25.7	3,150	4,300	+1,150	+36.5
Shickshinny Boro	160	1,843	1,685	-158	-8.6	1,680	880	-800	-47.6	880	950	+70	+7.9	1,680	950	-730	-43.5
Conyngham Twp.	162	1,819	1,693	-126	-6.9	1,690	1,690	0	0.0	1,690	1,860	+170	+10.1	1,690	1,860	+170	+10.1
TOTAL STUDY AREA		263,357	254,587	-8,770	-3.3	256,940	268,320	+11,380	+4.4	268,320	316,430	+48,110	+17.9	256,940	316,430	+59,490	+23.2

Sources: 1960 and 1970 figures - United States Census - Population
1972, 1977 and 2000 figures - Wilbur Smith and Associates (figures rounded to nearest 10)

Table 9

DENSITY BY MUNICIPALITY

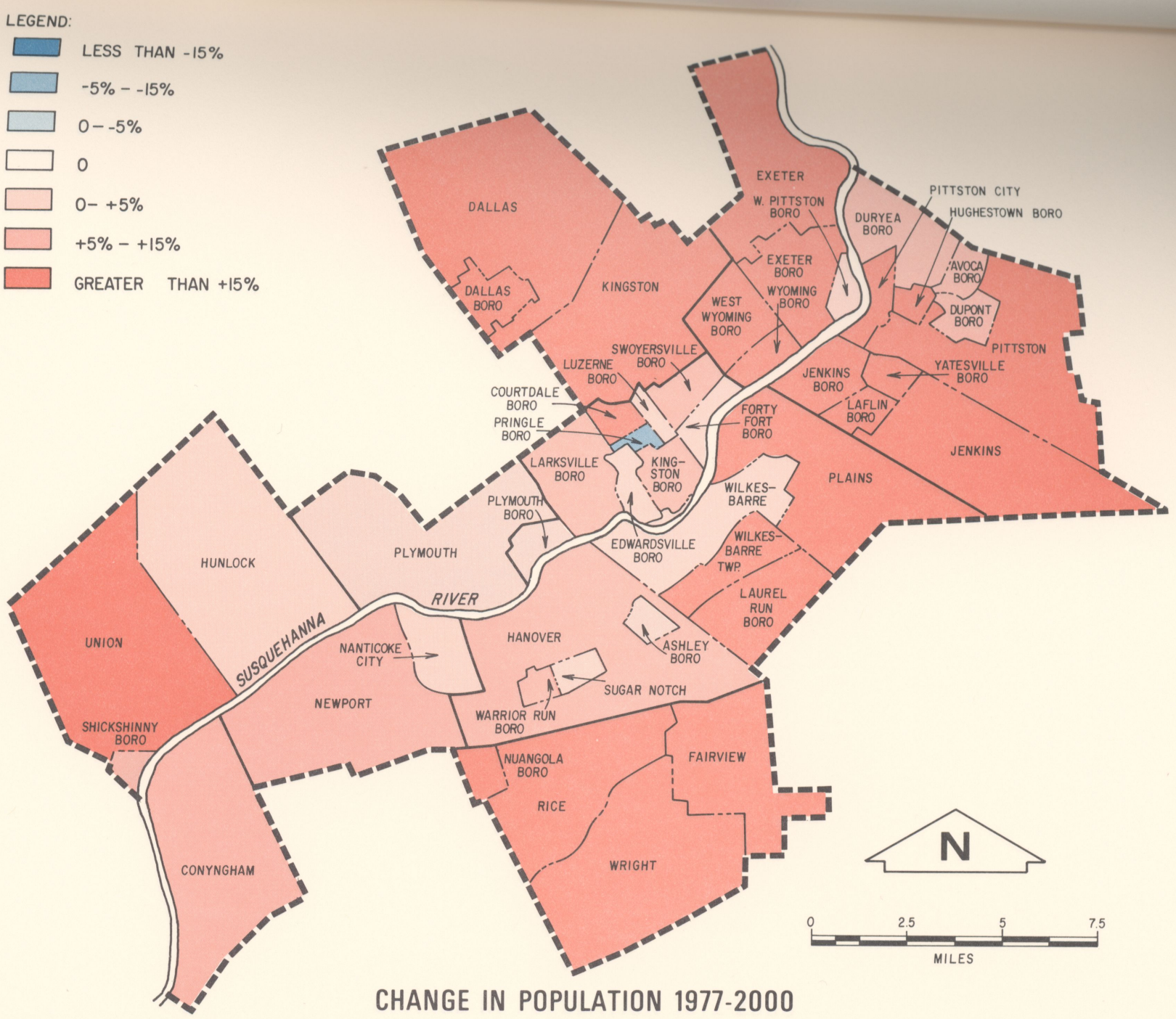
MUNICIPALITY	Sq. Miles	1970 Pop.	1970 Density	1972 Pop.	1972 Density	1977 Pop.	1977 Density	2000 Pop.	2000 Density
SHICKSHINNY AREA									
Conyngham Twp.	17.99	1,693	94	1,690	94	1,690	94	1,860	103
Hunlock Twp.	20.46	1,744	85	1,810	89	1,840	90	1,860	91
Shickshinny Boro	0.63	1,685	2,674	1,680	2,666	880	1,397	950	1,508
Union Twp.	17.32	1,219	70	1,340	77	1,580	91	2,440	141
Sub-Total	56.40	6,341	112	6,520	116	5,990	106	7,110	126
NANTICOKE AREA									
Nanticoke City	3.28	14,638	4,463	14,560	4,439	14,760	4,500	15,160	4,622
Newport Twp.	15.51	6,002	387	5,790	373	6,090	393	6,670	430
Plymouth Twp.	14.18	2,614	184	2,610	184	2,560	181	2,590	185
Sub-Total	32.97	23,254	705	22,960	696	23,410	710	24,420	741
WILKES-BARRE AREA									
Ashley Boro	.97	4,095	4,222	4,080	4,206	4,010	4,134	4,030	4,155
Courtdale Boro	.95	1,027	1,081	1,060	1,116	1,140	1,200	1,480	1,558
Edwardsville Boro	1.15	5,633	4,898	5,620	4,887	5,780	5,026	5,920	5,148
Forty Fort Boro	1.39	6,114	4,399	6,080	4,374	6,130	4,410	6,420	4,619
Hanover Twp.	19.05	12,102	635	12,230	642	15,000	787	16,800	882
Kingston Boro	2.23	18,325	8,217	17,930	8,040	17,950	8,049	18,970	8,507
Larksville Boro	4.73	3,937	832	3,900	826	4,020	850	4,250	899
Laurel Run Boro	6.26	327	52	360	58	400	64	610	97
Luzerne Boro	.66	4,504	6,824	4,420	6,697	4,500	6,818	4,600	6,970
Plains Twp.	13.72	11,481	837	11,100	809	12,390	903	15,000	1,093
Plymouth Boro	1.42	9,536	6,715	9,390	6,613	9,340	6,577	9,350	6,585
Pringle Boro	.52	1,155	2,221	1,150	2,212	1,050	2,019	990	1,904
Sugar Notch Boro	1.04	1,333	1,282	1,340	1,288	1,330	1,279	1,380	1,327
Swoyersville Boro	1.06	6,786	6,402	6,840	6,453	7,000	6,604	7,930	7,481
Warrior Run Boro	.71	816	1,149	820	1,155	820	1,155	880	1,239
Wilkes-Barre City	6.68	58,856	8,812	58,590	8,771	59,910	8,969	62,370	9,337
Wilkes-Barre Twp.	2.92	3,535	1,211	3,600	1,233	3,720	1,274	4,600	1,756
Sub-Total	65.46	149,562	2,285	148,510	2,269	154,490	2,360	165,580	2,529



CHANGE IN POPULATION 1972-1977

FIGURE 4

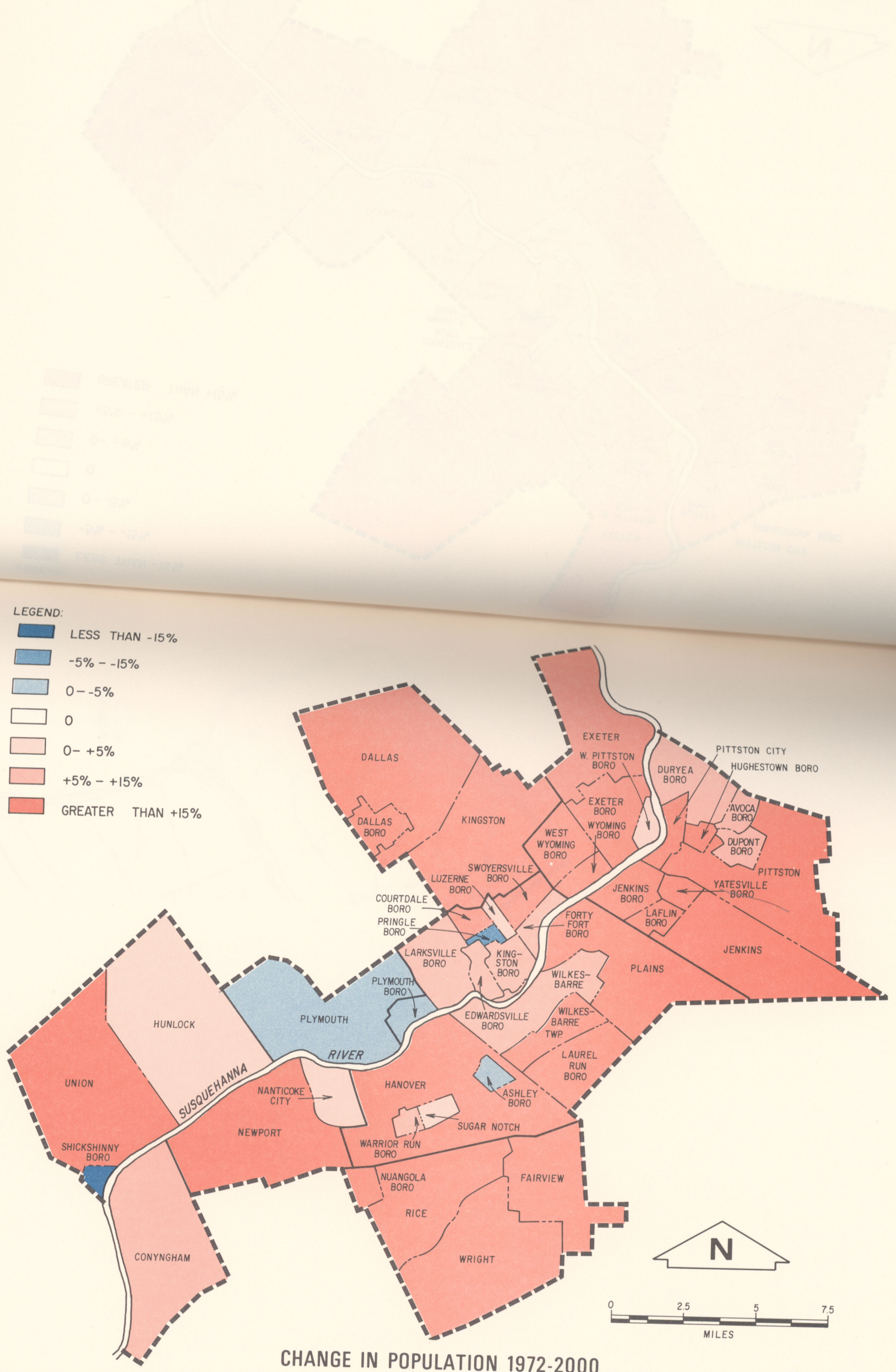
Wilbur Smith and Associates



CHANGE IN POPULATION 1977-2000

Wilbur Smith and Associates

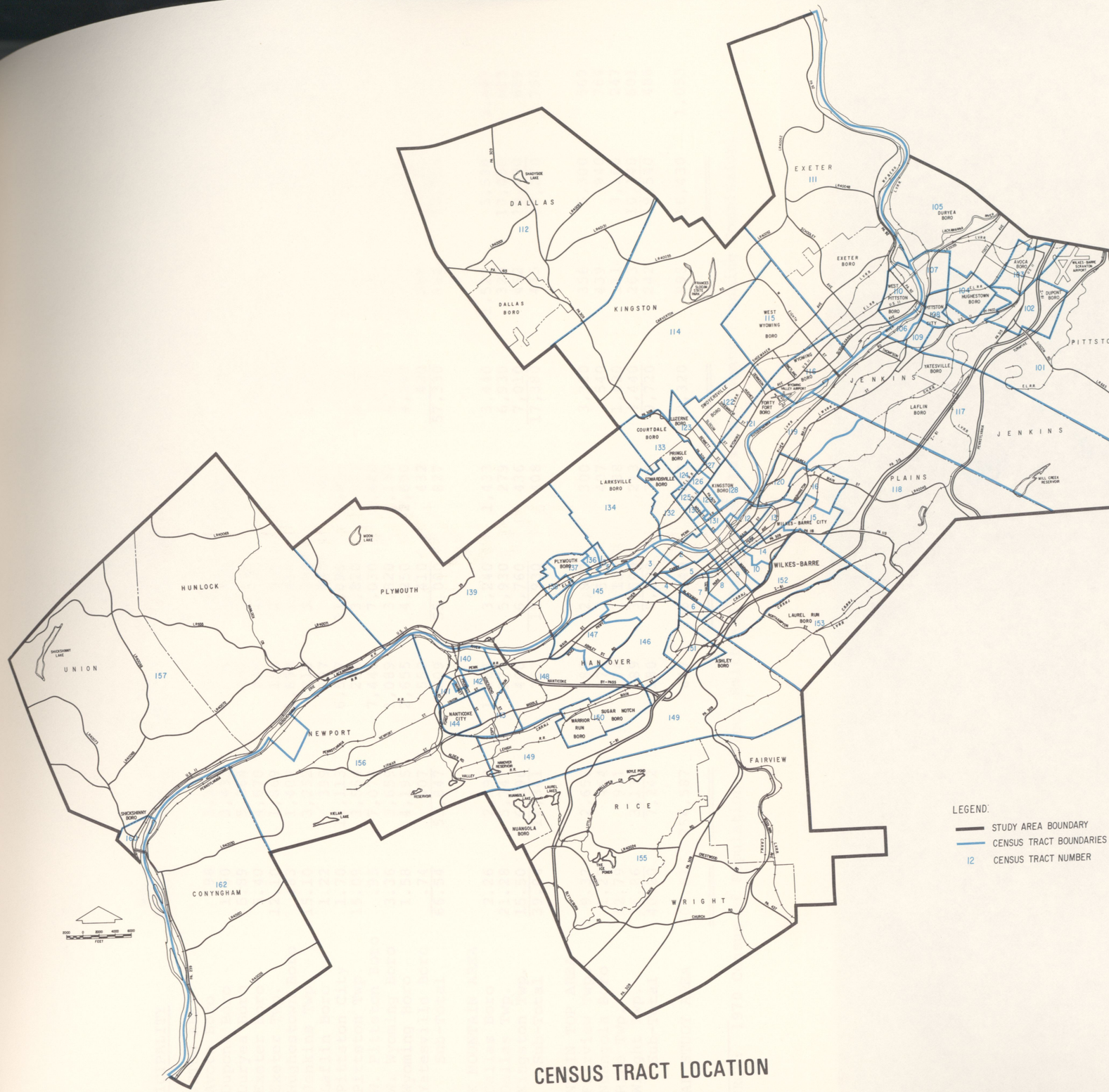
FIGURE 5



CHANGE IN POPULATION 1972-2000

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FIGURE 6



CENSUS TRACT LOCATION

FIGURE 7

Wilbur Smith and Associates

Table 9

DENSITY BY MUNICIPALITY (Con't)

MUNICIPALITY	Sq. Miles	1970 Pop.	1970 Density	1972 Pop.	1972 Density	1977 Pop.	1977 Density	2000 Pop.	2000 Density
PITTSTON AREA									
Avoca Boro	.98	3,543	3,615	3,560	3,633	3,600	3,673	3,920	4,000
Dupont Boro	1.60	3,431	2,144	3,470	2,169	3,450	2,156	3,800	2,375
Duryea Boro	5.89	5,264	894	5,490	932	5,610	952	5,980	1,015
Exeter Boro	5.40	4,670	865	4,720	874	5,000	926	5,800	1,074
Exeter Twp.	12.10	1,869	154	2,030	168	2,450	202	3,860	319
Hughestown Boro	.83	1,407	1,695	1,450	1,767	1,550	1,867	1,880	2,265
Jenkins Twp.	15.10	3,252	215	3,390	225	3,640	241	5,560	368
Laflin Boro	1.22	399	327	470	385	740	607	1,450	1,189
Pittston City	1.70	11,113	6,537	11,090	6,523	11,070	6,512	13,150	7,735
Pittston Twp.	15.09	3,564	236	3,820	253	4,240	281	6,380	423
W. Pittston Boro	.95	7,074	7,446	7,030	7,400	7,110	7,484	7,340	7,726
W. Wyoming Boro	3.36	3,659	1,089	3,820	1,137	4,160	1,238	5,620	1,673
Wyoming Boro	1.58	4,195	2,655	4,250	2,690	4,290	2,715	5,190	3,285
Yatesville Boro	.74	407	550	410	432	420	568	580	784
Sub-Total	66.54	53,847	809	55,000	827	57,330	862	70,510	1,060
BACK MOUNTAIN AREA									
Dallas Boro	2.26	2,398	1,061	3,240	1,433	3,440	1,522	5,530	2,447
Dallas Twp.	21.28	5,747	270	5,930	279	6,930	326	13,050	613
Kingston Twp.	15.50	6,196	400	6,760	436	7,010	452	10,690	689
Sub-Total	39.04	14,341	367	15,930	408	17,380	445	29,270	750
MOUNTAIN TOP AREA									
Fairview Twp.	9.32	2,658	285	2,800	300	3,320	356	5,300	569
Nuangola Boro	1.23	464	377	500	407	540	439	940	764
Rice Twp.	12.79	941	74	1,130	88	1,420	111	3,160	247
Wright Twp.	16.86	3,179	189	3,590	213	4,440	263	10,140	601
Sub-Total	40.20	7,242	180	8,020	200	9,720	242	19,540	486
TOTAL STUDY AREA	300.61	254,587	847	256,940	855	268,320	893	316,430	1,053

SOURCE: 1970 Census of Population; Wilbur Smith and Associates; Luzerne County Planning Commission.

The municipality with the greatest density within the Study Area is the City of Wilkes-Barre with a density of 8,771 persons per square mile, and an expected density of 9,337 persons per square mile by 2000, an increase of 6.5 percent.

The lowest density in 1972 is found in Laurel Run Borough where there are 58 persons per square mile and an expected density of 97 persons per square mile in the year 2000.

The lowest density in the year 2000 will be found in Hunlock Township with a projected 91 people for every square mile.

The greatest change in density between 1972 and 2000 is expected to take place in the four municipalities of the Mountain Top Community Area which would result in a density increase of 143 percent, from 200 persons per square mile in 1972 to 486 persons per square mile by 2000.

SUMMARY

For the past forty years Luzerne County has lost population, chiefly through out-migration. The out-migration of young people, and an increasing percentage of older residents has produced an aging population.

In projecting the population to the year 2000, decline or modest growth will mark those areas in the flood plain; however, substantial growth will be noted in the Back Mountain and Mountain Top areas.

The key to stabilizaion and increasing the county's population still rests on the ability to find suitable employment within Luzerne County.

CHAPTER 4

HOUSING ANALYSIS

The housing market is a haphazard, multi-faceted, and sometimes confusing combination of various public and private interests-yet somehow it works. What is unfortunate is that the process does not work for all persons. This is unfortunate, because housing embodies one of the basic needs of man, that of shelter. Apart from the primary function of housing as shelter, housing provides inputs to the total community system, places major requirements upon it and, in general, is a reflection of current values and conditions in our society.

Recognizing this, the U.S. Congress, in the Housing Act of 1954, called for ''a decent home and suitable living environment for every American family''.(1) This goal should be consistent with the basic objectives of any housing analysis.

GENERAL HOUSING FACTORS

It is significant that housing provides jobs in areas as diverse as raw materials, transportation, construction, home furnishings, and other retail services. Housing is also a major segment in our financial structure in terms of mortgages, interest rates, and the use of investment capital. Finally, in addition to being a major index of current financial conditions, housing forms a substantial portion of the tax base in any community.

As the major urban land user, housing imposes a variety of requirements upon a community. Besides general development policies, public services such as utilities, fire protection, police protection, educational and cultural facilities must be provided. Specific regulatory and enforcement vehicles such as housing codes, subdivision regulations, and zoning ordinances are also needed to insure sound and rational growth. Access must be provided, both locally and regionally, to places of work, shopping and recreation, and consideration should be given to the level of public transportation necessary to meet the needs of various segments of the population. Finally, the housing market must be evaluated in terms of current social values within our society. Apart from shelter, housing reflects different life style patterns with respect to needs, type, status, aesthetics, and mobility.

(1) United States Housing Act of 1954.

The housing stock of the Wyoming Valley is distinctively individualistic in several respects. (1) The majority of the present housing stock (82.3 percent) was built before 1939. (2) The majority of the units are one and two family dwellings with a very small percentage of the present stock being classified as apartments or multi-family units. (3) The amount of gross income allocated to housing and housing related items (lights, heat, water, etc.), 7.5 percent of gross income, is considerably lower than in the Commonwealth of Pennsylvania or in the United States as a whole. (4) There is a very recognizable void in the housing stock of units between $20,000 and $25,000. Since most new units cost above $30,000 when built and suitable older units are at a premium, young couples buying their first homes are caught in a very tight vise called a housing shortage. (5) Approximately 27,000 new units will have to be built during the next 28 years to meet the new demand. This would bring the total available units to a level of 111,590 units by the year 2000. At the present time, the number of builders and/or developers, while numerous, are generally small in scale averaging around 25 to 50 units per builder, built each year. New builders will have to be imported into the area to make up the deficit that now exists. The increased demand upon the construction industry will cause prices to increase and thereby raise the rents and housing construction costs to all time highs for the area. (6) Finally, a factor that will affect the present market is the uncorrelated mix that exists between housing size and persons per family. Many older homes exist where all the children have moved away and a two-person family is left with a large four bedroom house. To achieve the mix that would be correct, this two person family should move to a smaller unit and allow a family to occupy the unit that would most need the house.

Not every family will move to a smaller unit as their spacial needs decrease for a variety of reasons. The demand for these larger units would have to be met in a different way than the spacial filtering method.

The above housing factors are some of the problems that exist in the Wyoming Valley. The following sections will investigate each problem and in the final section offer recommendations as to possible implementative solutions.

HOUSING SUPPLY

The operation of any local or regional housing market is based on the interaction of supply and demand. The characteristics of available housing determine the extent to which requirements can be met. Through comparison of existing housing with housing needs, imperfections in the allocation of housing can be

identified and addressed. To approach this problem, it is first essential to examine trends and characteristics of the current housing supply.

The following sections identify and discuss the type of dwelling units included in local housing inventories. Trends in selected characteristics of the housing stock are investigated in terms of data available from the 1970 Census of Housing. Among the characteristics examined are number and types of housing unit, housing population, values and rents, and occupancy rates. The problems in defining and identifying substandard units are discussed along with trends in new residential construction based on building permits as issued since 1970.



DWELLING UNIT IDENTIFICATION

The two principal categories of dwelling units are single family and multi-family units. Within these categories are included a range of housing types and physical arrangements. While the location, density, and physical specifications of residential units are governed by jurisdictional development guides and regulatory instruments, there are certain characteristics common to each house type.

The single-family unit is the dominant form of residential construction in the Wyoming Valley as can be seen in Table 10; however, the two-family structure is the second most prevalent housing type consuming 23.2 percent of the total housing stock.

Table 10

1970 HOUSING

MUNICIPALITY	1 UNIT	2 UNITS	3 - 9 UNITS	10-49 UNITS	50+ UNITS	MOBILE HOME	TOTAL
SHICKSHINNY AREA							
Conyngham Twp.	442	138	47	7	0	6	640
Hunlock Twp.	456	20	19	0	0	25	520
Shickshinny Boro	364	124	112	4	0	4	608
Union Twp.	357	9	0	0	0	4	371
SUB-TOTAL	1,619	291	178	11	0	40	2,139
NANTICOKE AREA							
Nanticoke City	2,793	1,702	858	98	153	5	5,609
Newport Twp.	955	695	328	0	14	11	2,003
Plymouth Twp.	651	147	70	0	0	10	878
SUB-TOTAL	4,399	2,544	1,256	98	167	26	8,490
WILKES-BARRE AREA							
Ashley Boro	819	374	177	0	0	4	1,374
Courtdale Boro	264	58	0	0	0	5	327
Edwardsville Boro	954	618	388	130	6	4	2,100
Forty Fort Boro	1,380	507	234	0	0	0	2,121
Hanover Twp.	2,684	915	435	9	0	67	4,110
Kingston Boro	3,289	1,867	1,220	219	0	15	6,610
Larksville Boro	833	436	98	0	0	10	1,377
Laurel Run Boro	80	0	0	0	0	0	86
Luzerne Boro	922	436	247	0	6	0	1,605
Plains Twp.	2,044	1,162	264	11	0	84	3,565
Plymouth Boro	1,586	1,256	705	15	0	14	3,581
Pringle Boro	248	104	0	0	5	0	352
Sugar Notch Boro	200	201	28	0	0	0	429
Swoyersville Boro	1,744	252	129	0	0	9	2,134
Warrior Run Boro	175	125	6	0	0	0	306
Wilkes-Barre City	11,035	4,308	3,707	997	626	29	20,702
Wilkes-Barre Twp.	870	201	116	5	0	11	1,203
SUB-TOTAL	29,127	12,820	7,754	1,386	643	252	51,982

Table 10

1970 HOUSING (Con't)

MUNICIPALITY	1 UNIT	2 UNITS	3 - 9 UNITS	10-49 UNITS	50+ UNITS	MOBILE HOME	TOTAL
PITTSTON AREA							
Avoca Boro	829	234	61	0	0	8	1,132
Dupont Boro	812	149	140	0	0	27	1,128
Duryea Boro	1,218	470	68	8	0	16	1,780
Exeter Boro	1,012	271	126	21	0	36	1,466
Exeter Twp.	477	50	0	0	0	38	565
Hughestown Boro	365	63	0	4	0	9	441
Jenkins Twp.	795	158	44	23	0	12	1,032
Laflin Boro	79	31	0	0	0	0	110
Pittston City	2,064	1,138	417	30	0	4	3,653
Pittston Twp.	861	113	13	0	0	75	1,062
W. Pittston Boro	1,413	792	211	0	0	4	2,420
W. Wyoming Boro	925	149	42	0	0	30	1,146
Wyoming Boro	969	304	189	0	0	11	1,473
Yatesville Boro	105	9	0	0	0	0	114
SUB-TOTAL	11,924	3,931	1,311	86	0	270	17,522
BACK MOUNTAIN AREA							
Dallas Boro	661	98	30	0	0	0	789
Dallas Twp.	1,463	51	6	0	0	113	1,633
Kingston Twp.	1,647	79	153	0	0	4	1,883
SUB-TOTAL	3,771	229	190	0	0	117	4,305
MOUNTAIN TOP AREA							
Fairview Twp.	665	66	81	0	0	0	812
Nuangola Boro	138	5	0	0	0	9	152
Rice Twp.	231	10	6	0	0	20	267
Wright Twp.	796	35	0	40	0	54	925
SUB-TOTAL	1,830	116	87	40	0	83	2,156

SOURCE: 1970 Census of Housing.

Single family housing accounts for 63.8 percent of the housing stock. Single family units include conventionally constructed dwellings, mobile homes, and prefabricated units. Depending upon local requirements, single family dwellings may assume a variety of densities and patterns and may have several different relationships to surrounding land uses. These different uses will be investigated further in the land use and development controls sections.

Multiple-family dwellings, which range from duplexes to high rise apartments, provide a greater use of residential land. The units might be arranged in many different patterns, unit sizes, and numbers within the same development.

There are five basic types of multiple-unit dwellings: two-family or duplexes, row houses, townhouses, garden apartments, and multi-story apartments. The duplex is a two-family residential structure, with units arranged either one above the other or side by side. Row houses are attached, single family, one story units. Townhouses, while similar, are two or three story single family attached or semi-detached units having common facades with common side walls. These units may have any number in a line, however, the average number of units per building is six to eight. Garden apartments are buildings containing four apartment units or more, with at least two stories but no more than 5 stories per building. Each building is separated by open space with a maximum of 25 percent of the total site being occupied by buildings. Multi-storied or high rise apartment buildings are more than five stories with an elevator serving the different floors.

Housing may be occupied under private ownership or on a rental basis. Rental housing may be owned and operated by private property owners or managers, by limited dividend corporations, non-profit corporations, or by public housing authorities. Cooperative housing consists of a series of single or multi-family units in which ownership and operating costs are shared by the occupants. Condominium housing differs in that the occupants purchase specific units in a multiple unit structure or complex.

TRENDS IN SELECTED CHARACTERISTICS

The changes and trends in the housing stock of the Wyoming Valley are presented in this section. The Study Area gained 2,671 units between 1960 and 1970, a gain of 3.4 percent. This increase in housing took place at the same time the Study Area population decreased by 3.3 percent. The increase in housing units can be explained by the fact that the number of people per

occupied unit declined from 3.2 persons per occupied unit to 3.0 persons per occupied unit.

Twenty-nine out of a total of 73 census tracts within the Study Area declined in housing units between 1960 and 1970. The census tracts containing declines of five percent or more (see Table 11), a yearly rate of decline of .5 percent, are as follows:

Tract 5 - Wilkes-Barre City
Tract 8 - Wilkes-Barre City
Tract 104 - Hughestown Borough
Tract 106 - Pittston City
Tract 108 - Pittston City
Tract 135 - Plymouth Borough
Tract 139 - Plymouth Township
Tract 141 - Nanticoke City
Tract 149 - Hanover Township
Tract 150 - Warrior Run and Sugar Notch Boroughs
Tract 152 - Wilkes-Barre Township
Tract 153 - Laurel Run Borough

Those census tracts with an increase greater than ten percent (one percent increase per year) are as follows:

Tract 3 - Wilkes-Barre City
Tract 6 - Wilkes-Barre City
Tract 9 - Wilkes-Barre City
Tract 107 - Pittston City
Tract 110 - West Pittston Borough
Tract 114 - Kingston Township
Tract 115 - West Wyoming Borough
Tract 118 - Plains Township
Tract 119 - Plains Township
Tract 126 - Kingston Borough
Tract 128 - Kingston Borough
Tract 144 - Nanticoke City
Tract 147 - Hanover Township
Tract 148 - Hanover Township
Tract 155 - Fairview, Rice, Wright Townships, Nuangola Borough

As shown in Table 11, 1972 showed a sharper increase in housing units than had the preceding ten years. The average annual percent of increase between 1960 and 1970 was .34, whereas, between 1970 and 1972 the percentage had increased to .75 percent increase per year, for a total of 3,442 new housing units. While the Study Area, as a whole grew, there were still several municipalities that experienced a decline in dwelling units. The census

Table 11

OCCUPIED HOUSING BY CENSUS TRACTS

(1960-1972)

Municipalities	Census Tracts	1960	1970	Amount of Change 1960-1970	Percent Change 1960-1970	1972*	Amount of Change 1970-1972	Percent Change 1970-1972
Wilkes-Barre City	1	1,405	1,349	- 56	- 4.0	1,340	- 9	- 0.6
	2	1,591	1,697	+106	+ 6.7	1,730	+ 33	+ 1.9
	3	708	874	+166	+23.5	910	+ 36	+ 4.1
	4	1,343	1,292	- 51	- 3.8	1,280	- 12	- 0.9
	5	1,999	1,651	-348	-17.4	1,570	- 81	- 4.9
	6	1,013	1,118	+105	+10.4	1,150	+ 32	+ 2.8
	7	1,613	1,619	+ 6	+ 0.4	1,620	+ 1	+ 0.1
	8	1,529	1,406	-123	- 8.0	1,370	- 36	- 2.5
	9	1,710	1,896	+186	+10.9	1,940	+ 44	+ 2.3
	10	1,014	985	- 29	- 2.8	980	- 5	- 0.5
	11	655	641	- 14	- 2.1	630	- 11	- 1.7
	12	921	983	+ 62	+ 6.7	1,000	+ 17	+ 1.7
	13	1,082	1,057	- 25	- 2.3	1,050	- 7	- 0.6
	14	1,047	1,074	+ 27	+ 2.5	1,080	+ 6	+ 0.5
	15	1,055	1,047	- 8	- 0.7	1,040	- 7	- 0.6
	16	1,074	1,153	+ 99	+ 9.2	1,170	+ 17	+ 1.4
		19,759	19,842	+ 83	+ 0.4	19,860	+ 18	+ 0.1
Pittston Twp.	101	801	817	+ 16	+ 1.9	1,080	+263	+32.2
Dupont Boro	102	1,038	1,093	+ 55	+ 5.3	1,100	+ 7	+ 0.6
Avoca Boro	103	1,009	1,097	+ 88	+ 8.7	1,120	+ 23	+ 2.1
Hughestown Boro	104	456	420	- 36	- 7.9	420	0	0
Duryea Boro	105	1,679	1,731	+ 52	+ 3.1	1,790	+ 59	+ 3.4
Pittston City	106	638	556	- 82	-12.8	540	- 16	- 2.8
	107	630	713	+ 83	+13.2	740	+ 27	+ 3.7
	108	1,531	1,406	-125	- 8.2	1,390	- 16	- 1.1
	109	821	835	+ 14	+ 1.7	840	+ 5	+ 0.5
		3,620	3,510	-110	- 3.0	3,510	0	0
W. Pittston Boro	110	2,190	2,356	+166	+21.7	2,390	+ 34	+ 1.4
Exeter Boro Exeter Twp.	111	1,841	2,012	+171	+ 9.3	2,050	+ 38	+ 1.8
Dallas Boro Dallas Twp.	112 part	(a)	2,697	---	---	2,830	+133	+ 4.9
Kingston Twp.	114	1,609	1,843	+234	+14.5	1,880	+ 37	+ 2.0
W. Wyoming Boro	115	918	1,127	+209	+22.8	1,170	+ 43	+ 3.8
Wyoming Boro	116	1,289	1,429	+140	+ 1.1	1,460	+ 31	+ 2.1
Laflin Boro Jenkins Twp. Yatesville Boro	117	1,157	1,225	+ 68	+ 5.9	1,240	+ 15	+ 1.2
Plains Twp.	118	961	1,102	+141	+14.7	1,140	+ 38	+ 3.4
	119	1,215	1,437	+223	+18.3	1,490	+ 53	+ 3.6
	120	905	913	+ 8	+ 0.9	920	+ 7	+ 0.7
		3,081	3,452	+371	+12.0	3,550	+ 98	+ 2.8
Forty Fort Boro	121	2,023	2,074	+ 51	+ 2.5	2,120	+ 46	+ 2.2
Swoyersville Boro	122	1,970	2,076	+106	+ 5.4	2,100	+ 24	+ 1.1
Luzerne Boro	123	1,595	1,525	- 70	- 4.4	1,530	+ 5	+ 0.3
Kingston Boro	124	746	716	- 30	- 4.0	700	- 16	- 2.2
	125	558	546	- 12	- 2.2	540	- 6	- 1.0
	126	674	498	+176	+26.1	510	+ 12	+ 2.4
	127	748	725	- 23	- 3.1	710	- 15	- 2.0
	128	1,289	1,470	+181	+14.0	1,490	+ 20	+ 1.3
	129	746	781	+ 35	+ 4.7	790	+ 9	+ 1.1
	130	927	905	- 22	- 2.4	890	- 15	- 1.6
	131	813	830	+ 17	+ 2.1	830	0	0.0
		6,501	6,471	- 30	- 0.5	6,460	- 11	- 0.1
Edwardsville Boro	132	1,815	2,006	+191	+10.5	2,110	+104	+ 5.1
Courtdale Boro Pringle Boro	133	646	679	+ 33	+ 5.1	720	+ 41	+ 6.0

* Pre-flood
(a) Dallas Boro formed in 1968.

Table 11

OCCUPIED HOUSING BY CENSUS TRACTS (Cont'd)

(1960-1972)

Municipalities	Census Tracts	1960	1970	Amount of Change 1960-1970	Percent Change 1960-1970	1972*	Amount of Change 1970-1972	Percent Change 1970-1972
Larksville Boro	134	1,327	1,275	- 52	- 3.9	1,220	- 55	- 4.3
Plymouth Boro	135	716	651	- 65	- 9.1	640	- 11	- 1.6
	136	656	729	+ 73	+11.1	750	+ 21	+ 2.8
	137	1,203	1,236	+ 33	+ 2.7	1,240	+ 4	+ 0.3
	138	836	820	- 16	- 1.9	820	0	0.0
		3,411	3,436	+ 25	+ 0.7	3,450	+ 14	+ 0.4
Plymouth Twp.	139	859	781	- 78	- 9.1	830	+ 49	+ 6.2
Nanticoke City	140	910	875	- 35	- 3.8	870	- 5	- 0.5
	141	1,476	1,401	- 75	- 5.1	1,380	- 21	- 1.4
	142	1,294	1,264	- 30	- 2.3	1,250	- 14	- 1.1
	143	932	928	- 4	- 0.4	920	- 8	- 0.8
	144	743	861	+118	+15.9	880	+ 19	+ 2.2
		5,355	5,329	- 26	- 0.5	5,300	- 29	- 0.5
Hanover Twp.	145	843	874	+ 31	+ 3.7	880	+ 6	+ 0.6
	146	1,390	1,451	+ 61	+ 4.4	1,460	+ 9	+ 0.4
	147	711	785	+ 74	+10.4	790	+ 5	+ 0.6
	148	387	762	+375	+96.9	840	+ 78	+10.2
	149	620	150	-470	-75.8	70	- 80	-53.3
		3,951	4,022	+ 71	+ 1.8	4,040	+ 18	+ 0.4
Warrior Run Boro Sugar Notch Boro	150	710	671	- 39	- 5.5	670	- 1	- 0.1
Ashley Boro	151	1,280	1,327	+ 47	+ 3.7	1,370	+ 43	+ 3.2
Wilkes-Barre Twp.	152	1,261	1,150	-111	- 8.8	1,150	0	0.0
Laurel Run Boro	153 part	313	114	-199	-63.6	100	- 14	-12.3
Fairview Twp. Nuangola Boro Rice Twp. Wright Twp.	155 part	1,819	3,078	+1,259	+63.6	3,310	+232	+ 7.5
Newport Twp.	156	2,001	1,914	- 87	- 4.3	1,930	+ 16	+ 0.8
Hunlock Twp. Union Twp.	157	834	902	+ 68	+ 8.2	920	+ 18	+ 1.9
Shickshinny Boro	160	580	584	+ 4	+ 0.7	580	- 4	- 0.6
Conyngham Twp.	162	580	581	+ 1	+ 0.2	590	+ 9	+ 1.5
STUDY AREA TOTAL		79,278(1)	81,949(1) 84,646(2)	+2,671	+ 3.4	85,950(2)	+1,304	+ 1.5

(1) Does not include Dallas Boro or Dallas Twp.
(2) Includes Dallas Boro and Dallas Twp.
* Pre-flood

SOURCE: 1960 Census of Housing.
1970 Census of Housing.
Wilbur Smith and Associates.

tracts that are estimated to have a .5 percent yearly rate of decline between 1970 and 1972 are as follows:

Tract 5 - Wilkes-Barre City
Tract 8 - Wilkes-Barre City
Tract 11 - Wilkes-Barre City
Tract 106 - Pittston City
Tract 108 - Pittston City
Tract 124 - Kingston Borough
Tract 125 - Kingston Borough
Tract 127 - Kingston Borough
Tract 130 - Kingston Borough
Tract 134 - Larksville Borough
Tract 141 - Nanticoke City
Tract 142 - Nanticoke City
Tract 148 - Hanover Township
Tract 153 - Laurel Run Borough

The census tracts that are estimated to have an increase greater than one percent per year are as follows:

Tract 3 - Wilkes-Barre City
Tract 6 - Wilkes-Barre City
Tract 9 - Wilkes-Barre City
Tract 101 - Pittston Township
Tract 103 - Avoca Borough
Tract 105 - Duryea Borough
Tract 107 - Pittston City
Tract 112 - Dallas Borough and Township
Tract 115 - West Wyoming Borough
Tract 116 - Wyoming Borough
Tract 118 - Plains Township
Tract 119 - Plains Township
Tract 121 - Forty Fort Borough
Tract 126 - Kingston Borough
Tract 132 - Edwardsville Borough
Tract 133 - Courtdale and Pringle Borough
Tract 136 - Plymouth Borough
Tract 139 - Plymouth Borough
Tract 144 - Nanticoke City
Tract 148 - Hanover Township
Tract 151 - Ashley Borough
Tract 155 - Fairview, Rice and Wright Townships and Nuangola Borough

FUTURE HOUSING SUPPLY

The future supply of housing is a combination of several elements. As the population of a municipality or a region

grows, more and more housing units will be needed. The future supply would include these new units. The supply would also reflect any units demolished due to age, condition, or environmental reasons (subsidence, mine water, gas, flooding, etc.). Units demolished due to future road construction or urban renewal would also be subtracted from the future stock.



As Table 12 shows, there were 83,460 total units estimated in the past flood of 1972. This figure deletes those flood damaged units that will be demolished before 1977. Wilbur Smith and Associates project 94,000 occupied and vacant units by 1977. This represents an increase of 10,540 units in the next five years, an annual rate of 2.5 percent per year increase. The areas with the greatest projected increase in housing units within the next five years will be Plains, Rice, Kingston and Dallas Townships, all will be increasing at a rate greater than two percent per year. By the year 2000, the housing supply will reach 111,590 units, an increase of 28,130 units in a 30 year period. This number equates to a supply of approximately 2.6 new units being occupied every day, seven days a week, for the next 30 years.

POPULATION IN HOUSING UNITS

The population per occupied housing unit is presented in Table 13 for each municipality. The total population for the Study Area in 1970 was 254,587 for an average of 3.0 persons per occupied unit. The average number of people per unit in 1960 was 3.2. In 1972, a further decline was evident to a level of 2.9. This decrease is attributed to the high age level of the Valley,

Table 12

WYOMING VALLEY TOTAL HOUSING SUPPLY (1970 - 2000)

MUNICIPALITIES	Total 1970 Units	1972 Pre-Flood	Houses Destroyed By Flood	Houses Acquired For Urban Renewal	1972[1] Post Flood	Total 1977 Units	Units To Be Built	Total 2000 Units	Units To[2] Be Built
SHICKSHINNY AREA									
Conyngham Twp.	640	650	10		640	640	0	740	100
Hunlock Twp.	530	560			560	600	40	650	50
Shickshinny Boro	608	610	15	245	350	350	0	340	-10
Union Twp.	395	450			450	510	60	800	290
NANTICOKE AREA									
Nanticoke City	5,609	5,580		80	5,500	5,880	380	6,270	390
Newport Twp.	2,003	2,030			2,030	2,150	120	2,330	180
Plymouth Twp.	878	860	5	195	660	890	230	900	10
WILKES-BARRE AREA									
Ashley Boro	1,374	1,370			1,370	1,410	40	1,420	10
Courtdale Boro	335	360			360	400	40	510	110
Edwardsville Boro	2,100	2,100	10	50	2,040	2,240	200	2,220	-20
Forty Fort Boro	2,121	2,070	200	120	1,750	2,140	390	2,110	-30
Hanover Twp.	4,110	4,320	70	450	3,800	5,260	1,460	5,690	430
Kingston Boro	6,614	6,550	150	750	5,650	6,300	650	7,100	800
Larksville Boro	1,380	1,310			1,310	1,810	500	1,890	80
Laurel Run Boro	86	100			100	140	40	190	50
Luzerne Boro	1,605	1,550		50	1,500	1,580	80	1,610	30
Plains Twp.	3,565	3,450		20	3,430	3,580	150	5,250	1,670
Plymouth Boro	3,581	3,500	10	250	3,240	3,490	250	3,780	290
Pringle Boro	352	360			360	350	-10	350	0
Sugar Notch Boro	429	450			450	430	-20	470	40
Swoyersville Boro	2,138	2,190	30	280	1,880	2,300	420	2,600	300
Warrior Run Boro	306	300			300	300	0	350	50
Wilkes-Barre City	20,705	20,620	310	1,000	19,310	20,970	1,660	22,580	1,610
Wilkes-Barre Twp.	1,203	1,250			1,250	1,320	70	1,550	230
PITTSTON AREA									
Avoca Boro	1,132	1,150			1,150	1,220	70	1,320	100
Dupont Boro	1,128	1,160			1,160	1,200	40	1,330	130
Duryea Boro	1,780	1,840			1,840	1,970	130	2,160	190
Exeter Boro	1,474	1,480			1,480	1,640	160	1,900	260
Exeter Twp.	575	640			640	900	260	1,270	370
Hughestown Boro	441	450			450	500	50	620	120
Jenkins Twp.	1,032	1,070			1,070	1,320	250	1,830	510
Laflin Boro	110	130			130	250	120	450	200
Pittston City	3,653	3,650			3,650	3,730	80	4,450	720
Pittston Twp.	1,062	1,120			1,120	1,520	400	2,090	570
W. Pittston Boro	2,420	2,450	50	10	2,390	2,590	200	2,660	70
W. Wyoming Boro	1,150	1,190		10	1,180	1,500	320	1,900	400
Wyoming Boro	1,473	1,500	20	20	1,460	1,560	100	1,880	320
Yatesville Boro	114	120			120	150	30	190	40
BACK MOUNTAIN AREA									
Dallas Boro	793	1,070			1,070	1,320	250	1,930	610
Dallas Twp.	1,651	1,700			1,700	2,160	460	4,030	1,870
Kingston Twp.	1,883	2,090			2,090	2,300	210	3,510	1,210
MOUNTAIN TOP AREA									
Fairview Twp.	816	840			840	1,070	230	1,590	620
Nuangola Boro	164	180			180	220	40	340	120
Rice Twp.	292	350			350	460	110	1,010	550
Wright Twp.	938	1,100			1,100	1,380	280	3,330	1,950
TOTAL STUDY AREA	86,748	87,870	880	3,530	83,460	94,000	10,540	111,590	17,590

(1) Does not include HUD Trailers, Urban Renewal demolitions are assumed to have occurred.
(2) Does not include Replacement Housing.

SOURCE: 1970 Census of Housing.
Economic Development Council of Northeastern Pennsylvania.
Luzerne County Planning Commission.
Wilbur Smith and Associates.

Table 13

OCCUPIED HOUSING UNITS 1960-2000

Municipalities	Number of Occupied Units					People Per Occupied Unit				
	1960	1970	1972	1977	2000	1960	1970	1972	1977	2000
SHICKSHINNY AREA										
Conyngham Twp.	580	583	590	600	700	3.1	2.9	2.9	2.8	2.7
Hunlock Twp.	608	504	530	560	620	3.4	3.5	3.4	3.3	3.0
Shickshinny Boro	580	591	590	300	320	3.2	2.9	2.8	2.9	3.0
Union Twp.	226	348	400	480	760	3.4	3.5	3.4	3.3	3.2
NANTICOKE AREA										
Nanticoke City	5,355	5,332	5,300	5,600	5,970	2.9	2.7	2.7	2.6	2.5
Newport Twp.	2,001	1,906	1,930	2,040	2,220	3.5	3.1	3.0	3.0	3.0
Plymouth Twp.	859	844	830	850	860	3.2	3.1	3.1	3.0	3.0
WILKES-BARRE AREA										
Ashley Boro	1,280	1,327	1,320	1,340	1,350	3.3	3.1	3.1	3.0	3.0
Courtdale Boro	241	310	330	360	490	3.5	3.3	3.2	3.2	3.0
Edwardsville Boro	1,815	2,006	2,010	1,990	2,110	3.1	2.8	2.9	2.9	2.8
Forty Fort Boro	2,023	2,079	2,030	2,040	2,010	3.2	2.9	3.0	3.0	3.2
Hanover Twp.	3,951	4,007	4,220	5,000	5,420	3.2	3.0	2.9	3.0	3.1
Kingston Boro	6,501	6,469	6,400	6,650	7,760	3.1	2.8	2.8	2.7	2.5
Larksville Boro	1,327	1,294	1,220	1,260	1,420	3.3	3.0	3.2	3.2	3.0
Laurel Run Boro	313	86	100	110	180	2.7	3.8	3.6	3.5	3.3
Luzerne Boro	1,595	1,527	1,470	1,500	1,530	3.2	2.9	3.0	3.0	3.0
Plains Twp.	3,081	3,472	3,360	4,000	5,000	3.6	3.3	3.3	3.1	3.0
Plymouth Boro	3,411	3,435	3,350	3,160	3,600	3.0	2.8	2.8	2.7	2.6
Pringle Boro	405	341	350	330	330	3.5	3.4	3.3	3.2	3.0
Sugar Notch Boro	459	390	410	400	450	3.3	3.4	3.3	3.3	3.1
Swoyersville Boro	1,970	2,086	2,140	2,190	2,480	3.4	3.3	3.2	3.2	3.2
Warrior Run Boro	251	276	270	280	330	3.3	3.0	3.0	2.9	2.7
Wilkes-Barre City	19,759	19,861	19,530	19,970	21,500	3.3	3.0	3.0	3.0	2.9
Wilkes-Barre Twp.	1,261	1,155	1,200	1,240	1,480	3.4	3.1	3.0	3.0	3.1
PITTSTON AREA										
Avoca Boro	1,009	1,100	1,120	1,160	1,260	3.5	3.2	3.2	3.1	3.1
Dupont Boro	1,038	1,093	1,120	1,120	1,270	3.5	3.1	3.1	3.1	3.0
Duryea Boro	1,679	1,730	1,790	1,810	2,060	3.4	3.0	3.1	3.1	2.9
Exeter Boro	1,354	1,451	1,460	1,560	1,810	3.5	3.2	3.2	3.2	3.2
Exeter Twp.	487	534	600	740	1,210	2.7	3.5	3.4	3.3	3.2
Hughestown Boro	456	420	430	470	590	3.5	3.4	3.4	3.3	3.2
Jenkins Twp.	961	991	1,030	1,140	1,740	3.6	3.3	3.3	3.2	3.2
Laflin Boro	66	96	120	210	430	3.6	4.1	3.9	3.6	3.4
Pittston City	3,620	3,514	3,510	3,460	4,240	3.4	3.2	3.2	3.2	3.1
Pittston Twp.	801	1,022	1,080	1,250	1,990	3.7	3.5	3.5	3.4	3.2
W. Pittston Boro	2,190	2,357	2,390	2,450	2,530	3.2	3.0	2.9	2.9	2.9
W. Wyoming Boro	918	1,121	1,160	1,340	1,810	3.5	3.3	3.3	3.1	3.1
Wyoming Boro	1,289	1,431	1,460	1,480	1,790	3.2	2.9	2.9	2.9	2.9
Yatesville Boro	130	114	120	130	180	3.6	3.6	3.4	3.3	3.2
BACK MOUNTAIN AREA										
Dallas Boro	743	769	1,050	1,150	1,840	3.0	3.1	3.1	3.0	3.0
Dallas Twp.	1,225	1,596	1,650	2,040	3,840	3.6	3.6	3.6	3.4	3.4
Kingston Twp.	1,609	1,844	2,050	2,190	3,340	3.4	3.4	3.3	3.2	3.2
MOUNTAIN TOP AREA										
Fairview Twp.	624	792	820	1,010	1,610	3.3	3.4	3.4	3.3	3.3
Nuangola Boro	108	144	160	180	320	3.2	3.2	3.1	3.0	2.9
Rice Twp.	174	255	310	410	960	3.7	3.7	3.6	3.5	3.3
Wright Twp.	474	871	1,030	1,310	3,170	3.0	3.6	3.5	3.4	3.2
TOTALS	80,807	83,474	84,340	88,860	166,880	3.3	3.1	3.0	3.0	3.2

SOURCE: 1. 1960 Census of Housing
2. 1970 Census of Housing
3. Economic Development Commission of Northeast Pennsylvania
4. Luzerne County Planning Department
5. Wilbur Smith and Associates

Table 14

HOUSING AGE
1970

Municipality	1960-1970	1950-1959	1940-1949	1939 & Before
SHICKSHINNY AREA				
Conyngham Twp.	35	39	27	482
Hunlock Twp.	87	54	54	309
Shickshinny Boro	8	21	14	548
Union Twp.	39	25	15	269
SUB-TOTAL	169	139	110	1,608
NANTICOKE AREA				
Nanticoke City	394	74	159	4,705
Newport Twp.	67	72	74	1,693
Plymouth Twp.	61	48	74	661
SUB-TOTAL	522	194	307	7,059
WILKES-BARRE AREA				
Ashley Boro	19	25	42	1,241
Coutrdale Boro	69	27	20	194
Edwardsville Boro	299	33	59	1,615
Forty Fort Boro	53	215	159	1,652
Hanover Twp.	255	185	167	3,400
Kingston Boro	238	469	502	5,259
Larksville Boro	40	48	23	1,183
Laurel Run Boro	23	9	0	54
Luzerne Boro	11	45	47	1,424
Plains Twp.	331	152	98	2,891
Plymouth Boro	45	48	48	3,294
Pringle Boro	19	25	5	292
Sugar Notch Boro	11	6	6	367
Swoyersville Boro	190	191	129	1,576
Warrior Run Boro	0	0	0	276
Wilkes-Barre City	868	467	635	17,891
Wilkes-Barre Twp.	78	22	19	1,036
SUB-TOTAL	2,549	1,967	1,959	43,648
PITTSTON AREA				
Avoca Boro	77	28	35	960
Dupont Boro	125	104	42	822
Duryea Boro	119	48	33	1,530
Exeter Boro	197	174	59	1,021
Exeter Twp.	115	59	63	297
Hughestown Boro	69	0	27	324

Table 14 (Cont'd)

HOUSING AGE
1970

Municipality	1960-1970	1950-1959	1940-1949	1939 & Before
PITTSTON AREA (Cont'd)				
Jenkins Twp.	124	25	43	799
Laflin Boro	0	0	0	96
Pittston City	225	71	81	3,137
Pittston Twp.	196	131	71	624
W. Pittston Boro	71	110	68	2,108
W. Wyoming Boro	207	169	119	626
Wyoming Boro	127	121	104	1,079
Yatesville Boro	23	0	0	91
SUB-TOTAL	1,675	1,040	745	13,514
BACK MOUNTAIN AREA				
Dallas Boro	86	186	125	372
Dallas Twp.	366	377	143	710
Kingston Twp.	275	322	224	1,023
SUB-TOTAL	727	885	492	2,105
MOUNTAIN TOP AREA				
Fairview Twp.	150	242	69	331
Nuangola Boro	19	19	18	88
Rice Twp.	56	32	37	130
Wright Twp.	413	146	106	206
SUB-TOTAL	638	439	230	755
STUDY AREA TOTAL	6,280	4,664	3,843	68,689

Note: Totals represent number of units built during each decade that are still standing in 1970.

SOURCE: 1970 Census of Housing - 4th Count, Age of Structures

indicating that there are fewer children living at home now than there were twelve years ago.

OCCUPANCY

13. There were 85,383 occupied units in the Study Area in 1970, an increase of 4.2 percent in ten years. Total occupied units by municipality are presented in Table the census, a 2.5 percent increase has taken place, an annual rate of increase of 1.3 percent between 1970 and 1972 compared with an annual rate of increase of .42 percent between 1960 and 1970. In the two years since a total occupied housing level of 88,860 units, an annual increase of .64 percent per year. An increase of 3.2 percent is expected by 1977 reaching that there will be 106,880 occupied units in the Wyoming Valley. This number would represent a 27.7 percent increase in a 30 year period, an annual increase of approximately .9 percent per year. By the year 2000, it is expected The population during the same period of time increased at a rate of .84 percent per year. The highest growth rate will be in Dallas Township where a growth of 177.8 percent is projected to take place in the next 30 years, an annual rate of 5.9 percent per year. The next highest growth area will be located in Rice Township where a growth of 143 percent is projected, an annual rate of 4.8 percent per year.

The municipality with the highest number of people per occupied unit is Pittston Township. Fairview Township, by contrast, has the lowest.

HOUSING AGE

The most unique factor within the Wyoming Valley housing supply is the average age of the unit as described in Table 14. Approximately 82.3 percent of the total housing stock was built before 1940. This figure is uncommonly high when compared with other metropolitan areas in the state and on the East Coast.

Table 15
AGE OF STRUCTURE
(percent built before 1940)

Study Area	82.3
Philadelphia, Pa.	51.4
Pittsburgh, Pa.	54.4
Harrisburg, Pa.	49.6
Washington, D.C.	21.6
Baltimore, Md.	39.6

In the future, the percent of units built before 1940 should decrease for two reasons, (1) the older units will be among those to be demolished because of urban renewal and (2) as more new housing comes into the area, the percent of older homes will decrease as a part of the total housing supply.





VALUES AND RENTS

The value of housing, the average and median contract rent and the median family income is presented in Table 16.

Values - The median housing value for Luzerne County was $10,700 in 1970. Fifty-five of the 73 census tracts within the Study Area had median housing values below that of the County. The areas of densest population do not coincide with the areas of either the highest or lowest housing values, moreover, housing values do not coincide with any particular areas. While the growth areas are above the County median, the highest areas of median housing value are located in Kingston Borough. There are only two census tracts that equal the County median. They are Tract 118, Plains Township, and Tract 146, Hanover Township.

In the future, the housing values should increase for two reasons, (1) the number of new houses in the area will increase more over the next ten years than they have in the past 20 years, and (2) the costs of these new units will be at least double that of the present median and in many cases will be more than three times as high.

Table 16

HOUSING VALUE, AVERAGE CONTRACT RENT, MEDIAN FAMILY INCOME

Municipalities	Census Tracts	Average Housing Value 1970	1970 Median Housing Value	Average Contract Rent 1970	1970 Median Rent	Median Income 1970	Adjusted Rent for Income (a)
Wilkes-Barre City	1	15,500	9,100	76	69	6,643	110
	2	18,100	15,300	104	99	9,568	159
	3	15,900	13,300	68	66	8,636	143
	4	11,100	10,000	67	65	7,782	129
	5	11,400	9,900	78	74	8,170	136
	6	9,000	8,300	55	54	8,063	134
	7	9,100	8,500	57	55	7,847	130
	8	10,300	9,200	65	60	8,238	137
	9	10,500	9,400	58	65	7,188	119
	10	8,300	7,800	48	46	7,075	117
	11	9,600	8,900	61	57	7,437	123
	12	9,600	9,100	61	58	7,915	132
	13	9,700	9,200	55	51	8,327	138
	14	9,600	9,000	57	56	8,733	145
	15	10,700	9,700	56	65	7,843	131
	16	9,600	7,800	52	51	7,766	129
	TOTALS	10,900	9,800	67	62	8,047	134
Pittston Twp.	101	12,500	10,900	47	45	8,808	147
Dupont	102	11,400	10,000	49	46	7,319	122
Hughestown	104	10,300	8,100	57	51	8,712	145
Duryea Boro	105	11,000	9,200	51	45	8,037	134
Pittston City	106	10,100	8,900	56	55	7,866	131
	107	10,300	8,300	57	55	8,327	139
	108	9,800	8,600	57	56	7,760	129
	109	11,700	10,100	57	54	7,932	132
	TOTALS	10,400	9,100	57	55		
W. Pittston Boro	110	14,600	12,000	68	64	9,196	153
Exeter Boro Exeter Twp.	111	12,900	11,900	58	56	8,223	137
Dallas Boro Dallas Twp.	112 part	21,500	17,400	90	72	9,780	163
Kingston Twp.	114	16,400	14,900	77	69	9,303	155
W. Wyoming Boro	115	14,600	13,400	59	58	8,306	138
Wyoming Boro	116	16,200	13,800	70	68	8,345	139
Laflin Boro Jenkins Twp. Yatesville Boro	117	11,700	9,400	50	47	9,209	153
Plains Twp.	118	12,900	10,700	46	41	7,466	124
	119	11,500	9,400	56	56	8,551	143
	120	11,300	9,700	52	50	8,549	143
	TOTALS	11,400	9,900	54	50		
Forty Fort Boro	121	17,300	15,800	86	77	9,534	159
Swoyersville Boro	122	12,100	10,800	58	56	7,965	133
Luzerne Boro	123	10,100	9,300	51	49	7,094	118
Kingston Boro	124	11,000	10,500	53	52	7,117	119
	125	14,100	11,500	81	66	8,234	137
	126	11,800	10,800	69	67	8,088	135
	127	13,200	11,500	72	66	8,605	143
	128	27,500	23,100	107	93	11,385	190
	129	22,500	18,500	93	81	9,704	162
	130	15,600	14,600	78	71	9,517	159
	TOTALS	19,600	15,300	81	64		
Edwardsville Boro	132	9,900	8,500	80	60	7,756	129
Courtdale Boro Pringle Boro	133	11,600	9,900	48	46	7,707	128
Larksville Boro	134	8,000	6,700	41	38	7,164	119
Plymouth Boro	135	7,900	6,900	43	38	8,000	133
	136	10,400	8,900	49	45	7,708	129
	137	8,800	7,400	48	46	7,331	122
	138	9,100	7,400	42	40		
	TOTALS	9,000	7,600	46	42		

(a) 20 percent of yearly median family income

Table 16 (Cont'd)

HOUSING VALUE, AVERAGE CONTRACT RENT, MEDIAN FAMILY INCOME

Municipalities	Census Tracts	Average Housing Value 1970	1970 Median Housing Value	Average Contract Rent 1970	1970 Median Rent	Median Income 1970	Adjusted Rent for Income (a)
Plymouth Twp.	139	11,400	7,500	42	39	8,375	140
Nanticoke City	140	8,700	7,000	48	41	7,490	125
	141	9,600	8,500	46	43	6,905	115
	142	11,900	10,100	49	48	8,309	138
	143	9,100	7,600	44	41	7,744	129
	144	9,600	8,000	51	46	6,972	116
	TOTALS	10,000	8,300	48	44		
Hanover Twp.	145	11,600	10,600	57	58	8,262	138
	146	12,400	10,700	60	59	7,988	133
	147	11,100	9,200	52	53	7,878	131
	148	10,100	8,800	48	49	8,719	145
	149	8,100	6,600	42	38	8,708	145
Warrior Run Boro Sugar Notch Boro	150	8,000	7,000	45	40	7,500	125
Ashley Boro	151	8,300	7,600	56	55	8,062	134
Wilkes-Barre Twp.	152	9,500	8,300	52	45	7,966	133
Laurel Run Boro	153	13,500	16,700	56	50	9,347	156
Wright Twp. Rice Twp. Nuangola Boro Fairview Twp.	155	18,000	16,800	75	66	9,185	153
Newport Twp.	156	11,700	7,800	40	35	7.012	117
Hunlock Twp. Union Twp.	157	10,500	9,200	42	39	8,391	139
Shickshinny Boro	160	9,500	8,300	48	45	7,669	128
Conyngham Twp.	162	9,500	8,300	98	89	7,669	128
TOTAL LUZERNE COUNTY		11,800	10,700	61	57	8,244	137

(a) 20 percent of yearly median family income

SOURCE: 1970 Census of Housing.
Wilbur Smith and Associates.

Table 17

PEOPLE PER OCCUPIED UNIT

Municipalities	1 Percent	1 Number	2 Percent	2 Number	3 Percent	3 Number	4 Percent	4 Number	5 Percent	5 Number	6 Percent	6 Number	7 Percent	7 Number	8 or More Percent	8 or More Number
SHICKSHINNY AREA																
Conyngham Twp.	20.6	120	32.2	188	20.1	117	13.7	80	6.5	38	3.3	19	2.2	13	1.4	8
Hunlock Twp.	14.9	75	32.6	165	14.3	72	16.5	83	15.7	79	2.8	14	3.2	16	0.0	0
Shickshinny Boro	20.8	123	29.8	176	19.1	113	15.2	90	9.1	54	5.1	30	0.9	5	0.0	0
Union Twp.	10.9	38	25.6	89	23.3	81	16.7	58	15.5	54	6.3	22	1.7	6	0.0	0
NANTICOKE AREA																
Nanticoke City	24.5	1,308	30.1	1,604	18.1	964	13.7	729	7.1	378	4.5	339	1.2	64	0.8	46
Newport Twp.	19.0	363	34.8	663	18.4	351	13.6	259	7.6	144	2.9	56	2.9	55	0.8	15
Plymouth Twp.	17.9	151	25.9	219	19.1	161	16.5	139	10.4	88	5.6	47	3.1	26	1.5	13
WILKES-BARRE AREA																
Ashley Boro	17.5	232	28.6	379	20.0	265	15.0	199	8.4	111	4.1	54	5.7	77	0.7	10
Courtdale Boro	10.3	32	34.5	107	14.8	46	18.4	57	9.8	30	6.1	19	6.1	19	0.0	0
Edwardsville Boro	19.5	391	32.9	660	20.1	403	12.9	259	7.9	158	3.7	75	3.0	60	0.0	0
Forty Fort Boro	18.8	391	32.1	667	18.2	378	14.6	303	8.2	171	5.3	111	2.0	42	0.8	16
Hanover Twp.	16.3	652	31.2	1,251	19.3	772	15.7	631	8.2	368	5.1	204	2.5	100	0.7	29
Kingston Boro	20.7	1,345	32.3	2,093	18.1	1,170	13.9	898	8.3	535	3.0	192	2.9	186	0.8	49
Larksville Boro	15.2	227	26.9	402	29.7	443	10.8	162	7.2	108	6.7	100	1.8	27	1.7	25
Laurel Run Boro	14.0	308	28.0	24	8.1	7	33.6	29	16.3	14	0.0	0	0.0	0	0.0	0
Luzerne Boro	20.1	495	29.5	450	20.8	317	13.6	207	8.4	129	4.5	68	1.1	17	2.0	31
Plains Twp.	14.3	806	29.7	1,032	19.9	691	17.8	618	10.2	351	4.8	168	2.7	78	1.1	39
Plymouth Boro	23.5	48	31.3	1,078	17.3	593	13.5	464	7.6	262	3.1	107	2.7	92	1.0	33
Pringle Boro	14.1	39	25.6	87	18.2	62	17.3	59	6.7	23	6.8	30	2.6	9	6.7	23
Sugar Notch Boro	10.0	290	23.1	90	26.8	105	19.0	74	8.7	34	6.7	26	1.3	5	4.4	17
Swoyersville Boro	14.0	290	28.0	581	20.6	438	15.4	321	11.9	247	5.1	105	3.0	63	2.0	41
Warrior Run Boro	18.1	50	29.1	80	14.5	40	13.0	36	9.4	26	8.7	24	5.4	15	1.8	5
Wilkes-Barre City	23.7	4,703	28.9	5,730	17.4	3,449	14.6	2,603	8.4	1,673	4.3	853	2.9	581	1.3	265
Wilkes-Barre Twp.	18.8	216	26.9	311	19.0	219		169	9.5	110	7.4	86	3.1	36	0.7	8
PITTSTON AREA																
Avoca Boro	16.8	185	28.0	308	15.0	165	16.5	181	11.5	127	6.3	69	4.3	47	1.6	18
Dupont Boro	13.7	150	28.4	309	20.3	222	19.0	208	10.8	118	4.2	46	2.7	30	0.9	10
Duryea Boro	16.2	280	29.3	506	20.1	347	17.2	298	9.1	158	4.5	78	3.1	54	0.5	9
Exeter Boro	13.9	202	27.1	394	21.0	304	19.1	278	8.8	127	7.7	111	1.8	26	0.6	3
Exeter Twp.	11.6	62	26.0	139	18.9	101	15.0	80	16.5	88	8.4	45	3.0	16	0.6	3
Hughestown Boro	7.4	31	27.5	116	28.5	120	19.1	80	7.9	33	4.1	17	4.3	18	1.2	5
Jenkins Twp.	15.8	157	24.5	243	19.1	189	17.6	174	10.8	187	6.2	61	3.6	36	2.4	24
Laflin Boro	9.4	9	13.5	13	27.1	26	11.5	11	24.0	23	14.5	14	0.0	0	0.0	0
Pittston City	16.0	563	28.2	990	20.0	704	15.7	553	9.6	336	5.9	208	3.0	105	1.6	55
Pittston Twp.	11.4	116	23.1	236	22.6	232	15.4	164	15.0	153	7.2	74	2.9	30	1.7	17
W. Pittston Boro	17.7	417	30.0	706	20.5	482	17.5	365	9.1	215	4.6	109	1.6	38	1.1	25
W. Wyoming Boro	11.3	127	30.8	345	17.2	192	16.4	196	12.4	139	6.3	71	2.3	26	2.2	25
Wyoming Boro	16.8	240	34.5	494	17.8	255	7.9	235	8.8	126	2.6	37	1.0	14	2.1	30
Yatesville Boro	7.9	9	14.9	17	18.4	21		9	18.4	21	26.4	30	6.1	7	0.0	0
BACK MOUNTAIN AREA																
Dallas Boro	14.4	111	27.4	211	20.7	159	16.3	185	13.8	109	5.6	44	2.2	17	1.9	15
Dallas Twp.	12.0	192	29.6	472	16.2	259	18.2	9	4.2	6	3.5	5	6.3	9	3.5	5
Kingston Twp.	11.9	220	27.6	507	18.7	342	19.6	34	14.9	133	3.1	8	7.1	18	0.0	0
MOUNTAIN TOP AREA											7.2	63	4.6	40	1.7	15
Fairview Twp.	9.3	74	24.1	192	19.7	156	23.4	145	15.3							
Nuangola Boro	12.5	18	38.1	55	25.6	37	6.3									
Rice Twp.	17.3	44	29.0	74	15.3	39	13.3									
Wright Twp.	6.5	57	27.0	235	21.0	183	16.7									

SOURCE: 1970 Census of Housing

Contract Rents - The median contract rent is $57. This low value brings several serious Firstly, based on the amount required to pay of $10,700 in 120 equal payments over a ten-year pe mate rent which should be charged is $89. The are at $57 instead of $89 shows the age of the Secondly, the median family income for the Count the federal standard of 20 percent of the net in housing is used then $137 per month should be pa this is much higher than either of the two previ ing that a smaller part of the income of a famil housing. Lastly, all housing related costs amou percentage of the family income in the Study Area or the United States as a whole. In all municipa the amount that a family is capable of paying by exceeds the amount they are paying by as much as more. This condition has a serious impact upon f plies due to the increasing cost of new housing.

PERSONS PER UNIT

The number of people living in a unit can gi on several different situations. The number of p pied unit is given for each municipality in Table person unit shows the number of single people liv in a dwelling unit. The unit can be an efficiency rooming house, a one-bedroon unit and so on. A tw hold gives the number of units occupied by two rel persons.

The following table shows the 1970 breakdown occupied units within the Study Area.

Table 18

OCCUPIED HOUSING UNITS BY NUMBER OF PEOPLE (Study

	Occupied Units
Total Occupied Units	85,383
One-Person Units	15,967
Two-Person Units	25,188
Three-Person Units	16,137
Four-Person Units	12,722
Five-Person Units	7,941
Six-Person Units	4,098
Seven-Person Units	2,305
Eight or More Person Units	1,025

Source: 1970 Census of Housing.

| | | |

Table 19

BEDROOMS PER OCCUPIED UNIT

Municipalities	No Bedrooms Percent	No Bedrooms Number	1 Percent	1 Number	2 Percent	2 Number	3 Percent	3 Number	4 Percent	4 Number	5 Percent	5 Number
SHICKSHINNY AREA	0.0	0	3.7	21	51.9	298	31.9	183	9.6	55	2.9	17
Conyngham Twp.	0.0	0	0.0	0	25.9	124	60.7	291	13.4	64	0.0	0
Hunlock Twp.	0.0	0	13.1	76	42.7	248	37.7	219	2.9	17	3.6	21
Shickshinny Boro	0.0	0	0.0	0	16.2	56	48.7	168	23.2	80	11.9	41
Union Twp.												
NANTICOKE AREA	2.3	126	12.9	700	31.4	706	47.4	2,573	5.2	285	0.8	42
Nanticoke City	0.0	0	4.8	94	28.4	556	60.6	1,183	4.4	86	1.8	35
Newport Twp.	0.0	0	4.9	41	32.3	271	48.6	408	12.0	101	2.2	18
Plymouth Twp.												
WILKES-BARRE AREA	0.0	0	4.5	63	30.7	430	56.7	794	5.5	77	2.6	37
Ashley Boro	0.0	0	0.0	0	18.3	57	63.7	198	18.0	56	0.0	0
Courtdale Boro	0.0	0	17.2	365	28.4	604	50.5	1,072	3.9	83	0.0	0
Edwardsville Boro	0.0	0	7.9	155	26.8	526	47.7	937	14.6	287	3.0	60
Forty Fort Boro	0.0	0	8.8	341	26.5	1,027	56.4	2,186	7.4	287	0.9	35
Hanover Twp.	0.0	0	11.8	789	20.8	1,395	49.1	3,292	12.9	861	4.9	325
Kingston Boro	0.5	37	4.0	53	32.7	438	51.2	685	10.2	137	0.0	0
Larksville Boro	1.9	25	0.0	0	46.6	48	36.9	38	0.0	0	16.5	17
Laurel Run Boro	0.0	0	12.4	179	33.1	477	48.3	695	4.6	66	1.6	23
Luzerne Boro	0.0	0	4.4	149	34.6	1,161	56.5	1,895	2.8	94	1.7	55
Plains Twp.	0.0	0	9.1	315	21.9	759	59.3	2,053	7.0	243	2.7	94
Plymouth Boro	0.0	0	17.3	62	13.4	48	63.8	229	5.5	20	0.0	0
Pringle Boro	0.0	0	4.4	20	22.7	93	53.3	218	19.1	78	0.0	0
Sugar Notch Boro	0.0	0	10.4	213	31.2	638	48.1	981	9.3	189	1.0	20
Swoyersville Boro	0.0	0	0.0	0	7.5	21	78.3	219	7.1	20	7.1	20
Warrior Run Boro	2.9	577	14.7	2,906	23.7	4,683	45.1	8,922	9.9	1,976	3.7	726
Wilkes-Barre City	0.0	0	1.9	22	33.8	399	57.5	678	6.8	80	0.0	0
Wilkes-Barre Twp.												
PITTSTON AREA	0.0	0	3.8	41	21.4	227	52.6	559	17.0	181	5.2	55
Avoca Boro	0.0	0	13.4	155	40.6	469	37.7	435	5.2	60	3.1	35
Dupont Boro	0.0	0	5.4	88	34.2	557	48.0	782	7.7	126	4.7	76
Duryea Boro	0.0	0	12.7	189	27.0	404	51.5	770	8.8	131	0.0	0
Exeter Boro	0.0	0	0.0	0	35.1	198	56.6	320	8.3	47	0.0	0
Exeter Twp.	0.0	0	0.0	0	48.3	215	34.4	153	13.3	59	4.0	18
Hughestown Boro	0.0	0	9.6	91	22.9	217	48.7	463	12.5	119	6.3	60
Jenkins Twp(a)												
Laflin Boro	0.9	32	9.5	341	25.2	910	47.8	1,724	15.6	564	1.0	36
Pittston City	0.0	0	7.9	76	22.9	222	49.7	481	17.7	172	1.8	17
Pittston Twp.	0.0	0	16.7	395	17.7	417	44.5	1,052	17.6	415	3.5	83
W. Pittston Boro	1.5	18	4.8	57	26.0	308	45.8	543	20.1	239	1.8	21
W. Wyoming Boro	0.0	0	10.8	150	26.1	363	44.0	613	17.6	246	1.5	21
Wyoming Boro (a)												
Yatesville Boro												
BACK MOUNTAIN AREA	0.0	0	6.1	42	30.0	207	49.6	343	14.3	99	0.0	0
Dallas Boro	0.0	0	5.0	81	18.9	304	50.9	818	21.6	347	3.6	58
Dallas Twp.	0.0	0	6.7	120	29.6	527	47.3	841	9.2	163	7.2	128
Kingston Twp.												
MOUNTAIN TOP AREA	0.0	0	5.1	40	16.5	130	60.8	479	15.2	120	2.4	19
Fairview Twp.	0.0	0	0.0	0	34.2	63	43.5	80	22.3	41	0.0	0
Nuangola Boro	0.0	0	20.3	42	29.5	61	30.9	64	19.3	40	0.0	0
Rice Twp.	0.0	0	0.0	0	23.2	208	69.8	627	7.0	63	0.0	0
Wright Twp.												

(a) Information suppressed in Census of Housing

SOURCE: 1970 Census of Housing

The highest percentage of one and two-person units are in Nanticoke City and Nuangola Borough respectively. The municipality with the largest percentage of big families is Yatesville Borough with 22.5 percent of their units occupied by six people or more.

The number of people per unit in each municipality will determine the size of the needed units. This need will be investigat in a later section.

BEDROOMS PER UNIT

The federally accepted standard prescribes that a maximum o two persons occupy any one bedroom. The deficiencies to this statement within the study area are as follows:

1. The case where a family is at the poverty level and can not afford proper housing or a large enough house canno be found. In this case, there could be more than two people per bedroom as is the case with a family of seve or eight in a three bedroom house.
2. While not a deficiency, the situation where there is more than one bedroom per person thereby decreasing the supply of larger units for the people that need them.

The number of bedrooms per unit, as given in Table 19, when compared to the number of people per unit will give some indication of the present deficiencies and the future needs in the housing supply. However, due to the lack of specific information comparing the number of people per unit and the number of people per bedroom, exact deficiencies cannot be calculated.

The following table shows the breakdown of the 85,383 occupied units within the study area according to the number of bedrooms per units.

Table 20
OCCUPIED HOUSING UNITS BY NUMBER OF BEDROOMS
(Study Area) - 1970

	Number	Percent
Total Occupied Units	85,383	100.0
No Bedrooms	845	1.0
One Bedroom	8,786	10.3
Two Bedrooms	21,858	25.6
Three Bedrooms	42,802	50.1
Four Bedrooms	8,794	10.3
Five Bedrooms or More	2,298	2.7

Source: 1970 Census of Housing.

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HOUSING STANDARDS

There are two distinct types of standards applicable to housing: construction, or building code standards; and use-and-occupancy, or housing code standards.(2) Building code standards refer to the structural condition and safety of buildings, with emphasis on building materials, construction methods, and equipment. Housing code standards are concerned with the condition and facilities of buildings with respect to the physical, psychological, and social welfare of occupants.

The formulation and application of housing standards has only recently become a concern of government. It was not until 1941, with the passage of an amendment to the Baltimore City Code, that the modern housing code became an effective legal-administrative instrument.(3) Subsequent codes have been patterned along three lines: codes emphasizing health and safety requirements; codes oriented toward building construction and maintenance; and codes stressing legal, administrative, and enforcement provisions.(4) The content of the codes has principally been geared to facilities, maintenance, and the conditions of occupancy.(5) Apart from an emphasis on either human, structural, or legal requirements, definitions of substandard housing have been lacking in adequacy and consistency.(6) The definitions are inadequate in that they do not permit measurements of standard and substandard housing which correspond to existing codes or officially stated standards. The U.S. Census used only characteristics of condition and plumbing facilities in identifying substandard housing in 1960. There was no tabulation of occupancy characteristics, structural characteristics, equipment and fuels, and household characteristics from its data series. In addition, standard housing is identified only in terms of the absence of substandard features, without regard for further qualitative differences in housing standards. The 1970 Census did not

(2) Eric W. Mood, ''Development, Objective, and Adequacy of Current Housing Code Standards'', Housing Code Standards: Three Critical Studies. Prepared for the National Commission on Urban Problems, Research Report No. 19, Washington, D.C., 1969.
(3) Ibid., p. 1.
(4) Ibid., p. 14-15.
(5) Ibid., p. 15.
(6) Oscar Sutermeiser, ''Inadequacies and Inconsistencies in the Definition of Substandard Housing'', Housing Code Standards: Three Critical Studies. Prepared for the National Commission on Urban Problems, Research Report No. 19, p. 78-108.

identify substandard housing as in 1960, but provides for cross-tabulation of similar factors. Estimates of substandard housing will be based on the number of units lacking plumbing facilities and units with plumbing facilities but in a "dilapidated" condition.

Current definitions of substandard housing are also inconsistent. In his report for the National Commission on Urban Problems, Oscar Sutermeister compared official definitions of substandard housing, principally within the federal government. A lack of consistency was found among definitions employed by HUD's Consumer Relations Office, the Senate Committee on Banking and Currency, the Bureau of the Census, HUD's Workable Program, HUD's Codes and Building Standards Branch, HUD's Rent Supplement Program, HUD's Urban Renewal Service and Urban Renewal Handbook with regard to relocation standards, HUD's Enforcement Grant Handbook, and the Housing Code of the International Conference of Building Officials.

The definition recommended for general use by the National Commission on Urban Problems is as follows:

> Substandard housing means any dwelling or dwelling unit in which there is substantial departure from accepted minimum housing code provision.(7)

Given the complexity of defining substandard housing and housing standards, the quantification of substandard housing is difficult. Evaluations are available from sources which include the U.S. Census Bureau, local surveys, and federal agencies, but data are not always comparable, nor is the coverage complete.

The number of units that are or can be considered substandard will vary according to the agency or individual that conducts the survey. It is recommended that each municipality conduct its own survey with the help of the Luzerne County Planning Commission to determine the exact number of substandard units.

OVERVIEW OF HOUSING DEMAND

The processes of housing supply and housing demand are intimately related, as each shapes and molds the other. Housing is supplied, for the most part, in proportion to the quantity demanded and, to a certain extent, in the types of units demanded. Yet demand, by its very nature, is a need which must be fulfilled

(7) Ibid., p. 78-108.

and the different types of units supplied can, and do, influence the types demanded. As such, the operation of a housing market cannot be satisfactorily discussed or understood without consideration of both supply and demand.

Demand, as used herein, includes the number and types of dwelling units that are needed at any point in time and, just prior to that point in time, are not in existence. Demand is the result of a need which can only be supplied by building or repairing a unit which will fill the need. In this context, a unit is not included in demand if the standard unit already exists. Viewed in this say, there are five potential causes for demand in the Wyoming Valley: (1) as a result of a net increase in household formation; (2) as a result of deletions in the existing housing stock; (3) as a result of any necessary increase in the number of vacant units needed for a viable housing process; (4) as a result of the existence of substandard housing units; and (5) because of the existence of an improper mix of units that is not in line with those types demanded.

HOUSEHOLD FORMATIONS

The number of new household formations in the Valley is a result of two separate functions: (1) new family formation and (2) new arrivals within the Valley Area. The first type of family, the young marrieds, has no children and is extremely mobile. Their needs are for one and two bedroom apartments at rents low enough so that they can start saving money for the future.

The new arrivals within the area demand all housing styles and sizes. These new arrivals may be college students, young singles, young married, new executives and white collar workers, new blue collar workers, or people ready for retirement. This demand dictates a variety of housing types, sizes, price ranges, and locations.

The following tables give the recent additions to the housing supply. The largest percentage of new construction has been filling the needs of the elderly as can be seen in Table 21. Table 22 shows the specific ways in which the housing supply in the City of Wilkes-Barre has changed since 1970. In both cases the demand of the elderly is being met to some degree; however, a general supply is not being constructed at this time.

DEMOLITION AS AN INPUT TO DEMAND

Demolition of units plays a lesser role in housing demand than does new household formations, but the demolition of units

Table 21

CHANGES IN WYOMING VALLEY HOUSING STOCK
1970-1972

Financing	Municipality	No. of Units
Private	Wilkes-Barre	
S. 236	Wilkes-Barre	120
S. 236	Wilkes-Barre	173
S. 236-Elderly	Wilkes-Barre	196
S. 236-Elderly	Wilkes-Barre	215
S. 236-Elderly	Wilkes-Barre	100
S. 236-Elderly	Wilkes-Barre	100
Public	Wilkes-Barre	100
S. 236	Wilkes-Barre	99
S. 236	Wilkes-Barre	205
		374

Provincial Towers
B'nai B'rith
Sheridan Manor
Coal Street
East End Project
South Wilkes-Barre
Center Town U. R.
East Main Street U. R.
G R I T
Sherman Hills II

and the different types of units supplied can, and do, influence the types demanded. As such, the operation of a housing market cannot be satisfactorily discussed or understood without consideration of both supply and demand.

Demand, as used herein, includes the number and types of dwelling units that are needed at any point in time and, just prior to that point in time, are not in existence. Demand is the result of a need which can only be supplied by building or repairing a unit which will fill the need. In this context, a unit is not included in demand if the standard unit already exists. Viewed in this say, there are five potential causes for demand in household formation: (1) as a result of a net increase in the number of stock; (2) as a result of deletions in the existing housing vacant units needed for a viable housing process; (4) as a result of the existence of substandard housing units; and (5) because of the those types demanded.

HOUSEHOLD FORMATIONS

The number of new household formations in the Valley is a result of two separate functions: (1) new family formation and (2) new arrivals within the Valley Area. The first type of family, the young marrieds, has no children and is extremely mobile. Their needs are for one and two bedroom apartments at rents low enough so that they can start saving money for the future.

The new arrivals within the area demand all housing styles and sizes. These new arrivals may be college students, young singles, young married, new executives and white collar workers, new blue collar workers, or people ready for retirement. This demand dictates a variety of housing types, sizes, price ranges, and locations.

The following tables give the recent additions to the housing supply. The largest percentage of new construction has been filling the needs of the elderly as can be seen in Table 21. Table 22 shows the specific ways in which the housing supply in the City of Wilkes-Barre has changed since 1970. In both cases the demand of the elderly is being met to some degree; however, a general supply is not being constructed at this time.

DEMOLITION AS AN INPUT TO DEMAND

Demolition of units plays a lesser role in housing demand than does new household formations, but the demolition of units

Table 21

CHANGES IN WYOMING VALLEY HOUSING STOCK
1970-1972

	No. of Units	Financing	Municipality
Provincial Towers	120	Private	Wilkes-Barre
B'nai B'rith	173	S. 236	Wilkes-Barre
Sheridan Manor	196	S. 236	Wilkes-Barre
Coal Street	215	S. 236-Elderly	Wilkes-Barre
East End Project	100	S. 236-Elderly	Wilkes-Barre
South Wilkes-Barre	100	S. 236-Elderly	Wilkes-Barre
Center Town U. R.	100	S. 236-Elderly	Wilkes-Barre
East Main Street U. R.	99	Public	Wilkes-Barre
G R I T	205	S. 236	Wilkes-Barre
Sherman Hills II	374	S. 236	Wilkes-Barre
Washington Square Apartments	205	S. 236	Wilkes-Barre
Public Housing	200	Turnkey	Wilkes-Barre
Public Housing	100	Turnkey	Wilkes-Barre
Public Housing	150	S. 23	Wilkes-Barre
Wilkes Woods	161	Private	Wilkes-Barre Twp.
Nanticoke Towers	50	S. 236-Elderly	Nanticoke
Park Towers	76	Public Housing Elderly	Nanticoke
Enterprise and Gemini	56	Public Housing	Nanticoke
South and Lincoln	24	Public Housing	Nanticoke
Main Street Tower	165	S. 236-Elderly	Nanticoke
West Main Terrace	75	Public Housing	Nanticoke
East Side	120	S. 236	Nanticoke
Public Housing	240	Turnkey	Nanticoke

Table 21 (cont'd)

CHANGES IN WYOMING VALLEY HOUSING STOCK

	No. of Units	Financing	Municipality
Newberry Estates	250	Private	Dallas Twp.
Brandywine	120	Private	Dallas Twp.
New Dorms	102	Private	Dallas Twp.
Stirling Homex Corp.	1,140	S. 235/236	Larksville
Holiday Green Acres	196	Private	Kingston
Public Housing	120	Turnkey	Exeter Twp.
Public Housing	120	Turnkey	Plymouth Twp.
Public Housing	99	(Acc)-Elderly	Plymouth Boro
Shawnee Theater	40	S. 236	Plymouth
Sobel Construction	152	S. 236	Hanover
Cedar Village	74-134	Private	Hanover
Inman Park	200	S. 236	Hanover
Hanover Village	150	S. 2116173	Hanover
Apollo Apartments	50	S. 236-Elderly	Pittston
Bone Stadium	90	S. 236	Pittston
High Street	60	S. 236	Pittston
Lakewood Gardens	120-600	Private	Jenkins
Hillside Apartments	200	S. 236	Edwardsville
Gateway Court	264	S. 236	Edwardsville
Edwardsville Village	240	S. 2216173	Edwardsville

Table 22

CHANGES IN HOUSING STOCK SINCE 1970 CENSUS

City of Wilkes-Barre

Additions to Housing Stock (including units to be occupied b

New construction (public and private)

a) Special Group Housing (Source: Catholic Diocese of Scranton)

	hous.
Little Flower Manor (convalescent home; staff 15 nuns)	
Sacred Heart Convent (for 12 nuns)	
St. Nicholas Rectory (for 5 priests and staff)	
Subtotal	

b) Multi-Family Housing (Source: Survey of Major Developments by Wassell Associates)

B'nai B'rith (elderly, Section 236)	
Sheridan Manor (general, Section 236)	
Provincial Tower (general, conventional)	
Housing Authority of W-B (elderly, public)	
Ecumenical Enterprises, Inc. (general, Section 236)	
Subtotal	9

c) Single-Family Housing (Source: Wilkes-Barre Building Department)

Subtotal	

d) Mobile Home Flood Emergency Housing (Source: Wilkes-Barre Redevelopment Authority and U.S. Army Corps of Engineers)

	39
Subtotal	39
TOTAL	1,41

Table 22

CHANGES IN HOUSING STOCK SINCE 1970 CENSUS

City of Wilkes-Barre

Additions to Housing Stock (including units to be occupied by end of 1972)

New construction (public and private)

	housing units
a) Special Group Housing (Source: Catholic Diocese of Scranton)	
Little Flower Manor (convalescent home; staff 15 nuns)	15
Sacred Heart Convent (for 12 nuns)	12
St. Nicholas Rectory (for 5 priests and staff)	5
Subtotal	32
b) Multi-Family Housing (Source: Survey of Major Developments by Wassell Associates)	
B'nai B'rith (elderly; Section 236)	172
Sheridan Manor (general, Section 236)	200
Provincial Tower (general, conventional)	121
Housing Authority of W-B (elderly, public)	200
Ecumenical Enterprises, Inc. (general, Section 236)	215
Subtotal	908
c) Single-Family Housing (Source: Wilkes-Barre Building Department)	77
Subtotal	77
d) Mobile Home Flood Emergency Housing (Source: Wilkes-Barre Redevelopment Authority and U.S. Army Corps of Engineers)	394
Subtotal	394
TOTAL	1,411

Table 22 (Cont'd)

CHANGES IN HOUSING STOCK SINCE 1970 CENSUS

City of Wilkes-Barre

Subtractions from Housing Stock
Units taken out of housing use (Demolition, fire, etc.)

	Housing units
a) Special Group Housing (Source: Wilkes-Barre Bldg. Dept., Wilkes-Barre Redevelopment Authority and Catholic Diocese of Scranton)	
Brookside Hotel	12
Hotel Quinn	44
Wilkes College dormitory	100
St. Ann's Convent	100
St. Mary's Convent	75
St. Nicholas Rectory (old building)	5
Subtotal	336
b) Multi-Family and Single-Family Housing (Source: W-B Bldg. Dept., W-B Redevelopment Authority, W-B Fire Dept., U.S. Army Corps of Engineers)	
demolition permits by W-B Building Department	118
demolition through W-B Redevelopment Authority	180
demolition through fires	3
demolition through U.S.Army Corps of Engineers* (*Demolition from 1972 flood; 6 additional units demolished privately dur to flood and for which Bldg. Dept. demolition permits were grantes are included in Bldg. Dept. demolition figures)	58
Subtotal	359'
TOTAL**	695

**Total includes 64 housing units demolished because of flood

SOURCE: Wassell Associates, September 1972

brings forth a quantifiable number of new unit demands. Demolition comes about through the removal of existing units, conversion of existing units to fewer units and deterioration of a unit to the point that the structure is not habitable. Standard housing is sometimes deleted through natural disasters, as is the case for over 800 units in the Wyoming Valley, or through redevelopment or public works projects. A total of over 3,600 units will fall into the latter category. The actual number of units is usually hard to quantify with any degree of accuracy due to few records being kept when a private developer/builder clears land for new developments. In any event, as one family is displaced by some form of unit deletion, this family generates the demand for one additional unit. As such, stock deletions are a cause of housing demand.



VACANCY RATES

In order for the supply and demand mechanism to work satisfactorily in the housing field, there must be a number of vacant units available at any point in time. The number of such units varies with the size, mobility, and growth of an area. The Department of Housing and Urban Development uses as its guidelines in examining local housing markets, a one percent vacancy rate for owned units and 5 to 6 percent for rental units. Areas with above average population growth will require slightly higher vacancy rates. For purposes of calculations in this study, an assumed rate of 5 percent was established for the Study Area. Based on this rate, the area should have approximately 4,000 vacant, standard units at present, and approximately 5,600 by 2000. The present number of vacant units is approximately 3,000. As such, some demand is placed on the supply of units, not by

particular households, but rather by the housing market itself. Without supplying this number of vacant units, the housing process could break down and discourage the mobility of households.

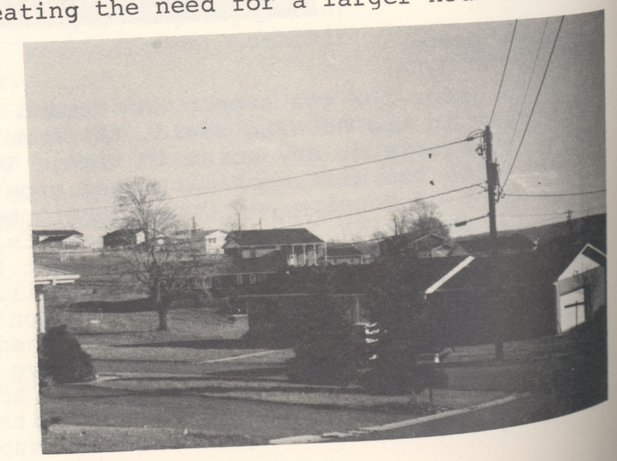
SUBSTANDARD UNITS

A fourth source of housing demand is the existence of substandard units in the Study Area. While persons living in such units may not be actively seeking improved units, and may not be avle to afford srandard housing, any commitment to standard housing requires the repair of substandard units or the deletion of these from the housing stock as a important source of demand.

Substandard units are difficult to qualify without doing a detailed interior and exterior survey. It is known that some units will be demolished that are presently occupied and substandard and that these families will need units in the future. They would then be part of the future housing demand.

CREATION OF A NEW HOUSING MIX

An improtant source of housing demand comes not from the demand for net additions to the housing stock, but rather from the demand for a different housing supply mix. That is, the prices, types, sizes, and locations of housing being demanded may not be the same as for housing currently being supplied. While the market mechanism over time responds quite well to such discrepancies, there are situations in which the supply mix simply does not meet the needs of the market. An example of a need for a new mix would be the case where a unit presently houses six people, a set of parents and four children. The unit has three bedrooms, a fifth child is added creating the need for a larger house. The



family finds that no four bedroom houses are available, but that several five bedroom houses are. They buy the larger house, but in the process another family of nine is unable to obtain the five bedroom house that they need. If a four bedroom house had been available, no problem would have been created. In this case, the demand was for a four bedroom unit.

The above was a simplistic view of demand; however, that is the way the demand for housing is derived.

HOUSING DEMAND QUANTIFIED

Table 23 gives the number of units that should be built to meet the demand for future units. While this denotes the general number that should be constructed, there are specific consumer groups that have special needs. The needs of the low income and middle income families and the elderly will be dealt with in a later section.

FAMILY ECONOMIC STRUCTURE

Table 24 examines the percentage of families whose head is over 65 years of age, the percentage of people within the population who are over 65 years and the percent of people below the poverty line.

Future housing demands will be based upon the number and type of family heads of households. It is assumed that each household lives in one housing unit; therefore, the demand for houses for the lederly can be based upon the number of family heads over 65 years. If one compares the number of new units needed (27,000 units between 1972 and 2000) with the percent of family heads over 65 years (37.7 percent), 10,180 units should be allocated for elderly housing in the future between 1972 and 2000.

The same procedure can be followed to determine the number of units that should be allocated for low income families or public housing. The allocation, at the present time, should be approximately 9.3 percent of the housing stock or 2,520 units. The present public housing supply is approximately 1,400 units leaving a deficit of approximately 1,120 units to be filled by the private market. This number of units means that 3,360 people are eligible for public housing but are unable to be housed at this time.

The municipality with the highest percentage of people below the poverty line (16.3 percent) is Larksville Borough, the lowest percentage (4.7 percent) is Pittston Township.

Table 23

HOUSING DEMAND

Municipalities	Total Units To Be Constructed 1972-2000	Units To Be Constructed 1972-1977	Units To Be Constructed 1977-2000	Units To Be Built Per Year
SHICKSHINNY AREA				
Conyngham Twp.	100		100	3.6
Hunlock Twp.	90	40	50	3.2
Shickshinny Boro				
Union Twp.	350	60	290	12.5
NANTICOKE AREA				
Nanticoke City	770	380	390	27.5
Newport Twp.	300	120	180	10.7
Plymouth Twp.	240	230	10	8.6
WILKES-BARRE AREA				
Ashley Boro	50	40	10	1.8
Courtdale Boro	150	40	110	5.4
Edwardsville Boro	200	200		7.1
Forty Fort Boro	390	390		13.9
Hanover Twp.	1,890	1,460	430	67.5
Kingston Boro	1,450	650	800	51.8
Larksville Boro	580	500	80	20.7
Laurel Run Boro	90	40	50	3.2
Luzerne Boro	110	80	30	3.9
Plains Twp.	1,820	150	1,670	65.0
Plymouth Boro	540	250	290	19.3
Pringle Boro				
Sugar Notch Boro	40		40	1.4
Swoyersville Boro	720	420	300	25.7
Warrior Run Boro	50		50	1.8
Wilkes-Barre City	3,270	1,660	1,610	116.8
Wilkes-Barre Twp.	300	70	230	10.7
PITTSTON AREA				
Avoca Boro	170	70	100	6.1
Dupont Boro	170	40	130	6.1
Duryea Boro	320	130	190	11.4

Table 23 (Con't)

HOUSING DEMAND

Municipalities	Total Units To Be Constructed 1972-2000	Units To Be Constructed 1972-1977	Units To Be Constructed 1977-2000	Units To Be Built Per Year
Exeter Boro	420	160	260	15.0
Exeter Twp.	630	260	370	22.5
Hughestown Boro	170	50	120	6.1
Jenkins Twp.	760	250	510	27.1
Laflin Boro	320	120	200	11.4
Pittston City	800	80	720	28.6
Pittston Twp.	970	400	570	34.6
W. Pittston Boro	270	200	70	9.6
W. Wyoming Boro	720	320	400	25.7
Wyoming Boro	420	100	320	15.0
Yatesville Boro	70	30	40	2.5
BACK MOUNTAIN AREA				
Dallas Boro	860	250	610	30.7
Dallas Twp.	2,330	460	1,870	83.2
Kingston Twp.	1,420	210	1,210	50.7
MOUNTAIN TOP AREA				
Fairview Twp.	850	230	620	30.4
Nuangola Boro	160	40	120	5.7
Rice Twp.	660	110	550	23.6
Wright Twp.	2,230	280	1,950	79.6
TOTAL	28,220	10,570	17,650	1007.9

SOURCE: Wilbur Smith and Associates

Table 24

FAMILY ECONOMIC STRUCTURE
1970

Municipalities	Median Family Income	Percent Family Heads 65 Years And Over	Percent Total Families Below Poverty Line	Percent of Total Population Over 65 Years
SHICKSHINNY AREA				
Conyngham Twp.	$7,669	45.2	7.2	13.1
Hunlock Twp.	8,391	35.2	7.2	11.2
Shickshinny Boro	7,159	23.7	8.0	13.7
Union Twp.	8,391	35.2	7.2	9.5
NANTICOKE AREA				
Nanticoke City	7,503	46.8	9.3	15.6
Newport Twp.	7,012	32.8	11.9	20.2
Plymouth Twp.	8,375	23.2	12.2	11.2
WILKES-BARRE AREA				
Ashley Boro	8,062	12.6	8.2	13.0
Courtdale Boro	7,707	20.3	10.3	11.7
Edwardsville Boro	7,756	35.9	11.4	11.9
Forty Fort Boro	9,534	44.0	8.1	15.3
Hanover Twp.	8,194	32.0	6.9	12.6
Kingston Boro	9,215	44.4	7.8	15.8
Larksville Boro	7,021	22.8	16.3	13.1
Laurel Run Boro	9,347	31.7	6.5	26.6
Luzerne Boro	7,094	19.8	15.6	13.9
Plains Twp.	8,195	49.5	7.1	13.1
Plymouth Boro	7,564	36.1	10.1	14.6
Pringle Boro	7,707	20.3	10.3	7.2
Sugar Notch Boro	7,500	12.8	13.8	10.3
Swoyersville Boro	7,965	26.9	11.4	9.4
Warrior Run Boro	7,500	12.8	13.8	14.8
Wilkes-Barre City	8,047	43.2	9.9	14.9
Wilkes-Barre Twp.	7,966	47.5	12.7	12.0

Table 24 (Cont'd)

FAMILY ECONOMIC STRUCTURE
1970

Municipalities	Median Family Income	Percent Family Heads 65 Years And Over	Percent Total Families Below Poverty Line	Percent of Total Population Over 65 Years
PITTSTON AREA				
Avoca Boro	$7,875	21.2	12.1	11.7'
Dupont Boro	7,319	45.0	10.6	9.5
Duryea Boro	8,037	36.9	11.0	11.4
Exeter Boro	8,223	33.5	9.8	9.7
Exeter Twp.	8,223	33.5	9.8	10.3
Hughestown Boro	8,712	39.5	11.2	7.9
Jenkins Twp.	9,209	44.7	7.3	9.6
Laflin Boro	9,209	44.7	7.3	8.0
Pittston City	7,935	41.5	9.7	11.8
Pittston Twp.	8,808	33.3	4.7	10.0
W. Pittston Boro	9,196	20.4	6.0	14.2
W. Wyoming Boro	8,306	48.0	5.0	8.4
Wyoming Boro	8,345	19.4	8.1	12.5
Yatesville Boro	9,209	44.7	7.3	9.8
BACK MOUNTAIN AREA				
Dallas Boro	9,780	15.6	7.1	8.7
Dallas Twp.	9,780	15.6	7.1	9.5
Kingston Twp.	9,303	30.2	7.8	9.4
MOUNTAIN TOP AREA				
Fairview Twp.	9,185	33.2	9.4	8.8
Nuangola Boro	9,185	33.2	9.4	11.6
Rice Twp.	9,185	33.2	9.4	7.8
Wright Twp.	9,185	33.2	9.4	6.8
LUZERNE COUNTY	10,700	32.8	8.9	13.0

SOURCE: 1. 1970 Census of Population - Income Characteristics of the Population.

2. 1970 Census of Housing - Financial Characteristics of Housing Units.

FAMILY INCOME VERSUS HOUSING VALUES

In Figure 8 a comparison is drawn between the median family income for each census tract and the median housing unit value. In the Wyoming Valley, the equation that best represents the cost of housing is $H_v = 1.31$, where H_v is median housing value and 1 is median family income. The national average is presently $H_v = 2.51$ or the average house costs two and one half times the median income. As can be seen, the Study Area residents pay a smaller percentage of their income for housing. This will change in the future due to the increased cost of housing over the past few years and the recent increase in housing costs for post-flood replacement housing.

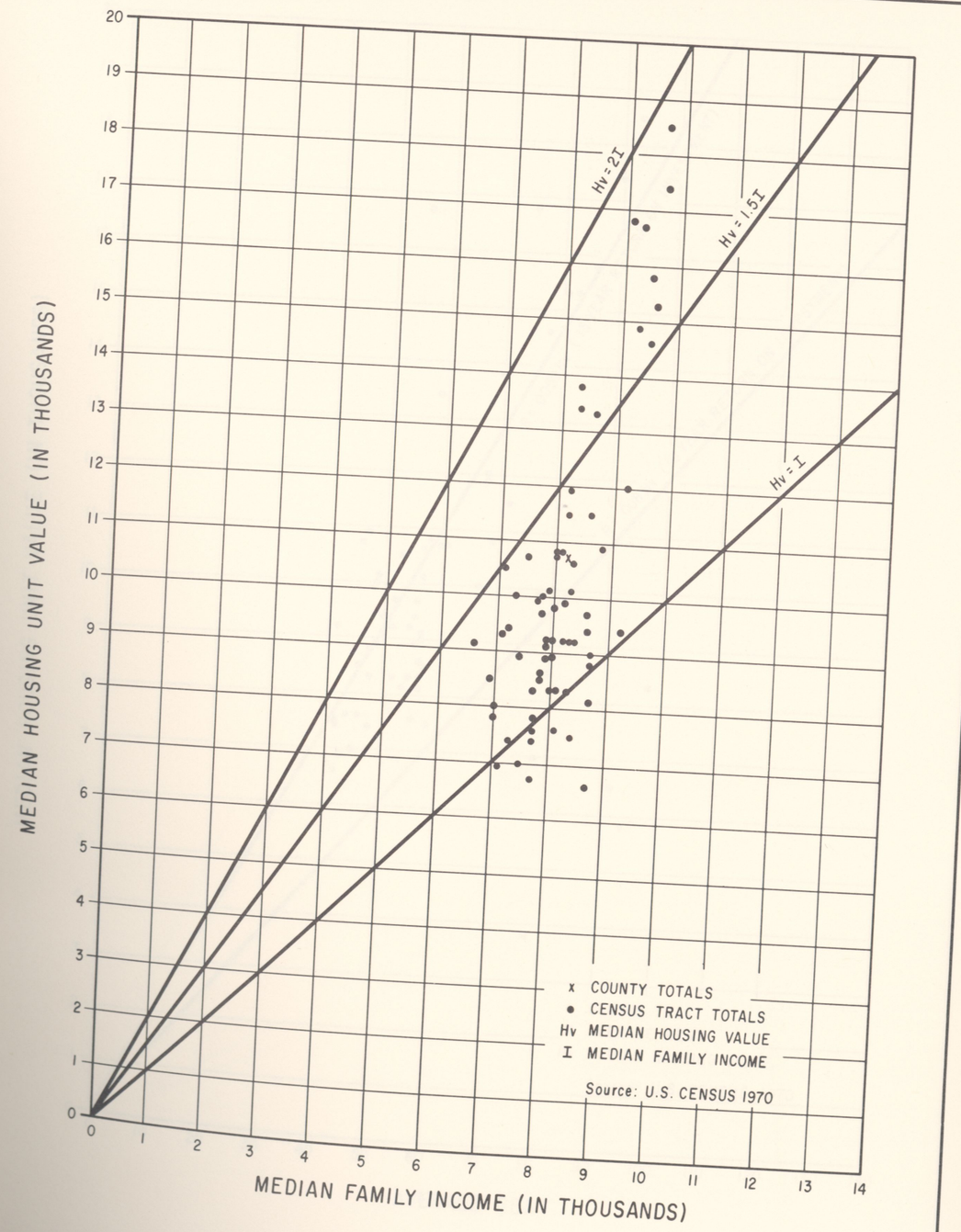
CONTRACT RENT VERSUS HOUSING VALUES

Figure 9 indicates the investment philosophy of the Wyoming Valley. The standard for rental property is such that the unit should pay for itself within a ten-year period. That is, the rent each month should equal .8 percent of the cost of the unit.

As a unit ages, the rent decreases (1) to encourage a person to live in an older unit and (2) because the mortgage is nearing maturity. At this stage, a more conservative investment posture is assumed so that a unit would be completely paid off in a 15-year period, that is, the monthly rent would equal .56 percent of the total cost of the house.

As can be seen in Figure 10, the majority of the present rental units have passed into the conservative investment posture. This will cause problems in the future for several reasons. Firstly, since the majority of units have gone into this stage, the populace has become accustomed to low rents. The rents on new units will take a greater percentage of their income than do the older units. The average person will be unwilling to pay the increase for what would not be a significant improvement in living conditions (see Figure 10). Secondly, the present investors will be unwilling to take on new mortgages to increase amenities of present structures due to the refusal of tenants to pay higher rents. Lastly, the income of the average family makes them eligible for 235 and 236 housing, subsidized sold and rented housing respectively. People now renting a house for $50 a month would be unwilling to buy or rent a unit where the monthly payments would be double. The new unit would not offer a significant improvement over the present conditions, and in some cases the new unit would be of a lesser quality than the older one.

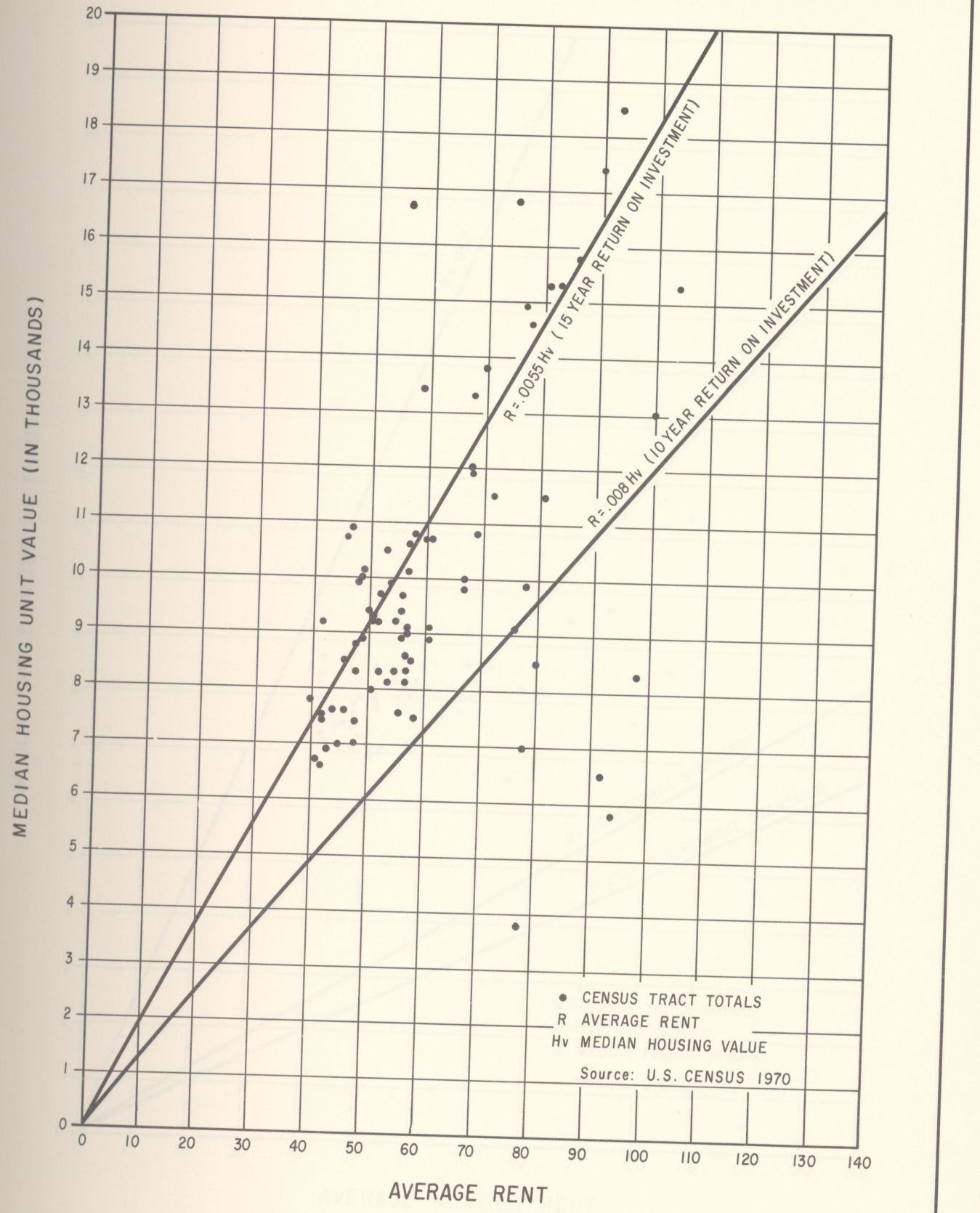
With the present condition caused by the flood, families are



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FAMILY INCOME vs. HOUSING VALUE

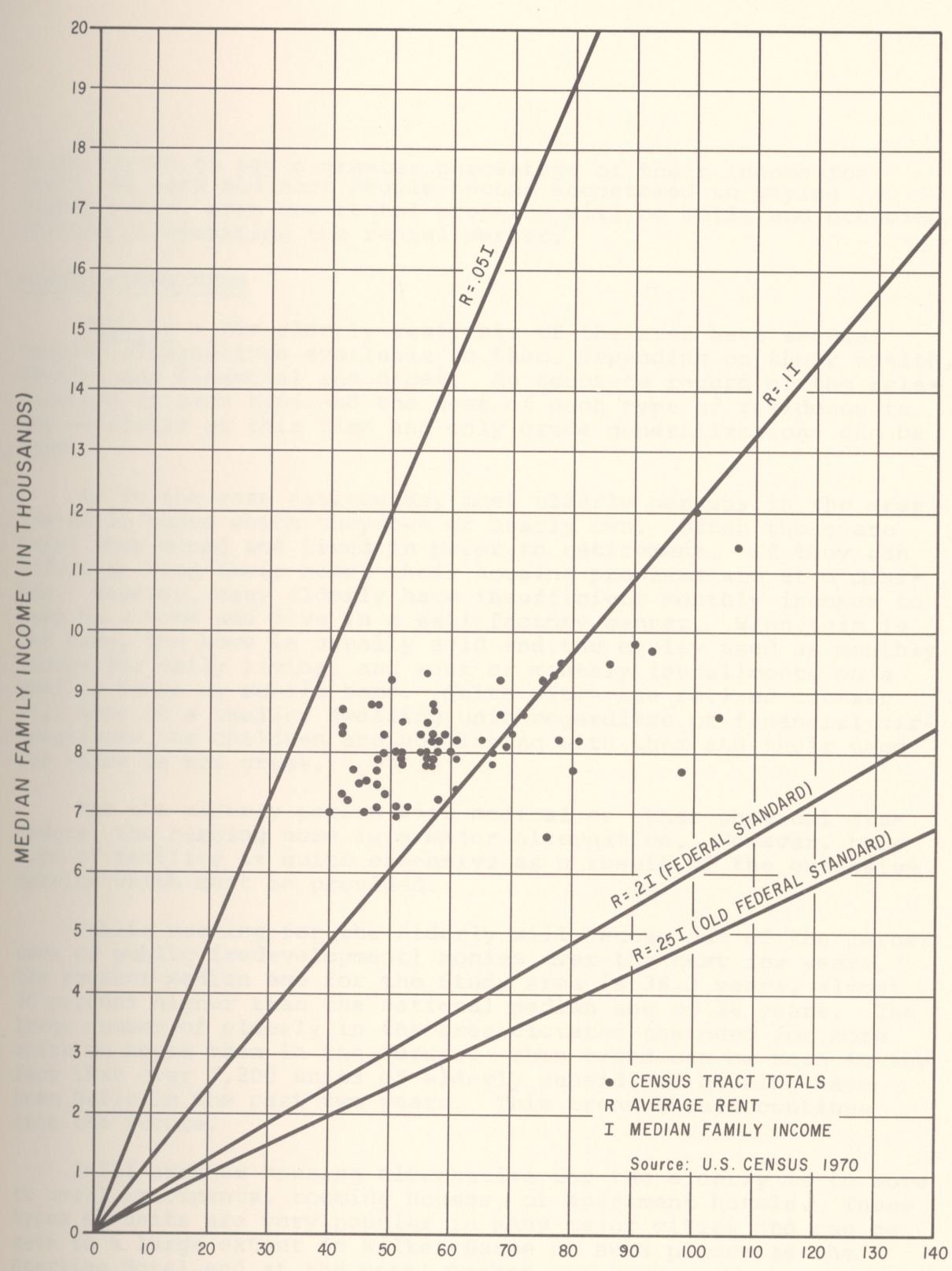
FIGURE 8



AVERAGE CONTRACT RENT vs. HOUSING VALUE

Wilbur Smith and Associates

FIGURE 9



AVERAGE CONTRACT RENT vs. FAMILY INCOME

Wilbur Smith and Associates

FIGURE 10

being forced to pay a greater percentage of their income for rent. As more and more people become accustomed to paying higher rents, more new rental property will be built and occupied, thereby rejuvenating the rental market.

SPECIAL CONSUMERS

Elderly - The elderly residents of the area have several housing alternatives available to them, depending on their health, family, and financial resources. An accurate record of the relative use of each type and the cost of each type of residence is not available at this time and only crude generalizations can be made.

As is the case nationwide, most elderly persons in the area reside in homes which they own or nearly own. Often these are homes they owned and lived in prior to retirement. If they can afford to keep their home, their housing problems are at a minimum. However, many elderly have insufficient monthly incomes to keep up a home and live in a satisfactory manner. When this is the case, the home is usually sold and the equity used as monthly imcome for daily living, and rent or monthly installments on a smaller house or mobile home. Quite often the retired citizen will move to a smaller dwelling unit regardless of financial circumstances, as children are not living with them and their need for space is not great.

For the elderly person with medical or other physical disorders, the nursing home is a major alternative. However, this type of facility is quite expensive as a result of the extensive service which must be provided.

Public housing for the elderly will become one of the larger uses of public [redevelopment] monies over the next few years. The present median age for the Study Area is 36.3 years, almost 30 percent higher than the national median age of 28 years. The large number of elderly in the area dictates the need for more units to house them in the future. This trend can be seen in the fact that over 1,200 units of elderly subsidized housing have been built in the past two years. This trend should continue into the future.

Still another housing alternative for the elderly is to move to small apartments, rooming houses, or apartment hotels. These types of units are very popular in many major cities and can be seen to a large extent in Wilkes-Barre at such places as the Sterling Hotel and at the Hotel Durkee.

The last housing alternative available to elderly persons is to utilize federal programs for which they are eligible, particularly those designed specifically for elderly persons. The Department of Housing and Urban Development (HUD) is the agency primarily concerned with housing for the elderly and has 21 programs for which elderly persons are eligible. Five of HUD's housing programs are particularly suited to the elderly citizen's housing needs. These five are:

Section 231 - Mortgage insurance for rental housing which includes construction, rehabilitation, and acquisition of rental housing with 8 or more units for elderly or handicapped persons.
Section 202 - Direct below market interest rate loans for the construction or rehabilitation of housing for the elderly.
FHA Mortgage Insurance for Mobile Homes and Mobile Home Courts.
Public Housing - Low rent through public housing authorities.
Section 236 - Interest supplements on rental and cooperative housing mortgages.

Although the federal government has recognized the problem of housing the elderly, and has developed the above programs, there are still far more elderly people who are forced to live in substandard dwelling units or are burdens on their families simply because their incomes no longer allow a reasonable place to live.

Other Housing Problems of the Elderly - While a small fixed income during inflation is undoubtedly the most severe problem, and the cause of many of the other problems facing the elderly citizen, the elderly do have other situations which are adverse and significant. When old age sets in, the body becomes frail and, in many cases, infirm. This factor causes endless housing problems for the elderly.

Elderly persons often lose their drivers licenses and auto insurance. If they have no one available to drive them in their daily activities, they are dependent on public transportation. This severely limits where they can live because of the limited areas with transit available. Most elderly persons require frequent visits to medical facilities, which require constant reliance on transportation services. Extremely important from a housing standpoint are the physical needs of the elderly and the disabled. The elderly are prone to household accidents, thereby necessitating special housing features. For example, single story buildings or buildings with elevators are a necessity.

Frank Lloyd Wright said that ''form follows function''. This means that buildings should be adapted to persons and human activities, rather than residents adapting to the living unit. Yet there are few living structures specifically designed for the unique needs of the elderly and the disabled.

Compounding the above problems is the fact that the elderly spend a greater proportion of their time within their dwelling than younger residents. They do not have the outside activities and outside work of the younger person. Consequently, it is especially important that the living unit for the older person be far more than a room, which often seems more of a cell block than a residence.

Housing for the older citizen is an agonizing need because of the elderly person's age, physical condition, isolation, and psychological nature. Growing old, retiring, and being isolated from the mainstream of society is a particularly painful experience. The fear of sudden illness and of financial crises is ever present. People are basically quite proud, and an isolated room can have important physical and psychological impact on the elderly person's well-being. The housing environment can affect one's whole attitude toward life; and, the longer a person can live independently and profitably, the happier he is and the better off society is. Indeed, a healthful living environment can ward off real and imaginary physical and psychological problems which often cost society more to correct than it would have cost to provide a suitable living unit and environment.

Historically, the aged have been able to depend on nearby children for assistance in time of need. Because of increased mobility, however, this ability is rapidly diminishing.

The many mechanisms for helping the elderly to find improved housing are severely hampered by the long-time resident's reluctance to leave familiar surroundings, the ingrained background and cultural differences, and to a considerable extent, the reluctance of many to give up their independence and submit to federal, state or local subsidy or welfare.

In any event, significant problems are faced by the elderly person with limited resources in finding suitable shelter, and not enough has been done for them by the local or state governments. Housing aid for the elderly has come almost exclusively from federal housing programs and local, interested citizens, church groups, and non-profit organizations.

Low Income - The low income residents of the Valley suffer many of the same problems that the elderly suffer in the search

for standard dwelling units. The lack of a real housing mix, the inability to afford standard housing and other deficiencies all combine to defeat the low income consumer. In the future, the needs of the elderly should not overshadow the needs of the non-elderly to the point of exclusion from needed programs.

SUMMARY

If the age and condition of the structures within the Wyoming Valley can be disregarded, the supply of housing is sufficient at this time. However, the environmental level, the relationship between the natural and man-made features of the land, makes this separation impossible. It is the relationship between the man-made features of an area and the natural features that give the observer the feeling of order or chaos, beauty or ugliness. To separate a structure from its surroundings, would be as difficult as separating a person from his character.

The housing demand of the future will be based upon the following factors: (1) the increase in population will demand more housing; (2) the reduction of dwelling units because of urban renewal will generate a future demand; (3) the number of substandard units that will be demolished in the future will generate a demand; (4) the removal of dwellings for road construction will cause a still greater demand; and, (5) the generation of a 5 percent vacancy rate will cause more units to be built in the future.

The Study Area will experience a growth of approximately 25 percent over the next 28 years. In the year 2000, there will be a total of 111,590 units in the Wyoming Valley. These units will differ from those presently existing in that new housing types will become more abundant. Apartments and townhouses will become more prevalent along with an increase in modular units for both single family and multi-family units. The future Valley will have a renewed housing stock that will give rise to a new community structure and environment.

The following recommendations suggest the ways and the means to achieve the future housing stock.

RECOMMENDATIONS

Organizational Councils -

1. One overall coordinating council for all federally subsidized housing projects, urban renewal, public housing, or non-profit housing should be started in the Valley so that an overview of all projects could be put into one central plan to achieve a better grantsmanship posture. This council could hire a professional grantsman to write all proposals and thereby increase the amount of federal funds brought into the Valley.

2. A marketing council should be started so that a constant surveillance of housing supply could be available at any point in time. This council could be part of the Luzerne County Planning Commission and/or the Economic Development Council of Northeast Pennsylvania. The main purpose of this council would be the constant monitoring of all new housing building permits issued in the study area. The council would not approve or disapprove, but simply monitor all new housing starts whether public or private so that a constantly updated base would be in existence.

3. Builders located within the Wyoming Valley should combine forces over the short range to meet the building needs created by Tropical Storm Agnes. The use of builders from outside the area will not add to the economic base over the long range and will not create the expertise in local builders that will be needed over the long range. After the building boom is over, the builders should specialize so that a truly diversified building industry can develop.

Local Tax Structures -

4. The present property taxes within the Valley are regressive in that the poor and elderly pay a greater percentage of their income to taxes than do the middle and upper income population. We recommend that a sliding scale for property taxes be developed to reflect the income of the taxpayer.

5. Mobile homes should be taxed as if they were single family homes and not as vehicles as are many at the present time. This new tax base could be used to off-set present taxes on property belonging to the poor and the elderly. New housing codes should be developed for mobile homes so that the parks and homes are kept in a safe, sanitary and standard condition.

6. A re-evaluation of the entire property tax structure of the study area should be started immediately. The areas for further investigations are (1) the millage paid by commercial and industrial property compared to residential property; (2) the millage rate variance among the municipalities; (3) the way a home is assessed, whether on a periodic update of value, flat percentage increase per year, or when a building changes ownership. In part three above, it must hold true that all people who live in the same priced house pay the same amount of taxes.

Needed Studies -

7. We recommend that a complete housing structure analysis be done for each municipality. A determination of the number and condition of each structure would give each municipality a

base from which a comprehensive plan for redevelopment could be started.

Municipal Policies for Better Housing -

8. All municipalities should immediately adopt building, housing, plumbing and electrical codes to control further deterioration of a community as well as standardize the quality of new construction.

9. It is recommended that all future changes in residential zoning and approval or disapproval of subdivisions, be based only upon the merit of the proposal.

10. The use of planned unit developments, PUDs, would add needed open space while also creating distinct neighborhoods that have their own individualistic characters. A full review of PUD is presented in the development control section of the land use report. Zoning ordinances should be revised to include needed flood plain control elements.

11. Improved site planning for all new residential developments should be initiated so that efficient and functional usage of land can be obtained. The incorporation of open space, small, neighborhood shopping area, improved pedestrian circulation systems, and good transportation routes should be foremost in the monds of the locality. A site review should be a prerequisite before approval of any future subdivision or housing development.

12. The future use of industrialized building components is recommended so that the construction time as well as the cost of housing units could possibly decrease. The use of such components as plastic pipes, pre-hung doors and windows, prefabricated plumbing units, etc. are strongly suggested as a means of decreasing housing costs. The Pennsylvania Industrialized Housing Code, passed in 1972 would allow for the above when it becomes effective, will supercede local codes.

Towards an Improved Housing Supply -

13. More multiple family housing of one and two bedrooms should be added to supply (1) the elderly, (2) college students, (3) young marrieds, and (4) a general vacancy rate for an increased mobility factor.

14. A greater variety of building types need to be built, allowing a greater degree of choice for new residents as well as existing residents wanting new dwelling units.

15. More new houses priced between $20,000 and $35,000 of a three and four-bedroom size are needed so that the new people that will be coming into the area will have a choice of dwelling units.

16. A quick and inexpensive method to achieve a better looking area environmentally would be the institution of a ''clean-up fix-up'' campaign in which all home owners within a certain area would paint the exterior of their houses or apply new siding, clean up the yards and plant new or additional shrubbery. This would give the area a renewed appearance. This campaign could be organized by each municipality with funds coming from local beautification societies. The Study Area presently has this type of campaign in progress, however, new emphasis could be added to the program.

17. The location of housing for the elderly has not conformed to any overall plan for the Valley. It is recommended that in locating all future buildings for elderly people that special consideration be given to sites that are located on major public transit routes, close to medical services and medical personnel and close to major shopping facilities. Special attention should be given to improved site planning and the activities that these buildings will house.

A high-rise building should not be built for elderly people. The best site plan would be one or two-story units built at grade with no stairs, only ramps. It is illogical to put an elderly person on the tenth floor of a building and expect them to negotiate stairs and elevators, especially if there is an emergency such as a fire. All further construction should be limited to two-story or prefabricated one-story units, built especially for the elderly and/or infirmed person.

CHAPTER 5
ECONOMIC CONSIDERATIONS

The Wyoming Valley portion of Luzerne County lies in the heart of the ''Anthracite Belt''. For years this part of Northeastern Pennsylvania has been known as mining country; roughly 30 percent of the total Anthracite coal production of the Commonwealth of Pennsylvania in 1970 was mined in Luzerne County. This amounted to approximately 2.7 million tons which is only .30 percent of the remaining recoverable reserves of anthracite. Mining, therefore, will no doubt remain a discernable economic factor in the area for at least the next century or so and may gain in importance due to the energy crisis.

For an area that used to be almost exclusively dependent upon mining employment, Luzerne County has made a commendable recovery. Growth rates consistently above the state average in practically every economic sector, and a progressively diversified industrial mix point to a period of economic stability ahead provided, however, that certain requirements are met. This period of stability can be identified even in the light of the recent adverse effects to the economy of the region caused by Tropical Storm Agnes. The reason for this observation is that despite some obvious liabilities, the area has been able to attract manufacturing establishments to a higher degree than most other metropolitan areas in the state and has achieved a higher percentage of manufacturing employment. The liabilities, on the other hand, are the decline in population (recently arrested), a growing shortage of skilled labor, a need for newer housing stock and improved technical education.

It should be emphasized that because of these basic structural inadequacies in the area's economy any encouraging short term trends should not be construed as being in any sense permanent in nature.

Even so, there is no reason why overall economic development efforts will not be increasingly successful if more coordinated areawide industry recruitment procedures are implemented.

The above mentioned liabilities have been instrumental in preventing a more rapid diversification of the economic base. The manufacturing industry is by no means balanced yet. Apparel manufacturing establishments still employ more persons than any other economic sector in the area. However, it appears that the dominance of this industry as a prime employer of non-skilled labor is slowly changing as more and more durable goods manufacturing establishments invest in the area.

On the other hand, it is expected that with the recent influx of federal and state employment, as part of the flood recovery effort, the slight shift towards non-manufacturing employment of the last two or three years will be strengthened. This will assist in creating the basis for a more balanced employment structure, closely resembling the national norm and resulting in a higher wage structure in the area. Unless the liabilities mentioned above can be corrected, a period of stagnancy may occur for the people in Wyoming Valley.

INDUSTRIAL MIX

The Wyoming Valley is the focal point in the economy of Luzerne County in combination with the city of Scranton as well as of northeastern Pennsylvania as well. Luzerne County has the largest number of manufacturing establishments in the region. In addition, it has consistently registered the highest gross as well as net gain in manufacturing employment among all seven counties in the area. Between 1958 and 1968 the county registered a 39 percent increase in new manufacturing jobs and a 58.2 percent net gain in manufacturing employment, the only county in northeastern Pennsylvania to achieve such a feat.

However, most of these new jobs did not contribute to the diversification of the industrial base. Unemployment and consequent population decline were indeed reduced but the extent of the economic lag for this area versus the national economic picture was undetermined at the time of Tropical Storm Agnes.

DURABLE VERSUS NON DURABLE GOODS EMPLOYMENT

Garment and textile mill plants entered the area during the forties primarily attracted by the availability of cheap labor as well as the area's proximity to the New York and Philadelphia markets. This labor was provided by an increasing number of women who were forced to seek employment. This was the only way to supplement declining family income as a result of mines either closing down, limiting their production, or introducing new mining methods. These establishments, even though dependent as they were on cheap labor, offered generally unstable employment and a low potential for any significant economic welfare of the Wyoming Valley. They merely served as a stabilizing factor to the decline in mining employment. They also had little effect on stimulating any sizeable service and other supporting industry activity.

By the mid-forties, it was evident that the only way the Valley as well as the whole region could arrest the deterioration of the economic base was to embark upon a rigorous program of attracting manufacturing plants that would not only offer stable employment but would also generate additional employment in related industries. It became clear that this was the most appropriate means by which out-migration would stop and high unemployment would be combated.

By and large, efforts of local leaders towards this goal have been successful. There is no doubt that the area has reached a point of equilibrium. As a matter of fact, it was on its way to a slightly more efficient utilization of available resources (i.e., it was experiencing a level of economic vitality generally in line with the national pattern) when Tropical Storm Agnes struck. The question, therefore, remains as to what extent the storm affected the long term economic growth of the general area and in particular, the Wyoming Valley.

Table 25 shows that in the last ten years or so Luzerne County as a whole has had a higher percentage of persons employed in non-agricultural and manufacturing occupations than northeastern Pennsylvania, Pennsylvania, and the U. S.

In 1961, for instance, the percentage of Luzerne County employment in manufacturing was 35.5 percent; for N.E. Pennsylvania it was 35.5 percent; for Pennsylvania 32.4 percent; and for the nation (in 1970) 25.2 percent. In 1971, these figures were 37.3 percent, 36.5 percent, 30.0 percent and 24.7 percent respectively. This is caused by the fact that persons employed by the manufacturing of non-durable goods outnumber by 2 to 1 persons employed by durable goods industries in both northeastern Pennsylvania and Luzerne County, while for Pennsylvania and the U. S. durable goods employment has been consistently more than employment in non-durable goods industries.(1)

For example, in Luzerne County for 1971, 12.3 percent of total employment was in durable goods establishments compared with 25.0 percent in non-durables. These figures compare unfavorably with the national averages for 1970 which were 14.3 percent and 10.4 percent respectively.

As figures in Table 25 also show, the shift in the distribution of manufacturing employment between durable and non-durable

(1) Durable goods are items with a normal life expectancy of three years or more, while non-durable goods are items with a relatively short life expectancy and usefulness.

Table 25

EMPLOYMENT TRENDS

(as a percentage of total employment)

	Luzerne County			Northeastern Pennsylvania			Pennsylvania			U. S.		
	1961	1969	1971	1961	1969	1971	1961	1969	1971	1960	1969	1970
Nonagricultural wage and salary	87.4	90.4	90.4	85.1	88.9	89.2	85.9	89.7	89.8	81.3	90.0	89.9
Manufacturing	35.5	39.4	37.3	35.5	37.6	36.5	32.4	31.0	30.0	25.2	25.8	24.7
Durable goods	7.8	12.3	12.3	7.8	10.2	11.7	18.1	18.2	17.5	14.2	15.2	14.3
Non-durable goods	27.7	27.1	25.0	27.7	27.4	24.8	14.3	12.8	12.5	11.0	10.6	10.4
Nonmanufacturing	51.9	50.9	53.1	49.5	51.3	52.7	53.5	58.7	59.8	5.1	64.2	65.2
Mining	4.7	1.7	1.5	3.6	1.6	1.5	1.3	0.8	0.8	1.1	0.8	0.8
Contract construction	2.9	3.8	4.3	2.5	3.5	3.4	3.6	4.3	4.2	4.3	4.4	4.3
Transportation & public utilities	5.5	4.9	5.0	5.7	4.6	4.6	6.3	5.6	5.6	6.0	5.7	5.7
Wholesale & retail trade	15.4	15.4	15.9	14.2	15.1	15.5	16.1	17.2	17.6	17.1	18.8	19.0
Finance, insurance & real estate	3.0	2.9	3.2	2.5	2.6	2.8	3.7	3.9	4.0	4.0	4.6	4.7
Service & miscellaneous	9.9	10.9	11.7	11.0	12.2	12.8	11.9	14.1	14.5	11.1	14.2	14.7
Government	10.5	11.2	11.6	10.0	11.7	12.1	10.6	12.8	13.1	12.5	15.7	16.0
Federal	2.2	2.2	2.2	2.1	2.7	2.7	2.2	2.5	2.9	3.4	(NA)	3.4
State & local	8.3	9.0	9.4	7.9	9.0	9.4	8.4	10.3	10.2	9.1	(NA)	12.6
All other nonagricultural employment	11.4	8.9	8.9	12.6	9.5	9.4	11.2	8.6	8.6	10.1	5.4	5.7
Agricultural	1.2	.7	.7	2.3	1.5	1.4	2.9	1.6	1.6	8.6	4.6	4.4
Employment Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: 1. U. S. Dept. of Commerce, Statistical Abstract of the U.S. (various years).

2. Pennsylvania Dept. of Commerce, 1972 Pennsylvania Abstract.

3. Economic Development Council of Northeastern Pennsylvania, Manufacturing Growth and the Economy of Northeastern Pennsylvania, December 1970.

4. Pennsylvania Dept. of Labor and Industry, Bureau of Employment Security, Labor Market Newsletter (various dates).

5. Wilbur Smith and Associates.

goods industries has been slightly more consistent in the region than in Luzerne County. On the same basis, relatively fewer people in the region than in Luzerne County (as a percentage of total employment in each area) either lost their jobs or moved out of manufacturing because of the recession.

From Table 25, it is further seen that there are relatively fewer persons employed in non-manufacturing jobs in Luzerne County than in Pennsylvania or the U.S. The figures for 1971 were 53.1 percent in the County versus 52.7 percent in northeastern Pennsylvania and 59.8 percent for the state as a whole. Mining is still higher than the national average and contract construction is approximately the same.

On the other hand, the County is definitely lagging with respect to employment growth in four sectors: (a) Wholesale and Retail Trade, (b) Finance, Insurance and Real Estate, (c) Service and Miscellaneous, and (d) Government. The greatest inadequacy seems to be in Finance, Insurance, Real Estate, and in Services. Wholesale and Retail Trade have been especially slow in relative growth.

Government also seems to be growing at a slower pace in the County than in the region with the Federal sector remaining constant between 1961 and 1971. All other non-agricultural employment in Luzerne County is relatively more stable than that in northeastern Pennsylvania or in the U. S. while agriculture has declined to an extremely low level in the last decade. The importance in this difference in manufacturing employment distribution can be seen in Table 26; namely that in 1971, only 38.2 percent of total salaries and wages due to manufacturing were generated by durable goods industries.

Nevertheless, there was an increase from 31.0 to 38.2 percent between 1962 and 1971 in the wages and salaries attributable to durable goods manufacturing employment. On the other hand, non-durable goods employment dropped from 69.0 to 61.8 percent. There were also corresponding drops in (a) value of production and (b) the number of establishments in the non-durable goods categories.

These figures also show that in 1971, the average payroll of a non-durable goods manufacturing establishment was about $268,800 while that of a durable goods manufacturing establishment was about $358,700 (in 1962 constant dollars). Figures for 1962 were $205,000 and $229,000, respectively. Therefore, the percentage

Table 26

TRENDS IN WAGE AND SALARY PAYMENTS

AND VALUE OF PRODUCTION 1962-1971

LUZERNE COUNTY

Non-Durable Goods	1971(1)	Percent of County Total	1962(1)	Percent of County Total
Wages and Salaries	$182.2	61.8	$107.5	69.0
Value of Production	$630.7	61.4	$391.4	68.1
Establishments (no. of)	519.0	68.4	524.0	71.3
Durable Goods				
Wages and Salaries	$112.7	38.2	$48.4	31.0
Value of Production	$396.4	38.6	$183.6	31.9
Establishments (no. of)	240.0	31.6	211.0	28.7

(1) Money figures in millions.

SOURCE: Pennsylvania Dept. of Commerce, County Industry Reports, 1971.

increase in salaries between 1962 and 1971 was 71.7 percent for non-durable goods establishments and 105.2 percent for durable goods establishments.

AREA ECONOMIC COMPARISONS

Another way to look at this situation is to consider 1968 or 1969 data on the assumption that 1970 and 1971 being recession years do not accurately reflect the economic health of Luzerne County. In Table 27, using the national average as a norm, the County has experienced smaller increases between 1958 and 1968 in Value Added per Employee and also Average Wage and Salary Payment per Employee than the region as a whole. On the other hand, the amount of Capital Expenditures per Employee increased at a much faster pace than that for the region.

In 1958, about $6.8 million was invested in capital expansion in Luzerne County while the figure for 1968 was $45.4 million (more than a six-fold increase). Comparative figures for the region are 22.0 million and 87.1 million (a little less than a four-fold increase). This impressive increase in capital expansion should serve to explain why the County experienced a higher growth in contract construction employment between 1961 and 1971 than the region (assuming a two to three year lag between expansion project announcement and actual expenditures leading to increased construction employment).

Figures in Table 27 indicate that both Northeastern Pennsylvania and the County are below the national averages in all aspects pertaining to gross domestic product. However, both areas have registered commendable progress in bridging the gap as confirmed by three major economic indicators between 1958 and 1968 (all higher than the rates of growth in the national average). Progress in the County had been less than that in the region in the quality of industries.

Even though Luzerne County contains the bulk of manufacturing activity in the region and registers the highest growth rates in manufacturing employment, it still has below average salaries compared to those of the region.

As figures in Table 28 indicate, the trend towards increases in non-durable manufacturing employment seems to have been halted in the last few years. That is while in 1969 durable goods additions were almost a half of the non-durable goods additions, or 655 jobs versus 1,470 jobs, in 1971 they were exactly equal or 1,042 jobs each.

Table 27.

TRENDS IN KEY ECONOMETRIC INDICATORS

AS PERCENTAGES OF THE NATIONAL AVERAGE

	Percent 1958	Percent 1968	Change in Percentage
Value Added Per Employee			
Luzerne County	57.39	71.19	+13.80
Northeastern Pennsylvania	54.90	70.93	+16.03
Average Wage and Salary Payment Per Employee			
Luzerne County	59.65	69.21	+ 9.56
Northeastern Pennsylvania	60.79	71.50	+10.71
Capital Expenditures Per Employee			
Luzerne County	30.66	83.10	+52.44
Northeastern Pennsylvania	37.65	66.41	+28.76

SOURCE: Pennsylvania Department of Commerce, County Industry Reports (various years).
Wilbur Smith and Associates.

Table 28

ANNUAL GROSS MANUFACTURING EMPLOYMENT

ADDITIONS BY INDUSTRY TYPE

LUZERNE COUNTY

	Total	Durable Goods	Non-Durable Goods
1969	2,125	655	1,470
1971	2,084	1,042	1,042

SOURCE: Pennsylvania Department of Commerce: Industrial Development Projects Announced in Pennsylvania (various years).
Wilbur Smith and Associates.

DURABLE GOODS EMPLOYMENT STABILITY

A difference in manufacturing employment appears to exist between the study area and Luzerne County as a whole. Table 29 shows that in 1971, the study area had a lower percentage of persons employed in durable goods industries than Luzerne County. In Luzerne County, 27.55 percent of the total manufacturing employment was in durable goods while in the study area the percentage was 24.73. The Hazleton area therefore has a more diversified industrial base than the study area.

However, a few SIC industry groups exhibit a difference in percentage distribution of employment between the study area and Luzerne County. These industries are (Primary Metals), (Chemicals), (Rubber and Plastics) and (Leather). Specifically, while 0.28 percent of the study area manufacturing employment was in primary metal industries the figure for the County was 1.45 percent. The figures for chemicals and allied products were 0.91 and 2.12 percent respectively, for rubber and miscellaneous plastics products 2.85 percent and 3.29 percent and for leather and leather products 9.84 and 5.63 percent.

Furthermore, as Table 30 indicates, there is a significant difference in manufacturing employment changes between the various municipalities of the Study Area and the remainder of Luzerne County.

Because of the recent nationwide recession, a slight drop in manufacturing employment was experienced in the whole County. However, this drop was limited to non-durable goods industries only. Durable goods industry employment was up for the County as a whole.

This relationship is not in any way conclusive. However, what is significant is that while the study area experienced a drop in manufacturing employment, the remainder of the County showed an increase. The former has a smaller percentage of durable goods to total manufacturing employment in 1971 than the latter. It is also worth noting that Hanover and Fairview Townships as well as Pittston City, (which were among the few municipalities in the study area to show an increase instead of a drop), had sizable employment in SIC code industries for stone, clay, etc; fabricated metal products; machinery, except electrical; transportation equipment; all durable goods industries.

Formal regional economic theory does not offer a ready explanation for this relationship. Experience with nationwide fluctuations tends to suggest that the opposite should be true.

Table 29

INDUSTRIAL EMPLOYMENT PROFILE

FOR THE STUDY AREA AND LUZERNE COUNTY, 1971

(as percent of total manufacturing employment in respective area)

		Percent of Study Area	Percent of Luzerne County
Durable Goods Total		24.73	27.55
SIC 19	Ordinance	N	0.22
SIC 24	Wood products	0.26	0.43
SIC 25	Furniture and fixtures	3.97	3.70
SIC 32	Stone, clay, glass, etc.	4.42	3.82
SIC 33	Primary metal products	0.28	1.45
SIC 34	Fabricated metal products	4.98	4.97
SIC 35	Machinery, except electrical	3.12	4.90
SIC 36	Electrical machinery	5.44	5.95
SIC 37	Transportation equipment	2.25	2.10
SIC 38	Instruments and related products	0.01	0.01
Non-Durable Goods Total		75.27	72.45
SIC 20	Food and kindred products	9.69	8.39
SIC 21	Tobacco manufacturing	6.12	4.81
SIC 22	Textile mill products	5.54	6.36
SIC 23	Apparel and related products	32.22	33.23
SIC 26	Paper and allied products	0.78	1.68
SIC 27	Printing and publishing	3.38	3.18
SIC 28	Chemicals and allied products	0.91	2.12
SIC 29	Petroleum refining	0.32	0.36
SIC 30	Rubber and miscellaneous plastics	2.85	3.29
SIC 31	Leather and leather products	9.84	5.63
SIC 39	Miscellaneous manufacturers	3.62	3.40
Manufacturing Employment Total		100.00	100.00

SOURCE: Wilbur Smith and Associates from Pennsylvania Department of Commerce County Industry Reports (1971).

N - Negligible Amount

Table 30

CHANGES IN MANUFACTURING EMPLOYMENT

SELECTED AREAS IN LUZERNE COUNTY

	1969	1971	Percentage Change	Ratio of Durable to Total Manufacturing Employment (1971)
Nanticoke City	1,304	555	-57.44	6.49
Plains Township	1,591	1,460	- 8.23	7.80
Swoyersville Boro	924	880	- 4.76	8.86
Plymouth Boro	782	764	- 2.30	9.29
Kingston Boro	3,446	2,849	-17.33	18.67
Wilkes-Barre City	11,890	10,965	- 7.78	20.00
West Pittston Boro	2,103	1,911	- 9.13	27.89
Study Area	41,218	38,366	- 6.90	27.97
Hazleton City	5,823	5,777	- .79	31.61
Hanover Township	1,356	1,429	+ 5.38	31.98
Pittston City	3,175	3,563	+12.22	35.78
Rest of Luzerne County	11,325	11,850	+ 4.63	37.85
Wright Township	4,949	4,536	- 8.34	52.27
Fairview Township	593	682	+15.00	84.89

SOURCE: Wilbur Smith and Associates from Pennsylvania Department of Commerce County Industry Reports (1971).

That is, as investment in new plant and equipment shrinks during a recession, orders of such durables (also called capital goods) as machine tools and related equipment also go down. This in turn is a contributing factor to a general slump in durable goods sales which, in turn, leads to a leveling off or even a slight decline in durable goods industry employment. However, this is not the case with Luzerne County. This situation could be caused by a combination of non-durable goods employment (partly due to over-concentration in particular industries) and a durable goods industrial mix with potential growth and with little if any capital goods employment.

Consequently, this selective examination of the industrial structure of the area suggests that the industrial development efforts of the last decade in the County as a whole have been on the right track. That is, not only has the area moved towards diversification, but it has diversified with new industries that are generally impervious to cyclical economic conditions. These efforts can be termed adequate for past conditions but inadequate as far as in the aftermath of storm Agnes or the future.

EMPLOYMENT STRUCTURE AND TRENDS

As of 1970, the structure of the labor force in Luzerne County showed that there were proportionately more older people in the area that in either Pennsylvania or the U.S. Moreover, as Table 31 shows, the County had a higher percentage of labor force-eligible people than the state, the U.S. or even northeastern Pennsylvania as a whole.

The County figures, however, compare favorably to the state figures for 1960 and 1970. As a matter of fact, the state situation deteriorated relatively more in this decade than did the situation in the County i.e., the County went from 73.1 percent in 1960 to 74.1 percent in 1970, (a change of 1.7 percentage points) while the State went from 70.9 percent in 1960 to 73.0 percent in 1970 (a change of 2.1 percentage points). Even though the percentage of 16 to 24 year old persons was higher in Luzerne County than in the nation, it was still somewhat below the Pennsylvania average. The 25 to 34 year old age group was weaker in the County than in either the State or the U.S.

The top-heaviness of the age distribution within the population could be a serious problem to some marginally growing industries in the area and may cause industries to relocate.

Table 31

AGE DISTRIBUTION OF THE POPULATION

Age (Yrs.)	Percent Of Luzerne County		Percent Of Northeastern Pennsylvania		Percent Of Pennsylvania(1)		Percent Of U. S.	
	1960	1970	1960	1970	1960	1970	1960	1970
16-19	5.5	6.7	5.4	6.6	7.1	9.1	2.9	4.3
20-24	4.8	6.6	4.8	6.4	5.4	7.2	4.7	6.0
25-34	11.4	10.0	11.4	9.9	12.4	11.1	12.7	12.3
35-44	14.4	11.6	14.4	11.5	14.3	11.6	13.4	11.4
45-54	14.4	14.0	14.1	13.9	12.3	12.8	11.4	11.4
55-64	11.5	13.0	11.2	12.7	9.4	10.4	8.7	9.2
65+	11.1	12.9	11.5	13.2	10.0	10.7	9.2	9.9
Labor force as a percentage of total population	73.1	74.8	72.8	74.2	70.9	73.0	63.0	64.5

(1) For Pennsylvania only the 16-19 age group has been substituted by the 15-19 age group.

SOURCE: EDCNP, The People: A Profile of Age, Sex, and Race: Pennsylvania Department of Commerce, 1972 Pennsylvania Abstract; 1971 Statistical Abstract of the U. S. 1960 and 1970 Census of Population.

The situation does not appear to be worsening though as far as long range planning is concerned since, as data elsewhere in this report indicate, out-migration in Luzerne County has leveled off within the last ten years or so. This can be generally seen from the fact that the median age of Luzerne County has increased from 36.0 years in 1960 to 36.3 years in 1970, showing a stabilizing of the age structure. The median age for the County is slightly higher than the figure for the region: 36.1 years.

STRUCTURAL DEFICIENCIES

Nevertheless, there are some serious structural deficiencies in the labor force that should be noted so that appropriate action programs can be instituted by responsible individuals, both in the private as well as in the public sector. Table 32 shows that even though total age population labor force i.e., the number of people in each age group that are job eligible went up between 1960 and 1970, the male component went down. The total labor force increased from 135,379 in 1960 to 143,459 in 1970.

The male labor participation rate or percentage of males in a particular age group that are employed or not employed although still higher than the female rate, decreased between 1960 and 1970 more than the national norm while the female rate increased to a sizable extent. The cumulative labor participation rate increased from 53.4 percent in 1960 to 56.1 percent in 1970. The male labor participation rate went from 72.4 percent in 1960 to 67.3 percent in 1970, while the female rate grew from 36.9 percent to 46.8 percent. Once again, an increase in the number of women seeking jobs accounts for an overall increase in the total labor participation rate.

The differences indicate that the majority of employed women in the area work in low paying jobs due to the fact that industrial development and growth in the area has primarily been in low skill sectors. By far the largest increase in a female age group labor participation rate was experienced in the 25 to 34 year group. This rate went from 42.7 percent in 1960 to 59.0 percent in 1970.

The same age group was practically the only one of the male age groups indicating a relative increase in interest for a job. It went from 92 percent to 94 percent, while for every other age group the rate dropped. Nevertheless, the absolute figures for both male and female age population labor force declined from 1960 to 1970. This of course can be traced directly to the population decline of this decade.

Table 32

SELECTED LUZERNE COUNTY

LABOR FORCE CHARACTERISTICS

Age (Yrs.)	1960 M & F	1960 Male	1960 Female	1970 M & F	1970 Male	1970 Female
Age Population Labor Force						
16-19	19,196	9,233	9,963	21,669	10,933	10,736
20-24	16,639	7,528	9,111	28,270	14,355	13,914
25-34	39,398	18,526	20,862	36,906	17,565	19,341
35-44	49,855	23,045	26,810	35,375	16,293	19,082
45-54	50,049	23,928	26,121	44,982	20,049	24,933
55-64	39,926	18,360	21,566	42,161	18,728	23,432
65+	38,597	16,881	21,716	45,899	18,629	27,270
Total	253,453	117,418	136,035	255,267	116,555	138,711
Labor Force						
16-19	7,196	3,244	3,951	8,470	3,863	4,606
20-24	11,458	6,142	5,316	21,152	11,564	9,587
25-34	25,985	17,071	8,914	27,931	16,518	11,412
35-44	32,948	21,366	11,582	35,650	14,863	10,786
45-54	32,917	20,887	12,029	31,054	16,311	14,742
55-64	19,413	12,784	6,629	22,915	11,983	10,932
65+	5,461	3,586	1,875	6,284	3,398	2,886
Total	135,379	85,082	50,297	143,459	78,504	64,955
Labor Participation Rates (Percent)						
16-19	37.4	35.1	39.6	39.0	35.3	42.9
20-24	68.8	81.5	58.3	74.8	80.5	68.9
25-34	65.9	92.0	42.7	75.6	94.0	59.0
35-44	66.0	92.7	43.2	72.5	91.2	56.5
45-54	65.7	87.2	46.0	69.0	81.3	59.1
55-64	48.6	69.6	30.7	54.3	63.9	46.6
65+	14.1	21.2	8.6	13.6	18.2	10.5
Total	53.4	72.4	36.9	56.1	67.3	46.8

SOURCE: Commonwealth of Pennsylvania: Governor's Office of State Planning and Development.

EMPLOYMENT CHANGES BY INDUSTRY

Figures 11 thru 14 depict the changes in the employment structure of Luzerne County during the past decade. As has been pointed out before, the largest employer is still the apparel industry even though retail trade seems to be slowly catching up. At the rate that the former is declining and the latter is increasing, retail trade should become the number one employer in the near future, followed by apparel and services. Mining is obviously the sector that has experienced the highest decrease in absolute as well as relative terms (3,900 people in the sixties), followed by other non-agricultural employment (500 jobs).

Next to services (about 4,000 new jobs), state and local government had a 3,000 increase followed by construction (2,200 people) and retail trade (1,400 people). Construction, as a matter of fact, exhibited the highest percentage increase of any sector, except for particular manufacturing industries. Between 1960 and 1970, contract construction went up 64.4 percent, most of it coming in 1964-65. That was about the same year that retail trade employment went up significantly.

Services, on the other hand, recorded their most impressive gain in 1966-67 while total manufacturing employment gains were greatest in 1961-1962. Table 33 shows that the study area has more or less lagged with respect to countywide trends in annual net manufacturing employment percentage changes. Only in three years (1965, 1967, and 1968) was the percentage change in manufacturing employment recorded in the Study Area greater than for the whole county. In 1964-1965 the change in the study area was +3.49 percent while in Luzerne County it was +1.40 percent. The 1966-1967 figures were +0.41 percent and -0.05 percent respectively, while the 1967-1968 figures were +2.56 percent and +2.12 percent.

Cumulative percentage changes, i.e., 1961-1969 and 1961-1971, although higher than the state (and region) averages were still lower in the Study Area than in the County. Manufacturing employment in the study area increased by 24.57 percent between 1961 and 1969 and by 15,95 percent between 1961 and 1971. On the other hand, the County figures went up 26.03 percent between 1961 and 1969 and 20.08 percent between 1961 and 1971. The differences between figures can be attributed to the 1970-71 recession.

What is particularly noteworthy as shown in Figure 3, is that in Luzerne County it took Finance, Insurance and Real Estate about seven years to respond to a sizable increase in manufacturing employment. From 1961 to 1967 this sector remained constant, while in 1968 it increased by 400 new employees to a total of

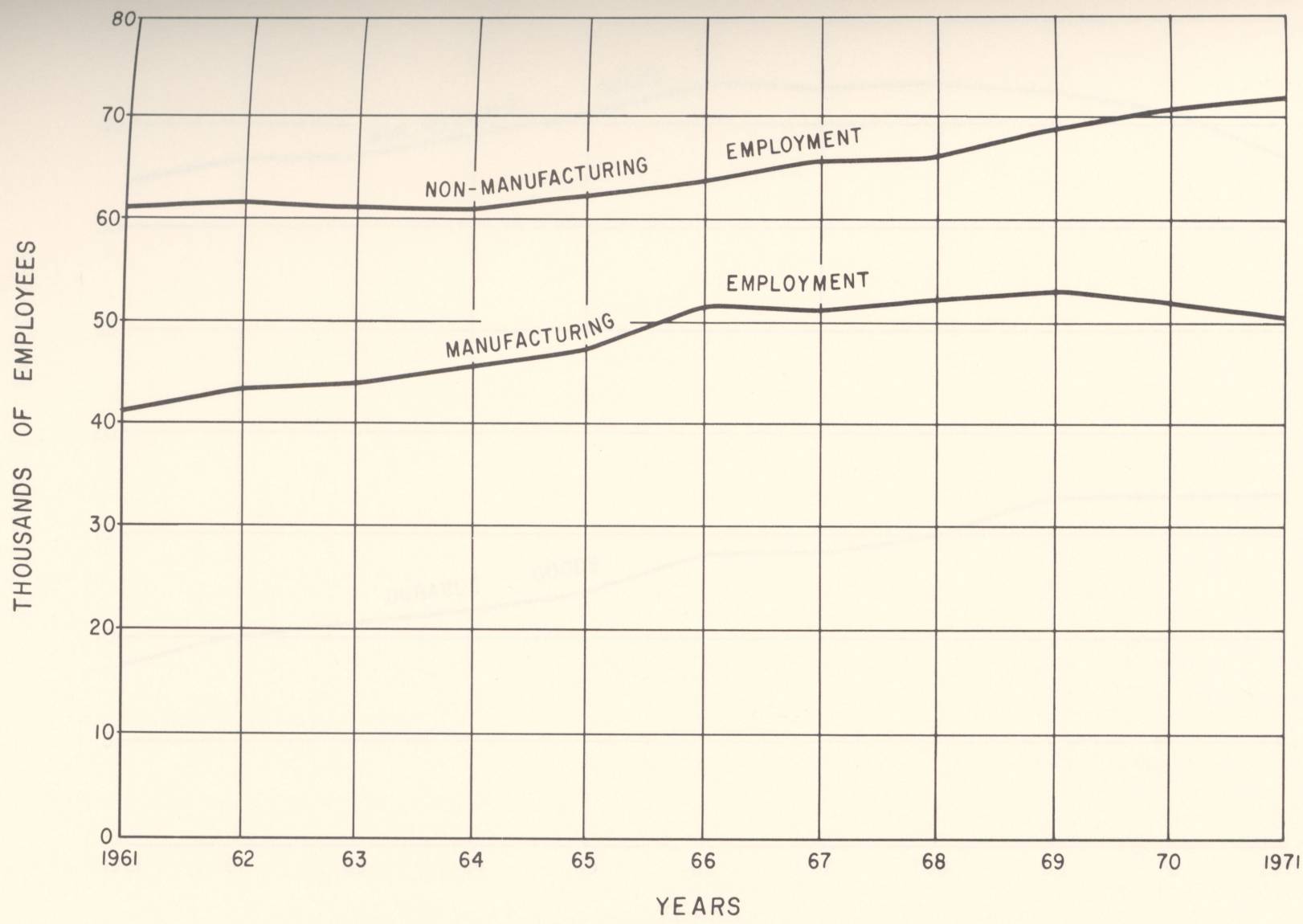
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Table 33

CHANGES IN MANUFACTURING EMPLOYMENT

Year	Study Area	Annual Percentage Change	Luzerne County	Annual Percentage Change	Pennsylvania	Annual Percentage Change
1961	33,988		41,688		1,369,508	
1962	37,195	+12.41	47,342	+13.56	1,378,576	+0.66
1963	37,848	+ 1.75	48,450	+ 2.34	1,373,136	+0.39
1964	38,245	+ 1.04	49,414	+ 1.99	1,410,818	+2.74
1965	39,583	+ 3.49	50,107	+ 1.40	1,479,242	+4.85
1966	40,271	+ 1.74	51,355	+ 2.49	1,495,911	+1.13
1967	40,436	+ 0.41	51,327	- 0.05	1,486,180	-0.65
1968	41,473	+ 2.56	52,418	+ 2.12	1,493,062	+0.46
1969	41,218	- 0.61	52,543	+ 0.24	1,499,259	+0.41
1970	40,279	- 2.28	51,819	- 1.38	1,435,069	-4.28
1971	38,366	- 4.77	50,061	- 3.39		
Percentage Change (1961-1969)		24.57		26.03		+9.47
Percentage Change (1961-1971)		15.95		20.08		

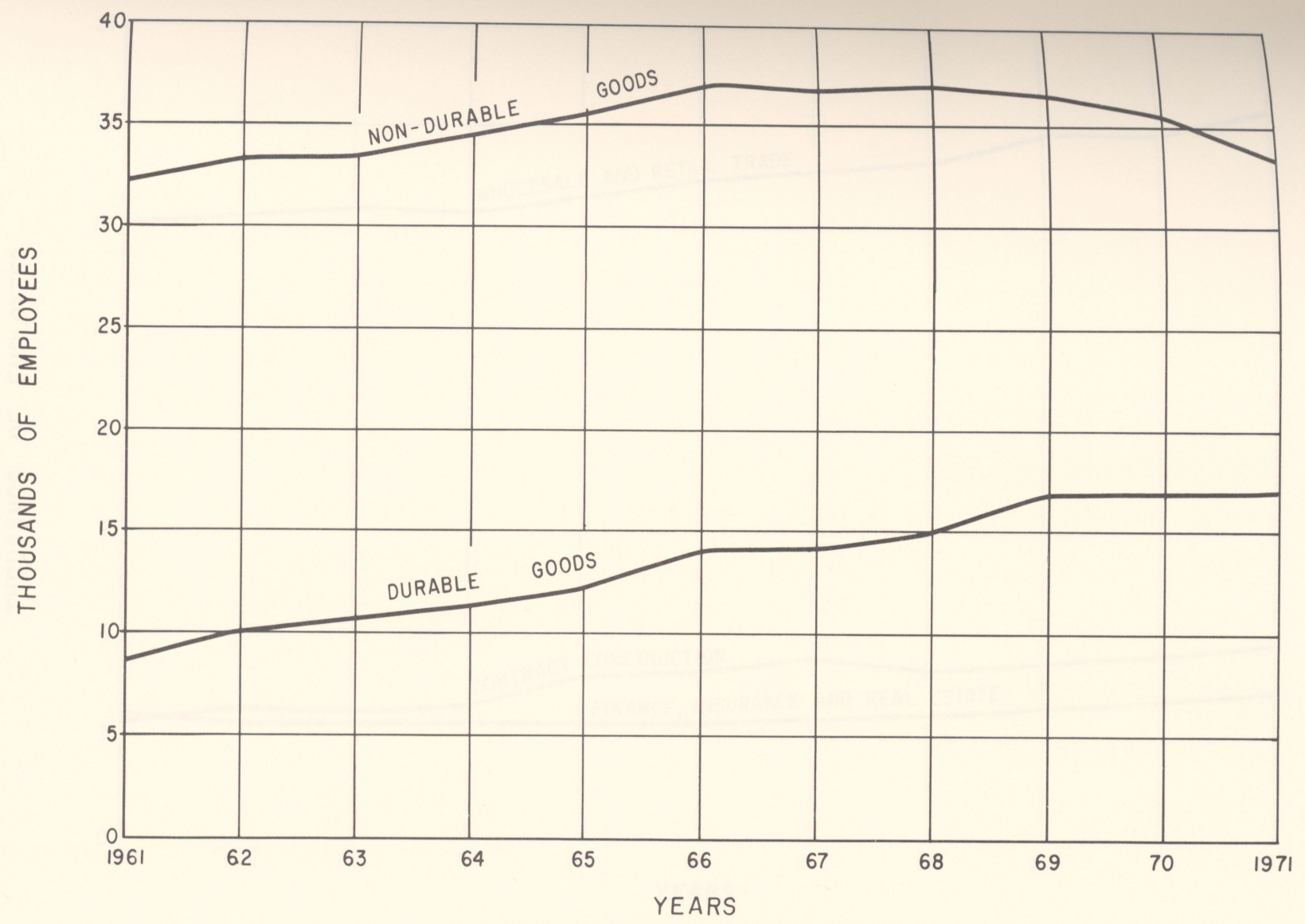
SOURCE: Pennsylvania Department of Commerce, County Industry Reports, 1961-1971.
Pennsylvania Department of Commerce, Bureau of Statistics, 1972 Pennsylvania Statistical Abstract.
Wilbur Smith and Associates.



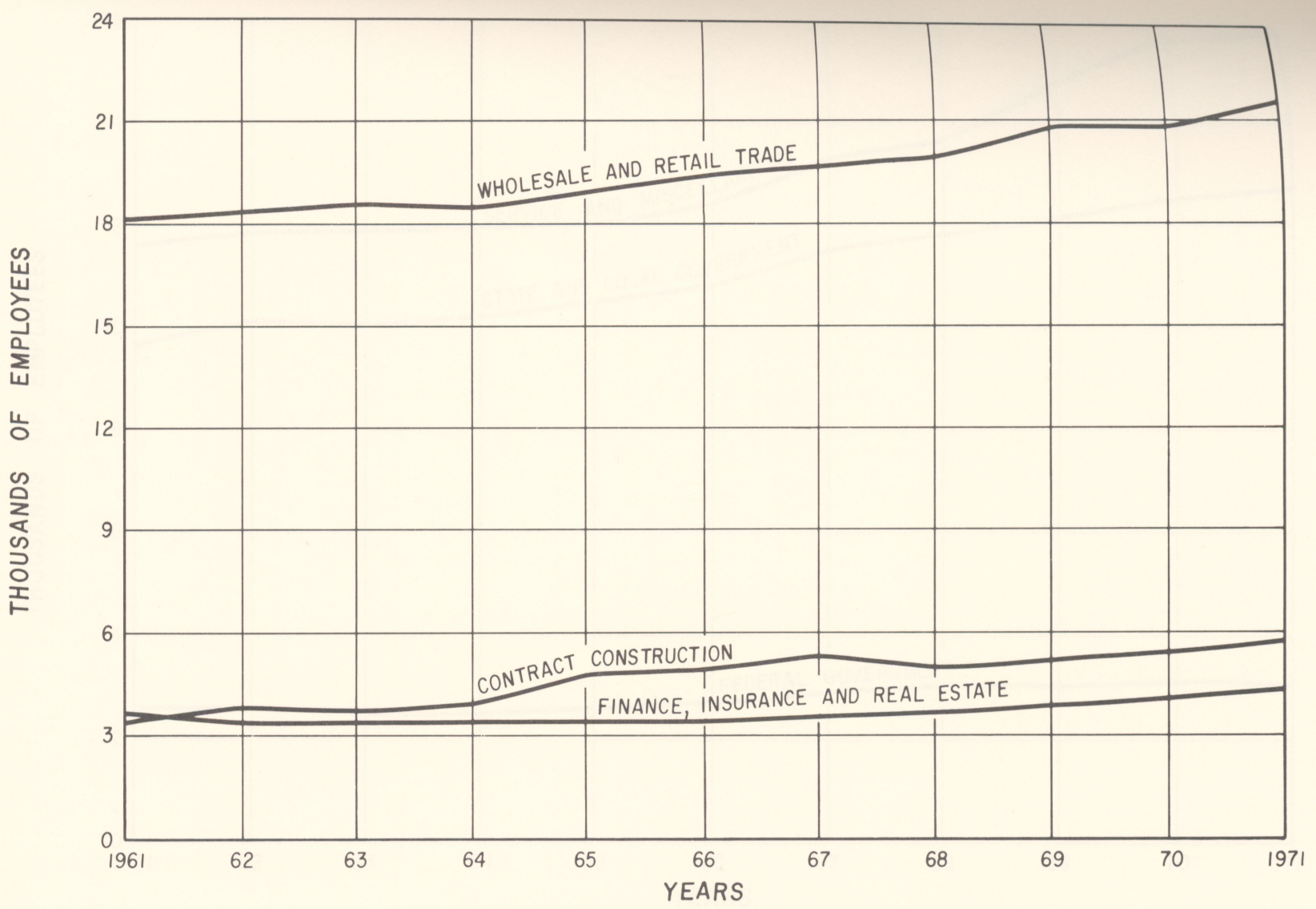
NON-AGRICULTURAL WAGE AND SALARY EMPLOYMENT

Wilbur Smith and Associates

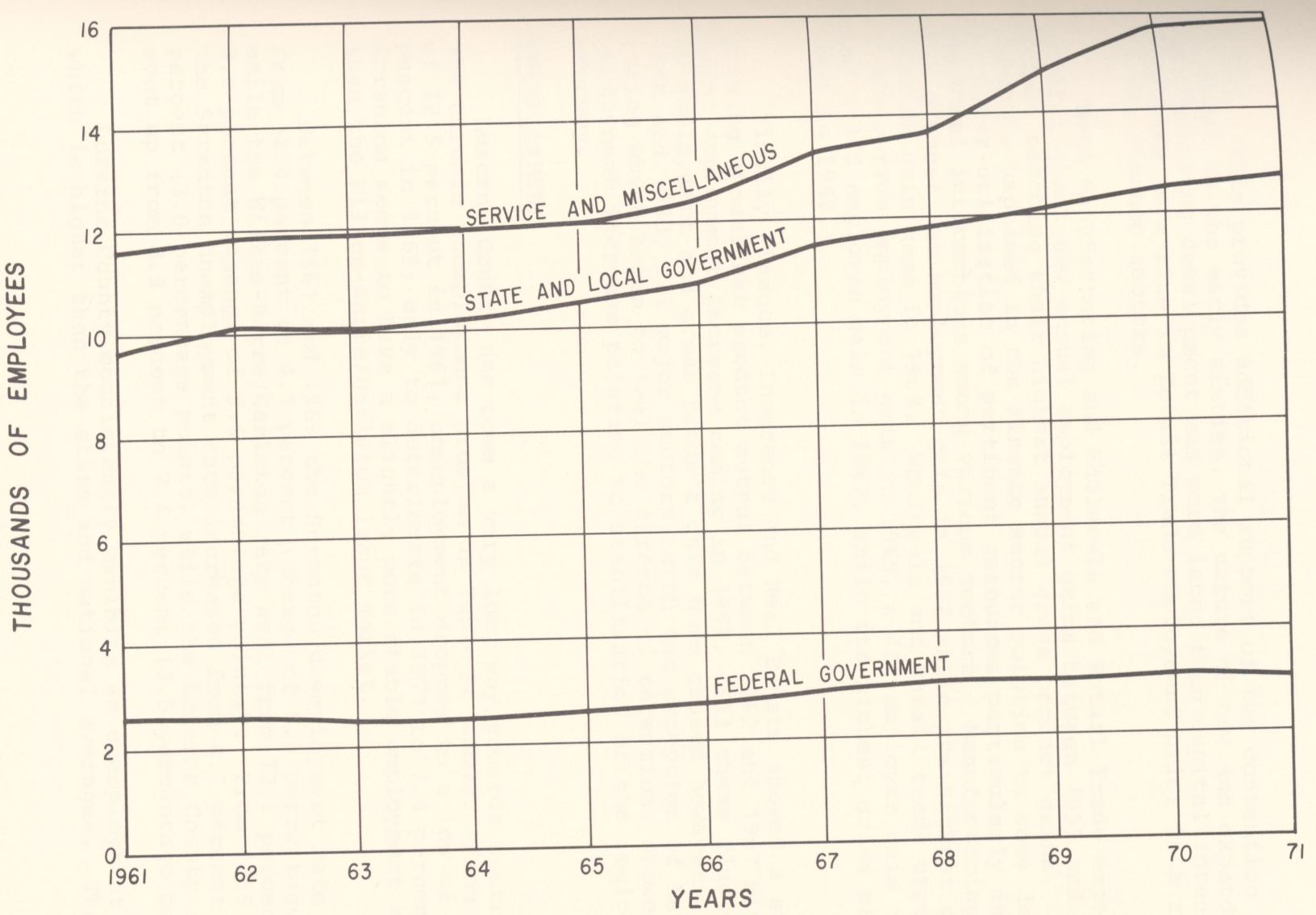
FIGURE 11



MANUFACTURING EMPLOYMENT



NON-MANUFACTURING EMPLOYMENT



NON-MANUFACTURING EMPLOYMENT SELECTED INDUSTRIES

FIGURE 14

3,800. This provides additional support of the contention that at least in the early sixties, the nature of new and expanded manufacturing development was more labor than capital intensive; resulting in a rise in Retail Trade employment prior to a rise in the Finance sectors.

Both Manufacturing and Wholesale and Retail Trade experienced their highest new annual employment gains between 1959 and 1968 before reaching their highest annual gross product gains. The opposite happened in the Finance sector pointing to some degree of under-utilization of pertinent resources particularly in inter-sectoral interactions among various sectors. Manufacturing had the highest net employment gain in 1962 while its highest gross product gain came in 1968. Wholesale and Retail trade experienced a 500 person employment gain in 1965, a 400 employee gain in 1966 and a 300 employee gain in 1967, while its highest gross product came in 1968.

Finally Finance, Insurance and Real Estate showed a steadily growing annual net product output between 1962 and 1967 with the major employment increase coming in 1968. All these fluctuations in employment and gross product gain have ceased however. Between 1968 and 1970, all major sectors, with the exception of Manufacturing which began to feel the effects of recession, showed an employment increase pointing to stabilization of the regional economy.

UNEMPLOYMENT

Luzerne County has come a very long way towards controlling its chronic unemployment problem as Table 34 shows. From a high of 12.5 percent in 1961, unemployment dropped to a low of 3.9 percent in 1969; only to deteriorate in 1971 to 7.4 percent. Scranton seems to have a slightly more stable employment situation than the Wilkes-Barre/Hazleton labor market.

Between 1961 and 1969 the Scranton unemployment rate dropped from 12.4 percent to 4.1 percent (change of 8.3 percentage points) while the Wilkes-Barre/Hazleton rate went from 12.5 percent to 3.9 percent (change of 8.6 percentage points). From 1969 to 1971 the Scranton unemployment rate increased from 4.1 percent to 7.1 percent (3.0 percentage points) while the Luzerne County rate went up from 3.9 percent to 7.4 percent (3.5 percentage points).

Luzerne County consistently exhibits an unemployment position which is higher than the state and national averages. This can

Table 34

REPRESENTATIVE UNEMPLOYMENT RATES

Labor Market	Percent Of 1961	Percent Of 1969	Percent Of 1971
Wilkes-Barre/Hazleton	12.5	3.9	7.4
Scranton	12.4	4.1	7.1
Allentown/Bethlehem	6.7	1.8	4.5
Harrisburg	6.1	2.0	3.1
Pennsylvania	9.2	2.9	5.2
U. S.	6.7	3.5	5.9

SOURCE: Pennsylvania Dept. of Labor and Industry, Bureau of Employment Security.

be explained by the dominance of manufacturing employment in the area to a larger extent than in the state or the nation. Another contributory factor is that the area has an unusually high percentage of relatively unskilled workers whose number is closely tied to the overall business cycle. As Table 35 indicates, a certain amount of these workers, mostly in non-durables, being seasonally employed are the first to experience a freeze in hiring or even layoffs as a result of a recession.

The seasonally adjusted monthly unemployment rate for the Wilkes-Barre/Hazleton labor market area shows sudden increases in the mid-summer during every year, although it increases relatively more during the recession years. Nevertheless, there is some progress: between 1960 and 1961, total civilian work force declined by .1 percent and total employment by .3 percent compared with 1968-1969 figures of +4.2 percent and 4.0 percent and 1970-1971 figures of +.1 percent and -.4 percent. It is also interesting to note in this table that because of the recent influx of government sponsored flood recovery work, the October unemployment rate is back to relatively normal levels.

WAGE LEVELS

The Wilkes-Barre/Hazleton labor market is one of the lowest-paid in the country. It ranks among the lowest 25 in an overall average hourly earnings in manufacturing for 175 areas in the U.S. In particular, apparel which is the dominant industry in the region had the lowest average earnings for production workers of any of the 21 major manufacturing industry groups in the U.S.

Table 36 provides a brief comparison of representative average hourly earnings in the U.S. and Luzerne County. Only one major manufacturing industry, printing and publishing, shows a higher level than the national average. The County figure is $4.25 per hour for printing, publishing and allied industries, while the national figure is $3.69.

Nevertheless, the area appears to be catching up with the rest of the country. Average hourly earnings of production workers in manufacturing rose more in the area between 1960 and 1970 than in the U.S. This can be attributed not only to a more diversified industrial base, but also to the fact that apparel experienced a greater than average improvement in sales in the past ten years.

A sizable amount of the local apparel industry is concentrated in the lower paying "contract shops" that engage in primarily sewing operations. Most of these were severely hit in the flood

Table 35

CHANGES IN UNEMPLOYMENT RATES

WILKES-BARRE/HAZLETON LABOR MARKET AREA

Month	Percent Of 1972	Percent Of 1971	Percent Of 1970	Percent Of 1969
May	6.0	7.4	7.6	3.9
June (1)	7.3	11.3	7.7	4.9
July	22.7	11.9	9.1	5.3
August	15.0	8.3	7.2	4.9
September	8.7	7.6	6.8	4.6
October	6.5	7.4	6.5	3.7

(1) Figure for June 1972 is pre-flood.

SOURCE: Pennsylvania Dept. of Labor and Industry, Bureau of Employment Security.

Table 36

COMPARATIVE AVERAGE HOURLY EARNINGS

BY MAJOR MANUFACTURING INDUSTRY GROUP, 1969

Industry	U. S.	Luzerne County
Printing, publishing and allied industries	$ 3.69	$ 4.25
Machinery, except electrical	3.58	3.06
Fabricated metal products	3.33	2.92
Food and kindred products	2.95	2.73
Tobacco manufactures	2.65	2.22
Leather and leather products	2.36	2.30
Textile mill products	2.35	2.22
Apparel and related products	$2.31	$2.31

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics: The Anthracite Belt in the Sixties.

and may have difficulty re-establishing their operations mainly due to the fact that many of their employees have now obtained much higher paying positions which are related to the flood recovery effort. This is bound to accelerate the decline in overall apparel employment.

LABOR FORCE SKILLS

The skill levels of the labor force are generally at par with those to be found in nearby labor markets, even though the supply of certain higher skill levels is far below these neighboring area.

The labor force is relatively well educated (particularly when compared with poorer areas in the south and elsewhere, but experiences substantial underemployment because of the lack of diversified employment opportunities and the desire of people to remain in the area.

For example, data from the State Board of Vocational Rehabilitation show that in Luzerne County there was a 21 percent increase in the number of cases handled between 1965 and 1971 compared with 68 percent for the State of Pennsylvania. There are certain categories of ''master'' craftsmen for which a shortage exists. Higher pay scales elsewhere plus inadequate vocational training have contributed to this problem. Furthermore, available skilled workers are mostly in their forties and older.

Female skills are low and used mostly in the garment and textile industries. It is generally acknowledged that there is no longer any sizable surplus labor pools available in the County. In the next few years the labor market will be under increased pressure to serve the needs of not only new industries that will enter the area, but existing ones as well. Vocational training, as analyzed elsewhere in the report, shows certain deficiencies with respect to the long-range needs of the area and is generally uncoordinated with forecasted arewide skill requirements.

MANPOWER TRAINING

Vocational program enrollment distributions by course category are indeed more oriented toward Trade/Industrial in the County than in the region. However, considering (a) the present status of the age distribution of the population in Luzerne County and (b) the potential needs of high skill durable goods industries, vocational training does not seem to anticipate the upcoming shortage in certain skills. An urgent need exists for adjusting the quality of specific vocational training programs to respective

industry needs. Certain high-paying skills in manufacturing industries are expected to be in particular demand. The service industry will also require properly trained personnel in order to achieve a status that is comparable to the national average.

The flood is expected to have a positive effect on the completion of the transition period from a formerly ''one industry area'' (first mining and then apparel and textiles) to a balanced economy. That is, by eliminating certain marginally productive establishments, and by injecting the artificial and somewhat inflationary stimulus of flood recovery work, it will temporarily increase the underemployed and relatively low skilled segment of the labor force; thus contributing to certain employment realignment among sectors generally to the benefit of employees rather than employers.

However, this factor is certainly not going to solve the long range needs of present and potential area employers. Only if proper action is taken immediately, will there be any possibility that the industrial development programs will not fail because of an inadequately labor trained labor supply.

VOCATIONAL-TECHNICAL SCHOOLS

The public school system of Luzerne County is obviously committed to vocational-technical (vo-tech) education as a component of secondary education. Since 1967, three facilities have made noticeable impact on manpower needs in the county. Two vocational schools--The West Side Vocational-Technical School, and recently opened Wilkes-Barre Areac Vocational-Technical School adequately accommodate students from ten school districts in the study area.

The West Side Vocational-Technical School is situated in Pringle Borough and serves the following five school districts: Northwest, Lake-Lehman, Dallas, Wyoming Area, and Wyoming Valley West. Approximately 700 students are enrolled in the school, of which 374, or nearly 54 percent, are from Wyoming Valley West. By constrast, the Wilkes-Barre Area Vocational-Technical School is situated in Plains Township and has the capacity to accommodate ap- Approximately 700 students are enrolled in the school, of which 374, or nearly 54 percent, are from Wyoming Valley West. By contrast, the Wilkes-Barre Area Vocational-Technical School is situated in Plains Township and has the capacity to accommodate approximately 1,232 students from five districts east of the Susquehanna River: Crestwood, Pittston Area, Greater Nanticoke Area, Unit 9, and Unit 11. The attendance area encompasses approximately 337 square miles. The relative location of both schools necessitates unequal and sometimes extensive travel requirements for the most distant districts. Travel accessibility is further curtailed occasionally by adverse climatic conditions.

Standards and Principals - The building facilities for vocational-technical education represent substantial physical assets. Buildings alone, however, do not predetermine the quality of programs. Conversely, programs are not ends within themselves. Herein lies the crux of the planning problem commonly accorded vocational-technical schools.

Proper guidance is one of the key elements to an effective vocational-technical program. It is therefore essential that industry and educators work to establish a common bond that will reap mutual benefits for the community. Guidance must be relevant to realistic life situations within the employment community.

Curriculum development is a means toward an end. It should be a cooperative endeavor between potential employers and educators. Failure to plan jointly therefore perpetuates a vocational-technical system that is conceivably unresponsive to community manpower needs. It also transfers unjustifiably to industry a responsibility expressly mandated to schools through annual allocation of public funds.

ASSUMPTIONS

There are several basic assumptions essential to an analysis of vocational-technical schools:

(a) Effective vocational-technical schools are designed to provide equal educational opportunities to students without respect to academic achievement levels or intellectual capabilities.
(b) Vocational-technical curricula are developed expressly to prepare graduates to enter the job market with at least a minimal level of marketable skills in the field of the graduates' preparation.
(c) Properly counseled students enroll in course offerings that are based on area job projections that can reasonably be expected to be available upon graduation and in future years.
(d) The adequacy of a vo-tech program can best be judged in relation to the degree to which graduates find suitable jobs and performance on jobs.
(e) Existing vo-tech schools possess adequate leverage to make significant impact on manpower needs in Luzerne County when proper guidance and counseling techniques are utilized.
(f) A curriculum is developed to serve the identified needs and objectives of the community; it must be continually evaluated for flexibility and adaptability.

(g) The nature of human personalities warrants a viable and dynamic guidance and counseling program.

Northeastern Pennsylvania is entering a period in its industrial development effort where it is committed to the improvement of the quality of its present and future industries by increasing technical skills of employees. The economy is expanding and becoming more diversified and technically oriented. For success, any plan or program should be based on a continuing partnership between the Vo-tech schools and the industries.

Careful analysis of available data relative to vocational programs currently in operation indicates these conclusions:

(1) Courses at Vocational Technical Schools are determined by four factors:
    (a) Parent-student interest survey;
    (b) Business and industry survey;
    (c) Guidance Counselors and Professional Advisory Council of the district; and,
    (d) Projected Employment Survey for the Wilkes-Barre-Hazleton Metropolitan Area (the most heavily weighted factor).
(2) Wilkes-Barre Area Vo-tech School offers 28 technical courses: West Side Vocational-Technical School has 15 shop area offerings.
(3) Course offerings at West Side are undergoing gradual changes.
(4) Distributive Education, a mixture of class room instruction and on the job experience under school sponsorship, is presently offered by both schools.
(5) Job placement services in 1971 might be considered inadequate in both schools--Wilkes-Barre has 27 percent placement; West Side Vo-tech has 17 percent placement. Currently most graduates find a job by the time they graduate.
(6) There is a need to coordinate identifiable objectives among vo-tech schools and other skilled manpower training units and employment service agencies.
(7) There is an increasing need for counselors to make a more thorough investigation of the areas' job market and general characteristics of available jobs. There is a tendency for some students to prepare for jobs that have an over supply of employees, especially in the clerical area.
(8) There are apparent variations in the operating philosophies of schools. For example, West Side Vo-Tech is a full time school, providing both academic and technical subjects; Wilkes-Barre Area Vo-Tech is part-time, meaning students receive one half day of instruction in technical

subjects, returning to the regular school for a half day in academic subjects. An important contribution of half-day scheduling is the lack of space at the Wilkes-Barre Area schools.

(9) There is need within the school community to bring about a more coordinated effort for vocational education and career opportunities which bring into concert the efforts now being made by similar units associated or affiliated with groups such as the American Vocational Association.

Recommendations - It is believed that the evidence overwhelmingly suggests that the vocational-technical schools must act aggressively and with defined actions to help meet the imperative needs emerging as a result of the disaster and the new emphasis on the quality of in-coming industries. What is obvious throughout the evidence is that immediate action is required to commit education and economic development to similar timetables. Therefore, in light of the accumulated evidence, the following actions are recommended:

(1) The Luzerne County Planning Commission and the Economic Development Council of Northeastern Pennsylvania (EDC) should provide the necessary impetus to engage in further dialogue with the Operating Committees of the vocational-technical schools to bring about a closer relationship among the four groups. A liaison person or group is suggested to build upon the initial contact. This would give visibility to a concentrated program of action for vocational education or what is now commonly referred to as occupational and career development education.

(2) The planning organizations (County and EDC) should further facilitate dialogue among the Chamber of Commerce, industrial/manufacturing sectors, vo-tech school, the Coordinated Area Manpower System (CAMPS) and the newly founded Luzerne County Human Resource Department. Such a relationship could create an atmosphere conducive to a more united thrust and a greater range of impact and service to such programs as legislative action, curriculum development, and public information programs.

(3) The vocational-technical schools should re-evaluate their practice of limited placement services, and followup on employment-bound graduates. Such a procedure could provide valuable data as needed to update course offerings,

(4) Education and business should continually maintain Business/Education (BE) Days for exchange visits.

Vocational education is not to be restricted in terms of ''a

domicile for the non-college bound''. The dichotomy is not between ''things academic and things vocational''. Rather it is a question of immediate skills for work or further education. To do both simultaneously maximizes the capabilities of the community's students to become properly and usefully prepared immediately.

There is strong evidence that secondary vocational programs in Luzerne County are striving to meet the broad objectives of an effective vocational-technical program. Post-secondary facilities are located strategically in Luzerne County and should undergird continual curriculum improvement and opportunities in both vo-tech schools. Luzerne County Community College, meanwhile, is being moved to Nanticoke where the facility will double its present size, and increase its enrollment capacity and services. Further cooperative planning, to include post-secondary courses, should prove beneficial for meeting many immediate and impending needs in the local labor market.

THE EFFECT OF AGNES

Tropical Storm Agnes has been called ''the greatest natural disaster in the history of the United States.'' Total estimated cost of recovery from flood damage is put at around $3,000,000,000 in Pennsylvania alone. It is alleged that about a fourth of this money will have to be expended in the Wyoming Valley alone. A preliminary estimate prepared in July, 1972 by the Economic Development Council of Northeastern Pennsylvania from urban renewal survey and planning applications put a price tag of more than $320,000,000 as total costs of proposed urban renewal disaster projects in Luzerne County.

Still, this is just one element of the total destruction inflicted by the storm; practically every sector of the economy sustained a certain amount of damage that will have intermediate to long range effects on the welfare of the region.

A compilation of manufacturers in the flood-affected area prepared by the Luzerne County Planning Commission lists total of 136 manufacturers with a 1970 employment status of approximately 14,645 persons. On the other hand, an August, 1972, estimate by the Economic Development Council of Northeastern Pennsylvania (EDCNP) puts the figures at 150 and 11,355 respectively. A breakdown by SIC code prepared by the same agency shows affected durable goods employment as being only 17 to 18 percent of the total manufacturing employment that was affected. In fact, the industries that were most severly hit were in the non-durables sector. Specifically, 34 plants employing approximately 20 percent of the total textile and apparel products labor in Luzerne County were flooded.

Despite all this physical damage, the Study Area appears to be on its way to a remarkable comeback. Table 37 shows that total employment in November, 1972 was ahead of that in June, 1972; that is, before the flood. Manufacturing employment, in November, 1972, was slightly below the November, 1971 level. The level of non-manufacturing employment increased between November, 1971 and November, 1972; however, this prosperity is somewhat deceiving in that some of these jobs are temporary and directly or closely tied to the flood recovery efforts and occurring mostly in government and service sector.

EFFECTS ON MANUFACTURING ESTABLISHMENTS

So far the most systematic evaluation of the impact of the flood upon various industries in the area has been prepared by a private consulting firm for the Office of Emergency Preparedness.(2) The consultants found that it is the feeling among local leaders that the damage to small industries will be more pronounced than the damage to large enterprises on the economy of the area in the long run. Concern was also expressed about the production loss which would have a detrimental effect on many garment establishments that rely heavily upon Christmas holiday sales.

The problem of meeting production schedules for low-wage manufacturers was further aggravated by severe discrepancies in labor force allocations during the months of July and August. It is indeed a problem for many firms to return to full production, even if the physical plant was undamaged, mainly because of a continuing shortage of qualified staff. It is obvious that in many assembly line production operations, lack of certain key skilled and semi-skilled workers can significantly reduce the pace and efficiency of the work.

In the case of the garment industry, the opinion was ventured by an industry spokesman that it would probably take a year for local establishments to return to normal. This statement is substantiated by information given in Table 37. In November, 1972 there were 31,500 people employed in non-durable goods industries located in Luzerne County. This number can only be matched with the figures of non-durable goods employment of October and December, 1961. On the other hand, the number of durable goods employees reached a new all time high of 17,500. As of October, 1972 durable goods employment had returned to pre-flood levels after a period of short and consistent growth.

(2) Public Administration Service: Report on a Survey of Major Industries and Businesses of Pennsylvania and New York Affected by Tropical Storm Agnes, August, 1972.

Table 37

EMPLOYMENT BY INDUSTRY: JUNE 1972 TO NOVEMBER 1972
WILKES-BARRE/HAZELTON LABOR MARKET AREA
(In Thousands)

	1971	1972					Percentage Growth
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	(July-Nov.)
Total Employment	135.8	137.8	126.8	134.6	136.6	137.0	137.9	5.0
Manufacturing Industries - Total	49.5	51.5	47.3	47.8	48.2	48.5	49.0	3.6
Durable Goods Ind. - Total	16.2	17.0	16.3	16.2	16.8	17.1	17.5	7.4
Nondurable Goods Ind. - Total	33.3	34.5	31.0	31.6	31.4	31.4	31.5	1.6

Despite all this physical damage, the Study Area appears to be on its way to a remarkable comeback. Table 37 shows that total employment in November, 1972 was ahead of that in June, is, before the flood. Manufacturing employment, in November, 1972 was slightly below the November, 1971 level of non-manufacturing employment increased between November, 1971 and November, 1972; however, this prosperity is somewhat deceiving in that some of these jobs are temporary and directly or closely tied to the flood recovery efforts and occurring mostly in government and service sector.

EFFECTS ON MANUFACTURING ESTABLISHMENTS

So far the most systematic evaluation of the impact of the flood upon various industries in the area has been prepared by a private consulting firm for the Office of Emergency Preparedness. (2) The consultants found that it is the feeling among local leaders that the damage to small industries will be more pronounced than the damage to large enterprises on the economy of the area in the long run. Concern was also expressed about the production loss which would have a detrimental effect on many garment establishments that rely heavily upon Christmas holiday sales.

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Nondurable Goods Ind. - Total	33.3	34.5	31.0	31.6	31.4	31.4	31.5	1.6
Nonmanufacturing Industries	73.5	73.5	68.6	74.8	75.9	76.4	75.9	10.6
Mining	1.9	1.6	1.5	1.5	1.6	1.6	1.6	6.7
Contract Construction	6.6	5.5	6.1	7.8	8.8	8.6	8.0	31.0
Transportation & Public Utilities	6.7	6.9	6.8	6.8	6.9	6.9	6.9	1.5
Wholesale & Retail Trades	22.3	22.3	20.1	21.6	22.2	22.3	22.5	11.9
Finance, Insurance, Real Estate	4.4	4.6	4.5	4.5	4.5	4.4	4.5	0.0
Service & Miscellaneous	15.9	16.5	14.3	15.7	15.9	15.9	15.4	28.7
Government	15.7	16.1	15.3	16.9	16.0	16.7	17.0	11.1
Federal Government	3.0	3.0	3.0	3.9	3.9	4.0	4.0	33.3
State & Local Government	12.7	13.1	12.3	13.0	12.1	12.7	13.0	5.7
Other Nonagricultural Employment	12.0	11.9	9.9	11.0	11.6	11.4	11.3	14.1
Agriculture	0.8	0.9	1.0	1.0	0.9	0.7	0.7	-30.0

SOURCES: Pennsylvania Department of Labor and Industry Bureau of Employment Security Labor Market Letter; Selected Issues 1971-1972.
Wilbur Smith and Associates

It is safe to presume that recovery of the apparel and leather industries on the aggregate will not be complete. Textile mills are particularly hard pressed because of foreign, especially Far Eastern competition. To an extent, the same can be said about garment and leather products industries as well. Certain "contract shops," already operating in an extremely competitive, and hence unstable, environment either have or will soon have to close or relocate elsewhere. The same will happen with every establishment whose primary reason for location in the Wyoming Valley was abundant cheap labor.

Flood relief activities are sure to permanently alter wage pay scales. Table 38 shows that in the second half of 1972, nondurable goods average hourly earnings were not only lower than those of durable goods but had also grown at a slower rate after the flood (5.6 percent between June and November for nondurable compared with 6.6 percent for durables) than the earnings of durable goods industries. It is noteworthy that Fabricated Metal Products, the most rapidly expanding durable goods industry in the area, had an 8.9 percent rate of growth in average hourly earnings between June and October, a rate considerably above the average for all manufacturing establishments.

Apparel and Related Products are already hard pressed to keep up with the rest of the manufacturing industries. Between June and October, 1972, the rate of growth of average hourly earnings in apparel (2.4 percent), was not only much lower than the non-durable average of 5.6 percent, but was even lower than the growth rate of 3.0 percent experienced in 1971.

There is little doubt that this expansion of the Retail and Wholesale trade will not last long. However, it will be an additional factor contributing to an unusually low labor supply for certain kinds of employment. What is important to stress though, is that the Trade and Services sectors will continue to grow, at a reduced rate, even after this rapid short term expansion is over.

Most of the growing firms in the area were not affected by the flood, mainly because they are located in industrial parks well above the flood plain. These companies will continue to draw employees from lower paying firms and absorb most of the available skilled labor pool of the area (for example, RCA indicated plans to add 110 employees to its current work force of 2,400).

Construction, along with supporting industries, as well as distribution activities will boom. Estimates of housing restoration

Table 38

AVERAGE HOURLY EARNINGS
SELECTED MANUFACTURING INDUSTRIES
WILKES-BARRE/HAZLETON LABOR MARKET AREA

	1972 Durable Goods	1971 Industries	1972 Non-Durable	1971 Industries
May	$3.27	$3.11	$3.00	$2.80
June	3.29	3.11	3.02	2.82
July	3.29	3.15	3.06	2.84
August	3.32	3.20	3.04	2.86
September	3.36	3.17	3.13	2.88
October	3.42	3.21	3.12	2.87
November	$3.51	$3.21	$3.19	$2.88

Percentage Rate of Growth

It is safe to presume that recovery of the apparel and leather industries on the aggregate will not be complete. Textile mills are particularly hard pressed because of foreign, especially Far Eastern competition. To an extent, the same can be said about garment and leather products industries as well. Certain "contract shops", already operating in an extremely competitive, and hence unstable, environment either have or will soon have to close or relocate elsewhere. The same will happen with every establishment whose primary reason for location in the Wyoming Valley was abundant cheap labor.

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October	3.42	3.21	3.12	2.87
November	$3.51	$3.21	$3.19	$2.88
Percentage Rate of Growth (June-November)	6.6	3.2	5.6	2.1

	Fabricated Metal Products		Apparel & Related Products	
May	$3.44	$3.25	$2.85	$2.66
June	3.38	3.29	2.92	2.65
July	3.48	3.39	2.90	2.69
August	3.58	3.34	2.93	2.71
September	3.59	3.27	3.00	2.75
October	$3.68	$3.30	$2.99	$2.73
Percentage Rate of Growth (June-October)	8.9	N/A	2.4	3.0

N/A - Not Applicable

SOURCE: Pennsylvania Department of Labor and Industry: Bureau of Employment Security Labor Market Letter; Selected Issues 1971-1972.
Wilbur Smith and Associates.

costs in the Greater Wilkes-Barre area range from one quarter to one half billion dollars. Most of this will be funded by Small Business Administration (SBA) loans. This will cause a definite improvement upon male employment rates. It will also provide some skill transition for unskilled labor in preparation for better paying factory jobs when the construction boom finally subsides.

Obviously this prediction is based on the assumption that reconstruction will continue at a brisk pace. Federal and State aid flood recovery programs will obviously play a major role in revitalizing the area's economy by creating enough jobs to keep the number of unemployed but skilled persons to a minimum. These programs will also assist in reducing hard core unemployment by generation of on-the-job training of unskilled individuals which will not be limited to the construction industry.

Continued prosperity of the most promising industrial concerns in the area will boost decisively the part of family income generated by male employment. This in turn will cause the female participation rates, especially in the older age groups, to level off by the end of the decade. As a result the supply of cheap labor will no longer be readily available. Consequently, a number of marginally productive and labor intensive manufacturing establishments will either have to increase wages to retain many employees or will have to relocate because of the unreliability of of cheap labor supply in the future.

The situation will also be negatively affected by a temporary out-migration surge, among the young and especially among chronically unemployed, and a significant amount of relocation within the study area. Changed travel patterns because of relocation, coupled with new trends in employment growth at particular areas, (i.e., new industrial parks), plus drastically altered social conditions because of the flood are bound to also have an effect upon particular employers.

Table 39 shows a breakdown by municipality of the data compiled by the Luzerne County Planning Commission. Kingston Borough was the hardest hit with 100 percent of its total manufacturing employment being in the flood plain. The Greater Pittston Area, on the other hand, appears to be the least affected area. Only one industrial plant was under water, since nearly all the industrial sites are high enough to be safe from river flooding. These figures can be compared with those of the manufacturing employment by SIC code and by Study Area municipality as of 1971 presented in Table 40.

Table 39

MANUFACTURING EMPLOYMENT AFFECTED

BY TROPICAL STORM AGNES

Municipality	Number of Employees (1970)	Total Area Manufacturing Employment (1970)
Edwardsville Boro	197	275
Exeter Boro	200	1,304
Forty Fort Boro	163	254
Hanover Township	35	1,356
Kingston Boro	3,912	3,912
Nanticoke City	40	1,223
Pittston City	85	3,220
Plymouth Boro	344	840
Shickshinny Boro	575	575
Newport Township	100	176
West Pittston Boro	55	1,988
Wilkes-Barre City	8,186	11,496
Wyoming Boro	52	844
Total	14,645	28,462

SOURCE: Luzerne County Planning Commission.
Wilbur Smith and Associates.

IMPACT ON NON-MANUFACTURING ACTIVITIES

Non-manufacturing employment, especially in Central Business districts (CBD) of the communities that were flooded, was also significantly affected. According to an Economic Development Commission of Northeast Pennsylvania estimate, 70 percent of the retail trade establishments, 86 percent of the wholesale trade units and 74 percent of selected services units in the flooded area were directly or indirectly affected.

These establishments were employing almost 14,000 persons and their annual payroll was in excess of $60,000,000. The commercial sector of the economy is dependent upon the industrial sector for growth. Therefore the recovery of the former will be dependent upon the recovery of the latter.

Only in the case of a disaster-stricken area, certain segments of the commercial sector, particularly Retail Trade and therefore Wholesale Trade as well, will recover at a relatively faster rate than the majority of industrial enterprises that were affected. For example, the figures in Table 40 show that while non-durable goods industries, the hardest hit establishments, experienced a 1.6 percent rate of growth in employment between July and November, Wholesale and Retail Trade went up 11.9 percent, thus returning to the level of a year before.

This recovery of the commercial sector will be aided not only by an unusually high level of liquid assets in the area at the present time, but also by a lower savings rate than that of the pre-flood level. Unfortunately, personal consumption expenditures will have to increase at a rapid pace in order to be able to replace the loss in personal property due to the flood. Thus, disposable assets in local institutions may be unable to adequately cope with the financing needs of local industries, old and new, as well as the needs of the housing market. It is possible that under these circumstances, local interest rates may not follow national trends and increase more than expected in a year of so the nation as a whole.

The effect of increased retail sales will cause increased employment demands, thus placing an additional short-term burden upon garment and textile mill employers. There is a high degree of probability that the number of these establishments that will have to leave the area may cause long-term unemployment among persons that have, since the flood, left these firms but will acquire no skills at their present termporary jobs. The danger exists therefore, that more garment related jobs may be lost than are justified by the present shift of apparel labor to other sectors of the economy.

Table 40

STUDY AREA MANUFACTURING EMPLOYMENT PROFILE (1971)

Municipality	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
Wilkes-Barre City	1,033 (25)	173 (2)	512 (6)	3,407 (52)		788 (8)		872 (18)	19 (1)		547 (2)	1,389 (9)	12 (3)	5 (1)	882 (14)	192 (8)	121 (3)	187 (6)	4 (1)	821 (11)
Pittston Twp	49 (1)								58 (1)		68 (1)					12 (1)				33 (1)
Dupont Boro				376 (7)												11 (1)				
Avoca Boro				222 (6)	29 (1)				15 (1)							12 (1)	2 (1)			
Hughestown Boro				34 (1)																
Duryea Boro	941 (1)		60 (1)	153 (4)		42 (1)							166 (1)							
Pittston City	237 (7)	57 (1)		1,783 (41)	2 (1)	4 (1)	180 (1)	31 (4)					1,269 (2)			507 (3)			146	
W. Pittston Boro	12 (1)	788 (1)	15 (1)	361 (6)		25 (1)	45 (2)	157 (1)							1 (2)					
Exeter Boro	117 (3)		149 (2)	377 (5)								314			107					

ON NON-MANUFACTURING ACTIVITIES

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Pittston Twp	49 (1)										68 (1)									
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Pittston City	237 (7)	57 (1)		1,783 (41)	2 (1)	4 (1)	180 (1)	31 (4)				1,269 (2)			107 (1)		5 (1)	146 (2)		
W. Pittston Boro	12 (1)	788 (1)	15 (1)	361 (6)		25 (1)	45 (2)	157 (1)												
Exeter Boro	117 (3)		149 (2)	377 (5)								314 (1)		120 (1)						
Exeter Twp.																				
Dallas Boro			266 (1)			10 (1)		243 (1)												
Dallas Twp.	72 (2)			78 (1)		6 (1)														
Kingston Twp.	9 (1)																			
W. Wyoming Boro	2 (1)			74 (1)	12 (1)			1 (1)						37 (2)		103 (1)		27 (1)		
Wyoming Boro				351 (6)		260 (3)									53 (1)					
Laflin Boro														36 (2)		29 (1)				
Jenkins Twp.				133 (3)				1 (1)			1 (1)						5 (1)			
Yatesville Boro				10 (1)	16 (1)						6 (1)									
Plains Twp.	12 (2)		119 (2)	1,187 (11)			28 (1)	7 (1)												
Forty Fort Boro	41 (1)			88 (2)																
Swoyersville Boro	45 (3)		98 (2)	658 (8)	21 (1)		40 (2)													
Luzerne Boro				271 (6)	23															
Kingston Boro	852 (6)	557 (1)	428 (4)	409 (7)	11 (2)	365 (3)	28 (2)	10 (3)												
Edwardsville Boro				183 (4)																
Courtdale Boro																				
Pringle Boro				8 (1)																
Larksville Boro				153 (3)																
Plymouth Boro	40 (2)		181 (1)	472 (9)																

Table 40 (cont'd)

STUDY AREA MANUFACTURING EMPLOYMENT PROFILE (1971)

Municipality	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
Plymouth Twp.	23 (2)								2 (1)											
Nanticoke City	10 (1)			326 (7)				2 (1)	16 (1)			165 (1)			8 (2)			3 (1)		25 (1)
Hanover Twp.	45 (6)			286 (5)						15 (1)		625 (2)	6 (1)		20 (1)	290 (4)				142 (1)
Warrior Run Boro				86 (2)																
Sugar Notch Boro													1 (1)							
Ashley Boro	2 (1)		34 (2)	101 (2)								147 (1)								
Wilkes-Barre Twp.	34 (2)		320 (1)	238 (5)			26 (1)	7 (1)	197 (1)		489 (3)				66 (1)		1,984 (1)	321 (2)		611 (1)
Laurel Run Boro														36 (1)	539 (1)	2 (1)	2 (1)			
Wright Twp.		835 (1)											6 (1)							
Rice Twp.																				
Nuangola Twp.																				
Fairview Twp.				98 (3)	5 (1)															
Newport Twp.				145 (3)																
Hunlock Twp.					4 (1)															
Union Twp.				112 (1)																
Shickshinny Boro				580 (3)																
Conyngham Twp.				14 (1)	3 (1)							88 (1)								
Total Employment	3,576	2,410	2,182	12,774	103	1,563	307	1,331	357	125	1,122	3,916	1,742	110	1,961	1,228	2,184	885	5	1,506

SIC CODES

20 - Food and kindred products
21 - Tobacco manufacturing
22 - Textile mill products
23 - Apparel and related products
24 - Lumber and wood products
25 - Furniture and fixtures
26 - Paper and allied products
27 - Printing, publishing and allied products
28 - Chemicals and allied products
29 - Petroleum refining and related products
30 - Rubber and miscellaneous plastics
31 - Leather and leather products
32 - Stone, clay, glass and concrete
33 - Primary metal products
34 - Fabricated metal products
35 - Machinery, except electrical
36 - Electrical machinery
37 - Transportation equipment
38 - Instruments and related products
39 - Miscellaneous manufacturers

Note: Figures in parentheses are manufacturing establishments; other figures are employment numbers.

SOURCE: 1. Pennsylvania Dept. of Commerce: County Industry Reports, Luzerne County (various years).
2. Wilbur Smith and Associates

STUDY AREA FORECASTS

The cumulative employment projections by industry for the Wyoming Valley as prepared by Wilbur Smith and Associates appear in Table 41. State and local government sectors are projected to experience the largest percentage increase between 1971 and 1977, as well as between 1971 and 2000. That is, there will be an upturn of the slow growth that this sector experienced during the sixties.

With the exception of two declining sectors, Agriculture and Mining, it is forecasted that Manufacturing and Finance, Insurance and Real Estate will be the businesses to grow the slowest between 1971 and 1977, because of the re-allocation process created by the flood. Manufacturing will be slow in growing because of (a) local wages slowly approaching national levels and (b) the shortage of certain technical skills. The latter liability is not expected to be overcome soon enough to avoid having a damaging effect (no matter how small) on industrial development in the Wyoming Valley.

Also, by the end of 1973 or mid-1974, it is expected that the composition of the labor force in the Study Area will have smaller percentage of skilled members. Consequently it will take some time for local industry to adjust to these changes in labor force characteristics. Construction and services are also expected to sustain vigorous rates of growth, construction because of the need in housing as a result of the flood and service because of the needs of the flood victims.

Forecast Assumptions - The forecasts are by no means pessimistic. They are, rather, as realistic as possible, with a certain degree of optimism allowed for certain sectors of the economy. A number of assumptions have been implicitly made to reflect the relatively healthy 7 percent overall rate of employment growth between 1971 and 1977. These are as follows:

(1) By the end of the decade at the very latest, the economy of the Valley will have caught up with a level in the rate of economic growth which is very similar to the rate that was forecasted before the flood by the Bureau of Economic Analysis of the U.S. Department of Commerce, and the rate that was forecasted by the Governor's Office of State Planning and Development (both rates applicable to Luzerne County as a whole). This assumption is

| Conyngham Twp. | | |

Table 41

STUDY AREA EMPLOYMENT PROJECTIONS

(1977 and 2000)

(figures in thousands)

	1971	1977	Percent Change 1971-1977	2000	Percent Change 1971-2000
Manufacturing	39.4	40.5	+ 3	45.1	+ 14
Transportation, Communications & Public Utilities	5.2	5.5	+ 5	5.6	+ 7
Wholesale & Retail Trade	16.7	17.4	+ 4	18.4	+ 10
Federal Government	2.3	2.6	+ 9	3.3	+ 40
State & Local Government	9.9	11.4	+ 15	14.9	+ 50
Services	12.4	13.6	+ 10	16.1	+ 30
Finance, Insurance & Real Estate	3.4	3.5	+ 3	4.0	+ 20
Construction	4.5	5.1	+ 12	5.4	+ 18
Mining	1.6	1.2	- 20	0.7	- 50
Agriculture	0.7	0.5	- 28	0.4	- 40
Other Nonagricultural	9.4	9.8	+ 5	10.2	+ 9
Totals	105.6(1)	111.2(1)	+ 7	124.3(1)	+ 18

(1) Totals may not add up due to rounding.

SOURCE: Pennsylvania Department of Labor and Industry, Bureau of Employment Security: Total Civilian Work Force, Unemployment and Employment by Industry: Annual Average, 1961-1971.
Governor's Office of State Planning and Development Historical Estimates and Projections of Employment by Industry and Labor Market (Revised September, 1972); Labor Market 37, Wilkes-Barre-Hazleton.
Wilbur Smith and Associates.

reflected in the 1971-2000 forecast.

(2) It is assumed that the Valley will continue receiving both direct government aid, related to flood recovery work, and indirect aid pertaining to social welfare programs of economic significance. The level of total aid, both federal and state, should peak in one to two years. However, it is assumed that proper action will be taken through normal legislative channels to assure that the ratio of indirect to total aid be increased as rapidly as possible.

For example, it will be to the long range benefit of the Wyoming Valley, while soliciting Commonwealth Grants-in-Aid, to concentrate its efforts to fiscal assistance that is made available in connection with federal programs rather than direct financial grants to local units. The advantage of the former, if properly administered, is that they not only create short range employment demand, but that they also develop the economic infrastructure of the community and in this way create a ''secondary'' job need as well.

The surge in state and local government employment shown in Table 17 presupposes concentration of efforts of local government units in programs of this nature that belong in the following categories (taken from The Catalogue of State Aids to Local Government) in order of importance:

(a) Public Instruction
(b) Community Affairs
(c) Commerce
(d) Health
(e) Civil Defense
(f) Welfare

Maximum effort should be made to not only secure funds but also to implement programs with these funds as soon as possible so that the anticipated oversupply of semi-skilled labor can be absorbed as soon as unemployment in this labor market sector begins to show signs of increasing.

(3) In connection with industrial development, it has also been implicitly assumed that prudent use by the various area governmental units will be made of the state's Site Development Act and Community Facilities Program. Demands upon the construction industry should by no means become so excessive as to require importation of skilled labor from other areas for long periods of time. Efforts should be made, as much as possible, to assure that the growth in the local construction industry does not overly exceed the local construction labor supply.

In light of the impending construction of the Pennsylvania Power and Light nuclear power plant in Salem Township accelerated manpower training programs should be instituted as soon as possible. Once again, extreme care should be taken, in light of the low skill availability in the Valley, to impart knowledge that will not only serve the contractor's needs, but will also provide the laborer with sufficient skills to continue working in another job once construction has leveled off. The possibility of a high unemployment rate among construction workers after five to ten years is very real, considering that a few thousand have already entered the field since July.

A large number of highly paid workers out of work and unable to find other jobs that have similar wage scales, is bound to lead to some form of out-migration; the extent of which will depend on the health of the durable goods sector at that time.

It should be kept in mind that the public sector as well as the private sector will impose an increase of demand upon the construction industry. An informal system of priorities will have to be established to avoid (a) excessive importation of permanent labor, (b) low quality work especially in low income housing and (c) inflationary tendencies due to skyrocketing wages.

Obviously both public and private sectors will have to cooperate in securing assistance funds from the Pennsylvania Department of Community Affairs (Urban Planning Assistance and Pennsylvania Urban Redevelopment Projects), the U.S. Economic Development Administration (primarily Public Works Grants), the Department of Housing and Urban Development, the Department of Health, Education and Welfare, the Department of Transportation, and the Appalachian Regional Commission. However, caution should be exercised to ensure that Valley-wide needs precede individual community needs. It should be realized that public service and urban renewal projects will not always have a higher priority than projects that benefit primarily the private sector.

Public service projects will have to serve the function of (a) preventing any further deterioration of the physical environment of the community and (b) providing emergency employment for short-term duration. Urban renewal projects, however, will strengthen the industrial base assuming that industrial development efforts will have been successful. Consequently, there should be a consensus of opinion with respect to (a) which project consititutes a short, intermediate, and long-range need,

and (b) what weight should be placed on each of these needs.

(4) The projected growth rates of Manufacturing and Services that will occur between 1971 and 1977 are based on the assumption that an unusual amount of effort will be made by appropriate groups to attract certain industries in the area as soon as possible to pick up the slack in employment of certain segments of the labor force. In particular, service industry has to be actively solicited, as will be explained in the next section.

Industrial development programs should be limited to industries that the local labor market can reasonably support. Otherwise both the new and the old industries that employ a similar kind of labor skill mix, stand to lose. Industrial investment needs should always stay ahead of the labor market but just enough to provide the necessary feedback stimulus. Overdiversification just as overconcentration can be catastrophic for the Valley. Well planned manpower training programs can be designed to avert this situation.

The particular needs and assets of the Valley and the adjoining Scranton labor market at the present time dictate for example that (a) distribution centers (one to serve local food wholesalers and another as a major distribution facility serving northeastern U.S. markets and shippers), (b) office parks and (c) such industries as lumber and wood products, furniture and fixtures as well as prefabricated modular housing are more compatible with the local business environment than other firms, and should be actively sought. These have been the subjects of a number of studies of the Economic Development Council of Northeastern Pennsylvania.

Unfortunately, the need that the Valley has for certain industries to absorb its changing labor force skill mix is so overwhelming that there is serious doubt if merely informal cooperation among local private and public agencies will suffice. It is hoped that the formation of one organization as espoused in the next section will initiate a much faster adjustment of the Valley to altered economic conditions than any other method. Nevertheless, the forecasting of the Manufacturing and Service sectors for 1977 has not presumed the existence of such an organization.

FUTURE ECONOMIC DEVELOPMENT

By any standard of measurement, pre-flood industrial development efforts in Luzerne County had been successful, because they had brought about the needed transition from declining one

industry area to the doorstep of a modern, reasonably promising economy. However, the County and especially Wyoming Valley had not yet crossed into a period of assured economic prosperity when Agnes struck.

The economy of the study area was, at the time, positioning itself for this period of stability and normal industrial diversification. This period was most likely to occur with the advent of the nationwide economic expansion that was taking place in the first and especially the second quarter of 1972. To what degree the Valley's economy was ready in June of 1972 to launch into this complete turnaround is open to conjecture. The analysis so far tends to indicate that it might not have been as ready as many people would like to think. The opinion will also be ventured that the flood might have done more for the long-range economic welfare of the Wyoming Valley than most people realize. What this section will attempt to do is to review past industrial development efforts, identify specific problems and opportunities and propose a program by which the Valley can take advantage of changes brought about by Agnes and catch up with national trends as soon as possible.

Industrial development figures compiled by the Pennsylvania Industrial Development Authority show that Luzerne County ranks first among all Pennsylvania Counties in the total number of industrial expansion loan projects that received tentative and final approval between 1956 and 1971. A total of 135 projects at a cost of almost $90 million creating 20,401 new jobs with an estimated payroll in excess of $140 million are listed for the County. In 1971, Luzerne County ranked third in the number of new plants. Specifically 19 new plants, 13 expansions and 3 relocations creating a total of 2,134 new jobs were approved.

Analyzing the record of the area's industrial development organizations in the aggregate level, one notices that it has indeed played a vertical role in changing the percentage of durable goods employment through the last ten years. Durable goods employment as a percent of total manufacturing employment in Luzerne County went from 23 percent in 1962, to 27.9 percent in 1967, to 33 percent in 1971. Between 1967 and 1971 the percentage of durable goods employment additions to overall manufacturing employment additions was 36.6 percent.

Industrial Development Organizations - There are ten separate industrial development organizations in Luzerne County. They are:

I Wilkes-Barre Chamber of Commerce

(1) Greater Wilkes-Barre Industrial Fund, Inc.
(2) Area Industrial Development Incorporated of Wilkes-Barre.
(3) Committee of One Hundred.

II Pittston Chamber of Commerce.
(1) Greater Pittston Chamber of Commerce.
(2) Pittston Area Industrial Development Group (PAID).

III Hazleton Chamber of Commerce.
(1) Greater Hazleton Area CAN-DO (Community Area New Development Organization, Inc.).
(2) Hazleton Industrial Development Corporation.

IV Nanticoke Industrial Development Authority.

V Luzerne County Industrial Development Authority.

VI Wilkes-Barre Industrial Development Authority.

VII Freeland Industrial Development Corporation.

Of these, only the last four are located out of the study area. The Luzerne County and Wilkes-Barre Industrial Development Authorities are organized under the Pennsylvania Revenue Bond and Mortgage Program as a financing mechanism for industry in their perspective area.

The three Wilkes-Barre organizations state that between 1960 and 1971 they brought to the Greater Wilkes-Barre/Wyoming Valley no less than 13,308 manufacturing jobs. Similar claims are offered by other organizations indicating a spirit of individual achievement.

It is certainly very difficult to examine to what degree local industrial development organizations cooperate with each other. On the one hand, a survey conducted in March, 1971 by EDCNP indicated a definite amount of cooperation among the region's organizations (based on answers by the respondents). On the other hand, there has been discussion in certain published sources negating this statement. A quick review of the projects partly financed through PIDA* funds since its inception indicates that no industrial expansion projects credited to one or another of these organizations is located in an area other than the ''area of jurisdiction'' of the respective organization.

This of course is understandable for organizations encompassing Hazleton since the Wyoming Valley is not organically related to Hazleton. However, the Valley is an integral economic unit and, as such, should be considered as one as far as any kind of economic development is concerned.

As a matter of fact, as the proximity of Wyoming Valley industrial parks to Lackawanna County indicates, the Valley is only

* Pennsylvania Industrial Development Authority.

a part of a larger economic unit that approximates the boundaries of the Wilkes-Barre/Scranton urbanized area. An inventory of industrial parks in the Study Area is presented in Table 42 and a map of industrial sites is provided in Figure 15.

Industrial expansion in one municipality is certain to have not only secondary but also primary economic effects upon surrounding municipalities. No two municipalities are exactly alike in the percentage of land devoted to or actually occupied by industry. Even if they ever happen to be, it is highly improbable that manufacturing employment in one municipality would equal that of another. Nor is it plausible to assure that one area in Wyoming Valley has a better skilled labor force than another. It may indeed have more and better land zoned for industrial uses. Industries can very well decide to locate there for just this reason. It should be stressed though that the quality of land, assuming availability of supporting infrastructure in all competing sites, does not mean that one municipality possesses unique advantages over another in the Valley. It is rather the Valley or the County or even more accurately the Wilkes-Barre/Scranton urbanized area that possesses locational advantages over other areas in the state.

An industrial investment project means that property tax revenues for the particular municipality will go up. This is a very important factor when one considers the quality of the housing stock and hence the tax base in the area. This problem is obviously going to become even more pronounced for those communities which were hardest hit by the flood.

However, chances are that not only during operation, but even while the new plant is under construction or modification, that a much higher percentage of expenditures will flow directly to business organization, suppliers, general contractors, and employees residing outside the municipality's boundaries than to the municipality itself. It is indeed extremely difficult to prove that a particular industrial enterprise will benefit the municipality where it is located more than surrounding municipalities and for that matter municipalities across the river or at the other end of the Valley. This may indeed have been true for small labor-intensive establishments when the garment industry first started coming in force into the Valley. For companies like these, (i.e., where little or no skill is required) employees could be drawn from the labor force of the immediate area. However, modern corporations in both the manufacturing and the non-manufacturing sectors, have to attract employees that possess the necessary skills and are willing to subject themselves to the hardships of long daily commuter trips.



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INDUSTRIAL PARK LOCATION

FIGURE 15

Wilbur Smith and Associates

Table 42

INDUSTRIAL PARKS INVENTORY

NAME	DEVELOPING AGENCY	LOCATION	TOTAL ACREAGE	AVAILABLE ACREAGE
Crestwood Industrial Park	Greater Wilkes-Barre Industrial Fund, Inc.	Mountain Top	715	140
Hanover Industrial Park	Greater Wilkes-Barre Industrial Fund, Inc.	Hanover Township	650	650
Wilkes-Barre Redevelopment Site	Wilkes-Barre Redevelopment Authority	City of Wilkes-Barre	100	
No Name Yet	Greater Wilkes-Barre Industrial Fund, Inc.	Wilkes-Barre Township	350	350
Nanticoke Industrial Park	Nanticoke Redevelopment Authority	Nanticoke	630	630
Barnum Industrial Park	Greater Pittston Chamber of Commerce	Duryea	317.59	
Foote Avenue Site	Greater Pittston Chamber of Commerce	Duryea	47	47
Foote & York Avenue Site	Greater Pittston Chamber of Commerce	Duryea	125	60
Jenkins Township Site	Greater Pittston Chamber of Commerce	Jenkins Township	25.0	25.0
Turnpike Industrial Site	Greater Pittston Chamber of Commerce	Pittston Township	217.0	

SOURCE: Wilbur Smith and Associates.
Economic Development Council of Northeastern Pennsylvania.

This argument happens to apply to the CBD areas of various communities in the study area as well. It is even more applicable in the case of large shopping centers which by virtue of their mere size can attract employees as well as customers from not only neighboring communities, but even from across county lines as well.

Problems and Opportunities - A survey of selected manufacturers in Northeastern Pennsylvania, conducted by EDCNP during the summer of 1969 found that labor resources, proximity to markets and the transportation network are regarded as the most important assets of the region. On the other hand a growing shortage of specialized skilled industrial labor, need for housing and education were considered to be the major liabilities.(3)

In the case of Luzerne County, recent unemployment figures tend to suggest that labor availability may no longer be an asset while the shortage of certain skills, already quite evident even before the flood, will very soon reach critical proportions. The national economy is in a period of vigorous expansion. Projections for 1973 call for an 8.6 percent advance in goods and an 8.9 percent increase in services. The impact of this upturn on the local economy will be a demand for skilled labor by most of the local manufacturing industries, especially those that were not affected during the recent recession and the Services Sector.

It should be noted that only four out of twenty specific industries, according to the Arthur D. Little report which are candidates for attraction to Northeastern Pennsylvania, belong to the non-durable (traditionally low requirements in skilled labor) manufacturing sector. Construction, already under pressure by an unusual nationwide housing market boom, will be particularly hard pressed to fill its requirements. Somehow the employment needs of all these enterprises will have to be filled; otherwise industrial development drives will be stalled and soft goods, low-skilled manufacturing establishments may not be the only ones to leave the area.

Since there is evidence that an abundance of office labor, both skilled and semi-skilled are underutilized, it is suggested that this should be corrected as soon as possible even when primary flood recovery efforts are over. It has been suggested that the "export" service industry (i.e., having customers out of Luzerne

(3) Economic Development Council of Northeastern Pennsylvania: ''Prospects for Growth, Needs for Action; A Survey of Selected Manufacturers in Northeastern Pennsylvania'', January 1970.

County and Northeastern Pennsylvania) be developed to take advantage of the labor supply and the proximity to markets.

The Arthur D. Little study of the Valley should address itself to among other things the feasibility of an office park tailored to the needs of such industries as Insurance Carriers, Credit Agencies other than Banks, Mail Order Houses and others.

The problem of skill shortage is also bound to be affected by the unusually low number, relative to the present labor force, of persons that will be entering the labor force in the next ten to fifteen years. As the MITRE report pointed out two years ago, a combination of such factors as young marginally educated apprentices, aging craftsmen, high labor turnover rates, non cooperative labor unions and others do little to create a favorable environment in industrial investment. What the flood will do to the economy of the area is essentially ''spoil'' people because of (a) the sudden increase in liquid holdings (SBA loans that already have caused a fifty percent increase in bank deposits) and (b) the high wages that came along with construction work and government jobs (both having reached record levels of employment). Many people will no longer be willing to return to low paying jobs when the present boom is over. They will demand non-manufacturing employment.

If the money that has entered the area is spent mostly in the Wyoming Valley, then non-manufacturing employment increases (such as services for instance) may be able to absorb these formerly unskilled individuals. This may happen if money for such economic inputs as wages and salaries doesn't have to leave the area to acquire other inputs that are presently much needed in the area to repair the physical damage. One such drain may be the wages and salaries of imported labor (especially construction) and another may be building materials for major projects.

Construction enters the picture in another way. A construction industry that, due to a variety of factors (unusual demand for construction services as well as non-availability of certain skills), has to operate near capacity means that housing needs will not be met soon enough to contribute to labor retention in the area once the boom levels off. Unless area housing stock is quickly upgraded, out-migration may start again especially among young, talented and energetic individuals who feel that their qualifications are more easily marketable elsewhere.

A decade ago, out-migration of certain age groups and skilled segments of the labor force was generally good because it contributed to the stabilization of the economy of the area. This time

though, this new kind of out-migration may have noticeable repercussions upon the plans of industrial firms to locate in the Wyoming Valley. This should also be considered in light of the image of the Valley as a flood stricken area in the minds of some potential investors (even though the detrimental effects of the flood in this respect tend to be disputed by certain local spokesmen).

An unfavorable environment for industry might become evident to the local population if a feeling of insecurity begins to breed due to the flood. This insecurity may lead to a further lack of motivation for young people who aspire to trades and crafts. This can erode the real industrial location assets of the area until, finally, the economy returns to the downward trends of the forties and early fifties.

This pessimistic scenario does not have to take place if the community realizes the extremely sensitive nature of the present situation, the existence of instability that can go either way. The thing to understand is that the loss of property, both industrial and residential, in the flood stricken area will not be the cause of a downfall of the economy of the Valley. Aid, no matter how slow and inefficient, will repair the physical damage to an acceptable degree. However, there can be no outside aid, other than guidance at the federal, state or regional level, to correct the changes in the Valley's economic structure brought about by Tropical Storm Agnes. Such correction will largely have to be a local effort.

The citizens of the Valley will have to decide through a unified effort how to a) correct the definitely adverse affects of the flood to the economy, such as a drastically reduced labor supply for textile and apparel manufacturers and b) take advantage of specific potentially beneficially changes, such as the tremendous increase in employment requirements related to construction and government. There are obviously many methods or strategies by which corrective action can be taken. Each of which can be realized at certain economic and social costs.

Since the social cost appears to amount to a significant proportion, no formal benefit/cost analysis is possible, even if strategies can be exactly defined. Consequently, what an outside organization, public agency or private firm, can do is to a) arrive at strategies or action plans after a detailed study of the Valley's economy and b) suggest different approaches to any necessary financing. It should be stressed, though,

that the infusion of capital to create jobs is by no means critical to the success of any of the proposed strategies. As a matter of fact, it can be argued that civil service employment introduced for no apparent reason than to cut down chronic unemployment can be more detrimental in the long run than beneficial in the short run.

Such jobs usually inhibit employee motivation and are generally not conducive to high labor productivity rates from the viewpoint of the area's gross regional product for the area. What will be critical is the complete coordination of all activities in the public and private sector that are related to the economic welfare of the Valley. The most prominent activity of course is the industrial development effort which has usually been viewed as the only determinant of economic progress.

However, the Wyoming Valley, is no longer trying to diversify its industrial base just so that it can survive. Further industrial diversification would of course be welcome; but it should not be the primary concern. What should be sought is a consolidation of the economic position of the Valley; and economic structure that would assure long-term balancing between supply and demand. That is, the demand of local industries in labor, raw materials, equipment, supplies and services should be balanced with a supply level, a maximum percentage of which should be generated from local sources.

In the case of labor, the local demand should never exceed local qualified supply. In this respect the following segment is quoted from the MITRE report:(4)

> ''Not only has the growth problem been dealt with on an expedient, labor-oriented, quick-fix basis throughout the region, but the intra-regional aspects of growth have been neglected in favor of the big buyer and big consumer outside the area. Comparisons of counties in the development area suggest the possibility that industrial growth activity from within the area can be improved.''

(4) The MITRE Corporation: Comprehensive Analysis and Action Alternatives for Northeastern Pennsylvania, Volume II - The Current Situation, p. 2.5.39.

Even though the statement refers to Northeastern, Pennsylvania it should be pointed out that it is just as applicable to Luzerne County and to the Wyoming Valley. In this respect, the flood should be viewed as an opportunity to correct certain inequities in resource allocation by seeking the most appropriate combination and time-schedule of aid programs among the hundreds available.

The exact implications of such an approach should be the subject of a detailed economic study of the Valley and the County, an input-output analysis, that should be conducted as soon as possible. In the meantime an organization should be formed with the sole purpose of overseeing and coordinating the implementation of the programs of the particular strategy that will be used. The decision of which strategy to employ should be left to this organization.

The organization should not merely possess a consultative function, but an action role as well. Staffed by professional personnel, this organization would centralize most of the diverse activities now handled by public and private organizations within the area. It would not only conduct all industrial development programs in a strictly scientific way but it would also serve as a central clearinghouse for all economic information of the Valley and perform any economic research as deemed necessary by its Board of Directors.

By forming a professional organization at this level, any deficiencies in the economic structure of the Valley would be noticed immediately. At the same time, corrective action would not only be recommended but also be carried out by this organization. It should be pointed out that a similar proposal has been advanced for the whole region by the ADL report.(5) The study recommended that EDCNP assume the role of an "action" organization instead of a "Catalyst".

An organization of such a nature would obviously be far more effective in carrying out a multitude of data collection, statistical analysis and economic research programs which are currently being handled by a host of local, regional, state and even federal agencies. It would provide the unique opportunity of data collection, but also would provide implementation of proposals.

(5) Arthur D. Little, Inc. -- A Study of the Feasibility of New or Expanded Distribution Centers of the Northeastern Pennsylvania Economic Development District, Part II: Economic Development Other Than Distribution, p. 7, 20.

This operational advantage is extremely important for an area in such a delicate economic position as the Wyoming Valley. It is somewhat questionable whether conventional channels can take remedial action soon enough to avoid a worsening of the situation. The best example is the problem of lack of skilled labor which has been around for some time now without any significant coordinated action having been taken until a few years ago.

The organization would complement the work of the Luzerne County Planning Commission. The results of its work would form the input to the Commission's work as well as the planning work of individual communities in the area. It could supplement the work of the Economic Development Council of Northeastern Pennsylvania functioning as a combination areawide chamber of commerce, industrial development organization and bureau of economic research. It could be affiliated with either or both of the local Colleges and at least be partially financed by federal funds (EDA for instance).

The basic functions of this organization would be:

1. Coordinating the work of all local organizations leading to the adoption of desired development strategy among the ones to be recommended in the economic study.
2. Translation of this strategy into an economic development program, revised and updated annually, which will bring together all the elements of the economic planning process, both public and private. Prince George's County, Md. is reportedly the first county government to adopt such a program in the U.S.(6)
3. Provide the necessary technical support to any industrial development activities in the Valley.
4. Set up and operate an economic monitoring program to collect and analyze pertinent data to be used in the formulation of the economic development program.

The provisions of industrial development technical support will in a few years prove to be extremely helpful. As the area is rapidly losing one of its three prime assets as an attractive industrial location i.e. ample labor resources coupled with low wages, it will be forced to concentrate its efforts to an increasing degree towards marketing its other two assets: transportation network and market proximity.

(6) National Association of Counties: County Tries New Approach to Development, December 8, 1972.

The success the Valley will have in attracting new industires with a high logistics to production cost ratio, and distribution centers will depend mostly upon the sophistication of techniques utilized to show the specific monetary advantages of the area for a particular prospect. These techniques are products of logistics and data processing research and are currently being developed.

Their use by large organizations will increase in the next few years; moving away from haphazard location searching methods. The best way for the Valley to exploit its locational advantages is to develop the capability to a) interact with the staffs and/or consultants of these firms in a strictly professional manner and b) utilize such techniques as logistics system simulation to the area's benefit.

THE ECONOMIC MONITORING PROGRAM

One of the most important functions of the Economic Research and Action Organization (E.R.A.O.) will be the formation and maintenance of a formal economic monitoring program for the Valley to serve a) its own economic research needs and b) the requirements of other organizations both public and private. This monitoring system will have to be set up by the E.R.A.O. before the results of the full-scale economic study become available. Therefore, this preliminary form should be flexible enough to be easily adaptable to any specific findings of the study with respect to the structure of the economy of the Valley.

Obviously the success of the program will depend largely upon the degree of cooperation afforded by local economic organizations. Assurances will have to be given that the data will not be disclosed to unauthorized individuals or organizations.

The basic objective of the system will be to collect data that will be used by the economic research department of the organization in its search for econometric relationships that will relate fluctuations in employment by economic sector and manufacturing industry (the latter using the standard SIC classification system) to changes in pertinent econometric indicators. This research will revolve around regression analysis. Therefore the independent variables of these regression equations will be the econometric indicators and the dependent variables the employment figures.

The monitoring program will not start until after the input-output analysis ofthe Valley has been completed as part of the overall economic study. Only then will enough knowledge about the

economic interactions in the Valley have been gathered to enable the E.R.A.O. researchers to make plausible postulations about the nature of the coefficients of these equations. In the meantime, however, information will be gathered to update the labor census that will have been furnished before any preliminary output is made.

The economic monitoring program will consist of a) the information gathering system and b) the data processing system. The information system will further have to be divided between a) publicly available data and b) data that has to be extracted from selected sources by standard means of statistical sampling. The publicly available data will be composed of primarily employment figures.

Two data sources will have to be relied upon for this information: the Industrial Census, conducted by the Pennsylvania Department of Commerce, and the data of the Bureau of Employment Security of the Pennsylvania Department of Industry and Labor. The former source will be used for manufacturing employment figures by industry, the latter for figures in all other kinds of employment. The following kinds of data will be collected on a quarterly basis:

1. Total civilian work force by municipality.
2. Total unemployment by municipality (location of employment).
3. Employment figures by type of employment (skilled or unskilled) by industry and by municipality.
4. Average gross earnings (weekly as well as hourly) and working time by industry.
5. Labor turnover rates by industry.

These dependent variables will be related to such quarterly econometric indicators as:

1. Retail trade sales by municipality (durable and non-durable goods categories).
2. Index of manufacturing activity by industry for the nation and for the Valley.
3. Agriculture income by municipality.
4. Estimated additions to the housing stock by municipality.
5. Automobile sales for the Valley.
6. Estimated public works expenditures by municipality.
7. Average payroll levels for (a) federal (b) state and (c) local government by municipality.

It should be stressed that this monitoring program will in no way attempt to regulate the labor market. It will merely extract information, which (when properly disseminated among labor unions, industrial executives and public officials) can indirectly help to affect positive changes in the labor situation through independent action by all who may be concerned. This program can serve as an early warning system by delineating consequences that may take place if present trends continue.

SUMMARY

To summarize the economic development of the Valley in the last decade, it is safe to state that the age of transition from a one-industry dependent area to an economy that is relatively diversified, and does not depend upon one specific industry for its livelihood, has come to an end with the advent of Agnes. This period of transition which can be referred to as the First Phase of Diversification was characterized by (a) quantity rather than quality in industrial development activities, (b) population stabilization, and (c) somewhat accelerated growth of non-manufacturing economic sectors during the latter half of the decade.

The economy is currently undergoing a period of necessary adjustment to the physical damage inflicted by the storm and the subsequent changes in the economic structure. With the gradual conclusion of the flood recovery activities however, the economy will soon arrive at a status where long range trends will start to be identified. This should happen around the end of 1973 or the beginning of 1974. At that time, economic equilibrium will probably have been reached and dominant forces will start having a definite effect in shaping the future of the Valley.

If left unchecked, the economy will most likely sustain a series of unpredictable fluctuations with no discernable long term pattern. Erosion of the economic base leading to a state of stagnation and possibly intermediate range negative growth is a real possibility unless appropriate precautionary measures are promptly taken. Nevertheless, there is ample evidence to suggest that the economy of the Valley is capable of a certain degree of real growth.

The best and most promising method of checking long range economic trends is human resources development under strict supply and demand balancing conditions. It is imperative to:

1. Accurately assess the present status of human resources (the supply),
2. Evaluate and forecast likely developments in every sector of the economy (the demand), and
3. Examine in detail the interactions among economic sectors and between each sector and the pertinent segment of the human resources reservoir (the balance).

By knowing the status of each economic sector and the human resources reservoir, as well as the nature of their interactions, the area should decide upon the economic goals to be attained. Attainment of these goals should be left up to professionally competent organizations to achieve through proper management of all available resources overriding individual municipality boundaries and personal interests. The success of these efforts will be a direct function of the degree of cooperation and coordination among all segments of the society.

These efforts will constitute the Second and Third Phases of Diversification. The Second Phase will be characterized by industrial development efforts that stress non-manufacturing over manufacturing activities, while the Third Phase will be composed of a highly selective program of development efforts that seek to attract manufacturing establishments that will be most suited for the economy of the area towards the end of the Second Phase.

The Second Phase will have as an objective the rehabilitation of the labor force, the characteristics of which were altered by the flood, while the Third Phase will attempt to zero in on specific industries that can assure the area of long term prosperity and growth.

Specifically, the following recommendations are being advanced:

1. Initiate, as soon as possible, a full scale economic study of the Valley. The scope of the study should be the (a) delineation of all economic sectors, (b) the relationship of each economic sector with the other as well as with existing human resources and (c) the identification of the interactions of the Valley with the rest of the County, the Scranton urbanized area, the Northeastern Pennsylvania region, the Commonwealth, and the nation. The objective of the study should be to incorporate the results of the labor census (see below) and arrive at feasible development strategies for the Valley with various levels of economic/social costs and benefits. Desirable completion date should be the end of 1973.

2. Conduct a labor census of the Wyoming Valley. This census should be completed no later than the end of 1973 and should be coordinated with the economic study and the attitude survey (see below) by the same contracting agency. To ensure the maximum degree of objectivity, consolidation of the two studies is not recommended. This manpower inventory should be as detailed as data availability permits and should exhaust all aspects of the matter in an unprecedented manner. The census and the attitude survey will comprise the ''supply'' part of the equation stated above. On the other hand, the economic study will analyze the ''demand'' and the ''balance''.
3. A Young People's Attitude Survey should be handled by a third organization and should be made available to the economic study group no later than August 1973. The findings of this survey will be taken into consideration while preparing the economic development strategies. This survey need not be limited to a certain segment of the population. Information can also be collected from other age groups. Nevertheless, in view of the present population age distribution and the reportedly unstable aspirations of the younger generation, it is necessary to forecast their anticipated reaction and contribution to the proposed strategies.
4. Organize an Economic Research and Action Organization (E.R.A.O.) as described in detail in the previous chapter no later than mid-1974. This organization should be in full operation when the results of the economic study are released in order to take immediate advantage of them. Speed in publicizing the strategies, obtaining community reaction and deciding upon the most suitable strategy is of utmost importance. Action programs in every economic sector should be implemented before any adverse or unwanted long-term trends start setting in the Valley's economy.
5. Preliminary findings of the economic study will be used as guidelines in conducting the labor census to assure format compatibility and as input to the economic monitoring program of the E.R.A.O., the basic framework of which should be available to the economic study team before any economic development strategies can be designed. The monitoring program data bank software and information gathering channels should be operational no later than the first or second month of 1974.

6. Assure full compatibility of the E.R.A.O. and the Human Resources Development Department of Luzerne County. Priority should be given to the establishment of working relationships between the two organizations before the findings of the economic study are made available. Both organizations, as soon as they become operational, should assure supervisory roles in all three studies. These same organizations should fully cooperate in taking appropriate action on the following short term action plans. Professional judgement and experience will have to be used as the only guidance until the results of the economic study are released and adopted. These action plans are:
   a. In preparation for the Third Phase of Diversification analysis by the staffs of these organizations of the labor needs of the most likely industries to be attracted in the area, as shown in the ADL report. A more indepth analysis of these needs will independently be carried out by the economic study team but will only be made available in conjunction with the recommended strategies. The preliminary analysis however will serve the purpose of preparing the manpower training framework of the Valley in anticipation of any short-term changes in the labor market structure and industrial demand prior to the adoption of the selected strategy. This analysis will be particularly useful in beginning a long-range industrial promotion drive to attract specific industries in the area that cannot only benefit from the usual combination of industrial location factors, but can also reap specific advantages from locating close to other industries, already in the area, with which they maintain close linkages.
   b. Launching of an ''export'' service industry and wide-area distribution center solicitation drive by the E.R.A.O. as soon as possible. Employers of these two categories, especially the first, should be brought in to pick up the forecasted short term increase in unemployment attendant with the anticipated reduction of federal government employment and the permanent shift in labor force attitudes from manufacturing to non-manufacturing employment. Since temporary government employment is expected to be curtailed during the fall of 1973, results of this drive should be available no later than the first quarter of 1974. Every effort should also be made to poll the various government organizations as to

the time and extent of the consolidation of their operations.

A very practical method by which solicitation drives towards service and especially physical distribution establishments can be launched, is through the preparation of brochures in which the particular ways by which industries already in the area take advantage of the locational assets of the Valley (excluding labor) can be publicized. Labor availability as a whole should no longer be mentioned except in specific cases such as office skills.

c. Monitoring of the changes in construction employment with any means available (B.E.A. and Human Resources Development Agency data banks) and coordination at the municipal level of any unusual demands upon the construction industry to ensure as little importation of skilled labor as necessary. The E.R.A.O. will also undertake to promote (a) formal manpower training programs with respect to construction industry long range demands and (b) maximum on-the-job training as conditions permit.

d. Using the same temporary means of data gathering, the E.R.A.O. should also attempt to focus on changes in government-related employment to distinguish between short- and long-range employment need and devise methods by which short-term employment can be absorbed by other sectors of the economy once the short-range employment becomes available. It should study state and local government employment data, analyze labor census and formulate specific policy recommendations to local municipalities as to the relation of present employment levels and long-term development outlook.

Particular attention should be placed upon an inventory of available skills in the area and skills likely to be in need during the Third Phase as determined in (a) above. The E.R.A.O. should also undertake to provide the economic study team with progress reports of the success of these four programs.

As a concluding statement it should be pointed out that the E.R.A.O., the Luzerne County Human Resources Development Department, the Luzerne County Planning Commission and the Economic Development Council of Northeastern Pennsylvania should all strive towards the goal of long range equilibrium between economic diversification leading to parallel growth of all sectors of the economy with a steady growth in average hourly earnings and hence total personal income of the Valley's population.

CHAPTER 6

EXISTING LAND USE (1)

The Wyoming Valley Study Area contains 192,382 acres, of which 17,225 acres, or about 8.95 percent, is devoted to residential land use. Most of the residential use is located along the Susquehanna River flood plain between the municipalities of Nanticoke and Pittston, see Figure 16.

About 1.22 percent or about 2,344 acres of the Valley's existing land use, as shown in Table 43, is devoted to Commercial purposes. Most of this land use is concentrated within the Wilkes-Barre Community Area. Over 56 percent or 1,315 acres of commercial land use is located in this section of the Valley.

Industrial land use occupies 3,339 acres, or about 1.74 percent. Much of the industrial property is scattered along the railroad lines on both sides of the River, and along major highway arteries. The garment industry is interspersed in commercial, industrial and residential land use areas. Several major concentrations of industrial activities found within the County are located near Pennsylvania Avenue (in the City of Wilkes-Barre) and a number of Industrial Parks. However, most new industrial development in the area is being located in planned industrial parks.

The area devoted to public and semi-public land uses amounts to 5.32 percent of the total Study Area. The 10,385 acres in this category include utilities, and transportation land uses, schools, hospitals and all municipal, county, and state property, except parks and recreational areas. Recreational areas, including state-owned game lands, forests and parks, constitutes 5,004 acres or 2.60 percent of the total Study Area.

A vast amount of land within the Study Area still remains to be developed. The 154,085 acres of undeveloped land is presently occupied by culm banks, strip mining operations, and agricultural and rural properties. New reclaiming techniques are being used to restore and change culm banks and strip mines into usable land for future development.

(1) Although acreage figures and percentages are expressed in detailed terms due to measurement procedures, they should be considered as approximations of existing conditions because of time and data input constraints.

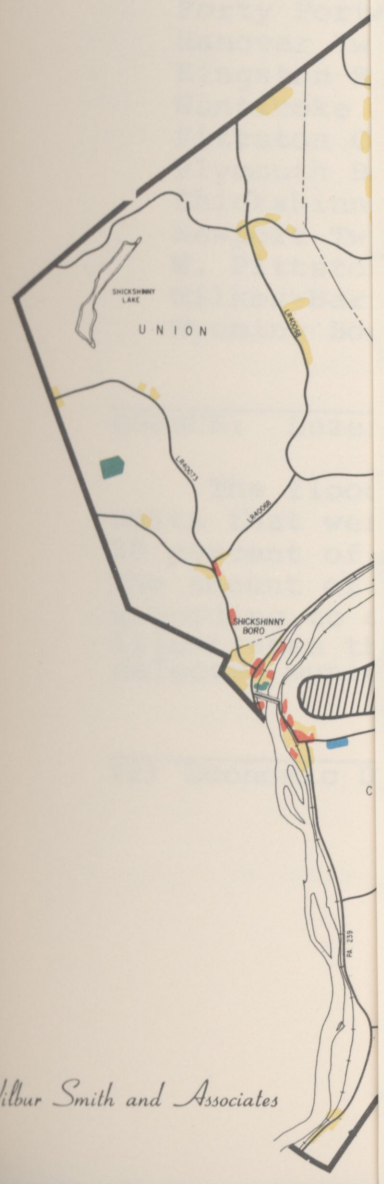
Table 43

GENERALIZED EXISTING LAND USE - 1972

Wyoming Valley Study Area

MUNICIPALITY	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	PUBLIC SEMI-PUBLIC (1)	RECREATION	TOTAL DEVELOPED	UNDEVELOPED	TOTAL (2)
SHICKSHINNY AREA								
Conyngham Twp.	244	25	9	320	230	282	10,685	11,513
Hunlock Twp.	736	41	5	290	600	1,672	11,422	13,094
Shickshinny Boro	215	16	20	19	6	276	127	403
Union Twp.	580	12	5	861	15	1,473	9,612	11,085
AREA SUB-TOTAL	1,775	94	39	1,490	851	4,249	31,846	36,095
NANTICOKE AREA								
Nanticoke City	420	79	49	75	39	662	1,437	2,099
Newport Twp.	231	17	109	582	26	965	8,961	9,926
Plymouth Twp.	389	21	17	1,509	605	2,541	6,534	9,075
AREA SUB-TOTAL	1,040	117	175	2,166	670	4,168	16,932	21,100
WILKES-BARRE AREA								
Ashley Boro	112	27	116	81	5	341	280	621
Courtdale Boro	61	13	4	46	3	127	481	608
Edwardsville Boro	293	121	49	14	11	488	248	736
Forty Fort Boro	269	57	12	183	17	538	351	889
Hanover Twp.	974	99	678	164	364	2,279	9,913	12,192
Kingston Boro	580	137	47	395	66	1,225	202	1,427
Larksville Boro	219	60	282	164	14	739	2,288	3,027
Laurel Run Boro	163	5	12	19	3	202	3,804	4,006
Luzerne Boro	181	35	28	99	10	353	69	422
Plains Twp.	958	198	120	150	434	1,860	6,921	8,781
Plymouth Boro	310	34	23	138	42	547	362	909
Pringle Boro	79	11	16	92	8	206	127	333
Sugar Notch Boro	81	10	0	16	4	111	554	665
Swoyersville Boro	301	29	65	201	22	618	60	678
Warrior Run Boro	57	6	0	13	1	77	377	454
Wilkes-Barre City	1,687	351	197	400	386	3,021	1,254	4,275
Wilkes-Barre Twp.	200	122	157	200	18	697	1,171	1,868
AREA SUB-TOTAL	6,525	1,315	1,806	2,375	1,408	13,429	28,462	41,891
PITTSTON AREA								
Avoca Boro	194	9	30	153	7	393	234	627
Dupont Boro	200	5	7	150	8	370	654	1,024
Duryea Boro	591	42	18	50	15	716	3,053	3,769
Exeter Boro	347	61	160	152	264	984	2,472	3,456
Exeter Twp.	410	62	55	46	258	831	6,913	7,744
Hughestown Boro	89	5	32	58	7	191	340	531
Jenkins Twp.	532	50	276	348	24	1,230	8,434	9,664
Laflin Boro	80	8	0	12	8	108	672	780
Pittston City	744	85	18	70	30	947	141	1,088
Pittston Twp.	388	62	169	532	25	1,176	8,481	9,657
W. Pittston Boro	410	31	40	45	4	530	78	608
W. Wyoming Boro	233	33	99	152	10	527	1,623	2,150
Wyoming Boro	227	69	27	192	11	526	485	1,011
Yatesville Boro	62	5	21	12	2	102	372	474
AREA SUB-TOTAL	4,507	527	952	1,972	673	8,631	33,952	42,583
BACK MOUNTAIN AREA								
Dallas Boro	396	91	36	23	2	548	898	1,446
Dallas Twp.	1,003	52	21	270	664	2,010	11,609	13,619
Kingston Twp.	727	38	26	1,084	14	1,889	8,031	9,920
AREA SUB-TOTAL	2,126	181	83	1,377	680	4.447	20,538	24,985
MOUNTAIN TOP AREA								
Fairview Twp.	428	49	26	36	693	1,232	4,733	5,965
Nuangola Boro	122	4	0	18	4	148	639	787
Rice Twp.	329	21	10	571	12	943	7,243	8,186
Wright Twp.	373	36	248	380	13	1,050	9,740	10,790
AREA SUB-TOTAL	1,252	110	284	1,005	722	3,373	22,355	25,728
GRAND TOTAL	17,225	2,344	3,339	10,385	5,004	38,297	154,085	192,382

(1) Not including recreation.
(2) Solid Waste Management Plan - Roy F. Weston, Inc.
SOURCE: Luzerne County Planning Commission.
Alan M. Voorhees and Associates.

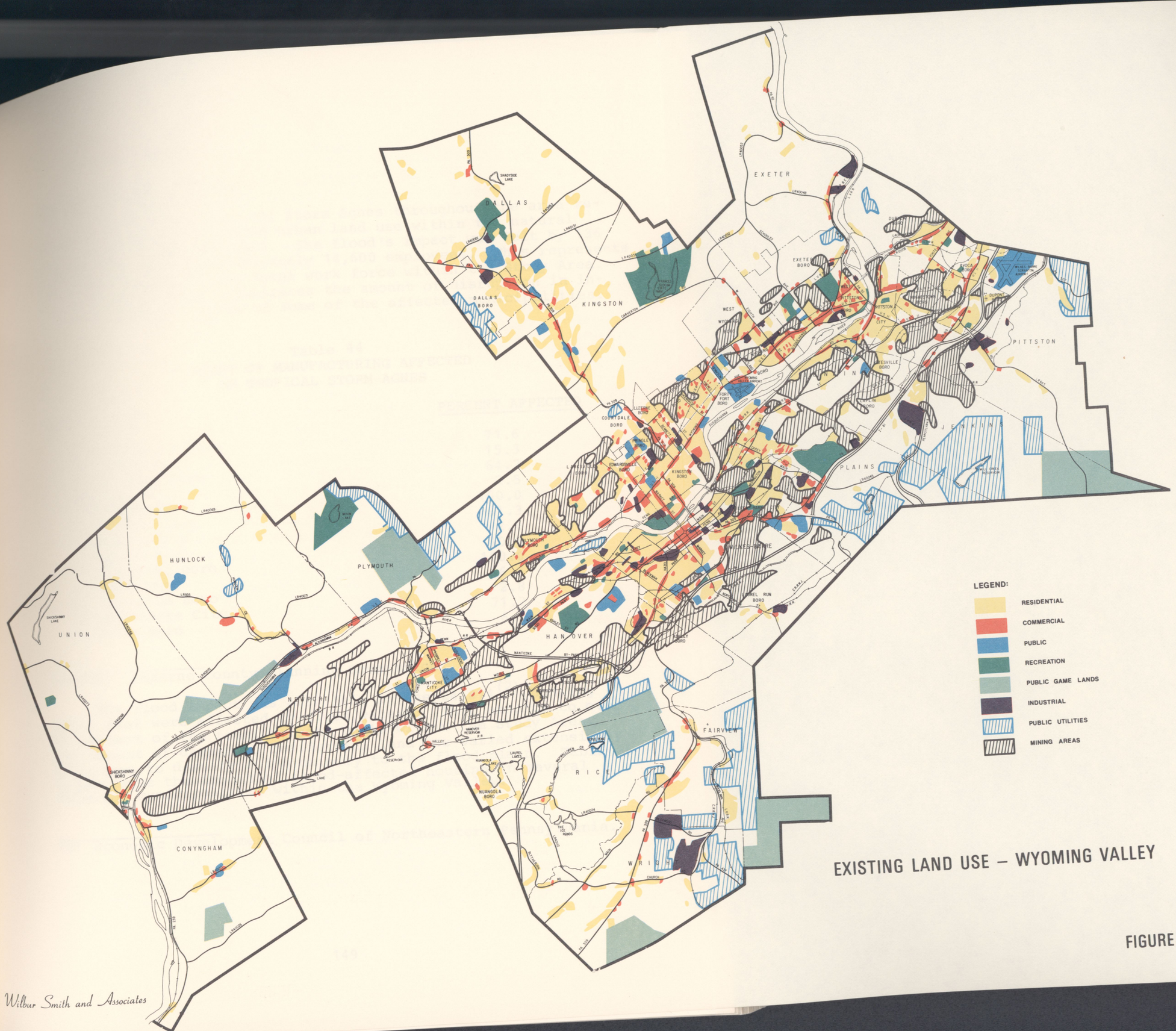


Wilbur Smith and Associates

USE - 1972

Area

PUBLIC EMI-PUBLIC (1)	RECREATION	TOTAL DEVELOPED	UNDEVELOPED	TOTAL (2)
320	230			
290	600	282	10,685	
19	6	1,672	11,422	11,513
861	15	276	127	13,094
1,490	851	1,473	9,612	403
		4,249	31,846	11,085
				36,095
75	39	662	1,437	
582	26	965	8,961	2,099
1,509	605	2,541	6,534	9,926
2,166	670	4,168	16,932	9,075
				21,100
81	5			
46	3	341	280	
14	11	127	481	621
183	17	488	248	608
164	364	538	351	736
395	66	2,279	9,913	889
164	14	1,225	202	12,192
19	3	739	2,288	1,427
99	10	202	3,804	3,027
150	434	353	69	4,006
138	42	1,860	6,921	422
92	8	547	362	8,781
16	4	206	127	909
201	22	111	554	333
13	1	618	60	665
400	386	77	377	678
200	18	3,021	1,254	454
375	1,408	697	1,171	4,275
		13,429	28,462	1,868
				41,891
153	7			
150	8	393	234	
50	15	370	654	627
52	264	716	3,053	1,024
46	258	984	2,472	3,769
58	7	831	6,913	3,456
48	24	191	340	7,744
12	8	1,230	8,434	531
70	30	108	672	9,664
32	25	947	141	780
15	4	1,176	8,481	1,088
32	10	530	78	9,657
2	11	527	1,623	608
2	2	526	485	2,150
	673	102	372	1,011
		8,631	33,952	474
				42,583
3	2	548	898	1,446
0	664	2,010	11,609	13,619
1	14	1,889	8,031	9,920
4	680	4.447	20,538	24,985
	693	1,232	4,733	5,965
	4	148	639	787
	12	943	7,243	8,186
	13	1,050	9,740	10,790
	722	3,373	22,355	25,728
	5,004	38,297	154,085	192,382



EXISTING LAND USE – WYOMING VALLEY

FIGURE 16

Wilbur Smith and Associates

FLOOD AFFECTED LAND USE

The impact of Tropical Storm Agnes throughout the area reflects the encroachment of urban land use within the natural flood plain over the years. The flood's impact was felt by 136 manufacturers and approximately 14,600 employees. This represents about 38 percent of the total work force within the Study Area. The following Table illustrates the amount of disruption in industrial land use areas of some of the affected municipalities.

Table 44
PERCENT OF MANUFACTURING AFFECTED
BY TROPICAL STORM AGNES

MUNICIPALITY	PERCENT AFFECTED
Edwardsville Boro	71.6
Exeter Boro	15.3
Forty Fort Boro	64.2
Hanover Twp.	2.5
Kingston Boro	100.0
Nanticoke City	31.3
Pittston City	2.6
Plymouth Boro	40.9
Shickshinny Boro	100.0
Newport Twp.	56.8
W. Pittston Boro	2.8
Wilkes-Barre City	71.2
Wyoming Boro	6.2

SOURCE: Luzerne County Planning Commission.

The flood impact was also felt by the 24,814[2] housing units that were affected by flood waters. This amounts to over 20 percent of the total housing units within the Study Area. The amount of damage to residential land use varied extensively according to density and proximity to the flood plain. Table 45 illustrates the amount of flood-affected housing in several selected municipalities within the Wyoming Valley.

(2) Economic Development Council of Northeastern Pennsylvania.

Table 45
PERCENT OF RESIDENTIAL LAND USE
AFFECTED BY TROPICAL STORM AGNES

MUNICIPALITY	PERCENT AFFECTED
Wilkes-Barre City	37.3
West Pittston Boro	49.3
Forty Fort Boro	100.0
Swoyersville Boro	58.2
Kingston Boro	100.0
Plymouth Boro	61.0
Nanticoke City	3.6
Shickshinny Boro	79.2
Plymouth Boro	30.0
Edwardsville Boro	49.0

SOURCE: Economic Development Council of Northeastern Pennsylvania.

Similar impact was also experienced in the commercial land use category. The commercial areas of Wilkes-Barre, Kingston, Forty Fort, and Shickshinny were heavily damaged by flood waters. Hardest hit were the businesses of Kingston, Plymouth and Edwardsville Boroughs.

Proper utilization of land use planning could have minimized much of the damage and property loss in flood plain areas. The proper application of land use planning becomes most important in unprotected areas of the flood plain. A greater emphasis should be placed upon the proper use of the flood plain and in particular unprotected secments of the flood plain. Land use types that are not greatly affected by the periodic inundation of flood waters should be encouraged; for example agricultural, recreational and open-space land uses. Proper utilization of these land use alternatives will reduce the loss of property and minimize the periodic hardship for residents of the Wyoming Valley.

In the light of federal policy restricting financial assistance in 100-year flood plain areas, a concentrated effort should be made within the Wyoming Valley to reduce existing developed land use within flood plains and prohibit future development in unprotected areas.

RESIDENTIAL LAND USE

About 8.95 percent of the Wyoming Valley Study Area's

192,382 acres of land area is devoted to residential land use. Residential areas are scattered throughout the Study Area in small community clusters that developed around the community's historic places of employment and workship. As the Valley's population grew, open space between communities was filled with the indiscriminant placement of residential developments. In recent years, the two areas of Mountain Top and Back Mountain have developed into fast growing residential communities. Most of the housing within the Valley is single-family or two-family dwellings.

Growth trends indicate that more multi-family units will be developed within the Valley and a continued growth in the number of single-family units will take place on the fringe of the Valley. Presently, there are over 2,700 residential units that have been constructed within the last few years as seen in Table 46. Approximately 840 of these new residential units were located in the City of Wilkes-Barre and, for the most part, are high rise, federally funded projects. Two projects for the elderly are located in Nanticoke. Dallas Township on the other hand has experienced the development of over 600 single-family units recently. Hanover Township is also expecting at least 1,000 single-family units in the next few years if planned unit development proposals are realized.

Present trends also indicate a growth in the number of mobile home parks and a greater use of mobile homes as permanent dwelling units. The use of mobile homes as emergency shelter by HUD and the local cost of housing has accelerated this trend. The Department of Housing and Urban Development is expected to sell a number of mobile units to residents of the Valley as permanent housing.

In the next couple of years, over 2,500 residential units will be developed within the Study Area. About 840 units will be located in Wilkes-Barre. Some of these units in Wilkes-Barre will be constructed, under S.236 grants. In Nanticoke, four projects are programmed for low-income and elderly housing. Two single-unit sites are planned for Rice Township and will occupy 43 acres. Other developments will be located in Kingston Borough (196 units) and Pittston City (250 units). A modular housing development of 850 units is underway in Hanover Township.

In addition to the above programmed units, over 3,000 additional housing units have been proposed. Most of these projects are tentative and it is uncertain how many will be constructed within the next five years. Most of this activity will be lo-

Table 46

RESIDENTIAL DEVELOPMENTS
EXISTING, PROGRAMMED AND PROPOSED
IN THE STUDY AREA

NAME	NUMBER OF UNITS	LOCATION	TYPE
Existing			
Brandywine	120 units	Dallas Twp.	Private
Whitesell Bros.	500 units	Dallas Twp.	Private
Newberry Estates	250 units	Dallas Boro	Condominium
Park Towers	16 units	Nanticoke City	Low Income & Elderly
Main St. Towers	165 units	Nanticoke City	Elderly
Sans Souci Moble Home	N/A	Hanover Twp.	Present HUD Site
Sobel Construction	152 units	Hanover Twp.	S. 236
Moble Home Park	200 units	Ashley Boro	Present HUD Site
Cedar Village	74-134 units	Hanover Twp.	Private
Sheridan Manor	196 units	Wilkes-Barre City	S. 236
Wilkes-Barre Housing Auth.	150 units	Wilkes-Barre City	Public
South W. B. Project	100 units	Wilkes-Barre City	Elderly
Provincial Towers	121 units	Wilkes-Barre City	Private
B'nai B'rith	173 units	Wilkes-Barre City	Elderly & S. 236
East End Project	100 units	Wilkes-Barre City	Elderly
Wilkes-Woods	161 units	Wilkes-Barre Twp.	Private
Pocono Trailer Park	N/A	Plains Twp.	Present HUD Site
Existing			
Lakewood Gardens Mobile Home	120-600 units	Jenkins Twp.	Present HUD Site
Apollo Apts.	50 units	Pittston City	Elderly
Shawnee Theater	40 units	Plymouth Boro	S. 236

Table 46(Cont'd)

RESIDENTIAL DEVELOPMENTS
EXISTING, PROGRAMMED AND PROPOSED
IN THE STUDY AREA

NAME	NUMBER OF UNITS	LOCATION	TYPE
Programmed (before 1977)			
Highland Woods	N/A	Fairview Twp.	Private
Laurel Lakes	17 acres	Rice Twp.	Private
Gateway Housing Corp.	26 acres	Rice Twp.	S. 235
Enterprise & Gemimi St.	50 units	Nanticoke City	Low Income
South & Lincoln St.	24 units	Nanticoke City	Low Income
Nanticoke Towers	50 units	Nanticoke City	Elderly
West Main Terrace	75 units	Nanticoke City	Low Income
Apartments	41 units	Wilkes-Barre City	Private
GRIT	205 units	Wilkes-Barre City	S. 236 & Elderly
Coal Street	215-850 units	Wilkes-Barre City	S. 236
High Rise	150 units	Pittston City	Private
High Street	60 units	Pittston City	Public
Bone Stadium Site	40 units	Pittston City	Public
Holiday Green Acres	196 units	Kingston Boro	Private
Highland Hills	540-1,500 units	Jenkins Twp.	Private
Park Avenue	150 units	Wilkes-Barre City	Elderly
Kingston Corners	200 units	Kingston Boro	Elderly
Bull Run	99 units	Plymouth Boro	Elderly
Lee Park Avenue	149 units	Hanover Twp.	Elderly
Apartments	150 units	West Pittston Boro	S. 235
Apartments	110 units	Exeter Boro	S. 235
Apartments	100 units	Swoyersville Boro	Elderly
Apartments	110 units	Luzerne Boro	S. 235
Apartments	100 units	Wyoming Boro	Elderly
Apartments	200 units	Kingston Boro	Elderly
Apartments	150 units	Forty Fort Boro	Elderly
Apartments	100 units	Duryea Boro	Elderly
Townhouses	50 units	Hanover Twp.	S. 235

Table 46 (Cont'd)

RESIDENTIAL DEVELOPMENTS
EXISTING, PROGRAMMED AND PROPOSED
IN THE STUDY AREA

NAME	LOCATION	NUMBER OF UNITS	TYPE
Proposed (post 1977)			
Deluxe Homes of Berwick	Wright Twp.	N/A	Private
Proposed			
Condominium	Wright Twp.	40-100 units	Private
PP & L Housing Site	Rice Twp.	N/A	Private
Proposed Subdivision	Dallas Twp.	20 units	Private
Creative Builders (1)	Dallas Twp.	N/A	Private
Creative Builders (2)	Dallas Twp.	N/A	Private
Al Rothstein	Dallas Boro	94 units	S. 236
Mark Realty	Hanover Twp.	N/A	S. 235
Oxford St. Project	Hanover Twp.	65 units	Modular
Planned Development Inc.	Yatesville Boro	850 units	S. 236
Mark Realty	Plymouth Boro	100-200 units	Public
E. Main St. U.R.	Larksville Boro	92 units	S. 235 or S. 236
Scenic Development Corp.	Edwardsville Boro	1,140 units	Private
Roer	Kingston Boro	200 units	Private
3rd Avenue U.R.	Luzerne Boro	N/A	S. 236
Center Town U.R.	Hanover Township	210 units	Private
Wyoming Valley Country Club Development Corp.	Edwardsville Boro	1,000 units	S. 236
U. S. Homes		200 units	

N/A = Not Available

SOURCE: Luzerne County Planning Commission.

cated in the Back Mountain and
notable project of approximatel
Larksville Borough, see Figure

COMMERCIAL LAND USE

Commercial land use accoun
(1.22 percent) in the County.
of downtown commercial centers
downtown Wilkes-Barre/Kingston.
area, the Pittston area, the Bac
Top area. Other major commercia
Mall and the Gateway Shopping Ce
Midway Shopping Center in Wyomin
land use is scattered along road
various neighborhood establishme

Wyoming Avenue (U.S. 11) has
commercial strip from Plymouth to
in this area continues, the addit
will probably occupy the vacant p
Another commercial strip has deve
continue to ''fill in'' as the Ba
developed land.

One of the most recent major
been the construction of Wyoming
about 1,200,000 square feet and wa
before the flood. The flood inund
areas of both Wilkes-Barre and Kin
of the Valley to patronize the Wyo
suburban locations. The initial i
served to accelerate the decline o
of both Wilkes-Barre and Kingston
ment of these commercial areas, it
areas will increase in their impor

Four proposed commercial deve
Wyoming Valley Study Area, as seen
facilities, two are shopping cente
Borough and the other in Pittston
will be an 8-acre motel-hotel compl
Expressway in Hanover Township, and
hood commercial area.

Mark Realty	N/A	Hanover Twp.	S. 236
Oxford St. Project	65 units	Hanover Twp.	S. 235
Planned Development Inc.	850 units	Hanover Twp.	Modular
Mark Realty	100-200 units	Yatesville Boro	S. 236
E. Main St. U.R.	92 units	Plymouth Boro	Public
Scenic Development Corp.	1,140 units	Larksville Boro	S. 235 or S.
Club Development Co.	200 units	Edwardsville Boro	Private
Roer	N/A	Kingston Boro	Private
3rd Avenue U.R.	210 units	Luzerne Boro	S. 236
Center Town U.R.			
Wyoming Valley Country Club Development Corp.	1,000 units	Hanover Township	Private
U. S. Homes	200 units	Edwardsville Boro	S. 236

N/A = Not Available

SOURCE: Luzerne County Planning Commission.

S. 236

cated in the Back Mountain and Mountain Top Areas, although one notable project of approximately 1,100 units will be located in Larksville Borough, see Figure 17.

COMMERCIAL LAND USE

Commercial land use accounts for 2,344 of the 192,382 acres (1.22 percent) in the County. There are five major concentrations of downtown commercial centers in the Valley. The largest is downtown Wilkes-Barre/Kingston. The others are in the Nanticoke area, the Pittston area, the Back Mountain area, and the Mountain Top area. Other major commercial areas are the Wyoming Valley Mall and the Gateway Shopping Center in Edwardsville and the Midway Shopping Center in Wyoming. The remaining commercial land use is scattered along roadways as strip development and in various neighborhood establishments and shopping centers.

Wyoming Avenue (U.S. 11) has developed into a scattered commercial strip from Plymouth to West Pittston. As development in this area continues, the additional strip commercial activities will probably occupy the vacant properties along this arterial. Another commercial strip has developed along Highway 309 and will continue to ''fill in'' as the Back Mountain Area increases its developed land.

One of the most recent major commercial developments has been the construction of Wyoming Valley Mall. The mall contains about 1,200,000 square feet and was opened in June 1972, just before the flood. The flood inundated most of the commercial areas of both Wilkes-Barre and Kingston, thus forcing residents of the Valley to patronize the Wyoming Valley Mall and other suburban locations. The initial impact of the flood has served to accelerate the decline of the downtown commercial areas of both Wilkes-Barre and Kingston but with the planned redevelopment of these commercial areas, it is expected that the downtown areas will increase in their importance.

Four proposed commercial developments are planned for the Wyoming Valley Study Area, as seen in Table 47. Of these proposed facilities, two are shopping centers, one located in Dallas Borough and the other in Pittston Township. The third facility will be an 8-acre motel-hotel complex near the South Cross Valley Expressway in Hanover Township, and the fourth will be a neighborhood commercial area.

Table 47
PROPOSED COMMERCIAL DEVELOPMENT

Al Rothstein S.C.	4-32 acres	Dallas Boro
Shopping Center	n/a	Pittston Twp.
New Hotel Complex	8-10 acres	Hanover Twp.
Kingston Corners	5 acres	Kingston Boro

SOURCES: Luzerne County Planning Commission.
Sunday Independent Newspaper, Wilkes-Barre.

INDUSTRIAL LAND USE

Industrial land use encompasses 1.74 percent of the total 192,382 acres of the Study Area or 3,339 acres. Some of the industrial land use is scattered along the railroad lines that criss-cross the Study Area. Industrial sites are also located along some of the major highway arteries. The garment industry is interspersed in commercial, residential and other industrial areas.

Several major concentrations of industrial property in the Study Area are located along Pennsylvania Avenue in the City of Wilkes-Barre and the following industrial parks: Crestwood site in Wright Township, Wilkes-Barre Redevelopment site in the City of Wilkes-Barre, Barnum site in Duryea, Foote and York Avenue sites in Duryea and the Turnpike Industrial Site in Pittston Township. A number of industrial parks are planned to be developed within the Study Area. Table 48 lists existing, planned and proposed industrial parks.

PUBLIC AND SEMI-PUBLIC LAND USE

Public and semi-public uses constitute 10,385 acres amounting to only 5.32 percent of the total land area of the Wyoming Valley. Included in this land use category are all state, county and municipal buildings, schools, streets, alleys, cemeteries, institutions and utilities (including railroad rights-of-way), but excluding recreational land use.

Flood damage to public and semi-public land use was extensive, particularly to public services and utilities. The damage to school systems within the Study Area was over $57 million. Needless to say, municipal buildings, fire houses, roadways and railroad right-of-ways also were damaged.

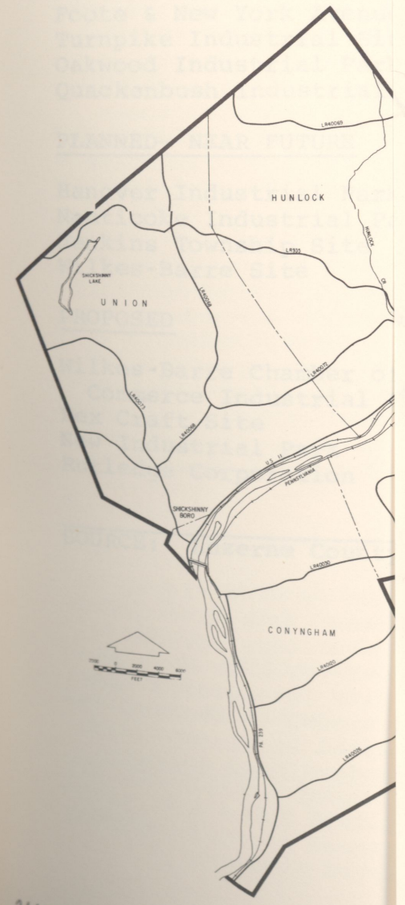


Table 47
O COMMERCIAL DEVELOPMENT

4-32 acres	Dallas Boro
n/a	Pittston Twp.
8-10 acres	Hanover Twp.
5 acres	Kingston Boro

Planning Commission.
dent Newspaper, Wilkes-Barre.

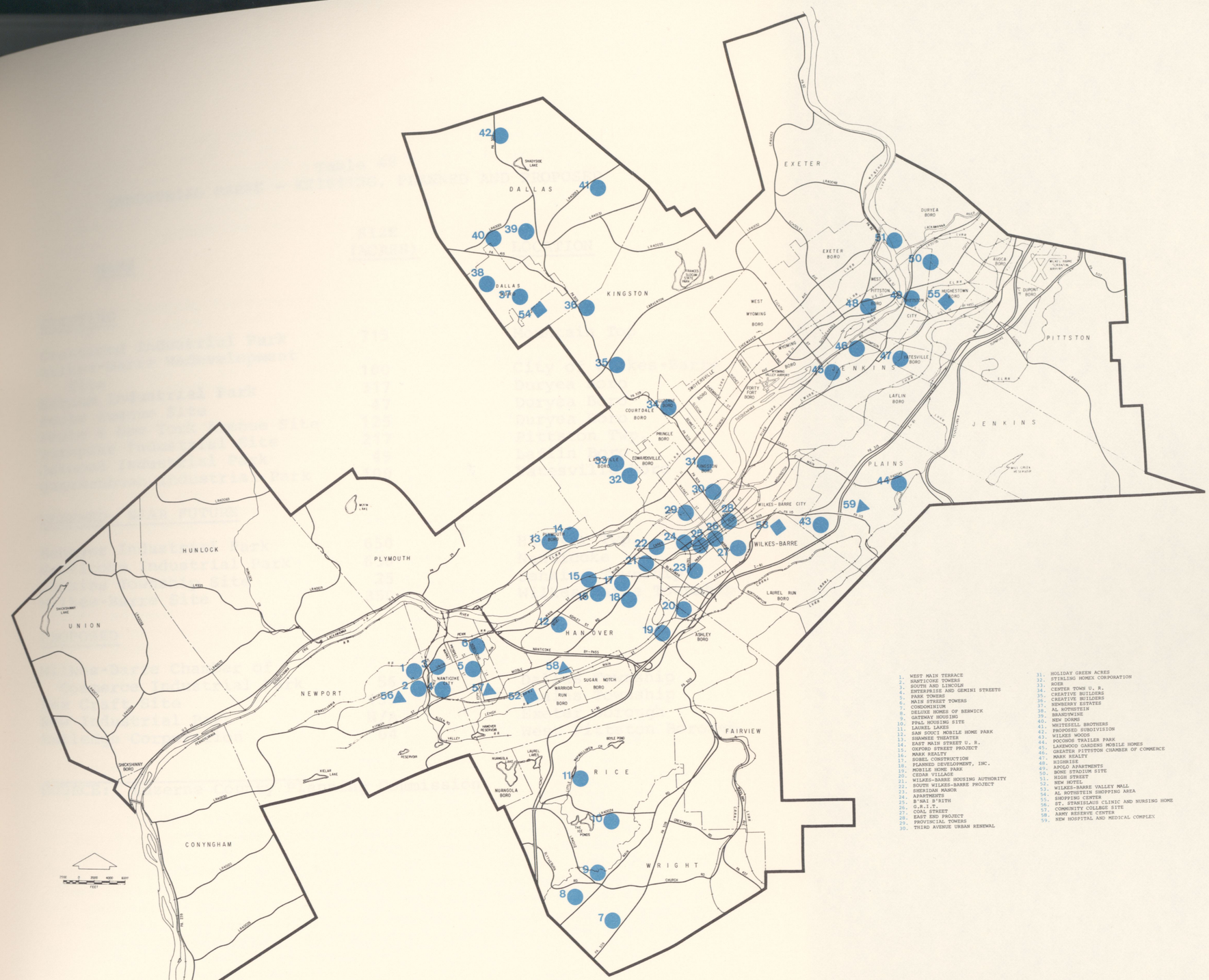
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wing industrial parks: Crestwood
ilkes-Barre Redevelopment site in
Barnum site in Duryea, Foote and York
the Turnpike Industrial Site in
er of industrial parks are planned
Study Area. Table 48 lists existing,
rial parks.

USE

uses constitute 10,385 acres amount-
the total land area of the Wyoming
and use category are all state, county
ools, streets, alleys, cemeteries,
including railroad rights-of-way),
and use.

and semi-public land use was exten-
services and utilities. The damage
Study Area was over $57 million.
ildings, fire houses, roadways
so were damaged.



1. WEST MAIN TERRACE
2. NANTICOKE TOWERS
3. SOUTH AND LINCOLN
4. ENTERPRISE AND GEMINI STREETS
5. PARK TOWERS
6. MAIN STREET TOWERS
7. CONDOMINIUM
8. DELUXE HOMES OF BERWICK
9. GATEWAY HOUSING
10. P&L HOUSING SITE
11. LAUREL LAKES
12. SAN SOUCI MOBILE HOME PARK
13. SHAWNEE THEATER
14. EAST MAIN STREET U. R.
15. OXFORD STREET PROJECT
16. MARK REALTY
17. SOBEL CONSTRUCTION
18. PLANNED DEVELOPMENT, INC.
19. MOBILE HOME PARK
20. CEDAR VILLAGE
21. WILKES-BARRE HOUSING AUTHORITY
22. SOUTH WILKES-BARRE PROJECT
23. SHERIDAN MANOR
24. APARTMENTS
25. B'NAI B'RITH
26. G.B.I.T.
27. COAL STREET
28. EAST END PROJECT
29. PROVINCIAL TOWERS
30. THIRD AVENUE URBAN RENEWAL
31. HOLIDAY GREEN ACRES
32. STIRLING HOMEX CORPORATION
33. KOER
34. CENTER TOWN U. R.
35. CREATIVE BUILDERS
36. CREATIVE BUILDERS
37. NEWBERRY ESTATES
38. AL ROTHSTEIN
39. BRANDYWINE
40. NEW DORMS
41. WHITESELL BROTHERS
42. PROPOSED SUBDIVISION
43. WILKES WOODS
44. POCONOS TRAILER PARK
45. LAKEWOOD GARDENS MOBILE HOMES
46. GREATER PITTSTON CHAMBER OF COMMERCE
47. MARK REALTY
48. HIGHRISE
49. APOLO APARTMENTS
50. BOWL STADIUM SITE
51. HIGH STREET
52. NEW HOTEL
53. WILKES-BARRE VALLEY MALL
54. AL ROTHSTEIN SHOPPING AREA
55. SHOPPING CENTER
56. ST. STANISLAUS CLINIC AND NURSING HOME
57. COMMUNITY COLLEGE SITE
58. ARMY RESERVE CENTER
59. NEW HOSPITAL AND MEDICAL COMPLEX

LOCATION OF NEW CONSTRUCTION–1972

FIGURE 17

Table 48
INDUSTRIAL PARKS - EXISTING, PLANNED AND PROPOSED

NAME	SIZE (ACRES)	LOCATION
EXISTING		
Crestwood Industrial Park	715	Mountain Top
Wilkes-Barre Redevelopment Site	100	City of Wilkes-Barre
Barnum Industrial Park	317	Duryea Boro
Foote Avenue Site	47	Duryea Boro
Foote & New York Avenue Site	125	Duryea Boro
Turnpike Industrial Site	217	Pittston Twp.
Oakwood Industrial Park	49	Laflin Boro
Quackenbush Industrial Park	100	Yatesville Boro
PLANNED- NEAR FUTURE		
Hanover Industrial Park	650	Hanover Twp.
Nanticoke Industrial Park	630	Nanticoke
Jenkins Township Site	25	Jenkins Township
Wilkes-Barre Site	350	Wilkes-Barre Township
PROPOSED		
Wilkes-Barre Chamber of Commerce Industrial Park	56	Dallas Township
Rex Craft Site	155	Plains Township
New Industrial Park	N/A	Exeter Borough
Rutledge Corporation	64	West Pittston Borough

SOURCE: Luzerne County Planning Commission.

A number of additions will be made to the Public and Semi-Public land use category in the future as shown in Table 49. They are: a proposed regional hospital in Plains Township on a 525 acre tract, the Army Reserve Center in the Hanover Industrial Park, theCross Valley Expressway between Kingston Township and Wilkes-Barre Township and several municipal buildings.

RECREATION LAND USE

Recreational land use including state-owned game lands, forests, parks, playgrounds, and playfields, constitutes 5,004 acres or about 2.60 percent of the total land area in the Study Area. The amounts of recreational land area vary from almost 700 acres in Fairview Township to one or two acres in some of the smaller municipalities.

In general, there is insufficient recreational space throughout the Wyoming Valley Study Area. Minimum standards of the National Recreation Association recommend a total of five to six acres of recreational land per 1,000 persons. Within the Wyoming Valley Study Area 24 of the 45 municipalities do not meet these standards for recreational land. Some of the municipalities are within easy accessibility to surplus recreational areas in other municipalities, but there is a critical need for more recreational land in communities with higher densities.

More recreational land use is needed in the following municipalities: Shickshinny Borough, Nanticoke City, Ashley Borough, Edwardsville Borough, Forty Fort Borough, Kingston Borough, Luzerne Borough, Sugar Notch Borough, Avoca Borough, Dupont Borough, Pittston City, West Pittston Borough, West Wyoming Borough, and Wyoming Borough. In light of the flood of 1972, strong encouragement should be given to the development of recreational land use along the floodway of the Susquehanna River, in accordance with the plans proposed by Environmental Design Associates.

UNDEVELOPED LAND

The Study Area contains over 154,000 acres of undeveloped land or about 80 percent of the total land area. This land use category includes culm banks, strip mining operations, agricultural and rural properties. New reclaiming methods have made it possible to change culm banks and stripping pits into usable land for future development. Careful planning is needed to restore the areas of the Valley that have been distrupted by mining operations. In recent years, a number of ''undeveloped areas''

Table 49
PUBLIC DEVELOPMENT
EXISTING, PLANNED AND PROPOSED

NAME	SIZE	LOCATION
EXISTING		
St. Stanislaus Nursing Home	N/A	Newport Twp.
New Dorms-Misericordia College	102 Units	Dallas Twp.
PLANNED-NEAR FUTURE		
Luzerne County Community College (1)	$8,500,000	Nanticoke City
PROPOSED		
New Regional Hospital	525 Acres	Plains Twp.
Army Reserve Center	8-10 Acres	Hanover Twp.
Hanover Twp. Municipal Building	$615,000	Hanover Twp.
Shickshinny Municipal Building	N/A	Shickshinny Boro
Cross-Valley Expressway	N/A	Kingston Twp. to Wilkes-Barre Twp.
West Wyoming Municipal Building	$340,000	W. Wyoming Boro
Duryea Municipal Building	$431,000	Duryea Boro
West Pittston Municipal Building	$593,000	W. Pittston Boro
Edwardsville Municipal Building	$581,000	Edwardsville Boro
Fire Station	$526,000	City of Wilkes-Barre
Plymouth Twp. Municipal Building	$377,000	Plymouth Twp.
Plymouth Municipal Building	N/A	Plymouth Boro
Exeter Municipal Building	N/A	Exeter Twp.
Fire House	$410,000	Plains Twp.
Forty Fort Municipal Building	N/A	Forty Fort Boro
Nanticoke Municipal Building	$909,000	City of Nanticoke

(1) Completion date - October, 1973.
NOTE: N/A = Not Available.
SOURCE: Luzerne County Planning Commission.
Economic Development Administration.

were transformed from culm banks into shopping centers and industrial parks. As progress demands more and more land, care should be used to protect the environment by encouraging the use of culm banks and stripping pits and discouraging the use of any wooded or green space for development. Undeveloped land in the floodway should not be developed due to the potential of flood damage.

SUMMARY

The Wyoming Valley Study Area contains 192,382 acres, of which 38,297 acres are developed and 154,085 acres are undeveloped.

Future residential land use will be primarily developed in higher density housing within the Valley and low-density housing in the Back Mountain and Mountain Top Community Areas.

Commercial land use occupies about 1.2 percent of the total land area. Most of the land use is scattered throughout the Valley except for five major commercial districts.

Industrial land use has, for the most part, been scattered throughout the area, but development of new industrial parks has started to concentrate industrial land use in a more ordered manner.

Public and Semi-Public land use comprises over five percent of the total land area. This category was hard hit by the flood, but is expected to expand with the construction of the Cross Valley Expressway and a number of new municipal buildings.

Recreational Land Use is in short supply in 24 of the 45 municipalities within the Study Area. The situation is critical in 14 municipalities as listed above and plans should be instituted to provide more recreational land as soon as possible.

The development of the 154,000 acres of undeveloped land should be studied in two contexts: (1) Preservation of the environment and the use of mine scarred landscape as future development areas, and (2) the prohibition of development of undeveloped segments of the floodway.

CHAPTER 7

TRANSPORTATION

This chapter addresses the transportation elements of the comprehensive plan program. Specific transportation oriented work tasks undertaken as a part of the comprehensive planning study included:

1) an evaluation of programmed short-range and long-range transportation improvements;
2) an appraisal of the relationship of the transportation system to future land use plans and policies to determine the degree to which the proposed system fulfills the needs of an expanding and shifting population;
3) study of alternate proposals for the Wyoming Valley Expressway (L.R. 1085);
4) development of recommendations for rights-of-way for proposed street and highway improvements within the boundaries of urban renewal projects; and,
5) coordination of previously conducted mass transit and TOPICS study findings and recommendations in analyzing the impact of proposed land use changes on transit needs.

To accomplish these tasks, a series of investigative efforts were undertaken. Initially, the several general and technical reports published in connection with the Lackawanna-Luzerne Transportation Study (LLTS) were studied to gain familiarity with study procedures, findings and recommendations. Preliminary reports on the Wilkes-Barre TOPICS study and the Lackawanna-Luzerne Transit Technical Feasibility study were also obtained and reviewed. A series of preliminary engineering studies of the proposed Wyoming Valley Expressway (L.R. 1085) were obtained from Penn DOT and reviewed.

To supplement the literature review, meetings were held with officials of the Luzerne County Planning Commission and the Pennsylvania Department of Transportation familiar with the LLTS, its current status and proposed updating efforts.

Traffic volume information for major facilities in the Study Area was obtained from Penn DOT for 1971 and compared with 1964 volumes reported in the LLTS. Growth rates in daily traffic volumes (1964-1971) were quantified for a series of cut-lines and cordon lines. These findings were used to estimate the magnitude of capacity deficiencies (1971) in selected critical corridors and were beneficial in assessing the priorities of major street system improvements.

Trends in motor vehicle registration in Luzerne County were also analyzed and compared with projected ownership rates in the LLTS. Findings associated with this element of the study are considered critical to the explanation of recent traffic volume growth and may have a significant bearing on the types and detail of future updating study processes.

One major output of the comprehensive plan re-evaluation is a re-projection of population, housing and employment characteristics for both a short-range (1977) and a long-range (2000) period. Using these raw projections as a basis, a sketch plan to guide future development was prepared. Several of these parameters also appear as independent variables in the trip generation equations developed by the LLTS. Solutions of these equations, using projections of population and socio-economic characteristics to the year 1975 and 1990 served as a basis for quantifying future travel in the LLTS process.

To provide a basis for some objectivity in appraising the relationship of the adopted transportation plan to land use plans and policies recommended as a result of this study, a generalized comparison was made of the LLTS projections of population characteristics with those developed by this study. While these comparisons are in themselves not conclusive, they do establish a relative trip production potential for each analysis unit in the Study Area. Thus, generalized comparisons were made between trip-end projections (1990) as contained in the LLTS and the relative trip-generating potential associated with the new projections.

There are a number of proposed urban renewal projects in the Study Area and in several instances, selected streets within these project boundaries are among those listed in the LLTS to be improved. This study included a listing of these proposed street improvements; recommendations for pavement and right-of-way widths for these projects are presented herein.

The newly organized Luzerne County Transportation Authority, with the financial assistance of the office of Emergency Preparedness provided free bus service for several months immediately following the flood caused by Storm Agnes. This service proved vital to the maintenance of adequate communications in the post-flood Wyoming Valley. Transit riding tripled (from 10,000 to 30,000 passengers per day). Relocations of thousands of persons due to flood damage, destruction of private automobiles, severe traffic congestion created by bridge and street wash-outs, and the ''free'' nature of the transit service all probably contributed to this increased usage of the bus system.

To take maximum advantage of the potential permanent effects of the situation, the Luzerne County Transportation Authority has underway a 21-month demonstration project financed through the Urban Mass Transit Administration. This project offers the community a unique opportunity to strengthen the local transit system during the coming months. Specific elements of the project, and related street system improvements are discussed in subsequent portions of this report. Also a capital improvements project has been approved for 43 new busses, 37 bus shelters communications and shop equipment and 300 signs. The White and Wilkes-Barre bus companies are also proposed to be acquired by the authority.

THOROUGHFARE PLAN EVALUATION

One major task undertaken as a part of this study involved an appraisal of the relationship of the thoroughfare plan and its components to future land use plans and policies. This appraisal was made to determine the degree to which the thoroughfare system (existing and proposed) fulfills the street and highway needs of an expanding and shifting population.

Study Processes - The Lackawanna-Luzerne Transportation Study (LLTS) was undertaken in 1964 and completed in 1970. This very extensive and comprehensive study process was designed to:

1) measure existing (1964) transportation demands and needs;
2) relate existing trip-making to socio-economic and land use characteristics on a small unit basis;
3) project socio-economic and land use parameters for both a short-range (1975) and a long-range (1990) design year.
4) project trip-making and daily traffic to each of the design years;
5) formulate and test under future travel loadings; alternate thoroughfare systems;
6) define and detail a recommended thoroughfare network, adequate to accommodate projected (1990) travel demands; and,
7) establish priorities for these needs within financial limitations.

To carry out these study processes, the LLTS began with extensive dwelling unit and roadside interviews to measure trip-making and to relate travel demands to socio-economic and land use characteristics. Using high-speed digital computers, equations were developed which mathematically described the current trip generation rates and travel patterns unique to the Study Area.

The socioeconomic and land use parameters which influence trip-making and travel patterns were forecast to the design year (1990). The previously developed mathematical models were solved, using forecasted data, to yield future trip making and travel

patterns. These data were then used to test the proposed network's ability to accommodate future demands.

It is noted that the development of the trip generation and travel distribution models is a critical element of the transportation study process. Relationships between land use and socio-economic parameters and trip generation are established; the study process assumes that these relationships will remain relatively constant through the planning period. Thus, solutions of the equations using forecasted data serves as the basis for quantifying future trip generation and travel distribution, and is used extensively in identifying and quantifying street system deficiencies and in formulating and dimensioning the thoroughfare plan.

Consequently, the validity of the thoroughfare plan is directly influenced by the accuracy of the socio-economic and land use forecasts and by the degree to which the trip generation and travel distribution equations recreate existing conditions and predict future conditions.

The Thoroughfare Plan - Following the previously discussed procedures, the LLTS formulated and tested several alternate ''study'' networks. These alternates were appraised as to cost, system efficiency, network sufficiency and achievement of community goals and objectives. From these comparisons, a recommended plan was formulated, detailed and subsequently adopted.

The thoroughfare system for the Wyoming Valley consists of expressways, and arterial and collector streets. In scheme, it complements the pattern of urban development in the Valley and may be described as an elongated, radial circumferential network. The more densely developed core (Wilkes-Barre CBD) serves as the hub of the street pattern. The plan includes a considerable length of new expressways as well as some new arterial street construction and widening and other improvements to existing arterial and collector streets.

The expressway components are positioned to serve the major activity centers. Since existing and potential urban development is quite elongated, the expressway components tend to be concentrated ''along the Valley''; however, the Cross-Valley Expressway movements are provided for as well.

The total length of plan elements in the Luzerne County portion of the LLTS approximates 333 miles. As listed in Table 50, approximately 21 percent of the total mileage is classed as expressways, 41 percent is arterial and 38 percent is collector streets.

Table 50
THOROUGHFARE SYSTEM MILEAGE
Luzerne County Portion of LLTS

TYPE FACILITY	EXISTING SYSTEM Length (Miles)	EXISTING SYSTEM Percent of Total	ADOPTED PLAN Length (Miles)	ADOPTED PLAN Percent of Total
Expressway	17.1	6.4	70.1	21.0
Arterial	125.5	47.1	136.9	41.0
Collector	123.7	46.5	126.7	38.0
TOTAL	266.3	100.0	33.7	100.0

SOURCE: LLTS, Technical Report Number 7.

Cost and Priorities - Following final formulation and detailing of the recommended thoroughfare plan, the numerous improvements were arranged in priority order and the cost of implementing the plan was estimated. Two major expressway projects were listed as committed facilities-the Nanticoke Connector, which has since been constructed and is open to traffic, and the Valley section of the Cross-Valley Expressway. These committed projects were estimated to cost $42.8 million.

Several projects were assigned a high priority. As listed in Table 51, the total cost of this category of projects in Luzerne County was estimated to be $86.0 million. Expressway elements given a high priority included the initial stage of the northern section of the Wilkes-Barre Distributor and the Trucksville-Pringle section of the Cross-Valley Expressway. Arterial and collector street improvements assigned a high priority included:

Table 51
ESTIMATED COST OF IMPROVEMENTS
Luzerne County Portion of LLTS

Priority	COST (in millions) Expressways	Arterials and Collectors	Total
Committed	$ 42.8	$ ---	$ 42.8
High	17.2	26.0	43.2
Medium	18.4	25.6	44.0
Low	5.0	64.8	69.8
Deferred	---	---	---
TOTALS	$ 83.4	$ 116.4	$ 149.8

SOURCE: LLTS, Technical Report Number 7.

- Carverton Road in Kingston Township
- PA 309 in Wright, Fairview and Hanover Townships
- River Street in Wilkes-Barre from LR 1052 to South Street
- North Street in Wilkes-Barre
- PA 115 in Plains Township
- Pierce Street in Kingston Borough
- Yatesville Connector in Pittston Township and Yatesville Borough

Expressway projects assigned a medium priority were estimated to cost $78.4 million and arterial and collector street improvements in this category were estimated to cost $25.6 million. Low priority was assigned to expressway projects estimated to cost $15.0 million and to arterial and collector street projects expected to cost $64.8 million.

Status of Implementation - At this time, a few of the projects listed in the improvement program are either underway or rapidly approaching construction contract award. As previously mentioned, the Nanticoke connector has been constructed. A contract award for the placing of fill on a portion of the river section of the Cross-Valley Expressway was let in January of 1973 and right-of-way acquistion is nearing completion on the remainder of the western valley section of the Cross-Valley Expressway. Design of the new North Street Bridge has begun and preliminary engineering studies have been or are being conducted for North Street and River Street improvements in Wilkes-Barre, and for the initial section of the Downtown Distributor in Wilkes-Barre.

RECENT GROWTH TRENDS

To provide a basis for assessing the thoroughfare plans relationship to new forecasts of land use and socio-economic parameters, and to provide some measure of the applicability of the trip generation and distribution models developed from the 1964 origin-destination surveys, growth in traffic volumes was measured on a series of cut-line in various sections of the Valley. Also, motor vehicle registration trends in the County were assessed.

Traffic Volume - The cut-lines chosen for analysis are shown in Figure 18. The growth trend analysis utilized 1964 average daily traffic (ADT) as reported in the LLTS and 1971 ADT as reported by the Pennsylvania Department of Transportation. The cut-lines were chosen to represent a composite picture of growth

throughout the Valley; selected corridors were appraised to permit some objectivity in assessing the current priority ordering of improvement projects. The results of this analysis are summarized in Table 52.

A 1964 ADT of 98,000 was reported crossing the river between Nanticoke and Pittston (line A-1 to A-4). By 1971, the ADT on the river crossings had increased to 134,500. This represents an increase of some 37 percent during the seven-year period. The greatest corridor increase, numerically, occurred on segment A-2 to A-3-the Market Street-North Street corridor. A large rate increase (49 percent) was measured on line segment A-1 to A-2. The recent opening of the Nanticoke connector apparently contributed to this change. The total numerical increase in ADT on the river crossing amounted to 36,500 vehicles.

A series of cross valley cut-lines was established and growth rates computed. These cut-lines, B, E, and F, revealed traffic volume increases between 1964 and 1971 ranging from a low of 52 percent for a cross valley line near the northern County line (line segment F-1 to F-2) to a high of 65 percent for a cross-valley line near Nanticoke (line segment B-1 to B-2). Thus, travel ''along the Valley'' appears to be increasing at a greater rate than travel ''across the Valley''.

A cordon line was drawn around the central portion of the Study Area to provide a more composite picture of traffic volume growth. This line (G-1 to G-10) was segmented to facilitate corridor analyses in studying improvement priorities and deficiencies in the existing system. Traffic volumes on the entire cordon (G-1 to G-10) increased from 150,000 in 1964 to 199,400 in 1971, an increase of 32 percent. It is noted that this cordon was positioned to exclude travel along Interstate Route 81 and the Nanticoke Connector.

Line segment G-9 to G-10 (the PA 309 Corridor to Dallas) experienced the greatest rate of growth-70 percent. Growth rates on the several corridors ranged from this reported high to a low of 22 percent. Major increases were noted to the west (segment G-9 to G-10), to the southeast (segment G-5 to G-6), and to the southwest (segment G-7 to G-8). More moderate growth rates (22 to 25 percent) were reported in the remaining corridors.

Motor Vehicle Registration - The number of motor vehicles available to a particular household has been shown to be of particular significance to the frequency of trip-making. Accordingly, changes in motor vehicle registration, and more particularly in registered passenger vehicles per person, were analyzed. The

Table 52
SUMMARY OF TRAFFIC GROWTH TRENDS
1964-1971

Selected Cut-Lines

Cut-Line Segment(1)	1964(2) ADT	1971(3) ADT	Ratio 1971/1964
A-1 to A-2	27,400	40,900	1.49
A-2 to A-3	49,500	63,700	1.29
A-3 to A-4	21,100	29,900	1.42
A-1 to A-4	98,000	134,500	1.37
B-1 to B-2	46,300	76,300	1.65
C-1 to C-2	19,500	28,100	1.44
D-1 to D-2	19,000	21,600	1.14
E-1 to E-2	17,200	18,500	1.08
E-3 to E-4	26,400	48,600	1.84
E-1 to E-4	43,600	67,100	1.56
F-1 to F-2	39,600	60,100	1.52
G-1 to G-2	27,600	33,600	1.25
G-3 to G-4	40,200	49,500	1.23
G-4 to G-5	26,600	32,700	1.23
G-5 to G-6	21,900	34,000	1.55
G-7 to G-8	8,300	11,900	1.43
G-8 to G-9	4,000	4,900	1.33
G-9 to G-10	15,800	26,800	1.70
G-1 to G-10	150,900	199,400	1.32

(1) See Figure 18 for Location of cut-lines and segments.
(2) Source: Lackawanna-Luzerne Transportation Study.
(3) Source: Pennsylvania Department of Transportation, 1971 Traffic Volume map, Luzerne County.

1960 census reported a Luzerne County population of 346,972. For the same year, some 96,000 passenger cars were registered in the County. As shown in Table53 , this is a rate of .277 passenger cars per person. By 1970, the Luzerne County population had declined slightly to 342,301 while registration of passenger vehicles had increased to 148,309, yielding a rate of .433 passenger cars per person. It is noted that this is a significant increase in automobile ownership and that the ownership rate is slightly higher than the .421 projected for 1990 in the LLTS. This significant increase in the registration of passenger vehicles, coincident with stable population levels probably contributed to the rather large increase in traffic volumes previously discussed. A corresponding decrease in transit usage is noted and will be discussed in subsequent parts of this report.

Table 53
POPULATION AND PASSENGER CAR REGISTRATION
Luzerne County

Year	Population	Number of Passenger Cars	Cars per Person
1960	346,972	96,000	.277
1970	342,301	148,309	.433

SOURCE: Luzerne-Lackawanna Transportation Study

Implications of Growth Rates - A very substantial increase in traffic volume seems to have occurred between 1964 and 1971 in the Study Area, in spite of a relatively stable level of population. This growth in traffic volume is probably attributable to a significant increase in the number of registered passenger cars, and a decrease in transit usage. This trend is a cause of some concern, especially in regard to the ability of the models developed by LLTS to accurately predict trip generation. It is noted that equations were developed to predict the number of auto driver trip productions by trip purpose. A five-purpose model is used including home-based work, shopping, social-recreational, and miscellaneous, and non-home based travel. In one major instance, the number of cars owned does not appear as a variable in the equation. This purpose (work productions) accounted for a rather significant percentage of the total home-based travel in 1964. While the variables used in the equation (labor force, dwellings and income) may adequately predict trip making, this factor should be carefully weighed during the continuing study process.

CAPACITY DEFICIENCIES - SELECTED CORRIDORS

Street and highway improvement projects are necessarily

designed to accommodate future transportation demands. More importantly, such projects should be specifically oriented to the elimination of existing capacity deficiencies. The magnitude of street and highway needs in the Valley, estimated at more than $350 million by 1990, suggests that all available funds be expended in those corridors which display the greatest degree of existing congestion.

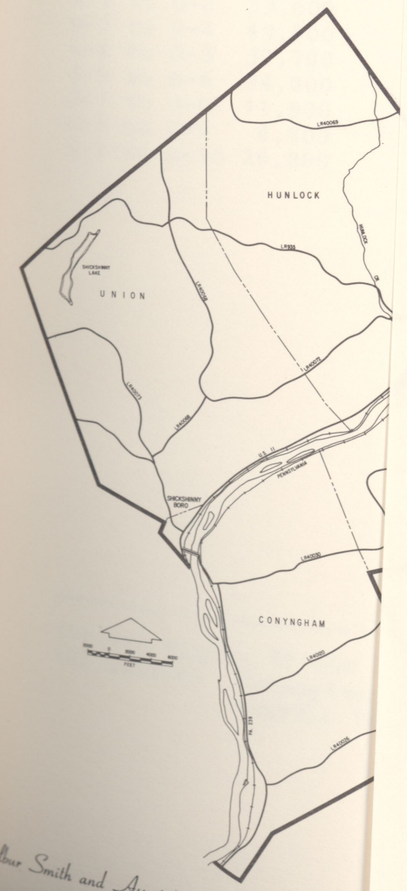
To provide a basis for appraising the current prior ties for street improvement projects, existing (1971) ADT was measured against street capacity in selected corridors. These corridors were selected to correlate with major improvements proposed in the LLTS. The results of these comparisons are listed in Table 54 for the several corridors analyzed. The locations of the cut-line segments are shown in Figure 18.

Serious capacity deficiencies (greater than 50 percent) are noted in two corridors. These are the Market Street-North Street river crossings in central Wilkes-Barre and the eastern approach to Wilkes-Barre from Interstate Route 81. Corridors with 1971 volumes in excess of capacity ranging from 25 to 50 percent include the PA Route 309 corridor in Courtdale, the Wyoming Avenue corridor in Forty Fort, the PA Route 309-River Road corridor to the northeast of Wilkes-Barre, and the corridor between Nanticoke and Wilkes-Barre.

The location and relative magnitude of existing capacity deficiencies echo the urgent need for two major expressway projects which have been listed as committed or high priority. These include the Valley section of the Cross-Valley Expressway and the Downtown Distributor in Wilkes-Barre. The need for additional river-crossing capacity in central Wilkes-Barre is also obvious; early completion of proposed improvements in the North Street corridor, including a new river bridge, extension eastwardly to Interstate Route 81, and improvements to Pierce Street from Wyoming Avenue to the river is urged.

Construction of the Cross-Valley Expressway can be expected to re-orient much of the travel to the Wilkes-Barre CBD. To accommodate these new travel patterns, the River Street project in Wilkes-Barre and Plains Township, previously listed with a deferred priority, should be considered as a high priority project.

The examination of existing capacity deficiencies tends to reinforce the high priority need for a number of arterial street improvement projects, as listed in the LLTS. These projects are located in the more congested north-south corridors and are essential to the proper functioning of the Cross-Valley Expressway and the Downtown Distributor.



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isting capacity deficiencies. The magnitude
needs in the Valley, estimated at more than
suggests that all available funds be ex-
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LOCATION OF CUT LINES

FIGURE 18

Wilbur Smith and Associates

Table 54
SUMMARY OF EXISTING CAPACITY DEFICIENCIES
SELECTED CORRIDORS

Cut-Line Segment(1)	1971 ADT(2)	Number of Traffic Lanes	Capacity (Vehicles per Day)	Ratio ADT/Cap
A-1 to A-2	40,900	8	44,000	0.93
A-2 to A-3	63,700	7	36,000	1.77
A-3 to A-4	29,900	8	32,000	0.93
C-1 to C-2	28,100	7	21,000	1.34
D-1 to D-2	21,600	6	18,000	1.20
E-1 to E-2	18,500	6	18,000	1.03
E-3 to E-4	48,600	10	42,000	1.16
F-1 to F-2	60,100	19	121,000	0.50
G-1 to G-2	33,600	9	30,000	1.12
G-3 to G-4	49,500	10	39,000	1.27
G-4 to G-5	32,700	6	18,000	1.82
G-5 to G-6	34,000	8	27,000	1.26
G-7 to G-8	11,900	4	12,000	0.99
G-8 to G-9	4,900	4	6,000	0.82
G-9 to G-10	26,800	6	21,000	1.28

(1) See Figure 18 for locations of cut-lines and segments.
(2) Source: Pennsylvania Department of Transportation, 1971 Traffic Volumes map, Luzerne County.

NEW LAND USE PLAN AND GROWTH PROJECTIONS

As previously discussed, a major part of the current study was the re-projection of population, housing, and employment characteristics and the preparation of a sketch plan to guide the anticipated development. These projections, and their impact on future travel demands and needs, are critical elements in the continuing transportation planning process.

The adopted thoroughfare plan is based, in part, on projections of future travel demands and needs. The magnitude and orientation of these future demands is a function of land use and socio-economic parameters which were forecast during the comprehensive transportation study process. This current study has produced new projections of socio-economic parameters; a comparison of these new projections with those developed for the LLTS was made to assess their relative impact on travel demands.

Population - The Luzerne County portion of the LLTS was subdivided into 49 traffic districts; and projections of trip generation parameters were prepared and listed for each of these districts. The LLTS population projections for the total 49 districts were for 288,089 by 1975 and 353,501 by 1990. Population projections resulting from this study, discussed in detail in other parts of this report, are for 260,549 in 1977 and 308,700 in the year 2000. The new projections for short-range growth (1977) are 9.6 percent less than the LLTS projections for 1975. The new long-range (2000) population projection is 12.6 percent less than the LLTS projection for 1990.

Differences in the two projections varied substantially from district to district. As listed in Table 55, the current population projection for the long-range period exceed those made for the LLTS by more than 50 percent for one district, by 25 to 50 percent for three districts, and by up to 25 percent for four other districts. The current long-range projections are less than the LLTS projections in 41 of the districts. (This pattern of variation between the two projections is also generally true for the short-range comparisons.)

Table 55
COMPARISON OF POPULATION PROJECTIONS
OF TRAFFIC DISTRICTS
LLTS and Current

Range of Difference in Projections (percent) (1)	Number of Traffic Districts	
	Short-Range Projections	Long-Range Projections
Greater than +50.0	1	1
+50.0 to +25.0	0	3
+24.9 to +0.0	11	4
+0.0 to -24.9	31	31
-25.0 to -49.9	5	9
-50.0 and greater	1	1

(1) Difference (percent) = $\frac{\text{(LLTS projection - Current projection)}}{\text{x 100 LLTS projection}}$

SOURCE: Luzerne=Lackawanna Transportation Study and Wilbur Smith and Associates.

Employment Projections - The LLTS reported a 1964 employment level in the Luzerne County portion of the Study Area of 98,181. Employment was projected to increase to 123,763 by 1975 and to 154,496 by 1990. The current study lists a 1971 employment of 105,634, an increase of about seven percent over 1964. This study projects a 1977 employment level of 111,255 and a year 2000 level of 124,275.

Overall differences in the two projections amount to 10.1 percent for the short-range period and 19.5 percent for the long-range period. In both instances, the new projections of employment are less than those reported in the LLTS.

Implications of the Growth Projections - Current projections of population and employment, two of the major independent variables which influence trip-making, are substantially less than those used to predict future travel in the LLTS. The difference between the two projections is not uniform throughout the area; current projections are higher in a few districts, and lower in most districts.

These major changes in the forecast of socioeconomic parameters, tend to somewhat offset the under-forecasting of automobile ownership discussed previously; however, it is concluded that a major re-evaluation of the thoroughfare plan is in order. This re-evaluation should attempt to:

1) re-project car ownership;
2) re-solve the trip generation equations for the design year (2000);

3) re-distribute trip-ends;
4) re-assign travel to the adopted thoroughfare plan using a capacity-restraint technique; and,
5) re-evaluate the sufficiency of the network.

It is also suggested that the equation used to predict auto-driver work trip productions be re-examined with a view toward ''forcing'' cars owned into the equation. This parameter may be more significant in predicting trip-making than income.

FUTURE LAND USE AND THE THOROUGHFARE PLAN NETWORK

The sketch plan prepared by this study to guide the future growth of the Wyoming Valley provides for a continuation and strengthening of the multi-nodal cluster pattern which exists. Major activity centers will include the Wilkes-Barre/Kingston core, Nanticoke, Pittston-West Pittston, Dallas, and Mountain Top. The existing thoroughfare plan is well suited, in scheme and pattern, to serve these areas. The primary activity center, Wilkes-Barre/Kingston, is well served by the proposed expressway system, including a complete expressway circumferential around the area. Expressways are also proposed to connect this primary urban center with other major activity centers such as Nanticoke, Pittston-West Pittston, and Dallas.

The thoroughfare plan is also well related to the smaller, more numerous neighborhood centers dispersed throughout the Valley. These centers are primarily residential and institutional in character; they will be highly dependent on the thoroughfare system for travel to work and shop, and for social-recreational travel.

The projected growth in employment is expected to occur primarily in the numerous industrial parks located throughout the Valley. These parks are generally well-related to the throughfare system; dispersal of this development along the Valley will take maximum advantage of the proposed expressway system. The spatial relationship of these employment centers and the residential neighborhoods should serve to keep travel times for work purposes to a minimum.

ANALYSIS OF ALTERNATE ALIGNMENTS - WYOMING VALLEY EXPRESSWAY (LR 1085)

One specific task undertaken as a part of this study was an evaluation of the proposed location of the Wyoming Valley Expressway (LR 1085). This proposed facility is a major element of the adopted thoroughfare plan. In scheme, it will provide for express ''along the Valley'' traffic movement west of the river and will provide two additional river crossings. Together with

Interstate Route 81, this facility would provide for circumferential freeway movement around the central part of the Valley.

As proposed, the Wyoming Valley Expressway would begin at an interchange with the proposed Central Valley Expressway at Yatesville. The expressway would run westwardly from this point and cross the river at Wintermoot Island. After passing between the communities of Wyoming and Exeter, the route would turn to the south, generally following the foot of the mountain slopes. Continuing south along the west side of the Valley, the route would pass through the communities of West Wyoming, Swoyersville, Luzerne, Pringle, Edwardsville and Larksville. South of its proposed interchange with Route 11, the route turns to the east and crosses the river at Richards Island. It then continues eastwardly through Hanover Township and Ashley, ending at an interchange with Interstate Route 81 at Mountain Top Highway (PA 309).

The topographic features of the west side of the Valley which influenced the urban growth will likewise influence and control the location of the Wyoming Valley Expressway. The selected corridor seems to be a compromise between extensive taking of developed properties and a more expensive, less serviceable alignment up on the mountain slopes. The selected corridor, except in Luzerne, Pringle, and to some extent in Hanover Township, tends to avoid the more densely developed neighborhoods.

In the communities of Pringle and Luzerne, the recommended alignment would require the acquisition of a number of dwelling units as it passes through a rather densely developed area. Compounding this problem is the necessity for a major interchange with the Cross-Valley Expressway in Pringle. These communities are quite small, and opposition to the selected route is based on a genuine concern regarding the significant reduction of land area of these communities and thus their tax base. These factors tend to reinforce the more traditional ''neighborhood'' opposition to the facility.

The Wyoming Valley Expressway will be a very expensive though vital element of the thoroughfare plan. Its final location must be a compromise which keeps costs to a minimum, provides for a high level of service, and causes minimum disruption to the communities it will serve. There appear to be few, if any, real alternates to the proposed alignment. In the immediate area of Pringle and Luzerne, one alternate which was considered during the preliminary investigation made by Penn DOT involved a more westerly location, somewhat up the mountain slopes. This alignment would pass through Courtdale and along the western edge of Luzerne Borough. This alternate alignment appears to

have some merit from the viewpoint of its effect on the immediate environment; however, it would be a great deal more costly and an adequate interchange with the Cross-Valley Expressway would be extremely difficult, if not impractical to provide. Such an alternate should not be discarded without detailed engineering, economic, and environmental impact investigations.

A more easterly alignment for this major facility was considered by this study. Such an alignment would generally follow along the Delaware, Lackawanna and Western Railroad from Exeter to Larksville. This alternate corridor was abandoned as it would obviously create a barrier through several neighborhoods; and have a severe negative impact on the environment.

It is noted that final decisions regarding the location of the proposed Wyoming Valley Expressway will be made following detailed environmental impact studies of the more obvious alternate alignments as required by the U. S. Department of Transportation for all Federal Aid projects. It is concluded that such studies should be undertaken following the availability of updated future traffic data; such data would be provided from the thoroughfare plan re-evaluation previously recommended. This sequence is of significant importance, as the updating process could result in a decision to change the basic concept of the proposed facility. The adopted plan calls for this facility to be constructed to expressway standards. Assignments of future (1990) traffic to the adopted plan indicates that some 20,000 vehicles would utilize the expressway in the more heavily traveled sections. Considering volume levels only, it would appear that the volume assigned to this facility is somewhat borderline insofar as expressway justification is concerned.

If, as a result of the plan re-evaluation, projected travel demands in this corridor should be significantly less than the level projected by the LLTS, other solutions should be considered. Such alternative solutions could include continuing with the basic alignment of the proposed facility while lowering its classification from expressway to major arterial status. If such an action were indicated, a lowering of project cost and a corresponding improvement in the cost-benefit relationship would exist.

SELECTED STREET IMPROVEMENT PROJECTS

Several urban renewal projects are planned in the Valley in response to the destruction caused by Storm Agnes. The projects may afford an opportunity to reserve rights-of-way for needed street improvement projects. Accordingly, a listing was prepared of improvement projects contained in the LLTS within the boundaries of the several urban renewal projects. Each of

these projects was reviewed in the field and compared with proposed acquisition maps as prepared by the redevelopment agencies. Also, conferences were held with Penn DOT and the Luzerne County Planning Commission to determine desirable street and right-of-way widths.

The several street improvement projects considered herein are listed in Table 56 along with the LLTS project number and priority. Also shown are the existing and proposed widths of pavement, right-of-way widths, and numbers of lanes.

River Street in Forty Fort and Kingston - This project involves both widening and new construction. Between Wyoming Avenue and Rutter Avenue, a 30-foot paved width exists on a 50-foot right-of-way. This street should be widened to a 52-foot paved width on a minimum 70-foot right-of-way. Efforts should be made to restrict the widening to the north or river side of this facility; the existing levee may preclude this action. The extension of this facility to Pierce Street will be through largely undeveloped areas. A good four-lane alignment is recommended.

Pierce Street in Kingston - This existing street has a paved width of 22 feet on a right-of-way of 60 feet. It should be widened to a four-lane roadway with additional left turn lanes at major intersections. Consideration should be given to providing a four-lane divided section with a minimum 16 foot median; left turn bays could then be constructed in the median divider. Preliminary studies of this needed improvement have been made by Penn DOT; the north side is reportedly favored for widening since this would permit a better alignment with the proposed new North Street Bridge.

Main Street and Northampton Streets in Kingston and Edwardsville - This facility has a paved width of 30 feet on a right-of-way of 50 feet. It should be widened to a paved width of 52 feet (4 lanes) on a minimum right-of-way of 70 feet. Field reconnaisance suggests that widening occur along the south side of this facility.

North Street in Wilkes-Barre - This 30-foot street (right-of-way 50 feet) should be widened to a minimum of 4 lanes plus turn lanes at major intersections. A four-lane divided section (68 feet curb to curb) is suggested. Preliminary studies by Penn DOT suggest widening along its north side.

River Street in Wilkes-Barre - This project has undergone preliminary studies by Penn-Dot which recommends a 42-foot paved section. If possible, this facility should be widened to a more adequate four-lane section (52 feet suggested).

Table 56

PROPOSED STREET CONSTRUCTION PROJECTS
IN URBAN RENEWAL PROJECTS

LLTS Project Number	Street Name	Segment Terminals From	To	Exist Paved Width	Exist No. of Lanes	Exist R-of-W Width	Proposed Paved Width	Proposed No. of Lanes	Proposed R-of-W Width	Remarks	LLTS Priority
24	River Street	Wyoming Avenue	Rutter Avenue	30	2	50	52	4	70-80	Widen Existing - No Parking	L
24	River Street	Rutter Avenue	URP Boundary	--	-	--	52	4	70-80	New Construction - No Parking	L
23	River Street	URP Boundary	Pierce Street	--	-	--	52	4	70-80	New Construction - No Parking	L
17	Pierce Street	Wyoming Avenue	Bridge over River	22	2	60	68	5	90-100	Widen on No. Side - No Parking	H
25	Main Street	Wyoming Avenue	Payne Street	30	2	50	52	4	70-80	Widen - No Parking	H
18	North Street	Main Street	Pennsylvania Avenue	30	2-3	50	68	5	90-100	Widen Existing So. Side - No Parking	H
14	River Street	North URP Boundary	South Street	30	2-3	50	44/52	4	60-70	Widen Existing - No Parking	H
13	Hazle Avenue	Dana Street	Columbus Street	34	2	50	52/68	4/5	70-90	Provides 4 Lanes w/Turn Lanes - No Pk.	H
12	Academy Street	Carey Street	Hazle Avenue	30	2	50	52/68	4/5	70-90	4 Lanes w/Turn Lanes - No Parking	H
11	Carey Street	Academy Street	St. Mary's Road	30-36	2	50-60	52/68	4/5	70-90	4 Lanes w/Turn Lanes - No Parking	H
10	Hanover Street	Carey Avenue	East URP Boundary	28	2	50	52/68	4/5	70-90	4 Lanes - No Parking	M
7	Main St. (Middle Road)	Division Street	Horton Street	18	2	50	40/52	3/4	60-70	4 Lanes - No Parking	L
5	Sans Souci Parkway	St. Mary's Road	South URP Boundary	50	4	80	68	5	90-100	Const. Median & Turn Lanes - No. Pk.	M
2	U.S. 11	South URP Boundary	Jeanette Street	--	-	--	30	2	50-90	Const. By-Pass Partial Access Con.	M
3	U.S. 11	Jeanette Street	North URP Boundary	40	4	58	68	5	90-100	Add Median & Turn Lanes - No Parking	M
1	U.S. 11	Mill Street	North URP Boundary	33	2	63	52/68	4/5	70-90	Widen to 4 Lanes (5 Desirable)	M
*10	Horton Street	Carey Avenue	East URP Boundary	28	2	50	52/68	4/5	70-90	4 Lanes w/Turn Lanes - No Parking	M

*Alternate to Hanover Street Project
Compiled by Wilbur Smith and Associates

SOURCE: Wilbur Smith and Associates

Hazle Avenue - Academy Street in Wil
two-lane facility exists on a right-of-wa
be widened to a minimum width of four lan
lane section to accommodate turn lanes wo
Field inspection suggests widening along
Dana Street and the railroad tracks and g
south side between the tracks and Carey A
at the intersection of Carey and Academy
on the north side at this intersection.

Carey Avenue in Wilkes-Barre and Hano
two-lane facility exists on a paved width
feet; right-of-way varies from 50 to 60 fe
adequate four-lane (52 feet) section is u
possible, a five-lane or four-lane divided
to curb) should be provided. Field reconn
widening along the east side from Fellows
Township to Horton Street in Wilkes-Barre.
and Academy Street, both sides of the stre
The side to be widened should be decided u
of property values and environmental impac

Hanover Street in Wilkes-Barre - This
be widened to a minimum width of 52 feet;
desirable. It appears more feasible to wi
of this facility.

Main Street in Wilkes-Barre - This two
commended for widening to a minimum three-
A four-lane section would be desirable. Wi
along the west side where necessary to prov

Sans Souci Parkway - This four-lane ro
for improvement to a four-lane divided sect
of a median divider and turn lanes will req
right-of-way; widening on the west side wil
at the Fellows Street intersection.

U.S. 11 in Nanticoke - This two-lane s
to a minimum width of 52 feet; a four-lane
feet) is desirable. Widening should occur
side of this facility to take advantage of
to acquire this property.

TRANSIT DEVELOPMENTS

Prior to June, 1972, all transit servic
urbanized area was provided by privately-own
two larger companies - Wilkes-Barre Transit

carried over 96 percent of all riders, and the three small suburban companies the remaining four percent, as shown in Table 57.

Transit riding in the Wilkes-Barre area, as throughout the United States, has dropped sharply over the past decade. Based on the figures for Wilkes-Barre Transit Company, the largest carrier in the area, transit riding declined by 44 percent from 4.9 million to 2.7 million between 1960 and 1971. Based on population served, this represents a drop from 24 to 14 transit rides per year per capita.

By adjusting miles and expenses to the reduced number of passengers, by increasing the fare and by disposing of capital assets, the company was able to remain financially solvent through 1971 and into 1972 until the flood in June. The company had, however, estimated that by early 1973 increasing labor and other costs would force it into the red, and had already initiated discussions with Luzerne County officials before the flood struck. Comparative operating results for selected years in the 1960-1971 period are shown in Table 58.

FLOOD EMERGENCY SERVICE

After the June 23, 1972 flood disaster, the Federal Office of Emergency Preparedness contracted with the two principal transit companies-Wilkes-Barre Transit and White Transit - to operate free bus service to meet the emergency situation and to serve temporary mobile home relocation areas provided for residents whose homes had been demolished or rendered unhabitable. Average weekday transit ridership rose to 24,000 during the period of free transit service. The emergency program terminated October 21, 1972.

Survey of Riders During Emergency - A comprehensive survey of the travel patterns and characteristics of the patrons of the bus service during the emergency free service period was conducted. The results of this survey are reported in demonstration project report Number 1, Free-Fare Transit Ridership, published in February 1973.(1)

Analyses of rider characteristics during this period indicated that about 12.5 percent of the riders were residing in temporary housing areas set up for homeless flood victims. These individuals represented six percent of the total population. Over 2,000 riders indicated that they had never used the bus prior to the flood.

(1) Free-Fare Transit Ridership, prepared for the Luzerne County Transportation Authority by Simpson and Curtin, Transportation Engineers, February, 1973.

Table 57

PASSENGERS CARRIED BY TRANSIT COMPANIES

WILKES-BARRE URBANIZED AREA

YEAR 1971

Company	Annual Revenue Passengers		
	Number	Percent	Cumulative Percent
Wilkes-Barre Transit Company	2,713,280	69.4	69.4
White Transit Company	1,060,500	27.1	96.5
Nanticoke Bus Company	75,200	1.9	98.4
Yatesville Bus Company	40,000	1.0	99.4
Williams Bus Company	22,500	0.6	100.0
TOTAL	3,912,280	100.0	
Population - urban areas	222,830		
Per capita transit riding	17.6		

SOURCE: Free-Fare Transit Ridership by Simpson and Curtin

Table 58

OPERATING RESULTS

WILKES-BARRE TRANSIT CO., INC.

SELECTED YEARS - 1960-1971

ITEM	1960	1965	1970	1971
Receipts				
Passenger	$1,177,974	$807,378	$ 900,334	$863,113
Other	47,867	38,242	97,242	106,355
Non-operating income - net	(-18,312)	(-8,603)	19,237	8,105
TOTAL	$1,207,502	$837,017	$1,016,812	$977,573
Expenses				
Operatures	$1,026,834	$649,257	$ 787,824	$794,480
Depreciation	43,286	35,466	41,775	45,636
Operating taxes	112,645	66,600	85,046	75,764
Interest	5,003	6,723	3,996	2,676
Income taxes	-0-	34,500	41,300	15,400
TOTAL	$1,187,768	$792,546	$ 959,941	$933,956
Net Income (loss)	$19,734	$44,471	$56,871	43,617
Net = % of gross	1.6	5.3	5.6	4.5
Revenue Passengers	4,887,556	3,093,758	2,925,458	2,713,284
Per Bus Mile	2.22	2.49	2.36	2.24
Bus Miles	2,202,919	1,242,324	1,241,675	1,212,992
Bus Hours	190,669	106,975	104,225	102,118
Average speed - m.p.h.	11.55	11.61	11.91	11.88
	77	45	54	54
Number of buses	140	95	95	95
One way miles of line	171	91	90	88
Number of employees			30.8	31.8
Average fare (cents)	24.1	26.1		

SOURCE: Free-Fare Transit Ridership.

About 83 percent of the
mobile, and 56 percent were f
under $5,000. Seventy-three

SERVICE BY TRANSPORTATION AUTH

In anticipation of the te
service, the Luzerne County Tr
ed by the Luzerne County Commi
into lease and management agre
Company and White Transit Comp
it, using buses and other faci
a cost reimbursement and manag
the Authority appointed an exp
Executive Director, and opened

Transit Demonstration Pro
Demonstration Project for Emerg
ed by the Luzerne County Transp
from the Urban Mass Transportat
of Transportation. The emergen
highly successful, providing ar
service over pre-flood levels,
from 11,500 to 24,000 daily tri
ject are to design and implemen
to normal service from emergenc

a) maximum retention of em
b) reduction of transit op
within state and local
c) assist in revitalizatio
business district and re

Fares during Transition - D
demonstration project it is prop
to the following timetable:

15 cent fare
25 cent fare

The ultimate 25 cent fare under
basic fare prevailing before the
charged by the Wilkes-Barre Tran

Initial Results - At the mi
figures for Wilkes-Barre Transit
a post-flood daily patronage of a
service period, riding initially
the first month under the 15-cent
about 18,000.

Income taxes				
TOTAL	$1,187,768	$792,546	$ 959,941	$933,956
Net Income (loss)	$19,734	$44,471	$56,871	43,617
Net = % of gross	1.6	5.3	5.6	4.5
Revenue Passengers	4,887,556	3,093,758	2,925,458	2,713,284
Per Bus Mile	2.22	2.49	2.36	2.24
Bus Miles	2,202,919	1,242,324	1,241,675	1,212,992
Bus Hours	190,669	106,975	104,225	102,118
Average speed - m.p.h.	11.55	11.61	11.91	11.88
Number of buses	77	45	54	54
One way miles of line	140	95	95	95
Number of employees	171	91	90	88
Average fare (cents)	24.1	26.1	30.8	31.8

SOURCE: Free-Fare Transit Ridership.

About 83 percent of the transit riders did not own an automobile, and 56 percent were from family units with gross incomes under $5,000. Seventy-three percent of the riders were female.

SERVICE BY TRANSPORTATION AUTHORITY

In anticipation of the termination of the emergency free service, the Luzerne County Transportation Authority was established by the Luzerne County Commissioners. The Authority entered into lease and management agreements with Wilkes-Barre Transit Company and White Transit Company to operate transit service for it, using buses and other facilities owned by the companies, on a cost reimbursement and management fee basis. Early in December, the Authority appointed an experienced transit manager as its Executive Director, and opened an office in downtown Wilkes-Barre.

Transit Demonstration Project - In October, 1972 a Federal Demonstration Project for Emergency Transit Services was established by the Luzerne County Transportation Authority with a grant from the Urban Mass Transportation Administration of the Department of Transportation. The emergency free transit program had been highly successful, providing an increase of 80 percent in transit service over pre-flood levels, while ridership more than doubled from 11,500 to 24,000 daily trips. The objectives of the project are to design and implement a transition program to return to normal service from emergency status with

a) maximum retention of emergency-generated ridership;
b) reduction of transit operating deficits to a level within state and local financial capacity; and,
c) assist in revitalization of the Wilkes-Barre central business district and relieve traffic congestion.

Fares during Transition - Over the 21-month life of the demonstration project it is proposed to re-establish fares according to the following timetable:

15 cent fare	October 1972 - July 1973
25 cent fare	July 1973 - July 1974

The ultimate 25 cent fare under this schedule is 5-cents below the basic fare prevailing before the flood and 10-cents less than was charged by the Wilkes-Barre Transit Company.

Initial Results - At the mid-point of the 15 cent fare stage figures for Wilkes-Barre Transit operations indicate that from a post-flood daily patronage of about 24,000 during the free service period, riding initially decreased to 19,900 per day in the first month under the 15-cent fare charge, and stabilized at about 18,000.

The transition back to a fare basis is to be accompanied by improvements, including 43 new buses, 37 bus shelters, 300 bus stop signs, improved public schedules, and an extensive marketing and ride promotion effort. To measure the effectiveness of the program an origin-destination survey of passengers during the free period was taken. A Master Plan for the Demonstration Project, including routes, schedules, service improvements, and marketing, is an integral part of the program.

At the end of the demonstration project, the transit system will be redesigned for permanent service providing sufficient farebox revenue so that the operating deficit is within state and local funding capacity.

During the term of the demonstration project the Luzerne County Transportation Authority will provide transit service as called for in the plan through a purchase-of-service agreement with each of the two bus companies. The Executive Director of the Authority acts as full time demonstration project director. The firm of Simpson and Curtin acts as consultants for the project.

Financing of Project - Funds for the financing of the demonstration project are received from the following sources:

Source	Amount	Percent
UMTA Demonstration Grant	$ 300,000	19.5
Pennsylvania Department of Transportation	500,000	32.6
HUD Model Cities	450,000	29.3
Office of Emergency Preparedness	285,000	18.6
Total	$1,535,000	100.0

First Capital Grant Application - A Capital Grant Application for 43 new buses and other capital expenditures related to the demonstration project was filed in November, 1972. This application does not cover the present purchase of the buses, garages, and other facilities of the bus companies now being used under purchase-of-service agreements. However, some of the older buses now being leased may be replaced by the new buses when delivered.

The Federal portion of the capital grant, in the amount of $1,426,068, was approved by the Secretary of Transportation on April 11, 1973, and includes in addition to the 43 buses, two spare bus engines, 45 registering-lock fare boxes, two air-conditioning compressors, 300 bus route signs and 37 bus shelters, a service truck, a base station and 49 two-way radio units, a bus washer and other garage and shop equipment.

TWO COUNTY TRANSIT SYSTEM PROPOSALS

Prior to the flood a transit development program was under way, looking towards a joint transit authority between Luzerne and Lackawanna Counties. This study was completed September 30, 1972.

The Scranton Transit Company discontinued service in November of 1971 and the community was without service for an extended period. Service has now been restored by Lackawanna County using leased buses operated under a management contract. The situation in respect to Luzerne County and the Wilkes-Barre area has been considerably altered as a result of developments after the flood. Service has started between Pittston and Scranton.

LUZERNE COUNTY CHARACTERISTICS AFFECTING TRANSIT

The Wilkes-Barre urbanized area of Luzerne County exhibits a number of characteristics favorable to transit service despite the increasing private car ownership characteristic of American cities. Wilkes-Barre City in particular, with its compact area (under 7 square miles) and relatively good density (almost 8,800 persons per square mile), and central business district strength and orientation, lends itself to good public transit operation. Growing CBD traffic congestion, arising both from central city attractions and through traffic due to lack of by-pass roads, points up the usefulness of mass transportation.

While the total Wilkes-Barre urbanized area, as defined by the Bureau of the Census, contains 222,800 persons in its 82 square miles, with a density of 2,701 persons per square mile, as shown in Table 59 has a relatively low overall density, many of the 23 separate boroughs have densities and compactness approaching that of Wilkes-Barre itself.

Private Car Availability - Almost 30 percent of the occupied housing units in Wilkes-Barre City were no-car households and only 18 percent had more than one car, according to the 1970 Census. There were 3.2 persons per car in Wilkes-Barre households, or expressed conversely, 30.9 cars per 100 persons. Corresponding figures for the whole of Luzerne County were 2.7 persons per car, or 36.8 cars per 100 persons. These are substantially below national averages. The statistics on car availability are shown in Table 60.

Table 59
DENSITY OF POPULATION
Wilkes-Barre Urbanized Area
1970 Census

PLACE	AREA (Square Miles)	POPULATION	DENSITY (Persons per square mile)
Wilkes-Barre City	6.7	58,856	8,784
Other south of river	49.5	81,719	1,651
Total south of river	56.2	140,575	2,501
Kingston Borough	2.3	18,325	7,967
Other north of river	24.3	63,530	2,631
Total north of river	26.3	82,255	3,127
Total urbanized areas	82.5	222,830	2,701

SOURCE: U.S. Census, 1970.

Table 60
PRIVATE CAR AVAILABILITY
Wilkes-Barre And Luzerne County

1970 Census

CAR AVAILABILITY	CITY OF WILKES-BARRE		LUZERNE COUNTY	
	Number	Percent	Number	Percent
No car	5,920	29.8	22,609	20.2
One car	10,272	51.7	57,916	51.9
Two cars	3,207	16.1	26,369	23.6
Three or more cars	475	2.4	4,800	4.3
Total	19,874	100.0	111,694	100.0
Total cars	18,206		126,014	
Persons per car	3.23		2.72	
Cars per 100 persons	30.93		36.81	

Source: 1970 Census.

The extensive improvements in transit in service and in fares which are being carried out in Luzerne County by local officials in cooperation with state and Federal agencies, these conditions indicate a good potential for increased transit attraction and usefulness.

ROUTE COVERAGE AND ALIGNMENT

Detailed examination of existing routes in relation to population and employment areas indicates acceptable transit coverage and reasonable alignment. Desirable transit routings to afford coverage and directness of lines has been considered in examining the street system. Certain present routes are operated to meet emergency disruptions of normal patterns of movement and are subject to modification as conditions change in the future. The 21-month demonstration program includes updating of routes to meet changing conditions.

TRAFFIC DISRUPTIONS TO TRANSIT

There has been close coordination between the demonstration project and transit authority and the current TOPICS traffic improvement program and it is expected that traffic measures in aid of transit will be fully taken into account. Except to a limited extent transit buses can move no more freely than all traffic. Accordingly by-pass roads around congested centers and general street improvements will also aid the movement of transit vehicles.

Alleviation of Traffic Congestion in Downtown Wilkes-Barre - The Federal grant contemplates that in Luzerne County the Transportation Authority, the City of Wilkes-Barre, the Wilkes-Barre Parking Authority, and the Luzerne County Board of Commissioners will take affirmative action to devise ways of reducing private car and truck congestion in the central business district by any means deemed appropriate, including, but not limited to

1. Adjustment of car parking rates and fees;
2. Adjustment of parking meter charges;
3. Reduction in permitted on-street parking;
4. Intensified enforcement of parking regulations;
5. TOPICS type intersection improvements; and,
6. Truck traffic regulations.

RECOMMENDATIONS

The action of the local authorities in Luzerne County during the flood emergency reflects a prompt and effective response to public needs in the community. The follow-up of Luzerne County

officials in establishing a Transit Authority, employing an experienced manager and staff, and in cooperation with Pennsylvania state and Federal agencies, taking the necessary steps to keep the transit service operating and improving it, reflects a continuing program to assure an effective public transport service which will effectively meet the needs of the urbanized area for a realistic alternative to private car use.

It is recommended that the County authorities (a) continue their present programs to sustain and improve public transit and develop greater use of it; (b) continue the present Demonstration Program in an effort to retain transit riding while establishing a rational level of service and fares which will be within the financial ability of the local government to defray; and (c) develop financial and operating plans for the Authority to acquire ownership of all transit properties over a reasonable period of time, with continuance of contract management. The transit operating standards prescribed by the Pennsylvania Department of Transportation[2] offer practical guidance in the development of a sound transit system as well as eligibility for Commonwealth financial assistance.

Luzerne and Lackawanna Counties Regional Transport - While both counties have had to act promptly to meet the separate problems which confronted each in the past two years - the flood emergency in Luzerne County which accelerated the financial problems of transit, the restoration of transit service which had been discontinued in Lackawanna County, and the close proximity and emerging regional character of the two counties suggest the desirability of pursuing the studies already under way[3] looking toward the establishment of a bi-county regional public transit system.

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(2) Operating Guidelines and Standards for the Mass Transportation Assistance Program of the Commonwealth of Pennsylvania, Department of Transportation, January, 1973.

(3) Transit Development Program for Lackawanna and Luzerne Counties by Bellante, Clair, Miller & Nolan, and Gannett, Fleming, Coddry & Carpenter, September, 1972.

CHAPTER 8

GOVERNMENTAL ORGANIZATION

INTRODUCTION

Special consideration has been given to the unique governmental picture which exists in the Wyoming Valley, See Figures. An unusually large number of municipal governments have their own elected officials and appointive officers, and have rendered urban type services, levied taxes, and otherwise functioned as fiscal regulatory bodies. The fact that these municipalities have functioned independently within so small and densely populated an area and have done so within the legal limits of one county presents an unusual situation for study, (Table 61.

STATISTICAL COMPARISONS

An overall statistical comparison performed by a compilation of the 1970 financial statements presented by the various municipalities in the area with certain interpolations for missing information has been reduced to tabular form with totals by greater community areas. Table 62 reveals a total revenues from property taxes for the year of approximately $7,000,000. Total revenue from all sources listed by the same method was approximately $9,300,000.

PER CAPITA COSTS FOR SERVICES

On a per capita basis, these figures indicate total tax revenue per capita of $27.00 and a total of all revenue collected per capita of approximately $36.00. These figures compared to the published state summary for 1966 show that statewide revenue from property taxes amounted to $45.60 per capita and the amount from the total revenues amounted to $73.50 per capita.

SELECTED SERVICES

Certain key expenditures for selected services have been singled out for overall comparison and utilizing the above mentioned budget figures as the source of information, total expenditure for certain selected services for all 45 municipalities in the Valley was found to be as follows:

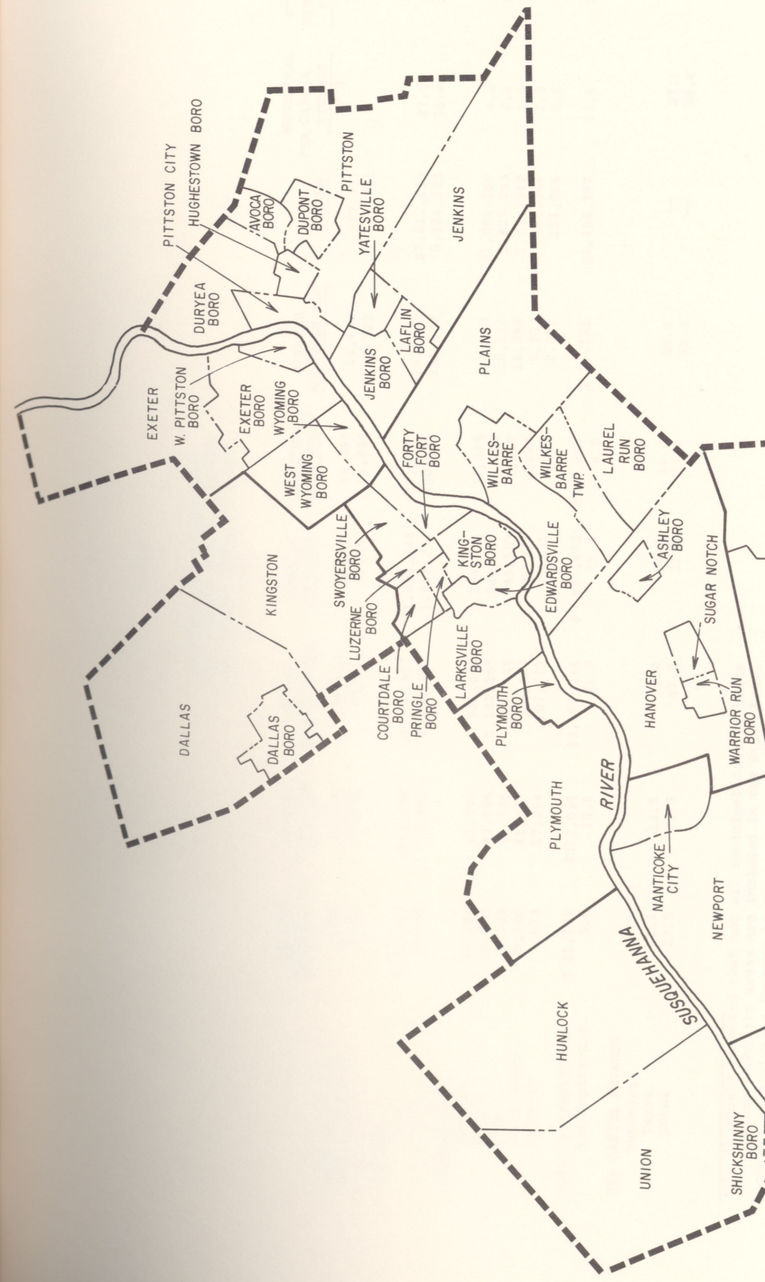
General Government	$1,066,258
Police	1,671,733
Fire	1,069,362
Solid Waste	585,368

Table 61

WYOMING VALLEY MUNICIPAL STRUCTURE

	1970 POPULATION	LAND AREA SQUARE MILES	POPULATION DENSITY PERSON PER SQUARE MILES	TAX VALUATION $MILLIONS	DATE OF INCORPORATION
WEST SIDE					
GREATER PITTSTON AREA					
West Pittston Boro	7,074	.95	7,446	$ 7.92	1857
Exeter Boro	4,670	5.40	865	6.21	1884
West Wyoming Boro	3,659	3.36	1,089	3.90	1898
Wyoming Boro	4,195	1.58	2,655	5.53	1885
Exeter TWP	1,869	12.10	154	1.72	1790
Sub-total	21,467	23.39	918	25.28	
GREATER BACK MOUNTAIN AREA					
Dallas Boro	2,398	2.26	1,061	$3.69	1879
Dallas TWP	5,747	21.28	270	7.63	1817
Kingston TWP	6,196	15.50	400	6.52	1790
Sub-total	14,341	39.04	367	17.84	
GREATER SHICKSHINNY AREA					
Shickshinny Boro	1,685	.63	2,674	$1.21	1861
Hunlock TWP	1,744	20.46	82	1.59	1877
Union TWP	1,219	17.32	78	1.32	1813
Sub-total	4,648	38.41	120	4.12	
GREATER NANTICOKE AREA					1768
Plymouth TWP	2,614	14.18	184	$2.26	
Sub-total	2,614	14.18	184	2.26	
GREATER WILKES-BARRE AREA					
Courtdale Boro	1,027	.95	1,081	$ .75	1897
Luzerne Boro	4,504	.66	6,824	3.26	1882
Pringle Boro	1,155	.52	2,221	.95	1914
Larksville Boro	3,937	4.73	832	2.72	1909
Edwardsville Boro	5,633	1.15	4,898	6.45	1884
Kingston Boro	18,325	2.23	8,217	25.34	1857
Swoyersville Boro	6,786	1.06	6,402	5.21	1888
Forty Fort Boro	6,114	1.39	4,399	7.52	1887
Plymouth Boro	9,536	1.42	6,716	7.08	1866
Sub-total	57,017	14.11	4,041	59.28	
WEST SIDE TOTAL	100,087	129.13	775	$108.78	
EAST SIDE					
GREATER PITTSTON AREA					
Hughestown Boro	1,407	.83	1,695	$ 1.38	1879
Pittston City	11,113	1.70	6,538	8.99	1894
Yatesville Boro	407	.74	550	.48	1878
Duryea Boro	5,264	5.89	894	4.44	1891
Dupont Boro	3,431	1.60	2,144	2.64	1917
Avoca Boro	3,543	.98	3,615	2.32	1889
Laflin Boro	399	1.22	327	1.05	1889
Pittston TWP	3,564	15.09	236	4.02	1768
Jenkins TWP	3,252	15.10	215	4.30	1852
Sub-total	32,380	43.15	750	29.62	
GREATER MOUNTAIN TOP AREA					
Nuangola Boro	464	1.23	377	$ 1.17	1908
Rice TWP	941	12.79	74	1.13	1928
Fairview TWP	2,658	9.32	285	3.86	1889
Wright TWP	3,179	16.86	88	9.08	1851
Sub-total	7,242	40.20	180	15.24	
GREATER SHICKSHINNY AREA					1875
Conyngham TWP	1,693	17.99	94	$ 1.55	
Sub-total	1,693	17.99	94	1.55	
GREATER NANTICOKE AREA					1871
Nanticoke City	14,632	3.28	4,463	$10.68	1790
Newport TWP	6,002	15.51	387	4.37	
Sub-total	20,634	18.79	1,098	15.05	
GREATER WILKES-BARRE AREA					1871
Wilkes Barre City	58,856	6.68	8,812	$66.56	1867
Sugar Notch Boro	1,333	1.04	1,282	.78	1870
Ashley Boro	4,095	.97	4,222	2.91	1881
Laurel Run Boro	327	6.26	52	.35	1851
Plains TWP	11,481	13.72	837	13.65	1790
Wilkes-Barre TWP	3,535	2.92	1,211	3.74	1790
Hanover TWP	12,102	19.05	635	12.32	1895
Warrior Run Boro	816	.71	1,149	.41	
Sub-total	92,545	51.35	1,802	100.72	
EAST SIDE TOTAL	154,494	171.48	901	$162.18	
STUDY AREA TOTAL	254,581	300.61	845	$270.96	

SOURCE: Wilbur Smith and Associates



WYOMING VALLEY MUNICIPAL STRUCTURE

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Sub-total	32,380	43.15	750	29.62	
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Wright TWP	3,179	16.86	188	9.08	1851
Sub-total	7,242	40.20	180	15.24	
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Sub-total	1,693	17.99	94	1.55	
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Wilkes-Barre TWP	3,535	2.92	1,211	3.74	1851
Hanover TWP	12,102	19.05	635	12.32	1790
Warrior Run Boro	816	.71	1,149	.41	1790
Sub-total	92,545	51.35	1,802	100.72	1895
EAST SIDE TOTAL	154,494	171.48	901	$162.18	
STUDY AREA TOTAL	254,581	300.61	845	$270.96	

SOURCE: Wilbur Smith and Associates



WYOMING VALLEY MUNICIPALITIES

Wilbur Smith and Associates

FIGURE 19

Table 62

REVENUES AND EXPENDITURES
FOR SELECTED PUBLIC SERVICES
BY GREATER COMMUNITY AREAS
1972

	GREATER SHICKSHINNY	GREATER NANTICOKE	GREATER WILKES-BARRE	GREATER PITTSTON	GREATER BACK MTN.(1)	GREATER MOUNTAIN TOP	TOTALS	MUNICIPAL PER CAPITA FIGURES 1970	STATEWIDE PER CAPITA FIGURES 1966
Population 1960	6,487	25,467	160,442	54,400	12,089	14,472	263,357		
Population 1970	6,313	23,248	149,568	53,847	14,856	7,242	255,074		
REVENUE	$ 71,679	$430,739	$4,754,915	$1,291,344	$271,237	$192,607	$7,012,620	27.5	45.6
Taxes	138,876	703,851	6,169,001	1,687,231	350,631	234,633	9,284,223	36.4	73.5
Total									
EXPENDITURES									
Gen. Gov't.	15,799	61,996	701,049	228,031	37,515	21,868	$1,066,258	4.2	6.3
Police	10,029	92,996	1,182,265	282,522	75,145	28,888	1,621,733	6.4	11.1
Fire	5,259	94,225	862,446	89,507	1,619	16,286	1,069,342	4.2	4.3
Solid Waste	3,508	45,625	329,327	202,271	2,885	1,752	585,368	2.3	3.5
Interest	879	17,294	107,127	25,131	1,328	2,327	154,084	0.6	2.9
TOTAL EXPENDITURES	$ 35,474	$312,024	$3,182,214	$ 827,462	$118,492	$ 71,121	$4,496,787	17.6	28.1
Per Capita-Exp.	5.6	13.4	21.3	15.4	8.0				
PER CAPITA REVENUE									
Municipal	11.4	18.5	31.8	24.0	18.3	26.6	--	27.5	
Taxes	22.0	30.3	41.2	31.3	23.6	32.4	--	36.4	
Total									

(1) It should be noted that not all municipalities in these greater community areas are included in the Study Area.

SOURCE: Pennsylvania Economy League.
Interviews with local municipalities.

COMPILED BY: Wilbur Smith and Associates.

It should be noted, however, that these figures do not represent a realistic estimate of cost for providing these services, since so many of the municipalities render varying degrees of service. For instance, in many of the municipalities, fire service is provided by volunteer fire departments which generally are unpaid. The solid waste expenditure is also unrealistic since in many of the boroughs, service is provided by private enterprise. However, since the same conditions exist, to a greater or lesser degree statewide, these figures are considered useful for an overall comparison with statewide cost per capita.

The above figures indicate that total cost per capita for the area services rendered are no greater on the average, and, in some cases, are much less than the expenditure statewide. The figures presented do not reflect the level of service in each, which is, of course, essential if an accurate comparison of cost is to be made.

MULTIPLICITY OF SERVICE

The brief review possible under the time limits of this study of the multiplicity of governmental services being rendered individually by 45 separate municipalities reveals many areas where the decision-making processes, the organization for decision-making, and the financing of programs and improvements could, without doubt, be carried on more efficiently and economically through some consolidation of public service efforts.

CONSOLIDATION OF MUNICIPAL SERVICE

As one concrete example of the fact that consolidation of effort can be more economical, the 45 municipalities in the Valley now utilize only five landfill areas for disposal of solid waste. These are (1) the Eastside Sanitary Landfill in Plains Township utilized by 21 municipalities (2) the Westside Sanitary Landfill located in Larksville Borough utilized by 21 municipalities, (3) the Nanticoke Sanitary Landfill located in Newport Township utilized by four municipalities, (4) the Jenkins Township Sanitary Landfill located in Jenkins Township used by three municipalities, and, (5) the Exeter Borough Landfill located in and utilized by the residents of Exeter Borough, Exeter Township, and West Pittston Borough. Thus, we see that all 45 of the municipalities have arranged through one method or another to consolidate their sanitary landfill into five major areas.

If all 45 municipalities had attempted to operate individually, the cost to each would have been a minimum of $10,000 to $12,000

dollars per year or $450,000 to $540,000 combined, for operating costs alone, excluding any debt amortization cost, since each individual area would require a minimum of one full-time operator and one adequate piece of landfill equipment.

The annual operating cost for a Luzerne Countywide landfill operation consisting of a minimum of three landfill sites has been projected by solid waste consultants for Luzerne County, to be $194,000 per year, exclusive of land or debt amortization.*

Another example of areawide solution to a common problem is found in the matter of sewage collection and treatment. In 1962, when the Luzerne County Planning Commission prepared its excellent work entitled, ''Sewage Report of Luzerne County'', the report revealed that an order had been issued in 1950 by the Sanitary Water Board of the Pennsylvania Department of Health, requiring all municipalities in the Wyoming Valley, which were sewered at that time, to treat their sewage waste water before emptying it into the Susquehanna River.

In spite of the order of 1950, by 1962 not one of the 14 municipalities receiving the 1950 order had constructed individual sewage treatment facilities.

JOINT AUTHORITY

Fourteen communities in the Valley, including the City of Wilkes-Barre, rather than attempting to build individual treatment facilities, in 1962 formed a joint authority to construct and maintain one sewage treatment facility, interceptors and pumping stations. This Authority is composed of the following members with representation as listed below.

COMMUNITY	REPRESENTATIVES	COMMUNITY	REPRESENTATIVES
Pittston City	1	Township of Jenkins	1
Borough of West Pittston	1	Borough of Edwardsville	1
Borough of Exeter	1	Borough of Plymouth	1
Borough of Wyoming	1	City of Wilkes-Barre	5
Borough of Swoyersville	1	Township of Hanover	1
Borough of Forty Fort	1	Borough of Nanticoke	2
Borough of Kingston	2	Township of Plains	1

* Solid Waste Study-Luzerne County, Roy F. Weston & Associates, 1972.

In 1969, the Wyoming Valley Sanitary Authority completed its system and began treating the sanitary sewage from its members and customers.

Thus, what had originally been an individual municipality problem was delegated to a Valleywide authority due to the size and complexity of the undertaking.

There is every indication that the identification of other common problems, needs and interests, and with the desire to seek solutions cooperatively, other areas of joint effort will become apparent and the necessary resources assembled and applied to achieve the solutions to the problems at hand. The problems and the means for their most effective and economic solution may be common to a number of the municipalities in the Valley because of their physical proximity. Other solutions may logically involve only two or more neighboring units of government.

PROTECTION OF CITIZEN RIGHTS

However, in the conduct of the public business through established units of government, it is logical and necessary that no resource be committed without some corresponding benefit and protection to the citizens of that government. If two or more units elect to perform some task, or provide some service or facility through joint action, then the benefits and protection of rights of all concerned should be no less than if each unit individually performed the undertaking.

SPECIAL PURPOSE DISTRICTS

Performance of the governmental functions by general purpose governments is usually to be preferred to their performance by special purpose agencies. Where special agencies or districts appear to offer the most advantageous arrangement, care must be taken to insure that their structure and direction are sensitive to and consistent with the other programs, policies, and needs of the area and its governments.

Therefore, although a solid waste or sanitary sewer authority may prove to be the only practical way to obtain area cooperation for a given public service, such authorities are generally not as responsive to the local municipal or county government.

ACCOUNTABILITY TO VOTING PUBLIC

Any governmental unit, agency, or authority administering

a governmental function should be readily and fully accountable to its citizens for its performance.

Where a community of interests exists, common governmental functions and programs to meet common needs should be performed at the highest possible level of government consistent with the economy, effectiveness and accountability of that governmental unit. No joint or cooperative undertaking should weaken the integrity and identity of local government.

LEGAL AUTHORITY

Pennsylvania cities, boroughs, townships, and to a considerable extent counties, have been granted broad powers to enter into joint undertakings whenever simplicity, economy, efficiency, and resultant benefits may be achieved. Particular functions may be performed jointly by one unit under contract with another, by creation of special municipal authorities, and by other means. There are prescribed legal requirements which must be satisfied, but the key point is that the citizens of local government are granted freedom to organize in virtually whatever government form they may wish for the performance of whatever governmental functions are desired under the proposed Home Rule provisions. Additionally, under certain conditions, Valley residents may select and secure authorization for a unique form specially tailored to their needs.

CITIZEN DETERMINATION

A detailed investigation and research is necessary before final recommendations can be made as to what form of organization might be most appropriate for the Wyoming Valley.

Supreme Court Justice, William Douglas has stated that ''Our machinery of government is nothing more or less than the instrument by which the citizens can bring their will into action''.

A determination of the type and degree of cooperative-action by each municipal government in the Wyoming Valley should be made by the citizens of the Valley themselves through their duly elected officials and only after a full identification of the problems has been made.

STUDY OBSERVATIONS

However, the findings of this analysis do point to the necessity for some degree and type of cooperative action throughout the Valley if governmental needs of the area are to be met.

Fragmentation Versus Consolidation - The citizens of the Wyoming Valley, through adherence to their small units of local governments may have exhibited great insight into the basic needs of municipal government. For example, many of the larger, more complex urban centers in the United States now operating under one government, have, during the last decade, begun to adopt so-called "innovative" methods. Neighborhood City Halls, precinct headquarters and block captains have been encouraged by the local governments in an attempt to establish "communication with the electorate" and to insure that the "decision-making processes of government" are made closer and more responsive to the needs and wishes of the citizens and voters.

The citizens of Wyoming Valley, through their historic adherence to the small and ''unworkable'' units of local government handed down to them from the earliest beginnings of our country; and subsequent periods of the mine-owner landlords have preserved one of the area's most unique assets - the sense of neighborhood closeness so lacking in many of our larger metropolitan areas today.

Unwavering support of one's home neighborhood, however, as laudable as it may be, is often accompanied by an equally unwavering distrust of and resistance to any change in the status quo. And, it is here that the danger lies, since blind resistance to change is often accompanied by too restrictive a concept of the true needs of the whole.

For just as there are many valid reasons which can be given for maintaining the present concept of the small (neighborhood) governments present in the Valley, there are many if not more reasons which can be given for abolishing old sectional jealousies and pulling together for the common good of the entire Valley. The attraction of new and worthwhile industry for example demands Valleywide effort, not a neighborhood tug-of-war.

Visible Signs of One Valley - Even the casual, visitor, by air or auto, to the outskirts of Wyoming Valley cannot help but recognize the closeness of dwellings and apparent interdependence of each person (in the Valley) on everyone else in the Valley.
true if the first visit is made at night, when electric lights dot the Valley from end to end in a continuous pattern revealing no distinction between borough, city,

and township lines. At such a viewing, even the river itself is no longer a recognizable barrier dividing valley dwellers.

A combination of effort for the good of the whole valley from an economic development standpoint, would make considerable sense even if municipal services were not at stake. However, the high population densities and relatively small land areas make the joint performance of many municipal services an absolute necessity. Services such as police protection, fire protection, garbage collection and disposal, water distribution and sanitary sewage collection and treatment, street maintenance, parks and recreation, code enforcement, and flood control, are becoming more and more a necessity for the health and welfare of the people in the Valley. It is, therefore, apparent that some type of cooperative public service and intergovernmental cooperation is not only desirable but actually essential to the future well-being of the Valley.

Examples of Governmental Cooperation - There are many examples to be found in other areas of the country of successful solutions to problems similar to those in the Wyoming Valley.

It should be recognized that one's government is a very personal matter and that its form will ultimately be what its people wish it to be. If certain units of government can satisfactorily perform one or more services in joint action and find that this advances their common interest, they may wish to examine the desirability of forming larger entities to represent them in governmental affairs.

On the other hand, if one or more of the examples of intergovernmental cooperation which have been tried and proven successful elsewhere should be found to meet with the approval of those in a position to be most knowledgeable of the Valley's needs, such a plan might be considered.

IDENTIFICATION OF COMMON PROBLEMS

Sufficient evidence has been produced in the course of this study to indicate that cooperative action involving, in one way or another, all the municipalities in the Valley, is not only desirable but necessary to meet current and emerging problems. Community leaders might join together to identify common problems and common interests, and explore the specific means by which these interests could be approached and solved.

With the help of outside technical assistance, local officials such as the Luzerne County Planning Commission and others of similar position can best fashion the organizational form which is most responsive, effective and representative in meeting citizen needs and aspirations.

Decisions can be reached as to whether a particular function or group of functions should be performed on an areawide or local basis. Having reached these determinations, investigations might appropriately answer such questions as (1) if areawide, what is the highest accountable general purpose government which can effectively and responsively perform that function, or (2) if local, what is the minimum level of government at which coordiantion of plans and resolution of conflicts can be achieved.

Contrary to popular opinion, consolidation is not the only means whereby municipalities existing within one metropolitan area or one county government may approach the problem of joint services for economy and efficiency. Several outstanding examples may be found in the United States where some type of cooperative effort through one or more legal governmental structures, has been found to work satisfactorily. One outstanding example of this type of governmental structure is to be found in the Dade County, Miami, Florida area.

In this example, Dade County exists as a strong county government, with elected representatives from each municipality in the county and a trained county administrator. The County renders urban-type services to the unincorporated areas of the county and, in addition, renders certain urban services to some 18 individual independent incorporated municipalities within the county. The municipalities in Dade County, (Miami) Florida retain their own individuality; each elects a major and city council; many retain services of a City Manager; all maintain a City Hall, courtroom, building official's office, and various other municipal functions. All, however, have representation on the Metro County government, and each delegates to the County government those services it feels can be best performed on an areawide basis more economically and efficiently.

COUNTYWIDE GOVERNMENTAL EVALUATION

In the case of Luzerne County and the 45 municipalities in the Wyoming Valley, considerable study is needed to determine the specific needs of each municipality and of the county as a whole and the best method of serving these needs. The Valley is fortunate in having only one county government since this considerably simplifies the implementation of any type of intergovernmental cooperation which is undertaken. This is also true of extension of some services and agreements into Lackawanna County.

Pennsylvania Economy League - The Valley is also fortunate in having an organization such as the Pennsylvania Economy League which is already well-staffed and has accumulated much of the type of detailed information necessary to the development of really practical concrete recommendations and alternatives for consideration by the appropriate governmental agencies. This organization could be most helpful in compiling an accurate inventory of municipal services and costs, and in defining needs and priorities, along with other agencies such as the Luzerne County Planning Commission and other appropriate organizations.

Municipal Services - The fact that all 45 of the Valley municipalities maintain some type of police department, fire department, public works department, solid waste collection and disposal service, and to a greater or lesser degree, some type of municipal office and staff, as well as five or more elective officials, is in itself indicative of the multiplicity of municipal communications and correspondence problems alone which exist in the Valley.

A general review of the various types of governmental services being rendered by the individual municipalities has been attempted during this study. Statistical information concerning the number of people employed in each category, the amount of equipment, the various costs of operation, and the plans for short-range capital improvements has been obtained from as many municipalities as possible. This information has revealed that even in the processes of accounting and reporting as required by Pennsylvania State Statutes, the prevailing practice is far from uniform or satisfactory.

Reporting Discrepancies - The fact that Pennsylvania requires each municipality to submit a budget at the beginning of each year and a financial statement for the year ending, is apparently not enough to guarantee uniformity or accuracy. Some municipalities submit only a budget statement at the beginning of each

year. Some submit only a financial statement for the end of the year, some submit both, and some submit neither, or if so, at very irregular intervals. The budgets and financial statements when submitted are sometimes incomplete, and therefore, inconclusive in serving as a tool for determining actual costs of various governmental functions in the rendering of various public services. Local governments should meet all government service requirements as prescribed by law; including the filling out and reporting of budget.

In the course of this study, an attempt was made to obtain sufficient financial information concerning each municipality to be able to determine certain key items of governmental operations data, such as tax evaluation and revenue from taxes, total revenue, and total expenditures and number of employees for police protection, fire protection, solid waste collection and disposal, general government, and interest on borrowed money.

Questionnaires were sent to each municipality in the Valley and personal interviews were held with staff members of over 50 percent of the municipalities maintaining municipal city halls and full-time staffs. The results of this inquiry, although admittedly inconclusive due to the inability to obtain all of the information desired, have been tabulated in Table 63.

As has been previously mentioned, these figures do not reveal, in so far as determinable from the information received, unusually high per capita cost for the services rendered by these various municipalities. As stated before, however, there are many indeterminate items such as level of service, number of personnel involved, inconsistencies in reporting, etc., which point up the need for much more detailed and accurate information and more in depth analysis before recommendations concerning any type of joint service function or intergovernmental cooperation could be finalized.

EXAMPLES OF DIFFERENCES IN LEVELS OF SERVICE AND METHOD OF REPORTING

Solid Waste Collection - The cost of solid waste collection and disposal shown by most mjnicipal budgets does not include the cost which the individual citizen pays for individual garbage collection service to private contract haulers. This item constitutes a major expenditure in the total cost of area solid waste collection and disposal which budgetwise is unaccounted for.

Some of the municipalities interviewed, for instance, perform their own collection service as a governmental function. Some contract with a private firm for service to be rendered under a franchise arrangement whereby the individual contractor collects directly from each individual user of the service. On the other hand, some municipalities render no collection service at all, but rely completely on private enterprise to provide this service.

Solid Waste Disposal - In the matter of solid waste disposal, as is shown later under that section of this report, some amount of intergovernmental cooperation has already taken place through the formation of several landfill authorities. Here again, however, the cost to the municipality, as shown on the budget or financial report, only reflects those payments which the municipality might be required to make to the sanitary landfill authorities. In those instances when the authority collects independently from contract haulers, no budgetary expense is reflected.

(Municipally Owned) Fire Protection - Another example of multiplicity of method exists in the rendering of fire protection. Some of the municipalities under study maintain and operate their own fire departments and purchase their own equipment, provide their own fire stations and maintain full-time paid fire department personnel. Other municipalities rent the service from an adjoining municipality.

Some municipalities maintain their own fire stations and equipment but only pay the necessary full-time drivers, supplying both the fire chief and other fire fighters through the very excellent volunteer fire departments which are found throughout the Valley. Other municipalities are found to own one of the fire stations where two or more exist and one of the fire trucks where two or more exist. In such cases, the municipality may or may not employ any full-time paid personnel.

In other instances, the municipality owns neither station nor equipment and the entire protection service is rendered through one or more volunteer fire companies. These fire companies purchase their own equipment, provide their own fire stations, and render the service at no direct cost to the municipal government.

Ambulance Service - A similar situation exists in those municipalities which render ambulance service. Many of the fire departments maintain one or more ambulances and provide an ambulance service to the community and surrounding mutual aid

territory. Others depend completely on the volunteer fire departments to render this service. Some have both; some neither.

Sanitary Sewerage - Many of the municipalities maintain to a greater or lesser extent a system of sanitary sewers within the streets of the municipality. Some of these sewer systems are connected to a municipal authority interceptor sewer and disposal system but some are not connected, thereby discharging raw sewage directly into the Susquehanna River.

Those municipalities which do connect to a municipal sewer authority do not show a cost of individual sewage treatment on their financial statements other than the amount charged by the authority to the municipality. The individual customers who are connected house by house, generally pay directly to the municipal authority for sewerage service rather than to the municipality. However, in some instances where sewage treatment is not being rendered, no sewer service charge is collected.

Not all of the municipalities have sewer systems however; some are only partially served with sanitary sewerage and some have no sewer systems at all but depend on septic tanks. Many of the municipalities having sewer systems, or partially-sewered systems, have been ordered by the Commonwealth of Pennsylvania Department of Environmental Resources to stop discharging raw sewage into the river and to either connect to a treatment authority interceptor sewer or provide their own sewage treatment. In some instances, where on-site sewerage systems prevail, numerous septic tank malfunctions have resulted in orders being issued to these municipalities also.

The Commonwealth of Pennsylvania Department of Environmental Resources estimates that if all pending projects for sewer connection to the Wyoming Valley Sanitary Authority, plus those additional sewers needed in municipalities already partially connected, were to be completed, approximately fifty thousand more people would be served by sanitary sewers.

The total cost of these projects by the individual municipalities although by no means all-inclusive, is reported under Chapter II - Sewers - of this report at approximately thirty million dollars. Of this amount, approximately ten to thirteen million dollars might be reimbursed from federal funds of one type or another. The size and complexity of the work involved in supplying the sewerage needs of only ten or twelve of the municipalities, indicates clearly the necessity for having one governmental authority responsible for the planning and financing

of all sanitary sewerage transportation and treatment systems within the Wyoming Area.

Storm Drainage and Flood Control Responsibility - The storm drainage and flood control system is composed of levees, flood gates, pumping stations, creek improvements, and improving basins. There are 13 pumping stations and numerous gates and closure structures. The operation of the flood control gates and pumping stations, the maintenance and repair to the levees and pumping equipment, and the opening or closing of flood gates and closure structures are the responsibilities of each individual municipality in which the flood control facility happens to be located. A strong case can be made for placing the overall management and responsibility for the operation of these vital public safety facilities under the jurisdiction of one governmental agency such as Luzerne County.

The failure of just one pumping station, gate or closure structure to operate satisfactory at the time of a high river crest, could result in widespread flooding to many areas behind the levee.

The failure to maintain the design level of just one section of the earthen dikes could, in effect, be equal to a lowering of the entire levee in that area, since the water flowing into one low place will quickly flood the entire low area behind the dike.

At one project, the Swoyersville-Forty Fort Project, the flood gate structure controlling Abrahams Creek consists of 14 separate flood gates. These gates are manually operated from an elevated platform high above the diversion structure, and each gate must travel in guides which may become warped or clogged. Regular, systematic, periodic maintenance of all such flood devices is mandatory to insure protection to all. The importance of such facilities dictates that there should be no division of responsibility in the case of so vital a matter. Not only is it unwise to allow the flood protection responsibility to be split but the burden of cost of maintenance and repair should not fall completely on those municipalities which happen to be so situated as to be saddled with the cost. Adequate flood protection is a concern of all and the cost as well as responsibility for maintenance and operation should likewise be borne by all.

Table 63 which follows, lists all four flood control projects, giving dates of completion, years in service and annual and total operating costs to the municipalities through 1968.

Table 63
OPERATION AND MAINTENANCE
COSTS TO LOCAL GOVERNMENTS
FOR
FLOOD CONTROL PROJECTS

PROJECT NAME	Date of Completion	Years In Service	Annual Oper. and Maint.	Est. Local Cost To June '68
Kingston-Edwardsville	1943	25	18,000	379,000
Plymouth	1948	20	8,000	117,000
Wilkes-Barre/Hanover	1952	16	20,000	216,000
Swoyersville, Forty Fort	1957	11	13,000	283,000
			59,000	995,000

SOURCE: U.S. Army Corps of Engineers.
Northeast Flood Study, Susquehanna River, Review Report, Nov. 1970.

Luzerne County is already responsible for one of the four Flood Control projects, the Swoyersville-Forty Fort Project. No pumping stations happen to fall within this project. The other three are the Kingston-Edwardsville Project - maintained by those two boroughs and having three pumping stations; the Plymouth Project maintained by that borough and having two pumping stations; and the Wilkes-Barre and Hanover Project, having eight pumping stations which are maintained by the City of Wilkes-Barre and Hanover Township.

Single responsibility for maintenance and operation of all flood control projects would reduce the risk of flooding and distribute the responsibility. The logical unit of government to assume this responsibility would seem to be Luzerne County.

Minimum Office and Staffing Requirements - In order for municipalities to fulfill their traditional role as the government closest to the average citizen, and the one he depends on most for his day to day governmental needs, they must maintain certain minimum standards, such as a permanent office the citizen can find; a telephone number he can call; and a full time person that can answer that phone and respond intelligently. In addition, since the municipal government is given the power to tax, and the power to collect and spend public funds, it must maintain sufficient, up-to-date records of its financial transactions to enable the citizen to hold it accountable for its stewardship.

If elected municipal officials are to fulfill their obligation to the voters and provide honest, efficient government and high quality municipal services at the lowest possible cost, they must have the assistance of at least one full-time staff administrative person, with enough experience and education to carry out his instructions, perform the public works assignments necessary and enforce the municipal policies.

Many of the smaller boroughs and townships now attempting to operate as responsible municipalities in Luzerne County do not maintain permanent offices, or even full time telephone service. Many do not have the services of a full time accountant, clerk, or public works superintendent, for financial reasons. The cost of minimum requirements for office space, telephone, secretarial and administration alone would almost dictate a minimum size or a minimum annual revenue. Any municipality which is too small or too poor to equip itself properly to fulfill its public obligation should relinquish its charter, or merge with a neighboring municipality.

Since all municipalities are subdivisions of the State, only the State can legally prescribe minimum standards for municipal operation, and it si recommended that the State do so.

Public Safety - The area where local government can be of the greatest service to its citizens is in the provision of protection to life and property. Police and fire protection thus constitutes the major justification for the existence of many small municipalities.

Police Protection - All of the municipalities under this study have a person designated as police chief. However, several do not have either patrolmen or a police car. Some of the municipalities operate with auxiliary patrolmen, others use regular patrolmen, and some do not have either.

Forty-two of the 45 municipalities in the Study Area employ regular patrolmen. These have a total force counting the Chiefs of 395 full time men. These men kept order among a total population in 1972 of 250,734. This averages 1 patrolmen for each 635 people, a relatively low figure compared to antional averages. In fact, Wilkes-Barre with 58,590 people is only slightly better with one patrolman for each 610 people. On the other hand, leaving out Wilkes-Barre--which is felt to somewhat distort the picture due to its size--the remaining 41 municipalities employ 299 full-time patrolment who are responsible for the protection of 192,144 persons. These figures average out to a ratio of one patrolman for each 642 persons or 1.56 patrolmen per 1,000 people.

Questionnaires were sent to all 45 municipalities in the Study Area. Twenty-eight responded and/or were personally contacted. All of the 28 employ full time patrolmen. In addition, most use auxiliary police as well. Table 4 which follows, presents the tabulated results of these questionnaires. Excluding the City of Wilkes-Barre, Table 4 reflects a total of 182 full time patrolmen serving a population of 134,730. This is an average of one policeman for each 740 people, or 1.35 policemen per 1,000 population.

For years in the United States, one policeman per thousand people was considered an adequate strength. However, in the last decade, with the tremendous increase in crime, this ratio is no longer considered adequate. The International City Management Association lists 2.3 policemen per thousand people, as being the National average in 1970 for cities over 50,000, and many cities such as Philadelphia and Pittsburgh, to name two in Pennsylvania, now are staffing over 3 policemen per 1,000 people. Using the I.C.M.A. national average the 28 municipal respondents should have 124 more policemen.

Table 64 also indicates a compilation of patrol cars and auxiliary equipment. This shows a total of 49 patrol cars, for 219 full-time policemen, or an average of 4.5 policemen per car. Considering an 8-hour shift this amounts to approximately 1.5 on duty policemen per car, or 2.25 per car for a 12-hour shift.

Excluding Wilkes-Barre, the ratio is 3.6 policemen per car with 34 cars for 124 patrolmen. For an 8 hour shift this averages 1.22 per car. The 12-hour shift average is 1.82 on duty patrolmen per car.

An average taken from representative cities in Pennsylvania in the 50,000 population range equals 6 patrolmen per car. This ratio would work out to equal 3 policemen per car for a 12-hour shift or 2 policemnt per car for an 8-hour shift.

Budgetwise, Table 64 shows that the total police expenditures for the municipalities under review totaled $1,500,322 exclusive of Wilkes-Barre, for a per capita expenditure of $11.13. By comparison, the City of Wilkes-Barre plans to spend $1,201,383 in 1973 for a total of $20.50 per capita.

As has been previously pointed out, the figures presented should not be taken as conclusive, since there are many variables in the accounting practices, and reporting techniques which each municipality employs. However, the preliminary indications

Table 64
TABLE OF SELECTED SERVICES
FROM REPRESENTATIVE MUNICIPALITIES

Municipalities	1972 Population	POLICE DEPARTMENT Budget 1972	Budget 1973	Manpower F/T	Manpower P/T	Equipment	FIRE DEPARTMENT Manpower F/T	Manpower P/T	Equipment Cars	Ambulances	Ladders	Pumpers & Tankers	Budget 1972	Budget 1973
Ashley Boro	4,080	32,000	36,000	5		1		36		2		3	4,000	4,625
Avoca Boro	3,560	17,896	26,363	1	5	1						2	2,300	3,750
Courtdale Boro	1,060	5,000	5,116		5	1						2	1,030	1,240
Dallas Boro	3,240	39,530	42,700	3	6	1		40	2	1		3	1,068	1,068
Edwardsville Boro	5,620	48,985	51,000	5	4	1		207	2			2	34,143	37,500
Fairview Twp.	2,800	18,950	18,950					25				2	19,720**	19,720
Forty Fort Boro	6,080	92,125	83,536	6		1						2	55,850	16,125
Hanover Twp.	12,230	165,287	156,712	16		4	7	1				2	109,135	114,593
Hunlock Twp.	1,810	360	360										1,500	1,500
Kingston Boro	17,930	223,512	234,688	18		12		30						

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Ashley Boro	4,080	32,000	36,000	5		1	4,000	4,625		36				3
Avoca Boro	3,560	17,896	26,363	1	5	1	2,300	3,750				2		2
Courtdale Boro	1,060	5,000	5,116		5	1	1,030	1,240						2
Dallas Boro	3,240	39,530	42,700	3	6	1	1,068	1,068		40		1		3
Edwardsville Boro	5,620	48,985	51,000	5	4	1	34,143	37,500		207	2			2
Fairview Twp.	2,800	18,950	18,950				19,720**	19,720		25				2
Forty Fort Boro	6,080	92,125	83,536	6		1	55,850	16,125						2
Hanover Twp.	12,230	165,287	156,712	16		4	109,135	114,593	7	1				2
Hunlock Twp.	1,810	360	360				1,500	1,500		30				2
Kingston Boro	17,930	223,512	234,688	19	40	4	174,411	183,447	14	80	1	2		3
Kingston Twp.	6,760	48,600	55,785	7		2	Volunteer	2,474		50		1		1
Laflin Boro	470	3,840	6,840		5	1	2,474	2,474		50				2
Larksville Boro	3,900	30,600	32,130	4			23,040	24,192						2
Laurel Run Boro	360	250	250	1			1,500	1,500		51				
Luzerne Boro	4,420	39,960	40,728	5		1	4,070	4,143	1					6
Nanticoke City	14,560	147,203	177,185	13	7	3	117,900	118,650	17	186	1	1	1	3
Newport Twp.	5,790	44,351	47,500	6		2	27,810	28,500	3	30	1	1		1
Nuangola Boro	500	1,367*	1,367*				500*	500*		25				1
Pittston City	3,820	164,850	175,000			1	78,500	79,000	2	55			1	3
Plymouth Boro	9,340	96,150	94,450	12	3	2	27,475	27,220		151				3
Plymouth Twp.	2,610	5,000	8,000		3	1	5,000	8,000		52				2
Shickshinny Boro	1,680	7,460*	7,460*				2,094*	2,094*		30				2
Swoyersville Boro	6,840	42,456	44,579	4		1	7,470	7,844		70				5
Warrior Run Boro	820	2,800	3,500				Volunteer			31				1
W. Pittston Boro	7,030	67,400	68,100	7	6	2	6,225	4,565		301				2
W. Wyoming Boro	3,820	20,000	31,000	3	3	1	6,000	6,000		31		1		2
Wilkes-Barre City	58,590	1,076,400	1,201,385	95		15	1,204,635	1,402,586	101					9
Wilkes-Barre Twp.	3,600	62,323	61,025	7	3	3	37,500	41,400		Contract with Wilkes-Barre City				
TOTAL	193,320	2,504,655	2,701,707	219	90	49	1,955,650	2,391,610	145	1,532	8	13	7	69
PER CAPITA		12.96	13.97				10.12	12.37						

* 1970 figure
** 1973 figure used for 1972

Table 64 (Continued)

TABLE OF SELECTED SERVICES

FROM REPRESENTATIVE MUNICIPALITIES

Municipalities	1972 Population	SOLID WASTE Budget 1972	SOLID WASTE Budget 1973	SOLID WASTE Manpower F/T	SOLID WASTE Manpower P/T	SOLID WASTE Equipment	PUBLIC WORKS Budget 1972	PUBLIC WORKS Budget 1973	PUBLIC WORKS Manpower F/T	PUBLIC WORKS Manpower P/T	PUBLIC WORKS Equipment Trucks	PUBLIC WORKS Equipment Heavy Equip.
Ashley Boro	4,080			3	1				4		1	
Avoca Boro	3,560	18,750	18,750		Contract	1	5,250	15,600	1		1	
Courtdale Boro	1,060	4,339	4,767		3		4,000	5,000			1	
Dallas Boro	3,240				Contract	2	37,950	41,400	4		2	2
Edwardsville Boro	5,620	48,967	51,500	8	Contract						2	
Fairview Twp.	2,800						59,478**	59,478	9		3	
Forty Fort Boro	6,080	47,420	54,250	7		2	110,500	144,700	7	5	3	1
Hanover Twp.	12,230				Contract	3	133,547	108,561			9	
Hunolck Twp.	1,810	80,732	84,769	10	Contract							
Kingston Boro	17,930				1		188,747	198,184	29	3		1
Kingston Twp.	6,760	5,000	5,210		6	2	45,900	84,202		14	1	
Laflin Boro	470	17,671	18,555				8,878	6,878		6	2	
Larksville Boro	3,900						14,650	15,383				
Laurel Run Boro	360								18		2	
Luzerne Boro	4,420	3,000	3,000	9		3	35,495	31,700				
Nanticoke City	14,560	30,542	32,069			15			8	35	1	1
Newport Twp.	5,790	24,100	28,500	8			42,000	48,000				
Nuangola Boro	500	1,752*				6	6,888*					
Pittston City	3,820	44,450	45,000	21		2	88,100	124,000	6	2	3	
Plymouth Boro	9,340	21,500	43,400	3			53,300	73,300			3	2
Plymouth Twp.	2,610				Contract		51,400	73,000	6		3	
Shickshinny Boro	1,680											
Swoyersville Boro	6,840	18,400	19,320	5	5		23,600	24,780	20			
Warrior Run Boro	820	3,500	4,500		Contract		30,485	45,729	12			
W. Pittston Boro	7,030	9,500	9,500		Contract		59,200	59,100	6		4	2
W. Wyoming Boro	3,820	19,000	19,000			7	25,000	42,000	3	1	1	
Wilkes-Barre City	58,590	138,210	161,364	22	Contract		972,054	993,561	88			2
Wilkes-Barre Twp.	3,600	13,632	15,685				42,600	61,900	4		3	
TOTAL	193,320	550,465	619,139	74	16	43	2,039,022	2,256,456	225	66	45	10
PER CAPITA		3.36	3.79				12.09	13.25				

* 1970 figure
** 1973 figure used for 1972

of this brief study are that the various muni
providing a valuable Police Protection servic
citizenry for a minimum cost, and it is doubt
could be saved through any type of service re
municipalities joining together. No doubt, i
could be achieved by a pooling of manpower an
of some form of unified management, but any d
should be deferred until more complete inform
compiled and evaluated. In the suburban area
Top, some pooling of manpower is already bein
with the Pennsylvania Crime Commission and Co
with full time telephone service, and radios
length in police cars has also been accomplis
area.

The liabilities of a neighborhood-type p
low pay, lack of training, poor chance for ad
generally lower motivation factory making it
the best qualified men. However, the value t
having a neighborhood-type police force, mann
people who live in the community, and can be
of minutes, is undoubtedly important, perhaps
enough to offset the liabilities.

FIRE PROTECTION

The Wyoming Valley is most fortunate in
hundreds of public spirited citizens who are
their time and resources for the protection o
through service as volunteer fire fighters.
fire companies, often without pay of any kind
for the protection of others. In addition to
fighters, many of the volunteer companies also
and rescue services.

If each municipality now depending on vo
ments for fire protection should have to pay
firemen and stations and equipment, the annual
protection would become one of the largest ite
Even with volunteer firemen and equipment, the
spent each by the municipalities constitutes a
of the total public services budget.

Table 4, which presents budgets, manpower
28 representative municipalities in the Study
fire protection expenditure of $2,142,236. Of
$1,402,586 is carried by the City of Wilkes-Ba

Newport Twp.	1												1		
Nuangola Boro															
Pittston City															
Plymouth Boro	3												3		
Plymouth Twp.	3												2		
Shickshinny Boro															
Swoyersville Boro	3														
Warrior Run Boro															
W. Pittston Boro	4												2		
W. Wyoming Boro	1														
Wilkes-Barre City															
Wilkes-Barre Twp.	3												2		
	45												10		
TOTAL	193,320	550,465	619,139	74	16	43	2,039,022	2,256,456	225	66	1	1	45	10	1
PER CAPITA		3.36	3.79				12.09	13.25							

* 1970 figure used for 1972
** 1973 figure used for 1972

of this brief study are that the various municipalities are providing a valuable Police Protection service to their citizenry for a minimum cost, and it is doubtful that much money could be saved through any type of service rendered by 2 or more municipalities joining together. No doubt, improved service could be achieved by a pooling of manpower and the introduction of some form of unified management, but any decision on this should be deferred until more complete information has been compiled and evaluated. In the suburban areas such as Mountain Top, some pooling of manpower is already being done. Cooperation with the Pennsylvania Crime Commission and County Civil Defense with full time telephone service, and radios on selected wave length in police cars has also been accomplished in the study area.

The liabilities of a neighborhood-type police force include: low pay, lack of training, poor chance for advancement, and a generally lower motivation factory making it difficult to obtain the best qualified men. However, the value to the citizen of having a neighborhood-type police force, manned by familiar people who live in the community, and can be reached in a matter of minutes, is undoubtedly important, perhaps even important enough to offset the liabilities.

FIRE PROTECTION

The Wyoming Valley is most fortunate in having literally hundreds of public spirited citizens who are willing to give of their time and resources for the protection of life and property through service as volunteer fire fighters. These independent fire companies, often without pay of any kind, risk their lives for the protection of others. In addition to service as fire fighters, many of the volunteer companies also operate ambulance and rescue services.

If each municipality now depending on volunteer fire departments for fire protection should have to pay for full-time firemen and stations and equipment, the annual cost for fire protection would become one of the largest items on the budget. Even with volunteer firemen and equipment, the total amount spent each by the municipalities constitutes a large percentage of the total public services budget.

Table 4, which presents budgets, manpower, and equipment for 28 representative municipalities in the Study Area shows a total fire protection expenditure of $2,142,236. Of this total, $1,402,586 is carried by the City of Wilkes-Barre. Excluding

Wilkes-Barre, the total budgeted by the 28 municipalities is $739,650, for an average cost of $5.48 per Capita.

The 28 municipalities have a total of 59 fire companies, most of which involve an individual fire station. Each company can generally depend on 25 to 40 volunteers answering their call to a fire. All of the companies honor one or more mutual aid pacts with other companies in the Valley, to whom they will respond or ''back-up'' on call. The following figures, taken from Table 64,show total effective strength of the 28 selected municipalities. The totals for manpower and equipment, and the equivalent ratio of persons protected per unit taken as a whole are as follows:

	FIRE CO.	MANPOWER F/T(1)	MANPOWER P/T(2)	PUMPERS & TANKERS	LADDER TRUCKS	AMBUL. & RESCUE TRUCKS
Total No. Units	59	145	1,532	69	7	13
Persons Protected/Units	3,277	1,287	126	2,801	27,617	14,871
CITY OF WILKES-BARRE ONLY						
Total No. Units	8	101	0	9	4	0
Persons Protected/Unit	7,324	580	0	6,510	14,648	0

(3) Private Ambulances

(1) F/T = Full-time
(2) P/T = Part-time
(3) Indicates public vehicles only

The above figures indicate that the number of fire companies per persons protected for the total area is greater than the number of fire stations per person in the City of Wilkes-Barre. The Table reveals that the area under study has a total strength of 69 pumpers and tankers, 7 ladder trucks, 13 ambulances and 145 full-time fire fighters. There are approximately 1,532 volunteer firemen who may be expected to answer calls.

A comparison of this total strength with that of Wilkes-Barre alone is not unfavorable. However, the figures for total strength do not indicate such things as training, time elapse in response to calls, annual fire loss, and other factors which must be taken into account in evaluating effective strength.

However, the preliminary conclusions to be drawn from the summary of fire department manpower and equipment alone, indicate

that the various municipalities are providing a valuable fire protection service to the citizens for a minimum cost, but that standards could be set for all municipalities in order to guarantee an adequate minimum level of protection.

SUMMARY AND RECOMMENDATIONS

Summary - The 45 municipalities in the Study Area have historical significance that would be the envy of almost any other city in the United States. Many can point with pride to having incorporated charters which actually pre-date the American Revolution and the founding of the United States itself as an independent nation and many, through the years have rendered, to a greater or lesser degree a valuable service to their citizens in the form of police and fire protection, road and bridge maintenance, providing a forum for town meetings, holding municipal court, and other vital matters.

The cost for services paid by the Citizens of the Valley to their respective municipal governments is not excessive. In fact, the cost per capita figures reflect a more favorable picture in this respect than might be expected for so fragmentized an operation.

However, total costs to the citizen for those services may change when the degree of service is accurately documented. A different value may be put on the relative cost of such services when compared to what might be obtained through some more efficient type of governmental administration.

Consolidation of effort has already been accomplished and is proving successful in the cases of sewage collection and treatment, in garbage disposal and airport planning and development. In these two areas, joint effort of many municipalities to form an authority to handle an area wide problem has resulted in efficiency and economy, and a more satisfactory solution than that which would have been possible if each municipality tried to provide these services individually.

Increases in population, changes of modes of transportation, and the more rigid demands of modern society have strained considerably the ability of the individual municipality to function as it did originally. Certain minimum demands for a functioning unit of government are not now being met. For example, basic facilities to handle complaints, and administer reliable service are lacking or inadequate in many instances.

The value of neighborhood closeness, and of maintaining a center of government that is closest to the citizenry is worthy of support, and justifies the effort to keep it intact. But an identification of common problems, and a better way to handle these problems should be diligently sought.

Inventory of Governmental Services - The first order of priority in the consideration of any type of governmental reorganization, is the compilation of sufficient statistical information concerning the actual type and degree of municipal services now being rendered to be able to prepare an accurate inventory of public services in Luzerne County.

Such an inventory as now being done by the Pennsylvania Economy League would envolve actual costs to the citizen for such services as garbage collection, street maintenance, fire protection, etc. It would document such things as manpower and equipment, purchasing procedure, and fire insurance costs, and would determine differences in tax valuation and code enforcement. Tax valuation in the County is conducted by the County assessor, except for Wilkes-Barre City, which may come under the County soon.

Hopefully, one bi-product of the inventory itself, would be the standardization of municipal accounting practices, and the development of a system of coding so that the processing of data accumulated could be accomplished by computers. Such a breakthrough, would allow many types and kinds of statistical information to be stored and retrieved electronically in a fraction of the time necessary for such an inventory to be accomplished by hand.

Citizens Steering Committee - Concurrent with the beginning of the inventory of municipal and public services should be the appointment of a Citizens Steering Committee, by agreement of all participating municipalities. Such a committee could be composed of one representative from each of several existing agencies such as the League of Women Voters, the Flood Recovery Task Force and The Flood Victims Action Council. It might include a representative selected by a Valley Wide Council of Local Governments or the Luzerne County Boroughs Association, with one from the Cities and one from the Townships Associations also. Such established agencies as the various local Chambers of Commerce, and the Economic Development Council of Northeastern Pennsylvania, the Pennsylvania Economy League, the Luzerne County Planning Commission or others could be requested to appoint one representative.

Whatever the final makeup of the Steering Committee, it should not be larger than 10 in number and should be composed of Citizens having already exhibited prior interest in Governmental reform, having a stake in the future of Luzerne County, and be responsive to the wishes and needs of the people of the County.

Charter Study Commission*- The next step following the completion, analysis and interpretation of the facts and findings of the governmental inventory, should be the determination, by the Steering Committee, whether or not to try for a vote approving a Charter Study Commission. If the decision is affirmative, the Committee should also decide which question to be placed on the Ballot.

Pennsylvania law prescribes the method whereby a county may change its form of charter. The steps to be followed are as follows:

a) Either by Ordinance of the County Commissioner or by Petition of the citizens the question must be put to the Voters of the County whether or not a Charter Study Commission shall be directed to 1) study the question of adoption of Home Rule; 2) to study the adoption of an optional form of government; or 3) to study the adoption of higher Home Rule, or optional forms.

b) If it is decided to study Home Rule, then the ballot must list the number of members of the Study Committee, whether 7, 9, or 11, and must also carry a list of all the names of candidates for membership on the Charter Study Commission.

c) The list of names is subject to the will of the people since any person who so wishes may have his name placed in nomination providing that he can obtain the signatures of 200 registered voters on a petition.

d) Voters who vote "no" on the question are still permitted to vote for Study Commission members to insure full representation.

e) After the Charter Study Commission election, if affirmative, the Commission has only 15 days to organize, and must then complete the work within 12 months. The final draft of the Home Rule Charter decided on must then be placed on the ballot at the next regular election, or at a special called election.

f) If the Charter election is successful, then at the next municipal election, both primary and general, the voters shall elect the officials to serve as the newly formed government.

Since municipal elections are only held on odd years, the timing for any Home Rule Charter adoption is critical.

*Note: The Charter Study Commission was approved in 1973.

If Luzerne County should decide to follow the route outlined above, the dates for quickest possible action would most likely be as follows:

March 1973 - Start of Municipal Inventory
July 1973 - Complete Study
May 1973 - First Ballot election on Charter Commission Formulation
June 1974 - Charter Commission Completes Report
Nov. 1974 - First Ballot on Charter Commission Recommendations
May 1975 - First Municipal Primary for election of New Government Officials
Nov. 1975 - General Election of New Government Officials
Jan. 1976 - Newly elected Government takes office

Appointment of County Manager - If the Home Rule Charter Commission recommended a County Manager form of government, then the newly elected County Council will appoint a County Manager after January 1976.

Following the establishment of a County Manager form of Government, it is anticipated that the County will begin to assume a better leadership role, as the one unit of local government having legal responsibility for the health and welfare of all of the people in Luzerne County.

Strong County Government - With the adoption of Home Rule and the restructuring of the County government, the application of sound business principles and modern business methods will be possible. Immediate steps toward stronger County participation in all of the functional aspects of providing urban type services should result.

With the appointment of a capable trained County Administrator and a highly qualified group of dedicated elected officials to guide and direct the County, immediate steps toward stronger County government should be seen.

Countywide Services - Positive plans should be formulated to make available at the County level certain key services found, upon consultation with the various municipal officials, to be the most needed and most sought. Such services might include without regard to order of priority, the following items:

a) Centralized purchasing and warehousing.
b) Centralized vehicle maintenance and repair facilities.

c) Pooling of little used, heavy equipment such as drag lines, bulldozers, and ditching machines.
d) Countywide, uniform tax appraisal and regular updating of land values.
e) Centralized data processing and billing service available to all municipalities.
f) Countywide solid waste service.
g) County paving and maintenance of all streets and roadways.
h) Countywide parks and recreation service.
i) County responsibility for maintenance, repair and operation of all levees and flood control devices.
j) Adoption of uniform building, plumbing, electric, fire and minimum housing codes.
k) Countywide traffic control and signalization.
l) Adoption of minimum standards for sewage treatment and water quality applying to private utilities or special purpose authorities.

Most of the services listed above could be offered to the various municipalities as needed, by agreement to pay for services rendered. Of course minimum participation would have to be guaranteed in some instances before the service could be initiated.

There are undoubtedly many other areas where efficiency and economy can be achieved by some type of joint effort, or intergovernmental cooperation. The identification of these areas, and the determination of the best methods for serving these needs is a Valley-wide function and should logically be solved at the highest level of accountable general purpose government having jurisdiction; namely, the County government.

CHAPTER 9

PUBLIC SERVICES UTILITIES

The purpose of this phase of the report is to review and coordinate the plans of various consultants and/or utility companies for restoration and future expansion of the utility systems in light of updated flood information population projection, land use plans, and flood control analysis developed by this consultant.

An overall examination of the various utility systems serving the Wyoming Valley, the flood damage experienced, their present level of service, and their plans for anticipated future demands reveals the following physical conditions, (see Figure 21).

SEWER SYSTEMS

The Susquehanna River through the Wyoming Valley serves as the receiving stream for the sewage flow from a population of approximately 255,000.

The River has an average 7 day-10 year low flow of 820 cubic feet per second (C.F.S.) and has been found on occasion to have a minimum dissolved oxygen content of 1.0 milligram per liter.(1) The minimum dissolved oxygen content for support of aquatic life in a stream is 5 milligrams per liter.

The sewage now being discharged into the river from the Valley itself was reported by the Susquehanna River Basin Study Committee as having a flow of approximately 33 million gallons per day, in 1968 for a per capita average of 144 gallons per person, per day. Table 65 on the following page shows flow projections to the year 2000.

Treatment - Most of the sewage entering the Susquehanna River within the Study Area receives only primary treatment which is performed by the Wyoming Valley Sanitary Authority. As the largest sanitary sewerage utility in the Valley, this authority is now collecting the sewage from approximately 163,000 persons which, according to the Wyoming Valley Sanitary Sewer Authority Report-1971, amounts to approximately 27 m.g.d. at present.

In addition to the Wyoming Valley Treatment Plant, there are two other publicly owned treatment plants which either

(1) Susquehanna River Basin Study, Appendix F.

discharge their effluents directly into the Susquehanna, or into a sizeable tributary, [immediately] connected thereto. These are the Dallas Area Municipal Authority sewage treatment plant and the Retreat State Mental Hospital plant located between Shickshinny and Nanticoke. In addition to these plants, the Lower Lackawanna Valley Sanitary Authority has announced plans to construct a 6 m.g.d. treatment plant near Duryea Borough.

Table 65
SEWAGE SERVICE AREA
OF WYOMING VALLEY SANITARY AUTHORITY
SHOWING ESTIMATED FLOWS BY YEARS FOR BOTH
EXISTING AND PROJECTED USAGE

	EXISTING	PROJECTED		
	1970	1980	2000	2020
EXISTING SERVICE AREA EST. FLOW IN M.G.D.	24.9	30.0	40.1	49.2
PROPOSED ADDITIONS TO SERVICE AREA	4.5	5.8	8.7	12.2
TOTAL EST. FLOW M.G.D.	29.4	35.8	48.8	61.4
POPULATIONS SERVED (1000)	162.7	182.0	208.9	227.8
PER CAPITA USAGE IN G.P.D.		196		

SOURCE: Gilbert and Associates Report - 1970.
Population and Per Capita Projections - Wilbur Smith and Associates - 1973.

Collection - The problems of collection and treatment of wastewater from Valley residences and businesses is compounded by the prevalence of combined sewers. This method of collection, whereby storm water and sanitary sewage both flow in the same pipe, necessitates separation by means of diversion chambers and pumping stations, before sending sewage to the treatment plant. At times of no rainfall or low ground water infiltration most of the sewage goes directly to the plant for treatment. However, when any appreciable amount of storm water is also present in the pipes it is necessary to restrict the flow going to the plant to a pre-determined volume, and simply allow the balance of the wastewater to be discharged untreated into the receiving stream.

Pumping - At present, the Wyoming Sanitary Authority maintains 19 pumping stations and 50 diversion structures to separate sanitary flow from storm water flow. The maximum sanitary flow diverted at any point is two times the average daily flow. Thus,

regardless of the concentration of pollutants carried by the sewers, only a portion of this flow will receive any treatment during these times of diversion.

Of note is the fact that the 20th pumping station, to be located at Ross Street and designated as pump station #12, has never been completed. This pumping station was completely stopped by an injunction taken out by private citizens living in this area. The pumping station would serve approximately 8,000 persons and would, if allowed to be built, remove 800,000 gallons per day of raw sewage from being dumped, untreated into the Susquehanna River.

Ross Street is near the heart of Wilkes-Barre - only three blocks south of the Market Street Bridge. The discharge of raw sewage into the river is deplorable at any point, but to permit the discharge of 800,000 gallons per day of raw sewage at a point so near the center of one of the highest valued residential areas in Wilkes-Barre, is unthinkable. It is sincerely hoped that ways may be found soon to allow this substantial volume of raw sewage to be diverted to the plant for treatment, and discontinue this serious pollution problem.

Combined Storm and Sanitary Systems - Separation of storm and sanitary water is presently receiving considerable attention from both Federal and State Environmental Protection agencies and it is anticipated that stricter regulations will be handed down in the future leading to stricter control or final elimination of this practice.

Improvements Needed - However, of more serious concern at present is the connection of all sewered systems to a sewage treatment interceptor, the installation of sewer lines to serve those urbanized areas not presently served, and the upgrading of the treatment plant of the Wyoming Valley Sanitary Authority to a higher capability of removal.

WYOMING VALLEY SANITARY AUTHORITY

The Wyoming Valley Sanitary Authority presently is composed of 14 separate governmental agencies as member municipalities, twelve of which are already connected. There are ten more urban areas which have signed up as potential customers, but only three of these had connected as of November 1972.

At the time of completion of the W.V.S.A. system in 1969, it was anticipated that all members and customer communities would quickly connect to the system. The anticipated flow from the connected customers was 40 m.g.d. The present flow averages only

27 m.g.d., since the present customer roll is only 60 percent of the anticipated load. It is most urgent that these additional customers be connected as quickly as possible to lessen pollution to the Susquehanna River. However, before many of the members and customers can connect, rather sizeable expenditures for new pumping stations interceptors and collection systems will have to be made. Cost estimates for this are discussed later.

Concurrent with the connection of all the participating members and customers however, should be the installation of secondary treatment, if more effective abatement of municipal pollution is to be accomplished. Cost estimates are now being made by private consultants to determine the economic feasibility for providing secondary treatment, since income from connected customers must be sufficient to pay for any expenditures. The anticipated connection of members and customers, which is essential to future cost feasibility, would be helpful in paying the added cost.

Cost estimates for secondary treatment have been projected ranging from $9 to $12 million for treatment alone and as high as $30 million for interceptors, pumping stations, and collection systems. Likewise, additional operating costs for secondary treatment have been estimated as high as $30,000 per month.

DALLAS AREA MUNICIPAL AUTHORITY

In addition to the treatment facilities of the Wyoming Valley Authority, the Dallas Area Municipal Authority also owns and operates a 2.2 m.g.d. secondary sewage treatment plant consisting of contact stabilization combines with activated sludge. This plant discharges its treated effluent into Toby Creek at Shavertown, Pennsylvania. The present flow is approximately 1.25 m.g.d.

The master plan for this area prepared by Roy F. Weston, Inc. of Westchester, Pennsylvania, dated November 1972, projects sewage flows from future areas to be served by the treatment facility to be 2.42 m.g.d. by 1980 and 4.29 m.g.d. by 2000. Since the present plant is capable of treating 2.2 m.g.d. some plant expansion will be needed by 1980.

FLOOD DAMAGE

Sewage interceptors and pumping stations operated by the

Wyoming Valley Sanitary Authority, were the worst hit by the flood. This system consists of 19 pumping stations, 25 miles of gravity sewer, 3 miles of force mains, and 50 diversion structures to separate storm from sewage flow. The boroughs, townships and cities maintain their own sewerage laterals, trucks and connectors within the various municipal limits.

The system also depends on 13 large dikeside storm water pumping stations. These stations are an integral part of the levee system and were installed by the Corps of Engineers, but are maintained separately and individually by each of the municipalities in which the storm water pumping stations are located. Eight of these stations are located on the East side of the River, and five on the West side.

Flood damage to the sewerage systems consisted not only of the complete flooding of all sanitary and storm pumping stations but also cave-ins, breaks and stoppages in the sewer lines themselves. Some were due to washouts, but they were primarily due to clogging lines with mud and silt and mine subsidence.

The problem of mine subsidence has been a continuing problem to flood plain areas of the Valley, due to the extensive mine channels beneath the surface of the Valley area. Subsidence damage is visible on the surface to a very limited degree but renders its most severe damage to underground storm and sanitary sewerage piping, water piping, gas piping, and underground electrical conduits. When breaks occur underground to these types of piping, it quite often is not known since water escapes into the underground abandoned mine channels. When this occurs to sanitary sewerage, it simply adds the sewerage pollution to the problem of active drainage pollution already present in the Wyoming Valley area.

Of the 19 sewerage pumping stations maintained by the Wyoming Valley Authority, only two escaped flooding. These were the Wilkern pumping station and Wyoming Avenue pumping station. One station suffered only minor damage; this was the west Main Street pumping station. Four were partially flooded and the rest experienced complete flooding. All had extensive damage to pumps, motors, and controls. The Loveland Avenue pumping station had its entire superstructure destroyed, as well as extensive damage to all motors, controls, and equipment.

The sewage treatment plant itself was completely flooded with water reaching to the third floor of the main office buildings. The main electrical substation, two minor on-site substations and all pumping equipment, motors, controls, etc. except those on the third floor were submerged. In fact, the third

floor of the control building was the only major portion of the plant to escape damage.

As of this writing, flood damage is still apparent with some pumping stations still out of service, [and all sewerage being diverted directly to the river]. Diversion to the river has been accomplished by bypasses which were built into the 50 diversion chambers as a part of the original design. Silting and stoppage from this in the sewer lines themselves continues to be a serious problem. The various municipalities are still conducting line cleaning operations at the present time. Damage assessment reported by the firm of Albright & Friel, Engineering Consultants for the Wyoming Valley Sanitary Authority lists a total damage value of damages sustained by the Wyoming Valley Sanitary Authority due to flood Agnes as being in the neighborhood of one million dollars.

UNTREATED AREAS

The Lower Lackawanna Sanitary Authority has started construction on a 6 m.g.d. secondary treatment facility. The service area for this facility will include the Avoca, Dupont, and Duryea Boroughs, in Wyoming Valley, in addition to Old Forge and Taylor in Lackawanna County and other areas outside the scope of this study. The present population of Avoca is 3,910, Dupont is 3,720, and Duryea is 5,264.

In addition to these boroughs which are already members of the Authority, it is anticipated that certain portions of the Pittston Township along Suscon Road and Glendale, would, because of topography, be served by the Lackawanna Facility.

A master plan report for water and sewerage dated 1970, prepared by the firm of Gilbert and Associates of Harrisburg, Pennsylvania (with flow data adjusted to post flood population estimates by this consultant) projects future sanitary sewage flows from the above municipalities by years as shown on Table 5. These figures are based on a population equivalent of 13,450 for the year 1980 and represent a flow of 130 gallons per capita per day.

Most of the homes and businesses represented by the above populations are either unsewered, or are discharging untreated sewage into Mill Creek.

At the lower end of Wyoming Valley, the municipalities of Hunlock Township, Shickshinny and Mocanaqua Boroughs, and the townships of Salem and Union are not now served with any sewage treatment facility.

FUTURE TREATMENT PLANS

The Master Plan for Water Supply and Wastewater Disposal of Luzerne County recommends two separate plants, one located on the west side of the river at Hunlock Creek and one on the east side of the River below the community of Mocanaqua, to serve these two areas.

The plant recommended at Hunlock Creek would have a capacity of 180,000 GPD which is estimated to have sufficient capacity for the area through 2000.

The plant recommended at Mocanaqua would have a .5 m.g.d. capacity, to be increased to 1 m.g.d. by 2000. This would serve both Shickshinny and Mocanaqua.

The Mountain Top Area consisting of Nuangola Borough, and Rice, Fairview and Wright Townships, although part of the study area for this report, does not, due to topography, drain directly into the Susquehanna River but rather into Big and Little Wapwallopen Creeks or their tributaries. However, one common sewage treatment wywtem to serve this fast growing area of Luzerne County is badly needed, since there are at present four separate treatment facilities now serving small developments in Wright and Fairview Townships with the inevitable duplication of expenditure resultant.

The Luzerne County Planning Commission report entitled Sewage Report of Luzerne County, dated 1962, notes that major growth is expected to take place within the Wapwallopen Creek Watershed, and suggests that the feasibility of placing a treatment plant along this creek be investigated.

The Master Plan verifies the validity of this concept by a recommendation that a regional sewage treatment system be developed for the Fairview, Wright, Rice, and Nuangola area, and that a plant be constructed on Big Wapwallopen Creek at the confluence of Watering Run.

This plant is recommended to have an initial capacity of 3 m.g.d. and to be expanded to 5 m.g.d. in the 1990 decade. The projected sewage flows given by this same report for this treatment facility equal only 1.42 m.g.d. by 1980, and 2.27 by 1990.

SUMMARY OF TREATMENT FACILITIES

To summarize; the existing public treatment plant capacities on the Susquehanna River are 40 m.g.d. of primary treatment for

the greater Wilkes-Barre area, and 2.2 m.g.d. of secondary treatment serving the Dallas, Back Mountain area. The proposed treatment capacities for the near future are 6 m.g.d., of which 1.31 m.g.d. is needed to serve Study Area residents living near the Lackawanna system, .18 m.g.d. at Hunlock Creek, and .50 m.g.d. at Shickshinny. In addition to these facilities there is a 3 m.g.d. facility proposed for the Mountain Top Area.

Planned projections for the year 2000 included an increase in Secondary Treatment and to a capacity of 60 m.g.d. for the Wyoming Valley Plant; an increase to 5 m.g.d. for the Dallas Area Municipal Authority Plant; an increase to 3 m.g.d. capacity for that portion of the Lackawanna Valley Plant serving the Wyoming Valley; an increase to 1 m.g.d. for the Shickshinny Area Plant; and an increase to 5 m.g.d. for the Mountain Top Area Plant.

WATER SYSTEMS

The water supply for the Wyoming Valley is furnished primarily by the Pennsylvania Gas and Water Company's Springbrook Division. This company supplies all of the water, both wholesale and retail, for 85 percent of the population receiving water service in Luzerne County. This company serves a total of 2 cities, 20 boroughs, and 15 townships within Luzerne County in the Study Area of this report.

The portions of the Study Area not served by the Pennsylvania Gas and Water Company are primarily in the Back Mountain areas composed of the Dallas Borough, the Dallas and Kingston Townships and in certain portions of the Mountain Top Area.

The Back Mountain Area is presently served by approximately 22 separate water companies. This area is one of the fastest growing sections of the County and is predicted to continue such growth. The fact that water service to this fast growing area constitutes a serious problem is discussed later in this section. The consolidation of some of the smaller companies through acquisition by the larger companies is now taking place.

Surface Reservoirs - The Springbrook division of the P.G.W. Company obtains its water from surface reservoirs located in the mountainous areas well above the flood plain. These reservoirs which are 5 in number have a combined safe yield of 51 million gallons per day. Other surface supplies without major impoundments account for the balance of the rated safe yield the system possesses which is estimated to be 55.8 m.g.d.(2)

(2) Pennsylvania Gas and Water Company, Permit Application, Pennsylvania Department of Health, June, 1965.

Table 66

WATER SUPPLY

SHOWING PRESENT AND FUTURE
WATER SUPPLY REQUIREMENTS FOR MUNICIPAL AND INDUSTRIAL USES
BY RIVER BASIN-SUB RIVER BASIN-AND WYOMING VALLEY

WATER SUPPLY NEEDS	SUSQUEHANNA RIVER BASIN			SUB BASIN III			(1) WYOMING VALLEY		
	1965	1980	2000	1965	1980	2000	1965	1980	2000
MUNICIPAL-COMMERCIAL NEEDS M.G.D.	275	449	765	102	134	196	55.5	65.4	90.9
MAJOR INDUSTRIAL NEEDS M.G.D.	322	483	748	65	64	88	13.7	10.0	13.5

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TOTAL NEEDS M.G.D.	597	932	1,513	167	197	283	69.2	75.4	104.4
POPULATION PROJECTIONS IN 1000's	2,251	3,224	4,797	594	751	971	263	327	413
PER CAPITA USAGE G.P.D.		299			262			233	

SOURCE: Water Supply Projections - Susquehanna River Basin Study
Population and Per Capital Projections - Wilbur Smith and Associates

(1) Sub Basin III is composed largely of portions of 6 counties along Susquehanna and Lackawanna Rivers. Columbia, Luzerne, Wyoming, Bradford, plus a small portion of Sullivan County.

Treatment Facilities - Two of the Reservoirs, the Rulison Evans Reservoir with a safe yield of 8 m.g.d., and the Crystal Lake Reservoir with a safe yield of 7 m.g.d., are provided with operating water filtration plants, while the balance of the water supply is generally provided with chlorination as the only treatment given. These two plants have rated maximum flow of treated water output capacity of 30 m.g.d. with 20 m.g.d. from the Hillside Plant just downstream from the Rulison Evans Reservoir, and 10 m.g.d. from the Crystal Lake Plant. The Hillside Water Filtration Plant is located in Kingston Township and treats water for the Boroughs of Kingston, Edwardsvills, Swoyersville, and Wyoming. The Crystal Lake Plant, which has just been completed, is designed to improve the quality of water in the Mountain Top Area.

Total Storage Capacity - The water storage capacity of the various impoundments in the Springbrook division total 12 billion gallons. Most of these impounded reservoirs are located on the perimeter of the valley and can therefore feed by gravity directly into the system. Very few pumping stations and storage tanks are required and consequently the system was able to maintain service throughout the Agnes Flood.

Wastage of Water - A serious condition exists, however, in the gravity system due to mine subsidence whereby over 50 percent of the total amount of water distributed from the reservoirs through the system is either lost or unaccounted for. So large a volume of water unaccounted for could not be tolerated economically if expensive treatment methods were required or extensive pumping necessary.

FLOOD DAMAGE

Hillside Filter Plant - Damage from the flooding following Tropical Storm Agnes was sustained at the 20 m.g.d. Hillside Filter Plant, located in Kingston Township, at the intersection of U.S. Route 309 and Pennsylvania Route 119. The damage sustained at this plant occurred when the clear basin was submerged necessitating shutting off of the source of supply. The filters at the plant however, were never submerged and continued to operate at maximum peak of 20 million gallons per day, holding out contaminated, silt beading flood water.

Toby Creek Transmission Line - Damage was also sustained by the 30 inch transmission line from this plant, in which three breaks occurred. One break occurred in Toby Creek at the Dallas Sanitary Authority supply line; a second occurred 250 feet below the first; and, the third occurred under the bridge off Highway

309 at Main and Union in Luzerne. However, pressure was maintained at all times through emergency repairs effected through the use of shaped steel plates and underwater divers.

Pressure Loss - Due to leakage, in spite of the break repairs, insufficient pressure was available to supply the higher areas of Luzerne and Swoyersville Boroughs and emergency pumping was required between fire hydrants to maintain the higher pressure at these points. Pressure loss was also experienced temporarily at Edwardsville and Larksville Boroughs. This damage was corrected by the installation of a 12'' above ground steel temporary main approximately 3,000 feet long to provide pressures needed.

Final correction of the break in the 30'' main in Toby Creek was performed by construction of an overhead crossing and abandonment of the underwater crossing. A second repair to that portion of the 30'' line, 250 feet downstream from the first, necessitated stream diversion and a 300 foot section of concrete encasement. Damage also occurred to two 18 inch suspension spans along Harvey's Creek, and to the tower support for one of these suspension crossings. Repairs to the support footing required 120 cubic yards of concrete. Repairs to the suspension span required a new unsupported aerial crossing at a higher elevation.

In addition to the three 30'' transmission breaks and two 18 inch transmission damages, the system sustained possibly 40 breaks of varying severity and size during the flood. In spite of breaks, Mr. D. R. Cook, Chief Engineer for Water with the Pennsylvania Gas and Water Company, states that continuous pressure readings, chlorine residual tests, and bacteriological samples were maintained throughout the flood and aftermath on a 24-hour basis, and that throughout the flood disaster period, the water quality met the U.S. Public Health standards for drinking water. However, the Pennsylvania Department of Environmental Resources, recommended that the public water in the Valley not be used, unless boiled or treated, for a few weeks after the flood.

FUTURE PLANS

The present trend toward higher water quality standards and more stringent water quality regulations would indicate that filtration may be required for all surface water sources in the future. If this occurs, repair of leaking mains to reduce wastage may become more economical due to the higher cost of water treatment. When coupled with the estimated increase in population for the areas served by the Springbrook Division of the Water Company, the projections made by the Gilbert and Associates report which

indicates that the system will have a potable water demand of 84 m.g.d. in 1990 and 156 m.g.d. by the year 2020 seems well justified.

This same report recommends increases in the safe yield capacity of the water supply from the present 51.3 m.g.d. to a total of 186.3 m.g.d. by the year 2000 and recommends a 110 m.g.d. intake and filtering systems from the Susquehanna River above Pittston, the construction of several large new transmission mains, the abandonment or repair of existing broken mains and the elimination of less than minimum sized lines to provide adequate water pressures throughout the system, where such does not now exist.

A detailed engineering study of the water supply system of the Pennsylvania Water Company should be made to determine if possible alternatives to the present condition which wastes so much water, would be more desireable in the long run.

GAS SERVICE

Gas service to the Wyoming Valley is supplied by the Pennsylvania Gas and Water Company, a public utility serving two cities, 20 boroughs and 15 townships in the Study Area of this report.

Supply - The company receives its supply from Trans-Continental Gas Pipeline Company and the Tennessee Gas Transmission Company. These two companies supply natural gas at two points, one through a pipeline connection at Wyoming Borough near the Wyoming Monument, and the other from a line at Uniondale in Susquehanna County.

The company has a third contract for gas supply with the Columbia Gas Corporation. The company furnishes liquified natural gas.

In addition to the above supply sources, the company also maintains two peak shaving propane plants having a combined capacity of 10,000 MCF., and an oil plant with a capacity of 2,500 MCF. per day.

Capacity and Load - The total supply capacity of both natural gas contracts and peak shaving plants equals 203,755 MCF. per day. The peak day's consumption of gas in 1971 was 198,300 MCF. This amount was consumed by 43,341 customers in the Wyoming Valley, Nanticoke to Pittston and including the Back Mountain and the Mountain Top areas.

FLOOD DAMAGE

Damage sustained by the flood to the gas system consisted primarily of damage to individual service connections and gas meters and mains. Several regulator stations were temporarily out of service and the peak shaving plant located at North Street Bridge was completely flooded over. Telemetering and gas dispatching operations located at the old Wilkes-Barre Gas Plant site at the North Street Bridge experienced an immediate emergency when flooding was predicted.

Telemetering facilities are essential to the operation of the entire system since it not only monitors volumes used at various points on the system but also aides the opening and closing of various valves and bypass lines to maintain adequate pressure throughout the system.

These facilities had to be moved to the company's new Empire yard located on East Northhampton Street in the Wilkes-Barre Township. Movement of this facility involved a considerable amount of work setting up an emergency communications network.

Damage to the peak shavings plant at North Street did not result in the dislocation of the three large propane tanks which stayed in place and were not damaged.

Other damage sustained by the company's gas system included a 12-inch main crossing from the east side to the west side of the Susquehanna River at the North Street Bridge when this bridge was washed out. This main was replaced by two 10-inch mains totaling 4,500 feet in overall length including 860 feet of line anchored and buried in the Susquehanna River Bottom.

One thousand feet of 8-inch main was installed at Wright Street in Kingston Borough to replace flood damaged 3-inch and 4-inch mains in this area.

Six hundred feet of 12-inch high-pressure main and 600 feet of 12-inch low-pressure main had to be installed to replace damaged line in the Wilkes-Barre area.

Twelve-inch mains were installed in both North Franklin and South Franklin Streets totaling approximately 7,500 feet.

Greatest damage occurred due to the entrance of water and mud into the gas system through homes being flooded and breaks in underground mains. Damage resulted in the necessity for meter replacement to 18,000 customers in the Wyoming area. This figure

is approximately 40 percent of the total 43,341 gas customers to whom the company supplies gas service within the Wyoming Valley including Back Mountain and Mountain Top.

Isolation of Flooded Areas - Throughout the flood period, it was necessary for the company to isolate large areas of the system which were flooded by utilizing existing valves and the installation of emergency valves where needed, to prevent the intrusion of water and mud into other portions of the system. It was also necessary for the company to visit each home, and make certain that all the gas service into the dwelling was cut off before any gas service could be restored to the gas mains.

On September 13, the company announced publicly that 17,000 gas meters damaged by the flood had been replaced and service restored to 17,000 customers. Since the period of the flood was not during the winter season, the restoration to heating appliances was not as critical as the restoration to stoves and hot water heaters. However, the installation of service to thousands of flood victims living in trailers, group sites, campers and other temporary facilities did constitute a problem.

Additional Gas Supply Needed - Gas service to the approximately 8,000 trailers installed as emergency housing facilities necessitated the lifting of regulations and restrictions against PG&W. attaching any new customers to their lines due to natural gas supply shortages.

On September 19, a public announcement was made in the Wilkes-Barre Record that five natural gas supply firms had, upon approval by the Federal Power Commission, agreed to deliver an additional 1.1 billion cubic feet of natural gas to the Pennsylvania Gas and Water Company for a period extending to August 1973. On September 29, the PG&W announced that on Saturday, September 30, 1972, it would expect to have achieved its goal of restoring gas service to over 25,000 customers affected by the flood.

FUTURE PLANS

Since the Pennsylvania Gas and Water Company is dependent upon outside suppliers for its source of natural gas, its present supply sources are not always able to supply the additional volumes needed to satisfy the growth potential of the service area. The company does not at present have any plans for extension or increases in the natural gas supplied.(3)

(3) Annual Report 1971 Pennsylvania Gas and Water Company.

Preventive measures are anticipated to lessen possibilities of future occurrences of flood damage. The location of telemetering and dispatching services from the North Street Bridge site to the site on East Northhampton Street is planned as a permanent relocation to prevent damages to this facility. In addition more adequate and permanent systems of valving off portions of the system are comtemplated to facilitate the isolation of flooded areas in the future should flooding occur.

SOLID WASTE COLLECTION AND DISPOSAL

The Luzerne County Planning Commission has received a preliminary report dated September 1, 1972, entitled "Solid Waste Management Plan" by the firm of Roy F. Weston, Incorporated, Environmental Scientists and Engineers, West Chester, Pennsylvania.

The report lists several alternatives for location of solid waste disposal sites and/or transfer stations and indicates that one central sanitary land fill located either on the west side of the river northwest of Wilkes-Barre or on the east side of the river northeast of Wilkes-Barre will be the most economical of the methods suggested. It should be noted, however, that the other alternatives, such as maintaining three land fill operations, on on the eastside, one on the westside and one at Nanticoke or the maintenance of the existing six sanitary land fills distributed throughout the Study Area are relatively close in cost comparison.

More serious engineering and economic feasibility studies should be made before a decision is finally reached as to what alternatives to adopt. As the report states, ''the selection of an appropriate alternative which can best serve the Study Area will be somewhat more dependent on local, political and jurisdictional attitudes rather than on their relative economic comparisons''. This Consultant concurs with this statement.

FLOOD DAMAGE

The results of the flood were felt quite naturally by all

of the Wyoming Valley and particularly by the residents occupying the 25,000 dwelling units affected by the flood. The impact of masses of debris brought about by the flood rehabilitation operations would have seriously taxed the capabilities of a Solid Waste Department serving a city of many times the population of the Valley.

The impact from flood related debris is still being felt in the Valley and will probably continue for some months to come. Although, under the circumstances, all of the private and public collection and disposal companies rendered yeoman service throughout the period of the flood and its recovery, the existence of over 100 private collection companies has undoubtedly contributed to the overall problem.

PLANS FOR THE FUTURE

Plans for the prevention or alleviation of damages possible from future flooding to future collection and disposal facilities and the interruption of service is best provided by adoption of the following recommendation of the previously mentioned Roy F. Weston solid waste management plan.

SINGLE AGENCY RESPONSIBILITY

If all solid waste service was placed under the jurisdiction of one agency, this agency could, through its jurisdictional authority, promulgate disaster recovery plans for solid waste collection and disposal which would make use of the orderly and sytematic utilization of all available rolling equipment throughout the entire area of its jurisdiction. Also possible would be pre-arranged contractual or voluntary commitments from other governmental jurisdictions. Pre-arrangement of alternate access routes and continued maintenance and repair of roadway bridges would best be accomplished by a single jurisdictional agency. Areawide communication would be a major factor in planning for the prevention or reduction of future service interruptions due to flooding or other natural disasters.

ELECTRIC GENERATING STATIONS

The UGI Corporation Hunlock Creek steam electric generating station, consisting of three (3) generating units totaling 89 million watts, was completely flooded and had to be taken out of service. Fortunately, none of the three (3) turbine units sustained sufficient damage to require replacement. Unit No. 2 was returned to service on July 26, unit No. 3 on July 30 and unit No. 1 on August 31.

The Pennsylvania Power and Light Company Stanton stream electric generating station, consisting of three (3) units totaling 106 million watts, was completely flooded and had to be taken out of service. Plans had already been made by Pennsylvania Power and Light Company to abandon this generating station in October, 1972, and consequently no effort has been made to put this station back into service.

Several other Pennsylvania Power and Light Company generating stations which are not located in the Luzerne County Study Area but affect service to customers in the Study Area were flooded and taken out of service. The most noteworthy of these is the company's largest generating plant at Brunner Island with a total capacity of 1,400 million watts. Preliminary damage cost to the Brunner Island generating station alone was estimated at about 1.5 million dollars. Also, flooded and out of service were the Holtwood steam electric generating station and the Lock Haven combustion turbine generating station.

ELECTRIC SUBSTATIONS

Pennsylvania Power and Light Company System - Five substations were flooded and had to be de-energized.

River substation (66-12 KV) was de-energized on June 23, after transferring all possible load. A 10,000 KVA mobile substation was placed in service at Pine Ridge Switching Structure on June 24, picking up the load from this substation. A temporary 25,000 KVA substation was built at Pine Ridge and placed in service on June 29. River substation incurred extensive damage but was able to be put back into service on a limited basis on August 12.

Beekman substation (12-4 KV) was interrupted on June 23. Temporary service was restored on June 29 by means of a 1,000 KVA mobile substation. This substation received considerable damage but since it was located in the ''hard hit'' flood area, with very little load immediately following the flood, work to restore it was delayed until more critical substations were restored.

Bennett substation (12-4 KV) was de-energized in two steps. The two underground network feeders were de-energized on June 23 with the two overhead feeders remaining in service because these lines supply areas not affected by the flood. However, on June 24 the level of the flood water at this substation required the entire substation to be de-energized. Temporary restoration of service to the overhead distribution lines was made by installation of two mobile substations. A 600 KVA mobile unit was

placed in service on June 25 and an additional 1,500 KVA mobile unit was placed in service on July 1. This substation received considerable damage but was able to be placed back in service on a limited basis on August 11.

Gildersleeve substation (12-4 KV) was de-energized on June 23. This substation received considerable damage but was able to be placed back in service on a limited basis on July 7.

Sullivan substation (12-4 KV) was interrupted on June 23. Temporary service was restored by use of a 1,000 KVA mobile substation on June 27. This substation received extensive damage and present plans are to abandon the entire substation.

UGI Corporation Luzerne Electric Division System - A total of 13 substations received flood damage from Tropical Storm Agnes. Three other substations, unaffected by flood waters, were tripped for periods of time until distribution facilities leading to flood areas could be cut free. Only two substations (Kingston and Retreat) were energized when flood waters rose, causing them to trip automatically.

Kingston substation was tripped automatically when water entered the substation switchgear and short-circuited the fuses. Damage to this substation was extensive and a mobile substation was used at this location to restore service on a temporary basis.

Retreat substation was submerged while energized. The recloser located here exploded, knocking the substation off the line.

Plymouth Borough substation was de-energized prior to being flooded. Extensive damage was experienced at this substation and a mobile unit was used for temporary service. This substation required major work prior to going back into permanent service.

Shickshinny substation was de-energized prior to being flooded. Since this substation equipment was very old, the substation was retired and replaced by pole-mounted step-down transformers in preparation for conversion to 13 KV distribution.

The remaining flooded substations (Forty Fort, Upper Kingston, Rutter Avenue, Gates Street, Westmoore, Plymouth Plant, Lyndwood, Nanticoke, and Hunlick Plant) sustained damage ranging from moderate to extensive. Work crews busy with restoration work concentrated their efforts at the lesser affected substations so that more substation capacity could be returned to service in the minimun amount of time. As these substations were returned to service, they were temporarily connected in a network system

manner in order to provide temporary power to all distribution lines. UGI Corporation reports that in all cases there was sufficient substation capacity available to supply the load remaining after the flood waters had receded.

LOW TENSION UNDERGROUND NETWORK SYSTEM

There is only one low tension underground network system in use in the Luzerne County Study Area. The Pennsylvania Power and Light Company system serving the urban area of Wilkes-Barre. The network system was 100 percent inundated and had to be de-energized.

Damage to the underground network system was extensive. Numerous underground transformer vaults collapsed and had to be rebuilt. Several transformers were found to be defective and had to be replaced. Also, oil was replaced in over 50 percent of all transformers located in underground vaults. Twenty-eight of a total of 55 network protectors were found to have water in them and had to be cleaned and dried before being put back into service. Several sections of underground cable were found to be defective and had to be replaced. All underground vaults and manholes were pumped dry and cleaned as soon as possible after the water table was down low enough to permit it.

Temporary restoration of the network system was made from Gildersleeve substation on July 7.

OVERHEAD TRANSMISSION AND DISTRIBUTION SYSTEMS

Reports from both utility companies indicate that the damage to overhead transmission and distribution lines was rather negligible when compared to the overall damage. The utility companies estimate a total of approximately 50 poles or guys that were partially washed out and had to be reset. No service interruptions of consequence were reported due to these washouts. Also, there is no report of any traffic problems due to poles and lines being down or any injuries or deaths due to electrocution from such washout damage.

UGI Corporation did report that for a short time during the flood, two of their three tie lines connecting them with Pennsylvania Power and Light were out of service. With their Hunlock generating plant flooded and out of service, this increased the danger of their losing power to the unaffected portion of their transmission system. However, they were able to maintain the one tie line throughout the flood and did not completely lose service.

ELECTRIC METERS

Each electric meter that had been submerged under water had to be replaced. As of December 15, 1972, approximately 23,000 electric meters had been replaced by the two utility companies. There also remained at that time several thousand that had not yet been replaced due to the property not having been restored by the customer.

ELECTRIC SERVICE RESTORATION

At the height of the flood on June 23, electric service was interrupted to approximately 45,000 customers in the Wyoming Valley of Luzerne County. These customers without service represented more than 35 percent of the total electric customers in Luzerne County. Quite a few of these interruptions were temporary in nature and the utility companies estimate that by June 26 service had been restored to approximately 17,000 customers. The remaining 28,000 customers were located in the flood area and had sustained actual flood damages. Almost without exception, these customers were not in a position to have their electric service restored even if it was available. In the vast majority of cases, the customer's electrical system had sustained sufficient damage to make it unsafe to restore service immediately. The customer was then faced with the problem of having to dry out and recondition his electrical system and have it inspected before service could be restored. The two utility companies and the local electrical contractors did not, at first, agree as to how much of the flooded wiring and electrical equipment should be replaced and this added to the problem.

Due to the immense amount of electrical reconditioning work that needed to be done, a sufficient supply of qualified electricians was not available to handle this work. Consequently, many customers were not able to proceed with this reconditioning work immediately. Also, the personnel handling the inspection were over-taxed and frequently there was considerable delay in a customer getting his electrical system inspected.

In order to restore service to their primary distribution lines, it was necessary for the utility companies to isolate the inundated customers' electrical systems from their primary distribution system for reasons of safety. This was accomplished by either removing and blanking out the old meter or replacing the old meter with a new meter with insulated boots so that power could not enter the customers wiring system. When the customer requested restoration of his service the utility company simply inspected the customer's electric system and removed the insulated boots from the meter.

Proceeding under this arrangement, the utility companies were able to restore service to an average of approximately 400 customers per day. By July 15, 1972, service had been restored to an additional 8,000 customers leaving approximately 20,000 customers still without service. As of December 15, 1972, service had been restored to an additional 15,800 customers leaving approximately 4,200 customers whose service had not been restored. The utility companies estimate that approximately 3,500 of these remaining customers will never be reconnected due to demolitions and abandonments.

ASSISTANCE TO CUSTOMERS DURING RESTORATION

Customer Billing - Both utility companies implemented the following significant changes in billing procedures involving those customers flooded out:

(1) For those customers who experienced complete loss of property or who had to abandon their homes or businesses permanently as a result of the flood, all outstanding charges for electric service to date would be cancelled.
(2) Current electric bills that were due had billing dates with net charges extended 60 days.
(3) Where service had been interrupted, proper recognition would be given to the number of days of the interruption in the preparation of the following electric bill.

Safety - Both utility companies participated in the preparation and distribution of newspaper, radio and television releases and commercials carrying messages outlining safety precautions customers should take when entering flooded properties and in attempting to reconnect or operate electrical devices that had come into contact with water. Messages spelled out step by step procedures to be followed by customers before their homes and businesses could be reconnected and also safety precautions to be followed after new meters were installed and service restored.

Inspection - Prior to energizing any structure that had been flooded an electrical inspection was required. Since the local electrical inspection agencies did not have sufficient manpower available to perform these inspections, it was necessary to request additional manpower from outside the flood=affected area. Both utility companies with the assistance of Fire Underwriters' personnel from Maryland, New Jersey and other neighboring states trained Penn State electrical students and Voc-Tech electrical

students, as well as their own employees, to do the minimum inspection required to energize services. These inspections of customers' electric facilities were made free of charge.

Portable Generators and Pumps - Due to the extensive damage to their facilities in the Wilkes-Barre area, especially the low tension underground network system which was 100 percent inundated, Pennsylvania Power and Light Company was unable to restore service immediately to numerous customers in this area. In order to provide service during the two weeks following the flood, Pennsylvania Power and Light Company provided and installed large portable generators for the following 13 customers: Wyoming Valley Sanitary Authority, Wilkes-Barre City Hall, Wilkes-Barre Publishing Company, VA Building, Provincial Towers, WBRE, Kirby Health Center, Boston Store, Blue Cross, Luzerne County Court House, Union Penn Bank, Wyoming National Bank and Wilkes College. Also, small generators were provided for 74 customers with some customers receving more than one unit. For example, Kings College received five units.

Pennsylvania Power and Light Company also provided portable pumps to customers where needed. A total of 59 portable pumps were used to pump out basements in areas where service was to be restored.

SPECIFIC PROBLEM AREAS

Communications - Both electric utility companies reported the loss of communications as a serious problem during and immediately following the flood. All telephone communications were knocked out in the entire Wyoming Valley of Luzerne County. In addition, local newspapers were not published and most local radio and television stations were off the air during the most critical time of the flood. This made it almost impossible for the utility companies to keep up with the rising flood waters and essentially all communications with their customers and employees were lost. Initial contact with their customers after the flood was made by passing out bulletins at the various evacuation centers and at the police stations, and over the radio and television stations.

Temporary Housing - Immediately following the flood, with their work crews already working around the clock, the utility companies were called upon to provide completely new electrical distribution systems and services for numerous mobile home parks for temporary housing. The records show that many of these mobile home parks were ultimately only partially occupied and a few of them were never occupied at all.

PROPOSED NEW GENERATING FACILITIES

Pennsylvania Power and Light Company is planning to construct a new nuclear-powered steam electric generating station in Salem Township, Luzerne County. This will be called their Susquehanna Steam Electric Station and will consist of two generating units with a capacity of 1,100,000 kilowatts each. Present plans are for construction to begin in the fall of 1973 with the first unit going into service around April, 1979, and the second unit going into service around April, 1981. Only after there is complete assurance that the Susquehanna station will be built and operated safely and that all standards for protection of the environment will be observed will Pennsylvania Power and Light Company be allowed to proceed with its plans.

UGI Corporation Luzerne Electric Division is planning to construct a new fossil-fueled steam electric generating plant at a new site in Hanover Township, Luzerne County. This plant is to consist of two generating units with a capacity of 300,000 kilowatts each. Present plans call for the first unit to go into service in August, 1977.

CONCLUSIONS AND RECOMMENDATIONS

Based on analysis of the preliminary reports received from the utility companies, the following conclusions and recommendations are presented for consideration at this time.

Conclusions

(1) The electric utility companies sustained extensive and costly damage to generating, substation and low tension underground network facilities. Damage to overhead transmission and distribution lines was relatively minor.

(2) The utility companies were able to keep most of their overhead transmission and distribution facilities in service by operation of selective switching to isolate the inundated facilities from the system. One or more major tie lines between Pennsylvania Power and Light Company, UGI Corporation Luzerne Electric Division, and electric utility generating facilities outside the flood area remained in service throughout the flood. Therefore, both utility companies had supply power available to their customers which were not directly affected by the flood, thereby limiting the electric service interruption to these customers to two or three days at the longest.

(3) The majority of the customers in the flood area sustained actual damage to their electrical systems and found it

necessary to recondition their electrical wiring before service could be restored. In most cases, restored service was available from the utility companies before these customers were ready to receive it, the major exception to this being the customers in the urban area of Wilkes-Barre. Since the underground network system in Wilkes-Barre was totally inundated, service was interrupted for approximately two weeks. However, Pennsylvania Power and Light Company did provide large portable generators for 12 of the most critical customers in this area and smaller portable generators for many other customers.

(4) Two of the major problems encountered by the utility companies were the loss of all communications in the flood area and the additional work required, with their work force already over-taxed, to provide new services for temporary housing.

(5) The utility companies should be commended for the outstanding manner in which they handled this major disaster especially with regards to safety. The records show no serious injuries or deaths due to electrical shock or burn in the entire flooded area.

(6) The immediate emergency repairs to generating and substation facilities are satisfactory to meet load requirements at present and in the foreseeable future.

(7) Since major new generating facilities are presently planned by both utility companies, no long term problems should result from this disaster.

Recommendations

(1) That an emergency communications system be established for use in a major disaster of this type. This system should include radio communications between Pennsylvania Power and Light Company and UGI Corporation. The system should be made as fail-safe as possible and should be tested periodically.

(2) That, after careful study, each utility company set up definite flood procedures to be followed. These procedures should include removing certain portable substation equipment such as air circuit breakers, relays, battery charger, etc., to a safe area prior to flooding.

(3) That each utility company set up emergency operation centers outside the flood area and tie these in to the emergency communications system.

(4) That each utility company communicate and coordinate with Housing and Urban Development and other governmental agencies in an effort to set up definite flood procedures concerning temporary housing.

(5) That Pennsylvania Power and Light Company devote special attention to their low tension underground network system in Wilkes-Barre in order to make it more flood-proof. Special attention should also be given to eliminating the structural failures which occurred in underground transformer vaults and manholes.

(6) That both utility companies utilize every means at their disposal to make their proposed new generating plants as flood immune as possible.

BELL TELEPHONE COMPANY OF PENNSYLVANIA

Bell Telephone Company of Pennsylvania central offices in Wilkes-Barre, Kingston and Plymouth were flooded and out of service. All three cities were completely without telephone service affecting 61,940 customers in Wilkes-Barre, 29,675 customers in Kingston and 6,750 customers in Plymouth.

All power equipment at the Wilkes-Barre central office was inundated. The switching equipment at this office was not damaged as it is located on an upper floor. This central office was restored to partial service on June 27.

Damage at the Kingston central office was not extensive and it was restored to partial service on June 28.

The Plymouth central office was 100 percent inundated. All equipment was retired and the office was completely rebuilt and restored to service on July 23. An old manual switchboard was shipped in from Michigan and put into service at Plymouth to serve approximately 300 customers.

The toll office in Wilkes-Barre was flooded, thereby knocking out all toll calls in the entire Wyoming Valley and surrounding areas. This toll office went back into service on July 15. Prior to the flood this toll office was handling approximately 110,000 toll calls per day. As of December 15, 1972, the load on this office had increased appreciably and it is now handling 140,000 toll calls per day.

The directory assistance office in Wilkes-Barre was flooded out. This office normally handles all directory assistance for the entire 717 area. However, provisions were available to immediately divert directory assistance calls to Frackville, Pennsylvania on a limited basis.

All underground cables and manholes in the urban area of Wilkes-Barre were flooded out and lost. During the height of the restoration work, the telephone company work force in Wilkes-Barre

was increased from a normal staff of 600 personnel to 1,335, with many people being imported from outside the Valley from other sections of the Bell System.

Bell Telephone Company of Pennsylvania reported 41,000 telephone instruments damaged and replaced due to the flood.

COMMONWEALTH TELEPHONE COMPANY

Commonwealth Telephone Company serves two areas of the Wyoming Valley of Luzerne County, the Shickshinny area and the Harding area of Exeter Township.

The Shickshinny central office was not flooded but did lose commercial power and operated from a diesel emergency generator for several days until power was restored. The major damage in this area was to overhead telephone lines. Approximately 900 of the 1,600 total customers lost telephone service and all toll facilities were lost for about a week.

A major telephone cable crossing the river in the Harding area was lost, thereby knocking out service for several days to approximately 400 of the 1,000 total customers served.

Commonwealth Telephone Company reported 600 telephone instruments damaged and replaced due to flood.

CONCLUSIONS

The telephone communication system throughout the Study Area became very critical during and immediately following the flood due to the loss of all toll facilities.

The telephone communications problem in Wilkes-Barre, Kingston, and Plymouth was further intensified due to the total loss of local service for several days.

RECOMMENDATIONS

(1) That, after careful study, each telephone company set up definite flood procedures to be followed.
(2) That Bell Telephone Company of Pennsylvania devote special attention to their underground telephone facilities in Wilkes-Barre in order to make them more flood immune.
(3) That all telephone power equipment, including standby emergency generators, be relocated from basements and first floors of buildings where possible, to remain in operation during flood conditions.

(4) That each central office of the telephone company give consideration to providing emergency circuits within the flood area, operated from equipment outside the flood area, for use during emergencies.

CHAPTER 10

CAPITAL IMPROVEMENTS

INTRODUCTION

Since the institution of government began, administrative officials have been faced with the problem that financial limitations will not allow them to implement all needed projects in one fiscal year. When this happens, it is necessary to give selected projects a high priority, while others must be postponed or cancelled.

A method of making this priority decision in a rational and business like manner is through capital improvement programming techniques. Capital improvement programming, as defined by the American Society of Planning Officials, is the ''--scheduling of public physical improvements for an area over a period of time. The scheduling is based on a series of priorities, according to the need, desire or importance of such improvements and the area's present and anticipated financial standing.''(1)

The major steps in capital improvement programming are:

1. Analysis of local needs and the submission of projects to meet these needs;
2. Analysis of financial capabilities of the local area to implement needed projects;
3. Establishment of relative priorities among the projects submitted;
4. Preparation of a multi-year program of designated needs and financing sources;
5. Approval of the program by the local governing body and the public, and,
6. Annual review and update of the program.

The major item to be developed under this effort is a Capital Improvement Program (CIP). CIP is a list of all proposed projects to be constructed or purchased listed in order of their priority and the recommended means of financing such projects. The first year of this program is referred to as the capital budget and it is the compilation of approved projects in order of their priority, with appropriations of funds from selected sources. The capital budget is adopted as part of the annual municipal budget.

(1) ASPO Planning Advisory Service, Capital Improvements Programming, Information Report N 151 (Chicago: American Society of Planning Officials, 1961) p. 1.

A capital improvement "... includes new or expanded physical facilities for the community that are of relatively large size, and are relatively expensive, and relatively permanent. Such items as streets, playgrounds, municipal facilities, police stations, schools, water systems, libraries, sewer systems, Urban Renewal projects and solid water facilities are considered capital or public improvements. Large scale replacement or rehabilitation of existing facilities also fall within the definition."(2)

CAPITAL IMPROVEMENTS PROGRAM

The Capital Improvements Program, an element of the comprehensive planning program, is designed to aid the municipality in implementing its comprehensive plan. The sketch plan proposes a wide range of public improvements for the period through the year 2000.

The purpose of the capital improvements program is to determine the relative need for each proposed public improvement, and to estimate the probable available revenues. These improvements represent a considerable expense to the local, federal, and state governments. Since the total cost of these improvements is much greater than either the county or the local units of government could bear at any one time and these improvements would not be needed simultaneously, it is important to approach the development of these improvements from a sound management standpoint.

Most projects identified in the capital improvements program are eligible for federal and/or state financial assistance. It should also be pointed out that mounting pressure and public concern with our physical environment is resulting in a move toward areawide programs rather than city, borough, township, or county programs. These areawide programs will seek solutions to service problems on a geographic basis rather than on a political boundary basis. It is anticipated that funds will be made available for many of the local as well as the areawide programs.

RECOMMENDED CAPITAL IMPROVEMENT PROJECTS

Since Tropical Storm Agnes has caused widespread devastation within the Wyoming Valley, the listing and description of the long-range capital improvement projects recommended for the area are far-reaching. The order of program priorities has been dispensed with since all of these are needed at this time. However, the vast majority of these projects will be financed by federal and state funds, with the local share being a small segment of the total. We have not attempted to rank these projects by order nor have we ranked them by governmental units. Rather, we have taken the list of projects that has been submitted to the Economic Development Administration (EDA), Department of Housing and Urban Development (HUD), the Corps of Engineers, and the Department of Health, Education and Welfare (HEW), and tabulated each according to their submissions for funding. Each of these projects has a very definite influence on the sketch plan as designed for the Wyoming Valley through the year 2000.

(2) Ibid. p. 4.

MUNICIPAL CAPITAL IMPROVEMENTS

Within the Study Area, eleven municipal buildings were inundated by Tropical Storm Agnes. These municipalities have submitted applications for approximately 6 million dollars to assist in repair or replacement of these facilities. (Table 67). In addition, several have requested funds from the Economic Development Administration for sewer services, community college, courthouse annexes, industrial park developments, fire houses, and street extensions. The total cost of requests submitted to EDA is approximately $48,000,000. Of this amount, EDA is financing approximately 80 percent or approximately $38,000,000. This means that the local boroughs, townships, and cities must come up with the additional 10 million dollars for completion of these projects.

Urban Renewal - The Department of Housing and Urban Development has accepted 18 applications for urban renewal projects for the areas affected by flood waters. These projects range in scale from approximately $1 million to more than $64 million (Table 68). The funding for the 18 projects is as follows: State and local share-25 percent of the total costs; the Department of Housing and Urban Development-75 percent of the total costs. The largest project within the Study Area is the downtown urban renewal project for the City of Wilkes-Barre. This project, as proposed, will cost approximately $65 million. With the exception of the Wilkes-Barre project, all other Urban Renewal projects are to be developed as housing for those people who suffered complete or fractional loss during the flood, or as recreational space. Problems which were created due to incomplete information and guidance will prevent many of the older housing units from being acquired by the Redevelopment Authorities because of the use of the SBA loan. A better design and development pattern might have been afforded the Study Area had these units been acquired by the Redevelopment Authority.

Table 67

MUNICIPAL CAPITAL IMPROVEMENTS
LUZERNE COUNTY, PENNSYLVANIA

1972

MUNICIPALITY	DESCRIPTION	ESTIMATED COST
Duryea Borough	Municipal building	431,000
	Flood relief	73,650
Exeter Twp.	Municipal building and paving	600,000
Edwardsville	Municipal building	581,000
	Flood relief	45,300
Forty Fort Borough	Municipal building and sewer project	600,000
Hanover Twp	Municipal building	616,000
	Sewers	504,000
	Industrial Park	2,200,000
Jenkins Twp.	Sewers	2,035,000
Kingston Borough	Municipal Building	225,000
	Sanitary and Storm Sewers	600,000
Luzerne Borough	Sanitary Sewers	403,000
Larksville Borough	Sanitary Sewers	2,300,000
Luzerne County	Community College	2,200,000
	Court House annex	720,000
	Sewers	2,430,000
Nanticoke City	Municipal Building	909,000
	Nanticoke Industrial Development Park	2,060,000
Newport Twp.	Sewers	2,946,000

Table 67 (cont'd)

MUNICIPAL CAPITAL IMPROVEMENTS
LUZERNE COUNTY, PENNSYLVANIA

1972

MUNICIPALITY	DESCRIPTION	ESTIMATED COST
Plains Twp.	Fire House	410,000
	Sewers	8,514,000
Pittston Twp.	Sewers	2,500,000
Pittston City	Turnpike Industrial Park	1,152,000
Plymouth Borough	Municipal building and garage	651,000
Plymouth Twp.	Sewers	2,000,000
Sugar Notch	Sewers	2,500,000
Swoyersville	Sewers	4,185,000
Shickshinney	Municipal building	554,000
West Pittston	Municipal building	593,000
West Wyoming Borough	Municipal building	340,000
Wyoming Borough	Road Improvements	542,000
Wilkes Barre City	Industrial Park	432,000
	Fire Station	526,000
	Street extensions	514,000
	Storm Sewers	297,000
TOTAL		$48,188,950

SOURCE: Economic Development Council of Northeast Pennsylvania
Luzerne County Planning Commission.

Table 68

PROPOSED URBAN
RENEWAL DISASTER PROJECTS

LUZERNE COUNTY, PENNSYLVANIA
(ESTIMATED TOTAL COST*)

MUNICIPALITY	STATE AND LOCAL	FEDERAL GRANT RESERVATION	TOTAL
Edwardsville	2,260,576	5,537,694	7,798,270
Forty Fort	3,948,500	7,702,001	11,650,501
Hanover Twp. (inc. Oxford NDP)	4,508,500	13,671,855	18,180,355
Kingston	12,850,000	43,741,913	56,591,913
Luzerne	745,808	2,116,088	2,861,896
Plymouth	4,623,071	11,225,550	15,848,621
Shickshinny	1,737,964	3,000,000***	4,737,964***
Swoyersville	5,598,789	13,157,528	18,756,317
Plymouth Twp. (West Nanticoke)	2,037,328	3,200,000***	5,237,328***
West Pittston	1,274,250	1,000,000***	2,274,250***
Wyoming	1,930,500	866,000***	2,790,500***
Wilkes-Barre Downtown	21,820,950	43,155,025	64,975,975
Wilkes-Barre South	14,641,250	29,518,249	44,159,499
Wilkes-Barre Iran Triangle (Phase I)	1,848,000***	5,542,750	7,390,750***
Nanticoke (Lower Broadway)	951,893	2,209,000***	3,151,893***
Plymouth Twp. (Redev. Area 2)	733,000	2,199,000***	2,932,000***
Plains Twp.	616,289	1,848,900***	2,465,000***
West Wyoming	323,203	969,600***	1,292,803***
TOTAL	81,790,171	190,652,203***	272,442,374***

SOURCE: Luzerne County Redevelopment Authority, City of Wilkes-Barre Redevelopment Authority, City of Nanticoke Redevelopment Authority

* Rehavilitation grants included.
** Total costs = Planning cost and execution costs.
*** Approximated at this time.

TBA - to be announced.

The Urban Renewal Project for Kingston Borough, which encompasses the area that suffered the most personal damage, is predominately residential redevelopment. This project will have a significant effect on reordering the growth potentials of the western side of the river. The project is estimated to cost approximately $57 million. All the projects that have been submitted to the Department of Housing and Urban Development are important to the affect municipality. However, we must analyze each project within the context of the county's goals and objectives. Each project must be analyzed according to the relocation needs, the levels of services and the availability of public monies.

SANITARY SEWER

Greater Wilkes-Barre Community Area - The Wyoming Valley Sanitary Authority had a flood damage replacement cost of approximately $1 million (Table 69). This includes renovations to the treatment plant, Loveland pumping station, as well as other pumping stations, inspection and testing, and sewer line cleaning.

The Wyoming Valley Sanitary Authority system needs to convert to secondary sewage treatment, increase its capacity and extend the sewers to the municipalities of Hanover, Wilkes-Barre, and Plains Townships, and the Boroughs of Pringle, Courtdale, Luzerne, Swoyersville and Larksville. The total cost of these improvements for the planning period can be seen in Table 69.

Greater Nanticoke Area - It is recommended that additional collection sewers be constructed in Nanticoke City and an entire system in the Townships of Newport and Plymouth, to form the Greater Nanticoke Community area section of the Wyoming Valley Sanitary System. An additional recommendation calls for the separation of storm sewers from sanitary sewers in Newport Township. This would eliminate all storm water from the sewer system. It is further recommended that a .68 MGD sewage pumping station force main be constructed east of Glen Lyon where LR40031 crosses a tributary of the Newport Creek.

It is recommended that the Plymouth Borough sewers be extended beyond the Plymouth Borough-Plymouth Township boundary into Plymouth Township during the next five years to serve current and future development in Curry Hill and Johnston Green. In addition, collection sewers should be provided for the West Nanticoke and Tilbury Terrace areas near the Susquehanna River north of Nanticoke City.

The Greater Shickshinny Community Area - This service area would include the townships of Conyngham, Fairmont, Hollenback, Hunlock, Huntington, Nescopeck, Ross, Salem and Union and Nescopeck, Columbus and Shickshinny Boroughs. However, within the study area, we are only interested in Hunlock Township and Shickshinny Borough.

Fifteen areas in Hunlock Township are presently developed, primarily in the southern portion, along Hunlock Creek and its tributaries. Individually these areas are not expected to develop sufficiently to be able to afford a sewerage system prior to the year 2000. However, collectively the towns in the southern portion could do so during the period between now and 1980.

It is therefore recommended that the sewerage systems and an eight-inch interceptor sewer be installed, the latter starting in Hunlock along Pa. Rt. LR40070, LR40071 and the Kingsville-Hunlock Creek Road to carry sewage flows from the lower Hunlock Township. These will flow southward from Hunlock along Hunlock Creek to a .18 m.g.d. sewage treatment plant, located just south of the populated area. The cost of this improvement by staging is shown in Table 69.

The Shickshinny system should include the area immediately west of the Borough line in Salem Township as well as the main built-up section of the Borough. Gravity sewers should carry sewage from the Shickshinny area to the point on the Shickshinny side of the Shickshinny-Macanaqua Bridge. At this location a sewerage pumping station should be constructed with an initial pumping capacity of .50 m.g.d., designed to that the capacity could be increased to 1.08 m.g.d. by 1990 and 1.54 m.g.d. by 2010. The total cost of this facility is listed in Table 69.

Greater Pittston Area - Pittston Township is not presently served with sanitary sewers. In 1968 a plan was proposed to collect the sewage from Browntown and direct the flow into the Pittston system. The flow would then continue to the Wyoming Valley interceptor sewer. The recommended sewage collection system would satisfy the requirements of the Browntown area. The cost of this proposed action is listed in Table 69.

The most feasible method of serving Yatesville would be to install a sewage collection system to discharge into the proposed Browntown (Pittston Townships) sanitary sewer system for treatment by the Wyoming Valley Sanitary Authority. The Yatesville system should be installed between now and 1977.

It is recommended that Laflin Borough develop a sewage collection system, a .48 m.g.d. capacity sewage pumping station and a force main along Laflin Road, between 1975 and 1977, to connect to the proposed Inkerman collection system. The pumping station should be expanded to .70 m.g.d. by 1990.

The urbanized (western part) of Jenkins Township, lies southwest of Pittston City on the south bank of the Susquehanna River. This area includes Sebastopol, Port Griffith, Port Blanchard, and Inkerman. Portions of Sebastopol and Port Griffith are presently served by sanitary sewers. However, a large portion of these developments drain westward toward Port Blanchard. It is suggested that sewage from the Sebastopol be diverted westward through a pumping station at Port Griffith, and join the 21-inch interceptor sewer flowing toward Port Blanchard. Sewage collection in Inkerman will flow northward through an 18-inch interceptor sewer into Port Blanchard. It is recommended that a sewage collection system be constructed by 1990 to accommodate the growth in the Pittston High School area and the flow to the Sebastopol system.

The eastern portion of Jenkins Township is sparsely populated with the only concentration of population being around the towns of Old Boston and West Minister and the Owens-Illinois industrial plant which presently has a on-site sewage treatment facility. It is not anticipated that these areas would need a treatment facility until the year 2020, unless industrial expansion occurs at a greater rate.

The southwestern area of Exeter Borough adjacent to West Pittston, and along the Susquehanna River, is served by combined sewers. It is recommended that the existing dual system be improved by developing separate systems for sewage and storm water by 1974. The Sullivan Trail area as well as the Happy Valley area should be served by a sanitary sewer system by approximately 1980.

West Wyoming Borough does not have a sewage collection system. It has been recommended that one be developed to serve the area by 1974. In addition, it has been recommended that by 1990 a 15 inch interceptor sewer extension of the proposed West Wyoming Borough sewage collection system be constructed along Abrams Creek to collect flows from the 12 inch interceptor sewer from the Burkett Pond area as well as from development in the West Wyoming Borough.

The Greater Mountain Top Area - There are five municipal sewage treatment plants in this area. Four plants, serving small developments in Wright and Fairview Townships, were designed and constructed during the last decade, for treatment of domestic wastes only. These facilities are located in Capitals Hills Village, Rowland Park, Highland Woods, and Fairview Park.

The Greater Mountain Top Area should establish an entirely new regional type sewerage system. It is proposed that this system serve Fairview, Wright, Rice, Slocum and Dorrance Townships and Nuangola Borough. To accommodate sewerage requirements of communities in the eastern part of the area, the organization of a White Haven Area Sewerage System is recommended, directing sewage flows south to the existing sewerage system in White Haven Borough. Finally, the Dorrance Township Sewerage system is proposed for Dorrance Corners and the Dorrance Interchange. The cost of this proposed project to the year 2000 can be seen in Table 69.

Greater Back Mountain Community Area - Dallas Borough, Dallas Township and Kingston Township have formed the Dallas Area Municipal Authority. These three municipalities comprised approximately 62 percent of the 1970 population of the Greater Back Mountain community area; and by the year 2000 will be approximately 65 percent of the area.

The recommendation for this system is to expand the Dallas Area Municipal Authority system. With the construction of the proposed facilities and the anticipated growth in and around the proposed service area, it is recommended that this system be expanded to include additional areas of member municipalities, Harvey's Lake Borough, and areas from Leman and Jackson Townships.

The formation of three other sewerage systems is recommended, the Greater Back Mountain Community Area proportion of the Wyoming Valley Sanitary Sewer Authority system, the Lake Lewis system, and the Lake Silkworth system. If all recommendations are implemented, the expansion of the Dallas Area Municipal System facilities and the formation of the three new collection system service areas will serve all built up areas in the Greater Back Mountain Community Area. The cost of this system of operation can be seen in Table 69.

SCHOOL FACILITIES

The Community's efforts in upgrading educational facilities has been hastened by Tropical Storm Agnes. Prior to the disaster, the average age of these structures was 40 years. Attempts prior

Table 69

CAPITAL IMPROVEMENTS

MUNICIPAL AUTHORITIES

LUZERNE COUNTY, PENNSYLVANIA

A. Wyoming Valley San. Authority

Flood Damage Replacement...	
Treatment Plant	
Loveland P. Station	$ 398,000
All Other P. Stations	177,000
Furn. & Misc.	320,000
Inspection & Testing	34,000
Sewer Line Cleaning	31,000
	51,000
TOTAL	$1,011,000

EXTENSIONS TO SYSTEM	1972-1977	1980	1990	2000
Greater Wilkes-Barre Area				
Convert to secondary treatment				
Increase capacity to 62 m.g.d.	$10,000,000			
Extend sewers to municipalities				
Hanover Twp. system			$9,344,000	
Askam to Warrior Run				
Collection sewers	504,000	$31,000	32,000	$71,000
Interceptor sewers			209,000	35,000
Pumps, force mains, Oliver Mills		211,000	134,000	97,000
Wilkes-Barre Twp.		301,000		95,000
Collection & interceptors				
Plains Twp.		111,000	73,000	63,000
Collection& interceptors	3,600,000			
TOTAL	$14,104,000	$654,000	497,000	67,000
			$10,289,000	$428,000
Greater Nanticoke Area				
Newport Twp. system				
Pumping station, force mains	$ 107,000			
Gravity interceptors	564,000		$ 43,000	
Collection sewers				
Interceptor sewers				$166,000
Plymouth Twp. system				51,000
West Nanticoke collectors	804,000	$ 4,000	14,000	12,000
Pumping station	38,000		7,000	
Force mains	63,000			
Plymouth Boro ext.	385,000	49,000	55,000	57,000
TOTAL	$1,961,000	$53,000	$119,000	$286,000
Greater Shickshinny Area				
Hunlock Twp. system				
Collection sewers	$ 324,000	$107,000	$ 83,000	$71,000
Interceptor sewers	668,000			
New treatment plant	408,000			
Shickshinny system				
Sewer extensions	67,000	7,000	7,000	4,000
Pumping station & force main	93,000		59,000	
TOTAL	$1,560,000	$114,000	$149,000	$75,000
Greater Pittston Area				
Pittston Twp. system				
Browntown collection system	$1,294,000	$ 12,000	$ 12,000	$ 26,000
Pittston High School collection system	306,000	410,000	370,000	186,000
Yatesville collection system			359,000	86,000
Jenkins Twp. system	1,399,000	86,000		
Port Blanchard collection system	564,000	77,000	108,000	105,000
Inkerman collector & interceptor			95,000	97,000
Laflin Boro system	120,000			
New pumping station				
Inkerman force main	413,000	421,000	111,000	
Collection system			331,000	327,000
Exeter Boro system	405,000	255,000		
Sullivan Trail collection system		130,000	130,000	105,000
Happy Valley collection system			53,000	39,000
West Wyoming Boro system	1,952,000	265,000		
Collection system			433,000	355,000
Interceptor system			130,000	
TOTAL	$6,453,000	$1,656,000	$2,132,000	$1,326,000

Table 69 (cont'd)

CAPITAL IMPROVEMENTS

MUNICIPAL AUTHORITIES

LUZERNE COUNTY, PENNSYLVANIA
(CONT'D)

EXTENSIONS TO SYSTEM	1972-1977	1980	1990	2000
Greater Mountaintop Area				
Fairview & Wright Twp.'s system				
Collection systems	$ 1,489,000	$ 2,543,000	$ 2,466,000	$ 2,256,000
Interceptor systems	2,148,000			
Pumping station & force main	92,000		66,000	
Lindbergh interceptor sewer	27,000			
Rice Twp. system				
Blytheburn collection system	108,000	49,000	47,000	49,000
Pumping station & force main	158,000		111,000	
Interceptor system	252,000			
Nuangola collection & interceptor system		582,000	375,000	347,000
Laurel Lake collection system				305,000
Nuangola Boro system				
Collector & interceptor sewers	1,210,000	203,000	231,000	203,000
Bliem, Vandermark collector system		119,000	150,000	138,000
Pumping station		150,000		
TOTAL	$5,484,000	$3,646,000	$3,380,000	$3,298,000
Greater Back Mountain Area				
Dallas Twp. system				
Friendship Hills collection system	$ 43,000	$ 262,000	$ 311,000	$ 209,000
Friendship Hills pump station & force mains	36,000		8,000	
South Central Dallas collection system		31,000	32,000	31,000
S. Cen. Dallas pump sta. & force mains		31,000		
Overbrook Road collection system	104,000	128,000	153,000	138,000
Overbrook Road pump sta. & force mains	82,000		55,000	
Overbrook collector & interceptor		80,000	30,000	27,000
Dallas Boro system				
Hays Corners collection system		59,000	47,000	46,000
Fairfield collector and interceptor			308,000	115,000
Fairview Terrace collector & interceptor		325,000	302,000	275,000
Kunkle collection system		213,000	74,000	72,000
Kunkle pump sta. & force mains		203,000		
Bunker Hill collector & interceptor			319,000	109,000
Huntsville collector & interceptor	637,000	77,000	107,000	120,000
Dallas sewage treatment plant expansion	1,648,000		3,557,000	
Kingston Twp. system				
Maple Crest/Meadow Crest collector		311,000	231,000	
Borkette Pond collector & interceptor			379,000	109,000
TOTAL	$2,550,000	$1,720,000	$5,913,000	$1,251,000

SOURCE: Economic Development Council of Northeast Pennsylvania

and since Agnes, indicate the area's committment to an optimum level of education.

The shift in population, as a result of Tropical Storm Agnes, although temporary in nature, has placed a burden upon several school districts to provide education during this interim period. This transformation has brought about a need for additional facilities to accommodate additional students. In addition, the structure rendered unserviceable or non-repairable must be replaced.

There are 30 structures scheduled to be abandoned by 1977. The vast majority of these were constructed between 1900 and 1940. Approximately 30 percent of the buildings are located in the Wilkes-Barre school district. Although, most of the facilities are being abandoned because of age, several were inundated by the flood water. Consequently, this hastened the need for replacement facilities.

The replacement of facilities, not affected by the flood, will cost the public school systems an estimated $36,478,997 (Table 70). Flood damage assessments to both public and private schools has been estimated at $24,860,248 and $27,459,794 respectively. Total cost for public and private improvements, including the flood damage, has been estimated at $88,799,039.

WATER SYSTEMS

Water supply for the study area is provided by the Pennsylvania Gas and Water Company with the exception of the Back Mountain Area. This area is served by 22 individual water companies. The number of individual authorities presents serious problems because of the growth projected in the area.

The Hillside Filter Plant clear basin was submerged during Agnes, necessitating shutting off the source of supply during the emergency. The filter system continued to operate at Maxerium Plant keeping out contaminated and silt-bearing flood water. Damage cost to this system was estimated at $399,000.

Toby Creek Transmission line sustained three breaks during the flood. However, pressure was retained through emergency repairs.

Greater Wilkes-Barre Community Area - Recommendations have been made that by 1990, nine storage facilities would be constructed within the service area, (Table 70). Of primary con-

Table 70

CAPITAL IMPROVEMENTS

SCHOOL FACILITIES

LUZERNE COUNTY, PENNSYLVANIA

PUBLIC SCHOOLS

	DESCRIPTION	IMPROVEMENT PLAN	FLOOD
Northwest Area*	Garrison Elementary Renovation & equipment	--	$ 215,880.66
	Shickshinny Boro Schools (Federal subsistence $161,910.75)		101,910.75
	New Construction: 6 classrooms - 2 high schools, 4 elementary	Cost to be determined	--
Dallas**	Federal subsistence & damage outlay		1,420,000.00
	Dallas High School- Roofing problem;	--	
	Water damage (shop)	--	
	Elementary School playground; road erosion	--	
	New Construction to replace classrooms located in wood frame buildings- 35-room elem. school	Cost to be determined	--
Wyoming Area Schools**	Renovation and replacements of equipment - Senior High & Schooley		178,178.00
	New high school construction	$9,200,000.00	
Wyoming Valley West***	Renovation projection to 1977 -- 16 buildings	700,000.00	
	New high school	11,200,000.00	
	Renovation & equipment replacement	--	8,000,000.00
Greater Nanticoke Area	Renovation, maintenance & equipment replacement (West Nanticoke Elem.)	--	787,719.00
	Renovate elem. annex	Cost to be determined	--
	Cafeteria additio - E. L. Smith Elem.	Cost to be determined	--
Wilkes-Barre (Unit IX)	Renovation & equipment replacement		15,000,000.00 INC
	New elementary school A (Model Cities)		
	New elementary school B 2 new junior high schools		
Pittston Area	No flood damage per se Relocatable flood victims housing used		126,000.00
	New junior high school	$21,100,000.00	$25,830,218.41
TOTAL PUBLIC SCHOOLS			

Table 70 (cont'd)

CAPITAL IMPROVEMENTS

SCHOOL FACILITIES

LUZERNE COUNTY, PENNSYLVANIA

PRIVATE AND PAROCHIAL SCHOOLS

	DESCRIPTION	IMPROVEMENT PLAN	FLOOD
Israel Ben Zion Academy ****	School inundated Renovation and equipment replacement required		$ 730,910.94
Wyoming Seminary	Repair and renovation		2,561,293.00
Kings College**	Materials and repair		3,797,542.00
Luzerne County Community College**			911,213.00
Wilkes-Barre College**	Library equipment, maintenance and renovation		16,849,130.00
Parochial Schools**	Renovation and equipment replacement at 4 Wilkes-Barre schools		3,376,834.47
	Repair and equipment replacement at 2 Kingston schools		1,574,768.09
	Repair and equipment replacement at 3 Plymouth schools		952,439.78
	Maintenance, renovation and repair at		
	Duryea - Holy Rosary		13,251.00
	Swoyersville - Holy Trinity		71,126.76
	Forty Fort - Holy Name of Jesus		470,415.25
TOTAL PRIVATE AND PAROCHIAL SCHOOLS			$31,308,924.29
		21 100,000.00	57,139,142.70
GRAND TOTAL			21,100,000.00
			78,239,142.70

* School
** HEW: Hurricane Agnes Disaster Report, November 13, 1972
*** Does not reflect cost of construction for Evans School recently destroyed by fire
**** School Damage Survey Report

SOURCE: Economic Development Council of Northeast Pennsylvania

cern, to the area is a new treatment facility in Plains Township and an additional source of supply in the Laurel Run District. These improvements are estimated to cost approximately six million dollars (Table 71).

Greater Nanticoke Community Area - The area is served by Pennsylvania Gas and Water Company. It has been recommended that two storage tanks be constructed in the service area by 1990. These improvements are estimated to cost one million dollars (Table 71).

Greater Shickshinny Community Area - The area is served by five water companies: the Berwick Water Company, Pennsylvania Gas and Water Company, Shickshinny Water Company, Mocanaqua Water Company and Citizens Water Company of Wapwallopur. Within our study area we are concerned with Shickshinny system, Citizens Water Company, Pennsylvania Gas and Water Company, and a proposed new system for the Muhlenberg district.

Proposed improvements to these systems through the year 2000 include four storage facilities, expansion of transmission lines and additional supply source. These improvements are estimated to cost a fraction over two million dollars.

Greater Pittston Community Area - Three systems serve the residents of the area. These include Pennsylvania Gas and Water Company, Barrett Water Company and Yuscavage Water Company. addition to these two previous study efforts recommend the

Proposed improvements to the existing systems include construction of five new storage tanks. The new system will need two wells, development of a distribution system and storage facility. The estimated cost of these improvements is approximately three million dollars (Table 71).

Greater Mountain Top Community Area - The area is served by the following systems: Pennsylvania Gas and Water Company, Indian Springs Water Company, White Haven Municipal Authority and White Haven State School and Hospital, PGW and Indian Springs Water System serve portions of the study area. It is recommended that five storage facilities and two new wells be constructed by 1990. The estimated cost is one million dollars (Table 71).

Greater Back Mountain Community Area - This section of the study area is served by the following systems: Wisnuski Water Company; Banks Water Company; Dallas Water Company; Midway Manor

Table 71

CAPITAL IMPROVEMENTS
WATER SUPPLY
LUZERNE COUNTY, PENNSYLVANIA

	1970	1980	1990	2000
GREATER WILKES-BARRE AREA				
Ashley and Hanover Areas				
Storage Tank			370,000	
Laurel Run District				
Water Supply (three wells)			240,000	
Transmission mains			20,000	
Storage tank			110,000	
Distribution System and Expansions			180,000	60,000
Plains Area				
Storage tank			340,000	
Wilkes-Barre Twp.				
Storage tank			205,000	
Sugar Notch and Warrior Run				
Storage tank			120,000	
Plains Twp.				
Mill Creek Water Treatment Plant			2,735,000	
Courtdale, Pringle, and Luzerne Area				
Storage tank			205,000	
Larksville Area				
Storage tank			150,000	
Edwardsville and Kingston Area				
Storage tank			580,000	
Swoyersville and Forty Fort Area				
Storage tank				
TOTAL			370,000	
			5,625,000	60,000
GREATER NANTICOKE AREA				
Nanticoke City and Newport Twp.				
Storage tanks			540,000	
Plymouth Area				
Storage tanks			470,000	
TOTAL			1,010,000	
GREATER SHICKSHINNY AREA				
Shickshinny District				
Water Treatment Plant			750,000	
Storage tanks			295,000	
Transmission Mains			90,000	
Distribution Systems expansions			240,000	60,000
Muhlenberg District				
Water supply (two wells)			160,000	
Storage tank			100,000	
Distribution system and expansions			210,000	50,000
Wapwallopen District				
Water supply (one well)			80,000	
Storage tank				
Hunlock Twp.	50,000			
Storage tank	(1974-76)			
TOTAL	50,000		95,000	
			2,020,000	110,000
GREATER PITTSTON AREA				
Upper Exeter District				
Water Supply (two wells)			160,000	
Storage tank			90,000	
Distribution system and expansion			120,000	45,000
Duryea and Avoca Areas				
Storage tanks			450,000	
Hughstown and Dupont Areas				
Storage tanks			205,000	
Jenkins and Laflin Areas				
Storage tank			205,000	
Pittston and Yatesville Areas				
Storage tank			500,000	
West Wyoming and Wyoming Areas				
Storage tank			340,000	
Exeter and West Pittston Areas				
Storage tanks			555,000	
TOTAL			2,625,000	45,000

Table 71 (cont'd)

	1970	1980	1990	2000
GREATER MOUNTAIN TOP AREA				
Fairview District				
Water Supply (two wells)	160,000 (1972-73)			
	80,000 (1972-73)			
Storage tank			205,000	
Fairview Twp.				
Storage tank			245,000	
Wright Twp.				
Storage tank			150,000	
Rice Twp.				
Storage tank			150,000	
Nuangola Boro			750,000	
Storage tank				
TOTAL	240,000			
GREATER BACK MOUNTAIN AREA				
Applewood Manor District		240,000		80,000
Water supply (four wells)		100,000		80,000
Storage tanks		80,000	40,000	
Transmission mains		135,000	175,000	105,000
Distribution System and expansions				160,000
Brown Manor Authority				80,000
Water supply (two wells)				55,000
Storage tank				200,000
Transmission mains				
Distribution system and expansions				80,000
Kunkle District		160,000		
Water supply (three wells)		110,000		
Storage tank		30,000		
Transmission main		125,000	45,000	45,000
Distribution system and expansion				
Dallas District	245,000		150,000	
Storage tanks	(1972-74)	700,000	510,000	475,000
Distribution system expansions		20,000	20,000	20,000
Shavertwon - Kingston District			120,000	
Distribution System expansions			155,000	130,000
Meadowcrest District		245,000		120,000
Storage tank				110,000
Distribution System expansions		120,000	130,000	1,740,000
Midway Manor District		155,000	1,345,000	
Storage tanks		2,220,000		
Distribution system expansions	245,000			
TOTAL				

SOURCE: Economic Development Council of Northeast Pennsylvania

Water Company; and Shavertown-Kingston, Trucksville, Hillcrest, Homesite and Hill Companies. Within these service districts, six storage tanks, nine new wells, and expansion of each distribution system will be required by the year 2000. These improvements are estimated to cost approximately five and one-half million dollars.

GAS SYSTEM

Flood damage to the Pennsylvania Gas and Water System consisted of damaged meters, mains, and individual service connections. The greatest damage was a result of contaminated flood waters entering the gas distribution systems. The cost of repairs and replacement has been estimated by the Pennsylvania Gas and Water Company at over eight million dollars (Table 72).

SUMMARY

Allocations towards capital improvements within the Wyoming Valley have varied greatly over the past several years. There are several ways of financing the needed improvements, including present revenues, floatation of bonds, and the use of state and federal assistance. As a result of the monies allocated to disaster relief, state and federal funds would supply the greatest opportunity for funding the proposed improvements.

The State of Pennsylvania has accepted the position of assisting the local governmental units in their shares of funding. It is estimated that the Federal Agencies will fund approximately 75 percent of the costs for making these improvements. The state will pick up an additional 10 percent. Therefore the local share of the total cost will be approximately 15 percent.

The governmental units in the Valley, should begin a capital improvements program this year. Just because the state and federal funding has been made available, does not preclude an organized approach after this one time shot in the Area. This can be done by systematically developing a program based on priorities rather than at random.

Table 72

CAPITAL IMPROVEMENTS
PRIVATE UTILITIES

LUZERNE COUNTY, PENNSYLVANIA

Pennsylvania Gas And Water Company

Flood Damage Gas System	
Repairs and replacement to service lines	$2,100,000
including 18,000 new meters	56,380
installing extra cut-off valves	4,236,584
replacing mains - cast iron	469,300
steel	552,500
maintenance and repairs to services	45,200
re-gassing distribution mains	374,200
new gas service installed	65,000
repairs to propane plant	206,000
all other repairs	$8,162,264
Emergency Telemeteoring	75,000
Flood Damage Water System	$ 399,000

SOURCE: Economic Development Council of Northeast Pennsylvania

Table 72

PITAL IMPROVEMENTS
PRIVATE UTILITIES

COUNTY, PENNSYLVANIA

ompany

to service lines	
ers	
valves	$2,100,000
ron	56,380
	4,236,584
o services	469,300
ains	552,500
	45,200
	374,200
	65,000
	206,000
	$8,162,264
	75,000
	$ 399,000

ouncil of Northeast Pennsylvania



MUNICIPAL CAPITAL IMPROVEMENTS

FIGURE 20

CHAPTER 11

SHORT-RANGE PLANNING STRATEGY

The short-range planning period, 1972-1977, is viewed as a positioning period in the sense that certain areawide steps can and should be taken to take advantage of the opportunities currently present in the area. This chapter is devoted to pinpointing those opportunities in a variety of areas and suggesting particular steps which can be taken to achieve various priority objectives.

In short, it is suggested that a more systematic approach on the part of the Wyoming Valley officials and residents to growth and development opportunities will result in a more stable and dynamic economic climate which, in turn, will provide the means to create a better physical and social environment for all area citizens. Most importantly, a more systematic approach will accelerate the flood recovery and economic growth process.

PART 1 - GROWTH AND DEVELOPMENT ISSUES

One method for ascertaining and finalizing specific planning strategy elements involves the identification and classification of issues from the background and inventory analyses. Issues are critical to the comprehensive planning process in that they indicate directions for policy formulation and program development. As such, issues can serve to focus upon and clarify activities and functions warranting further investigation and analysis.

Thus, the following outline represents a listing of those planning issues, which surfaced during the investigations of the past two months. The accuracy and depth of these observations have obviously yet to be tested. In this context, the issue statements reflect observations, concerns, findings, problems, and conclusions by all study participants.

(1) The courage and energy of Wyoming Valley residents during the pre-flood depression years and the flood period is well-documented. It remains to be seen whether or not this determination can be channeled and coordinated towards specific valley wide goals. The extent to which flood recovery and Valley development efforts are addressed will determine the future growth potential of the Valley.
(2) To maximize economic diversification, growth and development in the Wyoming Valley, more attention must be given to total community environment (housing, recreation,

circulation, etc.). Creating and serving industrial parks is only part of the answer to attracting desired industry.

(3) There appears to be a serious void throughout the Wyoming Valley in terms of community leadership in the 30 to 50 year old age bracket.

(4) Key issues for the short-range planning period (1972-1977) are: (a) Flood Recovery and Flood Control, (b) Coordination of Community Systems, and (c) Economic Growth.

(a) Flood Recovery - The first order of business is to get households, commercial establishments, government and industrial establishments back on their feet. This is being accomplished in large measure at the present time. The question is: are opportunities being utilized to develop better community patterns, or are things being put back as they were?

(b) Coordination of Community Systems - The short-range five-year planning period should be a time of restructuring existing systems and creating new ones to more effectively attack the problems of community revitalization and economic growth. This ''getting your house in order'' is of primary importance in light of limited economic resources and manpower.

(c) Economic Growth - Wyoming Valley economic growth needs are well documented. It is, perhaps, enough to say simply that without sustained economic growth and diversification, the Valley will not have the resources to renew and revitalize the total community environment. Specific components of growth efforts include (1) diversification of industrial base, (2) higher wage levels, (3) new job skills to stem the tide of out-migration of the area's young people, and (4) the attraction of industries which will become good community citizens. A successful area program takes a lot of effort and coordination. As John H. Reading, Mayor of Oakland, California, has said ''There has to be a community pride and cohesion to be able to put projects together. You must create an economic climate that feeds upon itself''.

(5) The serious economic problems of the last thirty years in the Valley have had their effects on housing, as reflected in the fact that 82 percent of the total housing stock in the Study Area was constructed prior to 1940. Because of the age factor, there will be an increasing need for new stock in future years. Key issues to be faced in this area include: (a) the special needs of the elderly, (b) the wide cost difference between existing housing and new units, and, (c) the difference between the existing rent structure in the area and what

rent for new units will be, even for subsidized housing.

(6) The governmental structure in the area is fragmented and inefficient. This fragmentation has hampered flood recovery efforts in addition to the normal provision of public services. Attention must be given to more functional arrangements whereby necessary and desired public services can be provided for lower per capita cost to the public.

(7) Educational facilities in the area, similar to housing, are in many cases in need of rehabilitation and/or replacement. Of particular importance, is the fact that many existing facilities do not meet current state acreage standards.

(8) There are 18 active flood-related urban renewal projects in the Valley at this time. Every opportunity should be utilized to (1) expand existing school sites, (2) provide more functional patterns of land use and (3) in general, open up some vary crowded urban areas through the use of green space and recreation facilities and lower density housing re-use.

(9) The flood control problem is, in large measure, being resolved in the leveed areas. However, firm policies should be initiated with respect to development and redevelopment in unprotected 100-year flood plain areas.

(10) The neighborhood, as a strong functional unit, has played a dominant role in the historic development of the Valley. In fact, this orientation has been somewhat institutionalized in the form of many small municipalities throughout the area. However, much of this original identity has been lost through recent, indiscriminate urban development. It is perhaps, time to return to the neighborhood concept as a strong physical and social unit in terms of future land use planning.

One Short Term Response - Because many municipalities in the Wyoming Valley are faced with a variety of planning and technical assistance problems connected with flood recovery efforts, the Pennsylvania Department of Community Affairs (DCA) has established a Flood Recovery Team, located in Kingston, to respond to Wyoming Valley needs in these areas.

The DCA Flood Recovery Team staff consists of eleven specialists such as planners, housing experts, architects, community services consultants and others who will offer technical assistance to any flood-damaged communities in the Commonwealth without any formal contractual arrangement between the community and the State. In addition to this staff, it is anticipated that staff support may, if necessary, be drawn from the various bureaus of the Pennsylvania Department of Community Affairs. Consultant

services will also be used if needed. The team will be disbanded at the end of a two year period.

The DCA Flood Recovery Team will confine its activities to flood damaged communities and will not duplicate services and activities of other State agencies unless requested to do so by those agencies. Within the Pennsylvania Department of Community Affairs, the administration of grant-in-aid programs will continue to be handled by the Regional Offices. The assistance provided by the DCA Flood Recovery Team will augment the technical and planning assistance normally provided through the Regional Offices.

The basic purpose of the DCA Flood Recovery Team can be outlined as follows:

(1) To augment the Pennsylvania Department of Community Affairs staff for a two-year period of departmental-oriented flood recovery activities.
(2) To assist local government and multi-jurisdictional agencies in the technical aspects of planning and initiating flood recovery activities. Such assistance will include program and project development.
(3) To act as liaison and conduit between local governments and multi-jurisdictional agencies and other State and Federal agencies.
(4) To assist in creating new agencies or organizational arrangements that will enable local governments to more effectively perform flood recovery activities.
(5) To provide special assistance to communities containing group mobile home sites, both in the management of these sites and in planning for their re-use.

PART 2 - ECONOMIC DEVELOPMENT

In terms of short-range economic development in the Wyoming Valley, the most productive approach will be to build upon the recent economic gains experienced by the area prior to Tropical Storm Agnes and to systematically exploit those economic opportunities created by the flood disaster itself.

Basically, this short-range approach involves specific action in three major areas of concern: (a) taking the necessary steps to become more knowledgeable about economic conditions in the Valley; (b) a meaningful coordination of the research, recruitment, sales and locational aspects of economic development; and, (c) allied actions to support the basic thrust of areawide economic development.

The following section outlines the major trends and observations

identified during the course of the Economic Growth Factors Study, recently conpleted.

Area Economic Trends

(1) The transition from a labor intensive, one-industry dependent area to an economy that is relatively diversified, and does not depend upon one specific industry for its livelihood, has come to an end with the advent of Agnes. This period of transition, which can be referred to as the First Phase of Diversification, was characterized by (a) quantity rather than quality in industrial development activities, (b) population stabilization, and (c)somewhat accelerated growth of non-manufacturing economic sectors during the latter half of the decade.
(2) For an area that used to be almost exclusively dependent upon mining employment, Luzerne County has made a commendable recovery. Growth rates are consistently above the state average in practically every economic sector, and a progressively diversified industrial mix point to a period of stability ahead. This period of stability can be identified even in light of the recent adverse effects caused by Tropical Storm Agnes to the economy of the region.

The reason for this observation is that despite some obvious liabilities, the area has been able to attract manufacturing establishments to a higher degree than most other metropolitan areas in the state and has achieved a higher percentage of manufacturing employment.

Liabilities are the decline in population (recently arrested), a growing shortage of skilled labor, a need for newer housing stock and improved technical education. Even so, there is no reason why overall economic development efforts will not be increasingly successful if more coordinated areawide industry recruitment procedures are implemented.

The above-mentioned liabilities have been instrumental in preventing a more rapid diversification of the economic base. The manufacturing industry is by no means balanced yet. Apparel manufacturing establishments still employ more persons than any other economic sector in the area. However, it appears that the dominance of this industry as a prime employer of non-skilled labor is slowly decreasing as more and more durable goods manufacturing establishments invest in the area.

Also, it is expected that with the recent influx of federal and state employment, as part of the flood recovery effort, the slight shift towards non-manufacturing employment taking place in the last two or three years

will be strengthened. This will assist in creating the basis for a more balanced employment structure, closely resembling the national norm and resulting in a higher wage structure in the area.

(3) Even though Luzerne County contains the bulk of manufacturing activity in the region and registers high growth rates in manufacturing employment, it still lags in the average remuneration employees of its industries take home compared to those of the northeastern region.

(4) The out-migration during the decade of 1950-1960 was 69,666 persons. By the decade 1960-1970, this migration rate had slowed to an out-migration of 11,989 persons, indicating that a ''turning around'' of the migration rate has exhibited itself, as indicated in the Economic Growth Factors.

(5) Luzerne County has come a very long way towards controlling its chronic unemployment problem. From a high of 12.5 percent in 1961, unemployment dropped to a low of 3.9 percent in 1969, but increased to 7.4 percent in 1971. Scranton seems to have a slightly more stable employment situation than the Wilkes-Barre/Hazelton labor market.

Luzerne County, however, consistently exhibits an unemployment percentage which is higher than the state and national averages. This can be explained by the dominance of one major industry in the area. Another contributing factor is that the area has an unusually high percentage or relatively unskilled workers whose number is closely tied to overall business cycles.

(6) The Wilkes-Barre/Hazleton labor market is one of the lowest-paid in the country. It ranks among the lowest 25 in an overall average hourly earnings in manufacturing for 175 areas in the U.S. In particular, apparel, which is the dominant industry in the region, had the lowest average earnings for production workers of any of the 21 major manufacturing industry groups in the U.S.

Nevertheless, the area appears to be catching up with the rest of the country. Average hourly earnings of production workers in manufacturing rose more in the area between 1960 and 1970 than in the U.S. This can be attributed not only to a more diversified industrial base, but also to the fact that apparel experienced a greater than average improvement in sales in the past ten years.

(7) Northeastern Pennsylvania is entering a period in its industrial development effort in which it must be committed to the improvement of the quality of its present and future industries by increasing the technical skills of employees. The economy is expanding and becoming more

diversified and technically-oriented and, as such, constantly requires new labor skills. For increased success, an economic development program should be based on a continuing partnership between the development effort and the technical education system in the area.

The Effects of Agnes

(8) Practically every sector of the Valley economy sustained a certain amount of damage that will have intermediate to long range effects on the welfare of the region. Despite all this physical damage, the area appears to be on its way to a remarkable comeback.

This comeback is particularly noticeable with respect to employment which, in most cases, is higher than comparable months in 1971. Nevertheless, this prosperity is somewhat deceiving in that a few thousand of these jobs are temporary and/or closely tied to the flood recovery efforts.

(9) The economy is currently undergoing a period of necessary adjustment to the physical damage inflicted by the storm, and subsequent changes in the economic structure. With the gradual conclusion of the flood recovery activities however, the economy will soon arrive at a status where long range trends will start to be identified. This should happen around the end of 1973 or the beginning of 1974. At that time, economic equilibrium will probably have been reached and dominant forces will start having a definite effect in shaping the future of the Valley.

(10) By the end of 1973 or mid-1974, it is expected that the composition of the labor force in the Study Area will have shifted towards a larger, high skill labor force population. Consequently, it will take some time for local industry to adjust to these changes in labor force characteristics. Construction and services are also expected to sustain vigorous rates of growth; the first because of the tremendous need in housing and the second as a combination of the post and pre-flood growth, partly due to the increased industrial diversification.

(11) In the case of the garment industry, one of the largest sectors of the Valley's economy, the opinion was ventured by an industry spokesman that it would probably take a year for local establishments to return to normal. The effect of increased sales will cause increased employment demands by retail establishments which will, in turn, place an additional short-term burden upon garment and textile mill employers. Because of these employment demands and changing wage rates, it is probable that

recovery of the apparel and leather industries in the aggregate will not be complete.

(12) Construction, along with supporting industries, as well as distribution activities will boom. Estimates of housing restoration costs in the Greater Wilkes-Barre area range from one quarter to one-half billion dollars. Much of this will be funded by Small Business Administration (SBA) loans. This will mean a definite reduction of male unemployment rates. It will also provide some skill transition for unskilled labor in preparation for better paying factory jobs when the construction boom finally subsides.

(13) Flood recovery activities have had a decided impact upon existing wage structures. These higher rates have been initially generated through the influx of federal and state agencies requiring new employees; emergency disaster funds providing for local administrators, temporary workers, etc.; and general recovery needs-particularly in the construction and service sectors.

This, in turn, has directly affected existing businesses and industries which have had to raise wages to compete. While some of the flood related employment is temporary, it will last long enough to have a permanent impact upon the economy of the area. Some marginal activities which have taken advantage of the labor intensive employment situation in the past will not survive this change.

SHORT-RANGE STRATEGY

The Wyoming Valley is no longer in the position of having to diversify its industrial base just so it can survive. Further industrial diversification is needed and will be welcome, but it should not be the primary concern of economic development efforts.

What should, perhaps, be the primary objective is a consolidation of the economic positions of the Valley; an economic structure that would assure long-term balancing between supply and demand. That is, the demand of local industries in labor, raw materials, equipment, supplies and services should be balanced with a supply level, a maximum percentage of which should be generated from local sources.

This procedure will require a more qualitative than quantitative approach, as the area is rapidly losing one of its three prime assets as an attractive industrial location, ample labor resources coupled with low wages. The area will be forced to concentrate its efforts to an increasing degree towards marketing

its other two primary assets: an outstanding transportation network and marketing proximity.

The most promising method of developing positive, long-range economic trends in the Valley is human resource development (upgrading local labor force skills) with respect to creating a better balance of economic supply and demand factors. In this context, it will be important to:

(1) accurately assess the present status of human resources (the supply),
(2) evaluate and forecast likely developments in every sector of the economy (the demand), and
(3) examine in detail the interactions among economic sectors, and between each sector and the pertinent segment of the human resources reservoir (the balance).

Better Knowledge of the Economic Sector - As a first step in positioning the Valley toward a stronger economic structure, it is important to become more knowledgeable about current economic trends, conditions and interrelationships throughout the Study Area. The better informed the area is regarding its economic structure, the easier it will be to initiate specific steps to speed up the economic growth of the area and do so in a manner which will establish the most advantageous trends in coming years.

Why more studies? Although several good economic analyses have been completed by the Economic Development Commission of Northeast Pennsylvania and other organizations, previous studies have dealt primarily with industrial development and other component parts of overall economic growth. Secondly, Tropical Storm Agnes has created some major changes in the Valley's economic structure which must be analyzed and understood to initiate the most effective economic growth efforts.

The following recommendations are concerned with this aspect of short-range economic strategy of becoming more knowledgeable about what presently exists in the Valley.

(1) Initiate as soon as possible a full scale economic study of the Wyoming Valley. The scope of the study should be the (a) delineation of all economic sectors, (b) their relationship of each economic sector with others as well as with existing human resources and (c) the identification of the interactions of the Valley with the rest of the County, the Scranton urbanized area, the Northeastern Pennsylvania region, the Commonwealth and the nation. The objective of the study should be to incorporate the results of the labor census (see below) and

arrive at feasible development strategies for the Valley with various levels of economic/social costs and benefits. Desirable completion date should be the end of 1973.

(2) Conduct a labor census of the Wyoming Valley. This census should be completed no later than the end of 1973 and should be coordinated with the economic study and the attitude survey (see below). To ensure the maximum degree of objectivity, consolidation of the two studies is not recommended. This manpower inventory should be as detailed as data availability permits and in a format capable of being updated periodically in an economical manner. The census and the attitude survey will comprise the ''supply'' part of the equation presented earlier in this section. On the other hand, the economic study will analyze the ''demand'' and the ''balance''.

(3) A Young People's Attitude Survey should be handled by another organization and should be made available to the economic study group no later than August 1973. The findings of this survey will be taken into consideration while preparing the economic development strategies. This survey need not be limited to a certain segment of the population. Information can also be collected from other age groups. Nevertheless, in view of the present population age distribution and the reportedly unstable aspirations of the younger generation, it is necessary to forecast their anticipated reaction and contribution to the proposed strategies.

(4) Establish an economic monitoring program to provide a consistent information base for economic development activities. The economic monitoring program will consist of (a) the information gathering system and (b) the data processing system. The information system will have to be divided between (a) publicly available data and (b) data that has to be extracted from selected sources by standard means of statistical sampling. The publicly available category of data will be composed of primarily employment figures.

Two primary data sources will have to be relied upon for this information: the Industrial Census, conducted by the Pennsylvania Department of Commerce, and the data of the Bureau of Employment Security of the Pennsylvania Department of Industry and Labor. The former source will be used for manufacturing employment figures by industry, the latter for figures in all other kinds of employment. The following kinds of data should be collected on a quarterly basis:

(a) Total civilian work force by municipality.

(b) Total unemployment by municipality.
(c) Employment figures by type of employment (skilled or unskilled) by industry and by municipality.
(d) Average gross earnings (weekly as well as hourly) and working time by industry.
(e) Labor turnover rates by industry.

These dependent variables will be regulated by such quarterly econometric indicators as:

(a) Retail trade sales by municipality (durable and non-durable goods categories).
(b) Index of manufacturing activity by industry for the nation and for the Valley.
(c) Agriculture income by municipality.
(d) Estimated additions to the housing stock by municipality.
(e) Automobile sales for the Valley.
(f) Estimated public works expenditures by municipality.
(g) Average payroll levels for (a) federal, (b) state and (c) local government by municipality.

The above listing represents an optimum approach to the monitoring of economic data. It is, however, recognized that it may not be possible to incorporate all aspects of the recommended program in an operational format at this time.

A logical place to perhaps situate the monitoring program is with the Data Access and Technical Assistance Program (DATAP) under the joint sponsorship of EDCNP, Kings College and Luzerne County. The computer equipment and systems analysis capability is well established, as well as a fee-sharing structure.

It should also be stressed that this monitoring program will in no way attempt to regulate the labor market. It will merely extract information which, when disseminated among labor unions, industrial executives and public officials, can indirectly help to effect positive changes in the labor situation through independent action by all who may be concerned. This program could serve as an early warning system by indicating possible consequences that may take place if present trends continue.

Coordination of Economic Development Efforts - It is certainly very difficult to examine to what degree local industrial development organizations in the Valley cooperate with each other. On the one hand, a survey conducted in March 1971, by EDCNP indicated a definite amount of cooperation among the region's organizations (based on answers by the respondents). On the other hand,

there has been discussion in certain published sources negating this statement. A quick review of the projects partly financed through the Pennsylvania Industrial Development Authority fund since its inception indicates that no industrial expansion projects credited to one or another of these organizations is located in an area other than the ''area of jurisdiction'' of the respective organization. The answer probably lies somewhere in between these viewpoints.

The question of cooperation and coordination between economic development organizations is most important due to the Valley being one economic unit and, therefore, should be considered as one for any additional economic development. As the proximity of Wyoming Valley industrial parks to Lackawanna County indicates, the Valley is only a part of a larger economic unit that approximates the Wilkes-Barre/Scranton urbanized area.

Industrial expansion in one municipality is certain to have not only secondary but also primary economic effects upon surrounding municipalities. No two municipalities are exactly alike in the percentage of land devoted to or actually occupied by industries. Even if they were similar, it is highly improbable that manufacturing employment in one municipality would equal that of another.

Nor is it plausible to assume that one municipality has a more skilled labor force than that of another. A municipality may have more and better industrially-zoned land. However, it should be stressed that the quality and quantity of land (assuming availability of supporting infrastructure in all competing sites) does not mean that one municipality necessarily possesses unique advantages over another in the Valley.

It is rather the Valley, the county, or even more accurately, the Wilkes-Barre/Scranton urbanized area that possesses locational advantages over other areas in the state.

Chances are that not only during operation but also while a new plant is under construction or modification, a much higher percentage of expenditures will flow directly to business organizations, suppliers, general contractors, and employees residing outside the municipality's boundaries than to the municipality itself. It is indeed extremely difficult to prove that a particular industrial enterprise will benefit the municipality at its present location more than in surrounding municipalities or municipalities across the river or at the other end of the Valley.

This cost/benefit situation can apply to the CBD areas of

various communities in the study area as well. It is even more applicable in the case of large shopping centers which by virtue of their mere size can attract employees as well as customers from not only neighboring communities, but from across county lines as well.

In summary, it seems desirable to achieve more systematic and productive economic development activities throughout the Valley. The following recommendations and strategies follow this approach in outlining coordinative actions which can be taken in this area.

(1) A dialogue should be established between those agencies and organizations in the Valley concerned with economic development, industrial recruitment, employment, human resource development, economic research and vocational-technical education. There should be a greater awareness of how the above activities contribute to the overall economic development process. As a first step, an economic development seminar under the sponsorship of either the Economic Development Council of Northeast Pennsylvania or the Institute for Regional Affairs at Wilkes College should be convened. As understanding is developed as to how each activity supports the overall economic development process, it is hoped that a more formal relationship will be established on the part of the participating agencies.

Particularly important, is the relationship of human resource development and vocational-technical education to the industrial recruitment process. It has been stated earlier that the area is losing one of its primary assets: a low wage, surplus labor force. A strong partnership, therefore, must be established between groups and area economic development groups in order to quickly respond to specific industry labor force needs.

(2) It is recommended that an areawide economic development organization be established to (a) increase the scope of recruitment activities, (b) provide a more centralized response to outside industrial inquiries, (c) more effectively utilize the dollars allocated to economic development in the Valley and (d) improve the area's economic development image.

This areawide organization can build upon an existing agency or a new structure can be created. Another alternative would be to create an areawide, cooperative economic development council. The most important aspect, however, is to more systematically pool the area's manpower and financial resources to stretch the economic development dollar further.

If eight individual organizations have a budget of $5,000 for personnel, the best they could expect would be a secretary and/or a part-time staff. If this money was put into a consolidated budget, a fulltime professional staff could be hired. The same is true for advertising, recruitment trips, etc. An overlooked, but vital, aspect of this process is the area's image to outsiders. With a number of competing economic development groups, it is hard for an organization interested in locating in the area to obtain a clear picture of true local opportunities. A coordinated effort makes the recruitment process much smoother for industrial prospects and increases the capture rate at the same time.

During the course of the study, several persons in the area expressed the opinion that "it will be impossible to get the various groups together". This is not an acceptable answer in terms of the benefits to be realized through a coordinated effort. Too many other areas are reaping the benefits of accelerated economic developments because they put their differences aside in favor of cooperative action.

How can a coordinated organization be established? The simplest way is to see what other areas are doing. There are numerous examples of a variety of cooperative efforts, both in Pennsylvania and other states. A few trips and conversations with other groups will provide many answers to organizational alternatives. The most important factor is to (1) agree on the need and (2) get started!

(3) This coordinated economic development effort should be supported by a professional economic research and analysis group which will provide information and assistance throughout the entire economic development procedure; from initial contact to on-site selling. Such a support group would be of valuable assistance in terms of functions as selection of target industries, preparation of promotional material and providing prospects with detailed, local data.

It seems logical that EDCNP provide this service to the Valley. One major reason for this recommendation is that the Council already has much of the necessary material in its files as well as the staff expertise to provide the required assistance. As the focal point for many previous economic development analysis efforts, the Council is well equiped to expand its operation to encompass this support effort. Additionally, the Council as an established regional planning and development

operation is in a position to assist in directing federal resources to bolster area economic development efforts.

Supporting Efforts - In conjunction with major economic development efforts, two supporting functions are suggested.

(1) In addition to the recruitment of new industry, a service to help existing industry in the Valley should be established. Many industries are experiencing problems as a result of the flood and/or the economic diversification process and, in many cases, it is desirable to help these industrial citizens stay in the Valley. This function can be performed as a part of the economic development organization.

(2) A group is also needed to acquaint industrial prospects with other aspects of locating in the Wyoming Valley; namely schools, houses, churches, etc. This is a service that many other areas are incorporating in their economic development process with satisfying results. It was mentioned earlier in this report that industries are becoming more and more interested in the total community environment and such a function represents a complementary response to this interest.

PART 3 - HOUSING

The greatest change in the character of the housing stock will happen within the next five years, during which time the construction and reconstruction of housing units will proceed as a result of the implementation stages of the urban redevelopment projects. Also, within the next five years, the majority of the available federally-subsidized funds will probably be expanded in the fields of public housing, housing for the elderly, Section 236 housing (middle-income owner occupied housing) and Section 235 housing (middle-income renter occupied housing). To help channel the effectiveness of this construction, the following suggestions are made.

(1) A coordinating, subsidized housing council should be created immediately so that one clear and concise overview can be obtained at this early stage of program development.

The director of the council should be an experienced grantsman and have extensive knowledge of urban renewal, public housing and non-profit housing programs. The first task would be the immediate coordination of urban renewal projects and all subsidized housing projects into one comprehensive program. His second task would be the

development of comprehensive programs of future subsidized housing within the Study Areas.

(2) A housing market council should be started so that constant surveillance of new housing stock needs could be available in the future. The purpose of the council would be to ascertain and project housing demand, by type and location so that a supply and demand balance can be maintained throughout the area.

(3) The builders located within the Wyoming Valley should consider combining forces to meet immediate building needs created by Tropical Storm Agnes. The use of builders from outside the Study Area will not add to the Valley's economy and will not create the expertise in local builders that will be needed in the future.

After this initial building period, lasting until approximately 1975 to 1980, builders could reorganize as individual firms. However, each firm will have the knowledge and experience that will come from reconstructing the Valley.

(4) As the Valley begins its recovery, new and innovative building and development techniques should be used as a springboard for a better community structure and environment. There are several means by which a more functional community structure can be obtained over the short range. First the institution of planned unit developments (PUD), would add the needed open space while also creating and reviving distinct neighborhoods that have their own individual character and present a specialized appearance.

The adoption of the PUD concept of zoning would do a great deal to open up the densely-packed residential areas that presently exist.

(5) Improved site planning for all new residential developments should be initiated so that a more efficient and functional usage of land can be realized. The incorporation of open space, small, neighborhood shopping areas and good transportation routes should be foremost in the minds of municipal leaders. A complete investigation of the impact of any new development should be made to determine the effect that new development will have upon not only the municipality in which it will be situated, but also upon the character of surrounding areas that it will affect. However, municipalities should compress this review into a relatively short span of time so that needed housing units will not be unnecessarily delayed because of bureaucratic red tape.

(6) A complete housing structure analysis is needed within each municipality. This determination of the number of

substandard units would give an indication of the number of additional standard units needed in the future. Additionally, area governments should back the present State Industrialized Housing Act (H.B. 1237). The inauguration of this act would allow the use of modular units thereby bringing the cost of new housing within the reach of a much greater number of people.

(7) The location of elderly housing, in the past, has not conformed to any overall plan for the Valley. It is recommended that in locating future buildings for elderly people, special consideration be given to sites that are located on major public transit routes, close to medical services and medical personnel and close to major shopping facilities. Special attention should be given to improved site planning and the activities that these buildings will house.

A high-rise building should not be built for elderly people. The best site plan would be one or two-story units built at grade with no stairs, only ramps. It makes little sense to put an elderly person on the tenth floor of a building and expect him to negotiate stairs and elevators, especially if there is an emergency, such as a fire.

(8) A re-evaluation of property taxes should be conducted so that commercial and industrial property pay their fair share within the tax structure. While the structure of the local tax system is being analyzed, two important considerations should be taken into account: are the taxes equitable and are all taxing categories being used to their utmost advantage. Present property taxes within the Valley are regressive in that the poor and elderly pay a greater percentage of their income to taxes than do the middle and upper income population. A sliding scale for property taxes could be developed to reflect the income of the taxpayer.

(9) The occurence of mobile homes will increase as the price of new housing continues to rise. Local municipalities are presently missing a source of revenue that will be increasing in the future. Mobile homes in mobile home parks should be taxed as if they were single-family homes and not as vehicles. This new tax base could be used to off-set present taxes on property belonging to the poor and the elderly.

(10) A last major area in which all municipalities can cooperate for a safe and standard housing stock is the adoption of housing and building codes so that one standard can be set for all new construction. The adoption of consistent plumbing, electrical and fire codes is also

necessary if the housing supply is to remain in a safe and usable condition.

Not all of the above recommendations can be implemented within the present framework of local governmental fragmentation. The implementation of one set of codes, with an areawide review and enforcement agency, for the entire Wyoming Valley would be the optimum situation. If such a condition existed, a developer would not have to redesign a specific unit for each different municipality and would not have to resubmit subdivision plats to each municipality. One central review procedure would benefit all areas and would increase the opportunity for future housing construction at a price the average resident of the Valley could afford.

PART 4 - GOVERNMENT

The case for continuation of the concept of small municipal government in the Wyoming Valley Study Area has been analyzed in previous chapters. The case for better intergovernmental cooperation and the joining of hands to achieve common goals and objectives for the future well-being of the Valley has also been clearly defined. Better living conditions, better municipal services such as streets, parks sewers, garbage collection and disposal, code enforcement, uniform tax valuation and flood control are but a few of the points justifying steps to be taken for improvement of the governmental structure; steps which will protect and enhance the general health and welfare of the people of the Valley.

The sections have pointed out the need for certain preliminary steps, if any implementation of the plans is begun. The identification of common problems, the examination of working examples of intergovernmental cooperation and the determination of area wide goals and objectives are several of the preliminary steps outlined as essential. Therefore, in order to provide some direction and timing, and set some priorities to study recommendations, some summary suggestions have been outlined. These suggestions which follow are not in any way intended to represent a final definition of the course to follow or the exact sequence, but are given, as is this entire study, as a type of ''sketch plan'' to define certain basic needs and suggest certain courses of action.

(1) Inventory of Municipal Services - As a first step to bringing about some improvement in the problems facing local government in the Study Area, an inventory of municipal services, costs, manpower, equipment and overall accountability should be made. Such an inventory is essential to the determination of actual needs, and the

setting of future goals, objectives, and priorities.

(2) Citizens Steering Committee - To guide and direct such a study, and to make evaluations and recommendations as to what courses of action should best be pursued, a Citizen Steering Committee should be formed. Such a committee should be charged with the responsibility of making recommendations to the governing body of Luzerne County. The recommendations would focus on whether or not a Charter Study Commission should be formed and the possibility of adopting a Home Rule Charter for Luzerne County.

(3) Charter Study Commission - Following completion of the Inventory of Municipal Services, assuming it is the recommendation of the Citizens Steering Committee, a concerted public effort should be made towards getting favorable action by the County Commission in the form of an ordinance calling for a referendum for the creation of a Charter Study Commission.

Continued action by the Steering Committee and other public groups will be needed to secure a representative group of candidates to offer service on the Commission and to secure a favorable vote by the public on Creation of the Charter Study Commission.

(4) Adoption of Home Rule Charter - Since two separate elections are required before a change in the structure of Luzerne County government can be made, it will be necessary for the Citizens Steering Committee to continue its promotional activity until the final voting has taken place with the adoption of the Home Rule Charter, and the election of the new governmental officials.

(5) Appointment of a County Manager - If the election results are favorable, and the public decides to adopt the Home Rule Charter, the next step would be appointment by the newly elected County Council of a trained, qualified, experienced County Administrator.

The process leading to adoption of a new County Charter involves actually three elections, since the municipal elections must be both a Primary election and a General election. Since municipal elections in Pennsylvania can only be held on odd years the soonest newly elected County govenment could take office is January, 1976.

With the adoption of the new County Home Rule Charter, and the appointment of a County Administrator, the County should begin to assume a strong leadership role in the matter of providing essential, and improved public services.

(6) County Wide Services - There is no doubt that there are many needs in the 45 municipalities in the Study Area

which are not now being met, or which could more adequately be met by an overall governmental unit, such as Luzerne County.

With a capable trained administrator to guide the County, and a County Council composed of dedicated, capable, public-minded citizens, who will place the future needs of the citizens of the entire county above all else, plans can be made to begin to provide certain additional key services. Those services determined by consultation with the various municipalities to have the highest priority and the greatest need should be sought first.

A partial listing of some of the areas where the newly elected County Coucil might move first could include such categories as:

(a) General Accounting Services such as centralized data processing, purchasing, warehousing, and pooling of heavy equipment.

(b) Public Works Service functions such as Solid Waste Collection and disposal, sewerage collection, street and road maintenance, parks and recreation and equipment maintenance and repair.

(c) Public Safety functions such as flood control facilities operation and maintenance, minimum standards for police and fire protection, uniform code adoption and enforcement, and traffic control and signalization.

No priority is intended in the order of listing these basic functions. There will undoubtedly be many other areas in which a strong County government will recognize and work to provide, by mutual agreement, with those municipalities which desire to take advantage of such service.

(7) Minimum Standards for Municipal Services - The identification of the areas where County services can best be provided will depend on the setting of minimum municipal standards. Such a setting of standards may either be provided in the type of Home Rule Charter adopted, or through later agreement with the Pennsylvania Department of Community Affairs, and the adoption of state wide legislation.

PART 5 - URBAN DEVELOPMENT

The strength of a long-term plan depends upon the ease with which the implementation process can begin. The recommended long term concept, as discussed in Chapter 13, emphasizes the importance of neighborhood centers. At present these centers are identifiable

through commercial areas, churches, and social or cultural activities. However, in many instances the neighborhood orientation has been lost due to a lack of identity.

Proto-type Centers - Through a detailed urban analysis and the resultant long range plan, four basic neighborhood types have been identified. These four types serve as the starting point for concentrating implementation techniques:

(1) neighborhood shopping
(2) religious and social activities
(3) educational facilities
(4) recreational activities

The European concept of the ''corner store'' still exists in many neighborhoods. This is extremely important since it serves as a local ''information'' center regarding such matters as baby-sitting services, employment, sale of merchandise, among others. In addition, these neighborhood centers often house the local pub or tavern which is often important as a community gathering place.

The importance of emphasizing this identification with neighborhood shopping can be accomplished by giving visual predominance to these shops, pubs, and other focal activities. Painting the shops of each center with a particular color identifies the center. Special lighting and signing can also direct residents to the center and provide a sense of arrival to a new activity. Sidewalk or street paving pattern or color could also help distinguish these centers. Posting of information kiosks or community bulletin boards which are readily visible by residents will serve to attract participation. Every economic encouragement should be offered to the neighborhood shop owner to remain in the neighborhood.

Religious and social activities provide an identifiable focus through local cinemas, clubs and fraternal organizations. Often these social activities are located in neighborhood shopping centers. This further strengthens the center. Again, improved lighting, special planting areas, and store front improvements will help identify the center. If land is available, a neighborhood outdoor meeting place could be designed as a mini-park.

Churches are a predominant feature on the skyline of the Wyoming Valley. These spires provide a sense of direction and orientation for the neighborhoods and should be re-emphasized by not allowing competing signs to obstruct the views and lighting of the steeples and spires at night. The use of church meeting rooms for appropriate community functions should be encouraged.

While the churches, in many cases, form the visual focus of the neighborhoods through the spires, and the commercial areas the trading centers through the types of shops, the most concentrated activities tend to be the schools. Playgrounds associated with the schools are a gathering area for neighborhood children. Again, improved lighting techniques should be explored to encourage safe night time use of the playareas. Pedestrian circulation techniques should be explored to ensure the safety of children traveling unassisted to schools. Special graphics and signing techniques could be developed to generate the interest of children. Outdoor display areas can be developed in conjunction with the playgrounds.

Daycare or childcare centers,which might be housed in structures painted special colors, could become neighborhood focal points. Graphics could be utilized to identify their specific function. Night time use could be made of these centers for baby-sitting services.

Recreational activities currently center around playgrounds, YMCA, and YWCA, health clubs, tennis and basketball courts, and other sports facilities. Presently, few parks or passive recreational spaces exist in the neighborhoods.

Future emphasis should be upon the creation of ''mini-parks or playareas'' where buildings have been razed. Through design imagination, regardless of how small the space, a quiet seating area or handball court or a simple landscaped area can be created. These areas can also become gathering places for both children and the elderly.

The neighborhood centers which are adjacent to the flood plain area have a special opportunity for introducing a ''green wedge'' from the river open space to the neighborhood center. If the flood plain area is developed, in part, as playing fields and other team recreational uses, the proximity of a neighborhood center with commercial facilities could be a magnet for ice cream parlors, sandwich shops, or taverns.

Pedestrian links between centers should be emphasized through a green space network whenever possible, by use of signing techniques, lighting, landscaping techniques, paving patterns or colors and other inexpensive methods. While parking areas should be planned, pedestrian circulation to the neighborhood centers should be encouraged.

To further strengthen the centers, a program of ''face lifting'' could be implemented in neighborhood centers. This ''face

lifting'' should extend beyond painting and renovating shop fronts to include surrounding residences. The important aspect of the neighborhood concept is that the improvements begin in the centers and radiate outward into the residential areas.

To achieve these ''first steps'' of the recommended plan, special financial incentives should be available to the neighborhood shopowner, school principal, or resident to encourage the visual revitalization of the center. Neighborhood residents should be encouraged to organize themselves through political wards, school districts, or other existing means to begin an orderly implementation of the plan.

An immediate way to improve the physical appearance is through the efforts of local beautification programs sponsored by local civic groups. If one community would buy a truckload of trees and would plant them along the major arterials, the effect would be to soften the harsh features that now exist in many areas and also provide for the much needed visual relief.

DEVELOPMENT CONTROLS

The major goal of the short-range planning strategy is to give direction to the future development and redevelopment within the Wyoming Valley. The choice of which developmental controls should be used has been a matter of many discussions and public comment since the flood caused by Tropical Storm Agnes. It is necessary for the respective governing bodies to take immediate steps to ensure that controls are realized. These steps include the meshing of municipal zoning and subdivision ordinances to the short- and long-range concept plans; extensive use of Urban Renewal and the power of eminent domain; and, the improvement in the channels of communication and coordination between local units of government in the Wyoming Valley.

This section will be devoted to three sub-sections (1) a general review of the tools available to control development, (2) a flood plain ordinance and the needs of such an ordinance, and (3) a building code for flood prone areas.

ORDINANCES AND CODES

Zoning, the primary vehicle for controlling private development, involves the division of an area into districts which provide for and regulate land use categories. By being neither too restrictive nor too permissive, zoning controls can serve the development interest of the community. Abuse of these controls by any party can negate possibilities for redevelopment or

realignment of priorities for enhancing the Valley and its environs.

Within the Study Area, 31 of the 45 units of government have adopted individual zoning ordinances as shown in Table 73. The remaining 14 municipalities have elected to use the County Zoning Ordinance as part of their planning programs (figure 21).

A review of these ordinances was undertaken. This review involved the number of criteria which, in combination, serve to indicate the effectiveness of a particular ordinance. Several of these criteria are listed here, but not in a particular order.

(1) Organization;
(2) Realistic minimum lot size in each district;
(3) Realistic building coverage limit in each district;
(4) Use of performance standards where appropriate;
(5) Appropriate use of land in and adjacent to the flood plain; and
(6) Provisions for a planned residential development.

Most of the ordinances are well organized. Each has a list of definitions, but in most cases, these have shortcomings. Definitions are an important element and clarification should be included in any revision. The shortcomings that are typical among most of the ordinances are (1) vagueness within the definitions, (2) inconclusive lists of uses contributing to alternative interpretations of the same section, (3) definitions for similar subjects are different for each municipality, and (4) little uniformity among municipalities as to what use is permissable in a specific district.

The pertinence of each permitted use within each district was not judged. However, no great conflicts within any one district was apparent.

There appears to be a need to include newly developed approaches to zoning. These include performance standards and planned residential developments.

Planned residential development will permit more flexible use of land patterns and densities, including housing mix and clustering and at the same time conform generally to district requirements. Depending on the scale of the development supportive, non-residential services may be permitted within it.

It is very evident, that for urban renewal to successfully re-juvenate the flooded areas, considerable planned residential

Wilbur Smith

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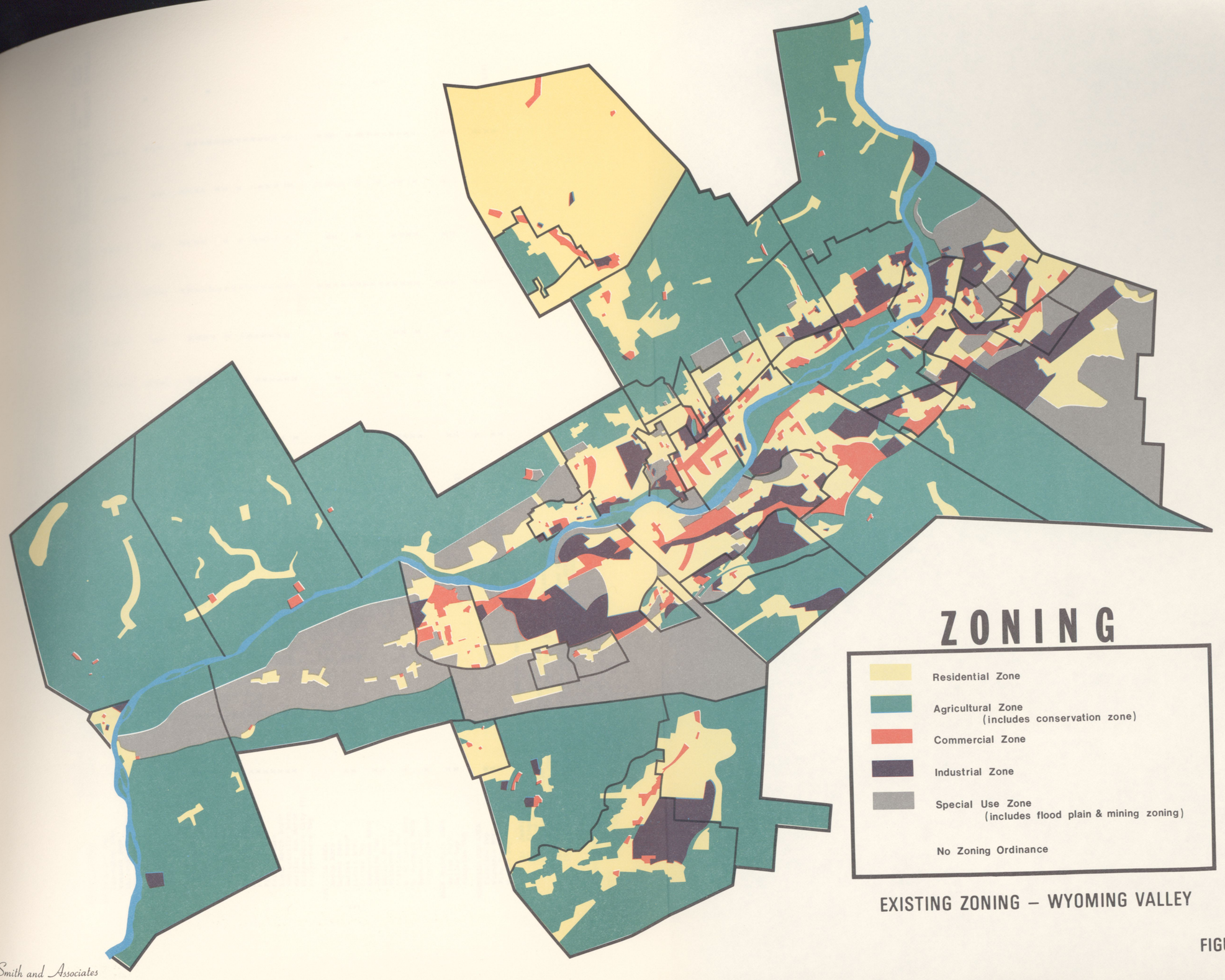
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EXISTING ZONING – WYOMING VALLEY

FIGURE 21

Wilbur Smith and Associates

Table 73

ZONING ORDINANCES
Adopted by Units of Government
Wyoming Valley
Luzerne County, Pennsylvania

Municipalities	Conservation Districts	Agricultural Districts	Suburban Residence Districts	Single Family Residence Districts	Two-Family Residence Districts	Apartment Residence Districts	Neighborhood Business Districts	Community Business Districts	Highway Business Districts	General Business Districts	Mining Districts	Light Industrial Districts	Heavy Industrial Districts	Special Use Districts	Flood Plain District
SHICKSHINNY AREA															
Conyngham Twp*	X	X	X	X	X	X	X	X	X	X	X	X	X		
Hunlock Twp*	X	X	X	X	X	X	X	X	X	X	X	X	X		
Shickshinny Boro*	X	X	X	X	X	X	X	X	X	X	X	X	X		
Union Twp*	X	X	X	X	X	X	X	X	X	X	X	X	X		
													X	X	
NANTICOKE AREA										X			X		
Nanticoke City				X	X	X	X	X	X	X	X	X	X		
Newport Twp*	X	X	X	X	X	X	X	X	X	X	X	X	X		
Plymouth Twp*	X	X	X	X	X	X	X	X	X						
										X	X	X	X		
WILKES-BARRE AREA										X	X	X	X		
Ashley Boro	X			X	X	X		X	X	X	X	X	X		
Courtdale Boro*	X	X	X	X	X	X	X	X	X	X	X	X	X		
Edwardsville Boro	X	X	X	X	X	X	X	X	X	X			X	X	
Forty Fort Boro	X	X	X	X	X				X	X	X	X	X		
Hanover Twp				X	X					X			X		
Kingston Boro				X	X	X	X	X	X	X	X	X	X		
Larksville Boro	X	X	X	X						X			X		
Laurel Run Boro	X			X	X	X	X	X	X	X	X	X	X		
Luzerne Boro	X	X	X	X	X	X	X		X	X			X		
Plains Twp	X			X	X	X	X	X	X	X	X	X	X		
Plymouth Boro	X	X	X	X	X	X	X	X	X	X			X		
Pringle Boro	X	X	X	X	X	X	X	X	X	X	X	X	X		
Sugar Notch Boro*	X	X	X	X	X	X	X	X	X	X			X		
Swoyersville Boro	X	X	X	X	X	X	X	X	X	X			X		
Warrior Run Boro*	X	X	X	X	X	X	X	X	X	X			X		
Wilkes-Barre City (7)															
Wilkes-Barre Twp															
										X			X		
PITTSTON AREA										X	X	X	X		
Avoca Boro				X	X	X				X			X		X
Dupont Boro				X	X	X	X	X	X	X					
Duryea Boro*	X	X	X	X	X	X				X	X	X	X		
Exeter Boro	X	X	X	X	X					X			X		
Exeter Twp					X					X			X		
Hughestown Boro				X	X(1)	X(1)	X			X		X	X	X	
Jenkins Twp	X			X	X	X				X			X	X	
Laflin Boro	X			X	X		X			X			X		
Pittston City				X	X					X	X	X	X		
Pittston Twp				X	X	X	X	X	X	X			X		
W. Pittston Boro	X	X	X	X	X					X	X	X	X		
W. Wyoming Boro		X		X	X(5)	X(5)	X	X	X	X			X		
Wyoming Boro		X		X	X	X	X								
Yatesville Boro*	X	X	X							X			X		
										X	X	X	X		
BACK MOUNTAIN AREA				X	X	X	X	X	X	X	X	X	X		
Dallas Boro	X			X	X	X	X			X	X	X	X		
Dallas Twp	X	X	X	X	X(2)	X(2)	X								
Kingston Twp		X													
							X			X			X		
MOUNTAIN TOP AREA										X			X	X(4)	
Fairview Twp	X	X		X						X	X		X		
Nuangola Boro	X			X	X(3)	X(3)	X			X	X				
Rice Twp	X			X	X(6)	X(6)	X								
Wright Twp		X													

Notes: (1) Jenkins Twp. combines 2-family & apartment residence districts.
(2) Kingston Twp. " " " " " " " "
(3) Rice Twp.
(4) Residence Trailer - Permanent Installation.
(5) Wyoming Borough Combines 2-family & apartment residence districts.
(6) Wright Twp. " " " " " " " "
(7) Wilkes-Barre has additional districts: (a) Commercial offices districts
(b) Heavy commercial districts
(c) Central office districts.

(* Under County Zoning Ordinance)

SOURCE: Luzerne County Planning Commission
Wilbur Smith and Associates

developments (PRD) must be incorporated into their plans. As mentioned, several of the ordinances have a section relating to PRD's. However, the existing ones are not flexible enough to allow new and inventive development. Therefore all ordinances should be modified to include a new section on PRD's. PRD's are allowed under the Commonwealth of Pennsylvania Municipal Planning Code enacted under Act 247 and amended by Act 93 of 1972. Section 701 through Section 711 give the details of the allowed planned residential development.

Another new idea in zoning is land use intensity standards, wherein property in a given area is assigned a rating on land use intensity or a maximum floor area for the area of the tract. This allows development of ratios for open and living space, recreation space and off-street parking.

Land allocated by zoning districts within the study area includes: approximately 22 percent residential, 4 percent commercial, 6 percent industrial, 56 percent agricultural, and 12 percent in special use category, as shown in Table 74. This compares to an existing land use of approximately 9 percent industrial, 8 percent public, quasi-public and recreation and 80 percent undeveloped which includes agricultural and mining uses. Open space and recreational land uses are included in the agricultural zone. The special use category includes flood plain and mining land uses.

As success of any ordinance depends upon the enforcing officer, it is very important that he be qualified to administer the regulation. Several of the governmental units do not have a full time staff member to enforce the ordinance and to answer questions. In addition, because of the difference in ordinances and their enforcement, an individual or developer does not have a clear understanding of it or what can be accomplished. Therefore, it is recommended that a model ordinance be prepared for adoption by all units of government. The proposed regulation should be flexible enough to allow the City of Wilkes-Barre its complex zones and at the same time offer the smallest governmental unit the needed zones for its protection. In addition, with the exception of Wilkes-Barre, it is recommended that the Luzerne County Planning Commission be made the enforcement agency for the remaining sectors of the county. This approach will assure equal treatment to all governmental units and at the same time treat the developer, builder, and citizens in a unified way.

SUBDIVISION REGULATION

Subdivision regulation is another means of legally controlling

Table 74

LAND ALLOCATION BY ZONING DISTRICT
Wyoming Valley, Pennsylvania
1972

MUNICIPALITY	TOTAL ACREAGE	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	AGRICULTURAL+	SPECIAL USE*
SHICKSHINNY AREA:						
Conyngham Twp	10,075	228	10	145	8,437	1,255
Hunlock Twp	12,914	1,169	225	0	11,520	0
Shickshinny Boro	249	83	50	63	53	0
Union Twp	12,857	883	58	47	11,919	0
Area Sub-Total	36,095	2,313	343	255	31,929	1,255
NANTICOKE AREA:						
Nanticoke City	2,024	1,039	399	75	0	511
Newport Twp	10,033	426	14	0	4,373	5,220
Plymouth Twp	9,043	739	45	0	7,155	1,104
Area Sub-Total	21,100	2,204	458	75	11,528	6,835
WILKES-BARRE AREA:						
Ashley Boro	513	154	67	14	181	97
Courtdale Boro	601	154	0	0	409	38
Edwardsville Boro	699	218	77	157	69	178
Forty Fort Boro	785	523	108	154	0	0
Hanover Twp	7,714	2,549	465	1,826	0	2,874
Kingston Boro	8,531	1,169	218	14	6,833	297
Larksville Boro	2,867	1,246	150	507	894	70
Laurel Run Boro	3,087	405	0	209	2,473	0
Luzerne Boro	384	192	52	46	94	0
Plains Twp	8,032	845	1,599	674	4,914	0
Plymouth Boro	699	388	91	126	94	0
Pringle Boro	342	209	63	35	35	0
Sugar Notch Boro	628	106	7	0	0	515
Swoyersville Boro	1,002	711	49	87	46	109
Warrior Run Boro	430	91	11	0	0	328
Wilkes-Barre City	4,173	2,451	590	681	0	451
Wilkes-Barre Twp	1,404	262	67	699	282	94
Area Sub-Total	41,891	11,673	3,614	5,229	16,324	5,051
PITTSTON AREA:						
Avoca Boro	766	573	60	133	0	0
Dupont Boro	939	253	97	199	0	390
Duryea Boro	6,397	519	16	303	932	4,627
Exeter Boro	2,509	443	189	533	1,344	0
Exeter Twp	7,212	689	34	147	6,308	34
Hughestown Boro	499	169	100	97	0	133
Jenkins Twp	10,964	603	60	73	10,228	0
LaFun Boro	758	290	136	272	60	0
Pittston City	932	396	233	250	0	53
Pittston Twp	8,108	1,368	306	1,568	0	4,866
W. Pittstown Boro	433	326	30	77	0	0
W. Wyoming Boro	2,037	426	97	187	1,238	89
Wyoming Boro	696	229	100	67	300	0
Yatesville Boro	333	126	0	133	34	40
Area Sub-Total	42,583	6,410	1,458	4,039	20,444	10,232
BACK MOUNTAIN AREA:						
Dallas Boro	13,251	12,859	249	143	0	0
Dallas Twp	1,786	893	159	0	734	0
Kingston Twp	9,948	1,507	119	37	7,966	319
Area Sub-Total	24,985	15,259	527	180	8,700	319
MOUNTAIN TOP AREA:						
Fairview Twp	5,909	1,538	132	366	3,873	0
Nuangola Boro	714	531	47	0	136	0
Rice Twp	10,425	654	117	114	9,540	0
Wright Twp	8,680	2,196	221	1,052	5,211	0
Area Sub-Total	25,728	4,919	517	1,532	18,760	0
GRAND TOTAL	192,382	42,778	6,917	11,310	107,685	23,692

\+ Includes: Open space zoning, recreational zoning and agricultural zoning.
* Includes: Flood Plain zoning, mining zoning and special use zoning.

SOURCE: Local zoning regulations and Wilbur Smith and Associates.

development and use of land which is available to governmental units. Under these regulations a developer must prepare and submit a plan of his proposed subdivision design for review by the Planning Commission and/or the governing body. Approval or disapproval is based on the plat's compliance with the provisions of the adopted regulation.

Conventional regulations emphasize design standards and coordination of utilities with adjacent developments, planned or existing. Subdivision regualtions also deal with road widths and frontages, lot sizes, block lengths and the relationship of the design of facilities and utilities with the site and its surroundings.

Subdivision regulations are administrated at the local governmental level. Subdivision regulations in the Study Area are in effect in the Boroughs of Ashley, Dallas, Dupont, Laflin, Larksville, Laurel Run, Nuangola, and Wyoming and the Townships of Dallas, Fairview, Hanover, Jenkins, Kingston, Newport, Pittston, Plains, Rice, Wilkes-Barre and Wright; and the Cities of Wilkes-Barre, Nanticoke, and Pittston.

CODES

These are a set of legal standards and requirements which regulate various aspects of housing construction and occupancy. Building codes are a series of standards and specifications establishing minimum safeguards in the creation and construction of buildings to protect the health and safety of the public. Specifically, they are concerned with the methods, materials, and equipment used in construction. Housing codes are requirements which govern the conditions and facilities of buildings as they relate to the health, safety, and welfare of housing occupants. Health codes are specifically designed to safeguard the physical well-being of residents, and encompass such areas as water and sewer facilities. (Table 75)

Building codes are based on the powers of the State delegates and are administered by local governments. Codes concerned with building are generally patterned after one of the four model codes. These include: the Basic Building Code prepared by the Building Official Conference of America (BOCA). This code has widespread use in the east and northcentral states; the Uniform Building Code prepared by the International Conference of Building Officials (ICBO) - and is usually used in the western states; the Southern Standard Building Code and the National Building Code prepared by the American Insurance Association. Codes developed along more specialized lines include fire, plumbing and electrical codes.

Table 75

CODES - ORDINANCES AND REGULATIONS
ADOPTED BY
UNITS OF GOVERNMENT WITHIN STUDY AREA
LUZERNE COUNTY, PENNSYLVANIA

Unit of Government	Building	Electrical	Plumbing	Fire	Housing	Zoning Adopted	Zoning Year	Subdivision Adopted	Subdivision Year	Proposed Urban Renewal Projects
Ashley Boro	X	X	X	X	X	X	1968	X	1965	
Avoca Boro						X	1965			
Conyngham Twp*										
Courtdale Boro*	X	X	X	X	X					
Dallas Boro						X	1948			
Dallas Twp						X	1965	X	1965	
Dupont Boro						X	1966	X	1966	
Duryea Boro*										
Edwardsville Boro*	X	X	X	X						
Exeter Boro						X	1965			X
Exeter Twp*										
Fairview Twp						X	1964			
Forty Fort Boro						X	1929			
Hanover Twp	X	X	X	X	X	X	1956	X	1959	X
Hughestown Boro	X	X				X	1965			X
Hunlock Twp*										
Jenkins Twp						X	1965	X	1964	
Kingston Boro	X	X	X	X	X	X	1928			
Kingston Twp						X	1962			X
Laflin Boro						X	1970	X	1961	
Larksville Boro	X					X	1968	X	1964	
Laurel Run Boro	X	X	X	X		X	1961	X	1968	
Luzerne Boro*	X	X	X	X	X			X	1964	
Nanticoke City	X	X	X	X	X	X	1959			X
Newport Twp*								X	1959	X
Nuangola Boro						X	1964	X	1964	
Pittston City	X	X	X	X	X	X	1964	X	1964	
Pittston Twp						X	1959	X	1959	X
Plains Twp						X	1966	X	1966	
Plymouth Boro	X	X	X	X	X	X	1966	X	1965	X
Plymouth Twp*						X	1964			X
Pringle Boro										X
Rice Twp						X	1967			X
Shickshinny Boro*						X	1965	X	1962	
Sugar Notch Boro										X
Swoyersville Boro	X	X	X	X	X	X	1965			
Union Twp*										X
Warrior Run Boro*						X	1964			
W. Pittston Boro						X	1965			X
W. Wyoming Boro	X	X	X	X	X	X	1960	X	1960	X
Wilkes-Barre City						X	1966	X	1966	
Wilkes-Barre Twp						X	1964	X	1962	
Wright Twp				X		X	1965	X	1965	X
Wyoming Boro										
Yatesville Boro*	X									

* These units of government have adopted the County Zoning Ordinance

Source: Luzerne County Planning Commission and
Wilbur Smith and Associates

The enforcement of various codes requires a system of inspections to ascertain compliances. Violations are reported to the owner, who is ordered to restore the property to legal standards. Additional procedures may be applied if non-compliance continues. As a final recourse, units of government may supervise repairs, and receiverships and code enforcement programs may be organized and financed through federal programs.

Other jurisdictional codes, regulating plans and practices guide the development of residential uses. Local policies and plans with respect to utilities and streets are important factors in the planning process. Policies are commonly commented on in the capital improvement program and local service offered. The rates, services, accounting, and facilities of utility companies are regulated by the State.

FLOOD PLAIN ZONING

The need for flood plain zoning can be seen if one looks at the areas of greatest damage as a result of Tropical Storm Agnes and compares these areas to the areas delineated as the 100-year flood plain. The intent of any flood plain ordinance is to protect the public from possible flooding dangers. As an aid to promoting better flood plain management, the following ordinance is provided.

SECTION 1.0 STATUTORY AUTHORIZATION, FINDINGS OF FACT AND PURPOSES

1.1 STATUTORY AUTHORIZATION

The Legislature of the Commonwealth of Pennsylvania has in Section 604 of Act 247 as amended by Act 93 of 1972 delegated the responsibility to local governmental units to adopt regulations designed to minimize flood losses. Therefore the _____ (governing body) of _____ (local unit), Pennsylvania does ordain as follows:

1.2 FINDINGS OF FACT

1.21 Flood Losses Resulting from Periodic Inundation. - The flood hazard areas of _____ (local unit), Pennsylvania are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base all of which adversely affect the public health, safety and general welfare.

1.22 General Causes of These Flood Losses. - These flood losses are caused by: (1) The cumulative effect of obstructions in flood plains causing increases in flood heights and velocities. (2) The occupancy of flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated or otherwise protected from flood damages.

1.23 Methods Used to Analyze Flood Hazards. - The determination of the 100-year flood plain will be based upon maps by the Corps of Engineers delineating the 100-year flood.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety, and general welfare and to minimize those losses described in Section 1.21 by provisions designed to:

1.31 Restrict or prohibit uses which are dangerous to health, safety or property in times of flood or cause excessive increases in flood heights or velocities.

1.32 Require that uses vulnerable to floods, including public facilities which serve such uses, shall be protected against flood damage at the time of initial construction.

1.33 Protect individuals from buying lands which are unsuited for intended purposes because of flood hazards.

SECTION 2.0 GENERAL PROVISIONS

2.1 LANDS TO WHICH ORDINANCE APPLIES

This ordinance shall apply to all lands within the jurisdiction of _____ (local unit name) shown on the Official Zoning Map as being located within the boundaries of the Floodway and Floodway Fringe Districts.

2.2 ESTABLISHMENT OF OFFICIAL ZONING MAP

The Official Zoning Map, together with all explanatory matter thereon and attached thereto, is hereby adopted by reference and declared to be a part of this ordinance. The Official Zoning Map bears the signature of the _____ (e.g., Mayor) attested by the _____ (e.g., City Clerk) and shall be on file in the office of the _____ (e.g., City Clerk) _____ (e.g., Zoning Administrator).

The water surface profile entitled 100-year Flood Plain prepared by Army Corps of Engineers, dated _____, is attached to and made a part of the Official Zoning Map and this ordinance.

2.3 RULES FOR INTERPRETATION OF DISTRICT BOUNDARIES

The boundaries of the zoning districts shall be determined by scaling distances on the Official Zoning Map. Where interpretation is needed as to the exact location of the boundaries of the district as shown on the Official Zoning Map (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Board of Adjustment shall make the necessary interpretation. The person contesting the location of the district boundary shall be given a reasonable opportunity to present his case to the Board and to submit his own technical evidence if he so desires.

2.4 COMPLIANCE

No structure or land shall hereafter be used and no structure shall be located, extended, converted or structurally altered without full compliance with the terms of this ordinance and other applicable regulations which apply to uses within the jurisdiction of this ordinance.

2.5 ABROGATION AND GREATER RESTRICTIONS

It is not intended by this ordinance to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this ordinance imposes greater restrictions, the provision of this ordinance shall prevail. All other ordinances inconsistent with this ordinance are hereby repealed to the extent of the inconsistency only.

2.6 INTERPRETATION

In their interpretation and application, the provisions of this ordinance shall be held to minimum requirements and shall be liberally construed in favor of the governing body and shall not be deemed a limitation or repeal of any other powers granted by State statutes.

2.7 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings

restricted by debris. This ordinance does not imply that areas outside the flood plain districts or land uses permitted within such districts will be free from flooding or flood damages. This ordinance shall not create liability on the part of _____ (Name of local unit) or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

2.8 SEVERABILITY

If any section, clause, provision or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected therby.

SECTION 3.0 ESTABLISHMENT OF ZONING DISTRICTS

The flood plain areas within the jurisdiction of this ordinance are hereby divided into the two districts: Floodway Districts (FW) and Floodway Fringe Districts (FF). The boundaries of these districts shall be shown on the Official Zoning Map. Within these districts all uses not allowed as Permitted Uses or permissible as Special Exception Uses shall be provided.

SECTION 4.0 FLOODWAY DISTRICT (FW)

4.1 PERMITTED USES

The following uses having a low flood damage potential and not obstructing flood flows shall be permitted within the Floodway District to the extent that they are not prohibited by any other ordinance and provided they do not require structures, fill or storage of materials or equipment. But no use shall adversely affect the capacity of the channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility or system.

4.11 Agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viriculture, truck farming, forestry, sod farming, and wild crop harvesting.

4.12 Industrial-commercial uses such as loading areas, parking areas, airport landing strips.

4.13 Private and public recreational uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic

grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails.

4.14 Residential uses such as lawns, gardens, parking areas and play areas.

4.2 SPECIAL EXCEPTION USES

The following uses which involve structures (temporary or permanent), fill or storage of materials or equipment may be permitted only upon application to the Zoning Administrator and the issuance of a Special Exception by the Board of Adjustment, as provided in Section 6.5, Special Exceptions, of this ordinance. These uses are also subject to the provisions of Section 4.3, which apply to all floodway Special Exception uses.

4.21 Uses or structures accessory to open space or Special Exception uses.

4.22 Circuses, carnivals, and similar transient amusement enterprises.

4.23 Drive-in theaters, new and used car lots, roadside stands, signs, and billboards.

4.24 Extraction of sand, gravel, or other materials.

4.25 Marinas, boat rentals, docks, piers, wharves.

4.26 Railroads, streets, bridges, utility transmission lines, and pipelines.

4.27 Storage yards for equipment, machinery, or materials.

4.28 Kennels and stables.

4.29 Other uses similar in nature to uses described in Section 4.1 or 4.2 which are consistent with the provisions set out in Sections 1.3 and 5.0 of this ordinance.

4.3 STANDARDS FOR FLOODWAY SPECIAL EXCEPTION USES

4.31 All Uses. - No structure (temporary or permanent), fill (including fill for roads and levees), deposit, obstruction, storage of materials or equipment, or other use may be allowed as a Special Exception use which, acting along or in combination with

existing or future uses, unduly affects the capacity of the floodway or unduly increases flood heights. Consideration of the effects of a proposed use shall be based on a reasonable assumption that there will be an equal degree of encroachment extending for a significant reach on both sides of the stream. In addition all floodway special permit uses shall be subject to the standards contained in Section 6.53 and the following standards (4.32-4.36):

4.32 Fill. -

(1) Any fill proposed to be deposited in the floodway must be shown to have some beneficial purpose and the amount thereof not greater than is necessary to achieve that purpose, as demonstrated by a plan submitted by the owner showing the uses to which the filled land will be put and the final dimensions of the proposed fill or other materials.
(2) Such fill or other materials shall be protected against erosion by rip-rap, vegetative cover or bulkheading.

4.33 Structures (temporary or permanent). -

(1) Structures shall not be designed for human habitation.
(2) Structures shall have a low flood damage potential.
(3) The structure or structures, if permitted, shall be constructed and placed on the building site so as to offer the minimum obstruction to the flow of floodwaters.
(a) Whenever possible, structures shall be constructed with the longitudinal axis parallel to the direction of floodflow, and
(b) So far as practicable, structures shall be placed approximately on the same floodflow lines as those adjoining structures.
(4) Structures shall be firmly anchored to prevent flotation which may result in damage to other structures, restriction of bridge openings and other narrow sections of the stream or river; and
(5) Service facilities such as electrical and heating equipment shall be constructed at or above the regulatory flood protection elevation for the particular area or floodproofed.

4.34 Storage of Material and Equipment. -

(1) The storage or processing of materials that are in time of flooding buoyant, flammable, explosive or could be injurious to human, animal or plantlife is prohibited.
(2) Storage of other material or equipment may be allowed if not subject to major damage by floods and firmly

anchored to prevent flotation or readily removable from the area within the time available after flood warning.

SECTION 5.0 FLOODWAY FRINGE DISTRICT (FF)

5.1 PERMITTED USES

The following uses shall be permitted uses within the Floodway Fringe District to the extent that they are not prohibited by any other ordinance:

5.11 Any use permitted in Section 4.1.

5.12 Structures constructed on fill so that the first floor and basement floor are above the regulatory flood protection elevation. The fill shall be at a point no lower than one foot below the regulatory flood protection elevation for the particular area and shall extend at such elevation at least fifteen feet beyond the limits of any structure of building erected thereon. However, no use shall be constructed which will adversely affect the capacity of channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility or system.

5.2 SPECIAL EXCEPTIONS

5.21 Where existing streets or utilities are at elevations which make compliance with provision 5.12 impractical or in other special circumstances the Board of Adjustment may authorize other techniques for elevation of residences. Structures other than residences shall ordinarily be elevated on fill as provided in 5.12, but may, in special circumstances, be otherwise elevated or protected as provided in Section 6.55 (1)-(5) to a point above the regulatory flood protection elevation.

5.22 The Board may authorize the location of uses listed in Section 4.2 of this ordinance and other similar uses at an elevation below the regulatory flood elevation is such uses will not be subject to substantial flood damage and which will not cause flood damage to other lands.

SECTION 6.0 ADMINISTRATION

6.1 ZONING ADMINISTRATOR

A Zoning Administrator designated by the _____ (legislative body) shall administer and enforce this ordinance. If he finds a violation of the provisions of this ordinance, he shall notify the

person responsible for such violation, indicating the nature of the violation and ordering the action necessary to correct it.

6.2 ZONING PERMIT

6.21 Zoning Permit Required. - A Zoning Permit issued by the Zoning Administrator in conformity with the provisions of this ordinance shall be secured prior to the erection, addition or alteration of any building or structure or portion thereof; prior to the use or change of use of a building, structure, or land; and prior to the change or extension of a nonconforming use.

6.22 Application of Zoning Permits. - Application for a Zoning Permit shall be made in duplicate to the Zoning Administrator on forms furnished by him and shall include the following where applicable: Plans in duplicate drawn to scale, showing the nature, location, dimensions, and elevations of the lot; existing or proposed structures, fill, storage of materials; and the location of the foregoing in relation to the channel, the floodway and the flood protection elevation.

6.23 Certificate of Zoning Compliance for New, Altered, or Nonconforming Uses. -

(1) It shall be unlawful to use or occupy or permit the use or occupancy of any building or premises, or both, or part thereof hereafter created, executed, changed, converted, or wholly or partly altered or enlarged in its use or structure until a Certificate of Zoning Compliance has been issued therefor by the Zoning Administrator stating that the use of the building or land conforms to the requirements of this ordinance.
(2) No nonconforming structure or use shall be used after extension or substantial alteration until a Certificate of Zoning Compliance has been issued by the Zoning Administrator. The Certificate of Zoning Compliance shall state specifically the particulars, if any, in which the nonconforming structure or use differs from the provisions of this ordinance.

6.24 Construction and Use to be as Provided in Applications, Plans, Permits, and Certificates of Zoning Compliance. - Zoning permits, Special Exception uses or certificates of zoning compliance issued on the basis of approved plans and applications authorize only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement, or construction. Use, arrangement, or construction at variance with that authorized shall be deemed violation of this

ordinance, and punishable as provided by Section 8.0. The applicant shall ordinarily be required to submit certification by a registered professional engineer or other qualified person designated by the governing body that the finished fill and building floor elevations, floodproofing, or other flood protection measures were accomplished in compliance with the provisions of this ordinance.

6.3 ZONING HEARING BOARD

A Zoning Hearing Board is hereby established which shall consist of 3 members to be appointed by the _____ (legislative body) for a term of 3 years as specified in Section 904 of the Pennsylvania Statutes.

6.31 Rules. - The Zoning Hearing Board shall adopt rules for the conduct of business and may exercise all of the powers conferred on such Boards by State law.

6.32 Administrative Review. - The Board shall hear and decide appeals where it is alleged there is error in any order, requirement, decision, or determination made by an administrative official in the enforcement or administration of this ordinance.

6.33 Special Exceptions. - It shall hear and decide applications for Special Exceptions upon which the Board is authorized to pass under this ordinance.

6.34 Variances. - It may authorize upon appeal in specific cases such variances from the terms of this ordinance that will not be contrary to the public interest, where owing to special conditions a literal enforcement of the provisions of the ordinance will result in unnecessary hardship and so that the spirit of the ordinance shall be observed and substantial justice done. No variance shall have the effect of allowing in any district uses prohibited in that district, permit a lower degree of flood protection than the flood protection elevation for the particular area, or permit standards lower than those required by State law.

6.4 HEARINGS AND DECISIONS OF THE BOARD OF ADJUSTMENT

6.41 Hearings. - Upon the filing with the Zoning Hearing Board of an appeal from a decision of the Zoning Administrator, an application for a Special Exception or an application for a Variance, the Board shall hold a public hearing. The Board shall fix a reasonable time for the hearing and give public notice thereof, as well as due notice to parties in interest. At the hearing, any party may appear in person or by agent or attorney

and present written or oral evidence for the record which he may have transcribed by a stenographer. The written transcript, if presented to the Board by the appellant, shall be a part of the record.

6.42 Decisions. - The Board shall arrive at a decision on such appeal, Special Exception use, or Variance within a reasonable time. In passing upon an appeal, the Board may, so long as such action is in conformity with the provisions of this ordinance, reverse or affirm, wholly or in part, or modify the order, requirement, decision, or determination appealed from, and it shall make its decision, in writing, setting forth the findings of fact and the reasons for its decision. In granting a Special Exception or Variance, the Board may prescribe appropriate conditions and safeguards, in addition to those specified in Section 6.55, which are in conformity with the purposes of this ordinance. Violations of such conditions and safeguards, when made a part of the terms under which the Special Exception or Variance is granted, shall be deemed a violation of this ordinance punishable under Section 8.0.

6.43 Appeals to the Court. - Appeals from any decision of the Board may be taken by any person or persons, jointly or severally, aggrieved by any decision of the Board, or any taxpayer, or any officer, department, board or bureau of the municipality, to the _____ (name of appropriate court).

6.5 SPECIAL EXCEPTIONS

6.51 Application for any use listed in this ordinance as requiring a special permit may be allowed only upon application to the Zoning Administrator on forms furnished by him and issuance of a Special Exception by the Board. Upon receipt of the Application the Administrator shall forthwith submit it to the Board.

6.52 Procedure to be Followed by Board in Passing on Special Exception Permits. - Upon receiving an application for a special permit involving the use of fill, construction of structures, or storage of materials, the Board shall, prior to rendering a decision thereon:

(1) Require the applicant to furnish such of the following information as is deemed necessary by the Board for determining the suitability of the particular site for the proposed use:
(a) Plans in triplicate drawn to scale showing the nature, location, dimensions and elevation of the lot, existing or proposed structures, fill, storage of materials,

floodproofing measures, and the relationship of the above to the location of the channel floodway and regulatory flood protection elevation.

(b) A typical valley cross-section showing the channel of the stream, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high water information.

(c) Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill, or storage elevations; size, location and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets, water supply, sanitary facilities, photographs showing existing land uses and vegetation upstream and downstream, soil types, and other pertinent information.

(d) Profile showing the slope of the bottom of the channel or flow line of the stream.

(e) Specifications for building construction and materials, floodproofing, filling, dredging, grading, channel improvement, storage of materials, water supply, and sanitary facilities.

(2) Transmit one copy of the information described in subsection (1) to a designated engineer or other expert person or agency for technical assistance, where necessary, in evaluating the proposed project in relation to flood heights and velocities; the seriousness of flood damage to the use, the adequacy of the plans for protection and other technical matters.

(3) Based upon the technical evaluation of the designated engineer or expert, the Board shall determine the specific flood hazard at the site and shall evaluate the suitability of the proposed use in relation to the flood hazard.

6.53 Factors upon Which the Decision of the Board Shall Be Based. - In passing upon such applications, the Board shall consider all relevant factors specified in other sections of this ordinance and

(1) The danger to life and property due to increased flood heights or velocities caused by encroachments.
(2) The danger that materials may be swept on to other lands or downstream to the injury of others.
(3) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.
(4) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.

(5) The importance of the services provided by the proposed facility to the community.
(6) The requirements of the facility for a waterfront location.
(7) The availability of alternative locations not subject to flooding for the proposed use.
(8) The compatibility of the proposed use with existing development and development anticipated in the forseeable future.
(9) The relationship of the proposed use to the comprehensive plan and flood plain management program for the area.
(10) The safety of access to the property in times of flood for ordinary and emergency vehicles.
(11) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters expected at the site.
(12) Such other factors which are relevant to the purposes of this ordinance.

6.54 Time for Acting on Application. - The Board shall act on an application in the manner described within 30 days from receiving the application, except that where additional information is required by the Board pursuant to Section 6.53(1) of this ordinance, the Board shall render a written decision within 15 days from the receipt of such information.

6.55 Conditions Attached to Special Permits. - Upon consideration of the factors listed above and the purposes of this ordinance, the Board may attach such conditions to the granting of Special Exceptions or Variances as it deems necessary to further the purposes of this ordinance. Among such conditions without limitation because of specific enumeration may be included:

(1) Modification of waste disposal and water supply facilities.
(2) Limitations on periods of use and operation.
(3) Imposition of operational controls, sureties, and deed restrictions.
(4) Requirements for construction of channel modifications, dikes, levees, and other protective measures.
(5) Floodproofing measures. Floodproofing measures such as the following shall be designed consistent with the flood protection elevation for the particular area, flood velocities, durations, rate of rise, hydtostatic and hydrodynamic forces, and other factors associated with the regulatory flood. The Board of Adjustment shall require that the applicant submit a plan or document certified by a registered professional engineer that the floodproofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area. The following floodproofing

measures may be required without limitation because of specific enumeration:

(a) Anchorage to resist flotation and lateral movement.
(b) Installation of watertight doors, bulkheads, and shutters, or similar methods of construction.
(c) Reinforcement of walls to resist water pressures.
(d) Use of paints, membranes, or mortars to reduce seepage of water through walls.
(e) Addition of mass or weight to structures to resist flotation.
(f) Installation of pumps to lower water levels in structures.
(g) Construction of water supply and waste treatment systems so as to prevent the entrance of floodwaters.
(h) Pumping facilities or comparable practices for subsurface drainage systems for buildings to relieve external foundation wall and basement flood pressures.
(i) Construction to resist rupture or collapse caused by water pressure or floating debris.
(j) Installation of valves or controls on sanitary and storm drains which will permit the drains to be closed to prevent backup of sewage and storm waters into the buildings or structures. Gravity draining of basements may be eliminated by mechanical devices.
(k) Location of all electrical equipment, circuits and installed electrical appliances in a manner which will assure they are not subject to flooding and to provide protection from inundation by the regulatory flood.
(l) Location of any structural storage facilities for chemicals, explosives, buoyant materials, flammable liquids or other toxic materials which could be hazardous to public health, safety, and welfare in a manner which will assure that the facilities are situated at elevations above the height associated with the regulatory flood protection elevation or are adequately floodproofed to prevent flotation of storage containers, or damage to storage containers which could result in the escape of toxic materials into floodwaters.

SECTION 7.0 NONCONFORMING USES

7.1 A structure or the use of a structure or premises which was lawful before the passage or amendment of the ordinance but which is not in conformity with the provisions of this ordinance may be continued subject to the following conditions:

7.11 No such use shall be expanded, changed, enlarged, or

altered in a way which increases its nonconformity.

7.12 No structural alteration, addition, or repair to any nonconforming structure over the life of the structure shall exceed 50 percent of its value at the time of its becoming a nonconforming use, unless the structure is permanently changed to a conforming use.

7.13 If such use is discontinued for 12 consecutive months, any future use of the building premises shall conform to this ordinance. The assessor shall notify the Zoning Administrator in writing of instances of nonconforming uses which have been discontinued for a period of 11 months.

7.14 If any nonconforming use or structure is destroyed by any means, including floods, to an extent of 50 percent or more of its assessed value, it shall not be reconstructed except in conformity with the provisions of this ordinance. Provided that the Board of Adjustment may permit reconstruction if the use or structures located outside the floodway and upon reconstruction is adequately and safely floodproofed, elevated, or otherwise protected in conformity with Section 6.55 (1)-(5).

7.15 Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

7.16 Except as provided in Section 7.15, any use which has been permitted as a Special Exception use shall be considered a conforming use.

7.17 Any alteration, addition, or repair to any nonconforming structure which would result in substantially increasing its flood damage potential shall be protected by measures pursuant to Section 6.55 (1)-(5) of this ordinance.

7.18 The Zoning Administrator shall prepare a list of those nonconforming uses which have been floodproofed or otherwise adequately protected in conformity with Section 6.55 (1)-(5). He shall present such list to the Board of Adjustment which may issue a certificate to the owner stating that such uses as a result of these corrective measures, are in conformity with the provisions of this ordinance.

SECTION 8.0 PENALTIES FOR VIOLATION

Violation of the provisions of this ordinance or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of Variances or Special Exceptions) shall constitute a misdemeanor.

Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than $100 or imprisoned for not more than 10 days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense.

Nothing herein contained shall prevent the _____ (local unit) from taking such other lawful action as is necessary to prevent or remedy any violation.

SECTION 9.0 AMENDMENTS

The regulations, restrictions, and boundaries set forth in this ordinance may from time to time be amended, supplemented, changed, or repealed, as provided in Section 601 of the Pennsylvania Municipal Planning Code. However, no such action may be taken until a public hearing in relation thereto has been held at which parties in interest and citizens shall have an opportunity to be heard. At least 15 days' notice of the time and place of such hearing shall be published in a newspaper of general circulation in the _____ (local unit).

SECTION 10.0 DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

Accessory Use or Structure - a use or structure on the same lot with, and of a nature customarily incidental and subordinate to, as principal use or structure.

Equal Degree of Encroachment - a standard applied in determining the location of encroachment limits so that flood plain lands on both sides of a stream are capable of conveying a proportionate share of floodflows. This is determined by considering the effect of encroachment on the hydraulic efficiency of the flood plain along both sides of a stream for a significant reach.

Flood - a temporary rise in stream level that results in inundation of areas not ordinarily covered by water.

Floodway - the channel of the watercourse and those portions of the adjoining flood plains which are reasonably required to carry and discharge the regulatory flood.

Flood Frequency - the average frequency, statistically determined, for which it is expected that a specific flood level or discharge may be equaled or exceeded.

Obstruction - any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel rectification, bridge conduit, culvert, building, wire, fence, rock gravel, refuse, fill, structure or matter in, along, across, or projecting into any channel, watercourse, or regulatory flood hazard area which may impede, retard or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that is placed where the flow of water might carry the same downstream to the damage of life or property.

Person - any natural person, firm, partnership, association, or corporation, but this definition does not include any governmental unit.

Reach - a hydraulic engineering term to describe longitudinal segments of a stream or river. A reach will generally include the segment of the flood hazard area where flood heights are influenced by a man-made or natural obstruction. In an urban area, the segment of a stream or river between two consecutive bridge crossings would typically constitute a reach.

Regulatory Flood - a flood which is representative of large floods known to have occurred generally in the area and reasonably characteristic of what can be expected to occur in a particular stream. The regulatory flood generally has a frequency of approximately 100 years determined from an analysis of floods on a particular stream and other streams in the same general region.

Regulatory Flood Protection Elevation - the elevation to which uses regulated by this ordinance are required to be elevated or floodproofed.

Structure - anything constructed or erected, on the ground, or attached to the ground including but without limitation to buildings, factories, sheds.

BUILDING CODES

The following items are suggested building code provisions that could be added to the present building and enforced by each municipality. Where a municipality does not presently have a

building code enacted, we suggest that the National Building Code be adopted. The following suggestions would be possible amendments to that building code.

(1) No structure or any portion thereof shall be erected unless the finished surface of the ground is higher than, or is raised by filling to an elevation of at least one (1) foot above the elevation of the one hundred (100) year flood or is protected from a 100-year flood by levees or other flood control facilities.
(2) No first floor, or opening below the first floor, of any building shall be constructed at an elevation of less than one (1) foot above the elevation of the one hundred (100) year flood.
(3) Any structure permitted shall be firmly anchored to prevent the structure from floating away and thus threaten life or property downstream or to further restrict bridge openings and other restricted sections of the creek.
(4) Any structure permitted shall be constructed and placed on the lot so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum effect upon the flow and height of flood water.
(5) The following shall not be placed or caused to be placed in the flood hazard area: fences, except two-wire fences, other structures or other matter which may impede, retard or change the direction of the flow of water or that will catch or collect debris carried by such water, or that is placed where the natural flow of the stream or flood waters would carry the same downstream to the damage or detriment of either public or private property adjacent to the flood plain.
(6) No part of any on-site sewage disposal system shall be constructed within the 100-year flood plain.
(7) No materials that are buoyant, flammable, explosive or in times of flooding, could be injurious to human, animal, or plant life, shall be stored below an elevation of one (1) foot above the elevation of the one hundred (100) year flood.
(8) Fill shall consist of soil or rock materials only. Sanitary land fills shall not be permitted.
(9) Utilize water supply systems and sanitary sewage systems designed to preclude infiltration of flood waters into the systems and discharges from the system into flood waters.
(10) Adhesives shall have a bonding strength that is unaffected by inundation.
(11) Doors and all wood trim shall be sealed with a waterproof paint or similar product.

(12) No basement shall be permitted in any residential structure.
(13) Basements shall be permitted in non-residential structures only if they are designed to preclude inundation by the one hundred (100) year flood.
(14) Water heaters, furnaces, electrical distribution panels, and other critical mechanical or electrical installations shall be prohibited in basements.
(15) Separate electrical circuits shall serve lower levels and shall be dropped from above.
(16) Thermal insulation used below the first floor level shall be of a type that does not absorb water.
(17) Plywood used at or below the first floor level shall be of an ''exterior'' or ''marine'' grade and of a water-resistant or waterproof variety.
(18) Wood flooring used at or below the first floor level shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain, without incurring structural damage to the building.
(19) Basement ceilings shall have sufficient wet strength and be so installed as to survive inundation.
(20) Points or other finishes used at or below the first floor level shall be capable of surviving inundation.
(21) All air ducts, large pipes, and storage tanks located at or below the first floor level shall be firmly anchored to prevent flotation.

SUMMARY

The Wyoming Valley has witnessed its worst flood in history. Whether or not the residents and community leaders have learned from this experience will be determined by future events. The enactment of flood plain controls and a building code would be a sign that the residents of the Wyoming Valley do not want to repeat suffering again.

History tends to repeat itself, however, if firm actions in the form of code enactment and enforcement are started presently, the residents of the Wyoming Valley need not fear the devastation of floods in the future. The choice is up to the residents and the elected officials of each municipality and the County as a whole.

CHAPTER 12

URBAN RENEWAL

BACKGROUND AND PROBLEMS

On June 23, 1972, the waters, as a result of Tropical Storm Agnes, crested at approximately 41 feet, 16 feet above flood stage, in the Wyoming Valley. In the wake of this destructive force, nearly 24,000 housing units were left affected, displacing approximately 70,000 people. Immediately, the forces of the Department of Housing and Urban Development (HUD), the Office of Emergency Prepardedness (OEP), and the Small Business Administration (SBA) came into the affected area. While each has helped, each has also caused problems that might have long-lasting effects.

Early in the flood recovery efforts of the Wyoming Valley, most local, state and federal agencies and local private leaders and decision-makers encouraged the local citizenery to ''rebuild the Valley bigger and better as fast as possible.''

The citizens were encouraged to repair their homes and to utilize all the emergency disaster programs which were available. Many state and federal agencies were criticized for not doing enough, fast enough to bring the Wyomong Valley back.



During these early months, there was also a general lack of leadership and direction at every level of government. As a result many judgemental errors occured and some governmental directives concerning flood plains were ignored.

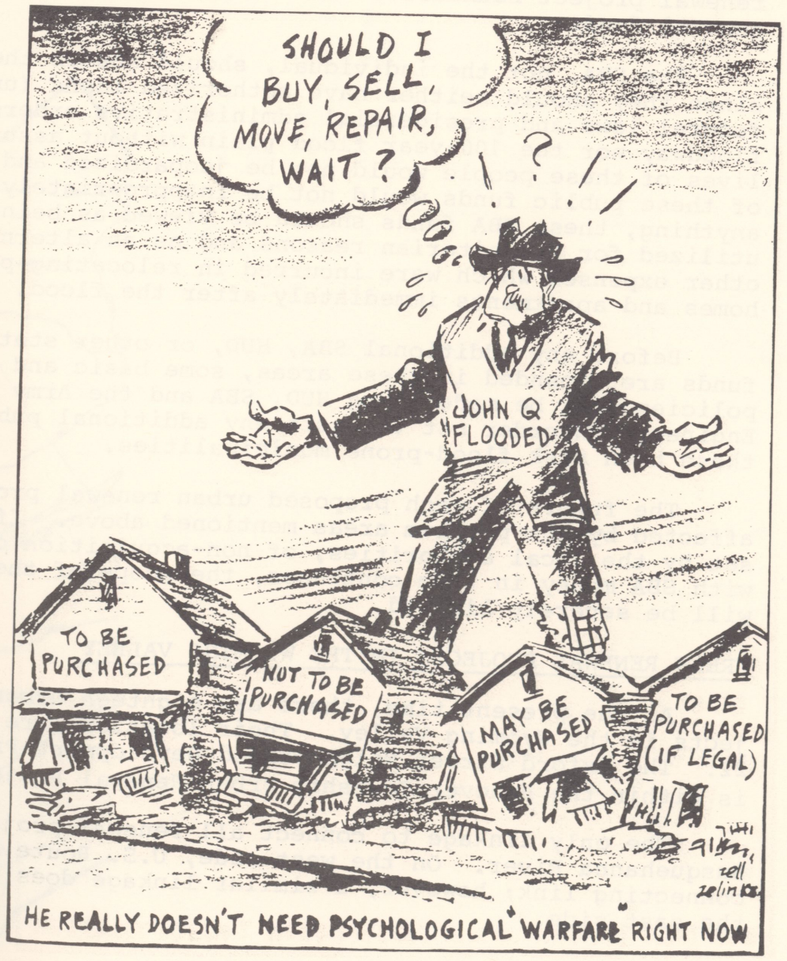
Some of the most serious problems now confronting the Wyoming Valley are those associated with early SBA policies relative to loans; especially, in respect to real property loans on structures which are within the region's floodways, flood plains, and flood control urban renewal project areas.

It has only been recently determined that the levees in the Greater Wilkes-Barre Area, when raised to their ''authorized'' height, will be sufficient to protect these municipalities from a future 100-year flood. Furthermore, no determination has been made on what impact the raising of these levees will have on communities up and down stream. It is conceivable that actions which the Army Corps of Engineers may take to protect the municipalities in the Greater Wilkes-Barre Area may, in reality, adversely affect the recovery efforts of many municipalities up and down stream of the Greater Wilkes-Barre Area.

At this point in time, it is reasonable to believe that it will take at least 8 to 10 years (if ever) before many of the municipalities downstream (Shickshinny, Plymouth Township, etc.) will be protected by levees built by the Army Corps of Engineers.



If these municipalities want to avail themselves of urban renewal funds to rebuild and/or redevelop portions of their municipalities and provide pre-flood value and relocation assistance payments to those individuals whose homes have been or will be demolished by the redevelopment authorities, it is apparent that these areas must be totally cleared and put into authorized flood plain uses. This applies to both those structures which have been declared economically unfeasible to rehabilitate and also for those structures which have been repaired through the use of SBA loans. Anything less than this would be a misuse of state and federal funds and inhumane since it would be placing these people's lives in jeopardy to permit them to remain in the floodway and flood plain areas.



Any person who owns a structure which would subsequently be torn down (SBA loan or not) should get pre-flood value for his home, appropriate relocation assistance payments and the SBA $5,000 forgiveness loan. Under no circumstances should the SBA real property loans be subtracted from an individual's pre-flood value and relocation assistance payments. In the event he rehabilitated his home between June 23 and the time his property was acquired by the redevelopment authorities, he should not have to suffer the consequences of inaction or delayed decision-making on the part of state or federal officials in determining the 100-year flood plain, the floodway, the definition of pre-flood value, the designation of flood control urban renewal project boundaries or the appropriation of adequate urban renewal funds.

The SBA, not the individual, should absorb these losses, since they should neither have authorized loans (under existing federal laws and presidential administrative orders) within the floodway nor the 100-year flood plain without assurance that the lives of these people would not be jeopardized and the investment of these public funds would not be inappropriately used. If anything, these SBA funds should be viewed as being expeditiously utilized for humanitarian reasons and as an alternative to the other expenses which were incurred in relocating people in mobile homes and apartments immediately after the flood.

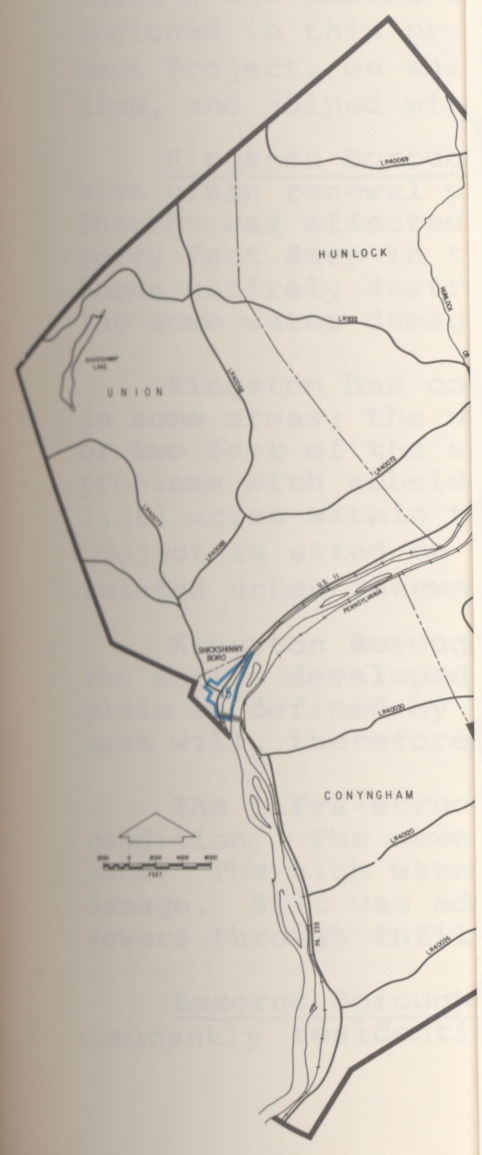
Before any additional SBA, HUD, or other state and federal funds are expended in these areas, some basic and fundamental policies must be made among HUD, SBA and the Army Corps of Engineers in order not to waste any additional public funds in these high risk flood-prone municipalities.

The future of each proposed urban renewal project will be affected by the problem areas mentioned above. If the policy, set by the local authorities, of non-acquisition of properties with SBA money in them continues, the scope of these projects will be severely limited.

URBAN RENEWAL PROJECTS IN THE WYOMING VALLEY

At the present time, there are eighteen urban renewal projects in the Wyoming Valley. Their locations are shown in Figure 22. The Oxford Street Neighborhood Development Project (N.D.P.) is within the Hanover Township Urban Renewal Project.

The only linkage to connect all renewal projects is the Susquehanna River. On the west side, U.S. Route 11 is a major connecting link; however, a similar linkage does not exist on the east side.



Wilbur Smith and Associates

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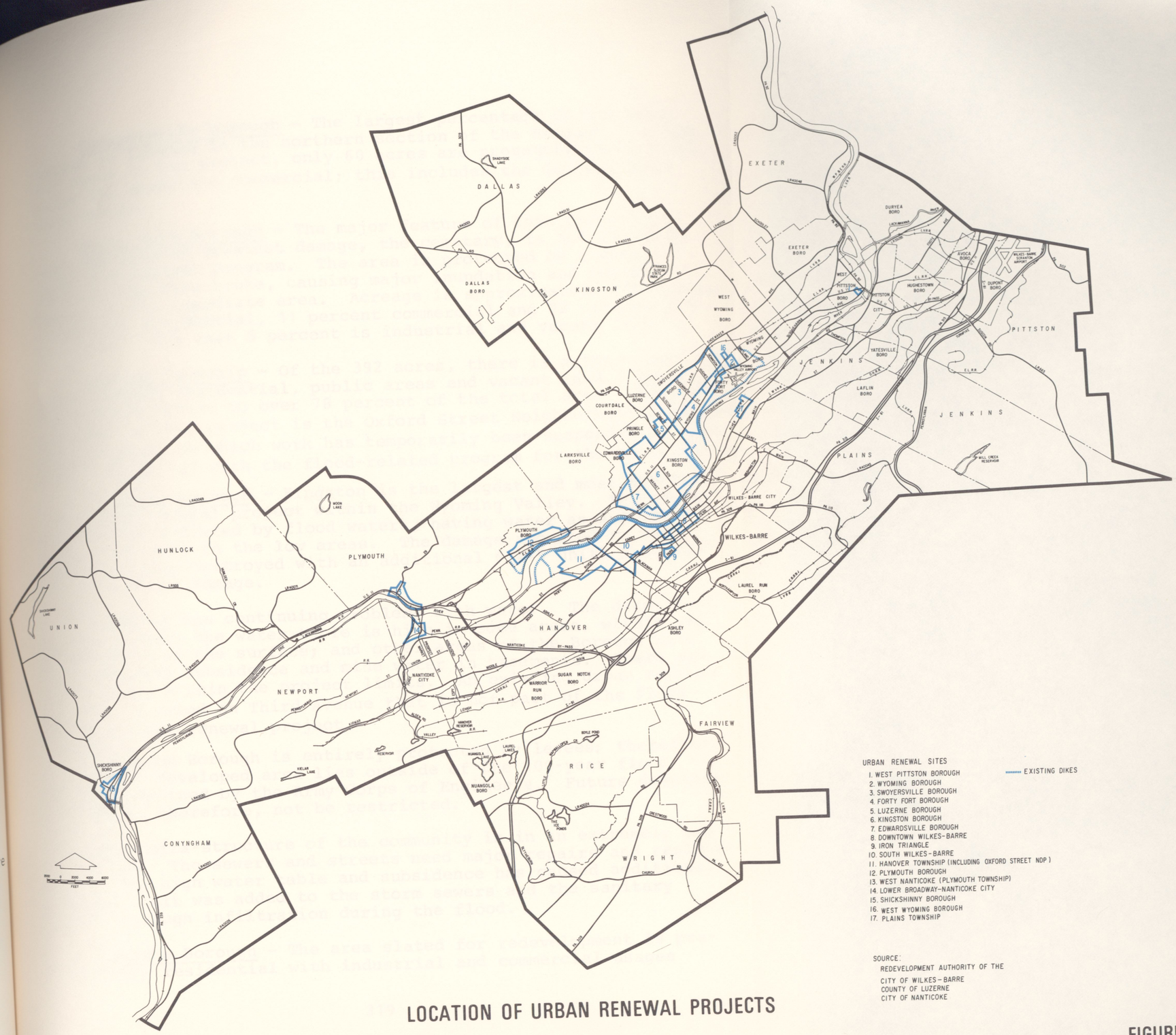
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URBAN RENEWAL SITES

1. WEST PITTSTON BOROUGH
2. WYOMING BOROUGH
3. SWOYERSVILLE BOROUGH
4. FORTY FORT BOROUGH
5. LUZERNE BOROUGH
6. KINGSTON BOROUGH
7. EDWARDSVILLE BOROUGH
8. DOWNTOWN WILKES-BARRE
9. IRON TRIANGLE
10. SOUTH WILKES-BARRE
11. HANOVER TOWNSHIP (INCLUDING OXFORD STREET NDP)
12. PLYMOUTH BOROUGH
13. WEST NANTICOKE (PLYMOUTH TOWNSHIP)
14. LOWER BROADWAY-NANTICOKE CITY
15. SHICKSHINNY BOROUGH
16. WEST WYOMING BOROUGH
17. PLAINS TOWNSHIP

EXISTING DIKES

SOURCE:
REDEVELOPMENT AUTHORITY OF THE
CITY OF WILKES-BARRE
COUNTY OF LUZERNE
CITY OF NANTICOKE

LOCATION OF URBAN RENEWAL PROJECTS

FIGURE 22

Edwardsville Borough - The largest percentage of the population is located in the northern section of the Borough. Of the 403 acres in the project, only 60 acres are presently residential while 198 acres are commercial; this includes the Gateway Shopping Center.

Forty Fort Borough - The major feature of this project is that the area of greatest damage, the cemetary, is not included under the project program. The area is protected by a dike; however, the dike broke, causing major inundation and severe damage in the immediate area. Acreage is approximately 450 acres, 62 percent residential, 11 percent commercial and 22 percent public areas. The last 5 percent is industrial and vacant land.

Hanover Township - Of the 392 acres, there is a three-way split between residential, public areas and vacant land. These three areas amount to over 78 percent of the total area. Also included in this project is the Oxford Street Neighborhood Development Project, on which work has temporarily been suspended at this time, and joined with the flood-related program for the municipality.

Kingston Borough - Kingston is the largest and most extensive urban renewal project within the Wyoming Valley. The entire Borough was affected by flood waters, having water as much as forty feet deep in the low areas. The damage amounted to 150 homes entirely destroyed with an additional 6,479 units sustaining some water damage.

Kingston has continuing problems with water. The dikes leak in some areas; the water table is high in some areas, within one or two feet of the surface; and other areas of the Borough have problems with subsidence and mine water in basements. There are 1,381 acres within the project limits. An existing urban renewal project is sited on Third Avenue that is not part of the flood-related urban renewal project.

Kingston Borough is entirely protected by levees; therefore, the entire developed area lies outside of the 100-year flood plain as defined by the Army Corps of Engineers. Future development will, therefore, not be restricted.

The infra-structure of the community is in an extremely bad condition. The sewers and streets need major repairs and replacement. The high water table and subsidence has caused additional damage. Silt was added to the storm sewers and the sanitary sewers through infiltration during the flood.

Luzerne Borough - The area slated for redevelopment is predominantly residential with industrial and commercial usages

along Factory Street. The flooding of this area was caused by water overflow from Kingston and Swoyersville.

Nanticoke City - The area within its flood related urban renewal project is approximately 59 acres. The project area is surrounded by streams and railroad lines and has the following land use: 58 percent industrial and vacant, 20 percent residential and the remaining 22 percent is divided between commercial and public areas. The area has a frequent flooding record and is presently unprotected by levees.

Plains Township - The redevelopment area is located between River Road and the Susquehanna River. It is predominantly residential and vacant with a strip of commercial along River Road.

Plymouth Borough - A dike presently protects approximately two-thirds of the Borough. The southeastern frontage on the river is non-protected, having only the natural land formations to act as a buffer. The redevelopment area is 303 acres, of which 43 percent is residential, 29 percent vacant, 20 percent public areas and the remaining 8 percent is a mixture of commercial and industrial lands.

Plymouth Township (West Nanticoke) - This project is one of the few that is unprotected in its entirety. Flooding has occured several times since 1936; however, in the past, the flooded areas have always been between U.S. Route 11 and the river. The project area is 106 acres, over half of which is residential.

Shickshinny Borough - This municipality, a confined area between mountains amounting to 197 acres, is presently unprotected from flooding. Shickshinny Creek is a source of constant water problems causing additional flooding from backed-up water as well as water overflowing the banks.

Swoyersville Borough - The urban renewal boundary is the result of flooding by two creeks in the area (1) Abraham's Creek and (2) the creek along Slocum Street. The total acreage is 711.2 acres over 65 percent of which is attributed to residential while 16 percent is attributed to public land, roads, rights-of-way, etc. The severity of the flood can be seen in this area where more than six feet of water was found over a mile and one-half from the river. The conditions of the sewers are poor at the present time.

West Pittston - The smallest of all the proposed flood related urban renewal projects consists of ten scattered lots with buildings beyond rehabilitation. The West Pittston Urban

Renewal Project consists of approximately four and one-half acres. The present usage is, for the most part, residential.

West Wyoming Borough - The project area is 5.9 acres located on Stites Street; this section is presently used for residential purposes. The area was totally flooded with several of the buildings destroyed and all units severely damaged.

Wilkes-Barre City - The City has four flood related urban renewal projects planned: (1) Downtown Wilkes-Barre, (2) Iron Triangle, (3) South Wilkes-Barre, and (4) Brookside. Also planned is a project that will be creating an industrial park along the present railroad tracks that run through the center of the City. All four projects connect to achieve a continuous line of redevelopment from approximately North Street to the Wilkes-Barre City/Hanover Township municipal line. These four projects comprise a total of 1,460 acres to be redeveloped within the City of Wilkes-Barre.

Wyoming Borough - The present acreage is approximately 15 acres, decreased from the originally proposed 170.3 acres. The present boundaries only include Colonial Village, an area of upper middle income housing. Due to the severe damage caused by the flood waters, the entire area is slated for acquisition by the Re-development Authority of Luzerne County.

Table 76 summarizes the above information with respect to existing land use within the project areas.

PRESENT AND FUTURE FLOOD POLICIES

The boundary of the 100-year flood plain is the key to new development within the Wyoming Valley. It is the delineation of that line that will determine the use and amounts of future federal funds, the degree of flood-proofing, if any, the need to obtain flood insurance and the determination as to whether or not the present land use within urban renewal areas can be reused for the same purpose.

The present policy of the federal government is that no federal funds will be spent within the 100-year flood plain unless it is for a flood control measure. A flood control measure would be the demolition of all structures within the floodway. The floodway is the path of the greatest volume of water during a flooding period; it is also the area of greatest destruction.

The Federal Government can offer four options to each community in non-protected areas. They are as follows:

Table 76

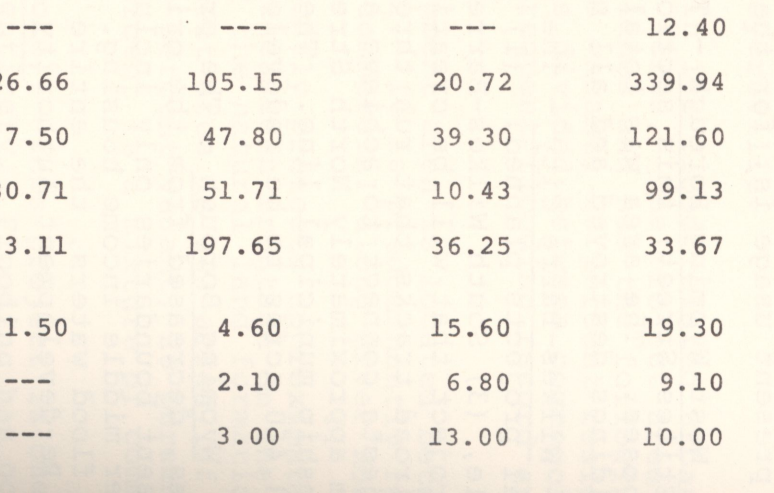
WYOMING VALLEY URBAN RENEWAL PROJECTS

EXISTING LAND USE
(In Acres)

	Total Acreage	Residential Dwelling	Residential Related	Commercial	Industrial	Public Including Streets	Vacant
Wilkes-Barre City							
Downtown	200.55	61.21	23.20	46.21	4.07	55.82	10.04
South Wilkes-Barre	983.70	441.20	---	17.00	25.20	255.60	244.70
Iron Triangle	21.69	15.81	0.16	0.78	0.69	4.25	---
Wyoming Boro	170.30	29.20	---	47.90	---	25.80	67.40
West Pittston	NOT AVAILABLE AT THIS TIME						
Swoyersville	711.20	461.30	10.40	12.40	17.70	116.20	93.20
Shickshinny	197.30	144.20	0.50	6.50	5.20	30.70	10.20
Plymouth Boro	303.10	118.80	11.50	10.20	15.40	59.60	87.60
Mocanaqua	41.00	19.20	---	---	---	12.40	9.40
Kingston Boro	381.22	566.75	26.66	105.15	20.72	339.94	322.00
Hanover Twp.	391.80	92.10	7.50	47.80	39.30	121.60	83.50
Forty Fort Boro	450.76	249.70	30.71	51.71	10.43	99.13	9.08
Edwardsville	403.41	57.05	3.11	197.65	36.25	33.67	75.68
West Nanticoke (Plymouth Twp.)	106.40	51.20	1.50	4.60	15.60	19.30	14.20
Luzerne Boro	58.90	32.90	---	2.10	6.80	9.10	8.00
Nanticoke City	59.00	12.00	---	3.00	13.00	10.00	21.00
TOTAL	5,480.33						

Source: City of Wilkes-Barre Redevelopment Authority, Luzerene County Redevelopment Authority, City of Nanticoke Redevelopment Authority[56]

1) Areas with existing levees with mass c
case, HUD, DCA and the local elected o
cide now that these areas could qualif
trol urban renewal projects", and that
guards will be enacted within a reasona
tect the communities, citizens and inve
funds. If this transpires, then an ind
conceivably receive pre-flood payments
relocation benefits up to $15,000, the
ness, and a 1 percent loan from SBA for
property. Furthermore, the local redev
could rebuild on this site as long as t
housing and building codes and ordinance



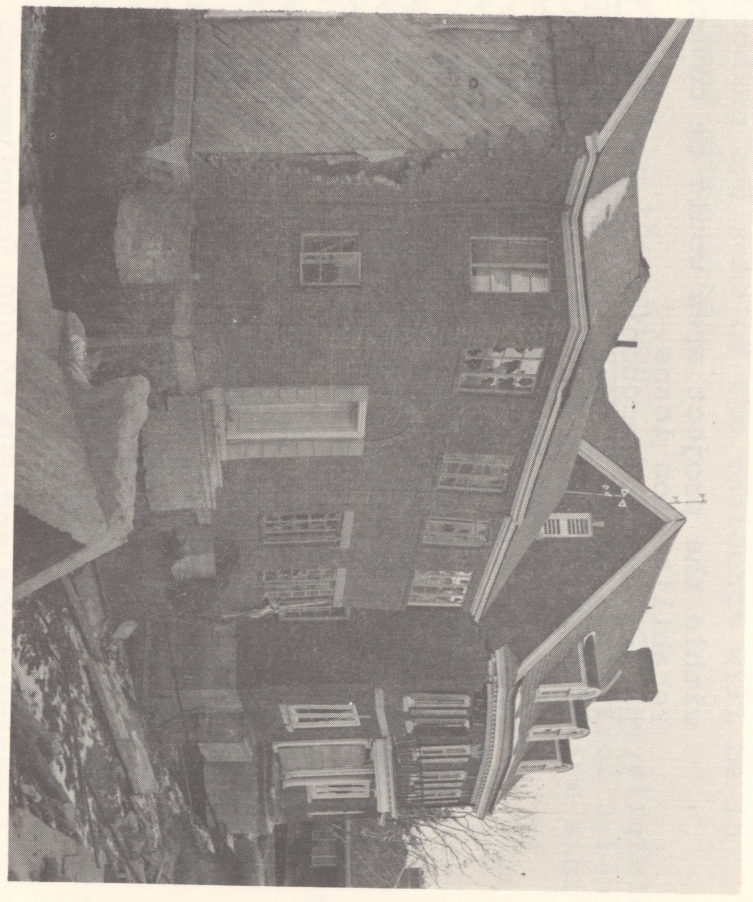
2) Areas with existing levees with limited
though the same fiscal restraint would b
option number 1, relative to the levee s
of acquisition and demolition would be s
ceivably the community would try to get
as a flood control urban renewal project
individuals affected to get pre-flood pay
location assistance. However, most of t
would involve spot clearance. In all pro
would be left in open space or would be
density, flood-proofed structures. The

Plymouth Boro	303.10	118.80	11.50	10.20	15.40	59.60	87.60
Mocanaqua	41.00	19.20	---	---	---	12.40	9.40
Kingston Boro	381.22	566.75	26.66	105.15	20.72	339.94	322.00
Hanover Twp.	391.80	92.10	7.50	47.80	39.30	121.60	83.50
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West Nanticoke (Plymouth Twp.)	106.40	51.20	1.50	4.60	15.60	19.30	14.20
Luzerne Boro	58.90	32.90	---	2.10	6.80	9.10	8.00
Nanticoke City	59.00	12.00	---	3.00	13.00	10.00	21.00
TOTAL	5,480.33						

Source: City of Wilkes-Barre Redevelopment Authority, Luzerene County Redevelopment Authority, City of Nanticoke Redevelopment Authority[96]

1) Areas with existing levees with mass clearance. In this case, HUD, DCA and the local elected officials may decide now that these areas could qualify as ''flood control urban renewal projects'' and that suitable safeguards will be enacted within a reasonable time to protect the communities, citizens and investment of public funds. If this transpires, then an individual could conceivably receive pre-flood payments on his home, get relocation benefits up to $15,000, the $5,000 SBA forgiveness, and a 1 percent loan from SBA for personal or real property. Furthermore, the local redevelopment authority could rebuild on this site as long as the appropriate housing and building codes and ordinances were adopted and implemented throughout the whole community.

2) Areas with existing levees with limited clearance. Even though the same fiscal restraint would be apparent as in option number 1, relative to the levee system, the amount of acquisition and demolition would be smaller and conceivably the community would try to get the area designated as a flood control urban renewal project, to permit the individuals affected to get pre-flood payments and relocation assistance. However, most of the acquisitions would involve spot clearance. In all probability, these would be left in open space or would be put into lower density, flood-proofed structures. The remaining areas



within the project area would be covered by SBA 1 percent rehabilitation loans.

3) Levees are not economically justified but the area is designated as a flood control urban renewal project. The community's elected officials may still decide to request that the area be designed as a flood control urban renewal project. They may or may not get concurrence from HUD or DCA; however, if they do get concurrence from HUD or DCA, it may mean that most, if not all the structures within the 100-year flood line (proposed urban renewal project boundary line) could conceivably be acquired, demolished, and put into open space or other limited land uses.

However, it would insure that fewer structural damages and lives would be lost due to future flooding in the community. Furthermore, it could also mean that the municipality would not have to replace nor maintain the infra-structure which was damaged by the most recent flood.

If this option is chosen, then all individuals which were affected by the mass clearance could get the appropriate pre-flood payments and relocation assistance payments and SBA $5,000 foregiveness. The 100-year flood plain and the floodway would be returned as cleared land and the seeds for wise plain management would be sown.

4) Levees are not economically justified and the area is not designated as a flood control urban renewal project. In this case, the Army Corps of Engineers makes the determination that the levees are not economically justified. HUD and DCA, in turn, also state that the area cannot be declared a flood control urban renewal project. This, in essence, means no one receives the pre-flood payments nor relocation assistance and the bulk of the local recovery effort is based upon the public improvements authorized or reimbursed by the Office of Emergency Preparedness (OEP). Furthermore, this means the major rehabilitation of the community is based upon the use of a SBA $5,000 foregiveness loan and 1 percent loans on real and personal property.

In this case, only those structures, demolished by the Army Corps of Engineers during the early stages of the disaster or authorized later by the property owner for demolition through local contractors under OEP regulations, are torn down. All other structures which are rehabilitated, and all new structures which are built, must conform to local building codes which, in all probability, will now contain the requirement of flood-proofing. The community is still vulnerable to

further flooding and some of the residents will be in high risk flood-prone areas.

The areas protected by the present levee system are eligible for flood insurance and can be designated as flood control urban renewal projects. These areas would be eligible to receive similar benefits as listed in option number 1 above.

The final caution goes to those areas that are presently unprotected and are not completely clearing the 100-year flood plain. HUD will not permit the use of any federal funds to rebuild any new structures in the floodway and 100-year flood plain, according to present written policy. Furthermore, those structures which are ''sound'' or can be economically rehabilitated but still are in the 100-year floodway or flood plain should not be permitted to be rebuilt until they are flood-proofed or moved to a safer area. This may be expensive. However, because the velocity of the water within the 100-year flood plain or floodway, for even smaller magnitude floods than Agnes may be so severe as to do great damage to these structures, this flood-proofing is necessary. These structures would be in a high risk, high cost flood insurance area. In the event another flood occurred, the damage to the unprotected areas might be extensive while little or no damage would be sustained in the protected areas. The areas may not be designated as a disaster area because of a lack of overall damage. Therefore, the residents, if they live through another flood the magnitude of Agnes or even a lesser one, would have to rebuild with their own capital. This could present a severe hardship to the individual property owners and the municipality, and could adversely affect the actuarial rates of the federally subsidized flood insurance program for that particular community.

It is also conceivable that in some cases, the local elected officials may decide not to initiate the appropriate applications and studies to have their communities certified as being eligible for federally subsidized flood insurance. In these cases, the individual will not be able to acquire a flood insurance policy and will be in greater financial trouble since, in all likelihood, the area in which he is now located will be flooded on a regular basis assuming there are no levees on the river or other protective measures on the creeks which flow through the boroughs and townships.

Table 77 illustrates the approximate damage sustained in each renewal project. Also given are the requested funds and the funds allocated at this time.

Table 77

FLOOD RELATED URBAN RENEWAL PROJECTS

	Total Acreage	Population of Study Area (1970)	Housing Units 1970	Units Demolished (Flood)	Units Damaged (Flood)	Funds Requested	Funds Received
Wilkes-Barre City							
Downtown	200.55	3,184	1,077	237	521	65,812,850	43,155,025
South Wilkes-Barre	983.70	15,317	5,385	70	3,105	44,798,750	29,518,249
Iron Triangle	21.69	514	170	----	178	8,000,000	5,542,750
Wyoming Boro	170.30	163	64	22	29	2,595,000	866,000*
West Pittston	5.00	0	10	----	10	4,452,750	1,000,000*
Swoyersville	711.20	5,984	1,865	35	1,636	17,396,368	13,157,528
Shickshinny	197.30	1,843	372	12	337	5,438,392	3,000,000*
Plymouth Boro	303.10	4,824	1,882	20	1,179	14,094,214	11,225,550
Kingston Boro	1,381.22	18,325	6,613	150	6,479	58,100,000	43,741,913
Hanover Twp. (include Oxford St.)	391.80	2,415	844	66	689	14,050,500	13,671,855
Forty Fort Boro	450.76	5,922	2,058	210	1,494	15,900,000	7,702,001
Edwardsville	403.41	2,299	905	6	626	6,961,729	5,537,694
West Nanticoke (Plymouth Twp.)	106.40	512	171	6	216	6,240,997	3,200,000*
Luzerne Boro	58.90	4,504	1,603	----	203	2,378,425	2,116,088
Nanticoke City	59.00	184	77	----	75	2,855,000	2,200,000*
West Wyoming	5.25	41	12	8	4	969,609	900,000*
Plains	62.80	320	100	14	61	1,800,000	1,000,000*
TOTAL	5,553.38	66,686	23,332	864	16,952	274,563,724	187,534,703

*Approximate at this time
SOURCE: The Redevelopment Authority of Luzerne County
The Redevelopment Authority of the City of Wilkes-Barre
The Redevelopment Authority of the City of Nanticoke
U.S. Department of Housing and Urban Development

FUTURE RE-USE WITHIN REDEVELOPMENT AREAS

The future re-use of land, along with recommendations for each project area, are discussed below.

The redevelopment projects of Nanticoke City, West Pittston Borough, Wyoming and West Wyoming Boroughs will be total acquisition of land within the boundaries and will be reused as open space or other approved land uses.

Swoyersville Borough - On the whole, the future treatment within Swoyersville will have little effect upon the Susquehanna River. There are two main areas of acquisition within the project area (see Figure 23), both located along Slocum Street. The first is in the area east of Main Street to Tenner Street, and the second area lies between Church Street, east to the project boundary. The two areas should be completely acquired (total acquisition) and planned unit development (PUD) instituted. This type of zoning would allow a better residential character to develop while allowing for greater land utilization in the form of open space, in areas of flooding, and neighborhood commercial, along major streets.

The flooding along Abraham's Creek can be controlled, to some degree, by placing three holding ponds (see Figure 24) at the following locations: (1) at White Street and Shoemaker Street next to the culm bank; (2) in the field west of Barber tracks and Jay Street; (3) east of the Lehigh Valley Railroad permit a unique treatment of the creek. These holding pond areas neighborhood and community-wide parks. The advantage present at these sites should be fully utilized for maximum public benefit.

A commercial PUD should be developed in the area bounded by Church Street, Trippe Street, the railroad tracks and the culm bank. This area would contribute badly needed neighborhood commercial land to the community while offsetting the loss of tax base due to the expansion of open space.

The present school site should be expanded to meet the state recommended minimums for land area. Due to present acquisition, east of the present site (across Perrin Street), we suggest that the school site should be expanded towards White Street taking a block of land bounded by Shoemaker Street, Perrin Street, Sullivan Street, and White Street.

Hanover Twp. (include Oxford St.)	391.80	2,415	844	66	689	14,050,500	13,671,855		
Forty Fort Boro	450.76	5,922	2,058	210	1,494	15,900,000	7,702,001		
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Luzerne Boro	58.90	4,504	1,603	----	203	2,378,425	2,116,088		
Nanticoke City	59.00	184	77	----	75	2,855,000	2,200,000*		
West Wyoming	5.25	41	12	8	4	969,609	900,000*		
Plains	62.80	320	100	14	61	1,800,000	1,000,000*		
TOTAL	5,553.38	66,686	23,332	864	16,952	274,563,724	187,534,703		

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SOURCE: The Redevelopment Authority of Luzerne County
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The flooding along Abraham's Creek can be controlled, to some degree, by placing three holding ponds (see Figure 24) at the following locations: (1) at White Street and Shoemaker Street next to the culm bank; (2) in the field west of Barber Street and Jay Street; (3) east of the Lehigh Valley Railroad tracks at the junction with the creek. These holding pond areas permit a unique treatment of the surrounding area with regards to neighborhood and community-wide parks. The advantage present at these sites should be fully utilized for maximum public benefit.

A commercial PUD should be developed in the area bounded by Church Street, Trippe Street, the railroad tracks and the culm bank. This area would contribute badly needed neighborhood commercial land to the community while offsetting the loss of tax base due to the expansion of open space.

The present school site should be expanded to meet the state recommended minimums for land area. Due to present acquisition, east of the present site (across Perrin Street), we suggest that the school site should be expanded towards White Street taking the block of land bounded by Shoemaker Street, Perrin Street, Sullivan Street, and White Street.

Forty Fort Borough - There is one major area of acquisition (see Figure 25) along Slocum Street, the Virginia Terrace Area. It is suggested that a PUD/residential use be constructed in the area bounded by Murray Street, Yeager Street, Wyoming Avenue, and the railroad tracks. There are two school sites that need expansion areas. The first, Dana Elementary, should be expanded to include the area bounded by Oak Street, Murray Street, Bedford Street, Dunn Street and Wyoming Avenue. The second site is Durkee Elementary. This site can be expanded so that the entire block between Durkee and Crisman Streets and from Murray Street to within one lot of Wyoming Avenue is used to add the needed playground area. These areas are shown in Figure 26.

Luzerne Borough - The area can be broken easily into two PUD developments. The first is an industrial/commercial PUD from Vaughn Street west to the project boundary. The second area for redevelopment would be from Vaughn Street east to the boundary line. The reuse, in this case, would be a residential PUD. The acquisition areas (Figure 27) indicate that the proposed development areas (Figure 28) are the most feasible alternatives.

Kingston Borough - Kingston has the greatest number of acquisition (see Figure 29) of all communities on the west side. Similarly, the redevelopment and the chances for improvement will also be greater in Kingston than in any other community on the west side.

The area to be used for open space generally follows the river; that is, between the river and the levee. One additional area that should be expanded is the park and swimming pool area. The expansion boundary should be Tioga Street, Dorrance Street, Hamilton Street, James Street, the railroad and Lathrop Street.

We recommend that four residential PUD's be established in the following areas: (1) the Third Avenue Urban Renewal Site which is presently vacant; (2) the present residential area between Pierce Street and Market Street, the railroad and the levee; (3) the area surrounded by Loveland Avenue, Market Street, Gates Avenue, and Chester Street. This area should use innovative site planning to control the high water level that exists at this time; (4) the area bounded by Gates Avenue, Northampton Street, Landon Avenue and Market Street. These areas are illustrated in Figure 30.

The other major areas for suggested acquisition and site enlargement are those areas contiguous with present school sites.

There are six school sites that need expansion of their present site facilities. The high school should be expanded to include the area bounded by Osceola Avenue, Chester Street, Gate Avenue and Pierce Street. The Main Street Elementary School should occupy the entire block in which it is presently located. The other three public schools in Kingston should acquire the blocks that are immediately adjacent to the present school locations. The last school area that needs enlargement is Wyoming Seminary. The new boundary area should be Schuyler Avenue, Hoyt Street, Chestnut Avenue, Market Street, Maple Avenue, Hoyt Street, Chestnut Avenue and Pringle Street. This would effectively increase the usable area for outdoor activities.





The area fronting on Market Street from the river to the new Kingston Corners should be planned commercial areas. This strip should try all possible remedies to the present appearance of strip commercial, and should encourage street plantings, wider sidewalks for pedestrians and other visual improvements.

Edwardsville Borough - The areas immediately adjacent to the river have the greatest potential for a regional park (see Figure 32). The area bounded by U.S. Route 11, the levee and the river should be maintained as open space along with a linkage following Toby's Creek into the center of Edwardsville. An additional linkage between this open space and Kirby Park can be initiated by preserving open space between the Delaware and Hudson Railroad tracks and the project boundary. The area within High Street to Thomas Street, the area of highest acquisition (see Figure 31), can be used for multi-family dwelling because

of the proximity of shopping areas and transportation links to the remainder of the Valley. There is one area suitable for a large scale PUD. This area is bounded by Zerbey Avenue, Northampton Street, Roosevelt Street and Grove Street. There are no school sites located within the project boundary.

Wilkes-Barre City - The municipality with the greatest amount of redevelopment in the Wyoming Valley is the City of Wilkes-Barre. The redevelopment of the downtown is progressing at a proper speed, however, the consultant feels that several changes should be made in the present urban renewal plan to allow a better relationship between people and cars. The mall presently planned for South Main Street should be totally pedestrian with no access for vehicular traffic other than emergency vehicles. This mall should then continue around Public Square to East Market Street and then east to the industrial park. If this were done, the shopping and municipal centers of Wilkes-Barre would be joined into a unified visual entity. As the downtown develops, the mall can become the focal point of activity and life within the City.

The mall on Market Street can then be linked to a pedestrian greenway that meanders through the industrial park linking North Street, the Market Street Mall, Bishop Hoben High School, Iron Triangle, and South Wilkes-Barre. The linking of these areas would unify the City into a well-balanced system of vehicular and pedestrian separation.

The Wilkes-Barre Redevelopment Authority and Model Cities plans presently existing for the Iron Triangle project and the South Wilkes-Barre project could easily link into the greenway suggested above. The commitment for a better community must be made as soon as possible. The decision to either repair to the pre-flood condition or redevelop to form a new and more viable center city should be first among the crucial decisions of the next few months.

The acquisition areas (Figure 33) show the amount of redevelopment which is feasible. The proposed development (Figure 34) shows a possible system of linkage to create a new center for the renewed Wyoming Valley.

Hanover Township - There are presently two areas within the Township that would lend themselves to PUD's. The area of Goeringer Street to the river should become predominantly open space, taking all structures within the limits shown on Figure 36. The acquisition in the area of Engle and Stuart Streets (Figure 35) should be enlarged to accommodate an industrial PUD in that area. The Oxford Street N.D.P. area should be considered

a PUD during redevelopment so that advantage can be taken, during this time, to open up the neighborhood with the use of open space areas.

Plymouth Borough - The redevelopment in this area will be roughly confined to those areas of acquisition as shown in Figure 37. We suggest that the area south of the railroad tracks in the vicinity of Ferry Street and running along Beade Street should be used for industrial purposes. A PUD should be developed along Flats Road to make optimal use of open space. Also the community should be penetrated with green belts along Brown's Creek and Wadham's Creek to alleviate the potential flood damage in this area, (See Figure 38).

West Nanticoke - This is an unprotected area and should have all structure within the 100-year flood plain removed as soon as possible (See Figure 39). All areas cleared in the 100-year flood plain should be retained as open space. A greenway should be created, as shown in Figure 40, along Harvey's Creek. A final suggestion recommends a commercial area bounded by Poplar Street, U.S. Route 11 and Harvey's Creek.

Shickshinny Borough - A similar situation exists in this Borough as in West Nanticoke above. The acquisition map, Figure 41, shows those areas to be cleared. All cleared areas within the 100-year flood plain should be left as open space. As a link to the business area and the park, Shickshinny Creek should become a greenway through the Borough. Off the greenway, a municipal complex would be built to incorporate the new municipal building and the redeveloped commercial areas (see Figure 42). An industrial park can be developed between the railroad and Canal Street to offset the loss of taxable land.

Plains Township - There are three areas of redevelopment within Plains Township, firstly, the area between Robert Street and the river should be cleared and reused as open space. The second area of reuse would be bounded by River Road, Rear River Street, the railroad and May Street and would be reused as open space. The last area of suggested redevelopment lies between River Road and the Lehigh Valley Railroad. The area would best be used as open space.

SUMMARY

Urban renewal is a means to an end product. The end product can be better than the existing or it can prolong the misuse of natural focal points. One major linkage that unifies the Wyoming Valley, both physically and morally (as in times



of disaster), is the Susquehanna River. All renewal projects are a direct result of a problem created by the river. If certain flood plain management procedures had taken place before the flood, it is possible that the damage may not have been as great. It is our recommendation that all buildings within the 100-year flood plain be removed, regardless of SBA loans or present opposition to such clearance. It would be in the best interest of all communities. To ''rebuild the Valley bigger and better'' does not mean to renew to the present condition. To truly rebuild the Valley, means that some people must suffer so that all people will not. If the Valley is to be better in the future, certain actions must be taken today.

The better Valley of the future will have realistic flood plain management procedures and will use the power given by the state (zoning, eminent domain, etc.) to achieve a better Valley. The recommendations in the above section are intended as guidelines for future development. The final reuse of land within the Valley is dependent upon the elected officials and the people and agencies responsible to them. A bigger and better Valley will depend upon the actions taken in the immediate future.

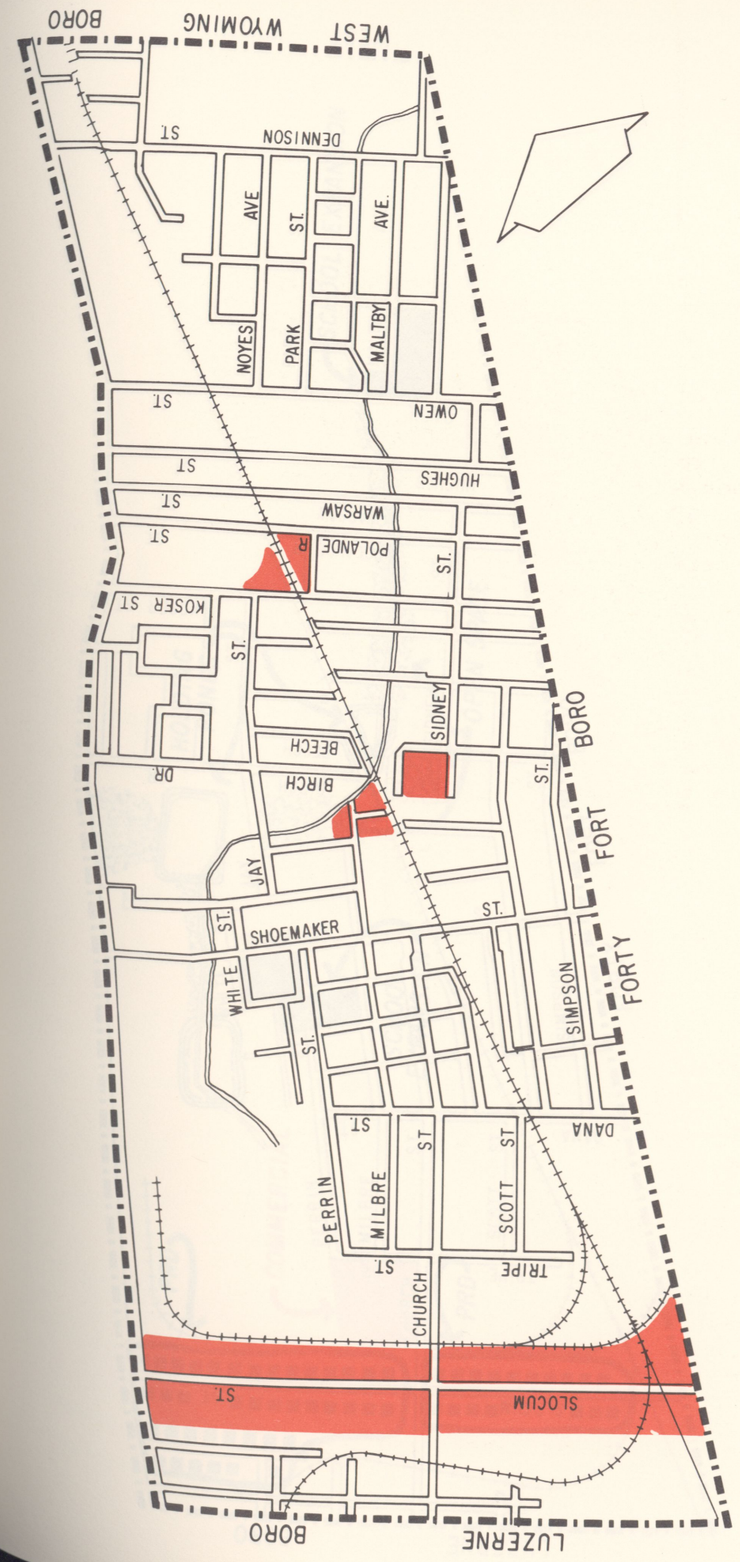


FIGURE 23

SWOYERSVILLE BOROUGH – GENERALIZED LAND ACQUISITION

Wilbur Smith and Associates



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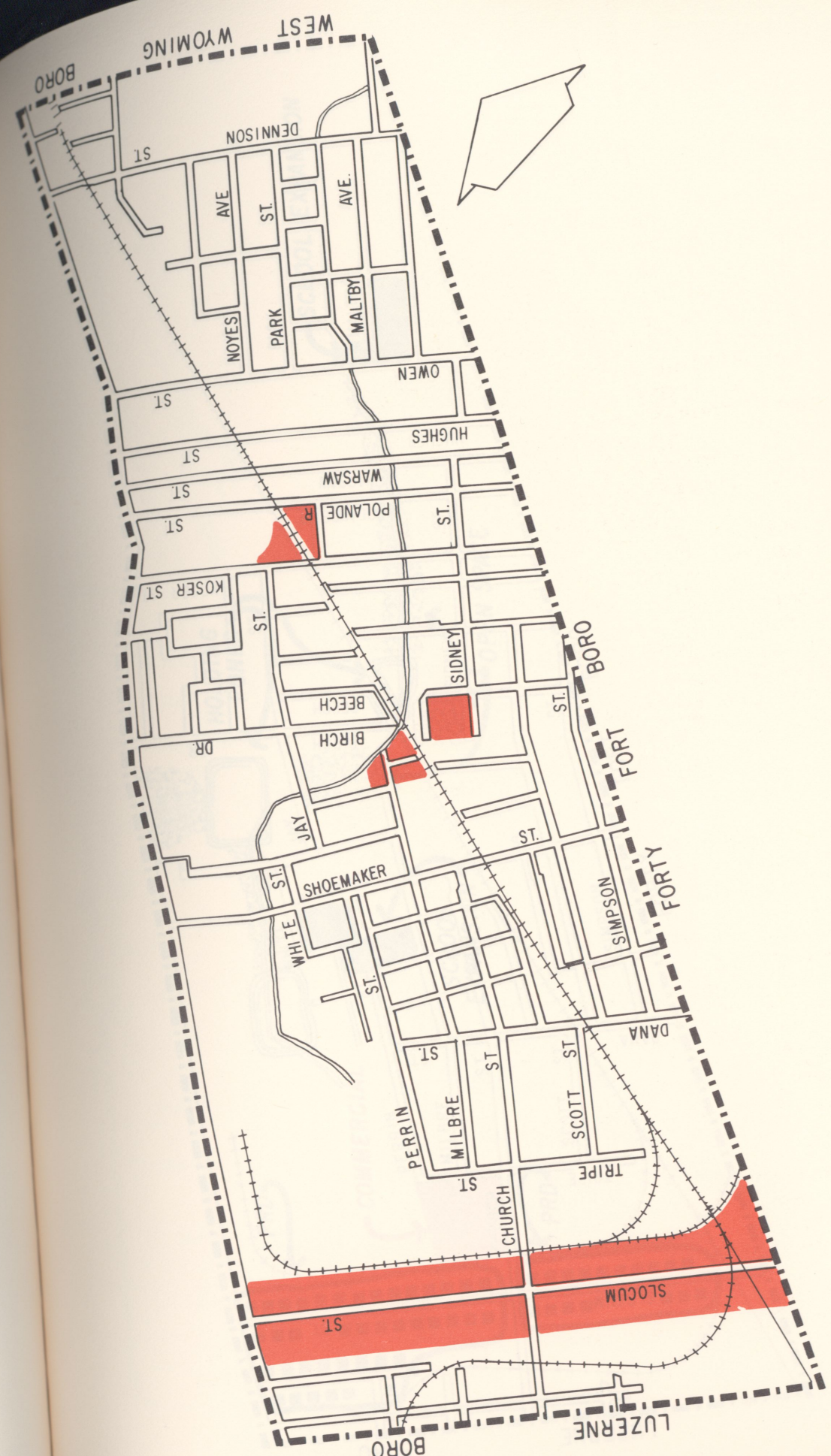


FIGURE 2

SWOYERSVILLE BOROUGH – GENERALIZED LAND ACQUISITION

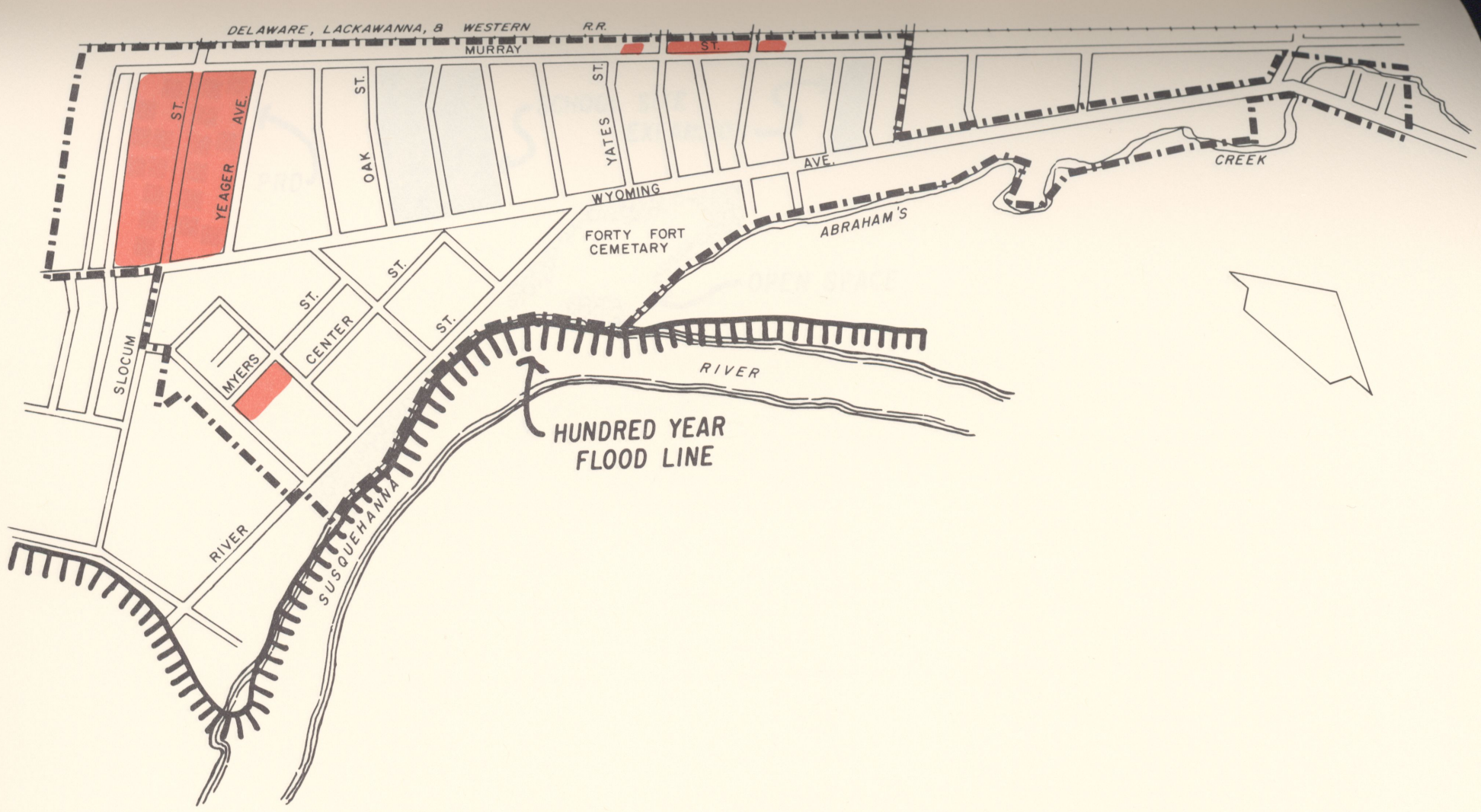
Wilbur Smith and Associates



SWOYERSVILLE BOROUGH – PROPOSED LAND USE RECOMMENDATIONS

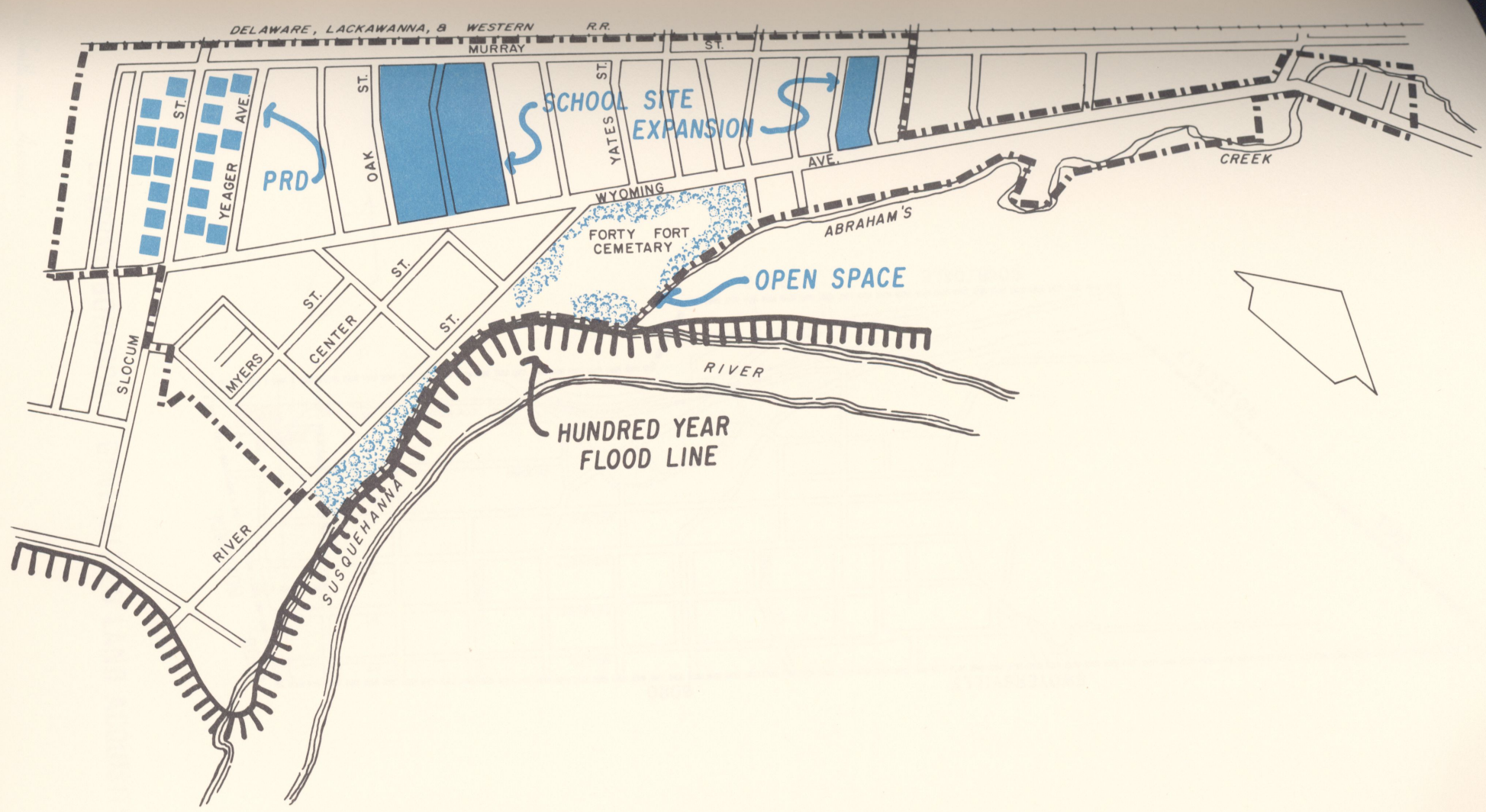
FIGURE 24

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FORTY FORT BOROUGH – GENERALIZED LAND ACQUISITION

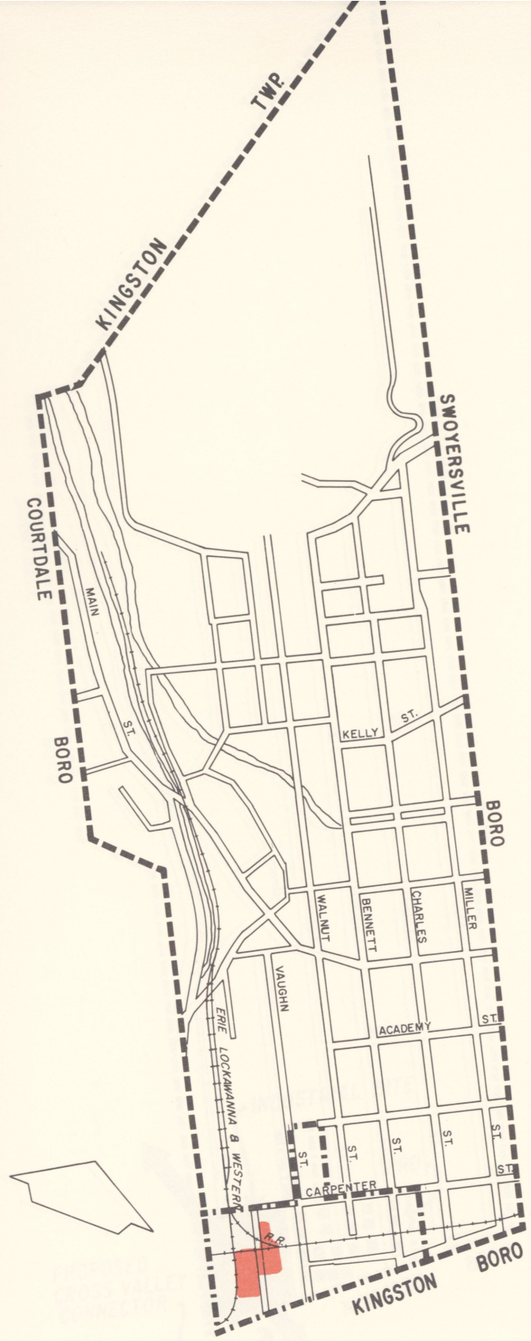
FIGURE 25



FORTY FORT BOROUGH – PROPOSED LAND USE RECOMMENDATIONS

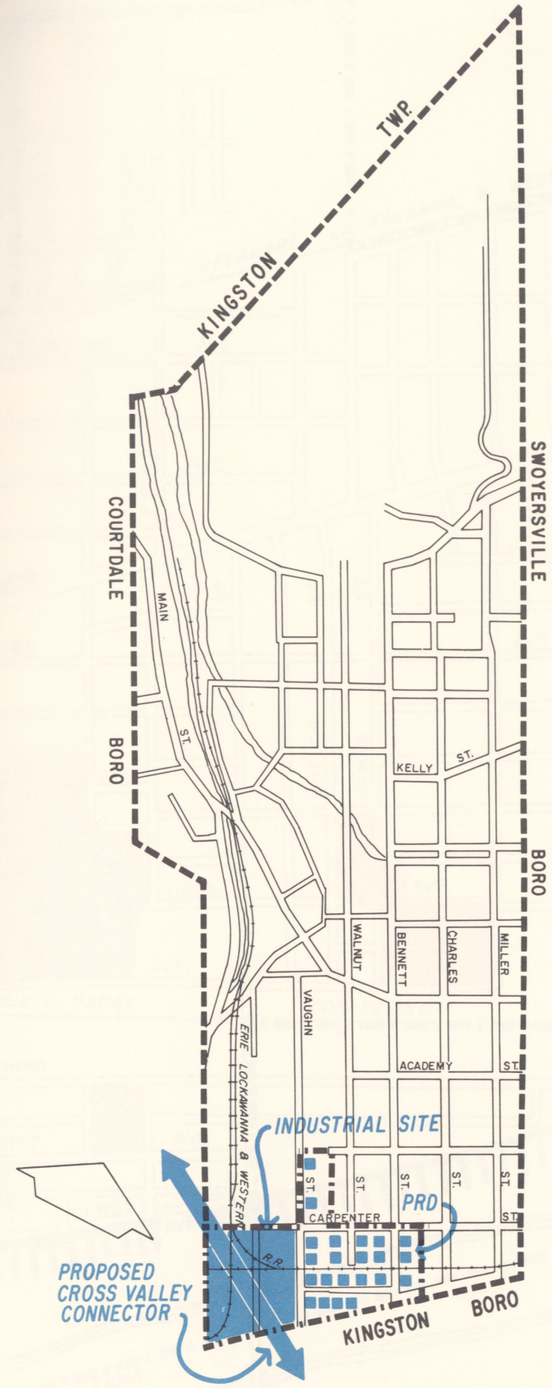
FIGURE 26

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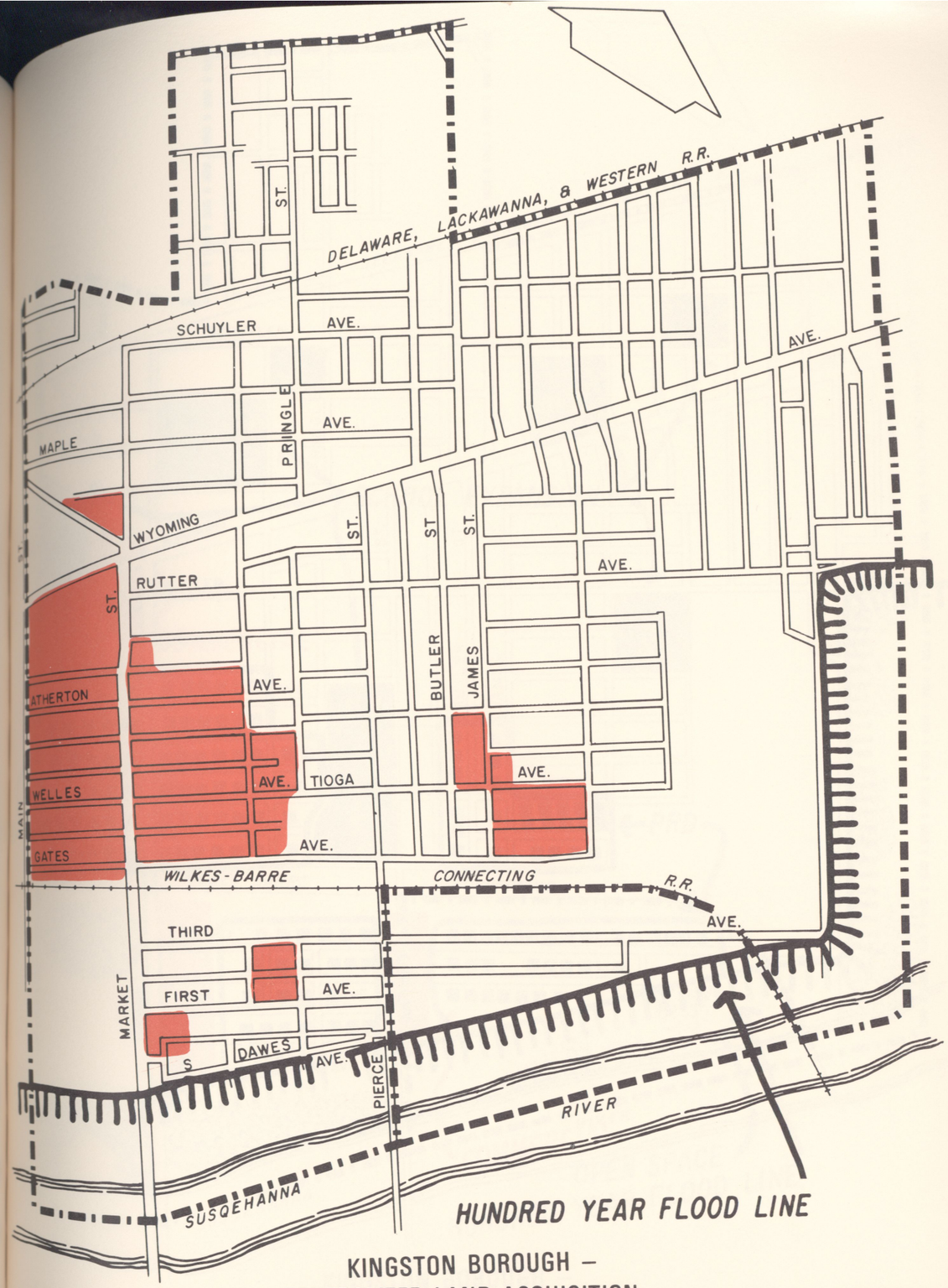


LUZERNE BOROUGH – GENERALIZED LAND ACQUISITION

FIGURE 27



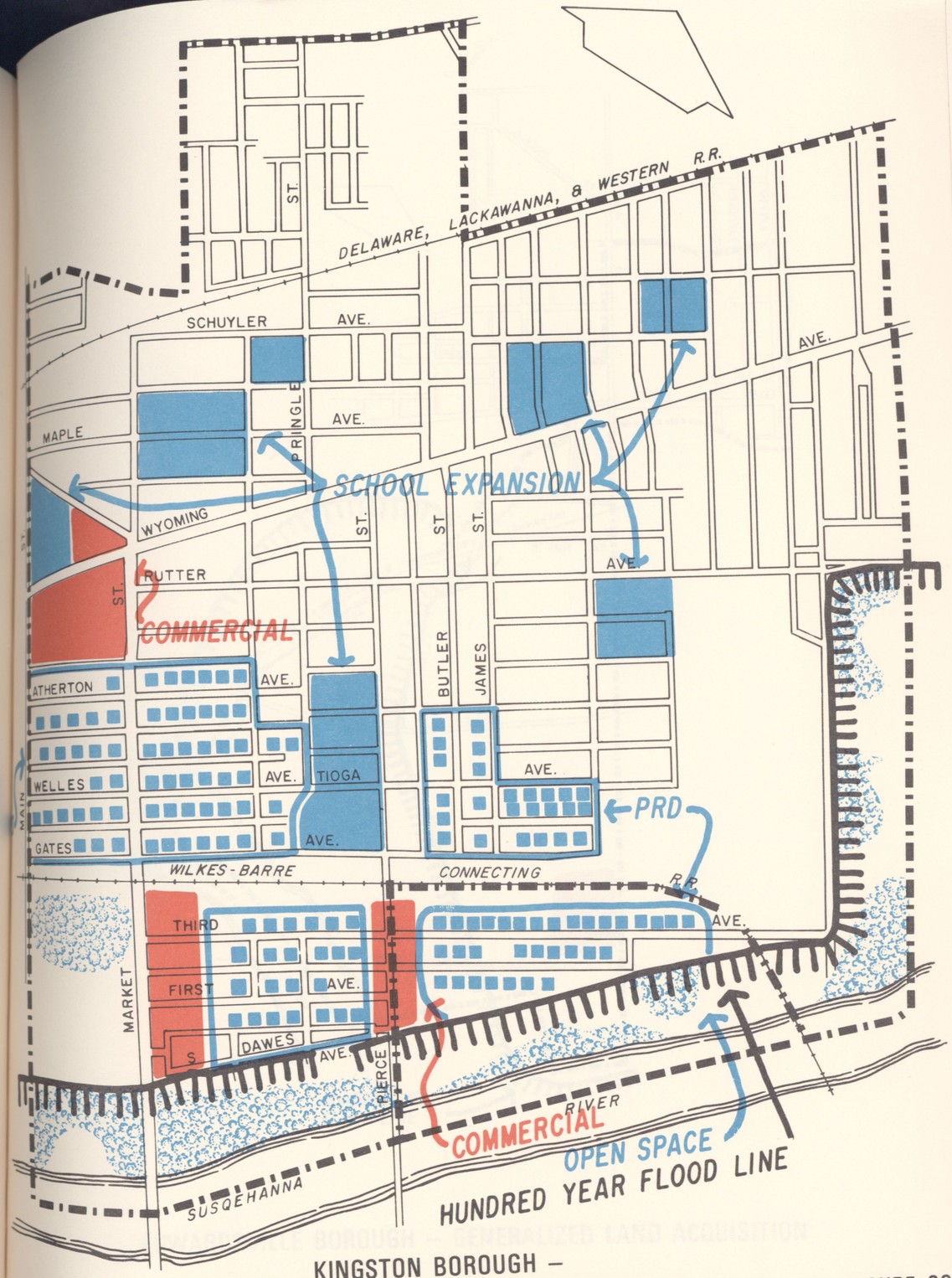
LUZERNE BOROUGH – PROPOSED LAND USE RECOMMENDATIONS



KINGSTON BOROUGH –
GENERALIZED LAND ACQUISITION

FIGURE 29

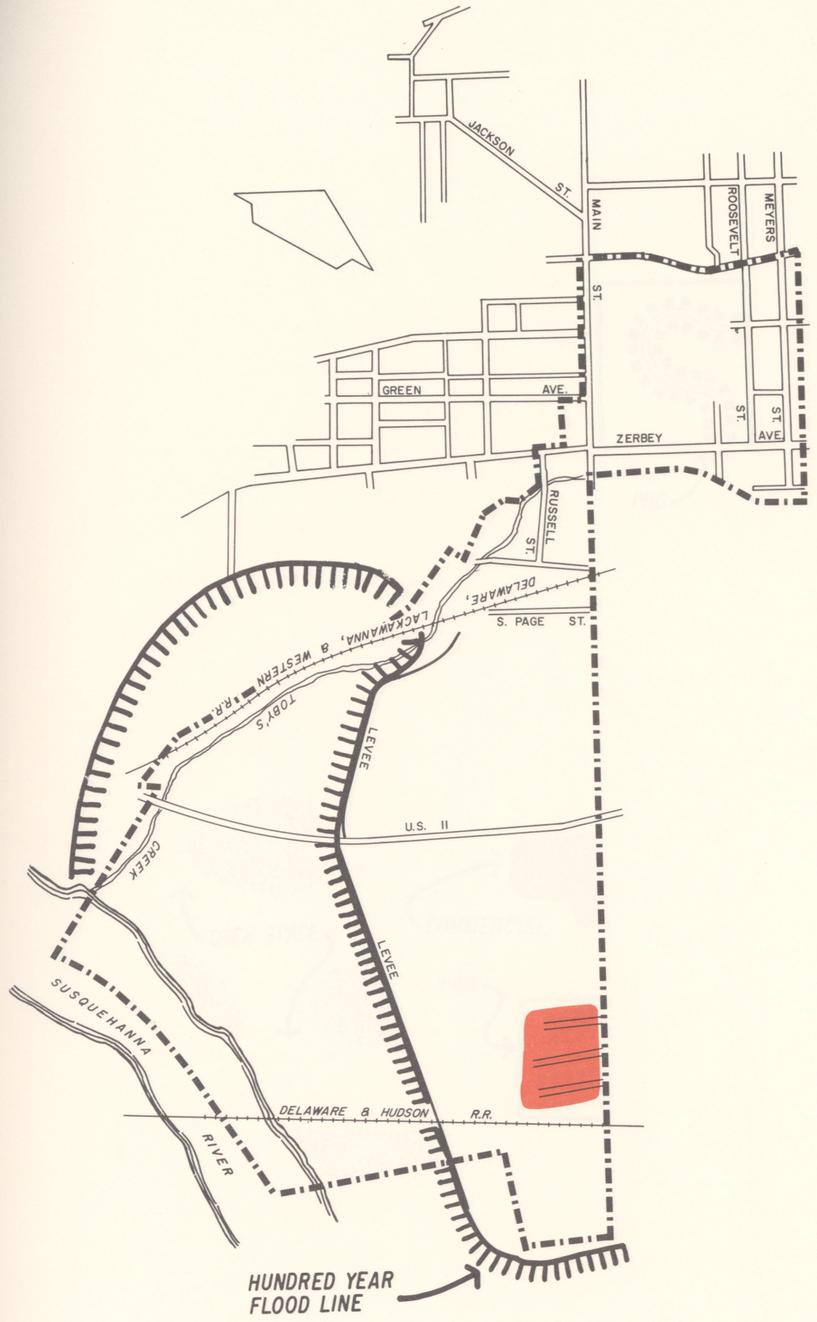
Wilbur Smith and Associates



KINGSTON BOROUGH –
PROPOSED LAND USE RECOMMENDATIONS

Wilbur Smith and Associates

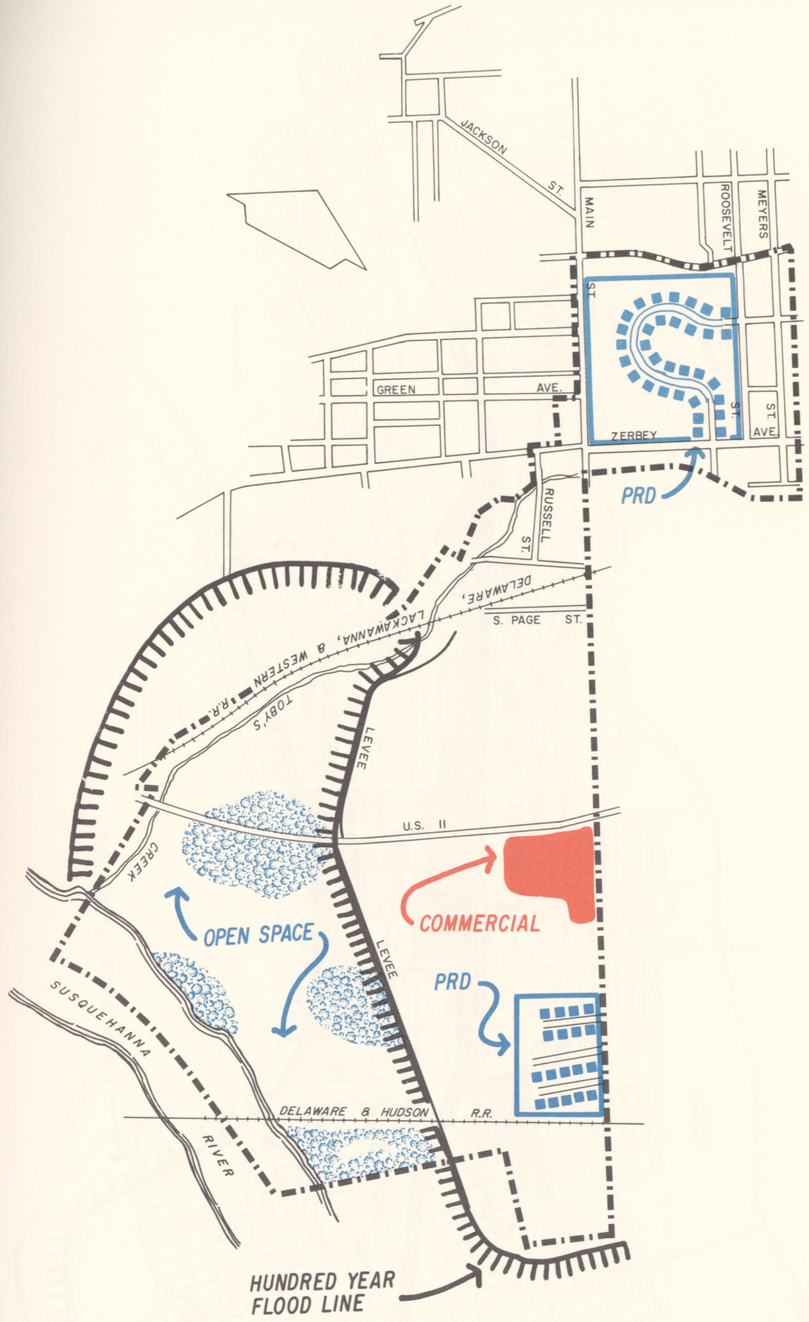
FIGURE 30



EDWARDSVILLE BOROUGH – GENERALIZED LAND ACQUISITION

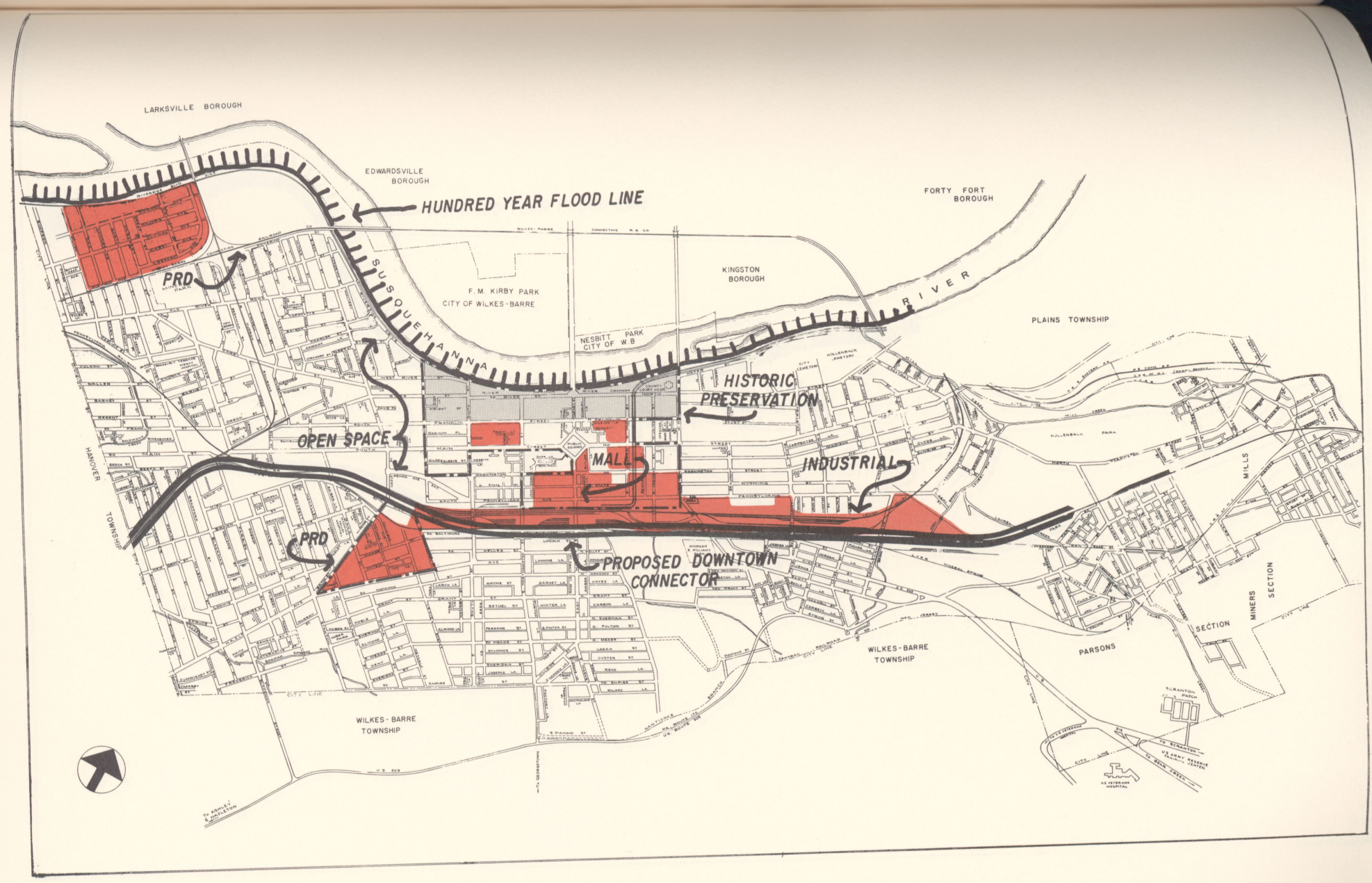
Wilbur Smith and Associates

FIGURE 31



EDWARDSVILLE BOROUGH – PROPOSED LAND USE RECOMMENDATIONS

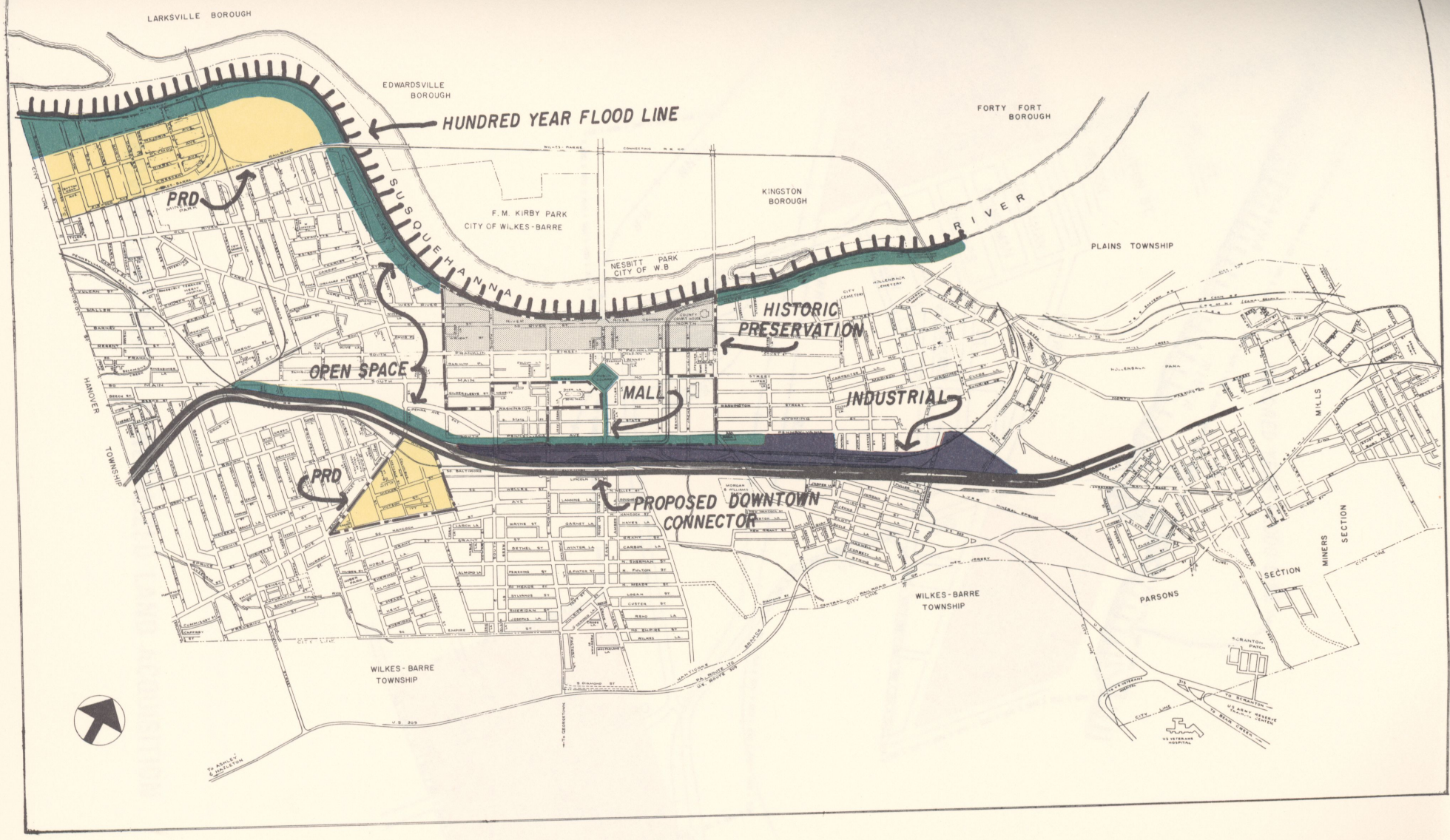
FIGURE 32



WILKES-BARRE CITY – GENERALIZED LAND ACQUISITION

FIGURE 33

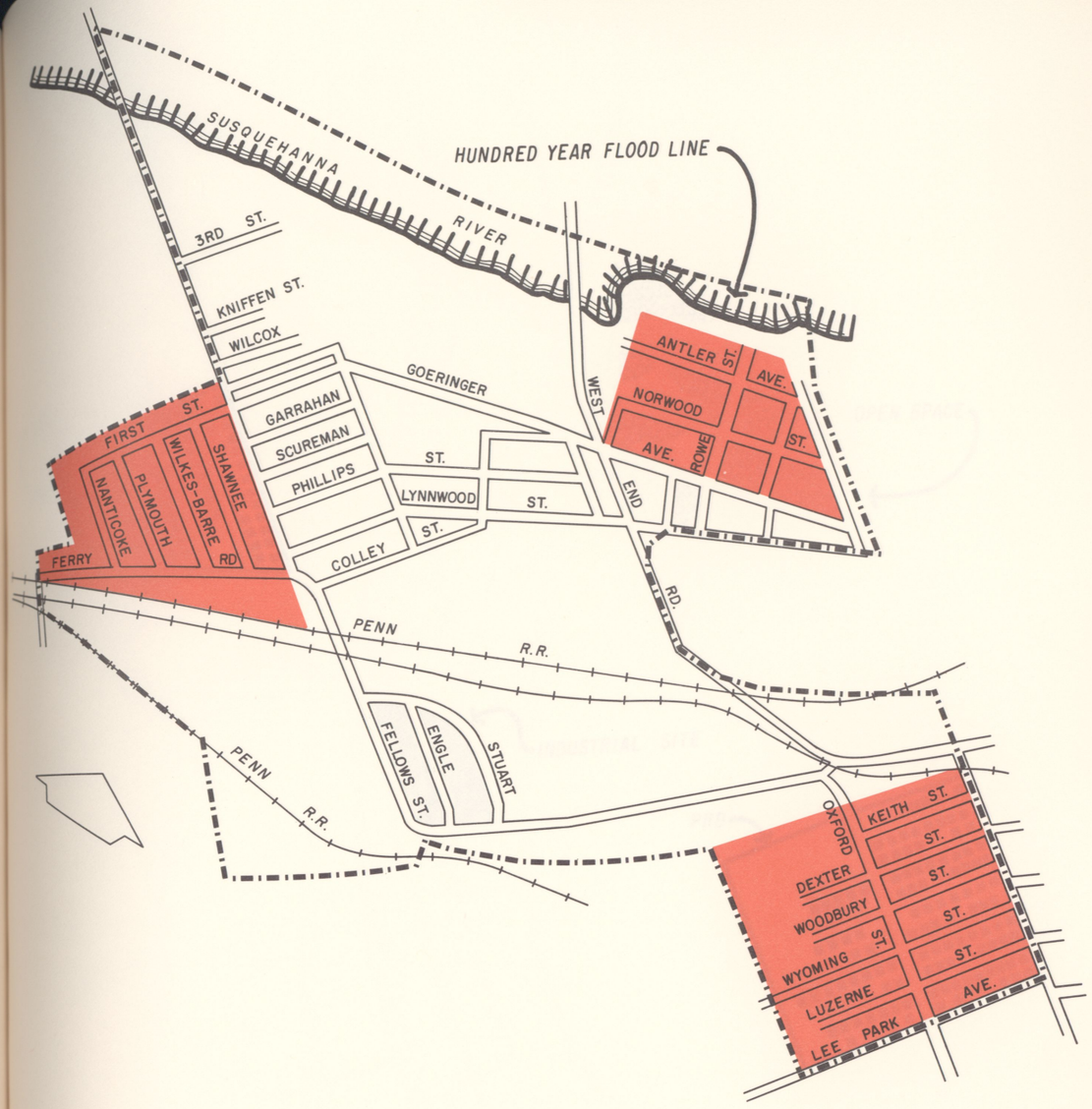
Wilbur Smith and Associates



WILKES-BARRE CITY – PROPOSED LAND USE RECOMMENDATIONS

FIGURE 34

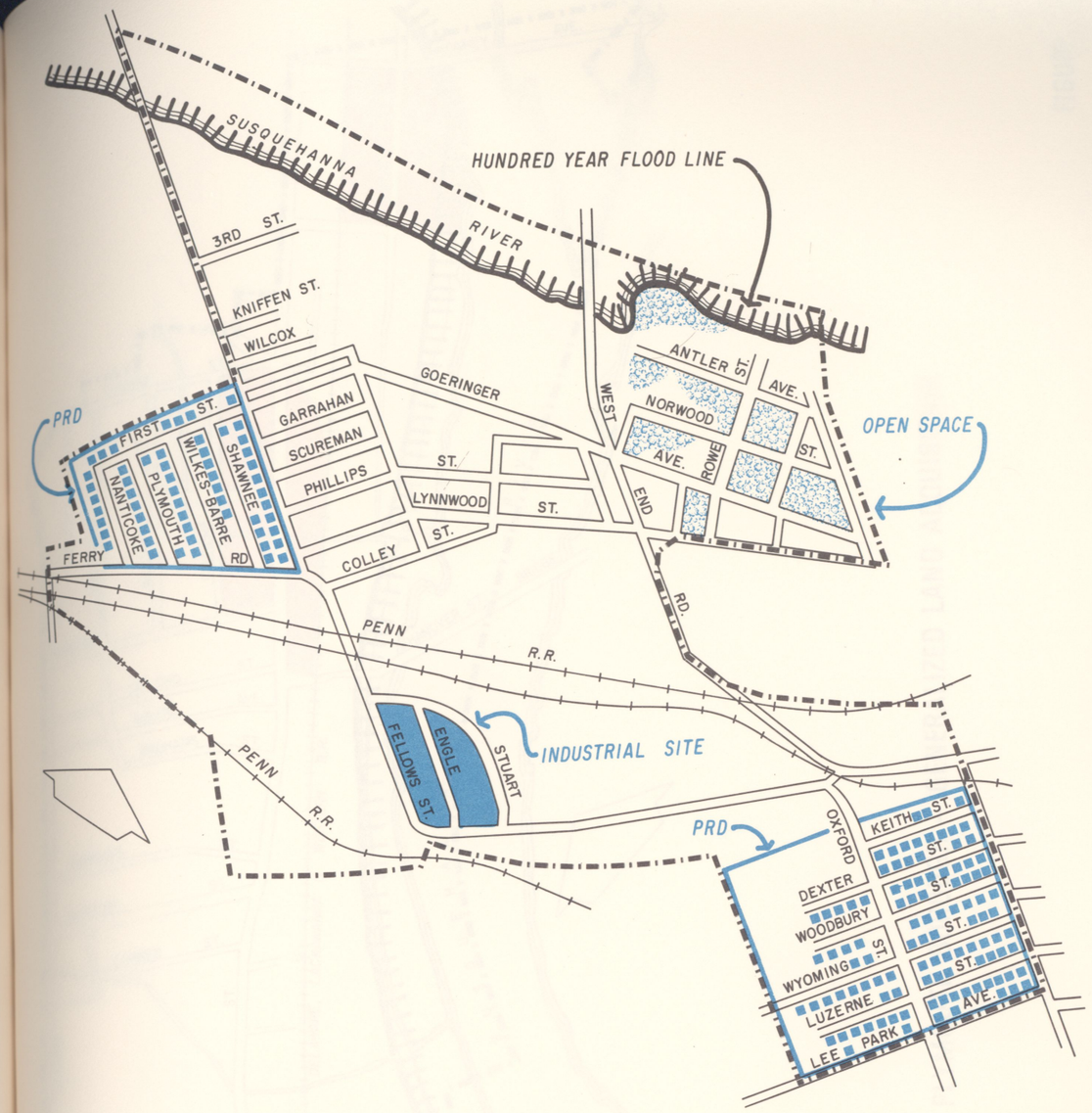
Wilbur Smith and Associates



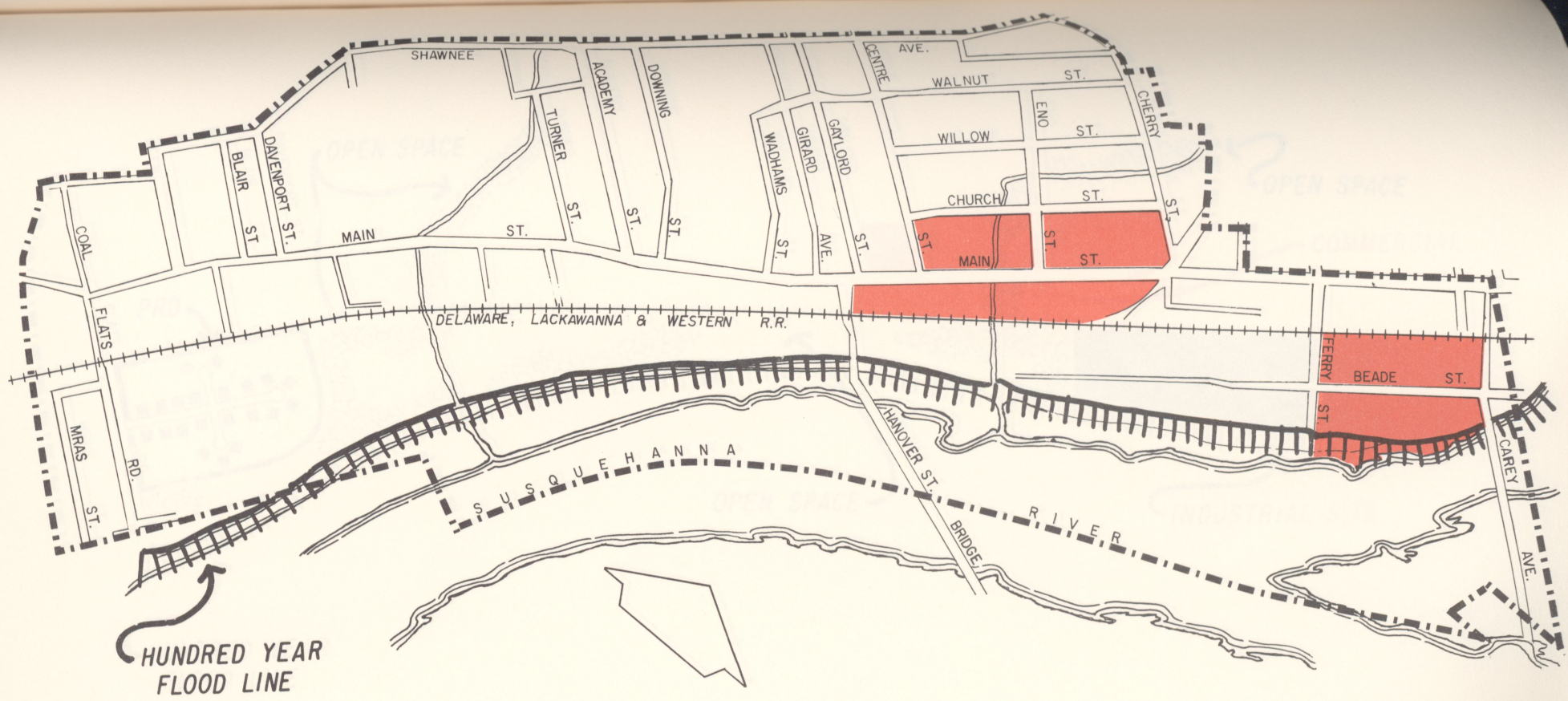
HANOVER TOWNSHIP – GENERALIZED LAND ACQUISITION

FIGURE 35

Wilbur Smith and Associates

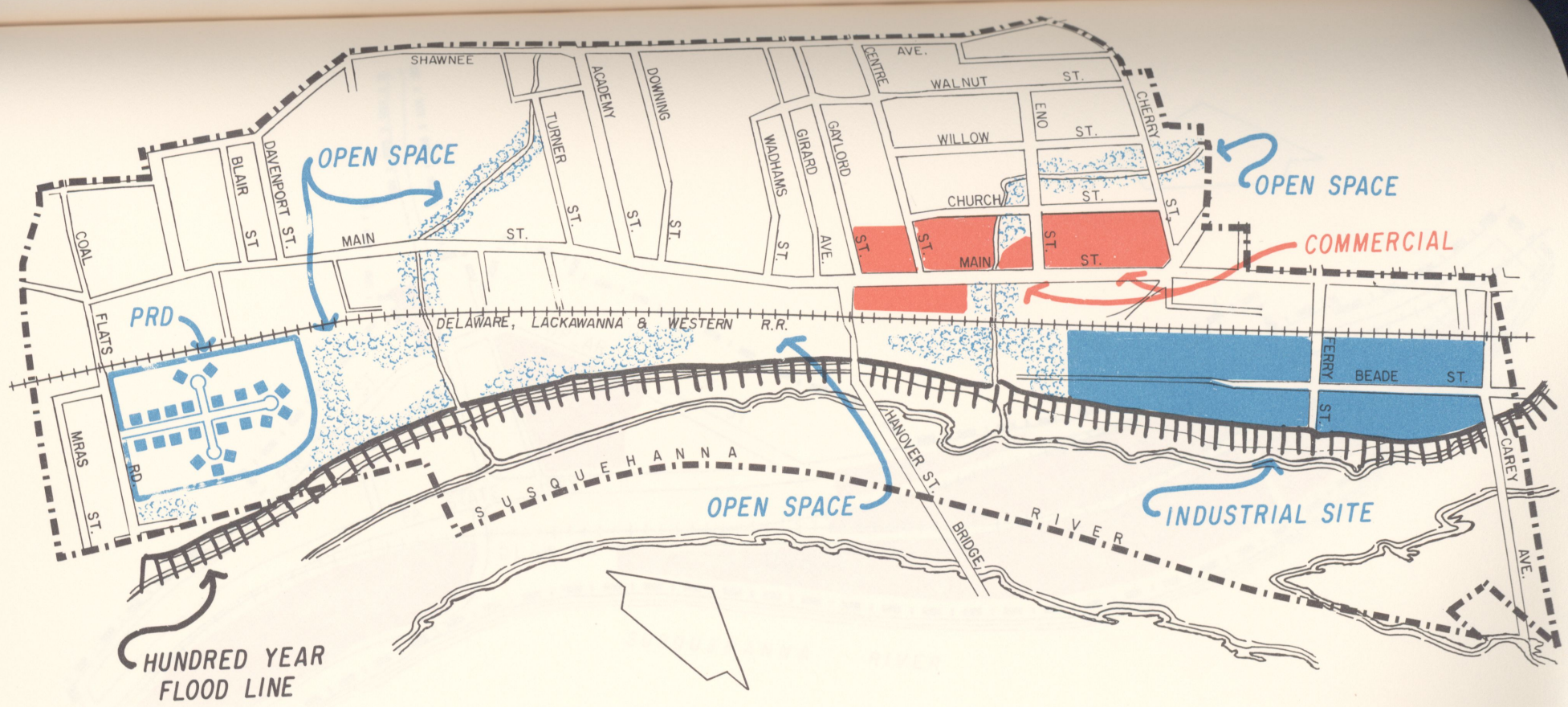


HANOVER TOWNSHIP – PROPOSED LAND USE RECOMMENDATIONS



PLYMOUTH BOROUGH – GENERALIZED LAND ACQUISITION

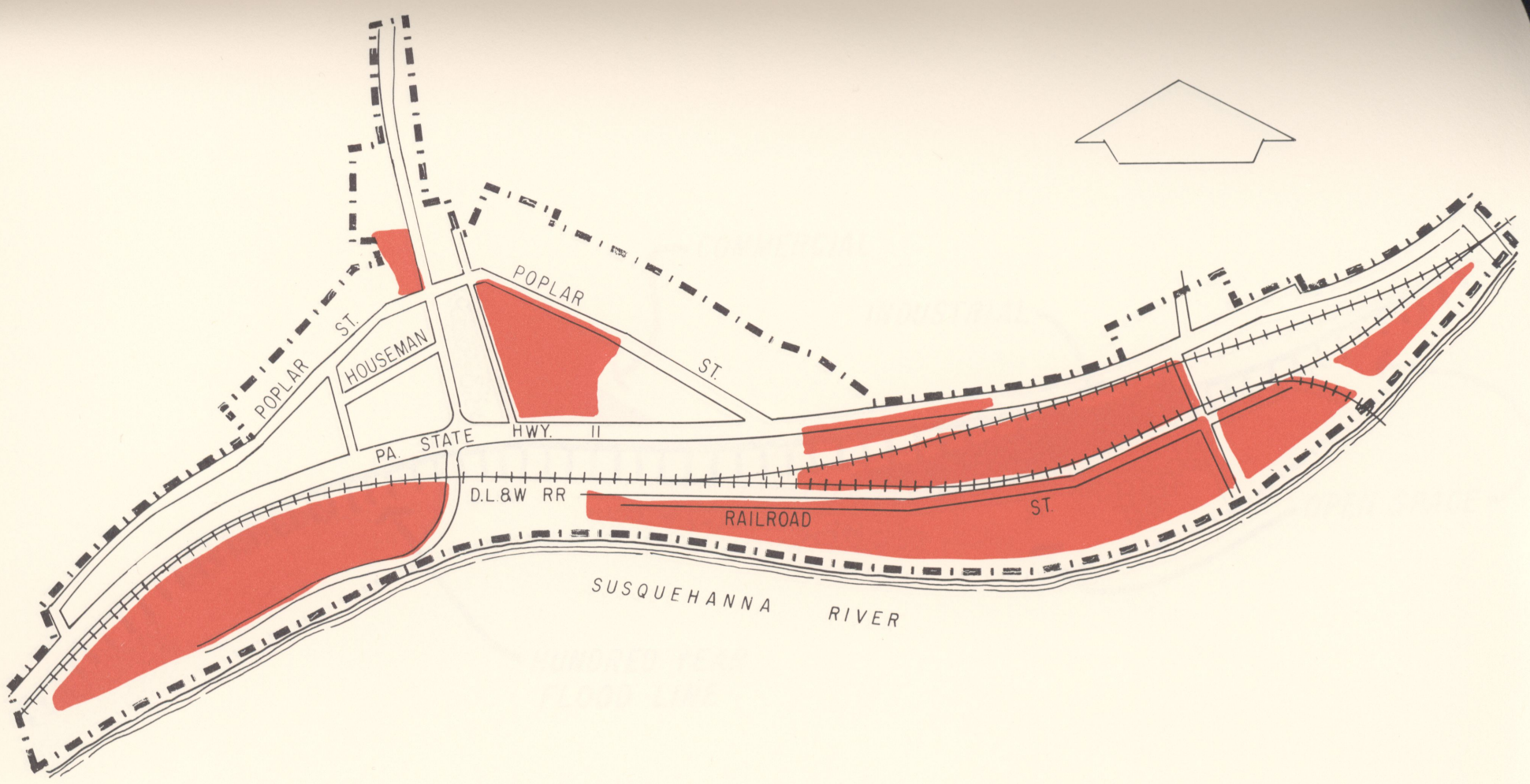
FIGURE 37



PLYMOUTH BOROUGH – PROPOSED LAND USE RECOMMENDATIONS

FIGURE 38

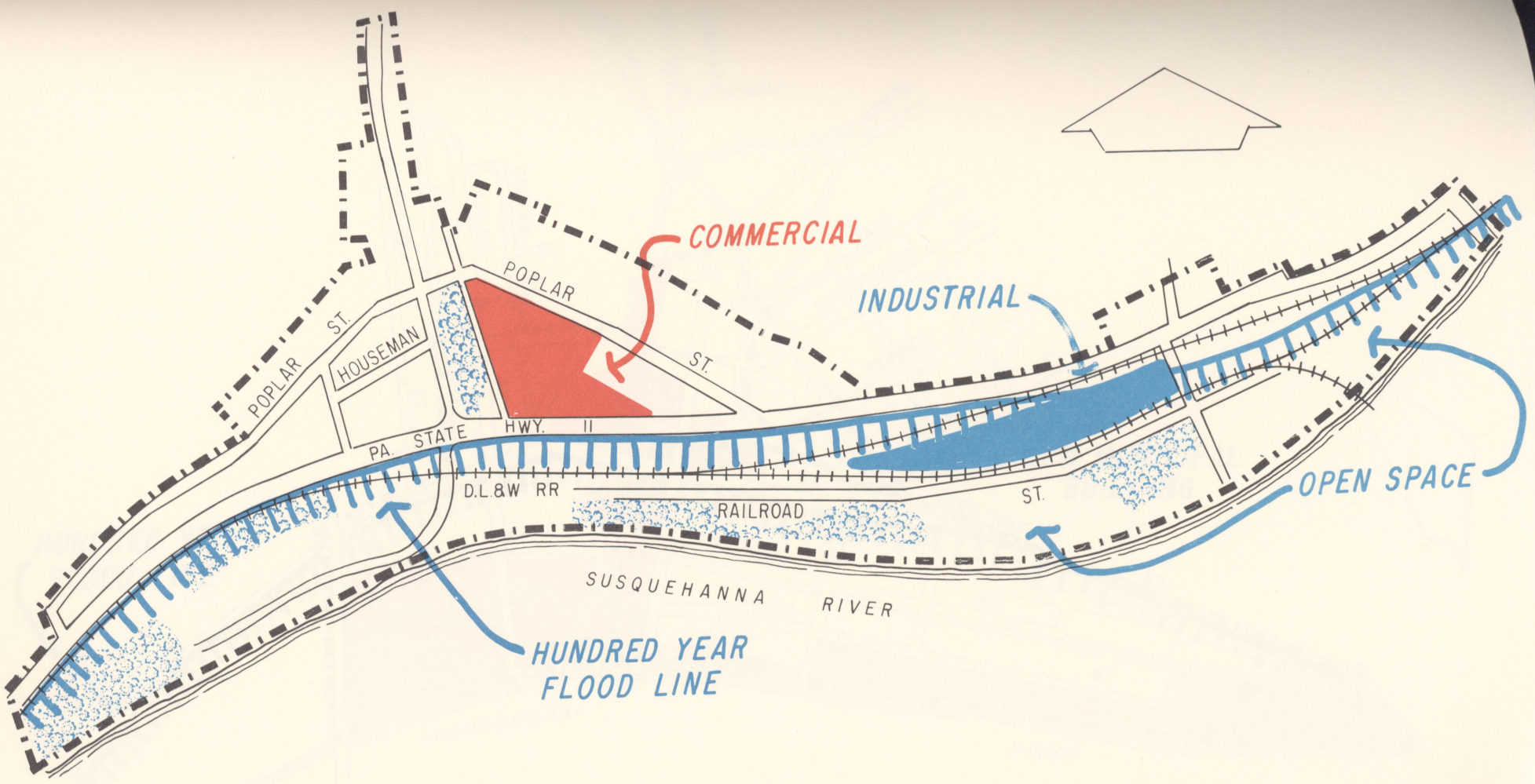
Wilbur Smith and Associates



PLYMOUTH TOWNSHIP – GENERALIZED LAND ACQUISITION

Wilbur Smith and Associates

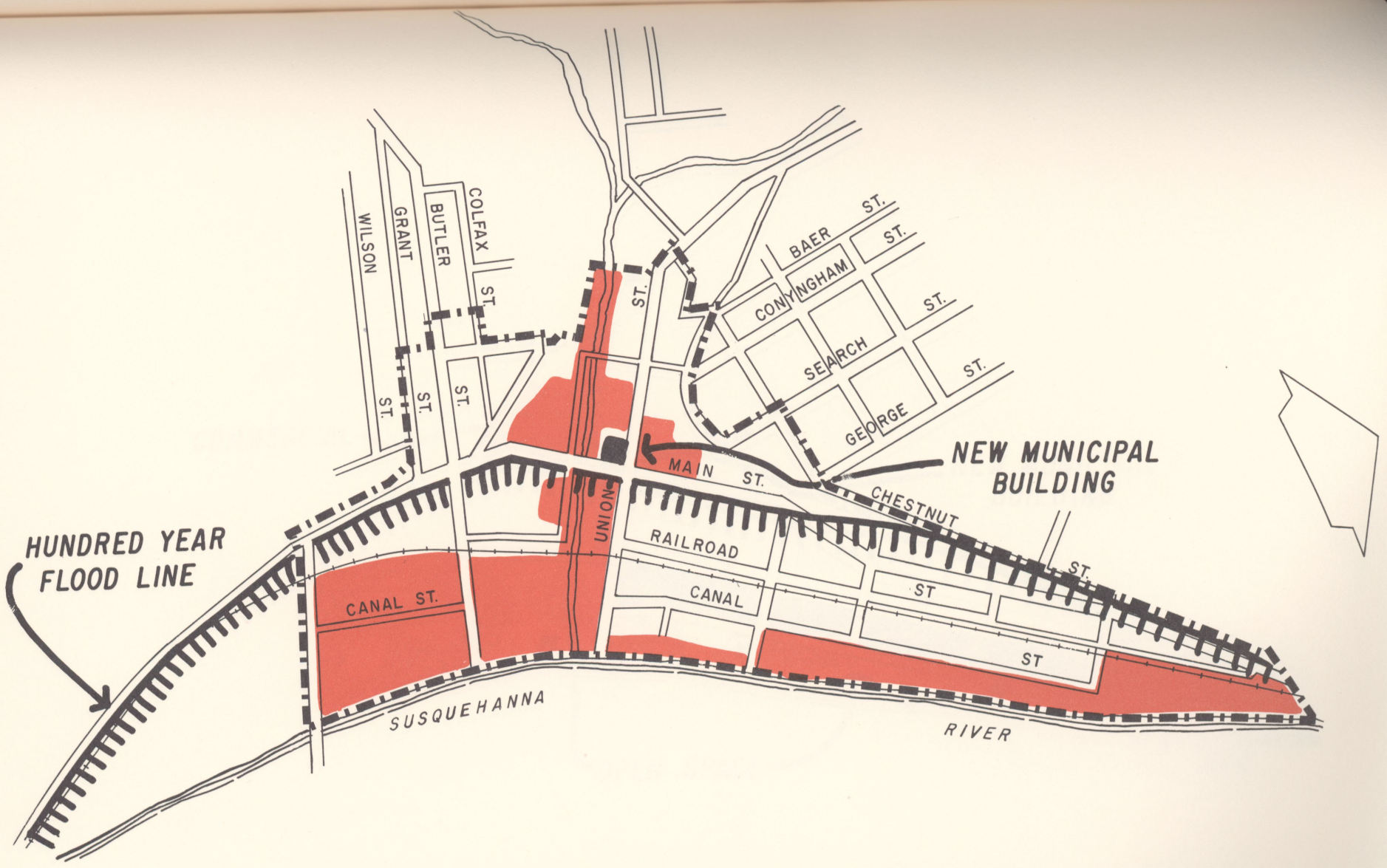
FIGURE 39



PLYMOUTH TOWNSHIP – PROPOSED LAND USE RECOMMENDATIONS

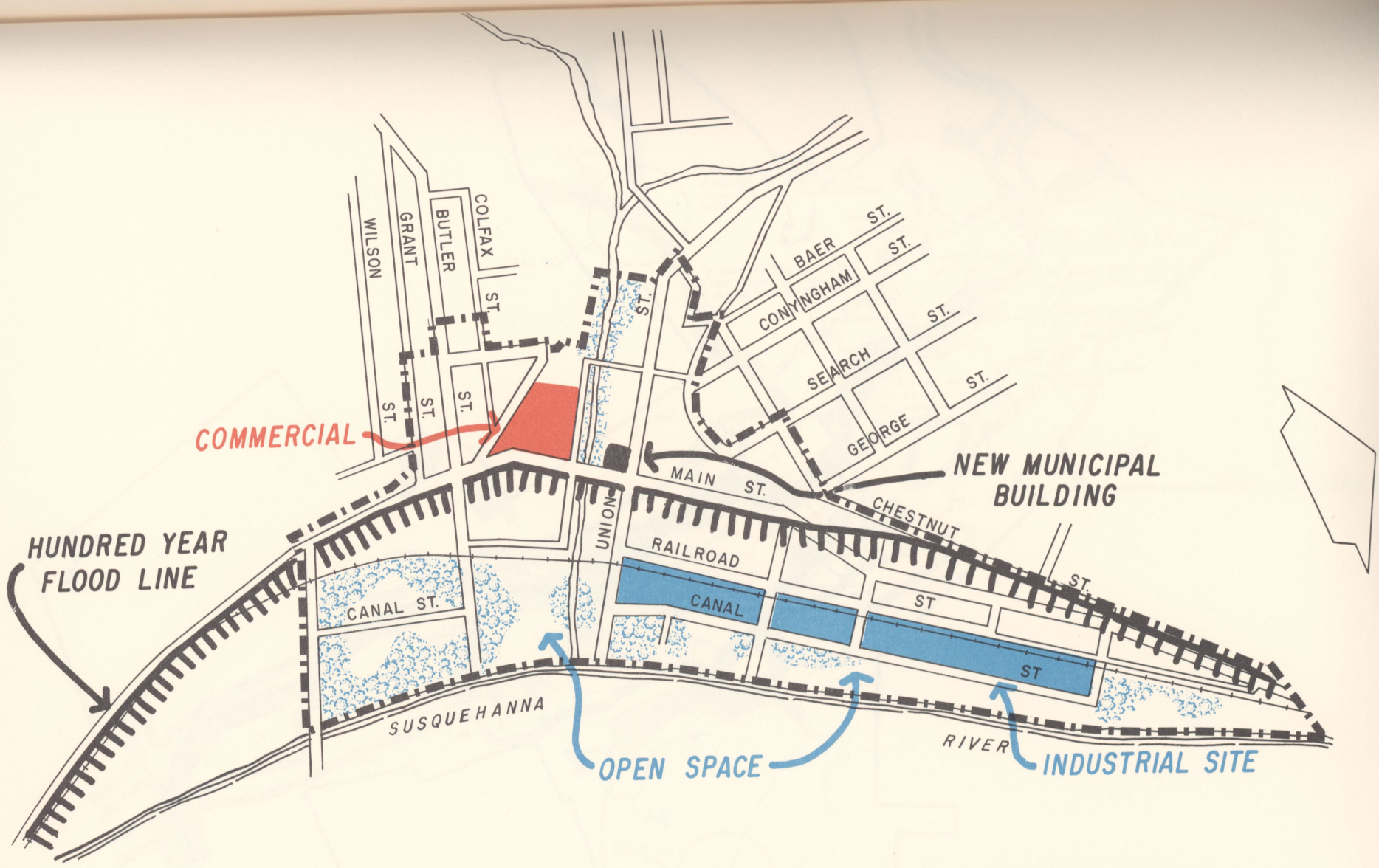
Wilbur Smith and Associates

FIGURE 40



SHICKSHINNY BOROUGH – GENERALIZED LAND ACQUISITION

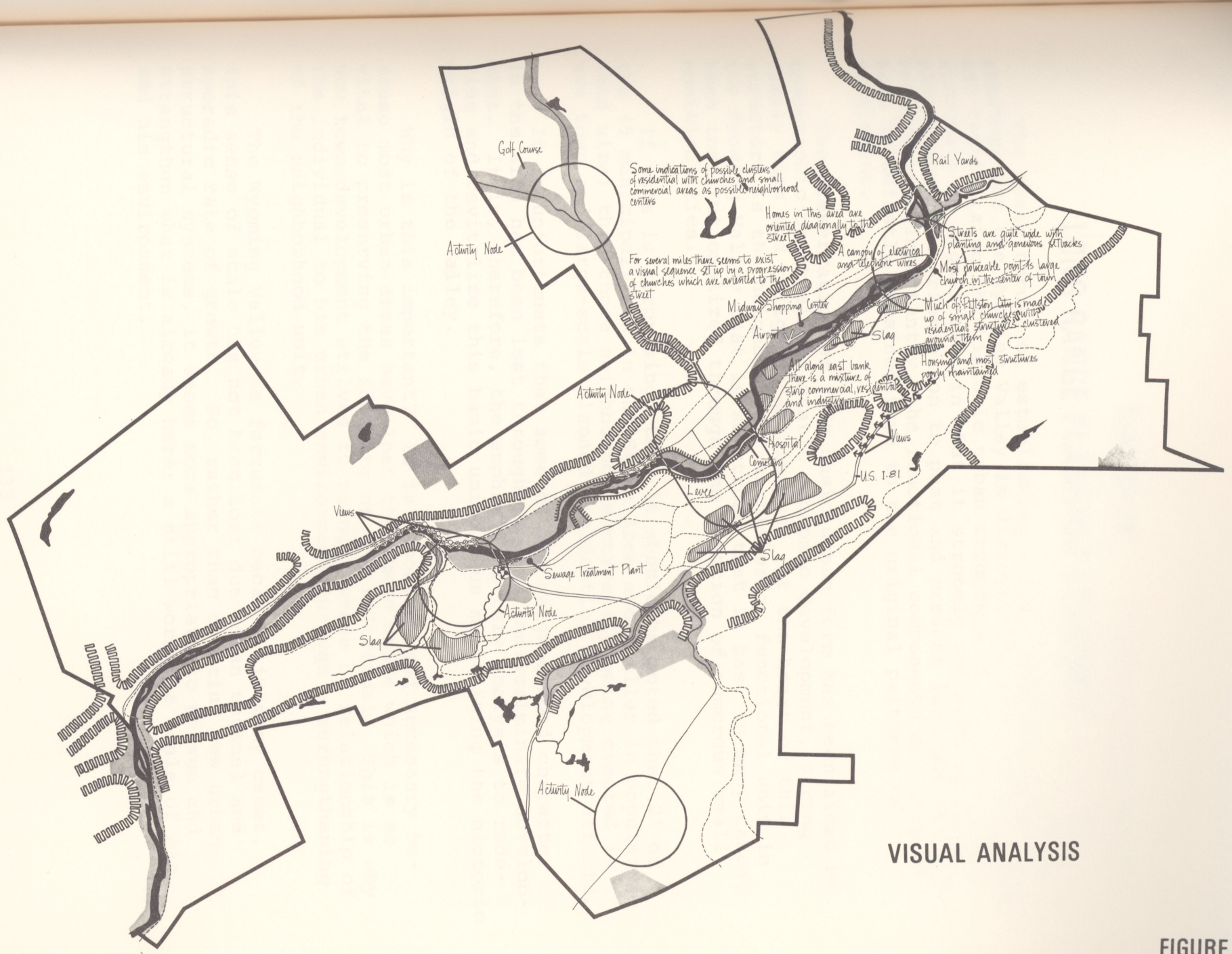
FIGURE 41



SHICKSHINNY BOROUGH – PROPOSED LAND USE RECOMMENDATIONS

FIGURE 42

Wilbur Smith and Associates



VISUAL ANALYSIS

FIGURE 43

Wilbur Smith and Associates

CHAPTER 13

LONG RANGE PLANNING STRATEGY

The basic thrust of establishing a long range planning strategy for the Wyoming Valley is directed toward re-establishing and revitalizing the historic urban structure of the area. This structure is significant in that it strongly reflects a unique, almost European orientation to past and present land use patterns. Perhaps more importantly, the functional components of the area have steadfastly remained true to the original patterns of settlement.

The preservation of this basic urban form has been aided by topographic constraints, static economic development, strong family ties and religious traditions. At the heart of this structure is the neighborhood; an historic, functional unit in the Wyoming Valley that is so strong that it has, in many cases, been institutionalized through the creation of numerous small municipalities.

If this is surprising, then it should be noted that 21 of the 45 municipalities in the Study Area are smaller in population (and size) than those neighborhoods currently being created in new town and large-scale planned residential development efforts.

It is unfortunate that some of the neighborhood character in the area has been lost through recent, indiscriminate development. It is, therefore, the emphasis of this analysis to redefine and revitalize this basic unit, thus maintaining the historic origin of the Valley.

Why is this important? It is important and necessary because most urban areas have lost the human scale which is so vital to preserving the identity of the individual. This is why new town development strives to bring a sense of relationship of the individual to his urban environment through a strengthening of the neighborhood unit.

The Wyoming Valley is fortunate because, in many cases, this sense of scale has not been lost due to an unusual and sporadic rate of growth. So, rather than creating new urban structural systems, it seems more appropriate to pursue and strengthen what is already here; a still workable scale of man and his environment.

PRESENT URBAN STRUCTURE

This analysis of the present urban structure is based upon a commitment to identify a new development approach that initiates significant positive actions to improve the functional land use patterns in the Valley, while not disrupting the security of the residents or the realities of the river and its flood potential.

In this regard, the proposed sketch plan is intended to correct existing developmental deficiencies, and at the same time, make the most of areawide potentials. Thus, a proposed plan that ignores the existing urban structure of the area, or the realities of the river and its flood potential, does the area an injustice. In such dense, confined areas as the Wyoming Valley, an implementation program that attempts to drastically restructure the area has very little chance of success, due to socio-economic constraints that have, and perhaps rightly so, defied change.

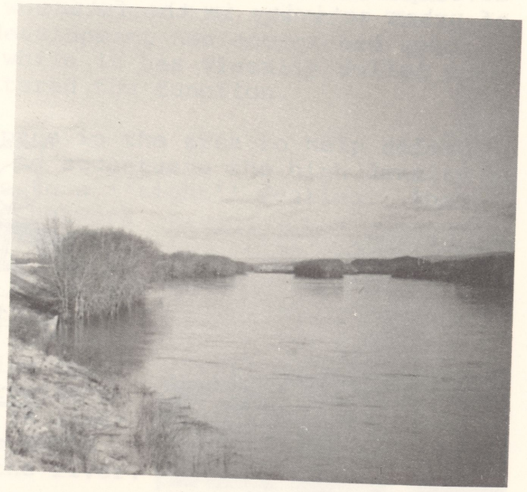
It is therefore most important that the proposed planning strategy utilize the significant features essential to the existing urban structure. When such features are strengthened, they will help to determine the pattern of development, re-development and re-structuring that should be implemented. To this end, these existing urban elements have been carefully analyzed, and their value to the future development of the area determined.

In reviewing the Valley area and the major elements that determine its present urban structure, the most significant factors include the river, major topographic features, the past history of mines, the arterial road network, the railroads, the major activity centers, the European heritage, and most importantly, the existing strong neighborhood pattern.



Due primarily to the winding river, the mountain ranges to each side and the arterial road network that threads along the length of the Valley, there is a linear character to the area. Topographically, the mountain ranges define both sides of the Valley, providing a visual barrier that reinforces the linearity of the area, while precisely defining the limits of growth.

The river is perhaps the most dominant physical force in the valley, but unfortunately, it is the most neglected. Seemingly, it is a much under-used resource. It represents a prominant spine that helps to accentuate the linear quality of the Valley, but unfortunately, very little development is oriented to it.

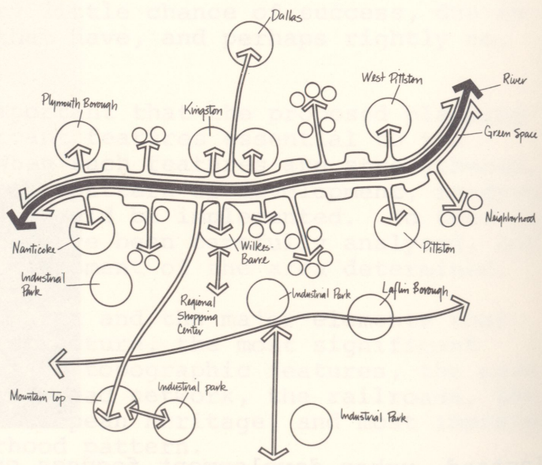


Instead, urban development focuses on the strong arterial network, which is one of the few cohesive elements in the area. Although there is but one limited-access route at present (I-81), there are several major highways that wind along the valley. This arterial framework, characterized by strip commercial that tends to blend each community into the next, manages to pull the Valley together.

There is great potential for the river to become an even more unifying element than the road network, but this is only possible if the residents, and the development they create, relate to the river both visually and functionally. In the past, the river has not been considered an amenity, but merely a physical barrier to be tolerated, and occasionally controlled. Since there are few physical links across the river, there is little

land use interaction from one side to the other. The bridges that cross the river do little to create the needed ties.

Although the Valley has a linear orientation, due to the visual factors detailed earlier, the socio-economic structure of the existing way of life and the activity functions that take place within the Valley do not support dense linear development. The six major activity areas within the Valley, where principal business and commercial functions take place include Wilkes-Barre, Kingston, Pittston, Dallas, Nanticoke, and Mountain Top. The largest of these, Wilkes-Barre, is the most densely populated area in the Valley. Most of these areas are scheduled for redevelopment and, therefore, should emerge as principal nuclei of urban activity in the future.



In the six major activity centers mentioned above, there are only two suburban growth areas, Dallas and Mountain Top. They are the relatively new areas, established to provide less dense area than the Valley floor, and have experienced substantial population increases over the past 10 years. Most of the Wyoming Valley activity centers, however, are not expected to witness intensive growth, but rather to stabilize. They are considered renewal areas, as opposed to growth areas. Primary emphasis will be the revitalization of the existing urban structure to ensure the continuation of the community life style that now exists. It should be noted, however, that new growth areas exist between major activity centers, for example the recently announced planned unit development in Hanover Township.

Although these six municipalities represent the largest identity areas, the primary orientation of the people in the Valley seems to be on a much smaller scale. The principal urban element for the valley can be found in the smaller municipalities, or more precisely, the neighborhoods that comprise them. This is where the urban pattern is centered.

This is a drastic reversal from most areas throughout the country, in that urban areas tend to dehumanize the environment. But by maintaining this basic neighborhood unit, the Valley has not lost the human scale that is so vital to preserving the identity of an individual. This neighborhood unit has remained as the basic structure of the Valley because there has been relatively little change that would upset the system. The lack of open space and strip development has encroached upon this neighborhood system, but while it has visually dulled some of the identity, it has not altered the function.

There is a lack of open space in the area to help define these communities. This tends to accentuate the high density of the Valley area and contributes to a ''tight'' feeling. There is, however, a very discernable network of potential green spaces, existing in the form of abandoned rail lines, large culm banks, and drainage ways. Any of these could possibly be strengthened, with landscaping and planting, to visually reinforce and better define the smaller neighborhoods and to provide a strong open space pattern that is linked with the river. Again, this would assist in orienting people to the river.

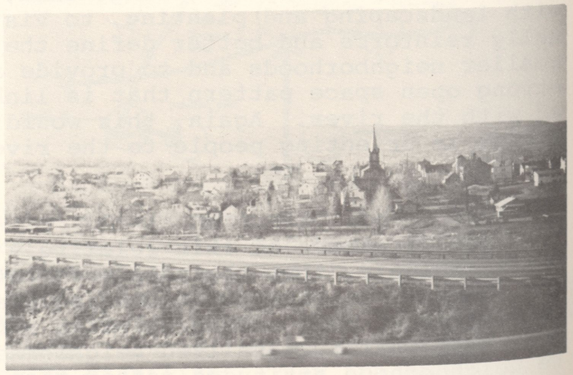


The existence of this relatively large number of governmental units indicates that the people do not wish to lose their identity and the face-to-face relationships that exist in these small communities. Many of the existing municipalities seem to be no more than institutionalized neighborhoods. Thus, there seem to be neighborhood attitudes rather than a municipal attitudes. Originally developed from ethnic neighborhoods or for tax purposes, these piecemeal communities have enabled their residents to maintain local identities in the face of continued arguments for consolidation within the Valley. While their boundaries may be defined by political limits, topographic constraints, culm banks, the flood plain, or the road network, the neighborhoods remain as the core of the Valley's urban structure.



THE NEIGHBORHOODS

Historically, neighborhoods in the Valley grew up around one industry: mining. Often, land use was totally controlled by the mining companies, which tended to foster dense development. Miners for these early settlements were relocated European miners, and because of their heritage, they consciously or unconsciously created an urban form in the Valley similar to



those in Europe. These neighborhoods are characterized by dense single-family and two-family housing along narrow streets, oriented to small community activity centers. This orientation has managed to survive in most neighborhoods. Current activity nodes include churches or other social activities (such as local meeting halls or community associations or simply taverns), small commercial areas, schools, or recreational activities. The activity centers

function as identity cards for neighborhoods. These numerous small residential clusters are explicit indications as to where the centers of everyday life exist in the Valley. Historically, this parallels the European residential development pattern. Such clusters, of course, have the potential of helping to evolve a much needed, valley-wide urban structure. If strengthened, these ''European'' Neighborhoods could be the principal element in improving the physical and social environment of the valley. This neighborhood unit provides a more human scale in which the residents can function. In land use planning, as well as in renewal efforts, when the opportunity exists to develop new patterns of living, the basic integrity of this neighborhood structure should be maintained.

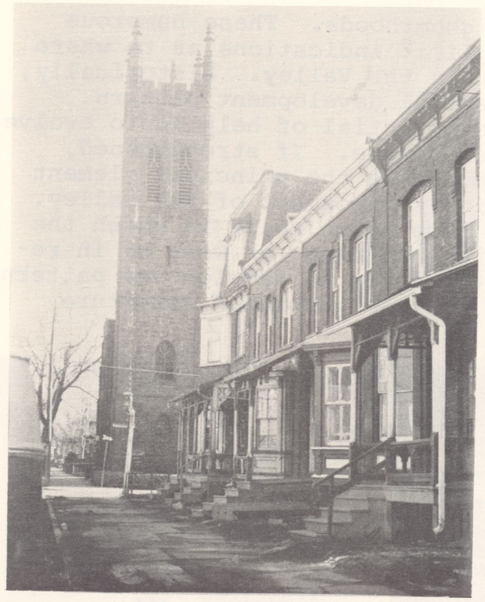




Approximately 83 percent of the housing stock in the Valley was built before 1940; therefore, many of the neighborhoods have interesting architectural features. A great deal of potential exists in the styles that are present, but in most cases, some rehabilitation or revitalization work is necessary. General upkeep and simple techniques can be used to highlight the architectural quality of some structures. This can drastically improve the visual appearance of a neighborhood. At the present time the rather diluted appearance of most of the neighborhoods contributes little to the vitality of the area.

VISUAL IMPRESSIONS

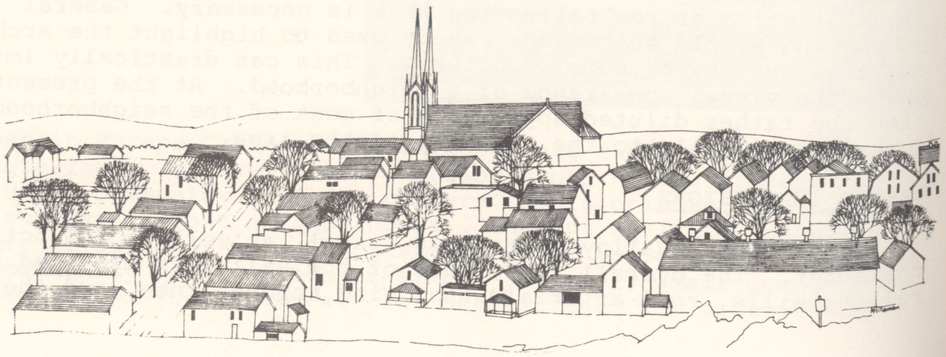
The Wyoming Valley portrays a visual, as well as a functional character. The overall appearance of the valley is typified by rolling hills, road arterials that wind through them, and the



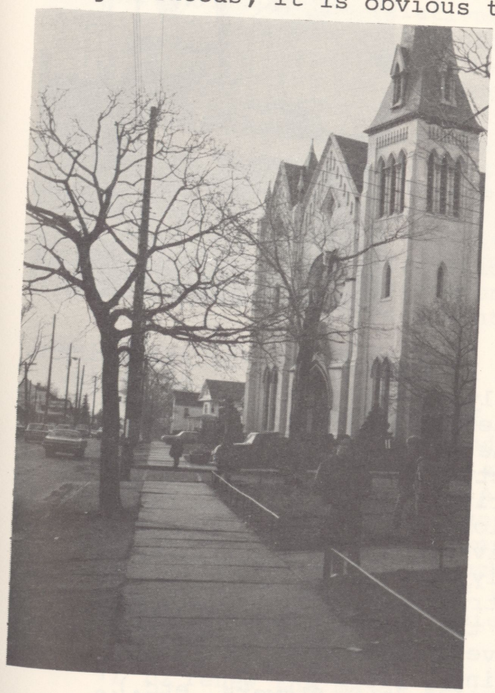


neighborhood pattern that is discernable by the occasional appearance of church steeples atop the hills. When traveling from one area to another, the European setting is apparent, with these churches amid small residential areas that spread from them (see Figure 43).

The principal visual problem of the valley, however, does not exist on the large scale, but on the human scale, when a person is actually moving through the area. When attempting to relate to the surroundings or the neighborhoods at this scale, the visual concept breaks down. There are no definable edges to the neighborhoods.

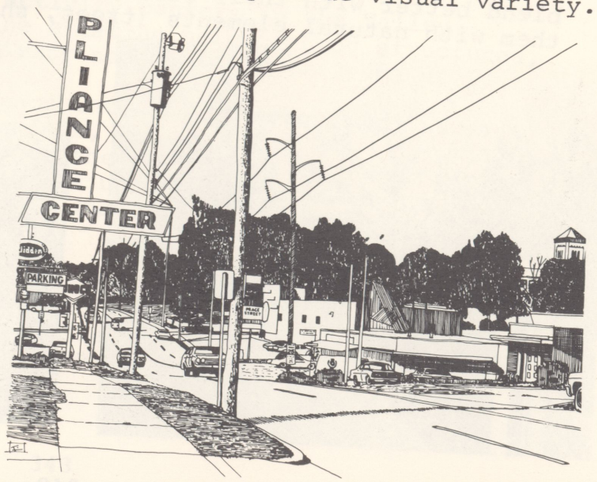


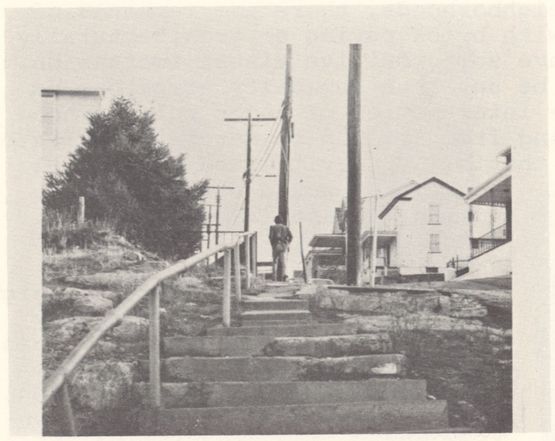
Occasionally, in some neighborhoods, there are remnants of older developments, perhaps with brick paving or architecturally significant housing, that leave some positive visual impression. The only time there seems to be any true community structure is when there is a church at the intersection of major neighborhood streets, with housing radiating from it. In commercially oriented neighborhoods, it is obvious that new or revitalized commercial activities would strengthen the community visually as well as functionally.



It is apparent that the neighborhood unit while functionally intact, visually has largely been lost, due to the lack of open space separating the communities, the strip development that permeates the Valley, and the blighted appearance of building and houses that are in disrepair. Those open areas that do exist, such as culm banks, drainage areas, or abandoned railroad lines are not improved and accented. This is particularly true with the railroads, which have great potential since they sometimes form a rare physical boundary between neighborhoods. There is a possibility of accenting these open spaces in such a way as to clearly define the boundary of the two neighborhoods as well as provide visual variety.

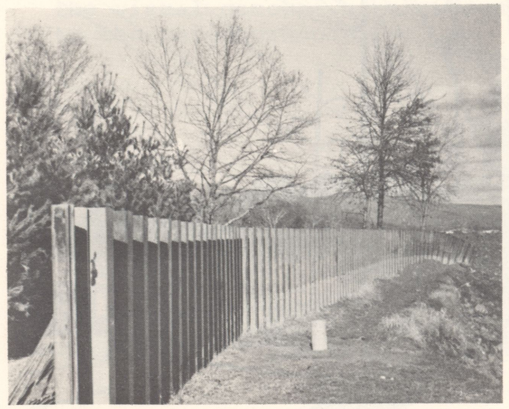
The existing streets in most older neighborhoods have a dense, ''tight'' feeling, due to the extremely short housing set backs and narrow streets found in the European development pattern. These confined corridors through the neighborhoods are, at times, further encroached upon by power lines and/or signs. For these reasons, some potentially pleasant neighborhoods seem to be on the verge of visual claustraphobia.

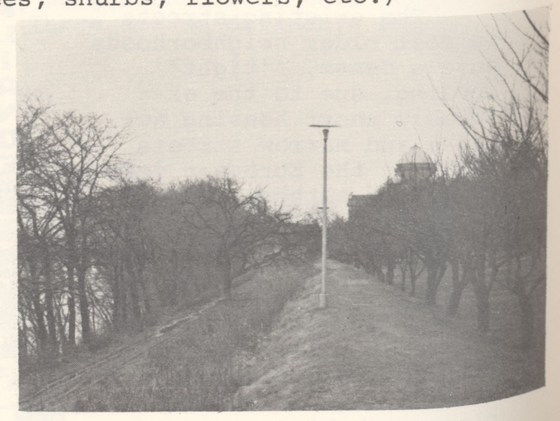






Along the river, where there is a potential for significant visual variety, there is often only a visual barrage of strip commercial, industrial, and scattered residential land uses that provide no orientation to the river or any particular land use function. This confusing picture is quite prevalent, particularly on the east side of the river. Both physically and visually, there is no real relationship to the river. The river's edge, or a view of the river, is often dominated by culm banks, which also tend to visually obscure development along many arterials. Flood control structures also tend to dominate the urban form, and particularly the river. Special attempts could be made to make such massive objects such as the levees, blend better with their surroundings, particularly by accenting them with natural elements (trees, shurbs, flowers, etc.)





In the past, the people have worried about surviving, economically, and have not concerned themselves specifically with the environment. In physical terms, the area has paid a high price for economic reversals over the past 30 years. As the County General Plan states, physically, the area is characterized by contrasting beauty and blight. There is potential beauty in the churches, the relatively pleasant street pattern, the architectural style of the older areas and the urban form of the neighborhoods themselves. The blighting effects of years of neglect in housing upkeep, intense strip commercial development along major arteries, and the extreme difficulty associated with intense traffic problems, all have combined to give the impression of a dense, cluttered area of physical deterioration in many sections of the Wyoming Valley. The quality that is offered by the neighborhoods, and the potential recreational and open space usage of the river and its tributaries, both seem to be lost. Hopefully, a significant effort will be made to once again establish a pleasant environment. This is to become a major guideline for the future development plan.

THE LONG-RANGE SKETCH PLAN

The preceding analysis of the urban land use form of the valley and its problems has indicated that the area has a very interesting, distinguishable, and generally positive urban form that has definite potential. At the outset, the sketch plan recognized these positive potentials, and does not recommend new town development, development of new growth areas, or drastic restructuring of the urban development in the Valley. Instead, the primary thrust of the sketch plan will be to renew, redefine and revitalize the neighborhood elements. The intention of the sketch plan is:

1) To renew the major activity centers in the Valley,
2) To renew and redefine existing neighborhood structures, including their activity nodes, in order to maintain this human scale.
3) To introduce open space into and between communities to help define neighborhoods,
4) To orient open space to the river area in an effort to renew and revitalize this unique resource, and,
5) To improve the physical and visual environment of these communities.

The general long-range plan for the Wyoming Valley centers about both the six major and minor activity centers, and the neighborhood framework of the Valley. The entire system of urban development in the Valley could be served by an overall green

space network that would visually and functionally tie the activity centers and neighborhoods to each other and the river. By extending into and around the neighborhoods, these green spaces could serve to visually open up the Valley, and to help to define the functional limits of neighborhoods or land use areas.

The principal business and commercial center of the Valley will obviously remain in the Wilkes-Barre/Kingston area, dominating the residential neighborhoods surrounding it. This area will serve as the functional hub of the Valley, as well as the population center. Major growth is not anticipated, but more importantly, the renewal effort in the area will hopefully re-define the urban form and provide an open space system that will open up the area.



Two sub-activity centers will be defined at either end of



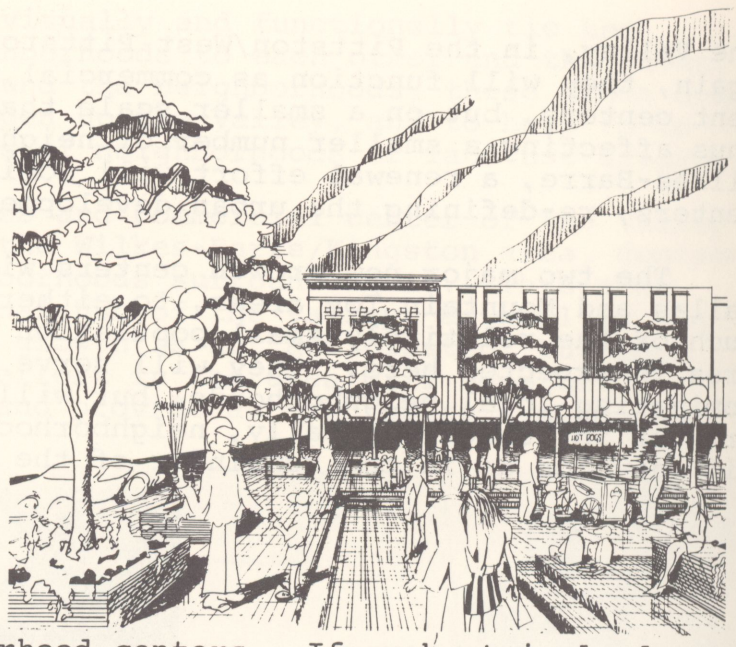
the Valley, in the Pittston/West Pittston and Nanticoke areas. Again, they will function as commercial, business and entertainment centers, but on a smaller scale than Wilkes-Barre/Kingston, thus affecting a smaller number of neighborhoods. Just as in Wilkes-Barre, a renewal effort will dominate the sub-activity centers, re-defining the urban development pattern that exists.

The two major new growth centers will continue to be the Dallas and Mountain Top areas, to either side of the Valley. Much of the relatively small population increase for the study area is expected here. They will serve as major activity centers, dominating local neighborhoods, but will be expanding their area of influence. Ideally, neighborhood patterns in these areas will develop as in the remainder of the Valley.



The existing neighborhood framework, perhaps the greatest potential of the Valley, is just as vital to proper development of the area as the activity centers. A redefining and revitalizing of the neighborhoods and their internal and external functioning is required, in that the present urban land use pattern tends to blur neighborhood identities. Both this urban conglomeration and poor visual appearance of the neighborhoods cause confusion as to neighborhood boundaries. This plan will emphasize providing this visual and functional order.

The existing neighborhood centers should be preserved, and strengthened when possible. Where commercial activities form the neighborhood focal points, such activities can function as magnets. Strip developments that would otherwise be locating along major transportation arteries could very well be inticed



to locate in these neighborhood centers. If such strip land development continues, there will be even more confusion concerning the land use pattern and neighborhood identity. In the less dominant commercial or non commercial centers, true village centers could be formed by the addition of small commercial activities, or the revitalization or concentration of existing commercial.

The emphasis on the neighborhoods should also focus on the residential pattern around the activity nodes. Homeowners particularly those who are relocating from the flood plain, should be encouraged to invest in existing neighborhoods, and thus hopefully revitalize the older residential areas, particularly those of historical significance.

It is felt that the integration of open space into the activity centers and along the residential sections could serve to open up the dense urban land use of the area. If proper use is made of existing open space areas such as railroad rights-of-ways, culm banks, drainage areas, etc., then open space belts can be used to define the functional boundaries of communities or land use areas. The green areas could also be extended into the neighborhood activity centers by means of parks, town commons, malls or pedestrian green spaces in the commercial cores. Such green belts could be a part of the overall green space network that would lead to the river, which would serve to visually and functionally orient the communities to the potential of the river. The preservation of the existing neighborhood areas will, in effect, maintain the present densities and thus, there



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WYOMING VALLEY SKETCH PLAN–2000

FIGURE 44

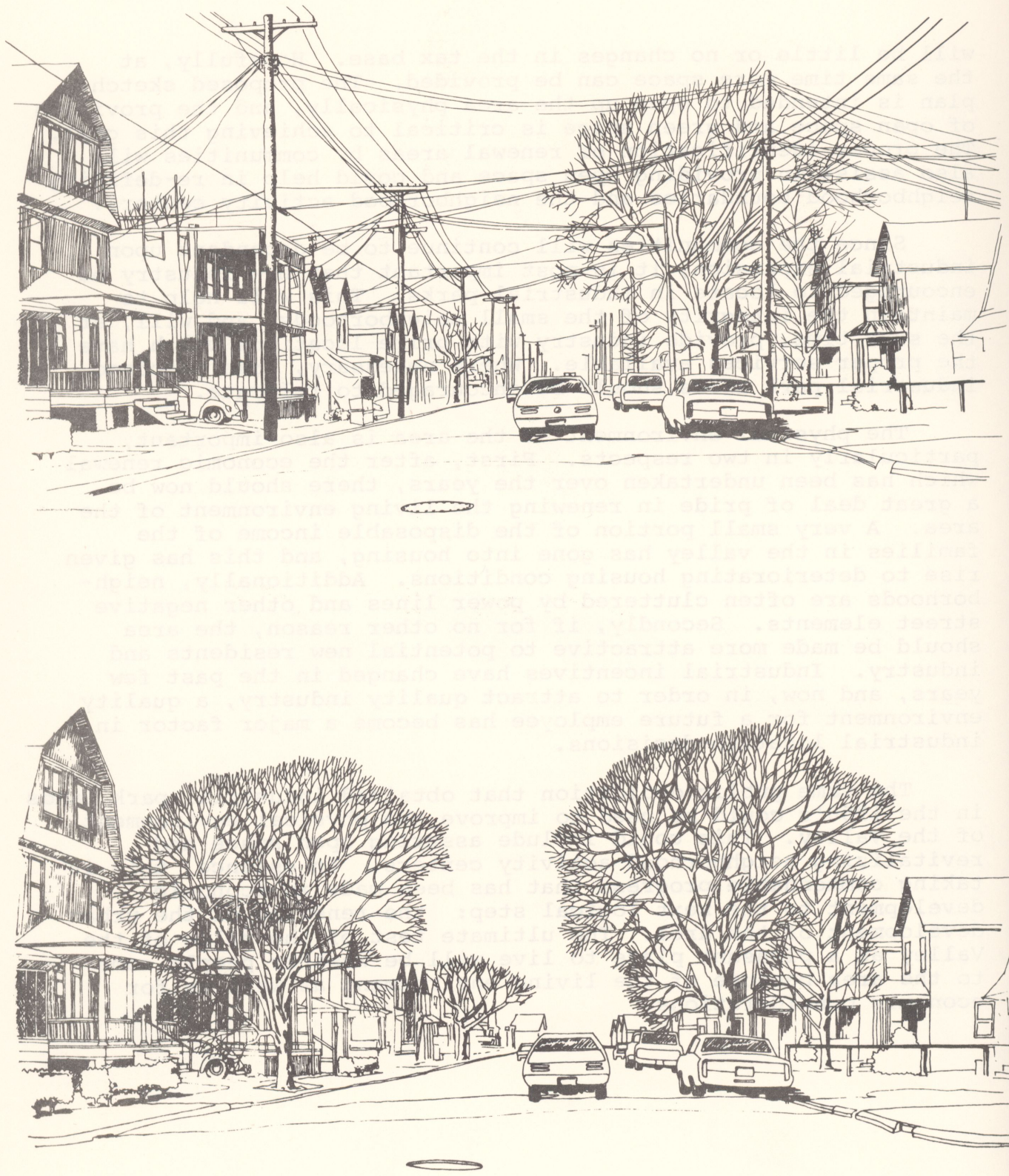
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will be little or no changes in the tax base. Hopefully, at the same time more space can be provided. The proposed sketch plan is intended to open up the area physically, and the provision of open space and green space is critical to achieving this goal. The proper identification of renewal areas by communities will also assist in providing open space and could help in re-defining neighborhood boundaries and the neighborhood activity centers.

Since the communities will continue to be dependent upon industrial expansion, it is most important that new industry be encouraged to locate in industrial parks. This will help to maintain the integrity of the small neighborhoods, and will, at the same time, provide industry with prime locations which have the proper services available. Where necessary, some proposed industrial park areas should be encouraged to relocate.

The physical environment of the area is also important, particularly in two respects. First, after the economic renewal which has been undertaken over the years, there should now be a great deal of pride in renewing the living environment of the area. A very small portion of the disposable income of the families in the valley has gone into housing, and this has given rise to deteriorating housing conditions. Additionally, neighborhoods are often cluttered by power lines and other negative street elements. Secondly, if for no other reason, the area should be made more attractive to potential new residents and industry. Industrial incentives have changed in the past few years, and now, in order to attract quality industry, a quality environment for a future employee has become a major factor in industrial location decisions.

The same public dedication that obtained industrial park lands in the 1950's could be used to improve the physical environment of the valley. This could include assuring open space and revitalizing neighborhood activity centers. In essence, this is taking commendable progress that has been made in economic development to the next logical step: the renewing of the urban development of the area. The ultimate test of the value of the Valley as a pleasant place to live will be whether people come to the area because of the living environment as well as for economic considerations.



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