



Oswego County Comprehensive Plan

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Oswego County Planning and Community Development, .pdf document

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1. INTRODUCTION

A. PURPOSE

The primary purpose of the Oswego County Comprehensive Plan is to serve as a guide to county decision-makers as they work to accommodate the physical growth and development of Oswego County. The plan will also provide a statement of community goals, objectives and strategies along with comprehensive information regarding plan elements. It is intended that the plan will be helpful to local towns, villages and cities as they plan for their communities' futures, to State agencies as they plan facilities within the county, and to other public entities, private businesses, not-for-profit agencies, and citizens as they plan for their futures.

In these days of limited public resources, it is important that there be adequate information available regarding the plans of public and private sector providers of infrastructure and facilities to allow for effective, efficient expenditures of public funds and sound private sector decision-making.

B. HISTORY OF SETTLEMENT

The Iroquois, French and British, several wars, the New York State Barge Canal, shipping days, creative builders, and local civic leaders have all left their marks on the history of Oswego County. The earliest inhabitants of the area were pre-Iroquoian native peoples, Algonquins, who hunted and fished. Later, the Onondagas and Oneidas hunted the land and fished in its waters, but with few exceptions, did not settle the area. Permanent village sites are known only in the southern part of the county. The first white explorers were French missionaries and Dutch fur traders. The English were introduced to the Great Lakes region and Oswego when they took over Dutch possessions. The British built two forts, Fort Oswego and Fort Ontario to protect their trading interests. Control of Oswego was transferred in 1796 to the American government well after the American Revolution.

People who followed these earlier inhabitants came in three waves. After the Revolutionary War, Yankees or New Englanders settled the region during the pre-industrial period from 1790 to 1825. These mostly Protestant people were farmers, artisans or housekeepers. In the late 1820s, immigrants were primarily from western Europe: England, Germany, and French-Canada. They worked in factories, commercial ventures, and service occupations. At the close of that century, the third wave of immigration brought people from southern and eastern Europe: Italy, Poland, and Russia.

As soon as the British left Fort Ontario in 1796, settlers made Oswego their home because of the possibility of business with Canada and trade on Lake Ontario and the Oswego River. Realizing that the area at the mouth of the river would be an important place, the State of New York made plans to lay out a community, Franklin Square, on the west side of the river. Following the War of 1812, the east side of Oswego was laid out in a grid street pattern and broad lots similar to the west side of the river. The completion of the Oswego Canal in 1828 gave Oswego its commercial start and spurred enormous growth, the population doubled between 1820 and 1830. The canal allowed cheaper and faster transportation for passengers and freight and established a larger market for all products. Using water power, factories along the Oswego River produced flour, starch, textiles, and manufactured goods. Beginning in the 1870s, Oswego declined as a bustling port. Salt shipments from Syracuse were no longer needed with the discovery of salt fields in the Midwest and the Erie Canal became a more cost-effective transportation route when it quit charging tolls. Before World War II, Oswego's economy began to focus on what was to become its major local industry, energy.

The City of Fulton, formerly Oswego Falls, flourished as a result of the construction of the canal with grain mills, textile factories, and metal working plants. As shipping business declined at the end of the nineteenth century, Fulton continued as an industrial center.

The land west of the Oswego River encompassing the Towns of Oswego, Hannibal, Granby, and Minetto was called the Military Tract because land parcels were given free to Revolutionary veterans. Through a series of

treaties, the State of New York had purchased land from the Iroquois Indians. Although each soldier was given 600 acres, few soldiers settled in the area; they sold their parcels to others.

In 1792, George Scriba and several other investors assumed the contract of 525,000 acres of land between the Oswego and Salmon Rivers from John and Nicholas Roosevelt. The Towns of Constantia, West Monroe, Amboy, Parish, Hastings, Schroepfel, Palermo and Volney comprised Scriba's purchase. The southern area along the Oneida Lake shore was settled earlier than the northern portions because of the natural waterway from the Mohawk Valley to Lake Ontario. Land and water transportation routes prescribed the location of villages in the Scriba Patent. Cleveland, Bernhards Bay, Constantia, Phoenix and Hinmanville ring the region along the Oneida Lake and Oneida and Oswego Rivers, the traditional water route. In 1846, Oswegonians built the first plank road in the United States initially from Syracuse to Central Square and later completed it to Watertown (now U.S. Route 11). The Village of Central Square sits astride this early road which connected North Country farmers with salt sources near Syracuse.

Settlement patterns were further influenced by the distribution of natural resources. From 1830 through the 1850s, bog iron ore along Scriba's Creek in Constantia supplied iron foundries. This in turn spurred settlement on the north shore of Oneida Lake. In Cleveland and Bernhards Bay, sand from Oneida Lake led to early glass manufacturing. Palermo, northern Hastings, and areas of Schroepfel were sources of gravel and sand.

The Scriba Patent North includes Scriba, New Haven and Mexico. In the nineteenth century, these towns were similar in many ways. Each lay along the stage route from Rome and Utica to Oswego, and each had creeks or rivers to power early mills. Villages formed at the intersection of main roads or where a major route crossed a creek at a mill site. The most activity and growth was in the Village of Mexico because of its location at the intersection of two creeks, Black Creek and the Little Salmon River. Their water powered grist and saw mills, machine shops, wagon and pump manufacturers, and copper shops, together making Mexico a thriving manufacturing community. Before the Civil War, Mexico was an area of antislavery activity. Several residents were a part of the Underground Railroad to help escaped slaves reach Canada.

The North Country includes the Towns of Richland, Albion, Boylston, Williamstown, Redfield, Orwell and Sandy Creek. Originally, Williamstown and the southern parts of Richland and Albion belonged to George Scriba's Patent. The four remaining towns belonged to a vast multi-million-acre tract occupying much of the northern portion of the State. The State sold this tract in 1791. It changed hands of several land speculators until individual settlers purchased farms of manageable size. Lumbering made the area ideal for dairy farming. Today, many of these marginal farms have returned to woodlands.

Besides farming activity, communities developed around industries powered by water, the railroad, and recreational activities. The railroad was to this area what the canal was to the City of Oswego. The railroad strengthened ties to Syracuse and contributed to the growth of inland villages. Richland Station is a reminder of the former importance of the railroad. Historically, the Village of Altmar, and hamlets of Williamstown, Redfield, and Orwell centered on early mills, tanneries, and wood product industries. Additionally, villages served small farms as shopping and social centers. The Village of Pulaski on the Salmon River and the Villages of Sandy Creek and Lacona on Little Sandy Creek developed around industries powered by nearby streams. Serving as the seat of government for eastern Oswego County added to Pulaski's growth. As early as 1900, summer tourist and residential areas developed along the lakeshore. Former lumbering camp sites developed into recreational camp areas, other sites were specifically developed as seasonal home areas.

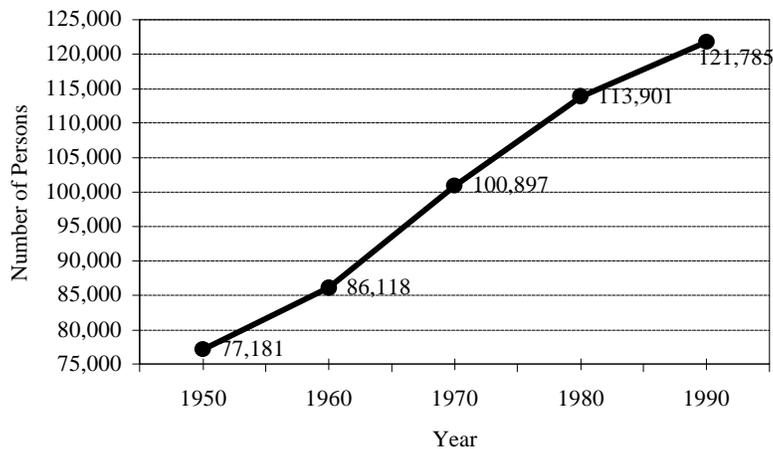
Following World War II, traditional activities declined. Recent growth relates to the expansion of a few key industries and suburbanization. People choose to live in Oswego County because of employment opportunities and the quality of life in small towns, its natural and historic landscape, and its close commuting distance to Syracuse via Routes 81 and 481.

C. DEMOGRAPHIC PROFILE

Between 1980 and 1990, Oswego County gained 7,884 people and 5,185 households. The growing population is heavily rural with 68.8 percent of persons living in places of less than 2,500 (Maps 1, 2, 3). For census data reporting, places include incorporated places and census designated places which have densely settled concentrations of population that are identifiable by name but not locally incorporated places. Towns are not considered to be places. Declining populations in the cities and most villages confirm that residential development is largely outside these limits. High growth areas were in southern townships and the Town of Scriba.

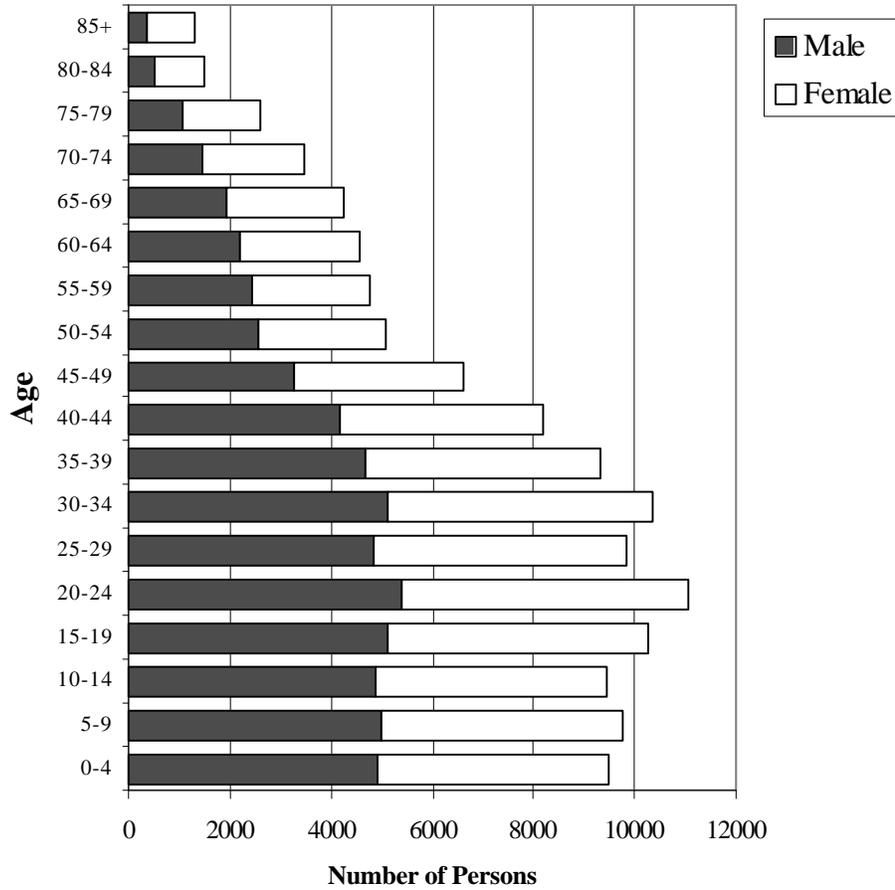
The most recent population update (July 1, 1995) estimates the county's population at 125,794 up from the 1990 Census figure of 121,785. Projections from 1990 anticipate continued growth to 136,747 persons by 2000 and 153,932 persons by 2010. (Appendix I-A) Population growth was corresponding to these projections until 1994 when it became markedly sluggish. Following population trends is important in preparing for infrastructure, services and employment needs. (Figure I-1)

Figure I-1: Population Trends 1950-1990
Oswego County



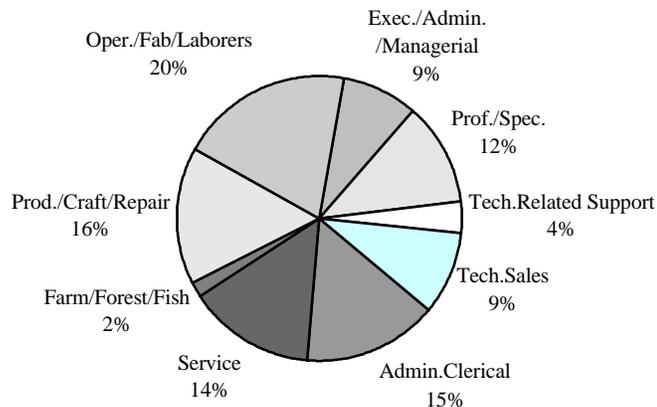
In comparing the age distribution of Oswego County and New York State, Oswego County has a greater percentage of younger persons. In contrast, the proportion of persons in the age groups 25 years and older is slightly less than that of the State. The age structure is related to potential labor force. (Figure I-2) Nearly all jobs are held by people ages 21 to 64; there is only a small proportion held by workers over 65 years old or under 21 years old. The number of persons in these latter groups determines other community needs such as medical care facilities and public schools for the younger population.

**Figure I-2: Population by Age and Sex
Oswego County 1990**

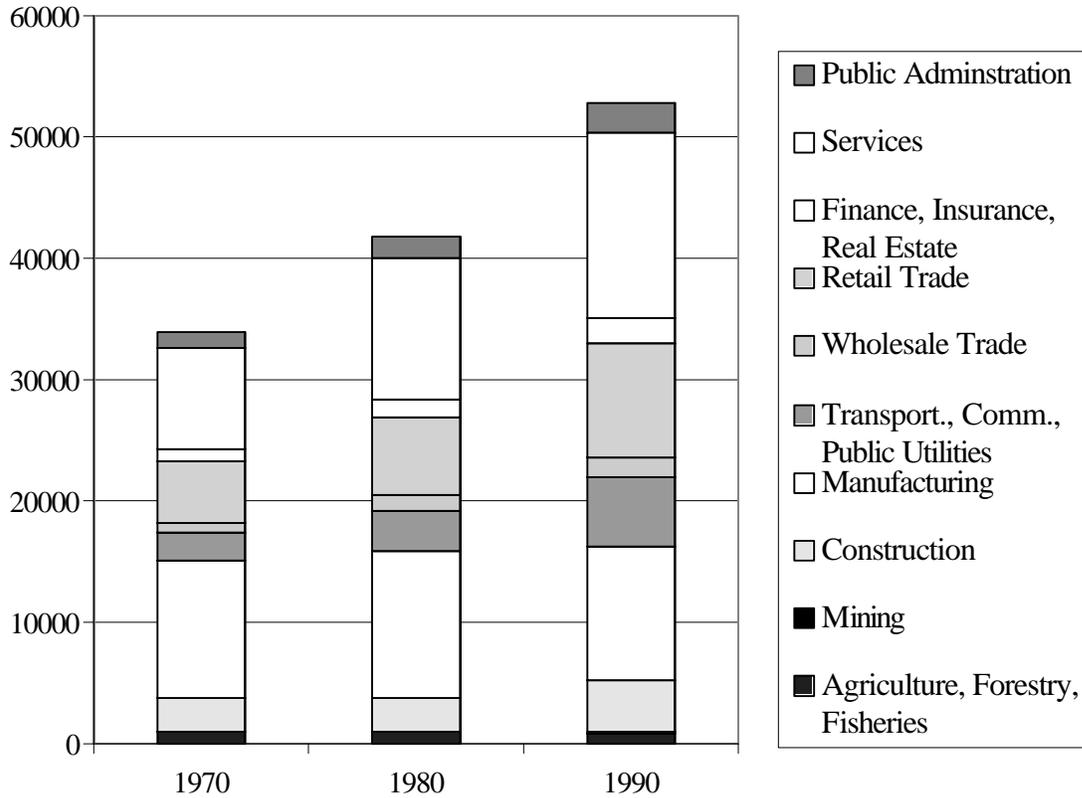


During the 1980s, employment of county residents grew by 10,120. The service industries employ the greatest number of persons over the age of 16 (29.5%) followed by manufacturing (21.1%), and retail trade (18.0%). The largest occupational group of employed persons over the age of 16, nearly one-fifth, is operators, fabricators and laborers. (Figures I-3 and I-4)

**Figure I-3: Occupation of Employed Persons Age 16 and Over
Oswego County 1990**



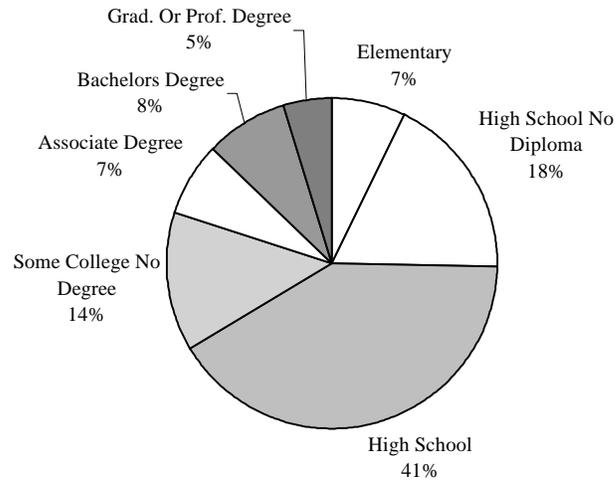
**Figure I-4: Industries of Employed Persons 16 Years and Over
Oswego County 1970-1990**



One-third of the county's work force commutes outside the county for employment. (Map 4) Areas with a particularly high number of persons commuting outside the county closely overlaps with areas experiencing high population growth, the southern townships. The proximity to the City of Syracuse and accessibility to NYS Route 481 and Interstate 81 contribute to this pattern.

Although Oswego County has a State college within its borders, only 34 percent of persons over 25 years of age have had some college background and only 13 percent of persons had an educational level of a bachelor's degree or higher. (Figure I-5) The latter figure is well below the state (23.1%) and the Syracuse Metropolitan Statistical Area (21.8%). In most cases, more education is important in achieving higher socioeconomic status.

Figure 5: Level of Educational Achievement
 Population Age 25 and Over
 Oswego County 1990



Place	% H.S. Diploma	% Bach. or Higher
Albion	70.2	8.3
Altmar (V)	64.6	7.6
Amboy	68.7	5.4
Boylston	75.2	1.7
Constantia	74.8	10
Cleveland (V)	77.2	6.6
Granby	72.8	10.1
Hannibal	71.8	5.2
Hannibal (V)	75.9	10.1
Hastings	74.6	10.2
Central Square (V)	79.1	18.7
Mexico	78.1	14.6
Mexico (V)	93.7	19.8
Minetto	86.4	31.9
New Haven	72.4	8
Orwell	61.6	10.1
Oswego	83	26
Palermo	73.8	5.9
Parish	78.1	10.8
Parish (V)	80.5	16.6
Redfield	67.2	5.5
Richland	75.1	13.6
Pulaski (V)	76.5	16.3
Sandy Creek	71.2	9.7
Lacona (V)	76.6	13.6
Sandy Creek (V)	73.7	15
Schroepfel	77.5	8.4
Phoenix (V)	84.1	10.3
Scriba	79.9	15.1
Volney	77.3	10.3
West Monroe	71.9	7.5
Williamstown	69.4	4.8
City of Fulton	71.5	12.4
City of Oswego	73.1	19.6
Oswego County	74.5	12.9
Syracuse MSA	79.5	21.8
New York State	74.8	23.1

Source: 1990 U.S. Bureau of the Census

D. OVERVIEW OF THE COMPREHENSIVE PLAN

The Oswego County Comprehensive Plan addresses nine subject areas based on NYS legislation defining a comprehensive plan. Sections of the plan address: Natural Resources and Environment; Historic Resources; Transportation; Infrastructure; Housing; Community Facilities; Parks, Recreation and Open Space; Economic Development; and Land Use and Community Design. Each section includes an inventory or profile of existing conditions, a discussion of relevant trends, an analysis of opportunities and constraints, and the goals, objectives, and strategies of the plan relating to that plan element. A separate implementation section describes how progress in achieving goals and objectives will be measured and monitored and the resources that are potentially available to support the plan's strategies. It is recognized that the goals are broad statements that represent long range community hopes and desires. Objectives are more specific steps toward achieving a goal but which will take some time to implement and will require periodic review every five to ten years. Strategies are more specific actions which should at least be initiated within a five year time horizon and which should be monitored annually and reviewed at least every five years.

Plan Contents

The Natural Resource and Environment section describes the resources in major ecological zones within the county and within important corridors along rivers and lakeshores. It recommends measures to enhance and conserve the multiple values of our natural resources through cooperative management and public and private stewardship.

The discussion of Historic Resources explains the legal framework for historic preservation efforts and how historic preservation tools can be an integral part of an overall community revitalization process. This section reveals how historically significant structures and elements in our landscape can enhance our understanding of the communities in which we live.

Under Transportation, the roads and other elements of our transportation systems are described and ways we can effectively manage these resources in tight financial times are explained. The importance of maintaining an integrated transportation system and Federal government initiatives to support "intermodalism" are explained.

The Infrastructure section discusses those elements of our communities which we often take for granted until a storm or break in a pipeline interrupts service. The existing water, sewer, power and telecommunication systems in the county are described and challenges and opportunities of changes occurring in the way these services are provided are discussed. Ways we can efficiently meet current and future needs are explained.

Housing is one of our basic human needs. The current makeup of our housing stock is described along with demographic and policy trends that will impact how we meet our community's housing needs in the future. Some creative alternatives to current types of housing development are suggested.

Community Facilities encompasses those facilities needed to provide a broad range of public and quasi-public services from education to medical care and public safety to child care. Financial challenges facing providers of these services and how they are affecting decision-making about current and future facility development are discussed.

Economic development means jobs, and Oswego County's employment trends and labor force are documented. Opportunities which may exist in a changing economy and strategies to capitalize on those opportunities are evaluated. All sectors of the economy are recognized as important to our future economic well being.

The Parks, Recreation and Open Space section starts with an inventory of the many recreational resources in the county and documents the increasing demand for water and trail related recreation. Parks and recreation opportunities are recognized both as a means to meet the needs of county residents and as an integral part of our tourism economy. Greenway and trail development opportunities are emphasized.

In Land Use and Community Design we consider the types of communities we will live in in the future. Strategies which can allow us to capitalize on all of our economic opportunities while retaining the natural beauty and rural and small town character we enjoy are identified.

Finally, the implementation section outlines how the plan's recommendations will be put into practice and how progress in achieving the plan's goals will be monitored and evaluated.

2. The Planning Process

This plan has been developed over a period of over two years utilizing a process which attempted to maximize the opportunity for public discussion and input regarding the issues facing the county as it moves into the 21st Century. The process began with a series of ten public meetings in 1995 soliciting public concerns regarding the plan's subject areas. Meetings were held at locations throughout the county to provide residents from all areas with the chance to learn about and provide ideas for the plan. During this process we received input from over 290 participants, many of them representing associations with combined county memberships in the thousands. (Appendix I-B)

As the plan developed, specific outreach efforts were extended to many organizations to confirm that our assessment of the sentiment expressed at this first round of public meetings was on target. Among the many groups we made presentations to and received additional feedback from were the Goals 2000 Task Force, the Oswego County Sportsmen's Federation, the County Snowmobile Club Association, the Greater Oswego Chamber of Commerce, the Association of Town Supervisors, Operation Oswego County, Inc., the Oswego Housing Development Council, the Heritage Foundation of Oswego, and the Fulton Neighborhood Action Committee. The reaction from these groups has been positive and supportive.

A draft plan based on this input was presented at a series of four public meetings in the spring of 1996 held in Pulaski, Central Square, Fulton and Oswego. A detailed survey on plan strategies was distributed to attendees at these meetings and the results are compiled in Appendix I-C. All public input was considered and evaluated. (Appendix I-D - summary of the public comments) Public comments were reviewed at two workshops with County Planning Board members prior to finalization of this plan.

Finally, a workshop was held with Planning Board members and the County Legislature and a public hearing before the County Legislature was held on March 13, 1997, prior to approval and adoption by the Legislature.

We are encouraged by the strong interest and support expressed for this plan by many community leaders and ordinary citizens. Their ongoing support and interest will be essential to successful implementation of the plan's strategies.

II. NATURAL RESOURCES AND ENVIRONMENT

A. INVENTORY

1. Introduction

a. Ecological Zones and Greenway Corridors

The natural resource and environment component of the Oswego County Comprehensive Plan is organized around ecological zones and greenway corridors. The ecological zones are based upon the 1982 Ecological Zones of Northern New York developed by the NYS DEC Division of Fish and Wildlife. These zones were distinguished on the basis of differences in both natural and social factors. Natural factors were defined as features of the environment other than those resulting from man=s activities and include: bedrock geology, land form and topography, soil productivity, climate, and forest type. Social factors are affects of man=s activities and include land ownership, land use, road access and human population density. Both social and natural factors have a fundamental influence on the occurrence, distribution and abundance of wildlife. The ecological zones include the Ontario Drumlins, Tug Hill, Erie-Ontario Plain, Eastern Ontario Plain and Oswego Lowlands. (Map 7)

Another category used for planning purposes are the Lake Ontario Coastal Zone, Oswego/Oneida River and Salmon River Corridors. These areas have been identified for greenway protection (Map 6) and are important for wildlife habitat, scenic views and recreational experiences enjoyed by tourists and residents.

b. Glacial Geology

The current landscape of Oswego County was shaped mainly by deposition of glacial drift and lake sediments plus the subsequent weathering and erosion of surface and bedrock materials. The County falls within the two physiographic regions of the Erie-Ontario Lowlands and Tug Hill Plateau with two thirds of the County in the Erie-Ontario Lowlands. During the retreat of the glaciers about 10,000 years ago, water from Lake Ontario drained eastward through the Mohawk Valley to the Hudson River due to the damming of the St. Lawrence by the remaining ice sheet. During this period, most of the County was beneath glacial Lake Iroquois. Lake Iroquois is the early predecessor of Lake Ontario and extended to an outlet at the east end of what is now Oneida Lake. As the glacier receded, the St. Lawrence Valley was opened and the waters reversed flow and drained from Lake Ontario to the northeast by way of the St. Lawrence River.

As a result of this glacial period the three most common landforms in the county are drumlins, glacial moraines, and till plains. Other post glacial landforms are eskers, ancient beach formations, barrier bars, deltas, alluvial fans, stream terraces, kame terraces, kame moraines, kettle holes and lake and outwash plains.

c. Climate

The climate of Oswego County is of the continental type, influenced by the gently rolling topography, the prevailing westerly winds, and proximity of Lake Ontario. Temperatures are typical of those in the northeastern United States and western Europe, but are tempered by the influence of Lake Ontario. Monthly precipitation is well distributed throughout the year, but ranges from an annual average of 34 inches in the southwest to about 55 inches in the remote northeastern Tug Hill areas.

Oswego County lies in the Eastern Lake Ontario snowbelt, an area from which annual winter snowfall decreases in all directions. Cold, dry polar air masses absorb heat and moisture as they pass eastward over Lake Ontario. Rising elevations cool the air, causing snow to precipitate. Seasonal snowfall averages from something less than 90 inches in the southwest to more than 200 in the Tug Hill areas.

The Tug Hill region receives a generous supply of precipitation at approximately 55 inches per year. It has a short growing season and is the wettest and snowiest region in New York State. Annual snow accumulation provides most of the region's usable water to replenish surface stream flows and groundwater aquifers.

Frost may be expected from early October until late May, with average annual front dates occurring near the end of October and the end of April.

The prevailing winds shift towards the north-westerly in winter and the south-westerly in the summer. At times, the southerly winds of summer persist throughout the fall and even into December and January.

d. Wetlands

The complex glacial geology of Oswego County has resulted in a number of significant hydrological features including surface waterbodies, aquifers and wetlands. State regulated wetlands of 12.4 acres or more account for 80,505 acres or 13 percent of the land area. Three classes of State wetlands are found in the county with Class I being the most significant in terms of wildlife and hydrological value. A breakdown of State wetland acreage by class is provided in the following table.

Table II-1: New York State Regulated Wetlands in Oswego County

	<u>Acres</u>	<u>% of Wetlands</u>	<u>% of Land Area</u>
Class I	53,414	66%	8.6%
Class II	20,243	25%	3.3%
Class III	<u>6,848</u>	<u>9%</u>	<u>1.1%</u>
TOTAL	80,505	100%	13%

Source: Oswego County Department of Planning and Community Development

2. Ecological Zones

a. Tug Hill

Topography/Geology/Soils - The Tug Hill Region is normally identified by the boundary of the 500 foot elevation contour which coincides with the approximate beach line of ancient Lake Iroquois. The region is an ancient peneplain which consists of an erosion resistant sandstone lying above shale and limestone. Much of the region is covered with numerous glacial features such as beach deposits, kame moraines and kettle lakes.

Biologists have separated the Tug Hill region into three ecological zones to better facilitate wildlife management. Two of these zones are located in Oswego County, the Central Tug Hill and Transitional Tug Hill ecozones. The Central Tug Hill lies roughly at the Tug Hill region's center and includes the Towns of Redfield and Orwell. The Transitional Tug Hill includes parts of the Towns of Parish, Albion, Williamstown, Boylston and Amboy. Within the Transitional Tug Hill region is an area called the Ontario Ridge and Swamplands which contains poorly drained soils and ridged ground moraines and swampy places that characterize its relief. The Tug Hill region offers remoteness, and excellent winter recreation, wildlife observation, hunting and trapping opportunities. The region has a gently rolling relief and the topography rises from west to east reaching the maximum elevation in the county at 1,725 feet in northeast Redfield. The region is relatively undeveloped.

The soils in the Tug Hill region are predominantly stony medium to coarse-textured, poor and imperfectly drained, highly acidic and derived from sandstone origin. (Map 10) They have low agricultural productivity. Soils in the region are rated as being fair for their potential to grow trees and are generally mixed, stony, sandy, wet, and shallow. Many biologists feel that the poor soils of the Tug Hill are more of a limiting factor to vegetative growth than harsh winters. Glacial till, medium textured soils which are well to moderately well drained can be found in an area north of the Hamlet of Orwell.

Hydrology - The Tug Hill has relatively few areas of open water which are critical for the feeding of waterfowl and migratory bird species. The Upper Salmon River Reservoir (Redfield Reservoir) is the largest man made water body in the region. The reservoir's surface area is approximately 5.28 square miles. The largest natural pond is North Pond, located in the Town of Amboy, which covers .34 square miles. Kasoag Lake is also located in the region and is an example of a kettle lake.

Water use in the region is low when compared to the total amount available annually. Groundwater resources include the Tug Hill Aquifer a 47 mile long, crescent shaped deposit of sand and gravel that flanks the western and southwestern edges of the Tug Hill Plateau. (Map 12) The aquifer extends discontinuously from Watertown Center in Jefferson County to Camden in Oneida County. The aquifer has a northwest/southeast orientation. The section of the Tug Hill Aquifer in Oswego County is sometimes referred to as the Lacona-Williamstown Aquifer. The Lacona-Williamstown Aquifer is composed of six types of deposits based upon texture and manner in which they were transported to their current site. These are sand, sand and gravel, silt and sand, till, alluvium, and organic materials. The potential groundwater yield is dependent upon geologic deposit, permeability and porosity.

The Redfield Aquifer is also located in the Tug Hill region. It is believed that the groundwater resource here is substantial. The aquifer is comprised of glacial outwash in river valleys of the North Branch of the Salmon and Mad Rivers. The outwash is thickest at the confluence of the two valleys. The potential well yields are estimated at 8 to 14 million gallons per day. The Happy Valley, Pulaski and Constantia Aquifers are also located in the Tug Hill region and relatively little is known about these resources.

Wetlands/Vegetation/Wildlife - The Central Tug Hill has a large number of wetlands and wetland complexes. (Map 9) This pattern is created by terraced ponds, kames and eskers. Peat and muck deposits are common in these wetlands. The majority of the wetlands associated with the Upper Salmon River Reservoir are emergent. Wetlands in the Central and Transitional Tug Hill are generally shrub swamps dominated by alder.

The Central Tug Hill region is dominated by uninterrupted deciduous, northern hardwoods with intermittent successional forests. (Map 13) Common trees are the American beech, maples, yellow birch and hemlock, white pine, spruce and fir. Trees of the Central Tug Hill provide an assemblage of seeds, cones, and leaves for food of a variety of birds and mammals. Cherry is an economically important common hardwood.

The Transitional Tug Hill area is made up of successional forests which include hardwood species overtaking the abandoned agricultural fields and cut over areas as well as coniferous plantations. (Map 13) The Oneida Lake Forest extends into parts of Albion, Parish, Amboy, Williamstown, West Monroe, Constantia, and Hastings. This forest has a high concentration of black cherry, eastern hemlock, and white pine. Depressions between drumlins are dominated by red maple which favors wet soils. Conifer forests are not abundant in the region and are mainly the result of plantation and reforestation. (Map 13)

Wildlife habitats in the Tug Hill include primarily forests, some agricultural fields, and wetlands. White tailed deer, snow shoe hare, grey squirrel, and grouse are found in the upland forest areas. White tailed deer use the deciduous forest during the warmer months and find refuge in coniferous forests in the winter. Deer wintering yards are located on the north side of the Salmon River Reservoir and along the North Branch of the Salmon River. Ruffed grouse and wood cock are best suited to the Central Tug Hill fringe and Transitional Tug Hill regions. Pheasant and cottontail rabbit are not as abundant in the area due to heavy seasonal snowfall and harsh weather conditions. Important mammals include red fox, grey fox, and eastern coyote which were rare but are beginning to make a comeback. The forest is well shaded, creating a moist forest floor suitable for amphibians such as salamanders, reptiles and small rodents which in turn feed predators.

Shrub swamps provide habitat for the snowshoe hare, ruffed grouse, deer, beaver, woodcock, moles and shrews and other mammals, birds and amphibians. Shrubland attracts aerial predators such as hawks, owls and woodcock. Beaver, mink, muskrat and fisher live in the wetlands and travel the water ways.

Geese are frequently found on the small ponds and reservoirs and wood ducks frequent many of the forest wetlands. The south side of the Redfield Reservoir provides a haven for a population of bald eagles. The large expanse of forest canopy and wetlands provide a substantial food source for forest nesting hawks and numerous song bird species. Surface water streams provide excellent brook trout habitat.

Farm fields and pasture are the first areas to be free of snow in the spring and the first areas in which seeds germinate. Cultivated corn crops in these areas provide food for deer, squirrels, Canadian geese, crows, rodents and others.

b. Erie-Ontario Plain

The Erie-Ontario Plain encompasses most of central and western Oswego County including both the Drumlins and Oswego Lowlands sub-units. Most of the Towns of Hannibal and Granby are not included in one of the two sub-units which are discussed separately in more detail below.

Topography/Geology/Soils - The topography of these towns is rolling. The elevation is lowest in the northwest corner of Hannibal (~300 feet), rises to a maximum height of 500 feet at the top of the drumlins located at the Hannibal/Granby town line and then gradually slopes toward the Oswego River.

The bedrock geology of the region consists primarily of the Clinton group with shale, green and gray marine sandstone, hematitic limestone, conglomerate and dolostone. A small portion of the region is part of the Medina Group - Queenstone Formation and is located parallel to the north/south Cayuga County line and south of the Village of Hannibal. Bedrock in this area is composed of red sandstones, shales and siltstone. Natural gas in the region exists in poor quality or quantity. Building stone in the Medina Group-Queenstone Formation is of fair potential for local use.

In the Town of Hannibal lodgement till is the dominant surficial deposit with only a few small areas of ablation till. Lacustrine sediments in the Town of Hannibal are small to moderate size deposits of lake silt and sand scattered throughout the town, with only a few deposits of lake silt and clay. Glaciofluvial deposits are found throughout the Town of Hannibal. In Granby lake silt and fine sand deposits cover the largest area and are the most contiguous. Lake silt and clay deposits are found around the Ox Creek area and extend to an area south of Lake Neatahwanta. Wave delta sand and gravel deposits are scattered in northern Granby. Also located in northern Granby are (glaciofluvial) beach sand and gravel deposits which are well sorted and highly permeable. Ablation till is located primarily in southwest Granby.

The best soils for development with sanitary leach fields, and buildings with basements are Alton gravelly fine sandy loam, 0-8% slopes; Hinckley gravelly loamy sand, 3-8% slopes; Oakville loamy fine sand, 0-6% slopes; and Windsor loamy fine sand. These soils are scattered throughout the Town of Hannibal and in the Town of Granby along Rathburn Road north of Granby Center, Route 176 west of Bowen=s Corners and between South Granby and Pinnacle Hill Roads.

There are 31 soil types in the Town of Granby that are prime, unique or of statewide importance for farmland and comprise a large portion of the Town of Granby. The importance of these agricultural soils varies with the degree to which they are contiguous. In the Town of Hannibal prime farmland is interspersed throughout the town with no distinct pattern or area of concentration. Unique farmlands can be found in the northeast corner of the Town of Hannibal, north of Cunningham Road. Another large area is located north of Harris Hill Road and east of County Route 7 with several smaller areas nearby. Other area can be found south of Pellet Road between Summerville Road and Brackett Road. The western portion of Hannibal from north of Woodruff Road south to Pellet Road is farmland of statewide importance. Typical farming activities on upland soils include dairy farming and fruit orchards. Small deposits of organic soils are found throughout Hannibal with larger deposits in the eastern portion of the town. Granby also has organic soils which have been used for muck farming.

Hydrology - The surface water resources of the region flow into Lake Ontario or the Oswego River. There are no surface waters in the region that meet the ?AA, A, B or N≡ NYS DEC classification. Nine Mile Creek south of the Village of Hannibal is suitable for trout fishing and propagation.

Flood hazard areas in the region occur primarily adjacent to streams and wetlands. (Map 8) The Towns of Granby and Hannibal participate in the National Flood Insurance Program.

Aquifers in the region include the Hannibal Aquifer and Fulton Aquifer. The Hannibal aquifer has a northwest/southeast orientation and is located in proximity to the Village of Hannibal. The portion of the Fulton Aquifer located in the region is located primarily in the Town of Granby and roughly follows the Lake Neatahwanta watershed. (Map 12)

Wetlands/Vegetation/Wildlife - In the region many of the wetlands follow streams or are located between drumlins. The majority of the wetlands in the Town of Hannibal are located in the eastern half of the town with smaller areas scattered throughout the rest of the community. Two large wetlands are located in the northeast corner of Cunningham Road and in the south east between Peat Bed Road and Harris Hill Road. Wetlands in the Town of Granby are largely deciduous swamps with red maple, willows, and red ash. Many of the Town of Granby wetlands were drained at one time for muck farming, but wetland vegetation has reclaimed many of the old farms.

The majority of the land in the region is successional pasture or early successional forest characterized by aspen, red maple, white ash and white pine and forest particularly in the north east section of Hannibal from Cunningham Road south to NYS Route 3 and southwest from Durbin Road to Pellet Road.

The wetlands and successional forests and fields support a number of wildlife species including white tailed deer, raccoons, coyote, beaver, opossum, hare and many other species.

c. Drumlins

Topography/Geology/Soils - Drumlins are a subunit of the Erie-Ontario Plain and are common in the Towns of Scriba, Oswego, Hannibal and all of Minetto. (Map 6) Drumlins are glacial deposits of gravel that generally have a north/south orientation and parallel the direction in which the glacier moved. They have an elongated form and are generally steepest along the northern slope and more gently sloping along the southern slope. Drumlin terrain is hilly and is atypical of glacial lake plains. In the Town of Hannibal the drumlins are flat topped due to wave action on ancient Lake Iroquois.

Hydrology - Streams in the drumlin region flow into Lake Ontario. Lakes in the region are few and include McMullen Pond and Regan=s Silver Lake/ Mud Lake. Part of the Hannibal aquifer is located in the drumlin region north of the Village of Hannibal. No other aquifers have been identified in the region.

Wetlands/Vegetation/Wildlife - Due to the nature of drumlins this area has a variety of smaller ecological community types in which maple beech and associated plants are predominant at higher elevations. Between the drumlins can be found numerous small interconnected wetlands and small stream corridors which typically can harbor red maple and beech-birch forests, and alder swamps. An extremely biologically diverse wetland complex is located adjacent to Regan=s Silver Lake which is noted as a biologically important bog mat and home to an endangered moth species.

d. Oswego Lowlands

Topography/Geology/Soils - The Oswego Lowlands are also a subunit of the Erie-Ontario Plain bordered on the west by the Oswego River Corridor, south by the Oneida Lake Outlet/River, west by the Transitional Tug Hill and north by the Eastern Ontario Plains and the Salmon River. (Map 6) The region includes all of the Town of Palermo and parts of the Towns of Volney, Schroepfel, Hastings, Mexico, New Haven, Scriba, Parish, Richland and Albion. All of the Villages of Parish and Central Square are within the region along with parts of the Villages of Phoenix, Mexico, and Pulaski. Part of the City of Fulton is also located in this region.

The Oswego Lowlands are underlain by the Clinton Group, Median Group and Lorraine Group bedrocks. The Medina Group consists of red sandstones and shales of Upper Ordovician and Lower Silurian age. (Map 11)

The Oswego Lowlands have scattered, low rounded hills surrounded by wetlands. The underlying unconsolidated sediments are sands, gravel, and clays deposited at the edges of glacial Lake Iroquois. In many places, the glacial till is overlain by lacustrine sediments.

Hydrology - Surface water drains into the Oneida River, Oswego River, Lake Ontario and Oneida Lake (Ontario & Oneida Drainage Basins) all of which eventually flow into Lake Ontario.

The Sand Ridge Aquifer is one of three groundwater resources found in Oswego County. The aquifer is a narrow ridge comprised of glaciofluvial and glaciolacustrine sediments. The aquifer is approximately 13 miles long and is located almost entirely in the Towns of Palermo and Schroepfel. (Map 12)

Recharge of the Sand Ridge Aquifer is dependent upon precipitation. Wetlands are the principal discharge areas for the aquifer. Other discharges include the Oneida River, springs, evaporation, two municipal wells in the Town of Schroepfel which supply the Village of Phoenix, and many private, domestic wells and community water systems.

The Great Bear Springs (Fulton Aquifer) are a source of groundwater for the City of Fulton. There are a total of five wells in the Great Bear Springs complex, two of which are located in Schroepfel and the others in Volney. Surficial deposits in this area include till, lake silts and sands and gravel.

Wetlands/Vegetation/Wildlife - The Town of Palermo has 27% of its total land area consisting of wetlands. The dominant vegetation is red maple and red ash. Six bog mats are located in the Town one is part of the Lot Ten Swamp, South of Paradise Road; another is a kettlehole between Factory Road and County Route 45; and the others are located between Blumer and Hare Roads; South of Blumer Road and east of Griswood Road, north of County Route 35A and west of Route 3, and east of Island Road, adjacent to a muckland.

Ecological communities in the region include agricultural upland fields, shrub swamps, forest lands and wetland agricultural fields. Wetlands in the region provide habitat for species such as muskrat, beaver, mink, raccoon and opossum. Upland areas provide habitat for deer, fox, coyote, squirrel, rabbit and mice. Some of these animals are sought by hunters and trappers.

e. Eastern Ontario Plain

Topography/Geology/Soils - The Eastern Ontario Plain is located between Lake Ontario and the Oswego Lowlands and Transitional Tug Hill physiographic zones. The region transects the Towns of Scriba, New Haven, Mexico, Richland and Sandy Creek and includes part or all of the Villages of Mexico, Pulaski, Sandy Creek and Lacona.

The bedrock geology of the region is part of the Lorraine Group and is primarily gray sandstone from Scriba to roughly the Salmon River and gray shale and sandstone from the Salmon River north to the county line.

The topography of the region is level and rolling plains with only minor relief. The underlying sediments are mostly glacially deposited silts, clays, sand and gravel. Lodgement tills are located in the southern two thirds of the Town of New Haven. Ablation till is located in the town's northern half and a small outwash deposit of sand and gravel is located in the hamlet of New Haven. Lake silt and sand (lacustrine deposits), as well as peat, marl, muck and clay are scattered throughout the town. Sand and gravel deposits are located in small pockets in the southern half of the town.

The beaches/shorelines of ancient Lake Iroquois can be observed in the Town of Sandy Creek and generally coincide with the 350' and 450' contour elevation causing the features of the topography to be slightly modified as the result of wave and stream action. Two to three miles east of Lake Ontario is a shoreline marked by benches, beach sand and dunes at approximately 280' to 300' contour elevations. Mining of sand and gravel deposits in the Town of Sandy Creek are economically viable and active.

The northern portion of the region, including approximately half of the Town of Mexico, Sandy Creek and Richland, is characterized by slopes that trend toward Lake Ontario, and which drop approximately 700= from West Boylston to the lakeshore. These slopes have resulted in narrow, riparian wetlands.

New Haven soils are acidic with neutral to slightly acidic fragipans. The soils are deep, medium textured soils which are moderately well drained and are undulating and sloping on glacial till. Large tracts of muck are located in New Haven east of County Route 51 and between County Route 6 and 35.

Hydrology - Surface water in the region includes numerous streams which flow into Lake Ontario. Red, Otter, Butterfly Creek, and Catfish Creek are located in the region. Surface waters in the Town of Sandy Creek flow into North or South Sandy Pond or the Salmon River and eventually into Lake Ontario. One potential source of pollution in Sandy Creek noted in the Town's Natural Resource Inventory was nonpoint pollution from agricultural areas causing accelerated algae and weed growth.

The Pulaski Aquifer in northern Richland is located in this region, but relatively little research has been done on this aquifer. In the Town of New Haven water tables are commonly high or perched causing the need for specially designed basements or foundations. The potential for aquifers is higher in bedrock groups and formations such as the Clinton Group sandstone and upper shale and in the Lorraine Group (Containing the Pulaski & Whetstone Gulf formation). Most of the region is on private wells with the exception of those users in the Villages of Sandy Creek, Lacona, Pulaski, and Mexico which have municipal groundwater supplies. Some residents in the Town of Scriba access Lake Ontario water through connections to the City of Oswego water system. It should also be noted that the 1989 Position Paper, Oswego County=s Position Regarding the State=s Identification of the Towns of Scriba and New Haven as a Candidate Area for a State Low Level Radioactive Waste Disposal Facility, identifies the Towns of New Haven and Scriba as having a hydrologic unit comprised principally of sand and gravel with the potential of yielding significant quantities of potable water. Approximately 11% of the land area includes these deposits. The Position Paper also explains that the two towns are underlain by a 250 foot thick formation of Oswego Sandstone which is considered to be an unconfined, unconsolidated aquifer strata with potentially high well yields.

In the Town of New Haven the average well yield in shale and siltstone ranges between 3 gallons per minute (gpm) to 28 gpm. Wells in sandstone in central New Haven average 11 gpm and have a maximum reported yield of 40 gpm. (Kantrowitz) In general Oswego Sandstone wells produce an average of 10 gpm with a maximum reported yield of 125 gpm. (Weston Consultants, 1982)

Wetlands/Vegetation/Wildlife - In addition to riparian wetlands mentioned above, a second distinct wetland area in the region includes the northern half of the towns of Mexico, Scriba, and New Haven. These wetlands are characterized by a relatively flat topography situated well above the level of Lake Ontario. Poorly drained ablation tills have promoted the formation of evenly distributed small wetlands many of which are connected by streams.

The Eastern Ontario Plain supports primary, and secondary successional growth. Abandoned pastures and orchards are the first stages in succession after active agriculture ceases and are characterized by low, grassy and herbaceous vegetation, scattered shrubs and small trees, orchard grass, goldenrod, raspberry and Queen Anne=s lace. Northern hardwoods include four dominant species - sugar maple, yellow birch, American beech, and hemlock. Other common species are red maple, white ash, basswood and black cherry.

Common wildlife species found in the region include woodcock, cottontail, ruffed grouse and grey squirrel. Deer and ring necked pheasant populations are small. Fur bearers include raccoon, mink, red fox, grey fox and skunk.

3. Greenway Corridors

a. Oswego River

Topography/Geology/Soils - The Oswego River corridor is approximately 24 miles long, and drains the second largest basin in NYS (5,122 square miles) including parts of Central New York and the Finger Lakes region.

The river contributes 4.2 billion gallons of water to Lake Ontario daily, second only to the Niagara River. For the purposes of this plan the Oswego River Corridor includes the major tributaries of Ox Creek and Lake Neatahwanta via Tannery Creek. (Map 7)

The Oswego River travels over shales and sandstone at the southern reach and through red sandstone and shale in the middle and outlet portions. The surficial geology is a function of lacustrine sediments left by Lake Iroquois. (Map 11)

There are some flood plain areas along the river corridor; however, due to the relatively wide character of the river coupled with fairly steep banks, the overall flood plain is relatively narrow. All eight municipalities within the Oswego River corridor participate in the National Flood Insurance Program. Flood hazard areas are shown on Map 8.

Erosion and siltation are perhaps the most notable geological concerns and are influenced by soil types. Problems are predominant during high water flows in the spring. Clearing of river banks for the purpose of development and access to the waterfront leave vulnerable soils prone to erosion and siltation which then impact water quality (Map 10). Soils in the corridor include lacustrine silt and clays and some glacial soils in the Ox Creek area. Soil types range from moderately steep to flat slopes and include: Amboy- Williamstown (sloping), Ira Sodus (rolling to stony and moderately steep), Amboy- Williamstown (rolling), and Raynham-Canandaigua (nearly level). All of these soils are problematic to conventional septic system design, have poor drainage, poor permeability and are subject to a seasonal high water table. (See, Soil Survey of Oswego County, New York, USDA)

Hydrology - The Fulton Aquifer encompasses five municipalities and lies in proximity to the Oswego River. The state designated this as a primary aquifer, and it is rather arbitrarily defined because of the relatively flat Ontario Lake Plain with no bedrock boundaries. (Map 12) Surface drainage divides along with surficial geology were used to delineate the area having a direct hydrologic influence on the Fulton Aquifer. The aquifer is unconsolidated and comprised of sand and gravel with kame, lake sand and silt, and clay deposits. The Fulton Aquifer is generally 10 to 75 feet thick. The Great Bear Springs are located in the Oswego River Corridor within the Fulton Aquifer. The Great Bear aquifer is 125 feet thick.

Lake Neatahwanta is an important natural resource located in southwest Fulton and the Town of Granby and is utilized for swimming, boating, nature appreciation and education, fishing, and aesthetics. The lake is eutrophic with impairment of use resulting from non-point source pollution (nutrients) from agricultural runoff, soil erosion and possibly, urban stormwater runoff. The lake is the only water body in Oswego County with a ?precluded≡ severity of use. Lake Neatahwanta has been identified by the Oswego County Water Quality Coordinating Committee as the number one priority water body for remediation.

The lake has wetlands and flood hazard areas located along all shores except for the east side which has some development. Wetlands have areas have been subject to limited development and access from those areas is limited. The majority of the north and eastern shore is publicly owned. The Lake Neatahwanta Reclamation Committee is considering development alternatives for this area of the shore. The Town of Granby and City of Fulton do not have greenway buffer regulations to protect the aesthetics or views of the lake.

Ox Creek is a wide, slow moving stream which offers excellent bass habitat. It has been plagued in recent years by explosive growth of invasive water chestnut.

Wetlands/Vegetation/Wildlife - Many wildlife habitats are found in the Oswego River corridor. Most of the forested areas of the corridor provide food and shelter for small mammals such as the red squirrel, grey squirrel and raccoon. Forested areas are important to migrating song birds and canopy dwelling birds such as vireos, warblers and thrushes. The major species of the forest plant communities are red oak, white pine, black cherry and various species of maple and willow. Wetland and open waters throughout the corridor provide habitat for muskrat, beaver and the great blue heron. Wetlands within the corridor are illustrated on Map 9. Waterfowl migrate through the corridor in the spring and fall and many winter in the corridor including common golden eyes, buffleheads, loons, mallards, mergansers, and black ducks. Waterfowl such as wood duck, mallards

and blue wing teal use the river corridor for nesting. Common vegetation in these wetlands includes sedges, rushes, red osier dogwood, willows, cattails and marsh grass.

Cultural Influences - From a historical perspective the Oswego River has contributed to the economic development of the County and is one of the most important natural resources in the county. The NYS Barge Canal and river have served as a water highway with connections to the Atlantic seaboard, midwest, Canada and the rest of the world. The entire length of the river is navigable by recreational and commercial marine traffic.

Land use development patterns have been influenced by the river's ability to provide transportation, water power, recreational opportunities and scenic views. Some land uses have led to the degradation of the river. Past industrial activities, municipal sewage treatment plants and urban sewer overflows (point sources) have contaminated the river and its sediments. For this reason the International Joint Commission (IJC) has identified the Oswego River from the Varick Dam to the Oswego Harbor breakwall as an area of concern (AOC) and focal point for remediation plans. The pollutants of concern in the Oswego River AOC are PCBs, dioxin, phosphorus, mercury, mirex and octachlorostyrene. Additional information on the Oswego River AOC can be found in the Oswego River Remedial Action Plan (RAP), (NYS DEC 1990) and The Oswego Harbor Survey, 1994.

Non-point sources of pollution include leaching of hazardous waste sites, contaminated sediment and groundwater, agricultural runoff, and atmospheric deposition. In the towns of Volney and Granby and City of Fulton there are five inactive hazardous waste sites thought to have been sources of contamination to the Oswego River. Remediation plans have been completed or are underway at these sites. Other upstream pollution sources are Onondaga Lake and the Seneca River. Therefore, parts of the Oswego River south of Varick Dam may have pollution problems similar to those in the AOC. (Fisheries Enhancement Plan for Oswego River, NY, A Tributary to Lake Ontario, March 1994) Water sampling conducted at the Minetto Bridge showed that the water column parameters of concern are iron, coliform, dissolved solids, phenols and PCBs. Limited fishing advisories are in effect for the Oswego River between the Oswego Harbor and the upper dam in Fulton, with consumption limited to one meal per month. In the area between Three Rivers to Oswego Falls Dam in Fulton conditions are such that fishing and fish survival may become limited due to flow modification. From the dam in Phoenix to Oswego the fishing use is impaired due to metals in the sediment.

The Oswego River corridor offers many recreational opportunities including boating, fishing, historic study and sight seeing. The NYS Barge Canal and Oswego River are designated in the NYS Open Space Plan as a greenway and recreationway. The Oswego County Planning Board conducted the Oswego River Scenic Assessment in 1992 which discusses means for preserving and improving the scenic quality of the Oswego River corridor through compatible land use practices. There are a number of open space and recreational areas which play an important part in preserving the wildlife, beauty and environmental quality of the corridor. Currently, there are no local laws which specifically protect this river/greenway corridor from poor development practices.

b. Oneida Lake Outlet and River

The Oneida Lake Outlet and River includes the 18 mile long Oneida River, Peter Scott Swamp, Big Bay Swamp and Toad Harbor Swamp. (Map 6) The Oneida River drains all or parts of the Town of Hastings, Palermo, Schroepel, and Volney, and towns around Oneida Lake in Oswego County as well as in Onondaga, Oneida and Madison County.

Hydrology - Water levels in Oneida Lake and the Oneida River east of Caughdenoy are regulated by the tainter-gait dam. Flow volumes are also regulated by the dam. Flood hazard areas along the Oneida River are shown on Map 8. The Oneida River is prone to frequent seasonal flooding. The largest flood hazard areas in this region are along the Oneida River, Peter Scott Swamp, a wetland and significant wildlife habitat, and Toad Harbor Swamp. The majority of the Oneida River is lined with residential and seasonal home development much of which is within the flood hazard area. The large wetland complexes are important storage areas for floodwaters which prevent even worse flooding than now occurs.

The Sand Ridge Aquifer is an unconfined principal aquifer which is approximately 15 miles long and is located in the Towns of Schroepfel and Palermo. (Map 12) Recharge to the aquifer is derived solely from infiltration of precipitation that falls directly on the aquifer and averages from 7.9 to 15.9 million gallons per day. The aquifer is capable of yielding water at a rate of several hundred gallons per minute. Peter Scott Swamp, the Oneida River and other streams are discharge areas for the aquifer. Groundwater flow is from north to south. The aquifer supplies water to the Village of Phoenix and to individual wells over the aquifer. The quality of water from the aquifer meets NYS DOH water quality standards.

Wetlands/Vegetation/Wildlife - There are large wetland complexes in this character area. (Map 9) The western portion of the north shore of Oneida Lake includes Toad Harbor Swamp a 3.85 square mile wetland complex which is highly productive and one of the largest in the county. Another smaller wetland found in this area is Big Bay Swamp, which is a 2.59 square mile wetland. Frenchman and Dunham islands in Oneida Lake are also highly rated as wildlife habitat for waterfowl and migratory birds.

Vegetation in these wetlands are typical of swamps, marshes, bogs and wet meadows found throughout the north shore. Trees include red maple, black ash, American elm, red ash, hemlock and tamarack. Common shrubs include various willows, speckled alder, spice bush, buttonbush, dogwoods, holly, highbush cranberry and golden rod. Marshes include various species of Typha and fresh water Spartina. Other common plants include rushes, grasses, sedges and other species well adapted to seasonal flooding and emergent conditions.

Peter Scott Swamp is a generalized state identified significant wildlife habitat and is the largest wetland complex associated with the Oneida River. The Peter Scott Swamp provides excellent habitat for the fur bearing animals which provide a fair income to trappers in the county.

Wetland complexes contain shrubby vegetation which is an attractive food source for deer populations. Peter Scott Swamp, Toad Harbor Swamp and Three Mile Bay all serve as deer wintering yards. Other mammals found in these wetland areas are hare, squirrel, beaver, muskrat, mink, raccoon and fox.

The most common forms of wildlife found along this corridor are geese, ducks and mergansers. Fairly large populations breed and nest in the wetland areas and others use Oneida Lake. A great blue heron rookery is located in the Peter Scott Swamp. Raptors are also found along the corridor. There are many migratory song birds and waterfowl that utilize the habitat in the Oneida Lake Outlet and River.

Cultural Influences - As part of the Rotating Intensive Basin Studies (RIBS), the Oneida River was sampled at US Route 11 in Brewerton, a popular fishing and boating area. The water column had no parameters of concern, only iron was borderline. Copper, lead, and zinc were found in bottom sediment at greater levels than threshold values based on numerical water quality standards or guidance values adopted by NYS DEC.

There are two sewage treatment plants which discharge into the Oneida River, Oak Orchard and Brewerton. The Metropolitan Petroleum company in Brewerton and Sears Realty in Clay are major industrial contributors. Water quality of the Oneida River is also affected by the release of algae from Oneida Lake.

c. Oneida Lake North Shore

Topography/Geology - The Oneida Lake North Shore is located east of Toad Harbor Swamp along Oneida Lake. (Map 6) It is part of a lowland area which extends in an easterly direction from the Great Lakes Basin. Included in the region are the hamlet of Constantia, Village of Cleveland and part of the Town of Constantia. The region is relatively flat and wet with numerous narrow, slow flowing creeks.

The Oneida Lake North Shore has water bearing sandstone and shale with a thickness of about 250 feet. Soils in this region are predominantly wet, poorly drained and rocky. The soils along the north shore pose significant limitations for building, development and septic systems.

Hydrology - The majority of Oneida Lake is in Oswego County with its southern boundary abutting Onondaga County and with Oneida County to the east. The lake is 79.8 square miles with 30,600 acres in Oswego County. Its drainage basin extends into Onondaga, Oneida, Madison, Lewis and Oswego Counties. The lake is deepest toward the east and shallower to the west. The lake is 20.9 miles long and between 3.8 and 5.5 miles wide, and is part of the Barge Canal system.

Oneida Lake is a shallow and naturally eutrophic lake with a maximum depth of 35 feet. The lake receives soft, cold water from the Tug Hill Plateau and hard, warm water from the south. The fertile drainage basin of the lake was once the bottom of an inland freshwater sea, and drainage from this area brings into the lake an abundance of soluble minerals and dissolved organic materials which alone appear to contribute to annual algae blooms. Concern has been expressed in recent years over extensive algae blooms and aquatic vegetation.

Oneida Lake is used almost exclusively for recreational purposes and has a highly productive fishery including bass, perch and walleye. The lake level is regulated by the tainter-gate dam in Caughdenoy as the lake drains to the west into the Oneida River.

No aquifers have been identified in this region.

Wetlands/Vegetation/Wildlife - The Oneida Lake North Shore has varied vegetation cover. (Map 13) The landscape is forested with conifer, deciduous and mixed forest and scattered among the landscape are many wetlands. Plants along the lake shore are adapted to flooding and wet soils and include black gum and yellow poplar. In better drained soils elm, black ash, beech and red maple are predominant. Conifers stands are sporadic.

Oneida Lake and its shoreline serve as resting and feeding areas for loons, grebes, herons, gulls, sandpipers, and plovers. As in all areas of the county there are numerous species of songbirds. Several gull and tern populations are also located on small islands in the lake. These are highly productive ecozones which also provide spawning and hatching shelter for fish populations. They provide a substantial food source for feeding birds, waterfowl and other forms of wildlife.

Cultural Influences - At one time farming was the predominant land use in the region however, there has been a significant decline leading to successional fields. (Map 13) Successional fields comprise the largest land area in the Town of Constantia. The town is no longer an active farm community and the remaining farms can be found along NYS Route 49. The second largest land area is comprised of forests and will eventually be the largest land area if natural succession from abandoned farm fields continues. The ponds, streams and woodlands provide an attractive setting for new homes but are extremely sensitive to development.

Water resources predominate in this region, contributing to the natural beauty of the area and providing important recreational opportunities. Managing Change, The Pilot Study in Rural Design and Planning by the Tug Hill Commission identifies that 90% of the Town of Constantia contains critical and sensitive resources vulnerable to development. A Tug Hill survey conducted as part of this study found that 90% of the survey respondents identified rural atmosphere as important or very important, and 87% identified natural resources and features as important or very important.

The Village of Cleveland sewage treatment plant is a point source discharge to the lake. High density seasonal and permanent homes and small pockets of commercial development along the lake shore may be a source of non point contaminants caused by septic systems.

d. Salmon River Corridor

Topography/Geology - The Salmon River Corridor follows the Salmon River. (Map 7) The Salmon River flows through rolling topography until it meets the flat coastal plain of the Eastern Ontario Lake Plain where the river's velocity slows and it begins to meander over outwash and alluvium. At the Lake Ontario Coastal Zone the river's characteristics change to a delta. In the past the Salmon River supplied sand to the Eastern Ontario Barrier system. A breakwall creating a safe harbor may have retained some of the outwash from entering into the lake.

The bedrock of the Lower Salmon River corridor consists of dark shales imbedded with limestone and gray fine grained sandstone imbedded with dark gray shale. Bedrock is overlain by glacial till with poor soils and drainage.

The most unique geological feature in the upper Salmon River Corridor is the Salmon River Falls and Gorge. This property is now owned by NYS DEC and it is a scenic high point of the Salmon River Corridor. The falls tumble 110 feet.

Hydrology - The headwaters of the Salmon River begin in the Town of Osceola in Lewis County. There are two reservoirs, the Salmon River Reservoir located in the towns of Redfield and Orwell and the Lower Reservoir which is located in the Town of Orwell. Niagara Mohawk generates hydroelectric power from and controls the water levels in both reservoirs and the Salmon River.

Water quality in the upper Salmon River is excellent due to the pristine quality of its headwaters and periodic flushing of the hydroelectric generation at the reservoirs. However, non-point source pollution within the watershed including sedimentation and septic systems, could influence future surface water quality in the watershed.

Vegetation/Wildlife - According to the US Forest Service (1987), no endangered flora exists in the Salmon River Corridor but an extensive inventory of the corridor has not been done. The New York Natural Heritage Program lists Birds Eye Primrose, Mountain Saxifrage, Sedge, Rams Head Lady Slipper, Osprey, and Black Tern among the species of Statewide importance.

The Salmon River is known for its vast fishing opportunities including steelhead, rock bass, bullhead, Atlantic salmon, brown trout, coho and chinook salmon, rainbow trout, northern pike and large mouth bass.

Cultural Influences - Quality of life in the Salmon River Corridor is directly tied to the natural resources of the area. The environment provides ample opportunities for outdoor recreation. The Salmon River Corridor has been the focus of the Salmon River Greenway Committee which has sought to provide direction for and coordinate efforts aimed at the enhancement and development of the greenway along the Salmon River Corridor. The Salmon River Corridor Greenway Protection and Development Concept Plan establishes the goals and objectives for the greenway creation and recreational development to protect the open space of the corridor. The committee was established in response to Niagara Mohawk divestment of lands within the corridor much of which has been sold in fee or as easement to NYS DEC. The newly acquired area south of the Salmon River Reservoir is now part of the Stillwater State Reforestation Area. As a result of Niagara Mohawk divestitures, conservation easements provide protection and access along the river. The conservation easements serve as a linear greenway, open space buffer and provide public access to the river and reservoirs. The southern shore of the Salmon River Reservoir has large wetland complexes and important wild life habitat and is a potential nesting area for bald eagles.

e. Lake Ontario Coastal Zone

Topography/Geology/Hydrology - The Lake Ontario Coastal Zone consists of a highly productive coastal environment that is directly related to the transitional nature of the coast. (Map 6) Included in this zone is North and South Sandy Pond. There are three types of shorelines within the zone: sandy beach, cobblestone, and bluff.

The sandy shore is continually being modified by wind, wave action and littoral drift. The sandy shore beach is generally found north of Selkirk Shores State Park and extends into Jefferson County. The narrow band of sandy shore is part of the Great Lakes dunes, a unique environment created by wind deposited sands at a time when Lake Ontario water levels were much lower than they are today. The beach area is also influenced by deltas from streams and rivers.

Cobblestone beaches are comprised of rounded, and smooth textured stony deposits of sand, gravel and other unconsolidated materials. Cobblestone shores may be stable or unstable. An example of a cobblestone beach can be found near Mexico Point Park.

Bluffs in Oswego County are truncated drumlins in which the lake shore slope of the drumlin erodes away. Bluffs normally have a slip face of sand or cobbles with larger stones deposited at the bottom of the slope. The upper part of the bluff is normally comprised of shallow soils with various cliff dwelling plants. An example of a bluff can be found at Sunset Beach or near the SUNY Oswego campus.

Water levels of Lake Ontario are regulated at the St. Lawrence Seaway and no known aquifers are noted in this character region.

Wetlands/Vegetation/Wildlife - The littoral zone (beach) is an extremely harsh environment for plant life. Mosses and lichen and American Beach grass are the most predominant species found in the beach zone. American Beach grass helps protect the beach from erosion.

Inland from the beach lie the primary and secondary dunes which are susceptible to erosion. American Beach grass and low shrubs help prevent erosion and aid in the buildup of the dune system. Scrub shrub and tree communities of sand willow and sand cherry establish themselves behind the protective dunes. The dunes provide protection for wetlands located inland, behind the dune. These areas include but are not limited to North and South Sandy Ponds, and Deer Creek Marsh.

Another land feature found in the Lake Ontario Coastal Zone is high quality wetlands. Wetlands in the coastal zone are abundant and are characterized by large offshore marshes and swamps which are separated from the lake shore by coastal barriers or bluffs. Their water levels are directly related to lake levels. Marshes in the zone are fed by streams. Snake Swamp, Butterfly Swamp, Teal Marsh, Deer Creek and Grindstone Creek outlets are examples of this type of wetland.

Several bogs are found in the Deer Creek Marsh. These bogs are normally identified by a mat of vegetation (mosses, cranberry, Tamarack, Blue Spruce, leather leaf, and pitcher plant) floating over a shallow water body or pond. These wetlands are highly productive and are among the most ecologically diverse types of wetlands.

Marshes are normally classified on the basis of their dominant vegetation. Typha, bulrush and other hydrophytes are grass like plants that dominate marshes. This type of wetland normally contains little woody vegetation except in high spots or hummocks. Marshes contain large numbers of plants like sedges. Marshes are found in Snake, Butterfly and Deer Creek Swamp.

Fens are fresh water swamps that contain a variety of woody plants. These plants may exist in combination with vascular plants or may be dominated by tree species adapted to hydric soil conditions. These woody species include Alder, Black Ash, Black Gum, White Cedar, Tamarack, Red Maple and various willow species. Associated shrubs may include Red Osier Dogwood, Winterberry, Cranberry Bush Viburnum, Potentilla, Poison Sumac and other deciduous plant species. Examples of this wetland community are found within Deer Creek Marsh and south of South Sandy Pond.

The Lake Ontario Coastal Zone is extremely important for the migration of birds particularly neotropical migrants and raptors. In the spring the shoreline of Lake Ontario is a stop-over area for migrating song birds which rest and forage during the day and fly across Lake Ontario at night. The most common songbird species are Catbird, Yellow Warbler, and Common Yellow throat. The Birds of Oswego County: An Annotated Checklist provides valuable information on bird species and occurrences.

The Lake Ontario Coastal Zone is a very rich habitat area with an abundance of wildlife and has been identified by the NY Natural Heritage Program as an area of particular rarity. There are 21 rare species, and 11 rare or exemplary habitats. The area also harbors a number of rare and endangered species and many significant species. The dunes and wetlands are of unparalleled importance for rare plants, animals and natural communities. (The Nature Conservancy, April 1995)

B. TRENDS

1. Oswego River Fishery Enhancements

In 1994 the US Fish and Wildlife Service completed the Fisheries Enhancement Plan for the Oswego River, New York, A Tributary to Lake Ontario which has served as a useful guide to understanding trends in the Oswego River fishery. The Oswego River Basin once provided plentiful habitat for feeding, spawning, growth and migration route for a myriad of Lake Ontario fishes. The Lake Ontario ecosystem showed, by the late 1980s and early 1990s, that the fishery resources have had a dramatic recovery from the 1950s and 60s. Since the 1800=s navigational dredging and hydropower facilities have changed the river, its species composition, channel substrate, water quality, flow regime and riparian vegetation which all affect fish habitat in the River and Lake Ontario. Hydropower facilities, shoreline development, impaired water quality, flood control measures and exotic species all limit the attainment of a healthy fishery. Hydropower facilities have limited fish migration, increased water temperature, decreased dissolved oxygen concentrations and created drastic changes in flow volumes. Since the 1920=s, eighteen species have not been observed in the Oswego River which could be a result of habitat degradation from land use practices, pollution, competition among species and/or overharvesting. As part of the relicensing of hydroelectric plants on the Oswego River, remediation of some of these impacts is being considered. Habitat improvements, increased minimum flows and protection of fish from mortality associated with passing through hydropower stations are all being reviewed.

2. Exotic Species

The proliferation of accidentally introduced exotic species, such as purple loosestrife, water milfoil, phragmites, water chestnut, and the ever dreaded zebra mussel, have disrupted the natural food chain and competed with naturally occurring species. Zebra mussels are the latest nuisance organism and have increased water clarity, leading to the increase in aquatic vegetation growth, change in the food chain and decreased oxygen levels in some areas of reported infestation. Zebra mussels also clog water intake pipes of municipalities and industry.

3. Clean Water Legislation

The Clean Water Act (CWA) focuses mainly on surface water and established the National Pollutant Discharge Elimination System (NPDES) leading to the State Pollution Discharge Elimination System (SPDES). The Environmental Protection Agency (EPA) administers NPDES and the NYS Department of Environmental Conservation (DEC) and NYS Department of Health administer the SPDES program. The State Legislature recognized the need to maintain groundwater and surface water resources and enacted Article 17, Water Pollution Control of the Environmental Conservation Law (ECL). With this came the creation of the SPDES program which maintains NYS waters with reasonable standards of purity. The SPDES program is designed to eliminate the pollution of surface and groundwater and to maintain the highest quality of water possible consistent with public health, enjoyment of the resource, protection and propagation of fish and wildlife, and industrial development in the state. Federal reauthorization of the Clean Water Act is pending and may affect how these resources are managed in the future.

4. Regional Approach to Water Quality

Current trends in planning include a focus on regional resources rather than governmental jurisdictions. The rationale for this is that a resource like a stream may cross many jurisdictional boundaries making the resource difficult for any single entity to manage. It is more effective to identify watersheds and to manage natural resources on this basis. Water quality in the Seneca, Oneida, Oswego River basin has improved since the 1960s due to municipal, industrial and other point source discharges being brought under control. Remaining problems in the basin are mainly related to non-point source pollution. For example a portion of the reduced water quality in the Oswego River is caused by point and non-point source pollution from Onondaga County and beyond. Runoff from agricultural, urban and suburban lands transports pollutants such as pesticides, fertilizers, oil, metals, road salts and nutrients into waters of the basin. Excessive nutrients can enter waterbodies from failing septic systems. The

Oswego County Water Quality Coordinating Committee, the Water Resources Board of the Finger Lakes Association, and the CNY Regional Planning and Development Board are groups that assist in watershed-wide water quality protection efforts.

5. Focus on Groundwater

Groundwater is a critically important source of drinking water for citizens of the county. In 1988 approximately 42% of the County residents depended on groundwater and the demand will increase by 37.6% by the year 2000. (Barton & Loguidice, 1992) It is also a vulnerable natural resource which is nearly impossible and almost always extremely expensive to clean up once polluted. DEC regulates activities that might pollute groundwater, such as solid waste disposal and transportation, mining, oil and gas development and pesticides use. DOH regulates public water supplies to ensure that the water is safe. DOH drinking water standards are also used by DEC. Recent efforts have focused on local efforts to address land use impacts which could affect groundwater quality.

6. Northern Forest Lands

The northeastern third of the county is in the Tug Hill region which has been identified as part of the nationally significant Northern Forest Lands. The Northern Forest Lands support forest based industries that have an impact on the local economy. The forests contribute to the local economy directly through forest product related industries and services, and recreational opportunities and tourism. In earlier times, forest lands would have been sold chiefly between timber companies for the value of the timber. The extent of these lands ultimately were not different than in the past. In the 1980s there were examples of large tracts of the northern forest lands being sold for their development value. With the sale of large tracts for development, the risk of change to the character of the land and the impact of change on important public values, on a scale never seen before, was an issue demanding attention. As a result, the U.S. Congress directed the Forest Service to conduct a study of the resource and the threats to its future.

The Finding Common Ground: Conserving the Northern Forest Lands report identified the following issues:

- * an increased polarization among forest user groups
- * increase in property taxes causing loss of land from natural resource uses
- * development pressure near shorelines and scenic places
- * loss of jobs due to competition from other regions and countries
- * incomplete knowledge of land management techniques to maintain and enhance biodiversity
- * lack of funding and clear priority-setting for public land and easement acquisition
- * insufficient attention to and funding for public land management
- * fear of losing public recreational opportunities and access to private lands
- * failure to consider forest land as a whole, as an integrated landscape
- * loss of respect for traditions of private ownership and uses of private lands

Without dealing with these issues, we could see the breakup of the northern forests lands, steadily weakening the economy and continuing pressure on finite natural resources.

7. Wetlands Regulation

During the 1970s the federal Freshwater Wetlands Act resulted in a federal program to regulate wetlands throughout the nation. Wetlands began to be recognized by government officials as having important values for habitat and flood storage. The recognition that wetlands are decreasing at an alarming rate prompted a policy of no net loss of wetland acreage throughout the country. The idea was to create and restore wetlands to compensate for the loss of wetlands in other areas and to prevent avoidable impacts to existing wetlands. The US Army Corps of

Engineers was granted the authority to enforce federal policy to regulate wetlands under the amended Rivers and Harbors Act and Section 404 of the Clean Water Act.

The current trend in wetland protection at the federal level is uncertainty and change. During the Bush administration, the Corps of Engineers was developing a technique to assess wetlands based on a number of values including heritage value, flood storage, habitat values, nutrient uptake and others. This system would identify wetlands that had high potential based upon their biological diversity and location in the watershed and provide a rating system for high priority wetlands. However, implementation of the assessment technique was halted due to a dispute over the length of time that a wetland has to be wet to be defined as a wetland and the technique was never implemented.

Today change is about the only consistent factor in wetlands issues. As new assessment techniques are developed political officials are questioning the value of wetlands, and the current trend toward deregulation at the federal level may reverse the advances made toward protecting this resource in the past. Although many individuals have identified the need to protect wetlands citing, for example, the disastrous flooding that has resulted in engineered watersheds such as the Mississippi River Valley, the scientific community is coming into conflict with political pressures to deregulate wetlands.

8. Coastal Erosion

Currently there is a push in coastal areas of the U.S. to reduce the extent of "hard technology" applied in the process of stabilizing dune ecosystems and coastal areas. Scientists like Orrin Pilkey have identified that areas with seawalls and jetties are more prone to flood damage because, although they hold back flood waters to a certain point, when water levels exceed the capacity of this type of shore protection the results can be catastrophic. Shorelines which are left in a natural state serve a number of functions. The vegetation not only provides stabilization to soils but it disperses wave energy, provides habitat for wildlife, provides the opportunity for nutrient uptake where they are excessive and enhances the scenic quality of the shore.

A natural shoreline profile offers protection to land development in coastal areas and river corridors. In many areas of the U.S. it is recognized that a gradually sloping shoreline disperses wave and flood energy in a far more efficient manner than do seawalls.

Dunes like the Great Lakes dune system along the eastern Lake Ontario shoreline have been recognized as important natural features that protect the shoreline. Approaches to protecting these dune systems include regulation and enforcement of development activities in barrier areas, protection of the primary dunes from unwise and damaging pedestrian crossings and vehicular use, revegetation and protection of vegetation in coastal dunes ecosystems, and utilizing natural methods of dune stabilization rather than the costly construction of seawalls and jetties which can accelerate erosion rates and interrupt critical sand supply and movement in the littoral zone. A new method of dune protection includes the use of wave trips or artificial reefs that are placed in critical areas to trip and disperse waves before they reach the shoreline. These methods follow the rationale that it is better to find natural ways to protect shorelines from flooding and erosion because it is less expensive, and allows the shoreline to interact with the waterbody as a functioning ecosystem in much the same way that it has evolved over time.

9. Sustainable Development

Sustainable development has become a theme for the more progressive types of development currently taking place throughout the country. This type of development takes into account the carrying capacity of the landscape with respect to human development. Based upon an extensive site inventory and analysis new communities are developed in the appropriate location and density in order to integrate the current natural resources of the site into development and develop to a point that produces minimal impact to the natural features and functions. For example buildings may be clustered in order to retain the maximum amount of open space and protect the resources which provide a regional identity of an area. Construction and development is carefully planned to avoid impacts to soils, vegetation and water quality. Natural methods of stormwater management are developed by directing runoff from streets and driveways to impoundment areas which not only enhance scenic

quality of a development but provide water for waterfowl and wildlife, allow vegetation to remove pollutants from the water before it runs into streams, and allow recharge of groundwater.

10. Greenways and Corridors

Greenways and waterfront revitalization programs have been encouraged by the Federal government in order to revitalize areas that have or will continue to experience growth in urban, suburban and exurban areas. These greenways establish a linear system of parks and open spaces that connect major population areas along waterways in order to protect and enhance natural, cultural and historical resources. Greenways may also be important in providing natural corridors to allow wildlife populations to move between large protected open space areas.

The Wild and Scenic Rivers Program is one that identifies undeveloped river corridors that have value due to the fact that they have not yet experienced development pressure. Many of these rivers are recognized as a scarce resource in that very few relatively undisturbed water bodies exist in the nation. These corridors are critical for protecting unique habitat and high quality surface waters. These very features may attract development in the future as development pressure begins to move into the few remaining remote areas of the country.

C. ANALYSIS

As Oswego County continues to grow it is important to remember that careful planning is needed to retain some of the county's rural character and create a shared vision for its future. By addressing our opportunities and constraints associated with our natural resources we can determine the necessary steps to be taken. It has been observed, "it is not the resources we lack, nor even the knowledge, but the vision to use them constructively." (Fairbrother, New Lives, New Landscape) The natural resources background of this plan indicates several opportunities and constraints regarding soil conditions, non-point source pollution control and watershed management, underutilized resources, wetlands and habitat protection, that will help guide the County's vision.

1. Non Point Source Pollution Control/Watershed Management

Obstacles to watershed management plans and policy making include lack of understanding by the public, jurisdictional conflicts and disagreements, and the lack of time, money and expertise. Opportunities exist to work with lake management committees and associations to overcome those obstacles and to create and/or implement watershed management plans. Other opportunities exist for public education to increase awareness of watershed issues.

a. Lake Neatahwanta

The efforts of the Lake Neatahwanta Reclamation Committee and the Oswego County Water Quality Coordinating Committee have sought to improve water quality in Lake Neatahwanta through several non-point source pollution control projects. Over the past several years the efforts focused in the watershed have been on data collection and physical improvements. Data collection included a stream bank inventory, lake management study, GIS mapping of watershed characteristics, and stream monitoring to assist in understanding the conditions in the watershed and lake. Several implementation projects have been completed including streambank remediation, farm nutrient management and shoreline stabilization. Further opportunities exist for streambank remediation in the feeder streams and potential stormwater diversion project(s). Funding has been made available through public grants, and private donations from individuals and industries. The Lake Neatahwanta Reclamation Committee is dedicated to improving the water quality of the lake and enhancing its use. In the future, work by the committee will most likely include improved community support and seeking additional funding to further the water quality objectives.

b. Sandy Ponds

The Oswego County Water Quality Coordinating Committee has identified North and South Sandy Ponds as its second priority water body. Funding has been requested through the Water Resources Board of the Finger Lakes Association to begin an initial inventory of the watershed and ponds. The first step is to complete the inventory and management plan. Available funding is a constraint and with the existing fiscal status at all levels of government, progress on this waterbody may be slowed. It is suggested that shoreline septic systems are the primary contributor to water quality problems.

2. Soil Conditions and Development

Restrictive soils in Oswego County are cause for concern as development in the county continues. Because restrictive soils are so prevalent throughout the County, virtually all new development faces the potential problems associated with these soils.

Of particular concern are the soils classified as "most severe" which indicate no type of traditional on-site septic system is well suited. These soils are common in the Town of Schroepel, northeast of Phoenix and in the southeast portion bordering Onondaga County; and in the southern portion of the Town of Hastings including Central Square. These areas both offer proximity to Onondaga County and to the Oneida River making them prime areas for future development. The minimum size of a parcel of land needed to accommodate sustainable development without infrastructure is impacted by soil type.

3. Underutilized Lands

a. Forests

The County's natural resources are the basis for our economic well being. In the Tug Hill region public and private forest lands can and do serve a variety of uses including recreation, wildlife habitat, forest products and surface and groundwater protection. Forestry management plans can contribute to the improved use of our forest areas.

A recent article in the Syracuse Post Standard identified Oswego County as having 50-74% of its land area covered by forests. Approximately 62% of the state is forested and federal analysts say the State's timber is growing about three times as fast as it's being cut. With a large percentage of the county's land area consisting of forests, opportunities exist for expanding the economic benefit of these lands through timber management plans. NYS DEC foresters can help interested residents develop timber management plans and groups such as Tug Hill Tomorrow and Tug Hill Resources Investment for Tomorrow (THRIFT) can provide additional information and assistance to landowners.

b. Eco-Tourism

Most of the ecological zones in the county offer opportunities for nature education and interpretation. The Lake Ontario Coastal Zone has a rare freshwater dune system which with a management plan and local commitment, will provide excellent opportunities for wildlife observation, habitat preservation and other educational opportunities. A constraint to opening natural areas to more users is the potential for the disruption of habitat and destruction of the environment through over use. The balance should be carefully managed.

4. Large Open Spaces, Islands and Corridor Habitat

Recent research on wildlife populations has indicated that many species require large expanses of unbroken habitat for survival. Oswego County is fortunate to have a solid base of state forests and wildlife management areas. Small acquisitions of inholdings and key adjacent properties from willing sellers could allow for long term conservation of multiple wildlife species in a way that has little impact on private property owners. Also, maintenance of wildlife movement corridors between large public open spaces would assist with maintaining the viability of wildlife populations. Such corridors could be maintained through a combination of land use planning, landowner agreements and conservation easements.

Frenchman and Dunham Islands in Oneida Lake and the shoreline of Lake Ontario serve as prime bird migration and/or nesting areas which are critical elements in the protection and preservation of bird species. By maintaining and/or restoring native vegetation bird populations can be helped to stabilize. There should be educational opportunities for those that own property in the migrating corridors to learn about the migration routes and ways to protect the habitat for migrating birds. A constraint to restoring the habitat is that many areas of the shoreline are very developed and easement creation or habitat restoration would need to be done on a strictly voluntary basis. By retaining the migration routes and providing managed access, there are potential opportunities for tourism associated with the rapidly growing number of bird watchers in the U.S.

5. Wetlands

Wetlands pose several opportunities and constraints. Wetland areas provide wildlife habitat and can be utilized as a natural classroom. Wetlands also serve as natural water retention and purification areas and can serve as flood detention areas. Due to the nature of wetlands, they can be used to naturally create stormwater detention areas and waste water discharge purification areas. In certain cases wetlands prohibit development. Wetlands are protected from development through state and federal regulations which prohibits building or filling within the wetland or within 100= of the State regulated wetland boundary without a permit. However, wetland mitigation poses several opportunities for protecting wetland habitat and expanding public ownership and/or protection of large wetland complexes.

Approximately 95% of Peter Scott Swamp is held in private ownership, including approximately 11% owned by Sithe Energies, Inc. and 12% owned by the Phoenix Gun Club. New York State owns 5% of the swamp. Through wetland mitigation, parts of Peter Scott Swamp could be purchased to preserve the integrity of this flood plain and wetland habitat area. Other opportunities exist in Big Bay Swamp and along the Lake Ontario Shoreline.

6. Greenway Corridors

Opportunities and constraints in the Salmon River Greenway are highlighted in the Salmon River Corridor Greenway Protection and Development Concept Plan. A few of the opportunities are:

- * Provide open space and natural resource stewardship for the unique and relatively undeveloped corridor area while it is still relatively undeveloped.
- * Good water quality and a large amount of lake effect snow allow for year round recreational activities.
- * Interest by Niagara Mohawk in investing in the greenway corridor through development and by operating the hydropower facility in a more ecological manner.
- * Improved and expanded public and private facilities to accommodate recreational demand.
- * Salmon River Greenway Committee serves as a forum for planning and educational opportunities.
- * A nature study facility with visual and physical access to the Salmon River and trail system.

Constraints in the corridor are limited public funding, lack of local infrastructure (water and sewer) to support the added demand of tourists, and potential for over use of trails and other natural areas leading to degradation.

Opportunities also exist along the Lake Ontario and Oswego/Oneida corridors. Private, not-for-profit conservation organizations such as the Central and Western New York Chapter of the Nature Conservancy, the Onondaga Audubon Society and Save Oswego County all own nature preserves and are active in varying degrees with conservation efforts in the coastal zone. Partnerships between private industry, not-for-profits and county and

local governments offer opportunities to advance the greenway concept along Lake Ontario. Alcan and Sither Energy have both undertaken conservation initiatives along the shoreline.

The State Canal Plan supports the greenway concept along the canal system which includes Oneida Lake, the Oneida River and the Oswego River. State properties and cooperative efforts with local and county governments and private landowners in these corridors hold the promise of establishing a true greenway system.

D. GOALS, OBJECTIVES AND STRATEGIES

GOAL: CONSERVE THE NATURAL RESOURCES OF OSWEGO COUNTY IN ORDER TO MAXIMIZE THE LONG RANGE ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS TO CURRENT AND FUTURE GENERATIONS.

OBJECTIVE 1: Maintain steady progress towards reducing discharge of toxic substances, nutrients and sediments to the waters of the County.

- STRATEGIES:**
- a. Advocate that water quality in the Oswego River and Lake Ontario be a primary consideration of any cleanup plan for Onondaga Lake.
 - b. Maintain a comprehensive computerized inventory of SPDES permits, hazardous waste sites and other potential sources of water pollution in the county.
 - c. Develop a comprehensive computerized map of watershed/drainage basins and aquifers.
 - d. Assist well drillers in developing a voluntary certification program and creation of a central library for well construction data/logs.
 - e. Promote implementation of guidelines for erosion and sedimentation control.
 - f. Continue operation of a comprehensive solid waste management program and household hazardous waste collection program.
 - g. Support a watershed approach to improving water quality in priority water bodies including Lake Neatahwanta and Sandy Pond.
 - h. Utilize wetland restoration or creation as a means to reduce nonpoint source contaminants in surface waters.
 - i. Oppose disposal and long-term storage of out-of-county hazardous and non-recyclable wastes in Oswego County.

OBJECTIVE 2: Support long-term planning and control mechanisms and effective response efforts to insure residents, resources and properties are safeguarded from the effects of flooding and water level fluctuations.

- STRATEGIES:**
- a. Limit development in the 100 year flood plain to low intensity land uses and ensure that floodways are unobstructed in order to minimize flood damage potential to life and property.
 - b. Promote implementation of guidelines for stormwater management so as to prevent an increase in flood flows and in the hazards and costs associated with flooding.

- c. Encourage that stream geometry be maintained so as to sustain the hydrologic functions of streams.
- d. Encourage municipal participation in the National Flood Insurance Program.
- e. Encourage greenway planning in flood hazard areas.
- f. Support enforcement of Federal and State wetland regulations as they relate to flood control.
- g. Monitor the effects of Lake Ontario lake levels on shoreline erosion and support maintenance of levels within the recent historical range.

OBJECTIVE 3: Support the protection, stabilization, restoration and optimum public use of the Lake Ontario coastal zone's important environmental resources.

- STRATEGIES:**
- a. Improve educational signage identifying erosion control issues.
 - b. Seek funding to study how sand movement in Lake Ontario affects freshwater dune and beach development and stabilization.
 - c. Improve managed public access to shoreline areas through development of dune walkovers, wildlife observation areas, and trails in appropriate areas, and divert higher intensity uses away from fragile ecosystems.
 - d. Promote low impact shoreline stabilization techniques and encourage ecological site planning in all shoreline areas.
 - e. Protect migratory bird habitat along shorelines, especially in the form of conservation easements and landowner management agreements.
 - f. Limit displacement of shore and harbor dependent uses and other water dependent uses which support economic development.

OBJECTIVE 4: Develop an ecological approach to planning for county growth to protect habitat for the diversity of plant and animal species, assure the protection of unique and irreplaceable biological resources, and sustain the traditional pastimes of hunting, fishing, trapping and viewing wildlife.

- STRATEGIES:**
- a. Guide development to sites with existing infrastructure and low impact on natural resources.
 - b. Identify potential wildlife movement corridors between major open space areas and encourage their incorporation into greenway, trail and local comprehensive planning efforts.
 - c. Prevent decreases in groundwater recharge and stream base flow so as to maintain aquatic life, assimilative capacity, and potential water supply.
 - d. Work with the NYS Natural Heritage Program to inventory habitats of threatened, rare and endangered species throughout Oswego County and identify areas with unique or important ecosystems which warrant protection.

- e. Encourage landowner agreements or donation of conservation easements by waterfront industries for the purposes of habitat protection, especially along Lake Ontario and major waterways.
- f. Advocate implementation of guidelines for buffers along streams, rivers, wetlands and shorelines.
- g. Seek grant funding that will support land acquisitions and programs that protect biodiversity and wildlife habitat in the county.
- h. Improve public access to large parcels of forested public lands and waterways, especially from greenway corridors.

OBJECTIVE 5: Support the preservation and management of public and private forest lands for a variety of uses including sustainable harvest of forest products, recreation, wildlife habitat, surface and groundwater protection, and air quality enhancement.

- STRATEGIES:**
- a. Work with private landowners to provide stewardship and to promote sustainable yields of forest products on private forest lands.
 - b. Advocate methods to continue traditional patterns of land ownership and use of the "northern forest lands" in the Tug Hill region.
 - c. Inventory all lands in public ownership and easement and identify and protect those that have significant value for recreation, nature study and environmental education.
 - d. Identify parcels that should be targeted for acquisition, recreational development or conservation of open space to complement existing large public open spaces, including those identified in the New York State Open Space Plan.
 - e. Identify lands that may be traded with public and private sector organizations and land holders in order to consolidate public holding in the county and eliminate out parcels.
 - f. Develop sustainable management plans for all county owned park, recreation and reforestation properties including evaluation of the most cost effective approaches to stewardship and consideration of the sensitivity of natural areas to public use.

OBJECTIVE 6: Encourage implementation of best available technology and best management practices to maintain and improve air quality and protect the health of County residents.

- STRATEGIES:**
- a. Upgrade air pollution controls at the Energy Recovery Facility.
 - b. Develop a model ordinance for local control of burning of refuse.

OBJECTIVE 7: Encourage practices for efficient, environmentally sustainable agricultural production and maintain or enhance agricultural lands as a viable and competitive natural resource.

- STRATEGIES :**
- a. Support whole farm planning for local farmers and agricultural operations.
 - b. Encourage local communities to consider clustering and other creative planning techniques that can help to preserve agricultural lands.

III. HISTORIC RESOURCES

A. INVENTORY

1. National Register

The National Register of Historic Places is an important component of the nationwide preservation process. It is a resource which contributes to the understanding of the historical and cultural foundations of the United States. Administered by the National Park Service, under the Secretary of the Interior, the National Register is a working list of properties determined to be of national, state, or local significance and worthy of preservation and consideration in planning or development decisions. Properties on the listing are distinguished because they are documented and evaluated according to uniform standards, *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*. These standards were developed to recognize the accomplishments of all peoples who have made a contribution to our country's history and heritage. The criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries to the National Register (Appendix III-A). The National Register includes the following: all historic areas in the National Park System; National Historic Landmarks which have been designated by the Secretary of the Interior for their significance to all Americans; and properties significant to the Nation, State, or community which have been nominated by the states, federal agencies, and others and have been approved by the National Park Service (U.S. Department of the Interior, The National Register of Historic Places). The number of historic resources in New York State are shown below.

Table III-1: Historic Resources in New York State

<u>Resources</u>	<u>Number</u>
National Register of Historic Places	3000 listings
Historic Sites Inventory	180,000 sites
State Administered Historic Sites	35 sites

Source: Conserving Open Space in New York State, 1995, p. 39

Typically, the necessary documentation and forms to nominate properties to the National Register are prepared by organizations, sponsors, or by the staff of the State Historic Preservation Officer. The completed nomination is presented to the State Board for Historic Preservation for approval. If approved, the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP) lists the property on the State Register and forwards the nomination to the National Park Service for final approval and listing on the National Register. Communities having a Certified Local Government make recommendations on properties eligible for nomination in their community directly to OPRHP. The nomination process is designed to insure complete and accurate documentation of each eligible property. In Oswego County, 250 properties are listed on the National Register (Appendix III-B). These include buildings within the county's four historic districts located in the Village of Mexico, the Village of Pulaski, the Village of Sandy Creek, and the City of Oswego. Individual nominations outside these districts include fourteen in the Town of Mexico, twelve in the Town of Sandy Creek, and fourteen in the City of Oswego. In addition, there are twelve other properties in the county listed on the National Register. Fort Ontario in the City of Oswego is not only listed on the National Register, but it is also a State administered historic site demonstrating mid-nineteenth century army life at the star-shaped fortress (New York State Parks, Historic Sites, & Programs Guide, G-21). Numerous other properties are listed on the Village of Phoenix/Town of Schroepfel Local Register (Appendix III-C). Designated by the local Historic Preservation Commission, these properties meet the criteria for local significance, but have not been designated by the State of New York or the Federal government. The rest of the county has no provision for designating properties to a local register.

2. Historic Districts

Historic properties are concentrated in the county's four historic districts. Ninety-three properties in the Franklin Square Historic District in the City of Oswego are listed on the National Register of Historic Places. As the center of early Oswego, Franklin Square was laid out on the west side of the Oswego River in 1797. It was designed to be the city's civic as well as residential center with a courthouse, academy, and prison and houses from all major periods (Federal, Greek Revival, Gothic, Italianate, and Queen Anne) surrounding them. In the nineteenth century, these typical New England blocks became the focal point for the prestigious residences of merchants, ship builders and ship captains, bankers, millers, and lumbermen. The northern blocks on the square were sold in 1817 to raise money to build the Oswego County courthouse on the east side of the river (Franklin Square Historic District, 2).

The Mexico Village Historic District includes 56 properties on the National Register. These properties, mostly of Italianate or Greek Revival architecture, are located on a two block Main Street and several adjacent residential blocks (Mexico Multiple Resource Nomination, 53). The historic district includes a portion of those residences which survived with few or no alterations as well as the village's commercial core. During the nineteenth century, the Village of Mexico had two primary functions: (1) services and housing for people travelling west from Rome to Oswego on the overland route; and (2) commercial and industrial services for the large surrounding agricultural community. The two creeks, Black Creek and Little Salmon Creek, provided water power for grist and saw mills and machine shops, wagon and pump manufactories, and cooper shops. Many homes in the historic district were built by mill owners and reflect the early success of the mills.

The Pulaski Historic District consists of 38 sites in the intact historic residential and commercial core of the village. The 14 acre district is rectangular in shape, three blocks long and two blocks wide. The boundaries of the historic district correspond closely to the original local militia drill field. In the early nineteenth century, the center portion of the field developed as the business district leaving open areas at each end which later became parks. The parks, residences, churches, civic buildings, and commercial structures were constructed between 1819 and 1940 and include a high concentration of Italianate architecture. Although an 1880 fire destroyed nearly all the central district, merchants rebuilt within one year in varying designs, predominantly Italianate. The people of Pulaski have a high degree of pride and an awareness of the architectural heritage which survives in their historic district (Pulaski Village Historic District, 1).

The Sandy Creek Historic District includes eleven commercial, residential, and civic properties constructed between the 1835 and 1928. The district encompasses 3.7 acres of the historic and present commercial center of Sandy Creek located at the intersection of U.S. Route 11, the historic Syracuse-Watertown plank road, and Harwood Drive, the historic main street of commercial, religious, and civic properties. The eleven properties represent development based on the prosperity of local farmers, the opening of transportation routes, and the advent of tourism (Sandy Creek Multiple Resource Area, 2).

3. Archaeological Resources

The New York State Office of Parks, Recreation, and Historic Preservation has mapped all known archaeological resources for the state on the New York State Archeological Sensitivity map. Because of the sensitive nature of this information, the map is not reproduced and is filed at the offices of the OPRHP in Albany. From reading the map it can be seen that archaeological areas in Oswego County are concentrated along the Oswego River, Oneida Lake, the Salmon River, and Lake Ontario at the mouth of the Salmon River at Selkirk Shores. Additionally, the Town of New Haven, the villages of Parish, Central Square, and Pulaski, and the cities of Fulton and Oswego are exceptionally sensitive areas. Shipwrecks in southeastern Lake Ontario have been inventoried by the Oswego Maritime Foundation (Appendix III-D).

B. TRENDS

1. Federal Legislation

Preserving historic properties as a reflection of our American heritage became national policy through the passage of the Antiquities Act of 1906, the Historic Sites Act of 1935, and the National Historic Preservation Act of 1966, as amended (National Register Bulletin 15, i). The Historic Sites Act authorized the Secretary of the Interior to identify and recognize properties of national significance. The National Historic Preservation Act of 1966, as amended, was designed to accelerate and expand historic preservation programs and activities on the Federal, State and local levels. It authorizes the Department of Interior to establish, maintain and expand a National Register of Historic Places to recognize not only properties of national significance but also those of local and State significance worthy of preservation. As the nation's central historic preservation law, the National Historic Preservation Act also established the following: State Historic Preservation Officer responsibilities, Grants-in-Aid program, Certified Local Government Program, Advisory Council on Historic Preservation, and Federal Agency responsibilities. Under this legislation, the National Park Service sets program direction and assures consistency for preservation activities nationwide.

As defined by the Department of the Interior, the goal of the national preservation program is "to establish national standards for historic preservation, to identify and document significant historic resources in the United States, to assist in preservation efforts by providing assistance to public and private preservation agencies and organizations and to educate the general public concerning the value of historic preservation." (U.S. Department of the Interior, The National Register of Historic Places) Preservation keeps intact places that are important parts of a community's identity and provides historical information about how an area was settled, developed, or declined. It helps a community to identify and understand the economic, geographic, environmental, social, and cultural forces that shaped its development (Stokes and Watson, 38).

The federal government recently entered the historic preservation picture in a major new way. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) permits money allocated for "transportation enhancement activities" to be used for the acquisition of historic sites, for historic preservation, and for the rehabilitation and operation of historic transportation buildings, structures, or facilities (Baer, 84).

During the last decade, many incentive programs have suffered because of changes in political and public support. Changes with the federal Tax Reform Act of 1986 curtailed the attractiveness of the tax credit by imposing restrictive passive-loss rules on the use of the credit and by denying its availability to wealthier taxpayers (Schwartz, 12). The tax credit was reduced from 25% to 20% and the amount of the credit a taxpayer could use each year was trimmed to \$7000. Previously, taxpayers could use all the credit available to them in the year the project was finished. Many state and local governments have tried to compensate for these changes. It is unlikely, in a tight fiscal climate, that the original tax credits will be restored (Hoyt, 87).

2. Neighborhood Preservation

Early preservation efforts concentrated on museum-like buildings. During the 1960s, urban renewal and highway building provoked concern over the demolition of historic buildings. Thus, began organized efforts to also protect buildings for their architectural or scenic qualities. The use of preservation ordinances, one of the oldest preservation tools, exploded in the mid-1960s. Previously, the concept had only spread slowly throughout the nation after Charleston, South Carolina, enacted the first historic preservation ordinance in 1931 (Roddewig, 1). These ordinances have evolved as a vehicle to protect individual landmarks as well as entire neighborhoods.

Lately, attention has shifted from individual buildings to larger areas, city neighborhoods, county villages, and rural countryside (Wellman, x). Historic preservation trends focus on restoring the character and vitality of downtowns and neighborhoods, converting structures for new economic activities, and restoring outdated transportation routes for interpretation and recreation. Removing fake facades from store fronts is one step in restoring the historic character of downtowns. Another is supporting the multiple use of these buildings. For example, use the street level space for commercial activities, second level for office activities, and the third level for

residential. Gaps in historic neighborhoods are being filled with buildings of similar style to reflect the original character of the area. With the decline in manufacturing, empty factories, warehouses, and mills are being converted for commercial space and housing. Churches and schoolhouses have been converted primarily because of consolidation. Within archaeology, shipwrecks and underwater heritage sites are one of the fastest growing branches. By continuing to be used, historic resources can often best be of service to present and future generations while at the same time retaining tangible reminders of the story of the area's development (Historic Resources Survey Manual, 15).

3. Comprehensive Planning

Preservation concerns and values have found their way into comprehensive plans and the overall planning process over the last decade (Morris, 37). Frequently, preservationists and planners have clashed, not understanding one another's purpose or motivations. Communities are now recognizing the aesthetic design and economic values of preservation. Increasingly, municipalities include a historic preservation element in their comprehensive plans or at least use preservation techniques in other elements of the plan such as housing, economic development, or community design. Planners are looking at historic preservation as part of the planning solution rather than as a problem.

C. ANALYSIS

1. National Register Listing

The results of listing on the National Register help to preserve historic properties. First, the property is recognized as significant to the Nation, the State, or the community. Second, the property is considered in the planning of Federal or federally assisted projects and in the decision to issue a surface coal mining permit. Finally, a property on the National Register is eligible to take advantage of federal tax provisions and qualifies for federal assistance for historic preservation when funds are available. Being listed on the State Register also has benefits. Historic properties are considered in the planning for projects involving state agencies and qualify for state grants.

Listing on the National Register is an honor and an important step in the preservation process, but it does not protect the historic property as much as might be expected. In general, there are no restrictions on private owners of registered properties. Owners may sell, alter, or dispose of their properties as they wish, consistent with local ordinances. Being on the National Register does, however, provide protection from demolition when federal or state funds are to be used.

2. Local Regulation

Communities dedicated to historic preservation have taken different routes to protect their historic resources through zoning, NYS General Municipal Law, section 96-a and the NYS Municipal Home Rule Law. Preservation controls are an exercise of police power that have been found constitutionally to be a legitimate public purpose.

Zoning variances or special use applications granted in or adjacent to historic areas can have a significant impact on historic character. For example, in a historic residential district where one essential quality of the streetscape is a uniform setback from the street, an application for a variance might mar the character of the neighborhood (White and Roddewig, 12). On the flip side, variances or special permits which do not disrupt an area's character can encourage rehabilitation. Zoning is a police power regulation of cities, towns, and villages which divides a municipality into districts or zones. Permissible uses of land are prescribed in each zone. The simplest way to coordinate historic preservation with zoning is to make historic districts official zoning districts (12). By providing particular districts with carefully drafted standards for land use and for the design and siting of improvements, zoning can provide the type of regulations typically judged appropriate for historic preservation. This is often accomplished by using a historic district overlay which provides a set of regulations aimed at

preservation in addition to the basic use and other controls already applicable to the land pursuant to the underlying zoning districts.

Unlike zoning, General Municipal Law applies to counties as well as to cities, towns, and villages. General Municipal law, section 96-a, contains specific authority for historic and aesthetic preservation controls including, regulations, special conditions and restrictions. (State of New York Department of State, 2) This statute is in addition to zoning powers, therefore, there need not be any zoning controls in effect to use this statute. The permissible purposes of these restrictions, special conditions and regulations and what may be accomplished by them is broadly stated in the statute. Regulations can be adopted to preserve buildings and areas which may not be of historic importance but are of architectural or other significance to the neighborhood. Finally, a unique provision authorizes controls to apply not only to a specific property being preserved but also over the use and/or appearance of neighboring private property within public view. This recognizes that a place of historic or aesthetic value can be greatly affected by the use and appearance of a nearby property. Nevertheless, controls over neighboring land would have to be reasonable (3). The Village of Phoenix/Town of Schroepfel Certified Local Government was developed under New York State General Municipal Law.

The third source of police power to enact preservation regulation is the broad local law powers granted to municipalities by the Municipal Home Rule Law. Counties, cities, towns and villages are authorized to adopt local laws relating to the protection and enhancement of their physical and visual environment (Municipal Home Rule Law, section 10 (1)(a)(11)). This is not limited to controls for historic preservation purposes, but could prove to be useful particularly if controls are desired outside the framework of zoning ordinances.

The Village of Phoenix/Town of Schroepfel has established itself as a Certified Local Government (CLG). By being a CLG, a community strengthens its ability to make important decisions about local preservation, development, and planning issues. In New York State, the Historic Preservation Services Bureau of the Office of Parks, Recreation and Historic Preservation (OPRHP) coordinates the Certified Local Government Program and provides assistance to member communities. In this state and federal preservation partnership, a CLG enjoys expanded participation in preservation activities, coordination with other programs such as Urban Cultural Parks, and priority legal, technical, and design assistance from the OPRHP. More specifically, the benefits offered to CLGs include training from OPRHP, participation in nominations to the National Register of Historic Places, participation in the national historic preservation assistance network, access to publications on historic preservation, and professional assistance.

Being a CLG has financial benefits as well. Certified Local Governments are eligible to apply for earmarked grants from their State Historic Preservation Office. At least 10% of annual federal preservation grant monies must be distributed among Certified Local Governments. While most CLG grants are used for planning and public education projects, the repair and restoration of properties listed on the National Register is an eligible activity.

To become a Certified Local Government, the local government must establish and enforce local legislation for the designation and protection of historic properties. This requires the following: a local Historic Preservation Commission, a process to landmark historic properties, and a method for reviewing changes to these landmarks. (New York State Office of Parks, Recreation, and Historic Preservation, Help for Community Preservation) Besides these three requirements, the CLG has a broad latitude to draft laws appropriate to their community. When requested, the New York State Office of Parks, Recreation, and Historic Preservation provides model preservation laws and legal advice.

The Village of Phoenix/Town of Schroepfel has used its benefits as a CLG for many purposes. The Historic Preservation Commission has conducted workshops to educate the public and other local governments on the importance of historic preservation. In 1988, they received funding from the New York State Council on the Arts to conduct a Historic Landscape Preservation Study. A second survey, the River Bridge and Canal Historic District Architectural Study, was published in 1990 with funding from the State Historic Preservation Office. The commission affected community planning by enforcing a historic preservation ordinance through a local law. Ultimately, however, the Village of Phoenix/Town of Schroepfel CLG separated when the village changed its law

in June 1995. Now, the village board rather than the preservation commission approves building changes; the village's commission is only advisory. With the change in the village's law, the Town of Schroepfel reorganized and in early 1996 formed a Schroepfel Landmarks Commission. The town remains a CLG and expanded the new commission's activities to include landscape and archaeology (Dix). The CLG status of the village is questionable.

Under authority conferred on counties to adopt local laws relating to the protection and enhancement of the physical and visual environment (Municipal Home Rule Law, section 10(1)(ii)(a)(11)) and to provide, by regulation as well as otherwise, for protection of historic and architectural resources (General Municipal Law, section 96-a and Article 5-K), Madison County has proposed a county Certified Local Government to preserve its unique heritage. Although other counties in the nation are certified CLGs, Madison County is the first county in New York to propose it. As a county CLG, its cities, towns, and villages would have the following options: having no preservation controls at all, electing to be included in the county local law by a local law/ordinance/resolution, or adopting its own preservation law or ordinance (Madison County Board of Supervisors). The county CLG puts legislation in place to be utilized as determined by each locality.

There are also several benefits of the county local law. In rural counties like Madison and Oswego, enacting a historic preservation law and developing, initiating, and forming a commission to carry out that law can be time-consuming and duplicative. Additionally, if a county had legislation and a commission to serve it, the expertise, experience, and training could be shared by the entire county. Finally, rather than being in competition against each other, local governments could, under a county historic preservation umbrella, develop skills to acquire funds in a cooperative and planned way. As a county unit, projects may be more competitive for grant sources. Nonetheless, Certified Local Governments are more common at the local level.

For over 60 years, local preservation ordinances have been the primary tools for historic preservation. While these techniques will continue to be a key to historic preservation, they are limited in preventing exurban sprawl and addressing financial pressures on owners of historic properties which are both important in protecting the broader context of historic areas (Morris, 1).

3. Financial Incentives

Financial incentives to rehabilitate and maintain historic buildings encourage private participation and investment in preservation. Because of the financial attraction, owners of historic properties who may not be active in preservation are encouraged to save buildings and become advocates. The purpose of incentive programs is to provide a contract of sorts between the property owner and the public, to counter government forces or land use policies that inadvertently threaten historic resources, to generate systematic rehabilitation of historic buildings, to provide for rehabilitation projects to compete with new construction or abandonment, and to compensate owners who may be significantly burdened by historic preservation laws. Federal rehabilitation tax incentives first authorized by the Tax Reform Act of 1976 and strengthened by the Economic Recovery Tax Act of 1981 were the biggest government-sponsored boom to preservation. The decade from 1978 to 1987 was the golden age of historic preservation in the United States during which a preservation industry came into being. While the Tax Reform Act of 1986 reduced the benefits of tax incentives, they are still available. The table below shows healthy investment, with or without credits, in the rebuilding of older structures.

Table III-2: The Projected Growth in Rehabilitation

1993:	\$23.1 billion
1994:	\$24.9 billion
1995:	\$26.9 billion
1996:	\$28.3 billion
1997:	\$30.1 billion
1998:	\$31.1 billion

Source: F.W. Dodge in Hoyt, p. 87

Dodge's figures, however, may underestimate rehabilitation's real value by some 25 percent. Not included in these figures are countless projects costing less than \$1 million such as commercial fix-ups and major single-family renovations (Hoyt, 86).

The preservation tax incentive is available to eligible owners of historic commercial, office, industrial, or residential properties listed on the National Register. It rewards owners of depreciable historic structures with an investment tax credit for rehabilitation costs. Generally, an owner has to preserve 75 percent of the original exterior wall to qualify for federal-tax preservation incentives.

Most public agency and private foundation funding programs are for municipal or NFP owners. Properties owned by municipalities and not-for-profit organizations are eligible to apply for state historic preservation matching grants. New York State established the Environmental Protection Act/Environmental Protection Fund (EPF) in 1993 to provide a funding mechanism "to protect the environment" through a variety of grant programs including park, recreation and historic preservation. The New York State Office of Parks, Recreation and Historic Preservation administers this program. Municipalities, NFP corporations, and more recently school districts and BOCES, are eligible to receive 50% matching grants for the acquisition, restoration, preservation, rehabilitation, protection, or improvement of historic buildings, structures, sites and objects listed on the National Register of Historic Places. The EPF grant program is similar to the grant program funded under the Environmental Quality Bond Act of 1986 except under EPF municipalities may apply for the acquisition of historic resources.

There are few opportunities for assistance to private property owners and particularly owner occupants. Residential and commercial property owners may, however, qualify for federal, state, or municipal funds distributed through county and/or city agencies or private lending institutions in the form of low interest loans or grants. As discussed above, owners of income producing properties may qualify for federal income tax benefits. Beyond the consideration of age and condition of historic properties, these programs emphasize providing affordable housing, creating employment opportunities, and investing in local communities. They may also offer assistance to target areas such as older urban neighborhoods or rural agricultural districts. Interestingly, most grant programs require that the historic property be listed or eligible for the State or National Register or be designated as a landmark under a local preservation ordinance at the time of the application. A list of organizations offering funding for historic preservation projects are listed in Appendix XI-B.

4. Downtown Revitalization

A key element in keeping a historic neighborhood or commercial area viable is that it must be used. In Oswego County, the population of the cities and villages has declined or grown very modestly. Most growth has been outside these corporate limits. By containing development and preventing urban sprawl, the continued use of historic buildings is encouraged. The "sense of place" of a village is frequently defined by the flavor of its central business district (CBD). Traditionally, the CBD symbolized the vitality and strength of a community. The singular advantage of this area was its centrality as reflected in the saying, "All roads lead downtown." The CBD is often the only part of the city or village a visitor sees and thus provides the sole basis for an assessment of the place. This highly visible area is characterized by pedestrian traffic, high density development, and mixed uses.

Downtown merchants have been hurt by competition from shopping malls and commercial strips and the consolidation of key social institutions such as post offices. Additionally, pressure for redevelopment, together with tearing down buildings to save on tax assessments, threatens the oldest and most historic CBD buildings. Because the oldest blocks of a village typically form the CBD, historic resources are concentrated there. Consequently, preservation and revitalization efforts are focused in the CBD. The initial task then is to define the boundary of the central business districts and the transitional areas around them.

Defining the boundaries of the CBD is a difficult task. Factors determining the boundary include intensities of land use, land value, building height, street level uses, and upper story uses. The shape of the CBD tends to be either square or elongated (1 or 2 streets). The transitional area adjacent to the CBD is of mixed land uses and is a buffer as well as a reservoir of potentially renewable land for CBD or residential uses (Hartshorn, 309). Once the boundaries are mapped, this area can be targeted for revitalization.

Offering incentives and implementing programs within boundaries of historic CBDs can encourage revitalization and redevelopment by steering development into the central business district. Main Street programs assist small community merchants in making their business district a more attractive place in which to shop (Stokes and Watson, 14-15). The components include historic store fronts, new uses for vacant or underused buildings, improved parking, assuring a range of stores and services, and a resident population downtown. Landscaping is a crucial factor in the appearance of a city or village. Planters, street lights, benches, trash receptacles, fences, walls, and pavement patterns contribute to a lively and richly detailed streetscape. To function as a neighborhood service center, pedestrian and traffic safety need to be enhanced. Sidewalks are an essential element of a pedestrian-friendly village which many villages lack. Together, the appearance of place, marketing practices such as coordinated opening hours, special events, and shared advertising can fill a CBD with activity from both natives and visitors (Sutro 17).

5. Adaptive Reuse

Adaptive reuse retains and reinforces the historic cultural landscape while accommodating contemporary uses, needs, and conditions. Abandoned schools, factories, and warehouses have been converted to much-needed housing, offices, and commercial space. In today's competition for public funding of historic preservation and economic development projects, it is essential to link the two in a comprehensive strategy. Many developers combine the historic preservation tax credit with economic development and commercial revitalization grants to tackle rehabilitation projects previously considered unfeasible. As much as 16 percent can be saved in construction costs for gut rehabilitation while 18 percent can be saved in construction time over demolishing a building for a new building of similar size. Also, developers and owners are discovering that a recycled building is more likely than a new building to be approved by neighborhood groups and conservationists (Hoyt, 86). For example, when Kingston, New York converted its 1910 Stuyvesant Hotel into apartments, the construction costs were much less than a new building at the same location. Rehabilitation cost \$78 per square foot compared to some \$100 for a new, multi-story, semi-fireproof building. The goal of this project was not only to provide housing for a mix of elderly, handicapped and mentally disabled tenants, but it was also to increase the city's charm and attract small businesses to the depressed business district. Now, the Stuyvesant is the most conspicuous building in the neighborhood. Its face lift has sparked upgrading of nearby structures. The challenge for planners and preservationists is to encourage new infill and adaptive reuse and rehabilitation of older buildings that complement historic development patterns while maintaining a regulatory environment that is receptive to economic development.

6. Development Incentives

Besides investment tax incentives, zoning and building code incentives can have significant impacts on the rehabilitation of historic properties. Local land use management tools including zoning and parking requirements must be analyzed for their effect on historic properties. Relaxation of land use classifications and variance and special use procedures for historic structures may encourage rehabilitation and reuse. Relaxing parking codes can prevent the demolition of properties or the clearing of areas near historic properties that may be necessary to comply with parking requirements. Planning boards approve these requests. The education of planning board members is required if those options are to be used.

7. Landscape Features

Culturally distinct rural areas usually have had unique ways of building, laying out farms, and creating furnishings and food. A key visual impression of the rural landscape is the repeating pattern of farm building clusters and associated open fields. Among these open spaces, significant historical features reflect the culture of people, patterns of development, or changes in technology. These features could include cemeteries, parks, farms, bridges, canal locks, or dams. Examples in our landscape are the Case Wall in the Town of Williamstown and the Salladin graves in the Town of Mexico, as well as remnants of the original Oswego Canal. The impact of new

construction on historic landscapes has not been considered in most preservation programs perhaps because most are based on urban models.

Unlike buildings, historic features in the landscape are not as easily recognized or understood (Reppert, 81). Nonetheless, identifying them is the start to valuing these features for their cultural, educational, economic and quality of life purposes. Once identified, stewardship or easements, either donated or purchased, would encourage their protection.

8. Archaeological Resources

As with buildings and landscape features, an important step in protecting archaeological resources is identification. Because many of these sites have been built over by streets or buildings, identifying them requires two steps, background research and field work. Background research identifies the most likely places to look while field work inspects the ground surface, sometimes including excavation.

The preferred method of physical protection of archaeological resources is to simply leave the site undisturbed. Another suggestion is to incorporate the site into development projects. The site can be left intact within landscaped areas, buried under fill, or exposed to some extent and interpreted for the public. Many sites may be appropriate for incorporation in greenway planning. If a site cannot be physically preserved, data recovery is appropriate. This means excavating the site to study the information and then translating that information into written form (books, maps, notes) to be consulted by future scholars. When a project site may be in an archeological sensitive area, a Cultural Resource Investigation determines if an archaeological resource is eligible for the National Register of Historic Places. The steps of the investigation are as follows: (1) determining the presence of resources in the project area, (2) if identified, proposing modifications to the project to minimize or avoid impact, (3) if modifications are not possible, evaluating the resource in detail, and finally (4) researching to provide adequate data for eligibility to the National Register. The report should include evidence of the resource's integrity and significance and an evaluation of the impact of the proposed project on the site. The purpose of the process for listing on the National Register is not to impede or halt development, but it is to assure the value of the historic property is given direct consideration in planning decisions (Parker).

Among our archaeological resources are submerged vessels. The Great Lakes region is widely recognized as one of the best shipwreck diving locations because its cold fresh water has preserved a multitude of vessels. Shipwrecks offer information on ship design, engineering, commerce, and shipboard life. These vessels are clues to how water transportation shaped the country and are a significant part of our cultural heritage. Moreover, goods and material remains at sites indicate choices of our ancestors and their lifestyles (FGG Executive Services Inc., 4) Exposure to air accelerates the decomposition process, consequently, shipwrecks are often better left submerged.

Underwater parks and preserves encourage the preservation of underwater historic resources. Because local businesses and stakeholders depend on attractive shipwrecks for their livelihood, they promote preservation and anti-pillaging among their customers. Unfortunately, in Oswego County and much of New York State diving areas are currently open frontiers. The preservation of historic resources and the viability of a diving industry, thus, relies on divers respecting underwater resources. Divers can either be the most destructive force to preservation or its greatest asset. To encourage the later, the Great Lakers Dive Association in Fulton prefers methods of self-regulation over legislation. These would encompass volunteer "patrols" by local diving clubs, "take nothing" rules enforced by dive charter leaders, educational programs, and preservation ethics taught by diving instructors.

Well planned and coordinated promotion and preservation programs encourage education, recreation diving, and tourism. In Oswego County, the Oswego Maritime Foundation, a non-profit corporation, leads a Marine Archaeology Program with technical and service support from the Great Lakers Dive Association and New York Sea Grant. The program's purposes are as follows:

1. Locate, identify, and map shipwrecks and submerged cultural resources before they are obscured by zebra mussels or destroyed by misuse.

2. Through public education programs, increase public awareness of, and appreciation for, the region=s maritime heritage.
3. Through public education programs, reduce the frequency of shipwreck pillage, and promote the responsible use of shipwrecks for recreation, education, and scientific study.
4. Promote sport diving as a tourism industry. (Oswego Maritime Foundation)

Before a historic dive location is given public access, it should be identified, documented, and inventoried to gather all information about our cultural heritage (Great Lakers, 6) This information contributes to our overall knowledge of maritime history benefiting museums, schools, historians, and the general public. Additionally, the Canadian organization, Save Ontario Shipwrecks, has noticed that pillage decreases when the contents of a shipwreck are widely publicized and frequently visited by dive charter boats (6).

The U.S. Abandoned Shipwreck Act of 1987 (ASA) influenced the use and management of cultural resources in the Great Lakes. This act culminated from conflicts and confusion over ownership and management of abandoned shipwrecks. The act does not apply to other underwater cultural resources such as prehistoric remains or historic docks and wharfs. The ASA has two general purposes. They are to:

- ∃ eliminate the application of admiralty law of finds and law of salvage to abandoned shipwrecks 1) embedded in submerged lands of a state, 2) embedded in coralline formations protected by a state on submerged lands of a state, or 3) on submerged lands of a state and included in or determined eligible for inclusion in the National Register of Historic Places.
- ∃ affirm state ownership and management authority for abandoned shipwrecks that meet one or more of the three criteria listed above. (Vrana and Mahoney, A6)

The ASA clarifies use and management by:

- ∃ characterizing abandoned shipwrecks as multiple resources.
- ∃ emphasizing rights of reasonable access by the public.
- ∃ encouraging the development of underwater parks, or other types of areas that provide additional protection.
- ∃ requiring public participation in the preparation of guidelines to foster partnerships in management. (A6)

New York State models its shipwreck program after the Abandoned Shipwreck Act. Because abandoned shipwrecks are primarily yielded to the State, the county is encouraged to establish a partnership with state agencies.

9. Economic Development

Historic preservation need not be a limitation on development, rather, it can be the basis for it (Herr, 33). More than ever, cultural and natural assets form the basis for economic development in small communities. Historic preservation programs tend to be a stimulus for tourism and economic investment. Each dollar awarded in grants and loans by the National Trust for Historic Preservation leveraged an average of ten dollars. The greatest attractions for economic growth in many towns are their quality of life, natural environment, historic legacy, and cultural context. Small communities also rely on monies received from tourism and its related service industries for major portions of their economic activity. Increasingly, visitors flock to sites of historical and cultural significance (Munsell, 30). Studies prove that visiting historic sites and small-town shopping are two of the top preferred activities of travelers. Even those not considering themselves preservationists seek the quality, safety, and unique experiences offered by small-town America (Cole, 6) In a survey reported by the New York State Office of Parks, Recreation and Historic Preservation, 70% of respondents expressed interest in touring historic properties (Historic Preservation Field Services Bureau). This underscores the value of National Register designation and the financial benefits which historic preservation can provide.

10. Education

Educational efforts are a key to a community's preservation success. There is the misconception that preservation is unrelated to the real needs of the county -- jobs, housing, human services. Consequently, preservation is not supported. Education is not only necessary for the public but also for those who develop and administer programs (Herr, 35). Before hoping to have an effect on an individual's perception of historic preservation or a change in attitude or behavior relating to it, it is first necessary to make individuals aware of the historic resources surrounding them (Veverka, 27). Many tools are now available whether they are high-tech (video, community cable television, computer simulations) or more traditional (workshops, newsletters). Particularly used in heritage tourism, the interpretive communication process is designed to reveal meanings and relationship of our cultural heritage through first-hand involvement with objects, artifacts, landscapes, and sites.

Recently, the Heritage Foundation suggested a brochure of basic architectural styles for realtors. This brochure will give realtors a reference for describing houses/buildings and assisting clients seeking historic structures. Private property owners frequently are unaware of the maintenance "how-tos" of historic buildings. A pamphlet describing repairs (windows, doors, roofing) may encourage property owners to make those repairs consistent with the building's historic style rather than altering it. Appreciating our heritage and wanting to preserve reminders of that heritage can be taught at an early age. This could encompass learning our history of development, identifying architectural styles, and hearing traditional folk stories. This would build on the work of local historians.

There are many participants in the county that can influence the direction of historic preservation in Oswego County. These include among others, local historians, not-for-profit organizations, planning board members, developers, realtors, private property owners, and school children. Frequently, preservationists fear that planning and zoning boards are too pro-development and unable to say "no" when development threatens a key historic resource. On the other hand, preservationists are sometimes viewed as unwilling to look for workable compromises. However, the benefits of linking preservation and wise land-use planning is beginning to override these fears (White and Roddewig, 41). With the decisions of the planning board and the cooperation of developers, new development should respect the community's identity and share qualities of scale, form, and materials with existing development. It is important to strive for better coordination between the work of historic preservation organizations and local planning boards and municipal legislatures. The lack of interaction weakens preservation efforts (Morris, 1).

11. Local Historians/Historical Societies

Each town and/or village has a historian or historical society as does the county as a whole (Appendix III-E). Local historians collect and interpret history whether it be written, oral stories, or information from town files. This information is shared with the public through newspaper columns, local history days, and presentations in schools. The Pulaski Historical Society has developed a self-guided tour for the Village of Pulaski including its historic district of nineteenth century commercial architecture and the restored H. Douglas Barclay Courthouse. Additionally, the Mexico Historical Society published a tour for the Village of Mexico particularly its residential Historic District and the fourteen properties listed on the National Register (Oswego County Department of Promotion and Tourism).

Several organizations in the county participate in preserving and expanding our historic and cultural resources. The Heritage Foundation of Oswego, Inc. purpose is ". . . to promote, protect, and enhance the historical and environmental resources found within the County of Oswego, New York." (The Heritage Foundation of Oswego, Inc. Annual Report) In fulfilling this purpose, this not-for-profit organization advises on building restoration, consults as to community services, and advocates for historic preservation. The Heritage Foundation sponsors two self-guided walking tours in the City of Oswego. The tours provide a view of uncommon and intact nineteenth century architecture and an opportunity to learn about the settlement and development of this region.

The Heritage Foundation is finishing a county-wide survey of historic and archeological sites, including text and maps for each town, village, and city. Understanding that there is a system for recognizing historic resources is an educational tool. A historic inventory helps a community to identify and understand the forces that shaped its development. (Wellman, 111) Additionally, this information can be used to prepare nominations for the State and National Registers and to consider land use and the planning of new projects.

A basic step to prevent harm to historic and cultural resources is a notification program. Frequently owners are willing to protect important resources once they learn about them. Logically, notification follows the resource inventory. Owners are notified about why their property is significant and why it deserves protection. Owners appreciate information compiled by organizations about their property. It prevents hard feelings and increases the owner=s awareness of historic resources (Stokes and Watson, 174-175). This process can be the first step in establishing a good relationship with a property owner and that relationship may eventually lead to a permanent commitment to protecting significant resources.

For the past fifteen years, the Heritage Foundation has sponsored a county-wide Plaque Program. Locally designated properties receive historic recognition and each property displays a plaque which denotes the historic significance of the property. This program helps to educate the public about the historic significance of the buildings and landscapes in the

area. Recognition programs work because they give owners pride and praise in protecting a community resource (Stokes and Watson, 174).

12. Celebrations and Festivals

Celebrations around community and history can be educational. During the summer months, for example, communities bordering the Oswego River celebrate the history of the canal. Canal Days in the Village of Phoenix highlights the nineteenth century history of the village as a stopping point along the Oswego Canal. Begun as a fourth grade history project, the festival incorporates canal history into its street festival of traditional storytelling, crafts, and entertainment. Celebrating its historic waterfront, the City of Oswego hosts one of Central New York=s greatest summer festivals, Harborfest. This festival is highlighted by reenactments of the battles of the War of 1812 and other special events at Fort Ontario. The four day event is packed with historic storytelling at the H. Lee White Marine Museum, top name entertainment, rides, games, arts and crafts, and a spectacular fireworks display over the Oswego Harbor. During the summer, the Oswego County Fair celebrates the agricultural heritage of the county with arts and crafts, exhibits by the various historical societies, and music performances. Other communities celebrate their unique cultural and historical significance throughout the year with similar activities. Nationally, Preservation Week is held annually during May.

A comprehensive plan brings historic preservation concerns to the forefront of local public policy and reviews its integration into other elements of the county=s development. Although not every historic and cultural resource will survive indefinitely, it is important that there is an agreement on a vision for preservation in Oswego County and that tools are in place to guide change. Dialogue with organizations and communities shaped the vision, the goals and objectives, of historic and cultural preservation in our county.

D. GOAL, OBJECTIVES AND STRATEGIES

GOAL: MAINTAIN THE HISTORIC CHARACTER OF THE COUNTY'S CITIES, VILLAGES AND RURAL TOWNS AS THEY ACCOMMODATE CHANGE.

OBJECTIVE 1: Encourage the preservation, maintenance, rehabilitation and appropriate adaptive reuse of older and historic structures in the County.

- STRATEGIES:
- a. Serve as a clearinghouse for information on historic properties, processes and organizations.
 - b. Provide technical assistance to the Heritage Foundation of Oswego, Inc. with respect to the publication of their county-wide historic survey.

- c. Provide local and County planning board members, historic property owners, developers, realtors and the general public with educational opportunities on historic preservation.
- d. Support nominations to the State Register and the National Register of Historic Places.
- e. Develop alternative standards for historic structures which would permit the relaxation of land use classifications and parking codes to encourage the adaptive use of historic structures and/or to prevent their demolition.
- f. Investigate the benefits and drawbacks of becoming a county-wide Certified Local Government (CLG).
- g. Identify historically significant areas (e.g. neighborhoods, central business districts) whose character could be preserved through the implementation of historic overlay zoning districts.
- h. Include historic resource issues in the County Planning Board review of local planning and zoning actions.

OBJECTIVE 2: Revitalize and maintain the older commercial cores of communities.

- STRATEGIES:**
- a. Investigate potential incentives to attract businesses to Central Business District locations.
 - b. Promote the implementations of Main Street programs and commercial core area redevelopment plans.

OBJECTIVE 3: Protect historically significant features in our landscapes.

- STRATEGIES:**
- a. Inventory historically significant landscape features.
 - b. Encourage the donation and purchase of historic preservation easements to protect historically significant landscape features.

OBJECTIVE 4: Preserve historic resources as a means of attracting economic development to the County.

- STRATEGIES:**
- a. Promote tourism associated with historic resources.
 - b. Encourage private investment for restoration work.

OBJECTIVE 5: Protect archaeological resources.

- STRATEGIES:**
- a. Incorporate archaeological resources into greenway planning.
 - b. Locate, identify and document underwater archaeological resources.
 - c. Include archaeological resource issues in the County Planning Board review of local planning and zoning actions.

IV. TRANSPORTATION

A. INVENTORY

1. Highways, Roads, and Streets

There are over 1900 miles of public highways, roads, and streets in Oswego County. Legal jurisdiction over these roads is divided between federal, state, county, and local governments. Table 1 summarizes this relationship.

Table IV-1: Total Highway Mileage in Oswego County

	<u>Number of Miles</u>	<u>Percent of Total</u>
FEDERAL	30.91	1.6
STATE	252.84	13.1
COUNTY	501.44	26.0
LOCAL	1145.81	59.3

Source: Oswego County Department of Public Works, 1995

There are a total of 239 bridges in Oswego county that are the responsibility of State, county, or local governments. Under New York State law a bridge must be at least 20 feet in length. Anything under that length is a culvert, no matter how it is constructed. Oswego County is responsible for all bridges 25 feet or greater in length. As a consequence of State law, local communities are responsible for bridges of 20 to 25 feet in length. All bridges are rated on a scale of one to seven, with seven being the best condition. Bridges with a rating less than three are closed to traffic.

Oswego county is responsible for the greatest number of bridges, followed by New York State and local governments, respectively. The entire system of responsibility and bridge rating is summarized below in Table IV-2.

Table IV-2: Bridge Responsibilities in Oswego County

	No. of Bridges	% of Total	RATING (% of Bridges)			
			Less than 3.00	3.00 - 3.99	4.00 - 4.99	5.00 or Greater
New York State	104	43.5%	<1%	12.5%	24.0%	62.5%
Oswego County	113	47.2%	<1%	17.6%	46.9%	34.5%
Local Gov	22	9.2%	-	4.5%	36.3%	59.2%

Source: New York State Department of Transportation, March 1996

2. Functional Classification

Another, perhaps more useful way to view roads and highways is to examine how they are actually used. One means of accomplishing this is through the functional classification. This is a process by which roads and streets are grouped into classes according to the character of service they are intended to provide. Central to this process is the understanding that vehicular traffic requires the use of a network of roads and that these roads also provide varying degrees of access to adjoining land use activities. Functional classification defines the role that a particular road or street should play in accommodating the flow of vehicles through a highway network. At the same time this highway network must provide access to adjoining property.

The following discussion addresses rural areas, but the concepts apply equally to urban centers. There are five categories within the functional classification system. These are principal arterials, minor arterials, major collectors, minor collectors, and local roads or streets. A principal arterial is the main intrastate or interstate highway for the movement of goods, services, and people. A principal arterial links one end of a state with the other. Mobility is the most important consideration while access is the least important. A minor arterial is a regional thoroughfare. Mobility, while still the most important function, is less of a consideration than it is with a principal arterial. A major collector links local communities or feeds traffic to a minor or principal arterial. A minor collector provides connections within a community or to higher level roads. Access becomes increasingly more important for lower level roads such as collectors, as compared to arterials. Finally, a local road or street serves adjacent land uses or moves traffic to collectors or arterial. Access is most important and mobility is least important for local roads.

Map 15 shows the state functional classification system for Oswego County. The map shows that functional groupings are primarily divided between state and county roads with most state roads in the higher level classes. Only state roads have been designated principal or minor arterials in the rural system. Some local streets in the cities of Fulton and Oswego are designated minor arterials. Both state and county roads may be major collectors, while minor collectors are mostly county roads with some selected town roads. Local roads consist of the non-designated county or town roads and city or village streets.

3. Fixed Route Public Transportation

a. Centro of Oswego, Inc.

Centro of Oswego, Inc., located in Oswego, is a subsidiary of the Central New York Regional Transportation Authority. The company provides fixed route bus service in the cities of Fulton and Oswego as shown on Map 16. There are eight routes in Oswego and one route in Fulton; Centro also provides the "Laker" service for the SUNY campus. There are 14 coaches in the Centro of Oswego fleet.

Map 16 also shows that Centro runs the Oswego County Loop, which provides service to and from Oswego, Fulton, and Mexico. Roads covered by the Oswego County Loop include portions of New York Routes 104, 3, and 481, Oswego County Routes 64 and 57, and Egglestone Road in the Town of Mexico. Centro provides connecting points with the Oswego County Opportunities route network. These transit points include the Oswego County Department of Social Services building in Mexico, North County Plaza in Central Square, Tow Path Towers in Fulton, and Hewitt Union Hall at the SUNY campus in Oswego. Lastly, Centro provides service from Oswego to Syracuse via Fulton and Phoenix along New York Route 481 and County Route 57 and from Central Square to Syracuse via U.S. Route 11.

The Oswego to Syracuse route averages 305 riders per day. Total Oswego County ridership for 1995 was 422,000 passengers.

b. Oswego County Opportunities (OCO)

Oswego County Opportunities, Inc. (OCO) is located in Fulton and has a total of 35 buses in its fleet. It provides service on 12 fixed routes. Nine of these routes transport workers to and from Oswego County industries. These routes are found in every community except the Town of Redfield. They are, however, concentrated west of Interstate 81.

In addition, Oswego County Opportunities operates three feeder routes as shown on Map 16 which link to Centro routes. These are Sandy Creek to Central Square via Pulaski, Mexico, and Parish, Central Square to Cleveland, and Hannibal to Fulton. These routes began service in December 1994. They represent a consolidation of a previous system of six separate routes. Current feeder route ridership is at 810 riders per month; this amounted to over 85,000 passengers by the end of 1995. The other fixed routes have 6,476 riders per month. Their total ridership was over 72,000 passengers by the end of 1995.

4. Demand Response Transportation

Demand response service providers are an important component of the County transportation system. These are public agencies and private companies that do not have specific routes and who use either a per mile transportation charge or a term contract with a public or quasi-public entity. This includes taxis and private contract and charter buses. Eight taxi companies (Appendix A) are located in Oswego County: three in the City of Oswego, two in the City of Fulton, two in the Village of Pulaski, and one in the Town of Hastings. (See Table 3) There are an additional four county based bus and transit service companies which provide medical and general transit service. Lastly, OCO provides nonemergency medical demand response transportation under a contract with the Oswego County Department of Social Services at the rate of \$22.50 per trip. Private individuals may also call OCO for transportation at the cost of \$25.00 per one-way trip.

Table IV-3: Bus and Taxi Companies in Oswego County

<u>Company</u>	<u>Location</u>
Gibson Bus Service	City of Fulton
Oswego County Hearse and Ambulance service	City of Fulton
A&E Medical Transport, Inc.	City of Oswego
Golden Bus Service	City of Oswego
The Taxi Company	City of Fulton
Fulton Taxi	City of Fulton
Checkered Taxi	City of Oswego
Empire Taxi	City of Oswego
Zellers Taxi	City of Oswego
Pulaski Taxi	Village of Pulaski
Car-a-Van Taxi Service	Village of Pulaski
North County Taxi	Town of Hastings

Source: Oswego County Department of Planning and Community Development, 1995

5. Trucking Companies

There are eight contract trucking companies located in Oswego County, primarily in the Cities of Fulton and Oswego and the Town of Schroepfel. Their respective service areas range from within Oswego County to the Central New York region to the entire United States and parts of Canada. The size of the truck companies varies from 3 to over 200 vehicles. The companies transport a wide variety of material ranging from general commodities to frozen and fresh food to sand and gravel.

Table IV-4: Contract Truck Companies in Oswego County

<u>Company</u>	<u>Location</u>
Fulton-Oswego Motor Express, Inc	City of Fulton
Lakeshore Transportation Line, Inc	City of Oswego
B&Q Distribution Service, Inc	Town of Schroepfel
Cloverleaf Transportation, Inc	Town of Schroepfel
Knight Transportation, Inc	Town of Scriba
Metal Transport System, Inc	Town of Scriba
Upstate Trucking	Town of Hastings
A.J. Montclair, Inc.	Town of Hastings

Source: Oswego County Industrial Directory, 1994

Trucking companies were recently surveyed as part of a traffic study on the east side of Oswego. The major concern indicated by the surveyed companies is traffic congestion along New York Route 481 in the City of Fulton and Oswego and along New York 104 in the City of Oswego.

6. Rail

a. Conrail

There are three Conrail lines (Map 17) that serve Oswego County for freight traffic only. These are the Fulton Secondary, Baldwinsville Secondary, and the Montreal Secondary. The Baldwinsville Secondary runs from the Chicago Main line near the New York State Fairgrounds, to the City of Oswego along the west side of the Oswego River. Current traffic serves industries in the Fulton area. In 1991 this line carried less than one million tons of freight. The Fulton Secondary runs from the Montreal Secondary Line near Liverpool to Oswego along the east side of the Oswego River. In 1991 three million tons of freight were hauled between the railhead and Fulton, while 2.1 million tons were hauled between Fulton and Oswego. The Montreal Secondary Line consists of freight service to Montreal. The line runs from the Chicago Main Line near Carousel Center Mall in Syracuse north to Massena via the Villages of Central Square, Parish, Pulaski, and Lacona. From Massena it joins with the Canadian National Railway to Montreal.

b. Amtrack.

There are no rail passenger services available in Oswego County. However, Amtrack provides this service through its East Syracuse station. From there it is possible to make connections to points east and west of Syracuse. In 1993 123,848 passengers used the East Syracuse station.

7. Water

a. St. Lawrence Seaway

The St. Lawrence Seaway is 2700 nautical miles long. It enables cargo ships to travel from the Gulf of St. Lawrence to Lake Superior at the ports of Duluth, Minnesota and Superior, Wisconsin. The Seaway was completed in 1959 and is jointly administered by the United States and Canada. In 1993 there were more than 2,000 commercial vessel transits through the Seaway locks. During the same year a total of 31,970,471 tons of cargo were shipped along the Seaway.

b. Port of Oswego

The Port of Oswego (Map 17) is located in the City of Oswego at the mouth of the Oswego River along the east and west banks of the river and along the shore of Lake Ontario. The Port has an entrance depth of 27 feet and a width of 750 feet. The Port is served by Conrail lines at its facility on the east side of the Oswego River.

During 1992-1993, \$109,425,794 worth of goods and materials passed through the Port of Oswego. The total quantity handled for 1992 and 1993 comes to 520,869 tons of material. In 1993 there were 22 shipments of commodities through the St Lawrence Seaway to the Port, for a total of 161,940 metric tons. This constitutes .7% of all inbound shipments to U.S. ports for that year. Nine companies located in Oswego County rely heavily on the Port for their supplies and materials.

Table IV-5: Businesses Relying on the Port of Oswego

Crop Production Services
Agway
Niagara Mohawk Power Corporation
Independent Cement

Sithe Energy
 Lafarge Corporation
 Sprague Energy
 Essroc Cement

Source: Council of Upstate Ports of New York

c. New York State Barge Canal.

In 1992 the New York State Barge Canal (Map 17) was redesignated as the New York State Canal System. There are a total of 524 miles of canals in four main sections. These are the Erie, Oswego, Champlain, and Seneca Canals.

Oswego County contains the Oswego Canal and a portion of the Erie Canal running from Oneida Lake to Three Rivers, just south of Phoenix. In 1990 traffic on the Oswego Canal carried 84,714 tons of commodities, which was nearly 80% lower than the 412,110 tons carried in 1960. Since 1990 commercial use of the canal has essentially ceased. In recent years recreational traffic along the canal has been increasing. In 1993 18,353 pleasure craft traversed the entire length of the Oswego Canal.

8. Air

a. Public

Oswego County Airport - The Oswego County Airport (Map 17) is located in the Town of Volney along County Route 176 near the City of Fulton. The airport is a transport reliever facility to Hancock International Airport. It is owned and operated by Oswego County. In 1990 it had a total of 15,750 operations (take-offs or landings), which was a decrease from the 1987 figure of 18,200 operations. Figures for the number of operations after 1990 are unavailable. However, the 1995 estimates are 24,150 operations. The airport has a capacity of 180,700 operations. It has two paved runways. The primary runway has a length of 5,200 feet.

Hancock International Airport - Hancock Airport is classified in the Central New York Regional Aviation Systems Plan as an air carrier airport. It is owned and operated by the City of Syracuse. It is located approximately five miles northeast of the city, 30 miles southeast of the City of Oswego, and 10 miles south of the Oswego County border. The airport is in very close proximity to New York Route 481 and the New York State Thruway. Hancock Airport is an integral part of the transportation system of Central New York. There were 827,067 passenger emplanements in 1980, which grew to 1,817,000 emplanements by 1990. This figure decreased to 1,040,550 in 1994 due to a decline in the Syracuse regional economy.

b. Private

Table IV-6 shows a total of three private airports, six heliports and one seaplane base in Oswego County.

Table IV-6: Private Air Facilities

<u>Type</u>	<u>Facility/Name</u>	<u>Community</u>
Airport	Mexico Airdrome	Town of Mexico
	Richland Air Park	Town of Richland
	Shestak Field	Town of Granby
Heliport	Puaski, County Sheriff	Village of Pulaski
	Oswego, County Sheriff	City of Oswego
	Oswego, Fort Ontario USAR Center	City of Oswego
	Oswego, US Coast Guard Station	City of Oswego
	Oswego, Niagara Mohawk Power Corp	City of Oswego
	Scriba, Energy Information Center	Town of Scriba

Source: Regional Aviation System Plan, 1993

9. Bicycle

There are three types of bicycle routes recognized by the New York State Department of Transportation. Class 1 routes occur along a right-of-way separate from any road or highway. Class 2 routes are signed bikeways on separate lanes along the shoulder of existing roads, and Class 3 routes are those on-road routes designated by a municipal body.

At the present time there is one formally designated bicycle route (Map 18) in Oswego County, the Seaway Trail Bike Route. This route extends along New York Route 3 from the Jefferson County border to New York Route 104B, along 104B to County Route 1, and along County Route 1 to the City of Oswego. Within the City of Oswego it follows local streets to County Route 89 in the Town of Oswego. From there it continues to West Lake Road, Sabin Road, DeMass Road, and New York Route 104A to Cayuga County.

10. Pedestrian

At present specific pedestrian routes include the East and West Linear Parks in the City of Oswego. The East Linear Park extends along the Oswego River from East Utica Street north to a riverside marina. The West Linear Park extends from the Varick Dam to Seneca Street.

Other pedestrian routes in Oswego County may be found in the City of Fulton. It is currently developing a linear walk which will extend along the east side of the Oswego River from the Broadway Street Bridge (New York Route 3) north to the Oneida Street bridge.

11. Inermodal

There are currently three Centro connections from the Cities of Oswego and Fulton to eastbound Amtrack trains. There are also two connections per day from Buffalo east bound trains to bus service to Fulton and Oswego. Bus connections are not currently available from west bound trains.

The Port of Oswego has both rail and truck facilities to allow the transfer of freight and materials between modes.

B. TRENDS

One major national transportation trend is the near completion of the interstate highway system. It has over 42,000 miles of roads and is over 99% complete. Another major trend is the increasing emphasis on intermodal forms of transportation. This means developing cohesive links between highways, rail, transit, air, and water based transportation, as well as bike and pedestrian movement. The focus of this trend is the Federal Intermodal Surface Transportation Efficiency Act of 1991. This act establishes a national policy of creating an integrated system of different modes of transportation.

Some of the national trends that may influence intermodal development include an increase in trip lengths and vehicle miles travelled by all vehicular modes of transportation, changing population and employment demographics, and a growth in tourism, particularly with weekend trips replacing vacations of longer duration. In addition, there is a growing use of fiber optic and digital communication technology which is changing commuter patterns. It is becoming less necessary for service industries to locate in a central urban area. As a result, traditional commuting patterns from suburb to urban center may not be as predominant in the future as in prior years.

Other trends that are occurring include rail/truck partnerships whereby railroads transport large loads of trailers or container stacks long distances. At the destination another truck delivers the order to the customer. A variant

of this trend is a combination of ship and rail service. Cargo is delivered to a port on one coast and shipped by rail to a port on another coast where it is reloaded onto a ship for delivery to its final destination. Trailers are also becoming larger; the previous standard was a length of 40 to 45 feet. Manufacturers are now building trailers as much as 53 feet long. Also, more and more truck companies are making use of tandem trailers. These trailers are each 28.5 feet long. However, they may be as much as 40 feet long on the New York Thruway.

New York State reflects the national trends. From 1964-1994 vehicular travel on state roads increased by more than 100 percent and travel continues to increase at the rate of 2-3% per year. There were 90 vehicles per 100 drivers in 1980. By 1994 this figure had increased to 97 vehicles per 100 drivers. There were 133 vehicles per 100 households in 1980 and 172 vehicles per 100 households by 1994. In addition, increasing suburbanization has been accompanied by an increased use of the automobile and a decreased use of transit service. During the 1980=s, transit ridership decreased by 22% in the counties outside metropolitan New York City.

Regional trends generally mirror national and state trends: decreasing use of mass transit facilities, increasingly longer vehicular trips, and increased emphasis on intermodal transportation. An example of regional intermodal transportation programs is the proposal by the Syracuse Metropolitan Transportation Council to construct a regional intermodal transportation center at Park Street in Syracuse. This will be a facility designed to serve as a hub and transfer point to coordinate regional and intercity bus service, Amtrack, and airport shuttle service. Construction is to begin in 1996 with service to start in 1997.

Another important trend is rural transportation coordination. The New York State Department of Transportation is trying to establish a state-wide system of rural transportation coordination among rural public transit operators. In Oswego County for example, OCO and Centro coordinate routes and pickup and dropoff times. The Department of Transportation has some funds available to assist in developing county-wide or regional coordination processes.

C. ANALYSIS

The following section examines the data presented in the previous inventory as it relates to the future development and improvement of the transportation system found in Oswego County. Recognizing that national transportation planning efforts are focused on intermodal transportation linkages, it is with this perspective that this analysis is conducted.

1. Public Response

An important part of this plan is public input. The planning department held a series of public information meetings in June and October 1994 and in June 1995 to solicit the concerns of the general public, trucking companies, public transit operators, and demand response operators toward the county transportation system. Many of the responses were ultimately incorporated into the goals and objectives of the transportation element of this plan. The responses varied, but among the concerns raised by participants were minimizing visibility problems along county roads, providing transit service to county residents, providing better access to Interstate 81 and New York 481, and protecting bicycle and pedestrian movement from conflicts with vehicular traffic.

2. Roads and Highways

The central feature of any transportation system is its network of streets, roads, and highways. The main concern is how to use this highway system in the most cost efficient manner possible. This means controlling annual maintenance costs, extending the life of a particular road for as long as possible, and minimizing if not eliminating the need to build new roads or highways. The examination of jurisdictional control and functional classification is one means of examining the issue of managing the County=s roads and highways.

a. Jurisdictional Responsibility

Nearly 60% of the total road mileage of Oswego County is under town, village, and city jurisdiction, with another 25% under county and 13% under state control. The question then arises as to how much it costs local, county, and state governments to maintain their respective streets, roads and bridges in a state of good repair. State and local maintenance data are unavailable. The 1996 Oswego County highway maintenance budget is over four million dollars not counting specific capital projects for bridge repair and highway reconstruction.

One means of controlling maintenance costs is close coordination between local and county departments of public works and the New York State Department of Transportation for maintenance, repair, and construction projects on their respective roads or bridges. It is equally important for the various units of government to coordinate their work with planned extensions of or improvements to other public and private sector infrastructure or utilities. One means to this end is a computerized inventory of conditions along County roads. This data would enable the County to monitor specific road segments and bridges and their associated maintenance costs, as well as more easily coordinate planned construction projects.

b. Functional Classification

With few exceptions collector and arterial roads are under county and state jurisdiction, while the remaining roads, known as local roads, are under both county and local control. As a very general rule, the busier the road, the higher the functional classification. Changing land use patterns can put this system into a state of flux. The construction of a major traffic generator such as a shopping center, can easily turn a local road into major collector, possibly calling into question the appropriateness of a jurisdictional responsibility or functional classification.

A proactive approach to address this issue is for county and local governments to monitor and control development along local roads. As much as possible the construction of major traffic generators should be limited to appropriate nodes proximate to collectors and arterials. The density of adjoining land use activities should be consistent with the functional classification of the road. This topic is more fully discussed later in this analysis.

A computerized inventory of county and local roads and streets would be extremely helpful in this process. This database should be comparable to what is currently available for state roads and should include such information as functional classification, road geometrics, traffic volume, adjoining land use activities, and maintenance and service history. It would be possible with such a system in place for state, county, and local governments to coordinate maintenance and development activities and provide a more realistic classification of the roads under their jurisdiction.

3. Cooperative Agreements

At the present time the Oswego County Department of Public Works rents road construction equipment to local highway departments that is too expensive or impractical for local governments individually to obtain. The county also provides by contract road construction and repair services to local communities. In addition, Oswego County plows, under contract, 313 lane miles of State roads, while local governments plow 463 miles of County roads. This cooperation should be encouraged to its fullest possible extent. Also, communication channels between county and local, county and state, and local and state highway and public works departments, water and sewer districts, and private utilities, telephone companies, and cable tv operators, should be strengthened in order to facilitate the analysis of maintenance needs and to coordinate maintenance activities between the various units of government and private industry. A computerized data inventory would be a useful tool in this process. The purpose is to avoid, to the extent possible, the situation of digging up the same stretch of road or highway more than once during its normal maintenance cycle.

4. Land Use Control

Another method of highway management is for the County to influence the character of land use changes that occur along its roads. One means of accomplishing this is for the County to use the functional classification system to recommend minimum road frontage and site design standards for the roads under its jurisdiction. It would be necessary for the County to work with local communities to establish and implement such standards. Ultimately this process could be extended to local communities to help them establish their own functional classification system and standards on local roads. This should also be extended to State highways, particularly commercial corridors, where State, local and county officials should cooperatively develop corridor management plans to integrate local land use planning with State highway functional concerns.

5. Public Transit and Demand Response Transportation

Another transportation system component is public transit. During the transportation element forums Centro operators indicated a problem with their busses making right hand turns off New York Route 3 north onto South First Street in the City of Fulton. In addition, many people expressed strong support for mass transit services in Oswego County. Unfortunately, national and regional trends suggest that public use of mass transit systems is declining. One simple means of making public transit viable is for the County government to continue its own contracts with Oswego County Opportunities. A second means is to encourage more concentrated development patterns. Oswego County could also maintain accurate land use and population distribution data that can be used by transit operators for planning optimum routes, especially to provide access to commercial service and employment areas in the County. Demand response operators may also benefit from such a database which might be useful in identifying potential market areas.

6. Contract Truck Service

In the fall of 1994, the Planning Department sent questionnaires to trucking companies in Oswego County to get their assessment of highway conditions in the County. The major concern indicated by the surveyed companies is traffic congestion along New York Routes 481 in the Cities of Fulton and Oswego and along New York Route 104 in the City of Oswego. These areas should be subjects of the corridor management process discussed above.

7. Rail Service

A potential expanded use of rail lines is tourism and recreation. At the present time the New York Susquahana and Western Railroad Company runs an excursion service in Syracuse, called the On-Track Service. In 1991 the Syracuse Metropolitan Development Authority developed an economic development plan that proposed extending On-Track service from Syracuse to various points in the Central New York region. The City of Oswego and the Village of Pulaski could be among these locations. The biggest obstacles facing this proposal are cost and developing a working arrangement with Conrail, the owner of the tracks. Also, as Conrail considers divesting itself of less heavily trafficked lines, it is important that Oswego County advocate maintenance of rail freight service on all lines currently serving the county.

8. Port of Oswego

Maintaining efficient truck ingress and egress from port facilities, retaining the eastside rail link, and maintaining New York Route 104 in as efficient manner as possible are activities that will help maintain the viability of the Port of Oswego.

9. Oswego County Airport

In July 1995 the Privatization Committee of the Oswego County Legislature issued a report recommending the County retain ownership of the airport. In addition, the committee made a series of recommendations designed to improve service at the airport and to increase its role in the County's economy. These included extending the primary instrument runway to 8,000 feet (as per Airport Master Plan) and working with the Oswego County

Department of Promotion and Tourism to nationally promote the airport as a site for fishing parties to fly directly into the County. These recommendations should be reviewed and evaluated for inclusion in the Airport Master Plan and, if feasible, implemented by the County.

10. State Canal

Trends in the use of the New York State Canal attest to its increased role in recreation. In fact, public response is very clear about wanting more access to the canal, a topic more fully discussed in the recreation section of this plan. The County should, however, work to coordinate activities between itself, local communities, and the State of New York to ensure efficient ingress and egress from state, county, and local roads onto canal access points.

11. Bike Trails

A bike trail system can also be addressed at the county level. The potential county bike routes include all or portions of New York Routes 3, 48, 264, 13, and 69, as well as Oswego County Routes 57, 17, 2, 50, 15, 13, 22, and 52. Public response during the transportation element public information meetings indicated a concern with bicycle safety. State standards for bike routes that use existing shoulders of public roads call for eight feet along arterial roads and six feet along collector roads. The proposed bike routes would require some upgrades in highway shoulder widths. A computerized inventory of state and county roads with information on existing shoulder conditions, traffic volume, and maintenance schedules would assist in prioritizing such a project.

12. Pedestrian Movement

No transportation planning efforts could be complete without addressing pedestrian movement. The ability to safely and comfortably move around without relying on the automobile is especially important in the more heavily developed portions of the County. One means of addressing this issue is to identify those areas of the county where there are serious pedestrian safety problems. If any involve County roads it is recommended that the County develop its own remediation process. Where safety problems involve State or local roads and streets the County should work with the appropriate governments to develop comparable remediation programs. Many pedestrian safety problems can be prevented by good site development standards. The County should work with local governments to establish such site performance standards.

13. Funding Sources

Funding will be a major factor in implementing the proposals of this section. Fortunately, intergovernmental and computerized mapping activities can be accomplished with existing county staff. Federal ISTEA and Federal Highway Aid funds may be available for specific computerized mapping and highway development, enhancement, and safety projects. In addition, New York State has funding sources through the State and Local Highway and Bridge Improvement Program which is funded through the Dedicated Highway and Bridge Trust Fund. Exact amounts of available money will be a function of future Federal and State appropriations.

D. GOALS, OBJECTIVES, STRATEGIES

GOAL: DEVELOP AND MAINTAIN AN EFFICIENT AND SAFE COUNTY TRANSPORTATION SYSTEM IN THE MOST FISCALLY SOUND, ENVIRONMENTALLY RESPONSIBLE AND ENERGY EFFICIENT MANNER POSSIBLE.

OBJECTIVE 1: Maintain the County highway system in a state of good repair and encourage appropriate maintenance of State and local roads to ensure the overall function of the highway system.

- STRATEGIES:
- a. Develop and maintain a comprehensive inventory of conditions on the County highway system.
 - b. Improve highway linkages with the Port of Oswego, the Oswego County Airport, Conrail and the New York State Canal system.
 - c. Develop a written and map version of a five year plan for improvements to the State and County highway system.
 - d. Identify and seek remediation of impediments to the efficient and safe flow of traffic along the State, County and local highway systems.
 - e. Seek State and Federal funding for identified projects.
- OBJECTIVE 2:
- Support the development of appropriate facilities and equipment at the Oswego County Airport.
- STRATEGY:
- a. Update and implement the Oswego County Airport Master Plan.
- OBJECTIVE 3:
- Coordinate transportation system planning, development, and maintenance programs with the New York State Department of Transportation, local governments, and transit system operators.
- STRATEGIES:
- a. Develop uniform and consistent frontage, access and site design standards that support the functional classification system.
 - b. Work with individual communities and NYS DOT to develop corridor access management and improvement programs for specific commercial corridors.
- OBJECTIVE 4:
- Develop a system of bike and pedestrian routes including on-road components and paths that are separate from highways.
- STRATEGIES:
- a. Review the suitability of County roads for bicycle use based on traffic volume and shoulder widths.
 - b. Designate appropriate routes as bike routes and identify improvements needed to support bicycle use of other routes.
 - c. Develop a bicycle trail program as part of a multi-use trail plan.
 - d. Develop a pedestrian movement survey to be utilized on a voluntary basis with local communities in order to identify needed improvements for safe and enjoyable pedestrian travel.
 - e. Incorporate improvements into five year improvement plans.
- OBJECTIVE 5:
- Encourage appropriate transit service between residential areas, community service areas, and employment centers.
- STRATEGY:
- a. Annually review with public transit operators their routes, ridership and economic efficiency.
- OBJECTIVE 6:
- Support continuation of rail freight service and development of passenger rail service, especially for tourism purposes.

- STRATEGIES:
- a. Advocate continued freight service on existing rail lines in Oswego County.
 - b. Support efforts to develop tourist-based rail service in Oswego County.

V. INFRASTRUCTURE AND UTILITIES

A. INVENTORY

1. Public Water Districts

Map 19 shows the extent of the 29 public water districts in Oswego County. These districts cover the cities of Fulton and Oswego, the entire Town of Oswego, and the villages of Central Square, Cleveland, Mexico, Phoenix, Pulaski, Sandy Creek and Lacona, as well as portions of the surrounding towns. The total population served is over 50,870, which is over 40% of the total population of the County. These districts obtain their water from a variety of sources, Twelve districts obtain their water directly from Lake Ontario. Another six use both local wells and water purchased from the Onondaga County Water Authority (OCWA). Seven additional districts rely entirely on OCWA, while another nine use only local wells and springs.

a. City of Fulton

The residents of the City of Fulton plus five districts in the adjoining towns of Granby and Volney are served by the City water system. There are two districts in the Town of Granby and three districts in the Town of Volney.

Current customers in the City of Fulton include 4,720 residential, 370 commercial, and 10 industrial services with a total of 12,900 users. Service outside the city includes an additional 1,035 people in the five Granby and Volney districts.

The main source of Fulton water is seven wells located at the Great Bear Springs, southeast of the city. The wells produce an average of 1.6 million gallons per day (gpd), with a maximum daily production of 2 million gallons. The City of Fulton also owns three wells close to the Oswego River and across County Route 57 from the former Miller Brewing plant. The wells are contaminated by chemical wastes, but are capable of producing an average of 800,000 gallons per day. At the present time water from two of the wells is treated to remove the contamination and the water is then sent into the City's distribution system. In addition to its wells, the City of Fulton has an agreement with the Onondaga County Water Authority to withdraw as much as 3 million gallons per day through a connection made at the Water Authority's Owen Road Water District.

All ten Fulton wells are capable of producing an average of 2.4 million gallons per day. The City's average daily demand is 2.7 million gallons per day. This means that Fulton needs to supplement its current water supply with water purchased from OCWA or from new wells.

b. City of Oswego

The City of Oswego and portions of the Towns of Minetto, Oswego, Scriba, and Volney are served by the City's public water facilities. There are two districts in the Town of Minetto, one district in the Town of Oswego, five districts in the Town of Scriba, and one district in the Town of Volney. The water is pumped from Lake Ontario and distributed by the City to its customers in the outlying water districts.

Current customers inside the City include 5,950 residential, 150 commercial, and 8 industrial services. In addition, there are over 1,000 customers in the water districts outside the city limits. The total customer base of the Oswego water system is 23,950 people.

Current available capacity of the city system's share of the Lake Ontario intake is approximately 62.5 million gallons per day (mgd). The full design capacity of the City's water treatment plant is 20.1 million gallons per day. However, 8 mgd are reserved for Sithe Energies Inc. The remaining 12 mgd are available for the City's remaining customer base. Current consumption is approximately 8 million gallons per day. This figure represents

both Oswego residents and the water districts in the adjoining towns. The capacity of the Oswego system is adequate to meet the demands of an additional 4,000 to 8,000 residential customers.

c. Town of Granby

There are two water districts in the Town of Granby, the Route 48 South and the West River Road North District. Both districts obtain their water from the City of Fulton.

The Route 48 South District has 54 residential and one commercial user with a total consumption of 7,300 gallons per day. The West River Road North District has 90 residential and 4 commercial customers which consume a total of 37,200 gallons per day. Together, both districts use a total of 44,500 gallons per day. There is no additional capacity in either district.

d. Town of Hastings and Town of West Monroe

There are a total of five districts in these towns, all of which purchase their water from the Onondaga County Water Authority. The Hastings districts include the Central Square Middle School and Transportation Center, Corporate Park Drive, Fort Brewerton, and Fort Brewerton Extension Number 1 districts. There is one district in the Town of West Monroe and that is the Big Bay Water District.

All of these districts are served by water mains through the Fort Brewerton district. Water comes from the Onondaga County Water Authority, which in turn purchases the water from the Metropolitan Water Board. The total population of all five districts is approximately 1,350 people who consume roughly 91,500 gpd, a figure easily met by the Water Authority's facilities.

e. Town of Minetto

There are two districts within the Town, both of which are served by the City of Oswego system. These are the Route 48 and West Fifth Street Road Districts. Together, the two districts serve a total of approximately 485 residential customers. The total average daily demand in the districts is 134,700 gallons. There is no available capacity in these districts.

f. Town of Oswego

In 1994 the Town of Oswego formed a town-wide water district. The entire town is expected to have water lines by the end of 1996. Water for the Oswego District is supplied by the Onondaga County Water Authority. By February 1996 all pre-existing water districts were absorbed into the town wide district.

g. Town of Scriba

The five districts in the Town obtain their water from the City of Oswego. These are the Broadway Road, Hall Road, North Road, Route 104, and Seneca Hill Districts. The total number of customers in all five districts is 646 residential users with a total consumption of 125,925 gallons per year. There is no available capacity in these districts due to low pressure and lack of storage facilities. The Town of Scriba is currently in the process of consolidating these districts into one town district.

h. Town of Volney

There are five districts located within the Town. These districts include The Glen, East River Road North, Maple Avenue, Seneca Hill, and Owen Road districts. The first three districts are served by the City of Fulton. The Seneca Hill District is shared with the Town of Scriba and is served by the City of Oswego. The total customer base of all districts minus the Owen Road District is 229 metered residential and 6 commercial customers. There are also an unknown number of users outside of the East River Road District. The total consumption of these districts is 35,517 gallons per day.

The Owen Road District is an industrial district. It covers the former Miller Brewing Company property along Owen Road. The source of the water is the Metropolitan Water Board 54 inch line which runs close to the property. The district's water line has a capacity of 10 million gallons per day. The plant however, consumed 6 million gpd when it was operating. With the close of the Miller plant the District has a 10 million gpd capacity. Except for the Owen Road District there is no available capacity in the Volney districts due to low pressure and lack of storage facilities.

i. Village of Central Square

The Village is served by two wells located on its north side. These wells have a combined estimated capacity of 504,000 gallons per day. Average daily demand and peak daily demand are 140,000 and 200,000 gpd respectively. There are 1,700 people who are currently served by the Central Square water system. This includes 610 residential units, 39 commercial units, and 13 customers in the Town of Hastings.

The Village wells could supply an additional 160,000 gpd, which could serve an additional 700 residential customers.

j. Village of Cleveland

The Village of Cleveland and small areas outside the village are supplied by a well located in the Town of Vienna in Oneida County. There is a second reserve well adjacent to the active well. The total estimated capacity of the active well is 216,000 gallons per day. This is more than the current average daily demand of 120,000 gallons and peak daily demand of 180,000 gallons. The village currently supplies 387 residential, 9 commercial, and one industrial customer for a total of 1,100 people. Cleveland has enough excess capacity to supply an additional 175 residential customers.

k. Village of Mexico

The Village of Mexico has three wells located about two miles south of the Village. These wells serve all village residents plus a limited number of town residents who live adjacent to the Village. Total estimated population served is 1,800 people. This includes 523 residential services, 107 commercial services, and one industrial customer, plus 80 town customers. Dependable yield of the Mexico wells is estimated to be 1,740,000 gpd, which is in considerable excess of both the average daily and peak daily demands of 350,000 and 450,000 gpd, respectively.

l. Village of Phoenix

The Phoenix water system generally serves properties within the village corporate limits. There are however, several private customers both east and west of the Village. Its water system is supplied by two wells located west of Kline Road in the Town of Schroepfel. The wells are in a sand and gravel formation known as the Sand Ridge Aquifer. The system currently serves 800 metered residential customers, 46 metered commercial customers, one metered industrial customer, and 80 outside unmetered customers, with an average daily demand of 300,000 gallons. The two wells have an estimated capacity of 1,300,000 gallons per day. The Village has the capacity to serve an additional 1,600 customers if it upgrades its storage, pumping, and transmission facilities.

Public water districts outside Phoenix include the New York Route 264 District and the Oswego County Industrial Park District. The New York State Route 264 Water District is located along New York State Route 264 between the Oswego County Industrial Park and the northwest corner of the Village. Water is supplied through an eight inch main from the Village. The district currently consists of 45 metered residential customers with an average daily demand of 8,000 gallons. There is no additional capacity in this district.

The Oswego County Industrial Park District serves the Oswego County Industrial Park, located approximately .5 mile northwest of Phoenix. It is connected to the water main from the Route 264 Water District.

The system has seven metered industrial customers with an average daily demand of 9,200 gallons. There is sufficient storage and pumping capacity to increase average daily demand to 240,000 gpd, provided the Village of Phoenix agrees to supply the additional water.

m. Village of Pulaski

The Village of Pulaski and surrounding portions of the Town of Richland are served with water taken from four wells located east of the Village near the hamlet of Richland. The estimated capacity of the wells is 1,150,000 gallons per day. A total of 2,500 people are served by the Pulaski water system. In addition, 183 commercial units plus one industrial customer are tied to the village network. Average daily consumption is 650,000 gpd, with peak demands equalling 950,000 gallons per day. The Pulaski water system is being used at near capacity and is not suitable for additional users.

n. Villages of Sandy Creek and Lacona

The two villages jointly control a distribution system that serves their residents plus portions of the surrounding Town of Sandy Creek. Water comes from four wells located in the north end of the Village of Lacona. Total estimated yield of all four wells is 1,648,800 gallons per day. However, the practical combined yield is between 400,000 and 500,000 gallons per day. This is because of seasonal fluctuations in the water table and interference between wells operating simultaneously. The current system serves an estimated population of 1,700 people for an average daily consumption of 340,000 gallons per day and a peak daily demand of 460,000 gallons. There is no additional capacity in the joint water system.

o. Hamlet of Orwell

This is a small water system that serves the hamlet, which is located at the intersection of Oswego County Routes 2 and 22. The hamlet obtains its water from local groundwater supplies, located to the east of the hamlet. This is an area located within the Tug Hill Aquifer. The Town of Orwell, which administers the water district, is permitted by the New York State Department of Environmental Conservation to withdraw 60,000 gallons per day from the aquifer. There are 400 customers in the water district and they consume an estimated daily average of 20,000 gallons. The current water supply can meet the average daily demands on the system. Peak demand is unknown, but the Town of Orwell has reported summer shortages of water. As a result, the district does not have the capacity to add additional customers.

p. Metropolitan Water Board (MWB)

The MWB was formed in 1962 to administer the Onondaga County Water District. The Water Board is a wholesaler of water and may only sell to public water districts or water authorities. The MWB sells much of its water to the Onondaga County Water Authority which in turn supplies six water districts in Oswego County.

The MWB owns a 54 inch pipeline that traverses Oswego County from the City of Oswego to Onondaga County (Map 19). In addition, the MWB owns pump and water treatment facilities near the City of Oswego. The Water Board obtains water from Lake Ontario through an intake owned by the City of Oswego. The MWB may draw as much as 62.5 million gallons per day (mgd) from the City's facilities.

Under New York State Law, the Metropolitan Water Board must provide 25% of its pipeline capacity to Oswego County. This comes to approximately 10 million gallons per day. With the close of the Miller Brewery, the MWB supply to the County has been approximately 200,000 gallons per day. Therefore, the MWB has a large excess capacity to support future growth in Oswego County.

The MWB plans to increase its pumping capacity to 72 million gpd and to build a new pump station in the City of Fulton. The MWB also plans to construct a new 96 inch water intake at Burt Point in the Town of Oswego. The new system will have an initial capacity of 100 million gpd but would be engineered to handle 140 million gallons per day. The MWB will be selling water to the Onondaga County Water Authority who in turn will sell

water to the Town of Oswego for a town-wide water district. The initial estimate of district needs is 300,000 gallons per day.

q. Onondaga County Water Authority (OCWA)

The Onondaga County Water Authority purchases water wholesale from the Metropolitan Water Board and then sells it retail to water districts in Oswego and Onondaga Counties. The Oswego County districts include the Fort Brewerton Water District, Fort Brewerton Water Supply District, Corporate Park Water Supply District, Central Square Middle School and Transportation Center Water Supply District, Big Bay Water District, Owen Road Water District, and the Oswego Town Wide Water District. The difference between water districts and water supply districts is that OCWA leases facilities in water districts and owns facilities in water supply districts.

2. Public Sewer Districts

Map 20 shows the extent of the 17 sewer districts in Oswego County. The total population served is approximately 43,000 people, which is about 35% of the total county population. The districts cover the cities of Fulton and Oswego, the villages of Central Square, Cleveland, Mexico, Parish, Phoenix, and Pulaski plus portions of the Towns of Granby, Volney, Oswego, Scriba, Minetto, Schroepel, Hastings, and West Monroe. A comparison of Maps 19 and 20 would reveal considerable overlap of water and sewer districts, a not unexpected fact.

a. City of Fulton

The City service area covers the City of Fulton plus one district each in the Towns of Granby and Volney. There are 4,720 residential, 370 commercial, and 10 industrial customers within the Fulton City limits. In addition, the City provides service to the West River Road Sewer District in the Town of Granby and to the Volney School in the Town of Volney. The average daily design flow of the Fulton sewage treatment plant is 3,400,000 gallons. The current average daily flow is 2,930,000 gallons. The treatment plant does have sufficient capacity for more users. There are, however, problems with infiltration which can limit capacity. The Fulton sewage system can handle an additional 330 units. It could absorb more than this amount if the infiltration problem is addressed.

b. City of Oswego

Oswego has two treatment systems, the East Side Sewer System and the West Side Sewer System. The east side system covers that portion of the City located east of the Oswego River, plus several adjacent areas in the Town of Scriba. The user base for the east side is unavailable. However, customers in both the east and west side service areas include 4,500 residential, 150 commercial, and 8 industrial customers. Outside service districts include the Candlewood, Hall Road, and Wine Creek Sewer Districts. The average daily design flow of the east side plant is 3,050,000 gallons. The current average daily flow is 2,900,000 gallons. This puts the treatment plant at 95% capacity. At present, no additional customers should be added although upgrades to the plant are proposed which would increase capacity.

The west side sewer service area covers that portion of the City of Oswego west of the Oswego River. The current city user base was identified in the previous paragraph. The average daily design flow of the west side treatment plant is 4 million gallons, while the current average daily flow is 3,260,000 gallons. The plant has a surplus capacity of one million gallons per day and could handle an estimated 3,300 additional customers.

c. Village of Central Square

The current service area is the village corporate limits. Current users include 767 residential and 37 commercial customers. The treatment plant is designed for a flow of 450,000 gallons per day. Current average daily flow is 220,000 gallons per day. The village has a reserve capacity of over 200,000 gallons per day. The village treatment plant is operating at half capacity, so it could handle over 700 additional residential customers.

d. Village of Cleveland

The village system was completed in 1992 and serves all residents within the Cleveland corporate limits. The current user base includes 331 residential, 5 commercial, and one industrial customer. The system has an average daily design flow of 150,000 gallons. It is estimated that the average daily flow will be 103,800 gallons. This leaves an excess capacity of 46,200 gallons per day, which can absorb an additional 150 units.

e. Village of Mexico

The sewer system serves the Village of Mexico plus the Oswego County BOCES building located west of the Village. Current users include 407 residential, 92 commercial, and one industrial customer. The treatment plant is designed for an average flow of 300,000 gallons per day. The current average daily sewage flow is 230,000 gallons. The Village system can absorb approximately 230 additional customers.

f. Village of Parish

The Parish system serves only village residents. The current user base includes 224 residential, 26 commercial, and 3 industrial customers. The average daily design flow of the Village treatment plant is 140,000 gpd, while the current average flow is 37,000 gallons per day. An estimated 340 additional units could be added to the Parish sewage system.

g. Village of Phoenix

The Phoenix sewer system serves the Village of Phoenix plus the Oswego County Industrial Park District in the Town of Schroepfel. Customers in the Phoenix district inside the village include 800 residential, 46 commercial, and one industrial user. The Village system is designed for an average daily flow of 600,000 gallons. Current average daily flow is 420,000 gallons. An additional 260 units could be added to this system. However, future expansion of the customer base must take into account the fact that peak flows due to infiltration can be as high as 1,300,000 gallons per day.

h. Village of Pulaski

The Pulaski Sewer Service Area covers only the village corporate limits. There are currently 591 residential, 183 commercial, and one industrial customer in the Pulaski system. It is designed for an average daily flow of 320,000 gallons. The current average daily flow is 420,000 gallons. The treatment plant is currently operating above design capacity. The Village sewage system should therefore not take on additional customers. A storm sewer remediation project under development would improve the plant's capacity, however.

i. Town of Granby

The West River Road District is located on the north side of the City of Fulton in the Town of Granby. It is located astride New York Route 48 and extends for approximately .2 miles north from the Fulton boundary. It currently has ten residential customers. Sewage from the district is treated at the City of Fulton sewage treatment plant. The collector sewer for the district is at 5% capacity during peak sewage flow. The district could serve an additional 400 units, although the actual number of units would depend upon the capacity of the Fulton treatment plant.

j. Town of Hastings

There are two sewer districts within the town. These are the Caughdenoy and Fort Brewerton Sewer Districts. The Caughdenoy district covers the hamlet of Caughdenoy, located in southwestern Hastings. The current user base includes 93 residential and 3 commercial customers. The district facilities are designed for an average daily flow of 28,500 gallons. Current sewage flow is 18,500 gallons per day. At present the system can not absorb

additional users due to problems of grease build-up and high Biological Oxygen Demand in some of the sewage system treatment facilities.

The Fort Brewerton Sewer District is located in the southeast corner of Hastings. Sewage collection is provided by the Town of Hastings while sewage treatment occurs at Onondaga County's Brewerton Wastewater Treatment Plant. Current users include 141 residential and 24 commercial customers. In addition, the district serves the Central Square Middle School and Transportation Center. The current capacity of the Fort Brewerton District is greater than the current loading of the district system. However, new connections for commercial, industrial, or institutional customers must first be approved by the Onondaga County Legislature. It is questionable as to whether the Legislature would approve new commercial or industrial connections.

k. Town of Minetto

The sewer district covers the hamlet of Minetto. There are 264 residential customers. Sewage treatment facilities are designed for an average daily flow of 300,000 gallons per day. At present the average daily flow is 80,000 gallons per day. The Minetto treatment plant could handle an additional 650 units. This would require a modification of the current state discharge permit, which allows the District to discharge only 100,000 gpd of effluent to the Oswego River.

l. Town of Oswego

The Sleepy Hollow Sewer District is located west of the City of Oswego and extends from New York Route 104 north to Lake Shore Road. There are currently 43 residential customers in the district. The average daily design capacity is 15,000 gallons. The estimated average daily flow is 12,900 gallons. The plant is under a Consent Order by the New York State Department of Environmental Conservation due to problems of maintenance and management.

m. Town of Schroepfel

The Oswego County Industrial Park Sewage District is located approximately one-half mile north of the Village of Phoenix on the west side of New York Route 264. The Town of Schroepfel maintains the sewers, but sewage treatment is provided by the Phoenix treatment plant. There are currently seven commercial users in the district. Collection sewers have a capacity of 500,000 gallons per day, only 8,000 of which are presently used. Although there is a large unused capacity in the district sewers, growth in the number of customers is limited by the capacity of the Phoenix treatment plant.

n. Town of Scriba

There are three districts in the Town. These are the Candlewood, Hall Road, and Wine Creek Sewer Districts. All three districts are in close proximity to each other and are either adjacent to or close to the City of Oswego. Sewage treatment for the districts is provided by the City's east side sewage treatment plant.

The Candlewood Sewer District includes Candlewood Drive and portions of City Line and Hall Roads. There are 44 customers in the district. The sewer collection system consists of an eight inch main and is currently underutilized.

The Hall Road Sewer District is located due east of the City of Oswego and is adjacent to the Candlewood Sewer District. There are nine customers in the district. Sewage collection is provided by an eight inch main and, like the Candlewood System, it is significantly underutilized.

The Wine Creek Sewer District is located along much of City Line Road. The district has 70 residential customers. Collection is also provided by eight inch mains. Like the Candlewood and Hall Road districts, the Wine Creek Sewer District is significantly underutilized.

o. Town of West Monroe

The Big Bay Sewer District is located in southwestern West Monroe. It is adjacent to the Town of Hastings and borders Oneida Lake. There are currently 220 residential and 10 commercial customers in the district. The treatment plant is designed for a sewage flow of 56,000 gallons per day. The current average daily flow is 9,000 gallons. The system is operating at 20% capacity and can handle an additional 155 units.

3. Power Generation and Transmission

Map 21 shows the location of power generation facilities and transmission lines in Oswego County. Most electrical power is produced by Niagara Mohawk Power Corporation and the New York State Power Authority. Together, the two utilities have one fossil fuel, three nuclear, and nine hydroelectric plants, which produce a total of 4,404,000 kilowatts (kw) of power that is sent into the New York State power grid. In addition, there are ten electric substations located in the County. These stations serve as distribution points for high voltage electric lines. The Oswego County substations are Mallory, Granby, Fulton, Bristol Hill, Minetto, Oswego High Dam, Varick, Scriba, Gilbert Mills, and Oswego Falls.

There are also one public and three privately owned cogeneration facilities in the county. These plants are owned by Oswego County, Sithe Energies Group, Indeck Energy Services of Oswego Inc., and Fulton Cogeneration Associates. These plants also produce steam and hot water that is purchased by private industry.

a. Fossil fuel

Niagara Mohawk Power Corporation owns a large fossil fuel plant on the west side of the City of Oswego. The plant uses two separate generators, Oswego 5 and Oswego 6, both of which use natural gas and oil. The Oswego Steam Station has the capacity to generate 1,800,000 kw of power, which is approximately 41% of all the public power produced in Oswego County.

b. Cogeneration

The Oswego County Department of Public Works runs a waste to energy facility north of Fulton. The plant burns nonrecyclable trash to produce electricity and steam. It has two 1.8 megawatt generators, one of which is used for backup. The electricity is sold to Niagara Mohawk and the steam is sold to Armstrong Industries which has a plant adjacent to the Energy Recovery Facility.

Sithe Energies Group Incorporated has completed construction of a 980 megawatt cogeneration facility. The plant is located in the Town of Scriba, east of the City of Oswego. It burns natural gas to produce steam and electricity. The steam is sold to Alcan Aluminum Products and the electricity is sold to Consolidated Edison of New York and Niagara Mohawk.

Indeck Energy and Fulton Cogeneration Associates each have a plant that burns natural gas and produces approximately 45 and 42 megawatts of electricity, respectively. The plants also produce hot water and steam. The electricity is sold to Niagara Mohawk and the hot water and steam is sold to private industry. Indeck sells to the International Paper Company plant near Oswego while Fulton Cogeneration Associates sells to Nestle Foods Inc. in Fulton.

c. Nuclear

There are three nuclear power plants in Oswego County. These are the Nine Mile Point One, Nine Mile Point Two, and James A. Fitzpatrick nuclear facilities. Nine Mile Point One is owned and operated by Niagara Mohawk Power Corporation. Nine Mile Point Two is owned by Niagara Mohawk, New York State Electric and Gas, Long Island Lighting Company, Rochester Gas and Electric, and Central Hudson Gas and Electric. The plant is operated by Niagara Mohawk. The Fitzpatrick plant is owned and operated by the New York State Power

Authority. The Nine Mile Point One plant produces 610,000 kw or 14% of the Oswego County total. Nine Mile Point Two produces 1,080,000 kw which is 24% of Oswego County production. The Fitzpatrick plant produces 840,000 kw or 19% of county production.

d. Hydroelectric

There are nine hydroelectric plants in Oswego county, all of which are either owned or operated by Niagara Mohawk. Table V-1 lists the facility, its location, and production capacity. Together, these plants produce 77,560 kw, which is approximately 1.75% of county electrical production.

Table V-1: Hydroelectric Plants in Oswego County

<u>Plant</u>	<u>Location</u>	<u>Capacity (KW)</u>
Lighthouse Hill	Orwell	7,500
Bennetts Bridge	Orwell	28,750
Varick	City of Oswego	8,000
Oswego High Dam	City of Oswego	7,600
Minetto	Minetto	8,000
Fulton	Fulton	1,250
Granby	Fulton	10,100
Oswego Falls E &W	Fulton	6,360
TOTAL		77,560

Source: Niagara Mohawk Power Corporation, 1995

e. Electrical Power Transmission Lines

There are a total of 16 high voltage power lines of more than 100 kv traversing Oswego County. These include nine 115 kv and seven 345 kv lines. These lines are named for the substations that they connect. The right-of-way required by transmission lines varies in width according to the specific route and the amount of current the lines carry. In general, however, 115 kv lines typically require 100 feet, while 345 kv lines require 150 feet. Table V-2 summarizes transmission lines found in Oswego County. One line, the Fitzpatrick-Edic line, is owned by the New York State Power Authority. The remaining lines are owned by Niagara Mohawk Power Corporation.

Table V-2: Electrical Transmission Lines in Oswego County

<u>Line</u>	<u>Power (Kv)</u>
Cofeen-Lighthouse Hill 5	115
Black River-Lighthouse Hill 6	115
South Oswego-Lighthouse Hill	115
Lighthouse Hill-Clay 78	115
Oswego-South Oswego 3,5, and 8	115
South Oswego-Curtis 10	115
South Oswego-Gereslock 8	115
South Oswego-Gereslock 9	115
South Oswego-Clay 4	115
Fitzpatrick-Edic	345
Volney-Marcy	345
Nine Mile-Volney 7	345
Nine Mile-Clay 8	345
Volney-Clay 6	345

Oswego-Volney 11 and 12	345
Oswego-LaFayette 17	345

Source: Niagara Mohawk Power Corporation, 1995

f. Natural Gas Transmission Lines

Oswego County contains, or is traversed by, at least twelve natural gas transmission lines of ten inches or greater. Map 21 shows the location of some of the largest and longest lines in the County. Most of these lines are owned and operated by Niagara Mohawk Power Corporation. Empire Pipeline Company owns one line that extends to Jefferson County. Gas transmission lines generally require a right-of-way of 40 feet.

The transmission lines are usually designated by a number and a descriptive name for their origin and destination points. For example, Pipeline 63 extends from the Town of Schroepfel to the Sithe Energies cogeneration plant in the Town of Scriba. It is also listed as the Schroepfel-Scriba Pipeline. The natural gas lines in the County are summarized in Table V-3.

Table V-3: Gas Transmission Lines in Oswego County

<u>Line</u>	<u>Location</u>
Pipeline 63 Schroepfel Marcellus-Oswego	Schroepfel -Scriba
Pipeline 58	Hall Road-Oswego
Pipeline 32	Fulton-Cold Springs
Pipeline 55 Burkle St.	Oswego Steam Station
Pipeline 25	Oswego-Syracuse
Pipeline 39	Phoenix-Rice Road
Pipeline 34	Oswego-Fulton
Pipeline 51	Oswego-Hall Road
Pipeline 16	Phoenix-Scribners Corners
Pipeline 33	Watertown-Fulton
Walnut-Oswego Steam Station	

Source: Niagara Mohawk Power Corporation, 1995

4. Telephone Service

Map 22 shows that Oswego County is served by three telephone companies. These are NYNEX, Citizens Telecom, and Alltel. Their service areas are roughly equal in size but NYNEX, at 24,000, has the largest number of customers. This is followed by Alltel and Citizens Telecom.

a. NYNEX

NYNEX has four exchanges entirely within Oswego County. They are in the City of Oswego, the villages of Mexico and Parish, and the hamlet of Constantia. NYNEX is gradually replacing its copper lines with fiber optic cables. At present there are fiber optic lines between Oswego and the Alcan aluminum plant, the nuclear power plants at Nine Mile Point, the Village of Mexico, and to the Oswego County Public Safety building.

b. Alltel

The company is located in Fulton and had a total of approximately 26,208 customer access lines in 1994, which represents a 2.3% growth over 1993. There are three exchanges located in the County. These are Fulton,

Phoenix, and Central Square. At the present time there is a fiber optic cable link between Fulton and Central Square. Plans for the expansion of fiber cable service are unavailable at this time.

c. Citizens Telecom

Citizens Telecom, located in Pulaski, has approximately 30 miles of fiber optic lines within Oswego County. The lines run from the central office in the Village of Pulaski to the Village of Adams in Jefferson County, the hamlet of Williamstown, the hamlet of Bennett Bridge via the Village of Altmar, and the hamlet of Port Ontario.

5. Cable TV Service

There are two cable companies that operate in Oswego County. These are Time Warner Cable and TCI of New York. Map 23 shows their respective franchise areas. Together, these two companies serve over 27,000 customers.

a. Time Warner Cable

In the fall of 1995, Time Warner Corporation, based in Stamford, Connecticut, acquired the Syracuse New Channels, Fulton New Channels, and Paragon Cable Systems. In early 1996 Time Warner completed its acquisition of the Cable Vision Industries franchise in Oswego County. These four companies served the western, central, and the north shore of Oneida Lake region of Oswego County. This combined franchise area serves approximately 22,855 customers. The previous cable companies had plans to upgrade their existing cable system with high capacity digital or fiber optic lines. Time Warner plans to meet or exceed previous plans.

b. TCI of New York

TCI of New York is located in Central Square. The company has 4,200 customers in its franchise area which includes the Villages of Central Square, Parish, Mexico, Pulaski, Sandy Creek, and Lacona and the Towns of Hastings, Parish, Mexico, Richland, and Sandy Creek. In 1994 the area around Sandy Pond was upgraded to fiber cable. Current plans call for upgrading the remaining service area to fiber cable in 1996.

B. TRENDS

The acquisition of basic inventory data is, of course, critical to any planning process. It is however, important to examine that data within the context of what is occurring in that particular field. This step is crucial in developing a reference point for plan recommendations.

1. Public Water and Sewer

The most important trend in public sewer and water system development at the national and state level is that over the last decade federal and state funding for construction

has decreased. This means that local governments have had to assume increasingly greater amounts of financial responsibility for water and sewer construction.

The financing of public water systems is often a problem. The Rural Development Administration provides funds for rural communities with a population under 10,000 people. Also, the Department of Housing and Urban Development may provide limited grants to low income communities. Beyond these special cases local communities have been on their own as far as financing public water systems is concerned. However, in 1996 Congress established a revolving loan fund for public water systems.

Historically, there have been more funds available for public sewer systems. During the 1960=s, 70=s, and early 80=s state and federal grants covered up to 85% of the cost of a public sewer system. Unfortunately, the grant

programs ended in the 1980=s. Current public financing is accomplished through a revolving loan fund that charges 2/3 of the market interest rate. An issue further complicating local financial burdens is the fact that sewage treatment plants built during the 1960=s and 1970=s are at or approaching their design life. Additionally, public sewers may predate the treatment facilities. Communities are thus faced or will be faced with potentially large capital costs that may be very difficult to finance even with low interest loans.

Trends in Oswego County vary according to which area is experiencing the greatest amount of growth pressures, where the age of the public water and sewer systems has become critical, or where growth has exceeded the natural carrying capacity. For example, the Town of Oswego formed a town-wide water district in 1994. Town residents have had problems of supply with unreliable on-site wells. The Town is also considering a town-wide sewer district. Other areas of the County where sewer or water districts are either being considered for creation, expansion, or consolidation include the Towns of Constantia and Scriba and the Villages of Parish and Central Square. Some public systems however, are at or near capacity. This includes the water systems of the villages of Pulaski and Sandy Creek/Lacona.

Another water quality issue that is of national, state, and local concern is stormwater separation. Many public sewer systems have combined sewers; they transport both stormwater runoff and sanitary sewage. This combined flow can overwhelm sewage treatment plants, causing serious pollution problems. The solution is to either upgrade sewage treatment plants to handle the combined flow or separate storm and sanitary sewers so that stormwater flows may be diverted away from sewage treatment plants. Four Oswego County communities are trying to address this issue: the cities of Oswego and Fulton, and the villages of Pulaski and Central Square. The City of Oswego has on-going storm sewer separation projects on both the east and west sides of the City. The City of Fulton and the villages of Pulaski and Central Square are trying to address problems of illegal sewer connections and infiltration, improper storm and sanitary sewer connections, and an aging physical system, respectively. Financing for storm sewer separation projects may be obtained through the state revolving loan fund.

2. Power Generation

Power generating companies are regulated monopolies. They have an exclusive service area in which they can operate. In return, they are subject to state regulation over their pricing policies. This formal structure is changing at both the national and state level. The current trend is toward deregulation of the utility industry. In the future, power companies may not necessarily have exclusive right to a particular service area. Indeed, unregulated power producers are already beginning to compete with the major producers for the same customers.

Power rates in New York State are 30% to 40% above the national average. All state power producers, including Niagara Mohawk, are faced with significant cost cutting challenges. The future of power generation appears to be similar to what is developing in the telephone industry, in which a number of companies will compete for customers in one particular area.

3. Telecommunications

Like power producers, telephone and cable TV companies have traditionally been regulated monopolies. Each company attended to its own affairs. Telephone companies provided telephone service and cable TV companies provided cable TV service. This distinction is rapidly changing due to the advent of digital communications and high capacity fiber optic cables. As a result, both cable TV and telephone companies are able to provide voice and two-way video communications. The traditional lines of distinction between the two industries are becoming irrelevant.

One result of these technological changes is that companies that rely on information processing can locate far from major urban centers. An excellent example of current trends is the State of Nebraska, which has over 6,700 miles of fiber cable lines. State businesses and industries have invested in fiber cables, digital switches and associated technologies. Currently, all but five county seats are linked by fiber cables. The technology is used for two-way video transmissions, telemedicine, and education. Other states working to build a fiber optic system

include North Carolina and Iowa. The State of Iowa has 2,800 miles over fiber optic cables that connect all of its 99 counties. The cables link schools, libraries, universities, hospitals, and local government.

The State of New York is developing a state wide telecommunications plan through the Office of General Services. This plan will address linking state agencies in the same building, state offices in different communities, and state offices and county and local governments.

Regional trends reflect national activity. In February 1994 the Cayuga County Legislature created a county wide telecommunication consortium of private citizens and representatives of education, business, human resources, and government. Their purpose was to identify and research issues in telecommunications that affect the economic development of Cayuga County. The consortium was directed to report its recommendations to the Cayuga County Legislature by August of 1994. The recommendations cover seven topics: infrastructure, cost, access, security, training, organizational structure, and economic development. In the spring of 1995 the consortium was reorganized into four working groups to implement the recommendations. These groups address education and training, information development, information routing, and financial and cost support.

C. ANALYSIS

1. Public Response

The Oswego County Planning Department held a public information meeting on infrastructure in April 1995 in order to obtain early public input toward the formulation of infrastructure recommendations. Many of the public comments were incorporated into the goals and objectives of this section. The public was concerned with a variety of issues, most of which may be summarized under these categories: making better use existing public water and sewer systems; protecting the quality of existing water supplies; and bringing fiber cable technologies to Oswego County.

2. Public Water and Sewer Systems

There are three issues that need to be examined when addressing the topic of public water and sewer systems: maintenance of existing systems, expansion of existing systems, and the creation of new systems. It is clear from the previous trends discussion that financing the maintenance, expansion, or creation of districts can be difficult. The first question then becomes how to make best use of existing systems.

There are a variety of computer mapping technologies such as CAD or GIS that water or sewer districts can use to inventory existing facilities and track leakage, lack of meters, and general maintenance and repair programs at the same time. Indeed, the development of on-going maintenance programs can help minimize the frequency of emergency repairs to these systems. The County could either provide this technology under contract to local districts or help them with information necessary to make decisions to acquire the necessary hardware and software themselves. The point is to make full use of the tools available to manage public systems.

The expansion of existing districts or the creation of new districts is a more complicated topic to address. It involves a variety of environmental, economic, and political issues which in turn relate to the type and density of land use activities that develop within a community. Most communities favor expanding their residential, commercial, and industrial base. For rural communities this presents a potential "catch 22" problem. They want economic growth but want to preserve their rural, undeveloped character.

Unfortunately, there is a definite limit beyond which growth will exceed the natural ability of the land to support that growth. This natural carrying capacity varies from location to location and is very difficult to quantify. However, at a minimum it may be stated that the natural carrying capacity is exceeded when the quantity of potable water is inadequate to meet the needs of the local population and when the concentration of septic effluent and their chemical and biological components exceeds public health standards. The population density threshold for the economic viability of public water and sewer systems may be equal to or greater than the environmental threshold.

The point to consider is that rural character and local environmental integrity may be compromised when land use densities exceed a certain minimum level.

There is a trade-off between economic growth and a rural environment. This means that the County and local communities need to carefully consider the type and the density of growth they want to encourage. There are a variety of approaches to addressing this matter. One technique is to encourage growth at densities that do not exceed the natural carrying capacity. Also, as far as potable water is concerned, the importance of conservation cannot be overemphasized. It makes no sense to invest millions of dollars in public water systems when an investment of hundreds or thousands of dollars in water saving technologies or techniques could either eliminate the need for a new or expanded water district or reduce the required area of an expanded or new district.

Another approach is to protect existing sources of water. A community will not need new sources of water if its existing source is uncontaminated. Oswego County is underlain by a number of productive high quality sand and gravel aquifers. The County can develop its own policies for protecting these aquifers and should assist local governments to do the same. In addition, computerized mapping technology can be used to help local governments develop their own groundwater protection programs and policies. Oswego County has a good start in inventorying these resources. At the present time there is general aquifer data for all of Oswego County plus a variety of detailed studies on specific aquifers and municipal well fields. This data includes a 1982 surficial geologic report that identifies potential water bearing deposits throughout the county as well as specific inventories of the Tug Hill (1989) and Sand Ridge (1993) aquifers. In addition, there is a 1993 Fulton wellhead protection study plus a 1995 analysis of the land within a one mile radius of the well fields of the Villages of Central Square, Cleveland, Mexico, Phoenix, and Pulaski.

The above measures will help minimize the need for new or expanded water and sewer districts but will only partially address current water supply and sewer problems in the County. There are areas where upgraded, expanded, or new public service districts may indeed be necessary. This would include existing districts with problems of low pressure, storage, or infiltration. It would also include those parts of the County where the type and density of land use exceeds the natural carrying capacity, as well as areas where growth pressure would support infrastructure extension. It is recommended that to the extent possible, public water and sewer service be extended to those areas first. The County can help by

supplying current water and sewer districts with relevant land use and population distribution data. The current mapping technology in the County's inventory can be used in this manner.

The discussion of extending existing systems directly leads to the consideration of creating new districts. In 1994, the voters of Oswego County defeated a proposed county-wide water district. The need for a county-wide or a part county water or sewer district should be re-evaluated. The economic development of the County may still require a county-wide or part county district even after all conservation, management, and environmental protection measures are instituted.

3. Power Generation

Perhaps the one word that can be used to describe the power industry is change. It has traditionally been comprised of companies that enjoyed franchise area monopolies. Deregulation is putting this system into question. In fact, during the fall of 1995 Niagara Mohawk Corporation proposed to separate its power producing and transmission operations into two distinct companies. Oswego County cannot conclusively influence this change but it can manage its effects and it can encourage a stable environment for the power industry so that it will remain an important part of the Oswego County economy. This may be accomplished by the County establishing clear lines of communication for data exchange and information with the power industry and by trying to diversify its economy so that it does not need to overly rely on the power industry (or any single industry) for too large a part of its tax revenues.

4. Telecommunications

Telephone and cable tv service falls under the general heading of telecommunications. This is an extremely complex issue, which involves a multitude of technological, economic, regulatory, and political concerns, a full examination of which is well beyond the scope of this plan. However, there are a number of steps County government can take to influence the role these technologies will play in the economic and social life of Oswego County.

As a starting point, it is clear that the full development of high capacity digital and fiber optic technologies has the potential of changing the way county and local governments, private industry, educational institutions, medical providers, and libraries, as well as private individuals, conduct their affairs. Therefore, it is important that all parties who could use, benefit or be affected by these technologies have a role in their development in Oswego County. A telecommunications consortium may be a useful way of addressing this topic. Such a body would be composed of private citizens and representatives of county and local governments, education, business, information, and human resources groups. An Oswego County consortium should have the charge of researching the telecommunications issues that affect the economic development of the County. Such issues may include the proper role of county government, use of digital cable versus fiber optic technology, access, data security, and cost.

Concurrent with this effort, the County government could connect its own buildings and facilities so that the various departments can more efficiently communicate with each other and more effectively serve the general public. This two-pronged approach is recommended because no matter what conclusions the proposed consortium would reach it is still critical that the County government operate in as efficient a manner as possible. That means making appropriate use of available technologies.

Among simple steps that the county could begin to undertake to facilitate development of telecommunications infrastructure would be to establish a communications procedure with telecommunications companies to coordinate highway and other infrastructure maintenance projects with improvements to the telecommunications infrastructure. The point is to try to minimize the number of times a road or right-of-way needs to be disrupted, dug into or torn-up and thus reduce costs. In addition, the county can use its automated mapping technology to create a geographic database that shows land use and population distribution patterns. Such information could be very useful to telecommunications carriers in planning where to extend their service. Finally, public response has indicated a strong desire to eliminate toll calls in the County. In addition to obvious financial savings this would serve the purpose of furthering a sense of community among County residents and businesses. It is suggested that the County work with telephone carriers to determine if this is feasible.

5. Funding Sources

Finally, a few words about financing is in order. Political acceptance notwithstanding, the weak link in most plans is how to finance them. Fortunately, most of the recommendations in this section can be accomplished using existing county staff and equipment. Additional funds may be available through Sections 319 and 604B of the Clean Water Act, Community Development Block Grants and other programs, although the exact amounts and eligibility requirements will be a function of Federal allocations.

D. GOALS, OBJECTIVES, AND STRATEGIES

GOAL: PROTECT THE QUANTITY AND QUALITY OF BOTH SURFACE AND GROUNDWATER SUPPLIES SO THAT EVERY RESIDENT, BUSINESS, AND INDUSTRY HAS ACCESS TO SAFE, POTABLE WATER AND THE QUALITY OF ALL COUNTY WATERS IS SUFFICIENT FOR DESIRED USES.

OBJECTIVE 1: Assist existing water and sewer districts in managing their systems.

STRATEGIES: a. Maintain a computerized inventory of public sewer and water systems and disseminate to the appropriate districts.

b. Explore with local communities and districts options for developing computerized management systems.

OBJECTIVE 2: Assist local governments in implementing groundwater protection programs and policies.

STRATEGIES: a. Develop a comprehensive inventory of all data on municipal wellfields, zones of contribution, recharge areas, aquifers and potential aquifers in the County and seek funding to more accurately determine these areas.

b. Develop groundwater protection guidelines for existing or potential groundwater sources of drinking water.

OBJECTIVE 3: Identify areas of the county where existing development currently exceeds the natural carrying capacity.

STRATEGIES: a. Analyze all available environmental data to model the natural carrying capacity of areas of the County experiencing significant growth.

b. Reevaluate the need for a part county water or sewer district or county sewer and water authority.

GOAL: DEVELOP A COMPREHENSIVE TELECOMMUNICATION SYSTEM TO TIE ALL COUNTY RESIDENTS TOGETHER, ESTABLISH A SENSE OF COMMUNITY, AND ENABLE COUNTY RESIDENTS TO MEET THE CHALLENGES AND OPPORTUNITIES POSED BY DIGITAL AND FIBER OPTIC TECHNOLOGIES.

OBJECTIVE 1: Promote and encourage the extension of fiber optic or other high capacity cable connections between State, County and local governments and between local libraries, schools, colleges, medical facilities, and private industry.

STRATEGY: a. Create a telecommunications consortium composed of representatives of County and local government, private industry, education, medicine, libraries, and the general public to examine and make recommendations to the Oswego County Legislature regarding the issues involved in extending fiber optic, cable and digital technologies in the County.

OBJECTIVE 2: Create a more integrated telecommunication system within the County to reduce costs and provide better opportunities for local businesses to market goods and services within the County.

STRATEGIES: a. Request the telecommunications consortium to make recommendations to the Oswego County Legislature about the issues involved in better integrating the existing telephone system within the County.

b. Encourage the development of a county-wide telecommunication directory.

GOAL: IMPROVE EFFICIENCY AND REDUCE COSTS OF INFRASTRUCTURE DEVELOPMENT WITHIN OSWEGO COUNTY

OBJECTIVE 1: Coordinate State, County and local highway maintenance with planned extension and improvements of sewer, water, power and telecommunications lines.

STRATEGY: a. Develop a communication procedure which allows county, State and local government to coordinate highway maintenance, repair, and construction projects with planned extensions of or improvements to public sewer, water, power and telecommunication lines.

OBJECTIVE 2: Coordinate infrastructure development with land use planning activities of local government and economic development efforts in the public and private sectors.

STRATEGIES: a. Monitor changes in land use patterns and disseminate that information to local government, water and sewer districts, and private industry.
b. Maintain an updated inventory of local land use regulations.
c. Maintain an updated inventory of existing infrastructure.
d. Develop a county-wide computerized geographic information system as a tool to facilitate coordination of infrastructure development.

VI. HOUSING

A. INVENTORY

1. Age of the County's Housing Stock

Oswego County's housing stock is generally older in nature. The largest percentage of the county's housing stock (36%), was built prior to 1940, compared to the national percentage which is 18% for this time period. Between 1970 and 1979 Oswego County experienced a surge in housing development and another 9,877 units were developed. Development during this decade accounts for approximately 20% of the existing housing stock in the county. Table VI-1 on the following page demonstrates the housing activity from prior to 1940 to the present. During the 1970-1979 boom in housing, much of the development was located in the Towns of Scriba and Oswego. At this time, the FitzPatrick Nuclear Power Plant was under construction and Niagara Mohawk then developed Nine Mile Point #2 which took many years to complete. During this time, employment in the construction industry peaked at approximately 5,000-6,000 persons averaging approximately 3,200 persons at any given time. In addition to construction jobs, another 1,000-2,000 persons were employed by Niagara Mohawk to operate the facility.

Looking at the year housing was built by municipality reflects not only population increases, but paints a picture of the type of housing that can be found in an area. Map 24 titled Greatest Percentage of Housing Built indicates that in most of the county the greatest percentage of the housing stock was built in 1939 or earlier. But in the southern portion of the county (Schroepfel, West Monroe, Hastings and Palermo), the greatest percentage of housing stock was built between the years of 1980-1990. Although villages located within these towns have older housing stocks, the remainder of the towns are primarily made up of newer units. The increase in housing in the area is a result of commuter patterns with the southern portion of the county serving as a bedroom community for Onondaga County.

2. Housing Type

Approximately 61% of the total housing stock is made up of single family detached housing units. Another 20% of the county's housing stock is mobile homes, followed by 2-4 unit dwellings making up 11%. Five percent of units are in structures with 10 or more units and 3% are in structures with 5-9 units. Of the 8,828 mobile home units, approximately 2,507 or 28% are located within 78 mobile home parks throughout the county.

The Town of Granby is host to the greatest number of mobile homes, 903, comprising 35% of the locality's overall housing stock. The Town of West Monroe has 40% of the local housing stock comprised of mobile homes which is the highest percentage in the county.

**Table VI-1: Number of Housing Structures by Decade Built
Oswego County**

Town/City	Pre-1940	1940-49	1950-59	1960-69	1970-79	1980-88	1989-90	Median Age	Total Structures
Albion	256	3	17	87	171	190	10	1970	734
Amboy	113	12	43	96	160	66	15	1969	505
Boylston	86	6	16	40	77	20	19	1966	264
Constantia	653	71	288	281	401	281	86	1961	2061
Granby	651	152	224	351	598	570	51	1968	2597
Hannibal	567	47	64	175	410	346	35	1968	1644
Hastings	669	129	324	329	648	842	197	1972	3138
Mexico	766	66	101	232	471	392	77	1965	2105
Minetto	197	23	72	156	146	50	3	1962	647

New Haven	383	18	32	163	288	248	75	1970	1207
Orwell	275	51	30	64	138	89	3	1950	650
Oswego	392	106	142	310	432	362	20	1968	1764
Palerno	235	28	58	178	328	304	51	1973	1182
Parish	277	6	44	73	236	193	26	1971	855
Redfield	169	25	51	89	87	59	22	1961	502
Richland	1076	105	139	229	620	355	112	1960	2636
Sandy Creek	990	20	146	343	541	382	19	1962	2441
Schroepfel	849	169	299	388	787	820	67	1970	3379
Scriba	308	17	138	408	906	755	70	1975	2602
Volney	615	136	216	297	298	443	60	1962	2065
West Monroe	305	46	108	258	370	470	50	1972	1607
Williamstown	209	7	32	83	130	102	5	1964	568
Fulton	2553	691	625	472	798	353	44	1943	5536
Oswego	5027	446	583	535	836	383	55	1939	7865
County	17621	2380	3792	5637	9877	8075	1172	1961	48554

In recent years there has been a dramatic increase in the number of mobile homes in Oswego County and throughout the nation. In 1980 13% of the total county year-round housing inventory was comprised of mobile homes. The number of mobile homes increased from 4,988 in 1980 to 8,828 in 1990. This represents a 77% increase in mobile home units throughout Oswego County in one decade.

Mobile homes are either located on individual lots or in mobile home parks. Mobile homes located on individual lots are usually treated the same as stick built homes. A building permit is required for placement of the unit and it is necessary for the unit to meet all the building and health codes concerning well and septic system separation. In mobile home parks, the park owner is responsible for providing water and sewer facilities (according to New York State Health Law), trash pick-up, road maintenance and other amenities. Mobile home parks often create rural neighborhoods.

Various communities regulate mobile homes in many different ways. Sixteen of Oswego County's 34 municipalities have at least one mobile home park. In the Town of Granby the majority of the mobile homes are located on individual lots. The Town of Schroepfel is host to 685 mobile homes, approximately 78% of which are located in mobile home parks.

Mobile homes continue to make up a large portion of the Oswego County housing market. Building permit data suggests that in 1993 for every 1.4 single family stick built homes developed, a mobile home was placed on a lot. The following table illustrates residential development according to building permit data for the years 1988, 1991, 1992 and 1993. A ratio for single family homes compared to mobile homes has been provided in the last row. (Table VI-2)

3. Home Ownership

According to the 1990 Census owner occupied housing is housing occupied by the owner or co-owner. The census definition does include housing that is not fully paid for and which is being purchased with a mortgage or some other debt arrangement. Census data lists all housing units as either owner occupied, renter occupied or vacant.

Table VI-2: Residential Building Permits Issued

	1988	1991	1992	1993*
Single Family Residence (SF)	444	194	244	360
Multi-Family Residence	22	16	7	3
Mobile Home (MH)	290	95	233	260
Camp	9	1	6	1
Apartment	24	1	8	0
Total Permits	789	307	498	624
SF/MH Ratio	1.4/1.0	2.0/1.0	1.1/1.0	1.3/1.0

* 1993 data was not available from the following townships: Albion, Orwell, Palermo, Redfield, Sandy Creek, Scriba, and Williamstown.

Source: Oswego County Planning Board Survey of Local Jurisdictions

According to the Census, there are 30,978 owner occupied housing units in Oswego County representing 64% of the total housing stock. The percentage of owner occupied housing units varies from one municipality to another. The Town of Redfield's year round owner occupied housing stock accounts for 33% of the town's total housing units. Occasional use (seasonal) units would generally be classified as vacant. In Palermo 85% of the total housing stock is owner occupied.

Residential housing unit sales in Oswego County during the 1990's averaged about 500 closings annually. During the mid-1980's, Oswego County experienced a boom in sales (823 in 1987). A decrease in sales began in 1988 and hit its lowest point in 1993.

One reason for this decline in housing sales during the late 1980's may be attributed to an increase in the prime lending rate. The decline in housing sales continued into the early 1990's. Although the prime lending rate began to decrease in 1991 and continued to decline through 1992, housing sales did not increase as one might expect. A couple of reasons for this may be a sluggish national and local economy and a lack of consumer confidence. Local realtors indicated that Oswego County residents were hesitant about making financial purchases which required a long term commitment because of the lack of confidence in their job security and long term employment opportunities.

The multiple listing information for Oswego County includes eight areas. The areas are as follows:

Area 01	Sandy Creek, Lacona, Pulaski, Boylston, Redfield, Orwell, Richland, Altmar, Albion and Williamstown
Area 02	Parish, Mexico, New Haven and Palermo
Area 03	City of Oswego, Oswego, Scriba and Minetto
Area 04	Volney, Granby, Hannibal and City of Fulton
Area 05	Cayuga County (Fair Haven and Sterling)
Area 06	Lysander, Baldwinsville, Phoenix and Schroepfel

Area 07 West Monroe, Constantia, Hastings, Central Square and Amboy

Area 16 Multiple listings - Jefferson, Madison and Onondaga Counties

For purposes of comparison it is necessary to use data which includes total units sold for all areas. The following is a historical perspective of the annual number of residential housing units sold by year:

<u>1980</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
294	823	734	660	495	436	428	515	552

Source: Multiple Listing Statistics

Table VI-3 is a summary of more detailed information concerning the residential real estate market for the years 1992-1994.

Table VI-3: Number of Residential Closings by Area

Area	1992		1992 % of		1993		1993 % of		1994	
	Listed	Closed	Listed	Sold	listed	Closed	Listed	Sold	Listed	Closed
01	244	48	20		229	73	32		222	64
02	21	203	56		28	202	65			32
03	317	161	51		305	153	51		408	163
04	315	110	35		356	123	35		380	157
05	62	29	47		40	25	63		53	15
06	69	12	17		81	25	31		79	28
07	238	23	0		202	57	21		235	53
16	23	3	13		21	3	14		31	7
Total	1503	428	28		1437	515	30		1610	552

Residential

Source: U.S. Bureau of the Census, 1990

The purchase of a mobile home is not always considered as a residential closing. Therefore, all mobile home sale transactions are not listed in the real estate summary data. According to the New York State Division of Housing and Community Renewal, Mobile Home Division, a mobile home is only considered a housing unit with a mortgage when real property is involved. If a mobile home is purchased and placed in a mobile home park or on a piece of land that is owned by another individual, then it is probable that the transaction was not handled by a realtor, but as a financial loan under section 223 of the Real Property Law.

4. Housing Values

The 1990 Census provides information concerning estimated value of specified owner occupied housing units. This statistic indicates the homeowner's estimate of what the property, house and lot would sell for if it were for sale. Value data for vacant units were obtained only for units that were for sale, in which case the asking price was recorded. The County-wide data suggested that 45% of homeowners estimate their home and property are in the \$60,000 - \$99,999 range. This was the estimated value for a plurality of homeowners in every municipality except the Town of Redfield where 27% of homeowners surveyed valued their housing unit and property to be in the

\$25,000 to \$39,000 and another 27% in the \$40,000 to \$59,999 range. Twenty six percent estimated the value of their housing unit and property to fall within the \$60,000 to \$99,999 range.

The municipalities which have the greatest percentage of housing estimated to be valued less than \$25,000 are the Town of Redfield with 20%, Boylston with 16% and Village of Altmar with 15%. The municipalities with the greatest percentage of homes valued at \$200,000 or more are Constantia, New Haven and West Monroe which all indicate 2% of the local housing stock in this category. Many of these units are likely to be lakefront units which usually command a premium.

The Central New York Regional Planning Board completed an analysis of median home values in Oswego County after adjusting for inflation. The study showed sharp increases in median home values in Oswego County between 1980 and 1990. According to the study "the following communities experienced increased values of over 30%; the Town of Sandy Creek (31.7%), the Town of Richland (32.8%), the Village of Pulaski (33.3%), the Town of Albion (36.6%) and the Village of Altmar (40%). The following municipalities had median home values below \$50,000 according to homeowner; the Village of Altmar (\$49,200), the Town of Amboy (\$48,500), the Town of Orwell (\$47,100), the Town of Williamstown (\$45,900), and the Town of Redfield (\$41,000)." Appendix VI-A contains a copy of the Housing Value Comparison 1980-1990 chart which was developed by the Central New York Regional Planning and Development Board.

5. Rental Market

Approximately 24% of the County's housing stock is classified as renter occupied. In more densely populated areas such as villages and cities the type of rental housing is made up mostly of apartments. Infrastructure in these areas generally allows for greater density.

The cities and most of the villages have water and sewer facilities and can accommodate two-family and multi-family development which tends to be utilized as rental units.

The rental stock in the more rural areas consists largely of mobile homes. The one exception to the rule is the four or more bedroom unit size; these units are usually individual stick built homes.

The Central New York Regional Planning Board did a comparison of the Oswego County rental market, taking into account inflation from 1980-1990. According to their study:

Median contract rent values within Oswego County from the 1990 Census were shown to be \$311.00. The median rent in the City of Fulton was \$302.00 and the median rent in the City of Oswego was \$322.00. These were increases of 13.7% and 11.9% respectively, after adjusting for inflation. The community with the highest median rent was the Town of West Monroe at \$351.00. The other municipalities with high median contract rents include: the Town of Minetto (\$339.00), the Village of Phoenix (\$338.00), the Town of Schroepfel (\$337.00) and the Town of Scriba (\$329.00).

Dramatic jumps in median contract rent values are evident during the past decade in the following communities: the Town of Boylston (44.1%), the Town of Sandy Creek (35.7%), the Town of West Monroe (35.4%) and the Town of Orwell (35.1%). Finally the least expensive community within Oswego County with regards to rental properties was the Town of Redfield with a median rental rate of \$175.00.

(Appendix VI-A)

6. Vacancy Rates

a. Homeowner Vacancy

The way the Census Bureau collected vacancy information changed between 1980 and 1990. In 1980 census information did not account for housing units that were vacant and for sale. Therefore, a valid comparison of homeowner vacancy rates by decade cannot be completed. The homeowner vacancy rate is important because it is one indicator used to assess the existing housing need. The homeowner vacancy rate is the percentage relationship between the number of vacant units for sale and the total homeowner inventory.

However, according to the 1990 Vacant for Sale information, the homeowner vacancy rate for Oswego County was 1.2%. The highest homeowner vacancy rate was 3.6% in the Town of Redfield, the lowest rate was .5% in the Town of New Haven. The Towns of Oswego, Palermo, Williamstown and the cities of Oswego and Fulton had less than 1% of their owner designated housing vacant and for sale. Typically a 2% vacancy rate for homeowner housing is considered normal. It should be noted that the vacancy rate does not reflect the number of housing units on the market but the percentage of homeowner units unoccupied and for sale. So even though it may seem as though there are many housing units for sale, the actual homeowner vacancy rate can be much lower.

b. Rental Unit Vacancy

The county-wide percentage of housing units classified as vacant for rent is 6%. The Town of Orwell had the greatest percentage of rental units classified as vacant, 25%, followed by the Town of Mexico which had a 14% vacancy rate and the Town of Sandy Creek with a 12% vacancy rate. The following towns also had double digit rental vacancy rates: Minetto at 11% and Redfield, Amboy and Hastings all with 10%. The Town of Albion has a 2% vacancy rate which is the lowest rental vacancy rate in the county. The towns of Boylston and Scriba and the City of Oswego had a 4% vacancy rate, slightly below the optimal rental vacancy rate which is 5%.

c. Occasional Use

The high overall vacancy rates in some towns are because the census definition of vacancy includes units held for occasional use. Therefore, it is necessary to break down the vacancy rate by classification. Table VI-4 analyzes vacancy by classification.

It is interesting to note that the highest incidence of occasional use housing is in the Town of Redfield where 55% of the housing stock is utilized for occasional use. The towns of Sandy Creek and Orwell also have a high incidence of occasional use housing with 44% and 41%, respectively. The 1980 Census information did not include seasonal or occasional housing in any of its analysis, therefore a comparison between decades cannot be made.

7. Substandard Housing

The Census does not identify housing units for structural deficiencies or for substandard conditions. However the Census does collect information about housing units lacking complete plumbing facilities. This represents housing units which lack hot and cold piped water, a flush toilet, or a bath tub or shower. All three facilities must be located inside the same house, apartment or mobile home, but not necessarily in the same room. Housing units are classified as lacking complete plumbing facilities when any one of the three facilities are not present.

In Oswego County, 1% of the total housing stock is classified as lacking complete plumbing facilities. However locally the percentage of units lacking complete plumbing facilities ranges from 0% in the towns of Schroepel and New Haven to 10% in Boylston.

The census also collects information about the total number of persons per unit. According to the United States Department of Housing and Urban Development, the average number of persons in a living unit should not exceed one per room. This standard is usually included when describing a substandard housing unit.

Table VI-4: Number of Vacant Housing Units By Classification

Town/City	For Rent	For Sale Only	Not Occupied	Occasional Use	Farm Workers	Other Vacant	Total Vacant	Total Housing Units
Albion	2	9	17	63	0	17	108	746
Amboy	6	4	12	109	0	10	141	480
Boylston	11	2	4	85	0	13	105	263
Constantia	19	19	6	323	0	64	431	2083
Granby	40	34	20	44	0	28	166	2597
Hannibal	27	19	12	18	1	20	97	1644
Hastings	71	36	40	33	0	31	211	3094
Mexico	61	20	23	213	0	35	350	2105
Minetto	9	9	5	4	0	10	37	656
New Haven	6	4	5	208	0	46	276	1207
Orwell	16	4	2	266	0	13	301	650
Oswego	18	10	17	38	4	31	118	1755
Palermo	9	7	10	2	0	16	44	1182
Parish	6	7	12	27	0	9	61	868
Redfield	4	6	0	265	0	9	284	479
Richland	56	18	58	288	0	24	444	2636
Sandy Creek	39	23	26	1096	0	20	1204	2465
Schroepfel	33	31	35	84	2	42	227	3373
Scriba	22	18	15	139	3	64	261	2602
Volney	26	20	18	7	1	63	135	2065
West Monroe	13	33	45	64	0	22	177	1629
Williamstown	7	2	2	144	2	7	164	568
Fulton	151	26	47	23	0	81	331	5536
Oswego	133	25	67	70	0	154	449	7865
County	775	386	498	3613	13	829	6114	48548

Source: U.S. Bureau of the Census, 1990

According to the 1990 Census, a total of 2% of the housing units in the county were occupied by households which had more than one person per room. The greatest percentage of these housing units were located in the towns of Amboy (6%) and Williamstown (5%).

8. Specialized Housing

One indicator of specialized housing enumerated in the Census is the number of persons living in group quarters. In Oswego County the percentage of persons living in group quarters is 11%. The group quarter population can be broken down further. The following is the distribution for the group quarters population:

<u>Correctional Institution</u>	<u>Nursing Home</u>	<u>Psychiatric Hospital</u>	<u>Dormitory</u>	<u>Emergency Shelter</u>	<u>Visible in the Streets</u>
2%	15%	1%	78%	<1%	<1%

In Oswego County specialized housing is developed primarily by two not-for-profit agencies, Oswego County Opportunities and Catholic Charities. Funding for these programs is provided by Federal, State and local funding sources.

Oswego County Opportunities, Inc. (OCO) provides transitional living in community residences for mentally ill adults who do not require hospitalization, but are in need of supervision, support and assistance to live in the community. OCO is certified by the New York State Office of Mental Health. A transitional living supervised community residence provides a single-site homelike living environment with 24 hour-a-day on-site supervision.

The transitional living community residence apartment program provides single and double occupancy apartments in Fulton and Oswego. The intensive supportive community residence program provides an independent living situation and daily staff visits. The supportive community residence also provides an independent living situation but with only one to three weekly staff visits. Both of these programs have 24 hour on call staffing for emergency situations.

OCO operates several community residences, supportive apartments and one respite bed throughout the county for developmentally disabled adults. The Residential program is specifically designed and operated to assist persons with developmental disabilities to live as independently as possible. Staff supervision is provided in the residence at all times. The apartment program consists of daily oversight and guidance with a 24 hour on call system. The respite program consists of one bed that families may utilize for their developmentally disabled family member on a temporary basis. The respite stay is determined by the availability of the bed and the needs of the individual.

Arbor House Halfway House and Arbor House Supportive Living apartment program are certified by the New York State Office of Alcoholism and Substance Abuse services. The halfway house provides twenty-four hour on-site staffing and supervision. The supportive living apartment program provides services for adults residing in scattered site apartments. The average stay of residents at the halfway house is from six to nine months. Average involvement for those who participate in the supportive living and apartment program is between one and two years.

An Agency Operated Boarding Home (AOBH) is run by OCO and provides housing for 6 adolescent females 13-18 years of age in a group home setting. The girls come from the Central New York area and the group home is funded through payments from the Department of Social Services that is responsible for the adolescent. In addition to the basic needs of food, clothing, shelter and general health care, other services offered are counseling, psychological services, recreational and cultural activities, and independent living skills. The girls group home has supervision by qualified staff on a 24 hour basis.

The supervised independent living program is an extension of the AOBH girls group home and is an apartment program which allows for transition from residential foster care to independent living.

Catholic Charities operates the community Family Care program for the county. Family care is a residential service that provides a home for people who are recovering from mental illness. Family care matches persons willing to share their home and community with individuals in need of the guidance, support and the companionship of a family environment. Currently there are 22 family care slots available. At this time 18 are being used.

An issue which has received attention throughout the nation is the homeless. According to the 1990 Census there are only 12 homeless persons in Oswego County. Eleven of these people were sighted in the City of Oswego and one person was seen in the City of Fulton. This data was collected on Shelter and Street night, which was conducted in two separate operations at pre-identified shelters and at street locations where individuals were known to congregate.

Shelter enumeration was conducted nationwide two weeks prior to the Census from 6:00 p.m. to midnight on March 20, 1990. Street enumeration occurred from 2:00 a.m. to 4:00 a.m. on March 21, 1990. All visible persons at pre-identified locations were counted, excluding persons in uniform or persons engaged in obvious money-making activities. The locations included parks, bridges or streets where persons were known to congregate. From 4:00 a.m. to 8:00 a.m. enumerators were stationed at abandoned and boarded up buildings.

Persons or entire families who were doubled up, staying with friends or relatives, in shelters for abused women and men, or living in tents, institutions or jail were not counted as homeless for the 1990 Census because it could not be classified with certainty that these people did not have a home. Due to winter weather conditions, homeless persons would probably not be visible in the streets in March in Oswego County. Since homeless families and individuals are often provided short-term housing in rooming houses, motels or hotels, it is reasonable to assume that the homeless figures for Oswego County have been underestimated by the Census.

The Census indicates that there were 132 persons at an emergency shelter in Orwell. This is Unity Acres which is a privately owned, operated and funded shelter for homeless men. Oswego County has a Youth Emergency Services Program (YES) which is administered by Oswego County Opportunities. The YES program can provide temporary emergency shelter through their host home program. The YES program can accommodate approximately four youths on any given night. This number can only be approximated because all host home sites are not available on any given night. It should be noted that two of the host homes can accommodate a youth and an infant.

The program to assist teenage homeless (The PATH) is a transitional living program for homeless young people. The PATH is available to a young person who is 16 to 21 years old, lacking a safe place to live and willing to participate in a program that provides food, housing and activities to empower youth to live responsibly and independently. Currently there are four apartments which can accommodate a maximum of eight program participants.

Oswego County Opportunities also operates Services to Aid Families (SAF) which provides emergency shelter for abused women and children. SAF also has a network of safe homes available for emergency shelter purposes. The combined total number of slots available to the SAF house on any given night is 18.

9. Assisted Housing

The subject of housing encompasses much more than the physical structures. The affordability is linked directly to the existing housing market and in some cases the availability of subsidized units. In Oswego County the following housing assistance programs are in existence:

- * The City of Fulton Community Development Agency administers 427 Section 8 Housing certificates and vouchers. The program service area is the City of Fulton. Approximately 16% of the total rental market is subsidized.
- * The City of Oswego Community Development Office administers 458 Section certificates and vouchers. The program service area is the City of Oswego. Approximately 13% of the total local rental market is subsidized.
- * The Phoenix Public Housing Agency administers 123 Section 8 Housing certificates and vouchers. The program service area is the Village of Phoenix and the Town of Schroepfel. Approximately 13 % of the local rental market is subsidized.
- * The Oswego County Rental Assistance Program administers 310 Section 8 Housing certificates and vouchers. The program service area is the entire county. However, the county program will only assist residents in the cities Fulton or Oswego, the Village of Phoenix and the Town of Schroepfel under special circumstances. The Oswego County Housing Program also administers 18 units of project based assistance under the Section 8 Moderate Rehabilitation Program. These units are located in Williamstown, Redfield and Mexico. This represents a subsidy of 6% of the total county rental market, excluding the cities of Oswego and Fulton and the Town of Schroepfel.

There are also project based units located throughout the county. These projects differ from the rental assistance programs in that the assistance does not go with the tenant but stays with the housing unit. Some of the project based housing assistance programs are owned and operated by a governmental entity, such as a housing authority; other projects are privately owned and operated but are under contractual agreement to maintain affordable housing costs.

Table VI-5 is a list of project based assisted housing units located in the County. All of the following developments are operated privately but do or have received government funding for development or operating costs.

Table VI-5: Project Based Assisted Housing

<u>Name</u>	<u>Location</u>	<u>Number of Units</u>
*Conifer Meadow Apartments	Central Square	130
Green Acres	Central Square	20
*Fulton Mills Apartments	Fulton	108
*Towpath Towers	Fulton	120
John Warren Wight	Mexico	32
*St. Luke Apartments	Oswego	100
*Pontiac Terrace	Oswego	70
*Simeon-Dewitt Apartments	Oswego	130
Wine Creek Apartments	Oswego	60 reserved for income eligible total of 256
*Paddocks Landing	Phoenix	32
Bradley Court	Phoenix	24
*Patrick Court	Phoenix	24
Christopher Court	Phoenix	40
Village Center	Phoenix	15
*Springbrook Apartments	Pulaski	(40% receive assistance) 119
*Deerfield Apartments	Pulaski	N/A
*Creekside Apartments	Sandy Creek	20

*Indicates the units are for elderly, 62 and older, disabled or handicapped.

Source: Community Resource Directory and personal contacts with project managers.

In addition there are two project-based, assisted apartment complexes owned and operated by public entities. Pathfinder Courts has 246 units located in the City of Fulton, and is operated by the Fulton Housing Authority. Funds are received through the New York State Division of Housing and Community Renewal (DHCR). Hamilton Homes is operated by the Oswego Housing Authority and has 186 units located in the City of Oswego. Funds also are received through the New York State Division of Housing and Community Renewal. These two housing complexes are also under contact with DHCR to maintain affordable housing units for a designated period of time.

10. Homeowner and Owner Invested Property Rehabilitation

The City of Fulton has been able to provide assistance in the rehabilitation of owner inventory properties under the Division of Housing and Community Renewal Housing Rental Rehabilitation Program. One hundred twenty eight (128) rental units have been repaired and are being utilized as safe, sanitary and affordable housing for city residents. An additional 11 units of rental housing located in the targeted area of the Community Development Block Grant Small Cities program in the city have also been rehabilitated.

HUD HOME funds have provided monies for both owner-occupied and owner investor properties within two targeted areas of the City and have been approved for a city-wide program. In the first two years of the HOME Program, there were 31 units of rental housing rehabilitated. HOME funds also provided assistance for rehabilitation of 13 owner-occupied properties. It was projected that an additional 30 properties will be rehabilitated during 1995-96.

For the past 18 years, the City of Oswego has operated a highly successful Housing Rehabilitation Program for owners of one and two family homes. Under the owner-occupied rehabilitation program, the Community Development Office has rehabilitated 600 homes, containing approximately 625 units since 1977.

The Rental Rehabilitation Program in the City of Oswego has been in existence since 1984. Since its inception, the program has rehabilitated 83 units in 44 buildings. Both programs have been funded through Community Development Block Grants.

In 1994, Oswego County was awarded \$200,000 of HUD HOME funds from the NYS Division of Housing and Community Renewal to implement a county-wide homeowner housing rehabilitation program. This was the first homeowner rehabilitation program available to the rural areas of Oswego County. The focus of this program was to leverage existing private and public housing repair, weatherization and energy conservation monies. A total of fifteen homes were rehabilitated.

In 1991 the Village of Hannibal received a HUD Small Cities Community Development Block Grant for \$400,000 to implement a village-wide moderate housing rehabilitation program. At the completion of the program in 1993, twenty-five homes had been rehabilitated.

In 1983, the Oswego Housing Development Council in conjunction with the Oswego County Section 8 Housing Program rehabilitated five owner investor properties with a total of 18 housing units. The Housing units are located in the towns of Redfield, Williamstown and Mexico.

11. Homeowner Programs

In Oswego County there are a variety of first-time home buyer programs available to income eligible families. The cities of Oswego and Fulton received funding from HUD under the Community Development Block Grant program to implement a first-time home buyer program. The City of Fulton has had a first-time home buyer program since 1992. Approximately 25 families have purchased their own home through this program and the City anticipates serving an additional 25-30 families. The City of Oswego's program was initiated in 1995 and is based on a three year plan. The City plans to assist approximately 30 families.

The Village of Phoenix received a Small Cities Community Development Block grant for first time homeownership in 1992. The village is implementing their program in two phases. The first phase, which is completed, involved the write down of existing homes for purchase. The second phase of the project includes the building of new single family housing units for purchase by a buyer from the Small Cities funded first-time home buyer program.

The Village of Parish is also in the process of revising their proposed first-time home buyer program. The original plan was to write down the mortgage of the proposed new homes which were to be built through the New York State Affordable Homeownership program. However, due to program complications, these new homes will not be constructed. The village is planning to use their Small Cities grant to further homeownership opportunities throughout the village.

The Oswego Housing Development Council, a not-for-profit agency which operates as the Rural Preservation Council for the county, has a new construction first-time home buyer program. The council has completed development of six homes in Williamstown, and has constructed eight homes in Pulaski with a capacity for a total of 12 units there.

12. Fair Housing

The Federal government passed the Fair Housing Amendments Act of 1988, which expanded Title VIII of the Civil Rights Act of 1968, to prohibit discriminatory housing practices based on handicap and familial status. The law also establishes an administrative and judicial enforcement mechanism for cases where discriminatory housing practices cannot be resolved informally and provides for monetary penalties in cases where housing discrimination is found. The Fair Housing Amendments Act also establishes design and construction requirements for certain new multifamily dwellings to ensure against discrimination against families.

New York State's fair housing requirements are included in equal opportunity legislation and are more inclusive than those provisions in the federal law because age and marital status are included as part of the protected populations.

In 1990 Oswego County passed county legislation which embraces the Federal Fair Housing legislation. This local law also established an Oswego County Fair Housing Officer and Fair Housing Council. In an effort to encourage Fair Housing practices, Oswego County has developed and implemented the New Horizons Fair Housing Strategy. The focus of the strategy is on education. One aspect of the New Horizons plan is encouraging local municipalities to participate in the New Horizons program. The Villages of Altmar, Mexico, Parish, Phoenix and Pulaski and the Town of Williamstown have passed resolutions which support the County's Fair Housing Law and Fair Housing Council and have each appointed a local Fair Housing Representative to distribute information about Fair Housing.

B. TRENDS

The U.S. population as a whole is getting older as the elderly are becoming a larger percentage of the total population. Although the majority of elderly households prefer to remain in their single family owned homes, national policy for elderly people has focused almost entirely on multi-family housing, including publicly assisted housing, retirement communities, congregate care and life care facilities.

As people age, their house becomes more of a challenge to live in. The layout of most houses is so inflexible that infirmities associated with age make it necessary for an elderly person to move or adapt their housing. Also, as people age in place they become over housed, meaning that one or two people now reside in a home that was once occupied by a family of four or more.

Another trend which has resulted in an increase in housing units throughout the country is the fact that families or households are smaller. As the size of the household has become smaller, there has been an increase in the number of households relative to the population. Thus even in areas with little or no population growth there has often been a significant increase in housing units.

The size of the average house has also increased. In 1965, the average home had approximately 1,525 square feet. In 1990, the average home had 1,966 square feet. In New York State, the average home was even larger, 2,149 square feet. Consequently, the percentage of income spent on housing has increased. Owners of mortgaged homes spent 19% of their income on housing costs in 1960. In 1990, owners of mortgaged homes spent 21% of their income on housing.

In Oswego County, as well as throughout the country, there is often a negative attitude toward the renting population. Members of the general public have voiced concerns about the perceived lack of investment renters have in their community. This statement has not been substantiated. It is also argued that rental properties are often not adequately maintained and are detrimental to neighborhoods. In such instances, there is frequent disagreement among landlords and tenants as to whether it is the renter who is an undesirable tenant or the landlord who is an irresponsible absentee property owner.

In rural areas of the country mobile and manufactured housing have become more prevalent. During the last ten years Oswego County has seen an increase in mobile/ manufactured housing units from 13% of the total housing stock to 20%. Mobile homes and manufactured housing are viewed as affordable housing alternatives. This trend is likely to continue.

In New York State as well as other parts of the country, special populations such as the developmentally disabled and the mentally impaired are being removed from institutionalized settings. Thus there has been an increase in specialized housing and group homes. It is believed that a group home setting is more economical and provides a better environment for residents. It appears this trend of neighborhood integration will continue.

C. ANALYSIS

1. Number of Housing Units Required

In order to understand the future housing needs for Oswego County, it is necessary to use existing data and future population and household population projections to estimate the anticipated number of housing units that will be needed.

By looking at the existing number of dwelling units and subtracting those units designated as occasional use, we can estimate how many existing permanent dwelling units are available. When comparing the total number of units to the existing households population, the excess existing housing units reflect the vacancy rate. The ideal housing market vacancy rate to create a wider range of housing options for owner occupied housing is no more than 2% and for rental housing 5%. It should be noted that there are vacant housing units not for rent, sale or in use that are not accounted for in this calculation.

To determine total housing units needed, we will use a blended vacancy rate of 3.5%. It is anticipated that in the year 2000 a total of 49,583 housing units will be needed. For a break down of future anticipated housing needs by community, refer to Table VI-6.

Based on 1990 Census information, owner-occupied housing units make up 69% of the total housing units in the county. Assuming that the percentage of residents owning their own home remains relatively constant, approximately 4,761 of the additional units required will be owner occupied.

The prevalence of mobile and manufactured homes in Oswego County has and will continue to have an impact on housing development in the county. In some areas the ratio of mobile and manufactured housing units being placed on lots are one for every one stick built home. According to local realtors, mobile and manufactured housing is one form of affordable housing. The market suggests that there is a lack of suitable housing available in the \$50,000-\$60,000 price range. Mobile and manufactured housing can fill this need. Although the cities of Oswego and Fulton and the villages of Parish, Pulaski and Phoenix have implemented first-time homeowner programs which may help qualified applicants to purchase a site built housing unit, these programs are not large enough to turn the tide away from mobile and manufactured housing as an easily accessible and affordable means to homeownership.

2. Cost of Housing

Table VI-7 is from the publication entitled "Preparing for Homeownership." This table demonstrates how much home you can afford based on your income and the interest rate at which the home is being purchased. By analyzing income, debt service, and mortgage interest rate, we can estimate the cost range for new housing units that can be supported in an area.

For example, the median county household income is \$29,083 and the allowable debt payment for the \$25,000 income category is \$167.00 a month. (Table VI-8) Therefore, for median household monthly allowable debt would be approximately \$190.00. This means that a household could not have more than \$190.00 of monthly bills or payments that are their responsibility and still qualify for the mortgage indicated by Table VI-6. If a typical household had this monthly debt service or less, this household could afford a home costing a maximum of approximately \$82,260 at a fixed rate of 8% for 30 years. If a household's actual monthly debt exceeds those listed in Table VI-8, a good rule of thumb is that for every \$50.00 of "excess debt" you can expect a \$5,000 reduction in the amount of mortgage that can be qualified for.

Therefore, a household with the median county income of \$29,083, but with monthly debt cost of \$450, would be able to afford a home priced at \$55,920 based on an 8%, thirty-year monthly mortgage payment.

Public input and the average sale price of houses being sold in the county suggest that people have more debt than the standard allowable rate and people are choosing to purchase below what they could otherwise afford based on their gross income. Thus, according to information concerning the potential and actual average selling prices provided by the Oswego County Board of Realtors, an affordable single family home in Oswego County should sell for between \$56,000-\$82,000 based on 1990 dollars. Of course when projecting the future cost of housing for Oswego County, projected cost should include inflation.

Concern has also been voiced about the lack of higher end housing available in the county. It is more difficult for a developer to develop higher end tract development in a rural area, because he or she can not receive an adequate return on his or her investment. Typically, higher end housing is custom built on a site by site basis. However, Oswego County has an opportunity to attract higher end housing because of the close proximity to Syracuse, as well as the natural assets the county has to offer.

TABLE VI-6: ANTICIPATED NUMBER OF HOUSING UNITS NEEDED BY 2000

Town/City	Total 1990 Year-Round Occupied Housing Units	Total Anticipated Number of Year-Round Housing Units Needed in 2000	Additional Year-Round Housing Units Needed in 2000*
Albion	638	753	115
Amboy	338	386	48
Boylston	158	184	26
Constantia	1652	2015	363
Granby	2431	2797	366
Hannibal	1547	1793	246
Hastings	2883	3420	537
Mexico	1753	1954	201
Minetto	619	682	62
New Haven	938	1082	144
Orwell	349	456	107
Oswego	1637	3159	1522
Palermo	1138	1267	129
Parish	807	936	124
Redfield	195	228	33
Richland	2192	2393	201
Sandy Creek	1261	1385	124
Schroepfel	3146	3797	657
Scriba	2341	2735	394
Volney	1930	2227	297
West Monroe	1452	1703	251
Williamstown	404	471	67
Fulton	5208	5490	282
Oswego	7416	8270	854
County	42433	49583	7150

*Based on 1990 Census Population Projection

Table VI-7: Maximum Mortgage by Annual Income and Interest Rate*

Interest Rate	Annual Income					
	\$20,000	\$30,000	\$40,000	\$50,000	\$60,000	\$70,000
6.5%	65,900	98,800	131,800	164,800	197,700	230,700
7.0%	62,600	93,900	125,300	156,600	187,900	219,200
7.5%	59,600	89,400	119,200	149,000	178,800	208,600
8.0%	56,700	85,100	113,500	141,900	170,300	198,700
8.5%	54,100	81,200	108,300	135,400	162,500	189,600
9.0%	51,700	77,700	103,500	129,400	155,300	181,200
9.5%	49,500	74,300	99,100	123,800	148,600	173,400
10.0%	47,400	71,200	94,900	118,600	142,400	166,100
10.5%	45,500	68,300	91,100	113,800	136,600	159,400
11.0%	43,700	65,600	87,500	109,300	131,200	153,100
11.5%	42,000	63,100	84,100	105,100	126,200	147,200

*This table is based on allowable debt rates.
Source: Preparing for homeownership, p. 12.

4. Rental Market

The current rental vacancy rate in Oswego County is 6.8%. The optimal rental vacancy rate is 5%. Rental housing accounts for approximately 24% of the total housing stock as previously estimated based on anticipated household increases of 7,150 additional housing units needed in the year 2000, approximately 1,573 of these units will be rental units. This is approximately 22% of the total new units required.

It is important to understand the rental market to predict what type of new units may need to be added to the housing rental inventory. At the present time, the rental vacancy rate is higher than desired. For instance, some rental units may be vacant because they are unsafe, too expensive or are located in an area that does not have a viable rental market, because of lack of proximity to employment, transportation or community services. By understanding the conditions of the rental market a more educated estimate for the anticipated number of rental units can be obtained. Currently, a detailed analysis of this market does not exist.

5. Substandard Housing

In order to understand the existing both the rental and owner-occupied housing markets and more effectively use public and private dollars, a definition of substandard housing should be developed. Areas of the county with high vacancy rates and a high percentage of older units should be surveyed. Each housing unit should be evaluated in relation to the definition of substandard or a local housing code. This information would be very helpful in understanding the housing needs of Oswego County.

Table VI-8: Allowable Monthly Debt by Income

Gross Annual Income	Allowable Debt Payments/Mo.
\$20,000	\$133
25,000	167
30,000	200
35,000	233
40,000	267
45,000	300
50,000	333
55,000	367
60,000	400
65,000	432
70,000	467

Source: Preparing for homeownership, p. 13

6. Occasional Use Housing

According to existing statistical information, many parts of Oswego County are viewed as vacation areas and therefore there are large concentrations of occasional use units located in some communities. The demand for occasional use housing is challenging to estimate. Some of the factors that influence a demand for occasional housing are economic trends, disposable income, the attractiveness of an area, as well as potential resale value. Presently, the occasional use housing unit category accounts for 7% of the existing market. It is assumed that this percentage will remain constant, thus accounting for an increase in occasional use units of 501, totalling 4,114 by the year 2000. Not every community will experience an increase in occasional use units. Occasional use units are usually tied to tourism or recreational activities. Therefore, those areas that have seasonal and recreational attractions and activities are more likely to have an increase in this type of housing.

Estimating the projected growth in the area of special population housing is extremely difficult. The ability to operate many of these programs is tied directly to government funding at the State and Federal level both of which are undergoing changes.

D. GOALS, OBJECTIVES AND STRATEGIES

GOAL: PROVIDE A WIDE RANGE OF SAFE, SANITARY AND AFFORDABLE HOUSING OPPORTUNITIES FOR THE EXISTING AND FUTURE RESIDENTS OF OSWEGO COUNTY.

OBJECTIVE 1: Support the maintenance of the county's housing stock.

- STRATEGIES:
- a. Develop a model housing code that could be adopted by local municipalities.
 - b. Apply for grants for maintenance and rehabilitation of owner-occupied housing.
 - c. Recommend that local zoning ordinances be reviewed to consider the appropriateness of allowing accessory apartments if the homeowner resides in the primary residence, in order to facilitate maintenance of larger, older homes.
 - d. Apply for funding to develop a mobile home replacement program for homeowner units which are unsafe.
 - e. Develop a model inspection form based on HUD housing quality standards which could be adopted by municipalities or utilized as a guide for landlords and tenants to ensure that all rental housing units are safe, sanitary and decent for their inhabitants.
- OBJECTIVE 2:
- Address the housing needs of Oswego County's aging and other special needs populations.
- STRATEGIES:
- a. Encourage local municipalities to amend local laws to provide for accessory apartments, elder cottages and shared residences.
 - b. Research the possibility of creating a mobile housing unit program which could be used in rural areas to allow for family care of elderly family members.
 - c. Apply for or support applications for grants to develop a diversity of private senior housing opportunities in areas of greatest need which are located near services.
 - d. Support efforts to develop targeted plans to address housing needs of the disabled, runaway youth, victims of abuse and the homeless.
- OBJECTIVE 3:
- Increase the opportunities for homeownership in Oswego County.
- STRATEGIES:
- a. Apply for grants to assist first-time homebuyers.
 - b. Support and encourage lending institution efforts to target a percentage of mortgages to low income, first-time homebuyers.
- OBJECTIVE 4:
- Encourage the use of creative and innovative design techniques when developing new housing.
- STRATEGIES:
- a. Develop model site plan standards for planned housing developments including options for higher density, more affordable housing.
 - b. Develop a model subdivision ordinance which incorporates creative design techniques.
- OBJECTIVE 5:
- Promote non-discrimination in the sale and lease of housing.
- STRATEGIES:
- a. Continue to update and implement the Oswego County Fair Housing Strategy.
 - b. Provide staff support for the Oswego County Fair Housing Council.
- OBJECTIVE 6:
- Locate affordable housing throughout Oswego County in proximity to job opportunities and community services.

- STRATEGIES:
- a. Recommend that new affordable housing be located near job opportunities and community services.
 - b. Work with local municipalities to update their zoning regulations to ensure that affordable housing can be located in proximity to job opportunities and community services.

VII. COMMUNITY FACILITIES

B. INVENTORY

1. Education

In Oswego County there are nine school districts: Altmar-Parish-Williamstown Central (APW), Central Square Central, Fulton Schools, Hannibal Central, Mexico Academy and Central, Oswego City Schools, Phoenix Central, Pulaski Central and Sandy Creek Central. In 1993 a total of 25,777 students were served by the nine school districts. There are a total of 46 school buildings being utilized as teaching facilities. Thirty-two of these are designated as elementary schools, five as jr. high or middle schools, and nine as high schools.

Oswego County also has five parochial/denominational elementary schools and one secondary denominational school. In 1992 Bishop Cunningham Catholic Jr.-Sr. High School was closed due to lack of enrollment. Presently there is not a secondary parochial school within Oswego County. In 1987 this school served 221 students. Children that were attending Bishop Cunningham Catholic Jr.-Sr. High school now attend the local public high school in their district.

The following is a breakdown of school enrollment by district.

Table VII-1: Public School Enrollment by District - 1993

<u>District</u>	<u>Total Kindergarten - 12</u>
APW Central	1,810
Central Square Central	4,851
Fulton School	4,249
Hannibal Central	1,756
Mexico Academy and Central	2,804
Oswego City Schools	5,221
Phoenix Central	2,710
Pulaski Central	1,239
Sandy Creek Central	<u>1,137</u>
All Districts	25,777

Source: Oswego County Data Book, 1994

According to the 1993-94 enrollment figures, the Oswego City School district has the largest student enrollment, with a total of 5,221 students, followed by the Central Square Central district which had a total of 4,851 students. The Sandy Creek school district had the smallest enrollment with 1,137 students.

a. Vocational and Technical Training

The Oswego County Board of Cooperative Educational Services (BOCES) was established in 1948 when legislation enabling school districts to combine their resources and share needed services was passed. There are 40 BOCES throughout New York State. In 1969 Oswego County BOCES moved to their present facility on County Route 64 in Mexico. At that time, five hundred students comprised the school enrollment, while today over 10,000 are served by numerous student programs.

Oswego County BOCES serves all nine public school districts in the County. BOCES is operated by a board of nine individuals, each one representing a component district. BOCES operations provide specialized instructional services at the request of the component school districts. Additionally, BOCES offers several adult education programs and tutorial services.

b. Community Colleges

Cayuga Community College has an Oswego County extension site located in the City of Fulton. Cayuga Community College offers two year associate degrees in the areas of liberal arts, business, computers, criminal justice, electrical technology, mechanical technology, nursing and telecommunications. Students can complete 50% to 90% of their degree program at the extension site. All other benefits and services of Cayuga Community College are extended to students studying at the Oswego County extension site.

c. Universities and Colleges

The State University of New York College at Oswego is located in Oswego County along the shore of Lake Ontario west of the City of Oswego. SUNY Oswego is a comprehensive college and member of the State University of New York educational system. SUNY Oswego is fully accredited in all its degree programs by the Middle Atlantic States Association. The academic division of the college is organized under the following areas: School of Education; School of Business; Arts and Sciences; Continuing Education and Summer Sessions; and Graduate Studies and Research. The college has 28 academic departments and offers undergraduate and graduate degree programs in 60 fields. SUNY Oswego opened a continuing educational center in 1994 at the Oswego County Industrial Park in Phoenix.

The college owns 50 buildings on a lakeside campus of 696 acres. More than 650 additional acres owned by college related organizations are available to the college. There are facilities for fine and performing arts, intercollegiate and intramural athletics, and the study of more than 68 academic areas. The total gross square feet of the physical plant is 3,124,646.

The number of full-time teaching faculty totaled 334 during the fall of 1994 and the number of part-time teaching faculty totaled 78. Thirty-eight percent of full-time faculty hold the rank of professor, 38 percent associate professor and 22 percent assistant professor.

Enrollment in the fall of 1994 totaled 8,817 with 7,607 undergraduates and 1,210 graduate students. In addition, there were 4,380 enrollments in the college's four 1993 summer sessions. New York State residents comprise approximately 98% of all enrollees.

d. Undergraduate Programs

The Bachelor of Science degree is offered in accounting, applied mathematical economics, applied mathematics, biology, business administration, chemistry, computer science, general studies, geochemistry, geology, human resource management, industrial training and development, management science, marketing, meteorology, physics, zoology, technology education, vocational-technical education, elementary education and secondary education.

A program leading to a Bachelor of Arts degree may be pursued in American studies, anthropology, art, biology, broadcasting and mass communication, chemistry, communication studies, computer science, economics, English, French, general studies, geology, German, history, human development, information science, linguistics, mathematics, meteorology, music, philosophy, physics, political science, psychology, public justice, sociology, Spanish, theater and zoology.

e. Graduate Programs

Graduate students can earn a Master of Arts degree in art and English or a Master of Science degree in chemistry, human services, counseling, business administration (management and accounting), school counseling and school psychology. The Master of Science in Education is offered in biology, chemistry, earth sciences, elementary education, English, industrial arts, education, mathematics, physics, reading education, school administration and supervisory, social studies, special education and vocational-technical education. The Certificate of Advanced Study program is available for the school administrator and supervisor, school counselor and school psychologist.

f. Continuing Education

The college's Division of Continuing Education provides a variety of credit and non-credit programs both on and off campus. Three evening degree programs are offered in accounting, business administration, psychology, public justice and information science. The Master of Science in Management is delivered at three sites: Jefferson Community College, Onondaga Community College and on the Oswego campus. Training and education is available to local corporations and businesses to upgrade the work force. The college also offers American Management Association certification courses. The SUNY Oswego Continuing Education Center at the Oswego County Industrial Park in Phoenix offers junior level courses and non-credit learning opportunities for local residents.

2. Child Care Facilities

Child care facilities are an important part of the community's resources. In New York State, individuals caring for more than two unrelated children must register with the New York State Department of Social Services, Early Childhood Services office. The registration process ensures that child care providers meet the minimum standards established by New York State. There are three categories of registered child care. The first is Family Day Care which is one adult caring for as many as six children ages two and up, plus two additional school age children. If the Family Day Care provider chooses to care for an infant under the age of two, they are limited to a capacity of five children plus two school age children. No more than two infants may be in care at a time. The second category, Group Family Day Care providers, involve a provider and an assistant together caring for a maximum of twelve children plus two additional school age children. Once again, the capacity is reduced from 12 to 10 if the providers choose to care for infants. No more than four infants may be in care at any time. The third category is child care centers which are located at a site other than a residential home and serve more than twelve children. Capacity levels vary depending upon the space available in the center.

Currently, Oswego County has 91 registered family day care homes with a maximum capacity of 546 pre-school age plus 182 school age children. There are 5 registered group family day care homes with a maximum capacity of 50 pre-school age plus 10 school age children. The following 5 licensed day care centers have varying capacities:

The Children's Center
Mitchell Street - Oswego

We Care Day Care
Route 11 - Central Square

The Children's Center
25 Swetman Hall
SUNY Oswego - Oswego

Discovery Day Care
Oswego County Industrial Park
Phoenix

Pulaski Day Care Center
Castle Drive - Pulaski

There are other child care programs as well as private providers in Oswego County which are not registered with New York State. Oswego County is fortunate to have the Child Care Council which promotes and supports the development of quality, accessible and affordable child care services. The council serves as a community resource for education and training on topics related to accessing and providing child care services.

3. Health

a. Hospitals

Oswego County has two hospitals of general service located in the cities of Oswego and Fulton. Oswego Hospital was incorporated in January 1881. The hospital was founded by a group of women known as the Board of

Lady Managers, with some assistance from an all male finance committee. At that time, the hospital provided six beds. In 1893, Thomas Mott donated a lot on the west side of Fourth Street between Schuyler and Seneca Streets. The hospital was built on this site, but the West Fourth Street hospital soon became overcrowded and obsolete and the decision was made to search for a new site.

In 1908, the Oswego Hospital relocated to its current site on West Sixth and Bridge Streets, known as the DeWolfe House. The DeWolfe House experienced three expansions in 1910, 1928 and 1949. Another expansion was completed in 1969. During this renovation the original DeWolfe House was demolished.

In 1994, the Oswego Hospital acquired and developed additional land at the West Sixth Street site for out-patient and other medical services. Oswego Hospital has a medical staff of 324 providing comprehensive medical services in acute medical, surgical, maternity, pediatric, psychiatric, emergency and skilled nursing care.

A.L. Lee Memorial Hospital was founded in 1903 and is located between Park Street and South Fourth Street in Fulton. It is a 67 bed acute care facility. Presently the hospital has a medical staff of 65 and provides ambulatory surgery, anesthesiology, cardiology, dermatology, emergency medicine, endocrinology, family medicine, neurology, gynecology, general surgery, gastroenterology, intensive care, internal medicine, neurology, occupational medicine, ophthalmology, pathology, pediatrics, podiatry, radiology and urology services.

b. Community Medical Services

The Health Services Center located adjacent to the Oswego Hospital on West Sixth Street in Oswego is an urgent care facility. The center is a 30,000 square foot facility which offers out-patient laboratory, radiology and primary care services.

Oswego Hospital owns and operates the Parish Medical Center located on route 69 in the Town of Parish. The center is a 2,880 square foot primary care facility which also has a pharmacy located on site. Oswego Hospital also owns and operates the Mexico Health Center located on NYS Route 104 and State Route 3. Presently, the center has obstetrics and gynecology.

The mental health facility located on Bunner Street in the City of Oswego is operated by Oswego Hospital. The Mental Health Division of Oswego Hospital employs approximately 100 mental health professionals. 1994 marked the beginning of work on the Seneca Hill Health Campus. More information about the health campus is given in the discussion of nursing homes later in this section.

A.L. Lee Memorial Hospital operates the Phoenix Primary Care Center which is located on State Street in the Village of Phoenix. The center provides primary care for the residents of southern Oswego County. A.L. Lee Memorial Hospital is proposing a primary care community medical center in the Village of Hannibal. It is anticipated that construction of this facility will begin in the spring of 1996.

Oswego County Opportunities (OCO) is a private non-profit corporation dedicated to serving the human service needs of Oswego County residents and operates two primary care centers in the county. These centers provide primary family medical care, minor emergency care, family planning and complete physicals. The Fulton Health Center is a cooperative effort between OCO and A.L. Lee Memorial Hospital located on South Fourth Street in the City of Fulton, adjacent to A.L. Lee Memorial Hospital.

OCO operates the Oswego Health Center in the City of Oswego. This new facility on George Street opened in summer 1996. OCO also offers family planning services in the villages of Pulaski and Mexico.

The Central Square Health Center is operated by Prepaid Health Plan which is a non-profit insurance group which operates several community clinics throughout Central New York. The center is located on route 49 in Central Square and provides family services, pediatrics, laboratory, x-rays and gynecology.

The Pulaski Health Center is located in the Village of Pulaski. The center is operated by Northern Oswego County Health Services Inc. and provides family medical care to local residents. Services include medical and dental health care, laboratory and x-ray services, immunizations and referrals.

Northern Oswego County Health Services also operates the E.H. Pierce Health Center on Scenic Avenue in Mexico. The center provides comprehensive family medical services.

The Sandy Creek Family Medical Center is located in the Village of Sandy Creek and is associated with the Good Samaritan Hospital in Watertown, New York. The current services offered are adult medicine for persons 18 years old and older, allergy shots, blood work, EKG testing and spirometry.

Hospitals Home Health Care Inc. was established in 1989 by A.L. Lee Memorial and Oswego Hospitals. The main goal of this organization is to ensure that patients health care needs are met after they leave the hospital. Although financially sponsored by Lee Memorial and Oswego Hospitals, HHC operates as a separate and independent organization.

c. Nursing Homes

Oswego County has six nursing homes located within the county, five of which are privately owned and operated. The County's Andrew Michaud Nursing Home is the only publicly owned and operated skilled nursing facility. This nursing home has 89 beds to be utilized for patients.

The following table lists the nursing home facilities located in Oswego County, the number of approved skilled nursing beds and the number of approved health related facilities, according to New York State Department of Health.

Table VII-2: Nursing Homes in Oswego County

<u>Name</u>	<u>Ownership</u>	<u>Licensed Number of Beds</u>
Andrew Michaud Nursing Home Fulton	Public	89
Harr-Wood Nursing Home Oswego	Private	120
Loretto Heights Oswego	Private	120
Meadow Brook Manor Hannibal	Private	20
Pontiac Nursing Home Oswego	Private	80
St. Luke's Nursing Home Oswego	Private	200 40 adult day care
TOTAL		669

Source: Nursing Home Administrators

In addition to the existing nursing home facilities, Oswego Hospital is scheduled to begin construction on the Seneca Hill Manor Nursing Home in 1996, which will be built between County Route 45 and County Route 57

in the Town of Volney. The Seneca Hill Manor Nursing Home has a certificate of need from the New York State Department of Health for a 128 bed facility. Oswego Hospital will also be constructing out-patient facilities for dialysis and cancer care at this site. Oswego Hospital plans on expanding services at this site in the future.

4. Public Safety

The issue of public safety presents itself in many forms within a community. It is necessary to have services in place to address a variety of safety issues. Currently Oswego County does not have the emergency 911 telephone response service in place. However, the county began planning the 911 emergency telephone response system in 1993 and it should be fully operational by the end of 1997.

a. Fire Safety

Oswego County is served by one industrial fire department located at the Alcan Aluminum corporation Plant, two professional fire departments in the cities of Oswego and Fulton and 27 volunteer companies serving the towns and villages within the county.

b. Emergency Medical Services

Similarly, ambulance services are operated within the cities of Oswego and Fulton and are paid professionals. The remainder of the county is serviced by volunteer professional emergency ambulance services and/or private contracted services.

c. Law Enforcement

At the Federal level, Oswego County is served by the Federal Bureau of Investigation office in Syracuse. The United States Border Patrol has an office in the City of Fulton and the United States Coast Guard has a station located on Lake Ontario in the City of Oswego. The Coast Guard patrols Lake Ontario and a portion of the Oswego River.

The New York State Police Department has three trooper barracks in Oswego County. These barracks are located in the City of Fulton, Town of Hastings and Village of Pulaski.

The Oswego County Sheriff's Department service area is anywhere within Oswego County, excluding the cities of Oswego and Fulton. Although the county's service area does not include local municipalities which have their own police forces, the county will assist or respond to calls within these areas when necessary. The Sheriff's Department also has a marine division which is responsible for activities along the shores of Lake Ontario and Oneida Lake, as well as all other water bodies within Oswego County, and a snowmobile patrol unit.

The cities of Oswego and Fulton each have a police force as do the Villages of Central Square, Pulaski and Phoenix.

5. General Government

a. Administrative

Public buildings and facilities are structures owned by the public and utilized for housing government services. These buildings include municipal offices, county office buildings and other facilities, court buildings, libraries, transfer stations, landfills and energy recovery facilities. There are twenty-four municipal offices and six county office buildings in the County. There are two court house facilities.

Oswego County owns and operates six county office buildings which are located throughout the county. The following is a list of the offices and their location:

Legislative Office Building
46 East Bridge Street

Public Safety Center
39 Churchill Road

Oswego, NY 13126

Health Services Office Complex
70 Bunner Street
Oswego, NY 13126

Oswego County Spring Street Building
Spring Street
Mexico, NY 13114

Oswego, NY 13126

Oswego County Branch Office
200 North Second Street
Fulton, NY 13069

Pulaski Health Clinic
Barclay Court House
Pulaski, NY 13142

The county has three highway garages located in Scriba, Pulaski and Parish. The County also owns a building maintenance facility, a records storage facility and former jail buildings which are currently unoccupied.

b. Courts

In Oswego County, Federal court matters are handled in Syracuse at the Federal Court Building located at Clinton Square.

State Supreme Court matters in Oswego County are tried in the recently renovated Court House located in Oswego on East Oneida Street. Presently, Oswego has two State Supreme Court Justices. Although the State Supreme Court presides over civil and criminal cases, the majority of cases heard in Oswego County are civil in nature.

Oswego County Court is held in two locations within the county; the new Public Safety Center which is located off of State Route 481 on Churchill Road in Scriba and the Barclay Court House in Pulaski. Family Court is also held at the Churchill Road site.

Each town has a justice; many towns only hold court on an as needed basis. The villages of Pulaski, Central Square, Phoenix and Cleveland also have justices and participate in the local court system. Oswego City Court is held in the City Court facility located in the Conway Building directly across from City Hall on West Oneida Street. Fulton City Court is held in the Chambers located in the Fulton Municipal Building on South First Street in the City of Fulton.

c. Solid Waste

Most solid waste generated in Oswego County is disposed of through county operated facilities. Garbage and recyclables may be brought to transfer stations by either municipal, contracted, or private haulers and individual residents. Garbage is unloaded, compacted, and transferred to county trailers. Recyclables are transferred via county trucks to the Materials Recovery Facility (MRF) located at the Bristol Hill site. Scrap metals are recycled at a local scrap yard, and burnable waste is taken to the County's Energy Recovery Facility (ERF) which generates steam and electricity for industrial use. Non-burnable waste and ash from the ERF are disposed of at the Bristol Hill Landfill, a double-composite lined, sanitary landfill located in the Town of Volney. Oswego County charges a tipping fee for the disposal of non-recyclable waste. Yard wastes are composted at county facilities at all transfer station locations except Oswego.

Transfer stations are located at:

Bristol Hill - State Route 3 east of the City of Fulton in the Town of Volney.

Hannibal - County Route 7, Johnson Road

Hastings - State Route 11, north of Central Square

Oswego - East Seneca Street

Pulaski - County Route 2A, south of Centerville Road

6. Post Offices

Oswego County also has 26 post offices. The following is a list of the communities that have post offices and their zip codes:

Altmar	13302	Bernhards Bay	13028
Central Square	13036	Cleveland	13042
Constantia	13044	Fulton	13069
Hannibal	13074	Hastings	13076
Lacona	13083	Lycoming	13093
Mallory	13103	Maple View	13107
Mexico	13114	Minetto	13115
New Haven	13121	Orwell	13426
Oswego	13126	Parish	13131
Pennellville	13132	Phoenix	13135
Pulaski	13142	Redfield	13437
Richland	13144	Sandy Creek	13145
West Monroe	13167	Williamstown	13493

7. Cultural Resources

Oswego County has many cultural resources located throughout the county. Cultural resources are sites, structures, districts, objects, and biotic elements significantly associated with or representative of earlier human activities. Historical sites, museums, and craft, musical, literary, and theatrical organizations bring alive history and traditions.

The diversity of the county's settlers means that we have a tremendous wealth of traditions, folk tales, arts, and crafts. Culturally distinct rural areas usually have had unique ways of building, laying out farms, and creating furnishings and food. As rural life styles, and the old and no longer cost-effective ways of doing things, fade our traditional cultural heritage is in danger of being lost. Just as with individuals, healthy communities need memories of the past. Retaining clear evidence of the community's cultural heritage provides context for of where it is going in the future.

In 1991, Oswego County, with funding from the New York State Council on the Arts, conducted a county-wide cultural needs assessment. The needs assessment sought to address the impact of the absence of an arts council in the county. Out of this study, the organization Arts & Culture for Oswego County was established. Among the county's more prominent cultural sites are Fort Ontario, the Selkirk Lighthouse, the Richardson-Bates House Museum, the H. Lee White Marine Museum, the Central Square Railroad Museum, and the Fort Brewerton Block House Museum. Complementing these places are art and cultural organizations such as Arts and Culture for Oswego County, Artswego, the Oswego Players, Inc., the Oswego Opera Theater, and the Ontario Center for the Performing Arts.

The cultural facilities within Oswego County are both public and private in nature. There are twelve public libraries in Oswego County located in the villages of Central Square, Hannibal, Mexico, Parish, Phoenix, Pulaski, and Sandy Creek, the towns of Constantia and Orwell and the cities of Fulton and Oswego. Penfield Library is located on the campus of the State University of New York at Oswego.

Other public cultural facilities located in Oswego County are:

- * The Oswego County Nature Park at Camp Zerbe in Williamstown. The park features a nature trail, interpretive center, educational exhibits and a meeting center.

- * Rice Creek Field Station at SUNY Oswego. The Rice Creek Field Station is an instructional and research laboratory. There are two lab/classrooms, a lecture room and exhibit areas with an indoor viewing gallery surrounded by 400 acres of land with trails.
- * The Cornell Cooperative Extension 4-H Nature Center located in Amboy. The Amboy Nature Center has buildings for meetings and offers overnight accommodations for organized groups.
- * State University of New York Performing Arts Center. The SUNY Oswego Performing Arts Center has two theaters: the Waterman Theater which seats 550 people and is available for public use, and Lakeside Dinner Theater which seats 165-200 people. The theaters are located on the SUNY campus and the Lakeside Theater is open for six weeks during the summer.
- * State University of New York Fine Arts. The Tyler Art Gallery is located at the SUNY Oswego Campus. The gallery serves the community by bringing in exhibitors, interpreters, collectors and presenters of original works.
- * Oswego High School Theater for the Performing Arts. Locally, the Oswego High School has a theater which has a seating capacity of 868. In addition to school activities, local groups utilize this theater for a variety of performances and activities.
- * Francis Marion Brown Civic Center Theater. The City of Oswego owns this building located on Fort Ontario Park property. The City leases the building to the Oswego Players under a long term lease agreement. This theater has a seating capacity of 121.
- * The Roy McCrobie Community Center Building, located on Lake Street in the City of Oswego, is home to the Ontario Center for the Performing Arts. The maximum number of persons that can be accommodated at this location is 200. The building is also available for use by other community groups.

To share their historical interests, four other organizations have plans to develop museums. Safe Haven Incorporated is a not-for-profit organization dedicated to telling the story of over 982 Jewish refugees from Europe given "safe haven" at Fort Ontario at the close of World War II. Fort Ontario was the only refugee center in the United States for those fleeing the Holocaust. The Oswego Fire Fighters Association is planning a Fire Fighter's Museum at a location on East Second Street next to the City of Oswego Fire Hall. The museum would display the 1925 and 1929 Miracle Fire Engines. The Great Lakes Divers Association is actively advocating an underwater park in Lake Ontario off the City of Oswego to increase public awareness and appreciation for the region's maritime heritage. The Greater Oswego Chamber of Commerce in the City of Oswego was influential in establishing the not-for-profit Oswego International Sportfishing Collection, Inc. The organization is looking for a permanent location to display its collection of historic fishing lures and equipment. Currently, the collection is being stored at SUNY Oswego and can be viewed by appointment only.

B. TRENDS

1. Education

With most school districts facing increasingly tight budgets, the trend locally and regionally has been to strive to simply maintain the existing school facilities. Lawmakers in New York State are interested in providing incentives to local districts to cut costs. School districts in the most rapidly growing parts of the county seem to be facing the most difficulty as needs for enlarged facilities are not matched by growth in the tax base.

Nationally, the trend to mainstream special education students into the classroom continues. Often inclusion of special populations requires alteration and upgrading of the physical plant, however, it is believed that inclusionary programs are more cost efficient in the long run and offer all students additional social benefits.

In the area of higher education, the trend is also to maintain the existing facilities. However, public funding is decreasing in this area. The cost of tuition for a higher education program at one of the State University programs has increased by approximately \$500-\$750 in the last year. If the cost of higher education increases and funding possibilities for students continue to decrease, then the SUNY system will have a difficult time maintaining the current level of services and facilities.

2. Child Care

Recently, the child care industry in Oswego County has experienced many changes. In 1995, two licensed day care centers were forced to close their doors for financial reasons and low enrollment. Another day care center is in the process of reorganizing in an effort to remain open. Just a few years ago child care centers had long waiting lists and were usually operating at capacity. Closing of day care centers has created a lack of child care opportunities for infants and school age children.

In the past two years there has been an increase in the number of registered family child care providers. A family child care provider is someone that is registered with the State and is permitted to watch a certain number of children in his or her home. The increase in family providers may be because of the local economy with people wishing to go into business for themselves and the availability of start-up funding provided by a grant from New York State which has been available through the Oswego County Child Care Council.

Typically, family child care providers do not take care of infants. This is because when a provider cares for an infant, he or she must care for fewer children overall so that the infants can receive proper care. It is also more difficult for a family child care provider to take school age children because the provider must reside in the same school district as the children in order to access bus service.

Although there is a need for licensed day care centers in our area, it is anticipated that because of the additional regulations a day care center must comply with, and because of inconsistent demand for this type of child care, the future needs for child care in Oswego County will be primarily met by family providers.

3. Health Care

The national trend in medical and health care has been a move from private, individual health care providers to a managed health care system. Overall patient hospital stays for routine surgery have been drastically reduced as more minor surgery and other procedures are done on an out-patient basis.

Recently, Oswego County has experienced a decentralization of health care services. In the past five years numerous medical clinics have located throughout the county. It is not clear what the future delivery of health and medical services will look like in our country. However, because of the importance of government funding for the medical industry, Oswego County will most likely mimic any future national trends.

The future of nursing home care is also uncertain. Since people are living longer, there is a greater need to address long-term care for our aging population. However, the Federal government does not have a defined policy to address long-term care, in fact, at the national level there is a move to cut Medicaid reimbursements for various types of long-term care options.

Due to the lack of funds, the long-term care industry has taken some initiative in order to provide innovative care for New York's aging population. Adult care facilities provide rooms and congregate meals in a safe environment. In 1991, legislation was passed to create an assisted long-term residential care program, however, because of additional regulations this program has floundered in New York State. According to Carl Young, President of New York State Association of Home and Services for the Aging, "In 1989, the State approved legislation to permit the development of life care communities. Many other states have used these communities to save money and provide their clients a better way of life. This program has not taken off in New York State, but it is believed over regulation is the problem."

The need to address our aging population is a trend which cannot be ignored. The challenge will be to provide quality services in a time of budget cutting. Inevitably, New York State will need to become more innovative in this area and, since so much of this field is regulated by the State, Oswego County will adhere to the new State initiatives.

4. Public Safety

The trend in public safety facilities such as police, fire, emergency medical services and law enforcement has been to maintain the existing facilities and services. This trend is evident when reviewing the future facility plans for local fire and law enforcement providers. All of the local providers are interested in maintaining their existing facilities and in a few instances adding a small addition on to the facility to meet the current need.

According to those in the emergency medical services industry, as people age, an increase in emergency medical services is required. A study was conducted in a rural Oklahoma community and found that utilization rates for ambulance services increase as the age of the population increases. For every 1,000 persons 80 years or older, 333 ambulance calls are generated, compared to 120 calls generated per 1,000 persons between the age of 70-79 (Doeksen and Leonard 1981).

5. General Government

The trend for general government is downsizing and privatization. Therefore, there is no anticipated need for any additional general government facilities. The trend is to maintain or even consolidate the existing facilities. However, many local governments in rural areas have inadequate facilities for record-keeping, local courts, and general community needs.

6. Cultural

Public funding of cultural facilities at the national and state levels has decreased and it appears that this trend will continue. There has been a trend to utilize cultural facilities for as many purposes as possible in an effort to maximize their potential. The cooperative use of facilities by multiple public and private entities is a trend that will most likely continue.

C. ANALYSIS

The direct role of Oswego County in the development of community facilities is limited. As previously illustrated, the county's primary role deals with the operation of county 911 and fire control, as well as county government buildings and facilities. The county is responsible for policing those areas of the county that do not have a local police force. The county also operates the Andrew Michaud Nursing Home. It has recently been recommended by the Goals 2000 Task Force that this facility be reviewed for possible transfer to private ownership. The county does not anticipate seeking an increase in their certificate of need.

1. Health Care

The health care sector has been one of the more active areas in community facility development in recent years. Oswego Hospital is acquiring the Lake Side Heart Center on West 4th Street in the City of Oswego. Oswego Hospital will also be developing new clinical and out patient services at the Seneca Hill site. Oswego County Opportunities has built a new clinic on George Street in Oswego to replace the Frank C. Meyer Clinic. A potential operator has expressed interest in developing a nursing home at a location in central or eastern Oswego County, however, a certificate of need has not yet been secured. A.L. Lee Memorial and Oswego Hospitals are in the final stages of completing expansion of their medical office buildings. A.L. Lee Memorial is currently seeking possible locations for an additional primary care center in Oswego County.

Health care also includes caring for our aging population. Currently there are 699 nursing home beds in Oswego County. There is one adult day care program which is operated by St. Lukes. This program usually operates at capacity, although St. Lukes does not currently have a waiting list for this program. However, those involved in the administration of the day care center feel that another program is needed. The current adult day care center focuses on medical nursing care. The other type of permitted day care is the social model which focuses on Alzheimer patients. It is felt that a social day care center is needed in Oswego County and should be pursued. It should be noted that most of the adult day care funding comes from private funding or Medicaid and that day care is much less expensive than nursing home care. However, adult day care does not serve the same population as do nursing homes. Therefore, nursing homes cannot be replaced by adult day care centers, but adult day care centers can improve the quality of life for older community residents and can help them remain in their own homes longer.

According to the 1990 Census, the Town of Orwell and the cities of Oswego and Fulton had the greatest percentage of persons age 50 and older. The majority of the Town of Orwell's older population fall in the 50-59 age category, while the majority of the cities of Fulton and Oswego's older population falls in the 62 and older category. It would appear that the two cities will continue to be focal points for additional services to the older population.

2. Child Care

Child care is often overlooked when discussing community facility needs, primarily because child care is viewed as an individual family need and not a community need. However, if private child care becomes too expensive for or is not accessible to local residents, then the availability of the local work force is affected and can have a negative impact on a community's ability to attract employers. In Oswego County the child care industry is in a state of flux. Day care centers have closed and there is a predominance of family care providers. There are a few theories as to why this is happening. One factor is the local economy. As of late, there have been layoffs in the higher paying occupations. Many of the higher paying jobs have been replaced with service sector jobs which do not pay as much. This may change the economics of the choice between working and staying at home to care for children. There is anecdotal evidence that this has changed two working parent families to a one parent working families and thus there no longer is a need for child care. Additionally, the rules and regulations concerning child care centers in New York State are very restrictive and can be very costly to comply with. There is talk of revising some of these rules so that child care services can be delivered in a more cost effective manner. However, it should be noted that providers and parents agree that many of the rules and regulations pertaining to child care in New York State are effective and necessary to ensure the safety of the children. There is also a very active unregistered network of child care providers in the county. An unregistered provider does not mean that the provider is unreliable; it does indicate that he or she has not gone through the State screening process.

Opportunities for child care are tied to the economy; when unemployment is low there is a need for child care. However, child care is also seen as a community asset which allows for a competent and reliable work force; thus a good child care system is needed to attract business. Future government funding for child care activities is unknown, but it is anticipated that some money will need to be set aside for child care activities as people move from the public assistance system to the work force. This has been recognized in the recent Federal budget which provided some increases from proposed reductions in child care funding. The Child Care Council is in the process of analyzing the current need in Oswego County and when this report is completed it will be added to the Appendix of this plan.

3. Education

Many local school districts have recently had a difficult time getting their school budgets approved. For example, the City of Oswego brought their facility expansion plan to a public referendum twice and it was defeated both times. At the present time, the Oswego School District is uncertain how to meet their physical plant needs to accommodate increasing enrollment in secondary schools. The Oswego district will try to address some of the elementary needs by improving the existing facilities.

The Central Square School District has also faced budget difficulties and is looking to maintain their existing facilities. They anticipate expanding and updating the high school to better serve their students.

The Sandy Creek, Mexico, Hannibal, APW and Pulaski School Districts have conducted informal studies and have determined that their anticipated school age children in the area will remain at or around current levels. Therefore, they will focus on maintaining their existing facilities.

The Fulton school district completed facility renovations in 1995. They do not expect to need any additional facilities so their focus will be on upkeep and maintenance of existing buildings.

The Phoenix School District has just completed adding 29 classrooms to their elementary school to address an increase in students and consolidate operations. The Pennellville Elementary School will be transformed to a learning center for students with various special learning needs. The focus of the high school will be to maintain the existing facility.

At the public input meetings for the comprehensive plan, residents indicated a desire to utilize the school facilities more. Some residents felt that their local school facilities were under utilized for community meetings, activities and events. A few of the local school districts indicated that they currently work closely with community leaders so that their facilities can be utilized to the fullest extent possible. It was agreed that issues of maintenance and liability would need to be addressed in order to fully explore the school as an open public facility.

It is important to analyze demographic information to anticipate the future educational needs for Oswego County. If the population growth patterns continue as projected, there will be a need to evaluate educational facilities in those areas with the fastest growing school age populations. According to the 1990 Census, Williamstown, Albion, West Monroe and Palermo have the greatest percentage of 0-14 year olds. Since these are 1990 numbers, it can be assumed that these numbers reflect the current school age population.

These areas and other growing areas should periodically review the current elementary school enrollment and project the future student needs for middle and high school children. It is also necessary to review the current birth rates for these areas in order to anticipate any increases in future school age populations. These factors are indicators that additional school facilities may be required. Of course, an in depth analysis would need to be completed to substantiate the need.

4. Government

Governmental facilities are also dependent upon tax dollars for financing. Fortunately, Oswego County recently completed the Public Facility Center at Churchill Road and the Highway Garage on Route 104 in Scriba. With the addition of these two facilities, the county does not anticipate any need for additional public buildings. The only new facility may be a kitchen to accommodate the Senior Nutrition program for residents of the northern and eastern parts of the county. This facility would tentatively be located in the Pulaski area.

5. Public Safety

The majority of fire departments are not anticipating developing any new facilities. However, the Hannibal, Minetto, Palermo and Pulaski fire stations have plans to expand their existing facilities.

The Oswego County Sheriff's Department is not anticipating any expansion to their existing facilities. The villages of Phoenix, Pulaski and Central Square anticipate maintaining their existing police facilities. The cities of Fulton and Oswego also do not intend to expand their physical public safety facilities. The New York State Police allocate services on a regional basis. Currently there are no expansion plans proposed.

6. Cultural Facilities

To date there are no plans to develop any public cultural facilities such as theaters, auditoriums or art galleries. However, all the entities involved in providing public cultural facilities are interested in maintaining their current facilities.

The county is interested in continuing to work on the Oswego County Nature Park at Camp Zerbe Implementation Plan, as well as maintain Camp Hollis. As previously mentioned in the Cultural section of this plan, there are plans for four new museums in Oswego County, all of which would be operated privately.

7. Summary

Overall recent population growth has been greatest in the southern townships and the Town of Scriba. Therefore, these areas are more likely to face possible deficiencies and should analyze their existing community facilities in greater detail to ensure that adequate child care, schools, medical emergency and long-term care facilities will be in place when required. Planning for community facilities is one element of creating a community which is attractive to those businesses required to meet a community's economic needs. If community facilities are not planned, then the quality of life for the residents of these areas will suffer.

D. GOALS, OBJECTIVES AND STRATEGIES

GOAL: ENCOURAGE AND SUPPORT MEASURES TO EFFICIENTLY PROVIDE COMMUNITY FACILITIES NEEDED TO PROTECT THE PUBLIC HEALTH, SAFETY AND WELFARE AND ATTAIN THE QUALITY OF LIFE DESIRED BY COUNTY RESIDENTS.

OBJECTIVE 1: Encourage and support the development of health care facilities needed to provide cost effective health care services to all county residents.

STRATEGIES:

- a. Provide technical assistance and information in the siting of health care facilities.
- b. Support provision of additional health care services in community service centers throughout the county.

OBJECTIVE 2: Ensure that adequate emergency services are available to all county residents.

STRATEGIES:

- a. Implement the 911 Emergency Response Program.
- b. Share information on population growth trends with emergency and public safety providers to assist in planning for adequate services.

OBJECTIVE 3: Strive to achieve the most efficient and cost effective use of our public education and other public facilities while maintaining and ensuring quality education of the students in Oswego County.

STRATEGIES:

- a. Encourage the use of educational facilities for other community purposes.
- b. Work with municipalities and school districts to discover ways to eliminate barriers, such as liability issues and maintenance costs, to increased public use of school facilities and municipal buildings.
- c. Encourage new facilities to be designed in a manner which offers flexibility for public use.
- d. Research the possibility of having shared county-wide liability insurance which would cover municipalities that participate in an "open" building program.
- e. Encourage all public entities to develop five year capital improvement programs and share this information in order to facilitate cooperative projects and community-wide fiscal stability.

OBJECTIVE 4: Encourage availability of a wide range of safe, affordable and registered day care and family child care facilities for the residents of Oswego County.

- STRATEGIES:**
- a. Support the Oswego County Child Care Council's efforts to provide affordable, quality child care options for Oswego County families.
 - b. Encourage county residents to use registered child care providers.

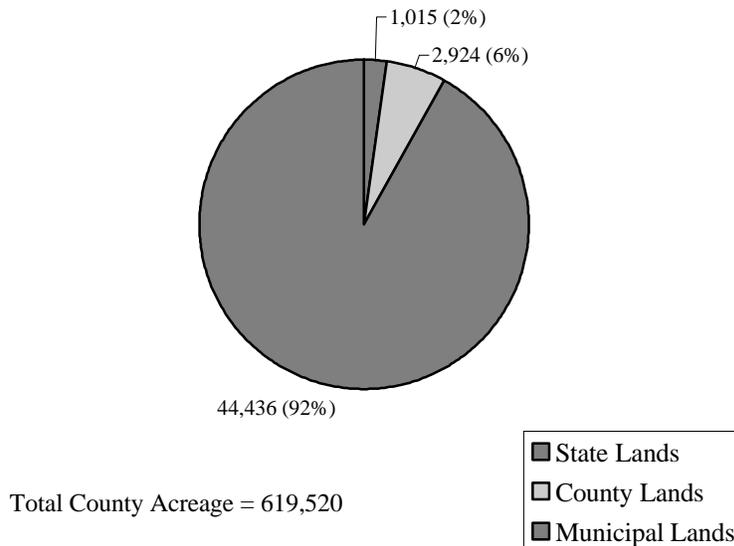
VIII. PARKS, RECREATION AND OPEN SPACE

A. INVENTORY

1. New York State Public Lands

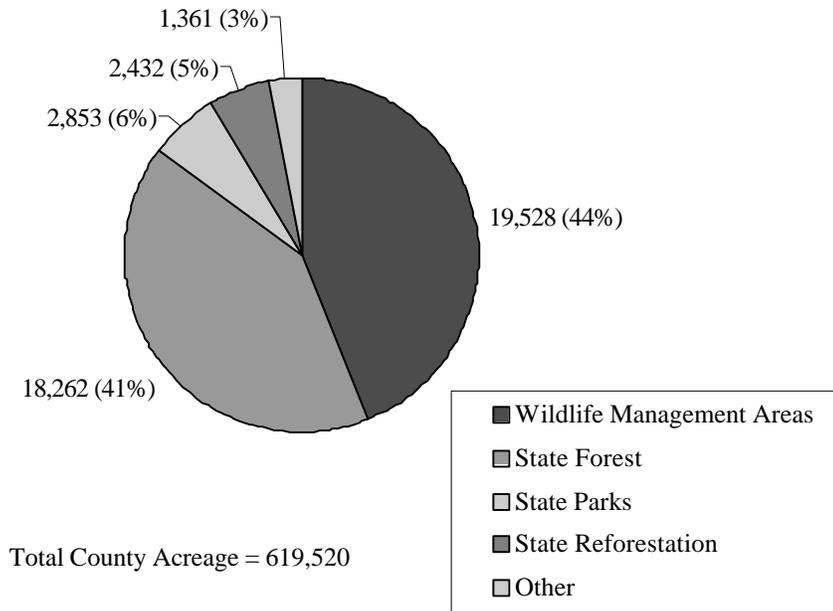
Oswego County is fortunate to have a number of State parks, recreation areas and open spaces. Selkirk Shores State Park for example provides lakefront park space while Battle Island State Park offers local residents and visitors a public golf experience. The State has large land holdings in the county such as Winona State Forest (renowned for its cross-country ski trails) and Happy Valley Wildlife Management Area which provides open space and wildlife habitat. On the other hand the Oneida Lake State Fish Hatchery stocks the most heavily fished inland lake in the New York State and the Salmon River hatchery in Altmar is responsible for re-establishing the salmonid sportfishery in Lake Ontario. These important State lands and facilities are key recreational resources and important tracts of public open space. (Figure VIII-1 and Figure VIII-2)

Figure VIII-1: Public Recreation Lands in Acres
Oswego County



The majority of publicly owned land, especially state forest and reforestation areas, is located in the eastern and northern portion of the county. The estimated combined total land area owned by the State comprises over 43,000 acres in Oswego County. Of this total land area, over 20,000 acres are wildlife habitat areas (Appendix VIII-A). Other State properties of significance in Oswego County are the State Barge Canal lands under the jurisdiction of the New York State Thruway Authority, and the Oswego County Trail which runs from Fulton to Cleveland and is leased from the New York State Department of Transportation. The State University of New York at Oswego also operates a large property, including recreational facilities associated with the college.

Figure VIII-2: State Recreation Lands in Acres
Oswego County



The following is a brief summary of State recreational land holdings in Oswego County (Appendix VIII-A for a more detailed list of public lands in Oswego County).

a. State Parks

- * Selkirk Shores State Park is a 980 acre waterfront park on the shore of Lake Ontario in the Town of Richland. The park provides camping, fishing, cabins and a swimming beach. See Appendix VIII-B for more information.
- * Battle Island State Park is a 235 acre riverfront park and golf course located on the Oswego River in the Town of Granby. The property provides cross-country skiing in the winter.
- * Mexico Point Park is a 120 acre park located on the west side of the Little Salmon River outlet to Lake Ontario. Located in the Town of Mexico, the park is leased by the town from the Office of Parks, Recreation and Historic Preservation for use as a town park and provides a public beach to local residents. The park also provides hiking and picnicking opportunities.
- * Fort Ontario Historic Site is a historic fortification located on the eastern shore of Lake Ontario's Oswego Harbor. The fort is in a 36 acre park. The site provides Civil War era military demonstrations and contains a research library and historic cemetery. The park provides an excellent view of Lake Ontario and provides picnicking and historical interpretive opportunities to the public.
- * Frenchman's Island State Park is a 26 acre island in Oneida Lake. This historic site is a state park accessible by boat only and is used mainly for wildlife management and conservation and is home to large populations of migratory birds and waterfowl.

b. State Wildlife Management Areas

There are a number of State wildlife management areas in the county which provide valuable open space for wildlife habitat and recreational pursuits. All of these areas are managed by the NYS Department of Environmental Conservation and all provide trails for public access. These areas include Little John, Happy Valley, Big Bay and Deer Creek Wildlife Management Areas and provide trails for fishing access, hiking, mountain biking and snowmobiling. See Appendix VIII-A for a list of State wildlife management areas.

c. State Forest and Reforestation Areas

There are approximately 18,262 acres of State forest in Oswego County, mainly in the northern and eastern portions of the county. Many of these state forests, especially Winona State Forest, provide trails which are open to cross-country skiing, hiking and biking. These state lands are also open to snowmobiling and hunting in designated areas. A list of state forests is provided in Appendix VIII-A for more detail.

d. State Fish Hatcheries

The Salmon River Hatchery is located on Route 22 in the Village of Altmar. The facility provides an information booth, aquarium, mounted fish specimens, fishing lure display and hatchery overlook balconies. The hatchery provides fish for stocking of salmon and trout to the Great Lakes and tributaries.

NYS Oneida Lake Fish Hatchery is located in the hamlet of Constantia on Route 23 along the north shore of Oneida Lake. The facility provides self-guided tours where visitors can observe hatchery operations including entering, tagging and egg taking.

e. Other State Lands

Other state lands include the New York State Canal lands and locks, Mexico Point Boat Launch, various fishing access points along the Salmon River and other Lake Ontario tributaries, the Salmon River falls overlook, and property owned by SUNY Oswego including the college campus and Fallbrook recreation center. These lands provide a number of opportunities to view wildlife and nature, and provide public access to open space and waterfront areas. Other properties owned by the state, including canal flood control and the Oswego County Recreation Trail, provide open space and recreational opportunities to county residents. See Appendix VIII-A for more information.

Figure VIII-2 shows a representation of the acreage of State Land in Oswego County. (Map 26)

2. Oswego County

Oswego County has a number of land holdings throughout the county. Although most of these lands do not contain extremely large blocks of open space many county reforestation areas are contiguous to or contained within State lands. These lands complement some of the large tracts of State land throughout the county.

A complete inventory of County lands is found in Appendix VIII-A. Key recreational properties are described below.

a. The Oswego County Nature Park at Camp Zerbe

Camp Zerbe was purchased from the Syracuse Boys Club in 1992 with a grant from the 1986 Environmental Quality Bond Act. The county is developing the property in accordance with a 1992 development plan as a nature park offering county residents a variety of recreational and educational opportunities. The park is in a rural natural area, covered with northern climax forest, successional woods and wetland vegetation. Camp Zerbe covers 364

acres of which a large portion is a Class I New York State regulated wetland. The property was combined with contiguous county reforestation lands to bring the total acreage of the park to 574 acres. A 24 acre kettlehole, Lake Loraine, and two other smaller kettleholes, Ike Allen Pond and Edick Pond are in the park. Currently, the park is utilized as a rustic summer day camp and nature center. The camp's structures consist of a main lodge, nature interpretive center, meeting center and other support buildings. Existing recreational facilities consist of court and field games, picnicking, hiking, canoeing and fishing access on Lake Loraine. The property is contiguous to the 8,645 acre Happy Valley State Wildlife Management Area. There is ample room to expand and improve Camp Zerbe's current facilities.

In 1993 and 1994 many of the objectives of the development plan were implemented including development of a nature trail loop and a trail which will eventually encircle Lake Loraine. Other recent improvements were made to the Nature Interpretive Facility (dedicated to late county legislator William Britton), the caretakers cabin, and Meeting Center (dedicated to late county legislator "Paco" Malone). Structural improvements were made to the Main Lodge and parking facilities, and electrical upgrades to all facilities are currently underway. Current implementation plans include an outdoor pavilion, restroom facilities, an improved picnic area, trail and parking improvements and additions to current trails.

b. Camp Hollis

Camp Hollis is a 37 acre residential youth camp on Lake Ontario in the Town of Oswego. The camp is on Camp Hollis Road with easy access just one mile from State Route 104 via West Lake Road. The camp is set in an open area and is surrounded by successional forest. A small pond is located on the far eastern end of the property. Facilities consist of an arts and crafts building, dining hall, cabins, a small amphitheater, picnic pavilion, swimming pool, court and field games, and a playground. Access to the lake is strictly monitored and limited because of the rocky shoreline and the roughness of the water.

c. Oswego County Lakeshore Nature Park

The 27 acre Oswego County Lakeshore Nature Park is adjacent to the Oswego County Industrial Park in Oswego on the lakeshore side of Conrail railroad tracks. The property is in an environmentally sensitive area and was dedicated for recreation and lake access. Approximately half of the site is part of Teal Marsh, a Class I State regulated wetland. The rest of the site is predominately successional growth forest. A beach and rock shoreline approximately 1,200 feet in length runs along the Lake Ontario shoreline. The only man-made feature is a deteriorating concrete retaining wall built some 50 years ago which runs parallel to the shoreline for 200 feet. A trail was developed in 1993 with funding from the Environmental Quality Bond Act of 1986.

d. Independence Park

Independence Park was dedicated in November 1995. It is located on Riker's Beach Road in the Town of Scriba and was acquired by the county from the Sithe Independence Partnership. The park includes approximately 700 feet of lakefront with a 3,500 foot nature trail winding through woodlands and wetlands. The trail terminates at a raised observation mound on the edge of Lake Ontario. The park provides opportunities for hiking, cross-country skiing and is perfectly suited to observe and photograph birds and wildlife on a major song bird migration route.

e. Oswego County Reforestation

According to Real Property tax records, Oswego County maintains approximately 2000 acres of reforestation land. These properties are undeveloped and are open to hunting and fishing. Some State funded snowmobile trails also cross some of these parcels. These properties are more concentrated in northern portions of the county and many of them are contiguous to large tracts of State owned land. Exchange of some properties within Happy Valley Wildlife Management Area for State parcels contiguous to the Oswego County Nature Park at Camp Zerbe has been discussed in order to complete a nature trail loop around Lake Loraine. (Map 26)

f. Oswego County Airport Park

Original plans for the Oswego County Airport included a proposal for a county park on property adjacent to the airport. Major components of the park plans were a four mile jogging trail, tennis and basketball courts, playing fields, a playground and a picnic area. The location proximate to the Fulton population center of the county suggests that such a facility could offer recreational benefits to local residents.

A few major components of the plan have not received serious consideration due to lack of funding. These projects must be reviewed in the context of current and planned airport operations and development. According to airport management, approximately 60 acres are reserved for recreational use. Future plans could include developing athletic fields at the old Durfy gravel pit encompassing about 280 acres off of Calkins Road. Also planned is a toddler playground pending demolition of the old EAA building on Route 176. It is hoped that by improving facilities to include professional regulation-sized athletic fields that little league and regional/national soccer tournaments would draw outside interest.

g. County Railroad Rights of Way

Oswego County has acquired abandoned railroad right of ways (ROW's). Acquisition of these properties represents foresight by the county, essential to providing intact corridors for future infrastructure improvements. The primary intent is for use of these right of ways to provide future water lines, sewer routes, communication corridors or other linear uses that may develop in the future. However, some areas may also offer recreational trail opportunities.

County owned ROW's are distributed throughout the county including sections in Williamstown, Albion, Richland, Sandy Creek, Mexico, New Haven, and the Hojack line which extends from Furniss Rd. in the Town of Oswego through Hannibal to the Cayuga County line. Smaller segments are located in the Town of Scriba. Many of these segments are interrupted by parcels which are privately owned and offer limited trail potential at this time, but larger segments are currently being informally used by local residents for walking, hiking, jogging and bicycling. The ROWs are in good condition with respect to potential trail development. County ROW's are generally 80 to 100 feet in width. Grading, stream and street crossings are required in some locations to prepare for recreational uses.

h. The Oswego County Recreation Trail

The 28 mile Oswego County Recreation Trail a formerly abandoned railroad right of way (ROW), traverses the county from Maple Avenue, just east of the City of Fulton to the Oneida County line in the Village of Cleveland. Currently the trail is leased by the County from the New York State Department of Transportation for use as a formal recreation trail, but the County plans to eventually acquire the ROW from the State pending DOT processing. An informal trailhead parking area is located on County Route 6. The trail extends east to the Village of Central Square where it ends at the Central Square Railroad museum. East of IB81 the trail continues to the hamlet of Constantia crossing a number of creeks and forested lands including the Toad Harbor Swamp complex and the Hastings Town Park. In Constantia the trail runs through the southern portion the State Fish Hatchery, about 1/8 mile from Oneida Lake. The trail continues east through fields, orchards and forest to the Village of Cleveland and a large village green directly next to the old glass works. From Cleveland the ROW continues into Oneida County toward Sylvan Beach. In Oneida County the ROW is not currently used for formal recreation but plans are being formulated to extend the trail into the Town of Vienna.

The County Recreation Trail is enjoyed primarily by local residents who live along the corridor but the trail facilitates a number of uses. During an inventory of the corridor in the summer of 1995, a number of bicyclists and joggers were observed and a plan for trail improvements is currently underway. The trail is part of the Oswego County Snowmobile trail system and is groomed by the Oswego County Department of Public Works during the winter. (Map 27)

3. Regional

a. State Snowmobile Trail System

Oswego County receives a great deal of lake effect snow as the result of its geographic location. The northern part of the County is in the Lake Ontario snowbelt. Due to heavy lake effect snows Oswego County is a prime area for snowmobilers who transport sleds from areas where snowfall is less consistent. Oswego County has 288 miles of existing State funded trails on private and public lands maintained by local snowmobile clubs and by the Oswego County Department of Public Works.

Although the Oswego County Department of Planning and Community Development, the Department of Public Works and the Oswego County Snowmobile Association have been participating in the New York State Trail Grant Program since 1986, increased club memberships have indicated that greater use of the trail system is inevitable. Our system has evolved into a quality network of safe and scenic trails and the county's three year snowmobile trail plan sets guidelines for addressing problem areas. The County is working with local clubs to make the trail system better, safer, and easier to navigate. (Map 27)

Lewis County is linked to Oswego County via a Snowmobile Trail corridor and a number of improved and seasonal roads. Snowmobile traffic in the north and east corner of the County is a major seasonal factor with links to Lewis and Jefferson Counties. The Oswego County Snowmobile Trail system provides access to the Tug Hill and Adirondack Greater snowmobiling region. Linkages are also provided that could connect the Adirondack region to points as far west as the Rochester area and the Finger Lakes region. Oswego County's 288 mile funded snowmobile trail system provides links to all of the surrounding counties.

b. New York State Canal System

New York State Canal lands in Oswego County extend from Oneida Lake and portions of the Oneida River, to the Oswego River Canal from the Three Rivers area to the City of Oswego. There are approximately 40 miles of canal in Oswego County including two thematic regions included in the NYS Canal Plan. These include "Oneida Lake Recreation" on Oneida Lake and "The Gateway to the Great Lakes" including the entire Oswego Canal. There are several locks on the Oswego Canal and one at the outlet of Oneida Lake in Brewerton. Remnants of the historic locks of the canal are found in Caughdenoy and along the Oswego Canal from Hinmanville to the City of Fulton along the former towpath. Remnants of the old canal towpath can be found along the east shore of the length of the Oswego River.

The Oswego Canal provides a waterway link from the Seaway Trail to the City of Syracuse, the Finger Lakes, Oneida Lake and ultimately to the Hudson and Niagara Rivers. This important historic resource ties the entire western and southern tiers of the County from the coastal zone of Lake Ontario into the interior of New York State. It is also an important link that ties the cities of Oswego and Fulton and points along the Oswego River and Oneida Lake and River with proposed improvements in the Inner Harbor project in the City of Syracuse.

c. Seaway Trail

Seaway Trail Inc. was established in 1978 to facilitate development of trail systems, bicycle paths, boating and canoe access, picnic and scenic overlooks and interpretive programs along the 454 mile ASeaway Trail≡ (Map 18). The Seaway Trail follows the Lake Ontario and Erie coasts from Pennsylvania to the St. Lawrence Seaway. The Seaway Trail is a scenic route that incorporates two lane roads for cars, bicycles, recreational vehicles and motor coaches. The recreational/scenic route connects numerous public recreational facilities and public access to the Lake Ontario shoreline including 38 parks, 13 wildlife management areas and 21 public beaches.

d. Tug Hill Tourathon Route and Trail System

The Tug Hill Tourathon is a 31 mile trail system in Winona State Forest in northern Oswego and southern Jefferson County. The trails extend through scenic forests, fields and along unplowed seasonal roads providing a quality recreation experience for mountain biking which is allowed on a seasonal basis. The Trails are regularly

maintained and groomed for cross country skiing and dog sledding in the winter. The system contains some of the best cross country ski trails in the northeast.

The Tour de Tug bicycle route is a 110 mile loop in the northeastern portion of the County which also extends into southern Jefferson County. The loop encompasses most of the scenic Tug Hill Region and is the route for the annual Tour de Tug bicycling event. Although this event takes place yearly the route is enjoyed by bicycle enthusiasts throughout the bicycle season.

4. Not for Profit and Cooperative Operated Lands

a. Sandy Pond Beach

In 1994, the Central New York Chapter of The Nature Conservancy purchased two large parcels of undeveloped land on the south spit of Sandy Pond comprising 77 acres and containing rare freshwater dunes and plants. The Chapter has entered into a cooperative management agreement with the New York State Department of Environmental Conservation. The property is part of the rare eastern Lake Ontario freshwater dune system. This barrier provides unique, high quality habitat for shorebirds and coastal vegetation that attracts concentrations of migrating and breeding birds. Sandy Pond Beach is a biological and recreational treasure and a major natural asset to county residents.

Until the purchase this area was privately owned and access to the spit was not legal. The Nature Conservancy, DEC and the friends of Sandy Pond Beach have joined together to establish and manage the area to preserve and restore the freshwater dunes and to protect feeding, nesting and resting habitats for birds while providing compatible public access to the shore. This area, known as "boaters beach" is informally used as a popular beach site for boaters in the area. Oswego County owns a small portion of the spit at the northern tip. (Map 26)

b. Snake Swamp

Snake Swamp Preserve is a 41 acre herbaceous marshland west of the City of Oswego and north of Lakeshore Road in the Town of Oswego. This area is owned (in part) by Save Oswego County, Inc., a private, non-profit environmental organization. It is managed to preserve its wetland cover and to protect the night herons (closed April 1st - August 31st). Educational use is encouraged.

The wetland itself has a history of instability because of fluctuating water levels. In the last 40 years, it has changed from swampland to herbaceous marshland (due to high water levels) and is in the process of returning to swampland conditions after decades of lower water levels. The area has served as a late summer roosting and loafing area for black-crowned night herons. (Map 26 and 29)

c. Noyes Sanctuary

Noyes Sanctuary is a 90 acre Onondaga Audubon Society nature preserve and bird sanctuary on Nine Mile Point Road (Route 63) north of its intersection with County Route 1. Frequently, eagles and osprey are seen while cutting across the corner of the lake to reach the northeast coastline. Great horned owls have been sighted on a year-round basis. During the May migration about 30 species of warblers are commonly sighted. The fruits that grow in large quantities on the viburnum species near the parking lot attract flickers, waxwings, grosbeaks, catbirds, vireos, and thrushes during the fall. A large barn swallow colony located along the lakeshore is reportedly the only such colony in the state.

d. Derby Hill

The Derby Hill Bird Observatory is a 50 acre sanctuary owned and operated by the Onondaga Audubon Society located on Sage Creek Road off Route 104 B, one mile west of its intersection with Route 3. Its location on

the extreme southeastern corner of Lake Ontario makes it an excellent place to observe migrating raptors. Hawks, eagles and vultures use winds and thermals to conserve energy and improve flight distance during migration.

There are three lookouts that provide observation opportunity to view species such as bald eagle, golden eagle, peregrine or osprey. Derby Hill is also an excellent spot to witness the fall migration of waterfowl, gulls and jaegers.

The woods and marshland are being prepared to serve as a center for nature education. This includes interpretive material and a trail system planned for the near future.

e. Amboy Environmental Education Center

The Amboy 4-H Environmental Education Center is a 150 acre facility off of NYS Route 183 in the Town of Amboy. The center offers self-guided interpretive trails and guided nature walks year-round. Use of the facility is free but there is a fee for overnight use. The area also provides marked trails which are open to the public.

f. Marquise Nature Education Area

This area is a 265 acre nature education and applied research area. The land was acquired in 1995 by Cornell Cooperative Extension from a former SUNY professor who wished to keep the property undeveloped. The property is located in the Town of Williamstown and contains a rare category 1 quaking mat kettle bog, a NYS DEC designation. The property has some informal trails and is only open to the public through permission.

g. Youth Camps

There are a number of youth camps in Oswego County, some of which own large parcels of land encompassing ponds, woods, wetlands, and streams. Youth camps generally provide both overnight and day use camping and recreation for group members. The Central New York Girl Scouts and Boy Scouts maintain approximately 1900 acres of land for camping while other groups like the Ontario Bible Conference and the Fulton YMCA provide summer youth programs to group members. Other programs include Arts in the Parks at various park properties, programs at Camp Hollis through the City-County Youth Bureau, the Catholic Youth Organization and other programs. (See list of youth programs, Appendix VIII-C, for further details) These youth camps, run by private and public organizations, provide a wide variety of educational, nature interpretative programs, and recreational activities for young people. For more information, see the Community Services Directory published annually by the Oswego City-County Youth Bureau.

5. Local Municipalities

Local municipalities are important providers of park, recreation and open space opportunities. City, town and village parks may be traditional green space parks providing ball fields, picnic areas and/or passive recreation, or may incorporate downtown streets, sidewalks and business districts into an integrated public/private recreational opportunity. Art exhibits, outdoor cafes, revitalized main streets and waterfronts can enhance private-for-profit ventures while providing for leisure, entertainment, recreation and historical interpretation for residents and visitors. Local governments have primary responsibility for providing for the active recreation needs of the resident population.

See Appendix VIII-A for an inventory of local municipal parks.

6. School Properties

Many school properties provide recreational opportunity to the public in the form of athletic fields, playgrounds and gymnasiums. These facilities not only provide for field sports, they also provide public green space for local communities. An inventory of school properties is included in Appendix VIII-A.

7. Private and Commercial

There are many recreational opportunities and facilities in Oswego County that are either privately or semi privately owned. Commercial golf courses and campgrounds, for example, are available to the public for a fee. These small businesses provide an important service to local residents and visitors to the county. They are also important to the local economy and the tourism industry. Other areas that provide opportunities are schools, churches, and landholding by corporations. Nestle Park, the Alcan Nature Reserve and Niagara Mohawk Properties are prime examples of cooperative recreational opportunities provided by private corporations.

A list of commercial and semi-public park, recreation and open space facilities is included in Appendix VIII-A.

B. TRENDS

1. Eco-tourism and Environmental Education

Ecotourism is gaining popularity on a world wide basis. Locations experiencing ecotourism growth are developing ways to deal with the impacts of tourism development in sensitive natural environments. Many naturalist tourists are flocking to areas ranging from the Amazon, Belize, and the Galapagos Islands to local trips to view migratory songbirds in their native habitat on the shores of Lake Ontario or dive to Great Lakes shipwrecks. More and more people are becoming interested in the study of nature and our heritage through viewing wildlife in its natural habitat and naturalist recreation vacations.

Ecotourism normally consists of guided tours of nature at its best, in the wild and under primitive conditions. Tours range from guided tour boats or white water rafting excursions to hiking or climbing in order to develop an appreciation for the environment, wildlife and the study of ecology. Programs at the 4H Environmental Education Center, Rice Creek Field Station and the Marquise Nature Education and Demonstration Area have been very successful in educating people of all ages about our environment and current environmental issues. Another example is an interpretive sign systems being developed to protect the rare freshwater dune system along Lake Ontario. (Map 26)

2. Wildlife Conservation

Over the past 25 years an increasing awareness of our impact upon the environment has evolved. Efforts to save endangered species are common knowledge from the comeback story of the Bald Eagle to the controversy over the Spotted Owl in the Northwest. Locally people are recognizing that open space for wildlife habitat must be conserved in order to provide for the future of outdoor pursuits like hunting, fishing, trapping, and viewing wildlife. Groups like the Oswego County Sportsmens Federation, The Ontario Dune Coalition, and Tug Hill Tomorrow are helping encourage cooperation between public agencies and private landowners to deal with local issues and concerns. These groups open avenues of communication for concerns ranging from providing adequate open space for hunting and trapping to providing information to the public regarding conservation of the local fishery.

3. Waterfront Revitalization

During the first half of the century many communities turned away from waterways due to pollution. Today, the advent of the post industrial age is causing communities to rediscover connections with waterfront areas as a means to mend the historical abuses. Well publicized efforts in cities like Cleveland, Boston, Baltimore, San Antonio and New York have developed and are currently implementing plans for waterfront revitalization, but locally communities are also recognizing the economic benefits of waterfront revitalization. From Oswego to Redfield residents are now benefitting from trails, boat rides, dinner cruises, historic museums and small business development associated with our waterfronts.

Waterfront revitalization reestablishes the historical precedence for the existence of the community. For example the City of Fulton was developed with strong ties to the Oswego River and the Canal. Established as a commercial center for the surrounding region, the river fostered the canal as a trade route and the falls provided power to run mills, factories and finally to generate electricity. Over time, however, the city's connection to the river seems to have been lost. Strip development obscures historic patterns and urban renewal has changed the character of the central business district.

Fortunately, some communities recognize waterways as an important economic resource. As industrial change occurs, large tracts of waterfront property may become available for reclamation as waterfront parks, riverwalks and urban linear parks reestablishing the waterfront as an important aspect of the local economy.

Locally, the success of Harborfest and the linear park in Oswego provide the economic framework for riverfront business. Waterfront projects are being undertaken in a number of communities. Many take the form of parks, recreation and open space projects providing recreation to local residents, public access to waterways, economic development in central business districts and open space in shoreline areas. Waterfront projects are currently at various stages of development throughout the county including the Town of Constantia, the Village of Pulaski, the Towns of Redfield, Albion, Orwell and Richland, the Town of Sandy Creek, the Towns of Schroepfel and Volney and the cities of Fulton and Oswego and Village of Phoenix. Other towns, including Hastings and Minetto, also have a number of potential projects and would like to develop better waterfront facilities. (Maps 28 and 29)

4. Greenways and Trails

Greenways are an important trend nationally and locally. Greenway planning is taking place from the populous Hudson Valley area to remote river valleys like the Salmon River. As part of a wider movement to protect linear features in the landscape, greenways are created around canals, waterfronts, rivers and coastlines. Greenways protect the natural areas and open spaces along key resources including lake shores, rivers and coastal zones. The greenway concept is to keep the corridor green with natural vegetation and create a way or trail system that connects points of interest along the corridor. Greenways have direct or indirect human benefit and use providing for hiking, wildlife observation, environmental interpretation, historical interest, fishing access, and stream bank or shoreline protection. In summary, they create a quality lifestyle for local residents.

The greenway approach is a response to the recognition that these environments are complex and sensitive to development while demand for waterfront property is steadily increasing. As shorelines in more populated areas become congested, we can expect an increase in the number of people who will want to move to less populated coastal areas. Especially in the case of the rare freshwater dune and wetland complex along the eastern shore of Lake Ontario, the need for open space planning is important if we are to conserve this precious open space resource that plays a key role in attracting thousands of fishermen, nature lovers and beachgoers each year. (Maps 6, 18 and 27)

Perhaps the greatest greenway success story of the last 10 years has been the conversion of abandoned railroad corridors into recreational trails in towns, rural areas and cities. As of February 1995 there are over 644 sites and 7000 miles of former railroad corridor nationally which provide recreation to walkers, hikers, bicyclists, runners, wheel chair recreation, equestrians and cross country skiers. Many trails provide non-motorized year round recreation while others provide for seasonal snowmobile use. Presently, 650 sites in every state include railroad right of ways being converted for recreational use. Greenway advocates throughout the country envision these corridors as an integral component of interconnected trails and transportation corridors including old canals, scenic river corridors, coastal areas and other remnant lands.

Much of this interest in trails and recreation corridors was catapulted by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). In this federal legislation rail-trail conversion was listed among the 10 specific enhancement recommendations. Approximately 17% of ISTEA funds have been granted to rail trail

projects. Recreation trails take the form of linear parks that connect park, recreation and open spaces together providing an alternative to driving as a means to access recreational facilities.

Demand for trails in Oswego County is increasing steadily. In 1994, residents in the Town of Oswego and Hannibal voiced support for the development of a recreation trail along the old Hojack railroad corridor. In addition more support for trails has been facilitated through the Salmon River Corridor Plan and the Canal Plan and groups which have advocated opening county owned railroad ROWs in the Towns of Mexico, Richland and Albion to recreational use. The Oswego County Snowmobile Association also supports trail development for all types of use and wants to be included in multi-season, multi-use trail development. Trail improvements have taken place at the Oswego County Nature Park at Camp Zerbe, Winona State Forest, along the Oswego River in the Town of Volney, the Village of Phoenix, the City of Fulton and the City of Oswego. Along the Salmon River trail development has been taking place on the south side of the reservoir, along the gorge and in the Village of Pulaski. (Map 27)

5. Historic Tourism

Local history is an integral part of Oswego County's parks, recreation and open space potential. Sites like Fort Ontario, Breitbeck Park, Lock Island and Mexico Point readily come to mind as historical and recreational resources. Local historians see history and local heritage as a special component of the recreational potential of the county. Museums and underwater parks are growing in popularity both nationally and locally, providing an important framework for education, interpretation and investigation of local resources.

Agriculture also has a strong history in Oswego County and provides a tie to the open space component of the plan. Large farms provide the opportunity for understanding local agricultural history and provide a vehicle for learning and agriBtourism which is growing on farms, orchards and during seasonal festivals. (Map 14)

6. Nature Parks and Interpretive/Education Programs

There is a national and local trend toward natural/heritage interpretation and environmental educational programs. Many communities run comprehensive programs in environmental education. Locally education programs are run at the 4BH Environmental Education Center, and Rice Creek Field Station, and plans to create an outdoor "nature as a classroom" area along eastern Lake Ontario are underway. At the same time interpretation of our local natural and historical resources is occurring along the Oswego Canal, Seaway Trail and many other greenway areas in the county. The trail center in Albion, the Bridge House Museum in Phoenix and many other scenic/historic areas complement efforts to improve park, recreation and open space opportunities for residents and visitors. (Map 26)

C. OPPORTUNITIES AND CONSTRAINTS

In addition to the discussion below, Appendix VIII-B provides an inventory and description of State, Regional and Local plans providing parks, recreation and open space opportunities for Oswego County.

1. Protecting Resources/Economic Benefits

Travel, recreation and tourism generates approximately 100 million dollars of economic impact to the county each year. In light of this fact, it is important to recognize that our natural resources are limited in their capacity to sustain certain types of recreational activity. Fishing has always been the mainstay of visitation to the county. In 1993, 52,323 nonResident licenses were sold in Oswego County. Increasing demand is evident in specific areas of the county. Along the Salmon River angler days increased from 7000 in 1976 to an estimated 180,000 in 1989, more than 25 times the number in a 13 year period. Many fear that the fishing may have leveled off due to zebra mussel infestation and imbalances in prey-predator species populations, but anglers continue to visit the county in large numbers. This illustrates the potential economic impact of recreational activities and the need for them to be planned appropriately to minimize adverse impacts to the natural environment.

The Eastern Lake Ontario shoreline is an example of the negative impacts unplanned recreational use can have upon the environment. Freshwater dunes are very limited in their ability to sustain trampling and vehicular traffic, however, the popularity of the area makes it extremely difficult to control adverse recreational impacts like ATV use and motorized biking in sensitive areas. As a result, "blow outs" or erosion has occurred as stabilizing vegetation has been destroyed. Planning the appropriate placement of public access to recreation areas, and the proper type and level of activity as well as voluntary guidelines for property owners to plan for the use of their properties are all necessary.

Cost is obviously a constraint in developing recreational facilities but the benefit to the economy must be considered when making these investments. One hundred more visitors to the county per day creates approximately \$2 million in business receipts in a year. Unfortunately local communities which want to see further recreational development may be deterred by the current economic climate. The City of Fulton, for example, is very interested in revitalizing their waterfront area, but the recent closing of the Miller Brewery and other local economic trends in industry have interfered with their ability to fund projects like the riverwalk, marina upgrade and a street tree program.

The proximity of recreation to private residential development can also be prohibitive. In many areas of the county, private landowners view the development of recreational facilities, especially trails, near their homes as an invasion of privacy and worry about their own liability and increasing crime. These are legitimate concerns, and the rights of private property owners must be taken into consideration when developing recreational facilities in or near residential areas.

2. Opportunities

Regardless of the constraints to the development of parks and recreation areas there is much opportunity throughout Oswego County. Many population centers in the county are near waterways providing excellent opportunity to improve downtowns and increase quality of life while creating an economically viable tourism industry. A number of public and semi-public park areas provide access to a wide range of recreational activities in locations ranging from the forested wilderness of the Tug Hill Plateau to the beaches and bluffs of the Lake Ontario shoreline.

a. Water Resources

The opportunities for Oswego County lie mainly in its abundant water resources. Major water resources of the county include Oneida Lake, the Oneida/Oswego River, the Salmon River and, of course, Lake Ontario. There are also a number of smaller under-utilized recreation areas like Lake Neatahwanta. The county's abundant fishery has always been the focus of recreational activities but the diversity of parks, recreation and open spaces in the county provide an enormous potential for further development, especially with respect to environmental education and interpretation.

b. Greenways

Oswego County is recognizing the benefits of greenways as a means to revitalize communities and to connect large open space lands. By improving water quality, maintaining open space, and enhancing access to public lands, there is the opportunity to increase availability of multi-season recreation pursuits. State and regional agencies are working to improve access to public lands for walking, hiking, hunting, and biking. Others are devoting efforts to improving parks and other open space projects on area waterways, trailways, historic areas and shorelines. Oswego County has enormous potential to link parks, recreation and open space areas through greenways, trailways and waterways. In fact, there are over 125 miles of corridor with greenway potential in the county with numerous connections to surrounding counties. Plans at the State and regional level have sparked a number of specific plans for all of the major water corridors. Greenway opportunities have provided the framework for these exciting projects, many of which have only begun to develop.

c. Corporate Conservation

Another opportunity in Oswego County is the willingness of local companies to allow conservation and recreation easements. According to "The Conservationist" corporations own a large percentage of land in North America comprising perhaps 1/4 of the land base in the United States (Vol. 48, #5 and 6). Companies normally keep spare land as buffers for security or safety reasons and as space for future expansion. Today companies realize that protecting the environment is a genuine concern of the majority of Americans. Many of the most successful companies recognize that conservation is a sound business strategy and it is beneficial to "green" their corporate image.

In Oswego County a number of local companies have given land grants or agreed to sell important land holdings to State or local municipalities. Sealright in Fulton has agreed to turn over riverfront property in order to develop recreation along the Oswego River. Niagara Mohawk has divested large tracts of land along the Salmon River Corridor for the purposes of greenway development and conservation. Site Energies and Alcan have developed buffers along Lake Ontario in order to conserve natural areas and allow public nature trails and access to the shoreline. These corporate investments in the county are extremely positive in improving the quality of life for county residents. These companies not only create employment but by recognizing the importance of parks and open space and providing areas for recreation they create quality opportunities for the community.

d. Scenic Byways

Transportation corridors provide recreational opportunities that complement greenways. Many of the parkways that Robert Moses developed earlier in the century remain quality scenic routes that link parks, beaches and population centers. In Oswego County the Seaway Trail provides links not only to parks like Selkirk Shores and Camp Hollis but to population centers like the City of Oswego. Opportunity for scenic byways and trailways exist along the Oswego River and the Salmon River Corridor. According to the President's Commission on American Outdoors, nearly 80% of Americans enjoy driving for pleasure and sightseeing. If these areas are developed properly they can provide a wide range of opportunity but without a formal recognition of their value and action to protect the attractiveness of the routes, scenic assets may be lost through the pressures of the development they have helped to attract.

e. Rail-Trails

Oswego County has acquired a number of abandoned railroad right-of-ways for the purpose of future infrastructure but public requests for their interim use as recreation corridors is growing. The ROW's have great recreation potential that can co-exist with gas lines or water lines. These corridors are quite scenic and in many cases have historically been utilized for informal recreation since their abandonment. Petitions have been submitted to the county to develop the Hojack Trail along the old railroad bed between Oswego and Hannibal and others would like to see the Oswego County Recreation Trail create a recreation corridor that will complement recreation plans for the north shore of Oneida Lake. In Oswego County, county-owned railroad ROWs have potential for recreational development because the nature of a railbed is that it is not sensitive to intensive recreation like snowmobiling or mountain biking. While many park trails are being closed to mountain biking, railbeds are already suited to the task.

f. Snowmobiling

Snowmobiling and cross-country skiing also bring potential for recreation to the area. Due to the heavy amounts of snowfall in the county, our location is ideal for winter recreational endeavors. Snowmobiling for example has increased dramatically over the past five years and snowmobilers bring much to the local economy. For many business owners the snowmobilers carry the recreational business in the winter that the fishing season brings to the area in other seasons. Hotel and restaurant owners in the Pulaski area, for example, have created a niche for themselves by capitalizing on snowmobilers. Oswego County has 288 miles of groomed snowmobile trails that are partially funded by the Bureau of Marine and Recreational Vehicles. The opportunity that this creates also aids development of other types of trails. Many snowmobilers favor the development of multi-use/multi-season

trails because many of them use trails for biking, hiking and fishing during the summer. The opportunity is encouraging due to the fact that snowmobilers provide volunteer labor and materials to develop trails for the benefit of all. (Map 27)

g. Nature Education

Besides the numbers opportunities for outdoor recreation, Oswego County has an enormous potential for nature education, interpretation and environmental study. In fact, the county has the potential to be a model for natural education, interpretation and environmental research. Facilities like the 4BH environmental center, the Oswego County Nature Park at Camp Zerbe, Rice Creek Field Station, the Salmon River Fish Hatchery, the Eastern Ontario Shoreline and Freshwater Dune System and the Seaway Trail provide residents and visitors with access to nature and nature education programs. Nature walks, nature trails and educational success stories are abundant in Oswego County and interest in developing interpretive programs for all of the major resource areas has been expressed by many county residents and organizations.

h. Sandy Island Beach

Currently, Oswego County is working with Seaway Trail Inc. and the Trust for Public Land to study the feasibility of acquisition of the property known as Sandy Island Beach to provide public access to Lake Ontario. The issue of the County or some other public entity acquiring this property for public access was raised at the Parks, Recreation and Open Space meeting of the comprehensive plan in March of 1995. As of 1996, the Trust for Public Land holds an option to purchase Sandy Island Beach and the County and Seaway Trail are currently developing an analysis of acquisition and operations to determine the feasibility of public management of the property by an agency or organization yet to be determined.

i. Lake Neatahwanta

Lake Neatahwanta is a 749 acre warm water lake located on the western edge of the City of Fulton. The lake is an important public recreation resource with public parks, swimming beaches, campground, boat launches and excellent fishery. Recreational use and the quality of recreational experience is affected by excessive aquatic vegetation growth and algae blooms.

The lake is easily accessible from State Route 3 connecting to I-481 one mile east of the lake and U.S. Route 104 eight miles to the west. Approximately five miles of the shore is predominantly wetlands. About 25% of the shore has been filled for recreational purposes including North Bay Campground, Bullhead Point and Recreation Park which are all owned by the City of Fulton. North Bay Campground is 60 acres with campsites, bathing beach, and boat launch and dock. Bullhead Point is about five acres and presently has an undeveloped dirt parking area along the shore. Recreation Park is 27 acres with a beach, pavilion and picnic grounds, and court and field games.

The Lake Neatahwanta Opportunities Plan developed in 1995 addresses mixed recreation/commercial use for municipal lands along the north and east shores of the lake. Five conceptual plans address the development of North Bay, Bullhead Point, the Recreation Park Esplanade, Public Gardens and lake trails as well as an approach to protecting open space and scenic views along the shoreline. The plan outlines a program that will foster the development of Lake Neatahwanta and complement the ongoing watershed management plan. The program includes picnic grounds, an outdoor amphitheater, a boat launch, a lodge for public use and other details for long term improvements to the lake resource. (Map 26 and 29)

j. SUNY Oswego Athletic Fields

The Southwest Athletic Fields, (Hidden Fields) are located on the SUNY College of Oswego Campus between Dormitory Road, NY Route 104 and Fred Haynes Boulevard. The fields are primarily used for intramural sports. SUNY's athletic fields are under-utilized especially during the summer.

k. O&W Railroad Promenade and Bikeway

East Park is a 4.5 acre urban park bordered by East Oneida, East Second, East Bridge and East Fourth Streets in the City of Oswego. Shade trees dominate the landscape and a playground is located in the southwest corner of the park. Three buildings are located within the perimeter of East Park: a synagogue on Oneida Street; the County Courthouse on East Oneida and East Second Street; and the County Legislative Office Building on the

corner of East Bridge Street and Second Street. Adjacent to the Legislative Office Building is an abandoned railroad tunnel. The park area is accessible on all sides by pedestrian walks. (Map 18)

In December of 1994 a joint City/County federal (ISTEA) grant application was awarded funding and is being administered through the State Department of Transportation (DOT). The first phase of the project will connect East Park with Fort Ontario and structural improvements and restoration of the old railroad tunnel which runs between the County Courthouse and the County Legislative Office Building. A future phase will complete a link between the East and West Side Linear Parks by upgrading the old railroad trestle bridge. The ultimate goal is to unite the west side of the City of Oswego with a bicycle/ pedestrian link to East Park and Fort Ontario.

I. Mexico Point

The State of New York Office of Parks, Recreation and Historic Preservation owns approximately 120 acres of land on the west side of the Little Salmon River outlet in the Town of Mexico. The park is currently leased by the Town of Mexico for use as a town park. The park is directly across the river from the Mexico Point State boat launching facility and adjacent to historic Spy Island, home of revolutionary war figure Silas Towne. The property contains an extensive Class I regulated wetland, a natural protective feature on the Lake Ontario shoreline and a small sandy beach.

This State-owned Mexico Point property provides multiple recreational activities. The Oswego County Department of Planning and Community Development has helped the Friends of Mexico Point Park to develop a plan which is currently in the implementation stage. The facility provides for the preservation of historic Spy Island and public access to Lake Ontario.

Park uses include picnicking, trails, swimming, shoreline fishing and historic interpretation. In the summer outdoor performances take place. Proposed future improvements include meeting rooms in existing buildings, cross-country skiing and nature trails, and historic displays. (Map 26)

m. Lock Island and Henley Park

Lock Island is an eight acre island between the Oswego River and Lock One of the Oswego Canal in the Village of Phoenix. The Island is directly across from the Village's Henley Park overlooking Lock 1. The property became more accessible when the State of New York constructed a new bridge over the Oswego River. In anticipation of this improved access, the Village of Phoenix worked with the Oswego County Planning Department, the NYS DEC, and Niagara Mohawk Power corporation (who granted the north half of the island to the village) and NYS Department of Transportation, to develop a conceptual recreation plan for the island and Henley Park. These plans were incorporated as part of a recently adopted Village Comprehensive Plan. This plan complements the Oswego River Scenic Assessment and the State Canal Plan. In 1994 the Village hired a consultant to develop construction drawings for the project. Facilities slated for the island include a cartop boat launch, parking for cars and trailers, fishing access, picnic areas, a children's play area, and transient boat docking. Funding for initial improvements was made possible by an Aid to Municipalities grant through the New York State Thruway Authority in 1994. The New York State Department of Environmental Conservation has committed to requesting funding for portions of the project to provide fishing access to the Oswego River. The New York State Thruway Authority will continue to contribute to the recreational development of Phoenix as a Canal Port.

The project offers both local and regional recreational opportunities of high priority in Oswego County and complements community revitalization and economic development objectives of the Village of Phoenix. (Map 28)

D. GOALS, OBJECTIVES AND STRATEGIES

GOAL: DEVELOP A COMPREHENSIVE RECREATIONAL SYSTEM OF MAJOR PARKS, RECREATION SITES AND OPEN SPACE AREAS LINKED TO ONE ANOTHER AND TO COUNTY POPULATION CENTERS BY A GREENWAY AND TRAIL SYSTEM.

- OBJECTIVE 1:** Develop greenways and trail system corridors as the foundation around which local parks, recreation sites and open space can be planned.
- STRATEGIES:**
- a. Establish and support greenway status for the NYS Canal System, the Lake Ontario Coastal Zone and the Salmon River corridor.
 - b. Support and seek funding to implement specific greenway projects outlined in the NYS Canal Plan, the Oswego River Scenic Assessment, the Salmon River Corridor Plan, and the NYS Open Space Plan.
 - c. Develop a county wide trail system including: 1) improvements to the Oswego County Recreation Trail; 2) evaluation of County-owned railroad ROWs for inclusion in the system; 3) trails in greenway corridors to improve access and public education opportunities; and 4) consideration of private/public partnerships for development and maintenance, safety, concerns of adjoining landowners and all potential trail uses.
- OBJECTIVE 2:** Focus on appropriate waterfront sites for the purpose of providing a wide range of recreational opportunities.
- STRATEGIES:**
- a. Complete the feasibility study for development of Sandy Island Beach as a public beach with adequate facilities for a designed carrying capacity and support development if feasible.
 - b. Provide technical support, assistance and grantsmanship to local projects which provide protection and access to lands along shorelines, including redevelopment of the Fitzgibbons site in Oswego.
 - c. Advocate implementation of specific projects on State and county lands to provide both boat and pedestrian access to public waterways which is compatible with existing management plans, including options for increased use of Camp Hollis.
- OBJECTIVE 3:** Promote Oswego County through development and promotion of environmental education and nature interpretation facilities and activities.
- STRATEGIES:**
- a. Complete implementation of the Oswego County Nature Park at Camp Zerbe development plan.
 - b. Identify resources that have scientific or educational importance and natural heritage value and encourage education, interpretation and research opportunities relating to these resources.
 - c. Study relationships between recreation and tourism and develop an economic analysis of tourism opportunities related to parks, beaches, trails, scenic landscapes, historic sites and recreational water use.
- OBJECTIVE 4:** Relate major recreation sites to the transportation system in order to provide appropriate accessibility.
- STRATEGIES:**
- a. Provide a well coordinated and uniform signage system to identify and direct traffic to public recreation facilities.
 - b. Develop and/or improve parking and access to park, recreation and open space areas on the county highway system.

OBJECTIVE 5: Support efforts to satisfy the active recreation needs of county residents and visitors.

- STRATEGIES:**
- a. Assist municipalities in developing local parks and recreation plans.
 - b. Develop and manage public lands to complement park, recreation and open space facilities that are better provided and managed in the private for profit or not-for-profit sector.
 - c. Include consideration of all potential recreation uses in management plans for county properties.

IX. ECONOMIC DEVELOPMENT

A. PROFILE OF THE OSWEGO COUNTY ECONOMY

1. Employment

The most recent available annual figures show that an average of 51,700 Oswego County residents were employed in 1995 and 4,900 were unemployed yielding an annual average unemployment rate of 8.6 percent. Monthly unemployment rates have fluctuated between 5.1 and 12.8 percent during the 1990's, but have consistently remained above the rates for the Syracuse Metropolitan Statistical Area (Cayuga, Madison, Onondaga and Oswego Counties). Unemployment rates have remained stubbornly high for twenty years reaching annual rates above ten percent in 1975, 1976, 1986, 1991 and 1992, and dipping below seven percent only twice, in 1988 and 1990. (Figure IX-1) Among adjoining counties, Jefferson and Lewis have generally had higher unemployment and Madison, Onondaga, and Oneida lower unemployment. Cayuga County has generally, though not always, maintained lower unemployment rates. (Figure IX-2)

During the 1990s total employment among Oswego County residents has ranged from a low of 47,300 in February, 1992 to a high of 53,900 in July, 1994. In spite of persistent high unemployment rates total employment has continued to generally trend upward along with overall population. However, in-county employment has fluctuated with peaks in 1985 and 1992.

2. Labor Force

Approximately 73% of males and 52% of females over the age of 16 were in the labor force in 1990. The figure for males is virtually unchanged from 1980 but the participation rate for females is a significant increase from the 44% rate in 1980. The most common occupations in Oswego County as of 1990 were operator/fabricator/labor (10,203), production crafts (8,072), administrative/clerical (7,954), and services (7,450). 1994 average annual wages varied widely between sectors with Transportation, Communications and Public Utilities (\$51,970) and Manufacturing (\$40,547) at the high end, and Retail Trade (\$11,838) and Mining/Agricultural Services (\$15,703) at the low end. Total annual average wages in Oswego County was \$27,999, the highest of any county in Central New York.

The largest industry group in terms of employment for residents of Oswego County in 1990 was manufacturing with 10,951 employed, or 21.1 percent of employed persons in the county. The second most important sector was retail trade with 9,342 workers representing 18 percent of employed persons. These figures were for Oswego County residents regardless of whether they work in or outside the County. Figures are similar for data by place of employment which covers all employees who work in Oswego County regardless of where they live. In 1990, 21.8 percent of those working in the county worked in manufacturing and 18.5 percent in retail trade. By 1994, manufacturing job losses left 18.7 percent of wage and salary employment in manufacturing and 19.3 percent in retail trade. All government, including educational institutions, is the single largest employment sector accounting for 27.5 percent of wage and salary employment in 1994.

3. Income

Median family income in 1989 as measured by the 1990 Census was \$33,888. The range by municipality was from a low of \$23,571 in Orwell to a high of \$50,085 in Minetto. Average per capita income in 1989 was \$11,792, a 25.3 percent increase from 1985. From 1975 to 1993 per capital personal income increased from \$4,681 to \$17,012 and when adjusted to 1993 dollars, from \$12,573 to \$17,012, a 35 percent increase. During the same period, per capita personal income in the U.S. increased from \$16,236 in 1993 dollars to \$20,800, a 28.1 percent rise. In 1990, 77 percent of households had wage or salary income, 12 percent had self

employment income, 27 percent received social security and seven percent of households received public assistance.

4. Business Establishments

Between 1985 and 1992, the number of business establishments in Oswego County increased by 16.7 percent from 1,687 to 2,089. This compares with overall employment growth of just 3.3 percent during this same period. Thus, the average number of workers per firm has declined from 20 in 1985 to just under 17 in 1992. Firms with fewer than 100 employees accounted for about 60 percent of private sector employment.

The largest growth in number of business establishments was in contract construction (+145 firms), retail trade (+99 firms), and services (+92 firms). Retail trade and services together account for about 60 percent of all business establishments with payrolls and 74 percent of retail and services businesses consist of firms with fewer than 10 employees. Across all sectors over 79 percent of firms had fewer than ten employees in 1992, yet it is estimated that these smallest firms account for about twenty percent of all private sector employment. By contrast, the 26 largest employers account for about 40 percent of all employment in the county.

Only fourteen establishments employed more than 250 people in 1992. A 1996 survey of the largest private sector employers shows that these firms are in the manufacturing, transportation, communications and public utilities, and services sectors. The largest manufacturing sectors in 1991 were food and kindred products, primary metals, and paper and allied products which together accounted for about 54 percent of manufacturing employment.

Figure IX-1: Unemployment Rate, 1975-1994
Oswego County

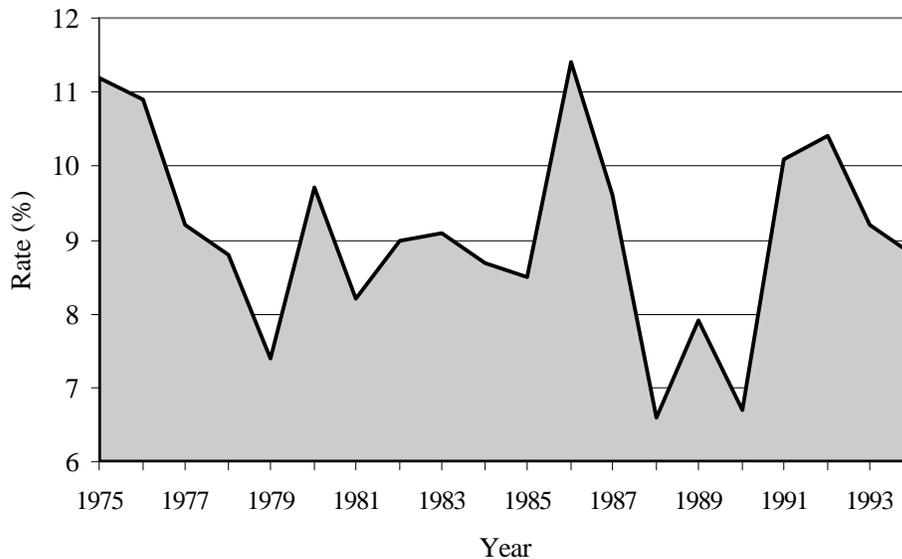


Figure IX-2: Regional and Adjacent County Unemployment Rates, 1994
Oswego County

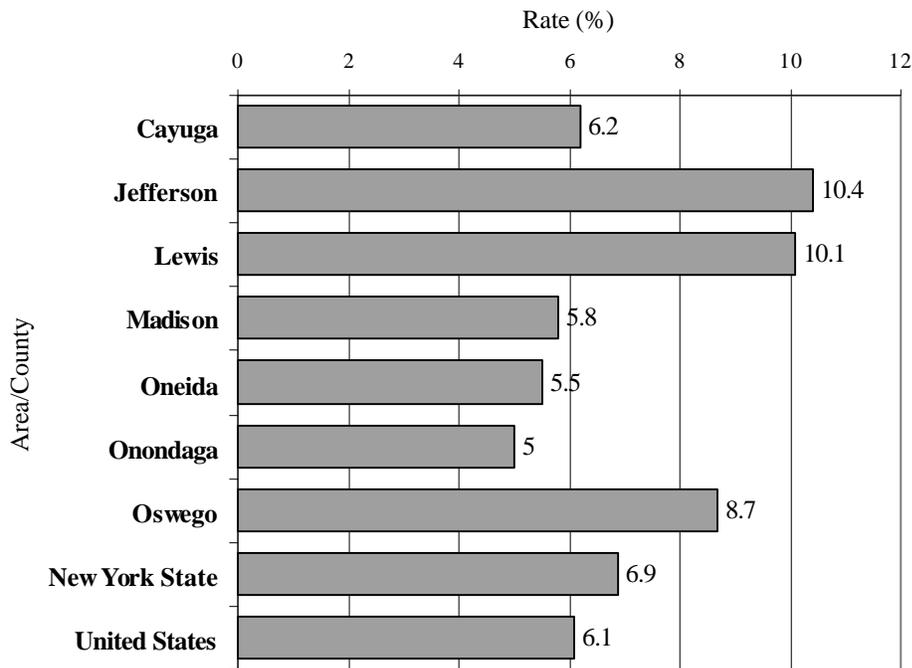


Table IX-1: Top 20 Private Sector Employers in Oswego County

<u>Rank</u>	<u>Employer</u>	<u>Employees</u>
1	Niagara Mohawk Power Corporation	1,500
2	Alcan Rolled Products	800
3	New York Power Authority	780
4	Nestle Chocolate & Confections	700
5	Oswego Hospital	676
6	Sealright Company	490
7	Oswego County Opportunities	421
8	Schoeller Technical Papers	352
9	Oswego Industries	350
10	A.L. Lee Memorial Hospital	320
11	Black Clawson Converting Machinery, Corp.	304
12	Birds-Eye - Dean Foods	282
13	Owens Brockway	280
14	Armstrong World Industries	260
15	St. Luke's Nursing Home	240
16	Price Chopper	227
17	P & C Food Markets	222
18	Tops Friendly Markets	220
19	The Fulton Companies	200
20	Wal-Mart	200

Note: Data includes full and part-time employees.

Source: Business Guide 1996, Oswego County Business

5. Retail Trade

The growth in retail firms and employment is reflected in retail sales figures which grew from \$263 million in 1977 to \$682 million in 1992 according to the Census of Retail Trade. (Figure IX-3) Due to the small number of firms in the General Merchandise category, sales were not reported in the Census of Retail Trade in 1992 so as not to provide information from which a single retailer's sales could be deduced. Among other sectors, Food Stores (\$177 million), Automotive Dealers (\$155 million), and Eating and Drinking Establishments (\$80 million) were sales leaders. (Figure IX-4)

In most categories the number of retail establishments has declined since 1977 indicating the replacement of smaller independent merchants, typical of city and village downtowns, with larger, national chain retailers most commonly found in shopping center and mall locations. However, recent growth in the number of Eating and Drinking establishments and Miscellaneous Retail Stores suggests a growth in tourism related and speciality retail businesses. (Figure IX-5)

6. Manufacturing

Despite recent declines in total employment, manufacturing is by far the largest private sector income producer in Oswego County. In 1994, manufacturing accounted for \$288 million in annual payroll or 27% of total payroll in the county. Until 1991, manufacturing was the largest sector overall accounting for nearly 30 percent of total payroll in that year.

In 1982 total value of manufactured products shipped was over \$2.4 billion with \$793 million of that value added by Oswego County industry. Capital expenditures on plant and employment topped \$63 million.

7. Government

Government overtook manufacturing as the largest payroll producing sector in the county in 1993 when just over 30 percent of total county payroll was in this sector. Government includes all Federal, State, County and local government as well as all public education including school districts and SUNY Oswego. In 1994 total government payroll was \$288 million. Table IX-2 shows the largest public sector employers.

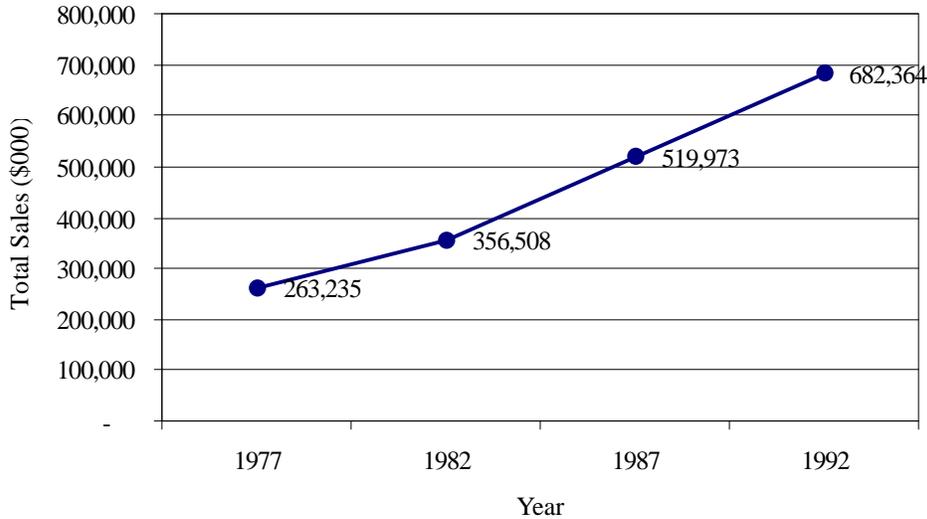
Table IX-2: Top 14 Public Sector Employers

<u>Rank</u>	<u>Employer</u>	<u>Employees</u>
1	Oswego County Government	1,541
2	SUNY-Oswego	1,255
3	Oswego School District	785
4	Central Square School District	678
5	Oswego County BOCES	615
6	Fulton School District	597
7	Mexico School District	425
8	City of Oswego	420
9	Phoenix School District	400
10	Altmar-Parish-Williamstown School District	278
11	Hannibal School District	250
12	City of Fulton	184
13	Pulaski School District	175
14	Sandy Creek School District	152

Note: Data includes full and part-time employees.

Source: Business Guide 1996, Oswego County Business

Figure IX-3: Total Retail Trade Sales
Oswego County, 1977-1992



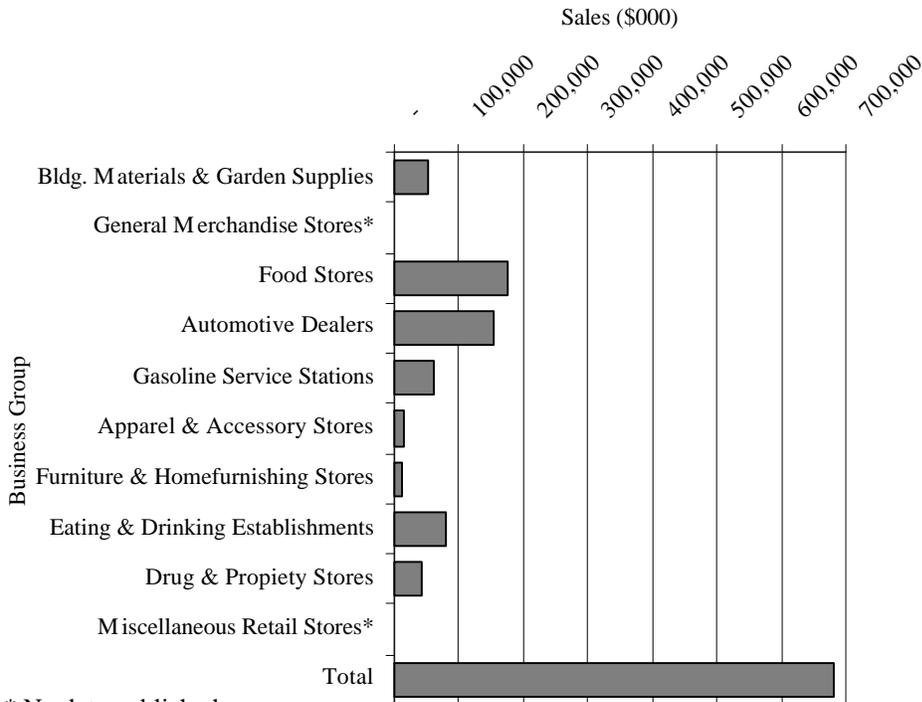
Source: 1977,1982,1987, and 1992 Census of Retail Trade

Within the Government sector, higher education is an important and often overlooked basic industry for Oswego County. The State University of New York at Oswego's 6,380 full-time traditional students and 1,225 faculty and staff spend over \$40 million a year in the local economy. Total direct and indirect spending generated by the college, its students and staff amounts to \$73 million annually in the county economy. This includes expenditures for food, housing, transportation and other needs.

8. Natural Resource Sectors

The natural resources sectors of agriculture, forestry, and mining make up a relatively small component of overall wage and salary employment and income but most farm operations are proprietorships. Agriculture in particular is critical to the economies of rural communities. In 1994, mining and agricultural services accounted for about 1.5 percent of overall private wage and salary employment and about .7 percent (\$7 million) of private sector wage and salary income. Net farm income by place of work in 1993 was \$7.6 million or just about .6 of one percent of total earnings by place of work. According to the 1992 Census of Agriculture, there were 659 farms encompassing 112,334 acres in Oswego County, down from 826 farms and 139,440 acres in 1982. Market value of all products sold amounted to over \$31 million, little changed from a decade earlier and down from the \$34 million in 1987. However, average farm sales increased from \$37,318 in 1982 to \$47,487 in 1992. Farms account for about 18 percent of the land area in the county. Each farmer has an investment in land, buildings, and machinery equal to about 4.7 times the annual market value of products sold. The land in farms consists of 35 percent harvested cropland, 21 percent un-pastured woodland, 21 percent pastured land and 22 percent land in house lots, roads and other uses.

Figure IX-4: Retail Sales by Kind of Business
Oswego County, 1992



* No data published

Source: 1992 Census of Retail Trade

Major crops and commodities produced in 1992 included corn for grain or seed (407,807 bushels on 4,340 acres), corn for silage (70,995 bushels on 6,343 acres), oats for grain (43,350 bushels on 1,149 acres), and hay (49,639 dry tons on 24,578 acres). There were 3,090 acres in vegetable crops and 781 acres in orchards. All categories of production showed significant declines from 1982, but much of the agricultural decline can clearly be attributed to the difficulty faced by the dairy industry in New York State.

9. Tourism

Another major industry in Oswego County which is closely tied to the natural resource base is tourism. Employment in travel related sectors increased from 1,524 in 1976 to 3,423 in 1994 and the number of establishments increased from 307 to 374. Total payroll in 1994 was \$32,202,000. The biggest employment gain was between 1981 and 1990 during which time 1,635 jobs were added and total payroll increased by over \$19 million.

Other evidence of the increased impact of outdoor recreation on the Oswego County economy includes the fact that more non-resident fishing licenses are sold in Oswego County than in any other county in New York State, and increases in boat registration (up 22 percent from 1988 to 1992) and snowmobile registrations (up 15 percent from 1988 to 1992).

B. TRENDS

1. Competition in a World Economy

Several national trends have influenced and/or are likely to influence the economic development of Oswego County. Two of them are integrally related. The emerging world economy with reductions in trade barriers is one of the factors driving efforts at increased corporate efficiency in order to enhance competitiveness. Unfortunately for many workers corporate efficiency often translates to "down-sizing." This has been seen in Oswego County where consolidation of operations resulted in the closing of the Miller Brewery and where major investments in modernization and increasing production capacity by firms such as Nestle and Alcan have not necessarily resulted in increased employment. On the other hand, consolidation will result in an increase of 100 jobs at Sealright and, as production processes become technologically more sophisticated, the skills needed by employees change creating the potential for increased productivity and wages. Also, the increased capital investment in production facilities may make employment more secure for the employees whose jobs remain

The world economy is certainly important to Oswego County with foreign based corporations like Nestle, Alcan, Sithe and Schoeller accounting for a large share of employment and investment. The strategic location of the county and the presence of the Port of Oswego also offer potential for increased international trade, especially with Canada.

2. Retailing

Another trend which affects all areas, including Oswego County, is the ever changing nature of retailing. From the predominance of shopping malls in the 70s, to the explosive growth of discounters in the 80s, and the resurgence of strip centers in the 90s, Oswego County has increasingly seen the decline of downtowns. As shoppers seek goods at malls in Onondaga County and shopping centers in Oswego County, small independent retailers have had a tough time competing. Marketing strategies of major retailers have reshaped the retail marketplace with new construction of large grocery stores and discounters like Walmart and K-Mart entering the market.

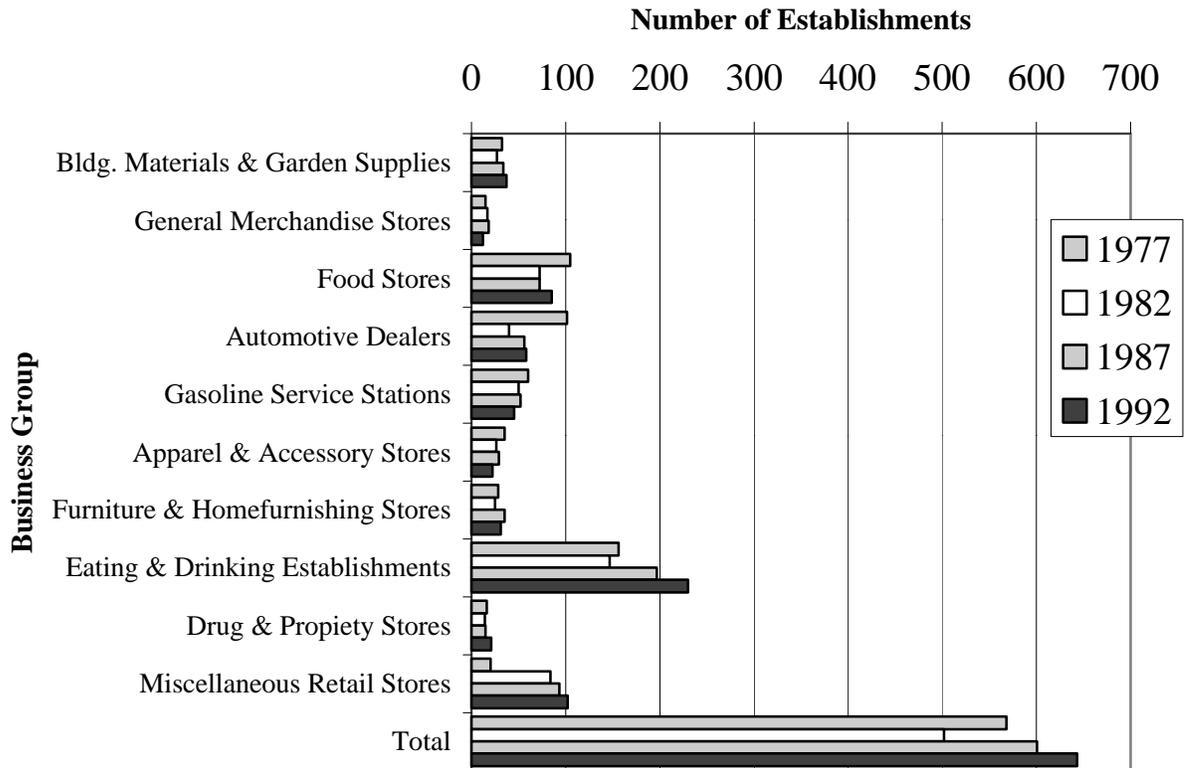
3. Government Taxation and Regulation

Another trend of late has been an increasing focus on the impacts of government taxation and regulatory policy on the economy. Although these issues are much too complex to fully explore in this document, three issues locally are clearly relevant to the comprehensive plan: property taxes, land use regulation, and the impacts of incentives to business investment in the county.

Property taxes were raised repeatedly as an issue in the public meeting to obtain input for this component of the plan. The ongoing concern over school, municipal and county property tax rates has been raised to a new level of concern by requests from Niagara Mohawk, the largest property taxpayer in the county, for a 50 percent reduction in its property tax assessment over five years.

New York State has a complex system of land use regulation which has increasingly been cited as a potential impediment to economic development in the State. At one Statewide public forum, a major mall and shopping center developer admitted that competition was reduced in his field because many developers were unwilling to enter a marketplace with so much uncertainty in the land use decision-making process. A survey of public and private interests across the State has shown a wide-spread discontent with the land use decision-making process. A survey of public and private interests across the State has shown a wide-spread discontent with the land use decision-making process. The problem results in part from the large number of towns, cities and villages in New York State each having completely independent responsibility for land use planning, regulation and zoning. This, when combined with a multiplicity of State and Federal rules, an often overly complex

Figure IX-5: Number of Retail Trade Business Establishments
Oswego County (1977,1982,1987,1992)



Source: 1977, 1982, 1987, 1992 Census of Retail Trade

environmental review process, very little up-front long range planning, and inadequate training of many local planning officials, has resulted in a cumbersome process which may, too often, serve to retard economic activity.

4. Business Incentives

The final issue which has received increasing attention locally and across the State is the impact of offering incentives to specific firms or to businesses locating in a specific area such as an Economic Development Zone. Some have argued that this may work against already established businesses by creating an unfair cost advantage for new entrants into the market. It is asserted that all businesses should receive the same advantages to create a level playing field and that what one community gains by providing locational incentives another community may lose. Finally, payment in lieu of tax (PILOT) agreements may tend to reduce the net positive fiscal impact generally attributed to industrial and commercial development. These arguments are often countered by explaining that: 1) especially given Oswego County's persistent high unemployment rates, job creation is and should be the primary objective of economic development; 2) Oswego County must use whatever tools it can to attract and retain jobs given what has at least been perceived to be an unfavorable competitive business climate in New York State; 3) new investment has many spinoff and multiplier benefits to the county and its residents; and 4) PILOT agreements do provide a significant positive net fiscal benefit to all levels of local government.

C. ANALYSIS

Many of the trends affecting economic development in Oswego County are the result of, or can be influenced only by, policy decisions made at the State and Federal level. Whether we agree or disagree with international trade policy or Federal and State tax policy, it is beyond the scope of a Comprehensive Plan to address these issues. We must, however, recognize the opportunities and constraints that State and Federal policies create for the local area, and respond to those as best we can to develop a strong, sustainable local economy.

1. Maintaining Manufacturing Competitiveness

Perhaps the overriding reality facing local economic development efforts is the internationalization of the economy and the resultant intense competitive pressure on manufacturing operations. Manufacturing remains the foundation of the Oswego County economy and although much of what determines profitability is beyond the authority of local or county government to influence, several factors which can be influenced locally affect the competitiveness of firms in Oswego County. Primary among these are infrastructure, transportation, natural resources, regulatory reform, and taxes. Also important are quality of life issues like education, recreation, housing, the environment, and other community facilities which directly affect the ability of businesses to attract and retain educated, skilled employees. These issues are all covered elsewhere in this Comprehensive Plan. The key from the economic development perspective is to integrate all of these issues into an overall community strategy to create jobs and enhance the local tax base.

Transportation networks, public sewer and water facilities, electric and natural gas service, and telecommunications are all critical elements to any successful business, but especially to manufacturing. It is not efficient to provide a full range of services to all areas of Oswego County, but the State Route 481 and Interstate 81 corridors are critical to our economic growth. In addition to being the major highway corridors, they are also the rail line corridors in the county. Key communities in these corridors should be targeted as employment growth centers where infrastructure will be provided to allow job creation which depends on these facilities. There has been public comment indicating we should focus on fully utilizing and extending existing infrastructure rather than using a broader based approach to infrastructure development. Within the Route 81 and 481 corridors the opportunity to provide all municipal service exists in five communities: Oswego, Fulton, Phoenix, Central Square and Pulaski. These are the areas with the greatest potential for major economic growth, especially if infrastructure can be upgraded to cure any current deficiencies. Oswego County is fortunate to have two economic development zones in Oswego and Fulton (Map 31) which can offer tax, utility and other incentives to businesses and enhance their competitiveness.

2. Small Business Growth

It should also be recognized that much job growth is occurring in small firms, some of which may not require either major arterial or rail access, or complete infrastructure. Therefore, many business opportunities will exist in other parts of the county. This may be particularly true for tourism or natural resource based firms. Every community can assess its own economic potentials but it is clear that many of the villages retain functions as small commercial trade and service centers to provide goods and services to the local population and to visitors. As residential development in rural areas continues to increase, there may be a demand for convenience goods in locations in hamlets and at country cross-roads. And, home or residence-based occupations are increasing in popularity as the computer age allows more business to be done from home. Finally, certain types of businesses may require or be compatible with a more rural location. Careful land use planning can allow all types of businesses to flourish at appropriate locations while protecting our natural environment and rural or small town character and way of life.

3. Natural Resource Based Development

Oswego County's rich natural resource base encompassing Lake Ontario and the Lake Plain, as well as the Tug Hill Plateau, offers many economic opportunities from tourism and recreation to farming and forestry. Our natural resource base is critical to our economic future and the opportunity for resource based economic activity must be encouraged and protected from incompatible development. Creative solutions will be required to allow agriculture and forestry to continue as economically viable enterprises. Our tourism industry is also dependent upon our natural resource base. Many opportunities remain to expand our tourism industry by offering new attractions,

improving access to our resources, and extending the seasons during which the resources are utilized. We are also blessed with significant water resources both in terms of Lake Ontario and several significant groundwater aquifers. These offer special opportunities as evidenced by companies like Schoeller Technical Paper, Alcan and Sithe Energies.

4. Human Resources

Our human resources also offer special opportunities. Notable among these are those provided by the presence of the SUNY Oswego campus in the county. SUNY Oswego is extending and expanding its role in the community with outreach efforts such as the satellite campus in Phoenix, continuing education efforts, and training programs with local industry. Further opportunities for linkages between this fine educational institution and our local economic growth need to be explored and may include physical linkages such as a research facility or park designed to turn ideas into products, processes and local jobs. The strong partnership between business and labor in Oswego County is another asset which should be capitalized on. Our demonstrated track record of providing a trained labor force and completing construction projects in a timely fashion are strong selling points when decisions are made to locate or expand business operations in Oswego County.

5. Conclusion

In conclusion, development of the local Oswego County economy is not a question of manufacturing vs. tourism or agriculture vs. downtown redevelopment, but rather a challenge of maximizing the economic potential of all of our resources, human, natural and man-made. By recognizing the opportunities presented by our people, land and water, and infrastructure, and focussing on addressing our infrastructure constraints in an efficient, cost-effective manner, we can create a business and development climate which is favorable to job and firm creation and growth.

D. GOALS, OBJECTIVES AND STRATEGIES

- GOAL:** DEVELOP A LOCAL ECONOMY WHICH PROVIDES GOOD JOB AND BUSINESS OPPORTUNITIES, NECESSARY GOODS AND SERVICES, AND THE STRONG, STABLE LOCAL TAX BASE NEEDED TO SUPPORT GOVERNMENT SERVICES AND PUBLIC EDUCATION.
- OBJECTIVE 1:** Develop and support the development of industrial and major commercial employment sites which have all necessary public services and which are compatible with existing land use patterns in the county.
- STRATEGIES:**
- a. Continue the development of infrastructure and facilities needed to make the Oswego County Industrial Park (Schroeppel) and Lake Ontario Industrial Park (Oswego) attractive business locations.
 - b. Develop and/or support private sector development of full service business/industrial parks at appropriate compatible locations in the Central Square and Pulaski areas including upgrade of existing infrastructure if necessary.
 - c. Develop and implement a plan for the Oswego County Airport Industrial Park (Volney) including provision of infrastructure and consideration of a focus on power industry and power industry-related firms.
 - d. Develop and maintain an up-to-date inventory of industrial and commercial sites which:
1) are accessible to arterial or major collector roads; 2) have appropriate zoning; 3) have electrical utilities and/or natural gas service available at site boundary; and 4) have public water and public sewer available.

OBJECTIVE 2: Identify appropriate areas where all types of desirable and needed commercial activities and community services can occur so that location of developable sites will not be a hindrance to entrepreneurship or to providing needed services in Oswego County.

- STRATEGIES:**
- a. Work with cities and villages to develop and maintain an inventory of infill sites in existing central business districts.
 - b. Review local zoning ordinances and make recommendations to encourage entrepreneurship by allowing residence-based businesses in appropriate areas.
 - c. Work with cities, villages and adjoining towns to project future commercial land use needs and locate appropriate planned commercial districts to meet those needs.
 - d. Identify and promote rural hamlets and traffic controlled intersections on minor arterial and collector roads at appropriate locations for consideration as planned "neighborhood commercial" nodes to serve the needs of rural residents and tourists.

OBJECTIVE 3: Develop and promote the development of facilities and attractions necessary to insure the continued growth of our tourism economy.

- STRATEGIES:**
- a. Plan and develop a county-wide recreation trail system.
 - b. Support viable projects to increase both pedestrian and boater public access to surface waters as long as they are environmentally sound and conform to existing greenway plans and standards.
 - c. Encourage development of and develop nature interpretive facilities focussed on the major natural resource areas of the county.
 - d. Support and develop improved access to public lands such as improved parking areas, trail heads, and ancillary facilities.
 - e. Support development of projects identified in the NYS Canal Plan and the Seaway Trail Oswego-Eastern Shore Communities Tourism Development Plan.
 - f. Review local zoning ordinances and recommend changes needed to allow tourism support facilities and businesses in appropriate areas.
 - g. Promote appropriate access to underwater archaeological resources.

OBJECTIVE 4: Protect important and significant farmland resources to insure that agriculture continues to be a major contributor to our local economy and a wise use of our natural resources.

- STRATEGIES:**
- a. Develop a farmland protection program which focuses on viable farm operations and committed farmers and which provides assistance with long term financial and land development strategies which will allow the continuation of agricultural operations.
 - b. Promote agritourism.
 - c. Promote farmers markets and community based agriculture which offer locally produced agricultural products.
 - d. Continue efforts to strike a balance between wetland and environmental protection and rural economic needs which will allow the continuation of a viable muck farming industry in the county.

- OBJECTIVE 5:** Provide a regulatory climate that is predictable, fair and efficient while protecting the quality of life of county residents.
- STRATEGIES:**
- a. Provide access to a comprehensive land use regulation training program for local legislative, planning and zoning officials in Oswego County.
 - b. Advocate proactive solutions and flexible regulatory approaches to environmental issues so that regulations do not become a hindrance to appropriate development.
 - c. Work to avoid unnecessary delays in permitting processes through the development of Generic Environmental Impact Statements (GEIS) and the application of Geographic Information systems (GIS).
 - d. Develop a county-wide map of existing zoning to assist with business location decisions.
 - e. Develop a wetland mitigation bank which may be used to provide effective and efficient wetlands impact mitigation for both private and public sector projects.
- OBJECTIVE 6:** Utilize an economic impact model so that decision makers can understand how different types of development affect the local economy and tax base.
- STRATEGIES:**
- a. Seek grant funds to hire a consultant to develop or adapt an existing economic impact model which can provide guidance to local decision-makers.
- OBJECTIVE 7:** Promote a regulatory framework which provides for necessary access to mineral resources while protecting the interests and addressing the concerns of local communities.
- STRATEGIES:**
- a. Advocate changes to the State Mined Land Reclamation Law to allow for meaningful local input into the DEC mining permit process.
 - b. Provide municipalities with information regarding the location and nature of their sand and gravel resources so that informed judgements can be made about local planning and zoning provisions regarding mining.
 - c. Work with the NYS DEC to develop model mine reclamation guidelines and encourage their use in mining permit applications for sites in Oswego County.
- OBJECTIVE 8:** Target economic development opportunities based on linkages to current industries and resources.
- STRATEGIES:**
- a. Develop a permanent forum in which to discuss and pursue power industry issues within the county.
 - b. Explore ways to translate research and development efforts at SUNY Oswego into businesses and jobs in the Oswego County economy.
 - c. Target industrial development opportunities which can utilize our plentiful water resources.
 - d. Target economic development opportunities associated with changes in the power industry.

- e. Target compatible recycling industries which can complement our comprehensive solid waste management system.
- f. Support work force development, financing alternatives and other programs to promote retention and expansion of existing industries and attraction of new industries which create or retain jobs in the local economy.
- g. Support construction of a wide range of housing types within the county to maximize the local economic benefits from meeting residents' housing needs.
- h. Support small business development programs, especially those targeted to tourism related businesses.
- i. Support development opportunities associated with the Port of Oswego.

X. LAND USE AND COMMUNITY DESIGN

A. INVENTORY

1. General Land Use

The Land Use and Community Design section of this plan pulls together themes from throughout the other sections of the plan and puts them into the context of how we use land and design communities in order to enhance our quality of life. The purpose of the inventory for this section is to show current land use patterns in order to identify and predict future impacts of land use on the county. Real property assessment records are the best existing source of this information. These categories are described below. Data variables include the property type, classification and ownership codes compiled and overseen by the Oswego County Department of Real Property Tax Services in accordance with the NYS Division of Equalization and Assessment Assessor's Manual.

<u>Category</u>	<u>Description</u>
Agricultural	Property used for production of crops or livestock.

Residential	Property used for human habitation. Living accommodations such as hotels, motels and apartments are included in commercial category.
Vacant Land	Property that is not in use, is in temporary use, or lacks permanent improvement.
Commercial	Property used for the sale of goods and/or services.
Recreation	Property used by groups for recreation, amusement and entertainment.
Community Service	Property used for the well being and assembly of the community.
Industrial	Property used for the production and fabrication of durable and nondurable manmade goods.
Public Services	Property used to provide services to the general public.
Wild Forested, Conservation Lands and Public Parks	Reforested lands, preserves and private hunting and fishing clubs.

Based upon Real Property Tax records for 1995, the greatest percentage of land in Oswego County is classified as being used for residential purposes (36.3%). 20.6% is classified as being vacant, 19.3% forest, 15.4% agriculture, and 3.3% for public service. This data depends upon the accuracy and consistency of land classification for assessment purposes. Categories may or may not be consistent with actual land use categories. For example, a residentially assessed parcel of 20 acres might only have an acre of actually developed land. This information is provided to illustrate general patterns based upon the use for which the parcel of property is assessed.

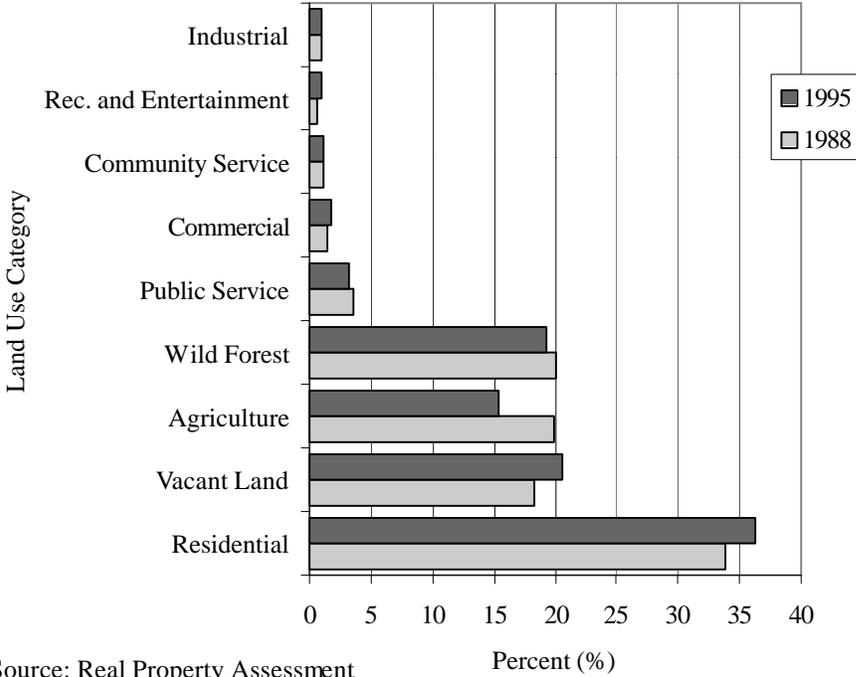
The earliest computerized tax records in the county are from the year 1988 and continue to the year 1995. The data has been summarized by the County Administration and is shown in Table X-1 and Figure X-1.

Table X-1: 1988 and 1995 Oswego County Land Use

<u>Land Use Category</u>	<u>1988 Percent</u>	<u>1995 Percent</u>	<u>Change 1988 to 1995</u>
Residential	33.9%	36.3%	+2.4%
Vacant Land	18.3%	20.6%	+2.3%
Agriculture	19.9%	15.4%	-4.5%
Wild Forest	20.0%	19.3%	- .7%
Public Service	3.5%	3.3%	- .2%
Commercial	1.5%	1.8%	+ .3%
Community Service	1.1%	1.2%	+ .1%
Recreation and Entertainment	.7%	1.0%	+ .3%
Industrial	.9%	1.0%	+ .1%

See Appendix X-A for land use assessment data by city and town.

Figure X-1: Oswego County Land Use
1988 and 1995



Source: Real Property Assessment

2. Community Types

Oswego County is made up of a diverse group of communities most of which retain a rural or small town character. For purposes of this plan, communities are considered under six types: employment and service centers; community service centers; rural recreational/natural resource based; rural/agricultural based; rural residential; and suburban residential. Within each type specific communities often play unique roles and many municipalities include more than one category.

a. Employment and Service Centers

Employment and service centers are communities which have a well developed retail and service economy and which host major employers in the county. These communities are characterized by access to major transportation networks and have complete public infrastructure. These communities also tend to have the highest residential densities in the county. Included in this community type are the cities of Oswego and Fulton, and the villages of Phoenix, Pulaski and Central Square, including their immediate surrounding areas in adjoining towns. The City of Oswego plays unique roles as the seat of county government and as an international port on Lake Ontario. In addition the city and adjacent Town of Oswego are home to the SUNY at Oswego campus. The city's harbor has become a waterfront recreational mecca for boaters and fishermen. The city is site of the Oswego Steam Station power plant and the Oswego Hospital.

The City of Fulton is the hub of industry in the county and a major port on the Oswego Canal. Major industries like Nestle and Sealright anchor the economic base of the community. The city is also a retail trade center for surrounding communities and the site of A. L. Lee Memorial Hospital.

The Village of Pulaski is a tourism destination especially for fishermen attracted to the Salmon River. The community is a traditional service center for the northern third of the county and retains a vibrant historic downtown. Two interchanges on Interstate 81 provide easy access for both visitors and commercial traffic.

The Village of Phoenix also is located on the Oswego Canal and the Oswego County Industrial Park is located just outside its borders. The village has excellent access to NYS Route 481 and has focussed community revitalization on its waterfront associated with recreational use of the Oswego Canal and River. It has also been the site of major investments in high quality multi-family housing developments in recent years.

The Village of Central Square primarily serves as a community service center to a rapidly suburbanizing population and to commuters and other travellers on I-81, State Route 49 and U.S. Route 11. The proximity to Onondaga County and I-81 have prompted much recent interest in commercial and industrial development opportunities.

b. Community Service Centers

Community service centers are primarily those smaller villages which have some but not all of the infrastructure or locational and transportation attributes necessary to support major concentrations of employment. Included in this group are the remaining villages in the county: Hannibal, Cleveland, Parish, Mexico, Altmar, Sandy Creek and Lacona. Many of these communities are also the home of major employers but their primary economic roles are as retail and service centers for the surrounding residential population or as service centers to seasonal residents and tourists. In growing areas of the county these communities are likely to experience continued commercial growth. Other futures will be tied to trends in tourism.

c. Rural Recreational/Natural Resource

These communities tend to be very rural in nature often including large public open spaces such as forests or wildlife management areas, or other natural resources which attract visitors. Included in this group would be the Tug Hill towns of Boylston, Redfield, Orwell, Williamstown and Albion, as well as parts of the lakeshore communities of Sandy Creek, Richland, Mexico, New Haven, West Monroe and Constantia. Some communities are host to lodging, marinas, sports shops and other tourist related businesses while others may have economies based on forest products and back country recreation.

d. Rural/Agricultural

In these communities agriculture remains the predominant land use but rural residential development has increased in recent decades. The towns of Palermo, Granby and Hannibal would fit this category along with large parts of Oswego, Scriba, Volney, New Haven, Mexico, Richland, Williamstown and Sandy Creek. Major agricultural activities include dairying, muck farming and fruit growing.

e. Rural/Residential

In areas of the county where traditional agricultural land uses have declined, low density, rural residential development is the primary activity. Parts of nearly all of the towns listed above along with Parish, Amboy and northern Schroepfel, Hastings, West Monroe and Constantia reflect this pattern.

f. Suburban Residential

In all or parts of many towns residential development has reached or is approaching suburban density. Although elements of the rural landscape may remain, the community character is clearly residential in nature. Many of these areas are portions of towns surrounding major employment centers. Parts of the towns of Oswego, Scriba, Minetto, Volney and Granby would fit this category. Other areas are primarily bedroom communities for Onondaga County including parts of Hastings, Schroepfel, West Monroe and Constantia. Commuting patterns indicate that more than half of the residents of these communities work outside Oswego County. (Map 4)

g. Commercial Strips

In addition to the above community types, commercial strip development has occurred along a number of major highways in the county. Most notable among these are NYS Route 104 East in Oswego, NYS Routes 481 and 3 in Fulton, NYS Route 49 in Central Square and West Monroe, U.S. Route 11 in Hastings and NYS Route 13 in Pulaski. Less intensive strip commercial development exists on NYS Route 104 West in Oswego, County Route 57 south of Phoenix, and NYS Route 3 in Port Ontario.

h. Industrial Parks/Concentrations

Major industrial hubs in the county exist on the northeast side of the City of Oswego extending along Lake Ontario into the Town of Scriba, and in the City of Fulton and Town of Volney. Industrial parks have been or are being developed in the towns of Schroepel and Volney and the City of Oswego.

C. TRENDS

1. National

a. Industrial Land Use

During the past ten years the face of industry and the way industrial development occurs has changed. Throughout the county there has been a decrease in manufacturing jobs and labor intensive employment, thus forcing the downsizing of many industries. Many communities are faced with land use issues which involve the reuse of industrial facilities. Reclamation of urban industrial areas or "brownfields" are part of this trend. Old industrial sites and factories that occupied large tracts of land are usually located on major waterways and are close to population centers. These areas are being reclaimed as revitalized buildings, greenspace and parks and can become large public open space and infill projects that complement a community's physical and social connectivity.

b. Commercial Land Use

A national and statewide trend for the last twenty years has been the development of malls and commercial strips along major roadways. Most rural areas have not experienced the development of a large mall, however, strip retail developments line many of our State and local highways. This trend is tied directly to our society's dependence on the automobile. Strip and mall development cater to the mobile customer by providing parking and access designed for the automobile.

In the last five years this trend has started to change. The plaza and shopping center concept seems to be coming back. As of late, new retail commercial development is embracing the concepts of shared parking and access while maintaining individual store access.

Another commercial trend is the development of the "Big Box" retail/wholesale store. The number of these stores has increased dramatically in the last ten years throughout the country. The acceptance of these large discount retailers has varied from community to community. Some communities welcome these large retailers while others try to prohibit their development, citing concerns that these developments have an adverse effect on small downtowns and are not aesthetically desirable.

Downtown and main street revitalization is a trend which has been a focus on the national level for over a decade. Downtown revitalization involves restoring the economic and historic fabric of a community. The implementation of facade improvement programs, development of streetscapes, use of infill techniques and mixed use development are tools used to revive downtowns as well as smaller local main streets.

c. Residential Land Use

The national and statewide residential land use trend has been the development of single family subdivision tract housing. Affordable housing in urbanized areas has typically been provided by multi-family apartments or townhouse units. In more rural areas, the affordable housing need has increasingly been addressed by purchasing or renting mobile and manufactured housing.

The concept of clustering has become popular in high growth areas and areas which have sensitive natural features. Clustering is a method of grouping residential and/or commercial development on a smaller portion of the site and leaving the remainder of the site as open space.

d. Community Design

During the last decade there has been a return to the more traditional development style known as neo-traditionalism or the "new urbanism," which is the return of the traditional community design. This borrows and builds upon local and regional characteristics like local building material and styles and is contrary to the "Anywhere USA Syndrome," where single family housing tracts are the same in Central New York as they are in other parts of the country.

Another community design trend is to recognize the importance of human scale. Human scale focuses on the needs of people as opposed to the needs of the automobile. Thus, human scale design often encourages smaller pavement widths for streets and encourages the incorporation of sidewalks, bike paths and street trees. This concept also incorporates elements of the natural environment into development design by leaving mature trees instead of completely clearing a site and then planting trees that require 20 or more years to mature.

Aesthetic stormwater management is becoming popular in more progressive areas where stormwater is diverted into reflective pools, man-made ponds and wetlands thus removing pollutants before they enter our surface and groundwater. This method makes stormwater treatment a visually pleasing design element in the landscape while at the same time providing open space and habitat.

2. Local Trends

a. Industrial

Local industrial land use trends have mirrored the national trends. Oswego County has experienced downsizing and the challenge of reuse of large industrial complexes, such as the Miller Brewing plant. However, Oswego County continues to be a leader in the energy and recycling industries. It also retains strong food processing, paper/packaging, metals and machinery manufacturing sectors.

b. Residential

In 1988, approximately 203,052 acres of land in Oswego County was assessed for residential uses. The total acreage increased to 218,818 in 1995, an increase of 15,766 acres in 7 years. The total percent of land used for residential purposes in the county in 1988 was 33.9% and in 1995 the percentage increased to 36.3%, an increase of 2.4%.

Increasing suburbanization will obviously continue to be a major land use trend into the foreseeable future. Reliance on the automobile has created concerns with respect to parking and access, non-pedestrian oriented communities and higher costs associated with highway and infrastructure maintenance. Increasing suburban populations make it difficult for centralized neighborhoods and commercial land uses to maintain a viable business in downtowns. More and more people are building on the fringes of population areas moving further into the countryside. This has caused concern Statewide as suburban areas spring up placing increasing burdens on school systems, infrastructure and natural resources. The recent financial burdens on school districts such as Central Square are examples of this impact. At the same time taxpayers head to polls to vote down increasing school expenditures, local towns are reporting increasing numbers of building permits. A total of 54 new residential permits were issued in the towns of Constantia, Hastings, and West Monroe in 1995, 67 in 1994, and 66 in 1993.

This reflects a trend statewide that suburban sprawl is continuing even though overall population is growing slowly or not at all.

c. Commercial

The percentage of land in the county assessed for commercial purposes increased .3% from 1988 to 1995. Approximately 1.8% of the land in the county was devoted to commercial uses in 1995 and the commercial acreage increased to 11,033 acres.

During the last three years there has been an increase in home occupations and small businesses which operate from the same lot as the principal residence. The home business trend is relatively new. Over time this may tend to blur the distinction between residential and commercial land use.

Small business is an important part of many local communities in Oswego County. Appropriate location and adequate site design are necessary to insure business success. Development of compact business districts is more efficient in terms of providing necessary public services and more effective in attracting clients or customers.

c. Agriculture

Many communities throughout the State and locally are faced with a declining land area for field agriculture. According to the New York Agricultural Statistics for 1993-1994, 4,000 farms have gone out of production accounting for approximately 500,000 acres that no longer produce feed crops or dairy products, much of which will be targeted for future suburban development. Although property taxes have increased about 48% since 1987, farm production expenses increased by 15% between 1987 and 1992. An important issue with respect to this trend is that profitability to the farmer is more easily obtained through sale of his land than by farming. Many communities are realizing that agricultural open space planning is important in order to maintain their economic and environmental health.

From 1988 to 1995, the percentage of land being assessed as agricultural has decreased approximately 4.45% in Oswego County. In 1988, approximately 119,095 acres were recorded and in 1995 the acreage decreased to approximately 93,022 acres for a loss of approximately 26,073 acres assessed as agricultural. In 1988, 19.9% of the total land in Oswego County was used for agricultural uses and in 1995 the percentage of agricultural lands decreased to 15.4%. These numbers when compared to the 1992 Census of Agriculture show a declining trend in agricultural operations. According to the Bureau of the Census 826 farms were in operation in Oswego County in 1982 as compared to 659 in 1992.

C. OPPORTUNITIES AND CONSTRAINTS

1. Natural Constraints

Perhaps the largest constraint to developing land in Oswego County is the limiting capacity of the soils in the county. Soils are the determining factor for the suitability of private septic systems and their effects on local water quality. Increasing trends toward suburbanization will continue to be a concern in areas without public water and sewer systems well into the next century. Many areas of the county are unsuitable for development because hydric soils are prevalent. Hydric soils are closely associated with river and stream corridors, coastal areas and the abundant wetlands in the county. These environments normally contain diverse ecosystems associated with shoreline and wetland conditions. Although their scenic beauty and amenities may often make these the most desirable areas for development, they are also most important for wildlife habitat, open space and recreational endeavors. Where possible, undeveloped areas with the most severe restrictions for development should be considered for appropriate natural resource based uses, while areas with appropriate infrastructure will have more potential for future development.

2. Transportation and Infrastructure

Along with the constraints of soils one must factor in the transportation system and sewer and water infrastructure when planning for future land use policy. Continued development in areas where commercial centers with good highway access already exist will be less costly. Many of these areas have sufficient levels of water and sewer service. If we emphasize improvements to existing commercial centers and aid in reestablishing or improving them as places to live and to work, growth will occur in proximity to these commercial centers, fostering economic development, allowing investments in upgraded sewer and water infrastructure, and reducing the costly burden of developing expensive infrastructure after development occurs.

3. Suburbanization

With respect to residential development, it should be recognized that suburbs can decline for the same reasons as urban areas. Aging housing, lack of private investment, and poor local image are all problems that are associated with the decline of suburban neighborhoods. The communities that do best have encouraged public transportation, mixed land uses and well designed pedestrian thoroughfares. Most importantly the suburban areas that have become the most economically viable have identified and maintained their sense of place which throughout most of Oswego County is closely tied to the rural character of the county.

In many suburbanizing areas, for example, a local community will see a new 50 home residential development as an opportunity to increase their "tax base." These 50 hypothetical new homes will be placed on 1/2 to one acre lots and will be developed on an old farm with access by a rural road. After the project is developed traffic increases, and demand for improved roads, better schools, bussing, libraries, fire and ambulance services follows. That these hidden costs are associated with the development is often overlooked. Five years later the developer decides to add 50 more homes to the tract. The perception is that this will also increase the "tax base." By this time the local school is at maximum capacity, school referendums are rejecting calls for increased budgets, fire and ambulance service needs improvement, wells are exhausted and septic systems may be leaching higher levels of nitrates and contaminants into the local groundwater supply. At this point, increasing expenditures make local officials view the construction of the new 50 units as a short-term source of tax revenue, but the cycle continues and before long the local government is faced with the costly construction of better roads, new public sewers and water, a new school, better emergency response facilities and a host of other costly projects that lead to increasing taxes for local residents.

This scenario is typical of many rural communities and foresight can certainly help to alleviate some of the problems associated with unplanned development, not to mention the burden that the development may have on the rural character of the community.

4. Natural Resources

Perhaps the most striking opportunity for Oswego County is its rich heritage with respect to its natural resources, especially its water resources. The over 200 miles of shoreline areas in the county provide a great opportunity to capitalize on waterfront areas, ranging from the pristine landscapes of the upper Salmon River to the urban economic opportunities along the Oswego Canal. Water is the key component to the opportunities of the county much as it has always been. Water is important to industry as well as wildlife and provides the framework for developing the county's mix of developed and rural areas. A greenway approach offers the opportunity to strengthen the natural and historical heritage of the past and provide a bright economic future and quality of life to county residents.

Greenways are a means by which to link commercial and population centers with parks, trails, waterways and open space corridors in a comprehensive and integrated manner. This provides a "system" of interconnecting greenspaces. This greenway approach is an excellent opportunity for the county to work toward the achievement of many goals and objectives in this plan in a step by step manner.

5. Rural Character

The rural character of the county also provides a number of opportunities to people who want to live in a country setting. The abundance of open space in the county affords the ability to deal with increasing

suburbanization in a responsible manner by utilizing the latest techniques in open space planning, storm water management and development design, as well as planning for future infrastructure improvements in a well organized, comprehensive and cost effective manner.

One of the easiest ways that value can be added to future development is the incorporation of performance standards for subdivisions and local roads. The street can become a means of creating a sense of neighborhood. Rather than streets devoid of pedestrians or ones with a dangerous mix of pedestrian and autos, streets can be designed with pedestrian walkways and site amenities like lighting and landscaping that will enhance the safety and visual character of development. Street tree programs and streetscape improvement programs are key elements to enhancing neighborhood character.

6. Heritage Values

Much opportunity also exists in the many downtown buildings and historical structures throughout the county. The heritage value of old buildings, districts and corridors can serve as an attraction to visitors and shoppers, and thus, to small businesses. The overriding principle for achieving the objectives of the land use section of the plan is to relate new development to existing natural conditions and patterns of development in the county.

Conservation and proper use of agricultural lands is supported by this plan. The natural interests of the farmer or forester in conserving the land upon which their livelihood depends, can serve as a guide for long term, county-wide interest in rural land conservation.

7. Water Quality

Specific recommendations with respect to maintaining and improving water quality county-wide are found throughout this plan. Open space recommendations, for example, are directed toward retaining public access to shorelines and toward conservation easements and buffer zones for all waterways and lakeshores. Emphasis on low impact recreational use of the Salmon River Corridor, Lake Ontario Coastal Zone and Oneida Lake north shore should be balanced with higher impact recreation use of Lake Ontario and the Oswego River Corridor at specific locations, especially in the cities of Fulton and Oswego. Industries should be encouraged to locate in designated industrial parks or planned industrial districts with public infrastructure near major roads and transportation corridors. Urban and large scale suburban development should be directed to areas that have public water and sewer or have the potential for providing public infrastructure in a cost effective manner.

D. GOALS, OBJECTIVES AND STRATEGIES

GOAL: ENSURE SUSTAINABLE LAND USE DEVELOPMENT THAT WILL MEET EXISTING NEEDS AND THE NEEDS OF FUTURE GENERATIONS.

OBJECTIVE 1: Encourage development of a wide range of housing opportunities in locations which efficiently utilize infrastructure, provide access to services and job opportunities, and do not degrade natural resources.

STRATEGIES:

- a. Work with towns with no land use regulations to develop and implement basic local land use plans, policies, model ordinances, and enforcement mechanisms.
- b. Encourage local governments to provide for higher density or clustered development, especially in areas where sufficient infrastructure exists or can be provided at a relatively low cost.
- c. Target plans for cost effective infrastructure extensions to areas near existing infrastructure in communities experiencing the greatest suburban growth.

- d. Develop a specific plan for a selected residential project to illustrate sustainable methods of development as a model for future development.

OBJECTIVE 2: Develop an integrated open space system which incorporates working landscapes, significant resource areas, greenways, major public lands and trail corridors.

- STRATEGIES:
- a. Review local land use regulations and recommend changes that will complement the greenway system.
 - b. Assist local communities with plans for specific projects which enhance identified greenways, recreational areas, and open space systems.
 - c. Review all delinquent tax parcels before they are sold to determine whether they offer potential to contribute to the open space system.

OBJECTIVE 3: Diversify the local economy by coordinating infrastructure and telecommunication development in major employment centers, reinforcing cities and villages as commercial service centers, creating a positive environment for small business development, and enhancing the economic value of our natural resources.

- STRATEGIES:
- a. Target areas for future commercial and industrial use based on existing land use, natural conditions, infrastructure and services.
 - b. Provide technical assistance to local communities in incorporating the appropriate location and design standards for commercial/industrial uses into local land use plans and ordinances.
 - c. Provide technical assistance to local governments to develop efficient regulatory procedures.
 - d. Identify resource-based, recreation and tourism, and other low intensity business uses which are appropriate in rural areas.
 - e. Create public/private partnerships to promote businesses that will enhance economic use of the county's natural resource base.
 - f. Develop new tourism attractions at locations that will provide economic benefits and opportunities to local residents.

OBJECTIVE 4: Promote stewardship of our natural resources by managing public and private lands for a sustained yield of natural products, taking an ecological approach to local planning, encouraging the continuation of working landscapes, preserving the most significant natural areas, and promoting Oswego County's natural attributes.

- STRATEGIES:
- a. Sponsor workshops to promote sustainable concepts of development and progressive development techniques.
 - b. Develop environmental education and research programs to enhance knowledge and awareness of the local environment.
 - c. Sponsor workshops for homeowners along greenways to illustrate the techniques and benefits of ecological site planning.

OBJECTIVE 5: Encourage management of land use activities to protect surface and groundwater quality and quantity and avoid increasing risks associated with flooding.

- STRATEGIES:
- a. Promote implementation of guidelines for stormwater management and erosion and sedimentation control.
 - b. Target nitrate loading of groundwater as a determining factor for density of development for lots not served by public water and sewer.
 - c. Require adequate wastewater treatment for homes receiving municipal water service.

OBJECTIVE 6: Promote efficient and safe access to our transportation system through land use management and design approaches which include consideration of all transportation modes and maintain transportation system function.

- STRATEGIES:
- a. Target major commercial/industrial land uses to sites with the greatest access to transportation corridors.
 - b. Promote land uses and frontage requirements that are consistent with the functional classification of roads.

OBJECTIVE 7: Promote regional solutions to land use and development issues which transcend county political boundaries.

- STRATEGIES:
- a. Support development of regional data on housing and the economy to better define land use needs within Oswego County.
 - b. Seek linkages with adjoining counties for trail, greenway and open space systems.
 - c. Work with adjoining counties and regional organizations to develop and support watershed approaches to water quality and flood control management activities.
 - d. Coordinate transportation network development and maintenance with State and regional agencies and adjoining counties.
 - e. Support regional initiatives to maintain and improve air quality in order to avoid adverse impacts on Oswego County.

GOAL: MAINTAIN THE RURAL AND SMALL TOWN CHARACTER OF OSWEGO COUNTY.

OBJECTIVE 1: Encourage new development to incorporate traditional village characteristics and/or complement natural landscape features in order to revive a "sense of place" and sense of community by reinforcing traditional development patterns.

- STRATEGIES:
- a. Develop model streetscape design concepts.
 - b. Promote incentives for use of historic buildings.
 - c. Encourage pedestrian scale multiple use development in central business districts.
 - d. Develop visual preference based design criteria for cities, villages and towns.
 - e. Recommend buffering standards between incompatible land uses and between development and sensitive natural areas.

- f. Recommend use of cluster development and building envelope planning techniques, especially in parts of the county which are experiencing increasing development pressure.

OBJECTIVE 2: Encourage retail development to occur in Central Business Districts or in planned commercial districts adjacent to cities and villages.

- STRATEGIES:
- a. Assist municipalities in mapping Central Business District boundaries and adjacent transitional areas to be incorporated into comprehensive plans, development review processes and zoning ordinances.
 - b. Develop and promote model site design standards for planned commercial districts.
 - c. Recommend maximum square footage limits for retail structures outside of planned commercial districts.

OBJECTIVE 3: Utilize waterfront revitalization plans as a means to strengthen cities and villages as strategic commercial centers.

- STRATEGIES:
- a. Implement waterfront design guidelines set forth in the State Canal Plan and local waterfront revitalization plans.
 - b. Support specific projects that strengthen linkages between waterfront areas and business districts.
 - c. Develop visual assessments and plans to improve visual access to waterways.

XI. IMPLEMENTATION

A. RESOURCES

Many of the strategies of this plan represent ongoing efforts of county agencies, not-for-profit agencies and other organizations. The hope is that the plan will help to better coordinate and focus these efforts. Other strategies represent new approaches that may involve redirecting current activities or a change in emphasis from current priorities. In all cases responsible agencies have been consulted regarding these changes and have agreed to the plan's strategies.

Where the plan recommends capital investments in facilities or projects, these are either consistent with current levels of investment in these areas or outside sources of funding have been identified which offer potential support for the projects. It is believed that the very existence of this comprehensive plan will enhance grant applications and make them more competitive.

B. IMPLEMENTATION TOOLS

The plan envisions using up-to-date technology and management techniques in order to allow more efficient use of existing resources. This will allow many of the plan's initiatives to be implemented without additional staff.

1. Capital Improvement Programs

Although most units of government have some sort of a capital improvement budgeting process, few have detailed five year capital improvement programs. Developing five year capital investment plans allows better financial planning and, if these plans are shared between school districts, cities, towns, villages and the county, may reveal ways that the burden on taxpayers can be reduced. The plan recommends that all projected capital improvements be included in written five year capital improvement programs.

2. Geographic Information Systems

Geographic Information Systems (GIS) are often described as "computer mapping" but in fact they are much more. They allow not only the storage and retrieval of large amounts of information that can be associated with a geographic location, but also permit complex analysis that otherwise would be impossible or cost prohibitive. The county has a geographic information system which will be expanded to allow it to serve as a tool for more efficient infrastructure and natural resource management, among many other uses. Many of the strategies in the plan are made possible only because this tool is available.

3. Communication and Coordination

The plan suggests several formal arrangements to enhance communication on issues of great importance to the county and its residents. This improved communication will allow better coordination between levels of government, and between the public and private sectors, on important issues like infrastructure and telecommunication development. It is believed that this coordination will lead to tangible savings to both government and private business and will, thus, lower overall costs which are passed on to residents in terms of taxes and fees for services.

C. ROLES AND RESPONSIBILITIES

This plan envisions many partnerships between different levels of government and between the public and private sectors. Appendix XI-A includes signed lead agency commitments for all of the plan's strategies. Many other entities, organizations and agencies have offered their support to implementation of this plan. By identifying a lead agency, duplication of effort will be avoided and accountability assured.

D. FISCAL IMPACT

Throughout the planning process many people have questioned the county's ability to implement the plan's strategies given current fiscal constraints at all levels of government. This plan addresses areas that have been identified as priority concerns of the Oswego County community. In many cases the issues are also of concern nationally. It does not appear that resources to address these important issues will dry up entirely, or in many cases, be reduced at all. In Appendix XI-B we have summarized grant programs and funding sources directly applicable to the strategies of this plan. While Oswego County and its cooperating organizations and communities may not be successful in accessing all of these funding sources, this plan will be extremely useful in helping us to compete for grants. Given past successes, we are confident that many grant applications will be funded. If we can get only our

"fair share" based on our population or relative share of affected resources we will be able to make great strides in advancing all of the strategies of this plan without an increased local tax burden. It will, however, be necessary to strategically use available county and local government resources to provide necessary local matches and staff support needed to successfully obtain grant funds.

Oswego County already makes necessary capital investments through its capital program. Over the five years from 1992 through 1996 an average of \$2.36 million was allocated annually for capital investments in bridge, building, highway, parks and environmental projects. A total of \$4.89 million was budgeted for principal and interest on long term capital debt in 1997. Ongoing capital expenditures of \$7.25 million (including debt service) would represent 5.5% of total county appropriations for 1997. This would seem to represent a modest level of investment in our future. Capital investments in line with this recent experience would appear to be sufficient to maintain the county's proactive role in achieving the goals and objectives of this plan, if programmed in a manner to focus on the plan's objectives and strategically expended to leverage outside funding sources whenever possible. A five year capital program will help to set aside necessary funding and prioritize county capital investments.

E. MONITORING AND EVALUATION

Each section of the plan will be reviewed at least every five years. This will be done on a rotating basis to limit the impact on other staff responsibilities. On average, one or two plan sections will be reviewed and updated each year. In addition, progress in implementing plan strategies will be monitored and reported annually. Effectiveness of the strategies in reaching plan goals and objectives will also be evaluated. In this way, the plan will become a living, evolving document which is always current and responds to changing conditions while maintaining the focus on long term goals.

It is recognized that some elements of this plan are further along in the process of developing effective strategies to reach long term goals and objectives. It is expected that the plan's goals and objectives will be refined and, in some cases, become more focused over time.