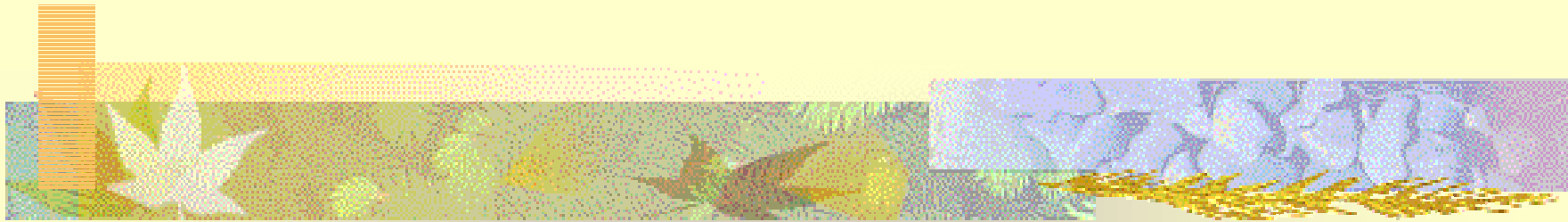


# Setting of the Raritan River Basin

A Technical Report for the Raritan Basin  
Watershed Management Project

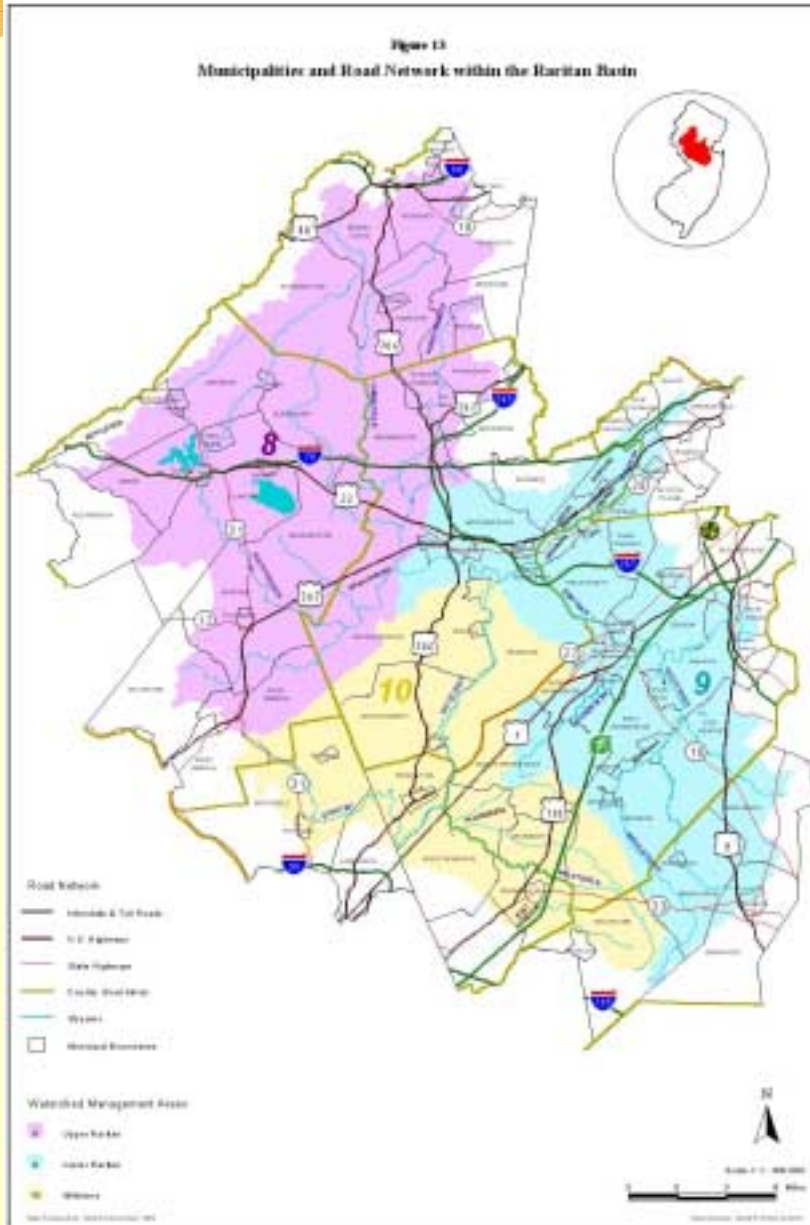


Debbie Newcomb and Tom Stanuikynas  
NJ Water Supply Authority

# Overview

- 7 Counties in North-Central New Jersey
- 3 Watershed Management Areas



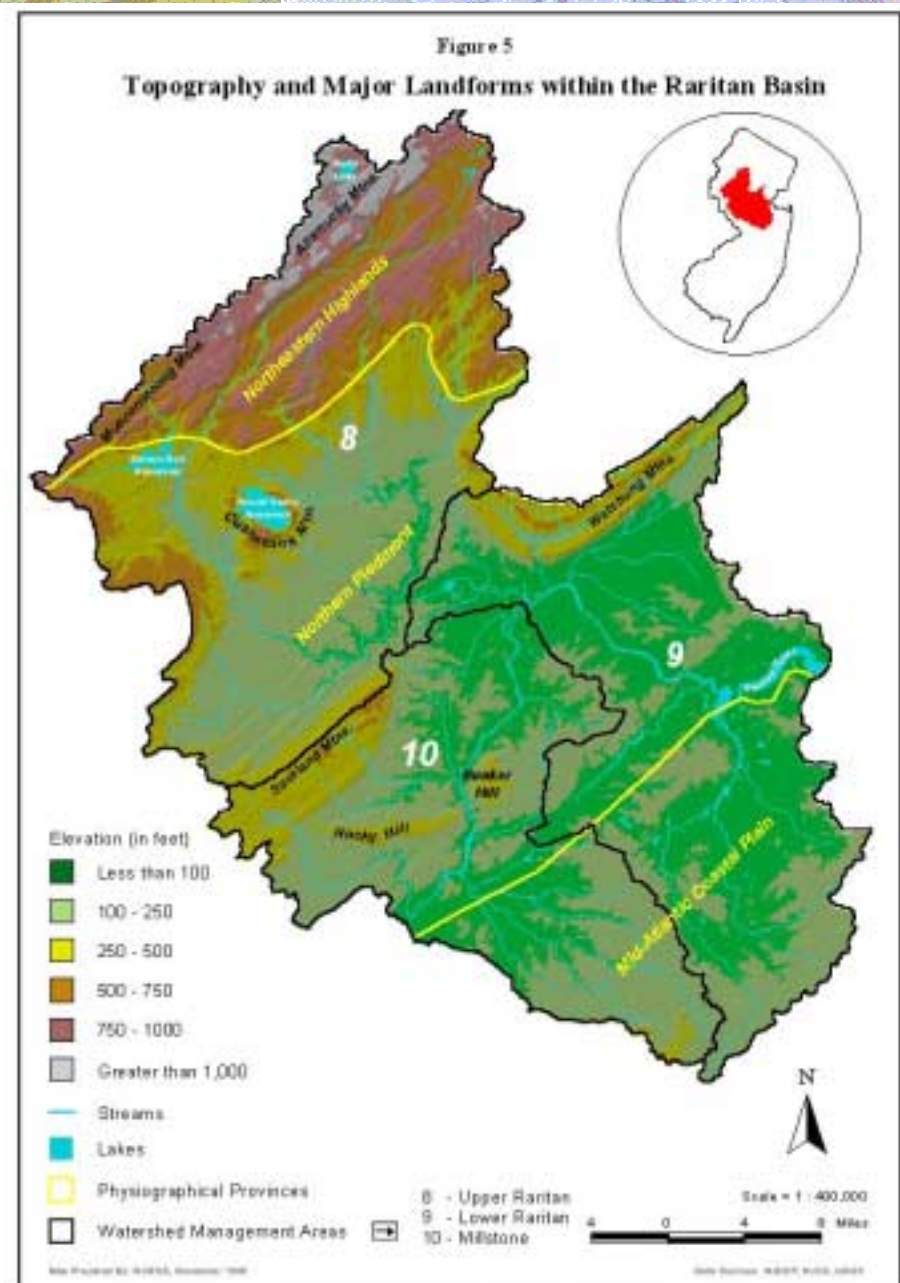


# Location

- Largest Basin located entirely within NJ
- Encompasses 100 municipalities

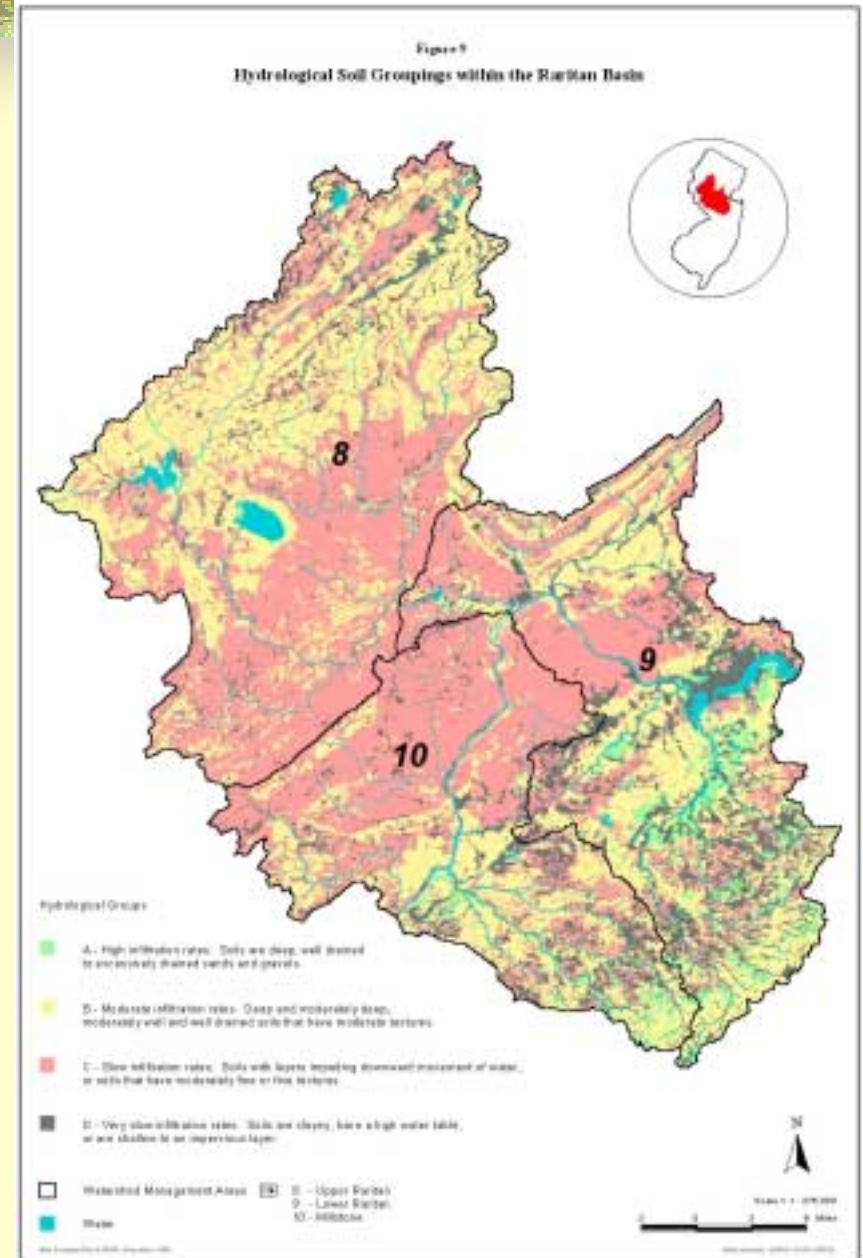
# Topography and Geology

- Highlands - 17% (Ridges of hard rock; Valleys of limestone and shale)
- Piedmont - 61% (Mountains of Diabase and Basalt)
- Coastal Plain – 22% (Unconsolidated Deposits)



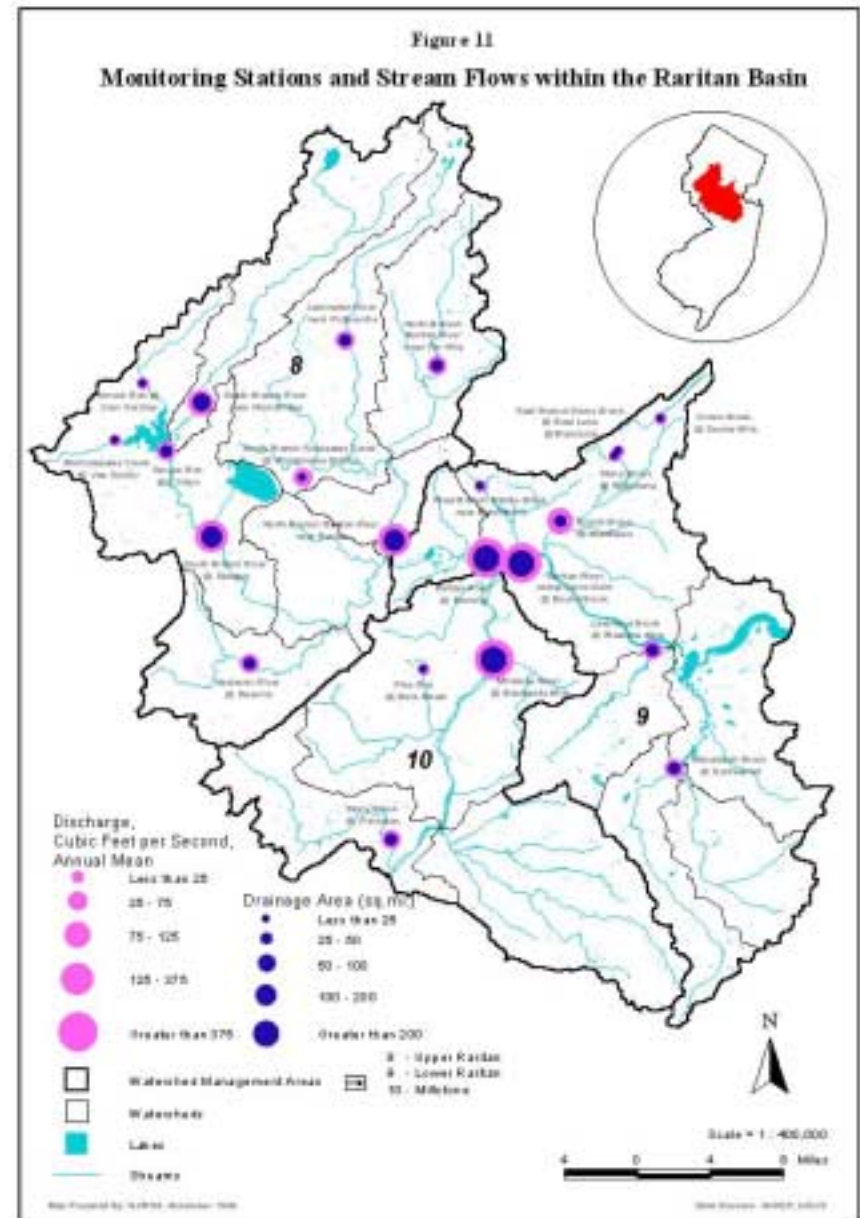
# Soils

- Basin Discussed by Hydrologic Groups A-D
- Generalized Soils Map – To be prepared by NRCS



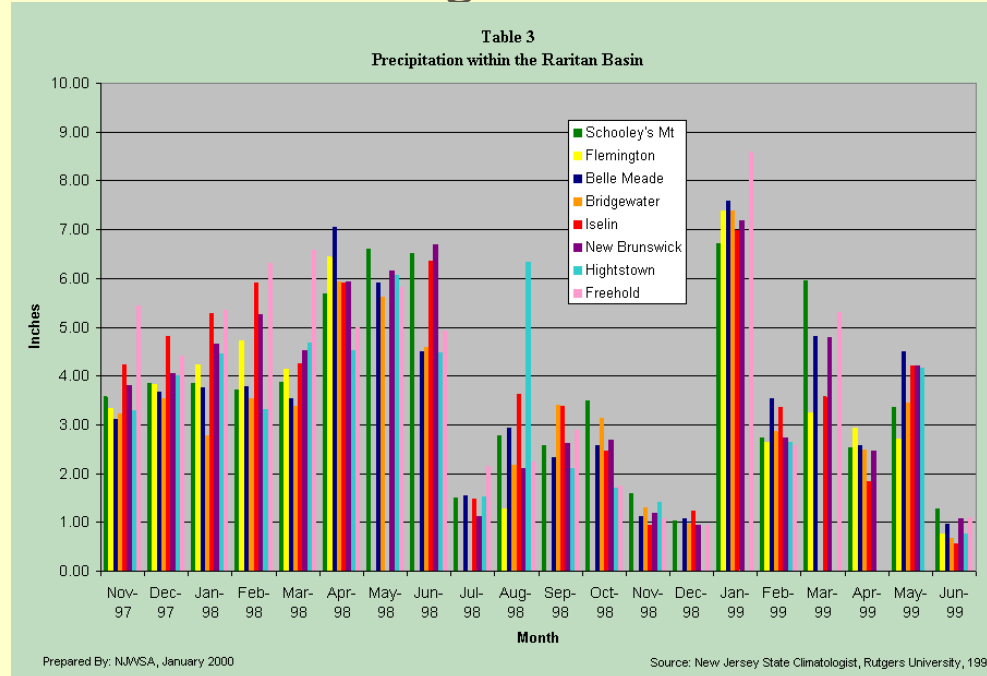
# Hydrology

- Upper Raritan WMA - 43%
- Lower Raritan WMA - 33%
- Millstone WMA - 24%
- Stream Gauging Stations, and Flows Relative to Drainage Area
- 60% of water use from SW; 40% from GW



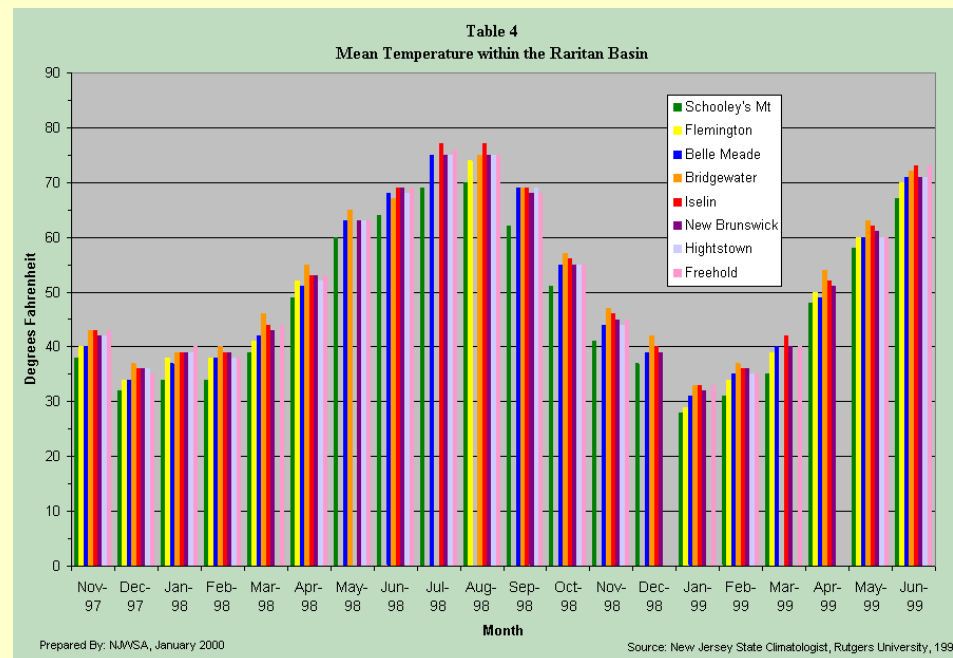
# Precipitation

- 8 Monitoring Stations in Basin
- Rainfall Trends - Above average amounts for end of 1997 and beginning of 1998; Below average for end of 1998 and beginning of 1999
- Hightstown Station – August 1998



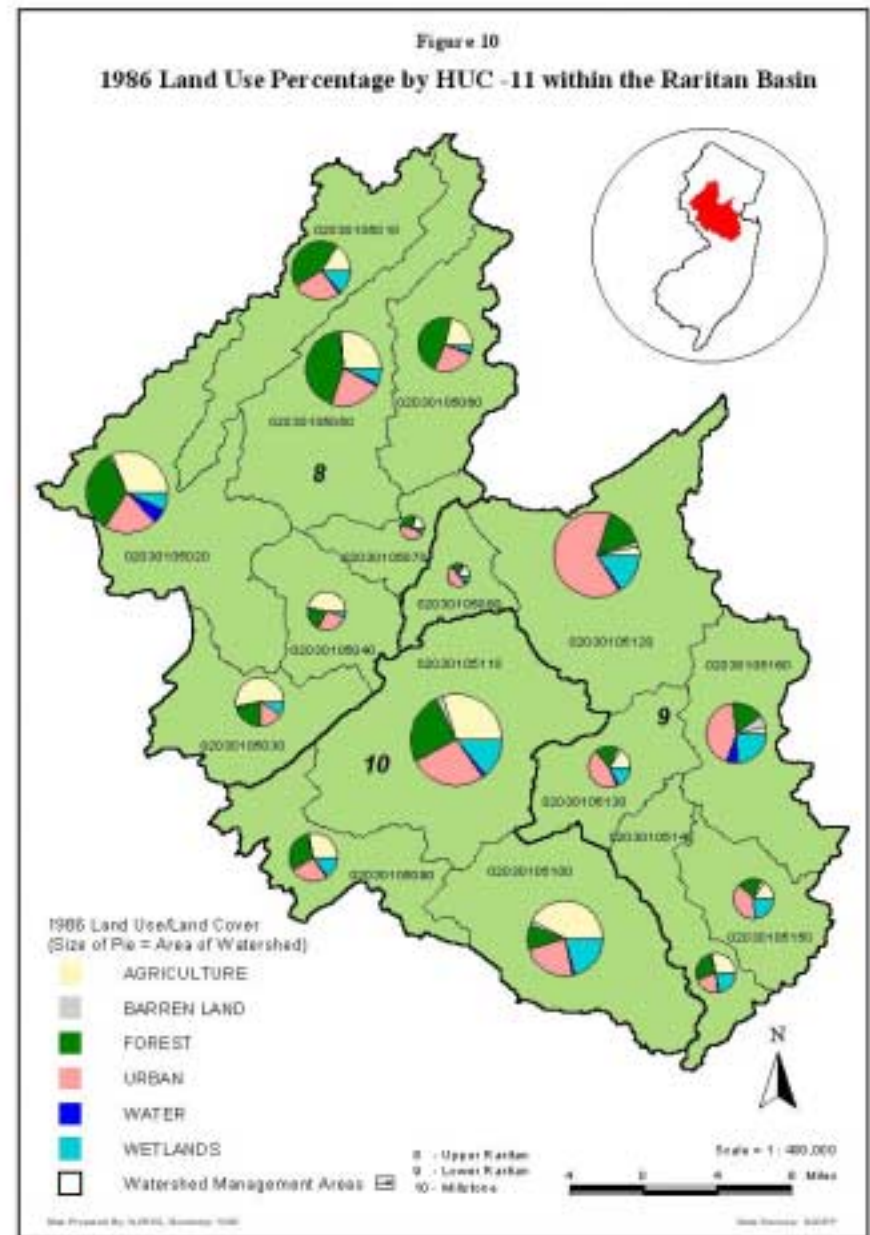
# Temperature Variations

- Variations due to ridges in Highlands and ocean influence in Coastal Plain



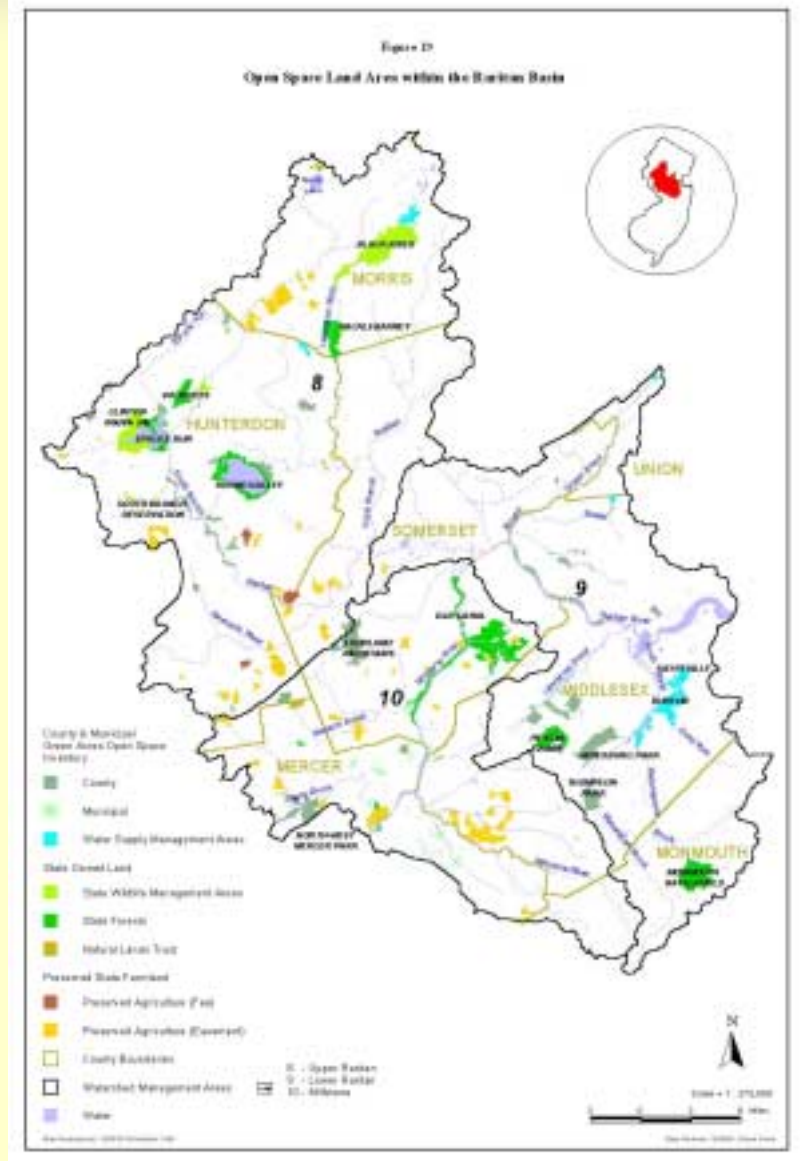
# Land Use

- 1986 Data by HUC-11
- Significance of urban areas in eastern portion of Basin
- 1995 - waiting on NJDEP LU/LC Data



# Open Space

- Areas 500 acres or greater are labeled
- Figure illustrates areas listed in NJDEP Green Acres Inventory
- Need Additional Information

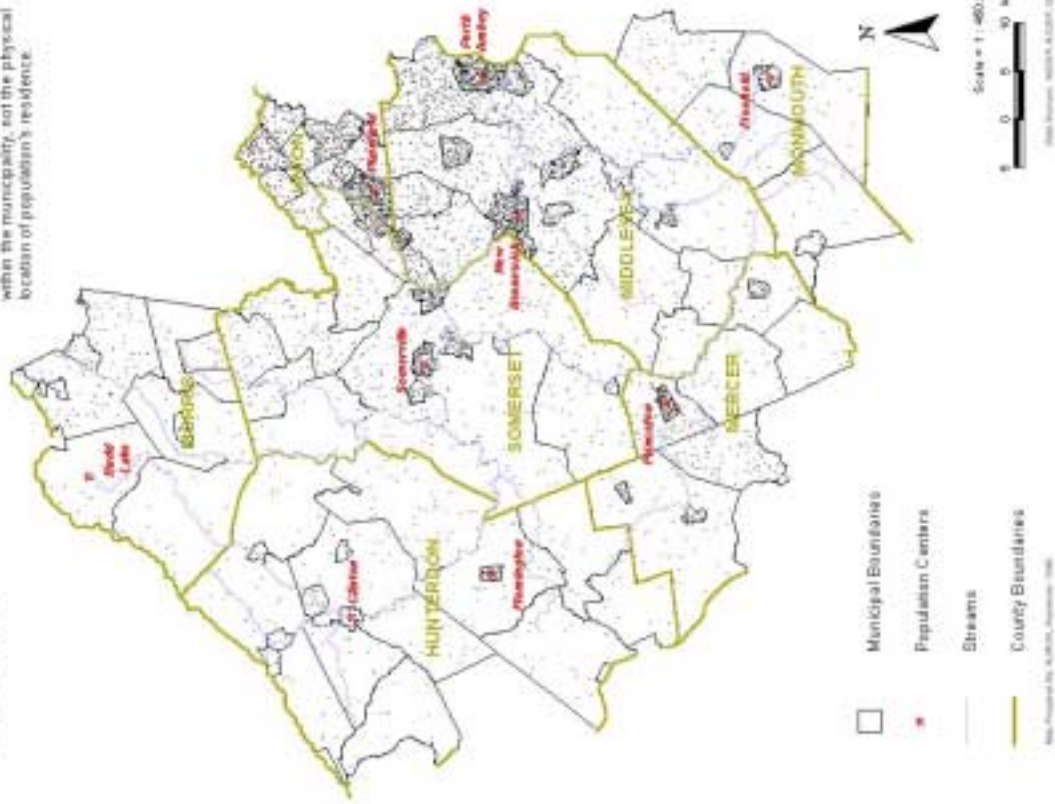




## Historical Population Estimates within the Raritan Basin

1950 Population  
1 Dot = 100 Persons

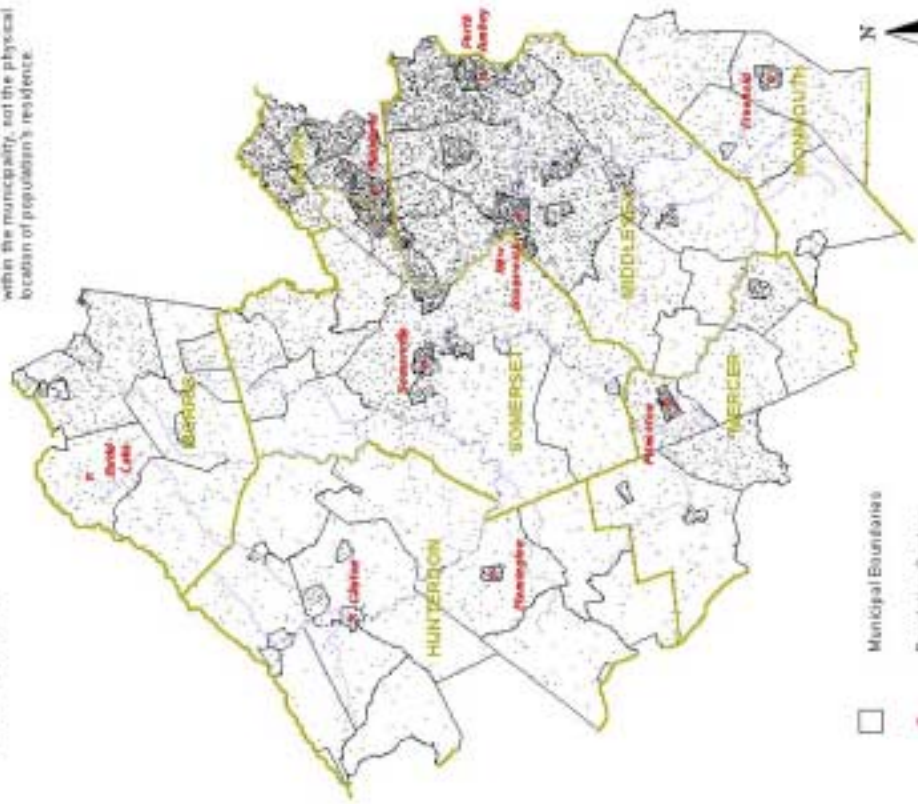
Please Note:  
Dots represent the total population  
within the municipality, not the physical  
location of population's residence.



# Historical Population Estimates within the Raritan Basin

1970 Population  
1 Dot = 100 Persons

Please Note:  
Dots represent the total population  
within the municipality, not the physical  
location of population's residence.



- Municipal Boundaries
- Population Centers
- Streams
- County Boundaries

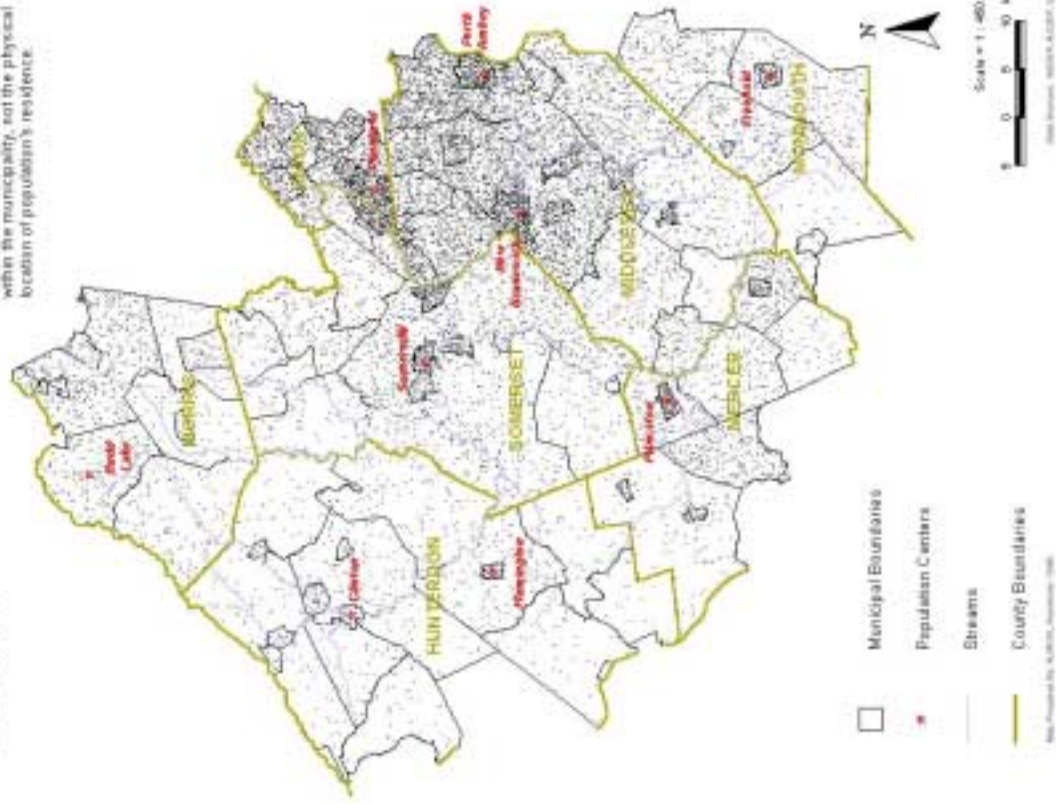
Scale = 1" = 40,000'  
0 10 20 Miles

Map Prepared by: G. M. H. Co., Inc., November 1980

## Historical Population Estimates within the Raritan Basin

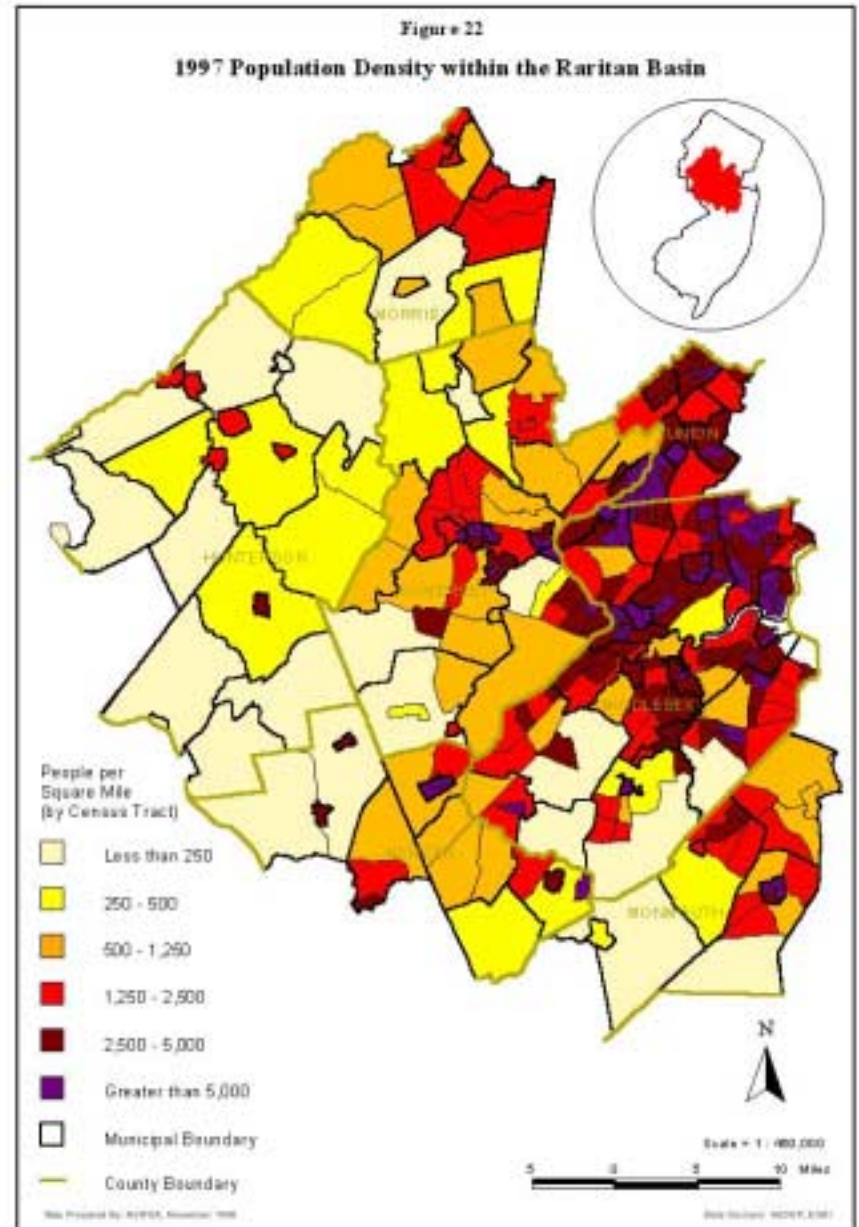
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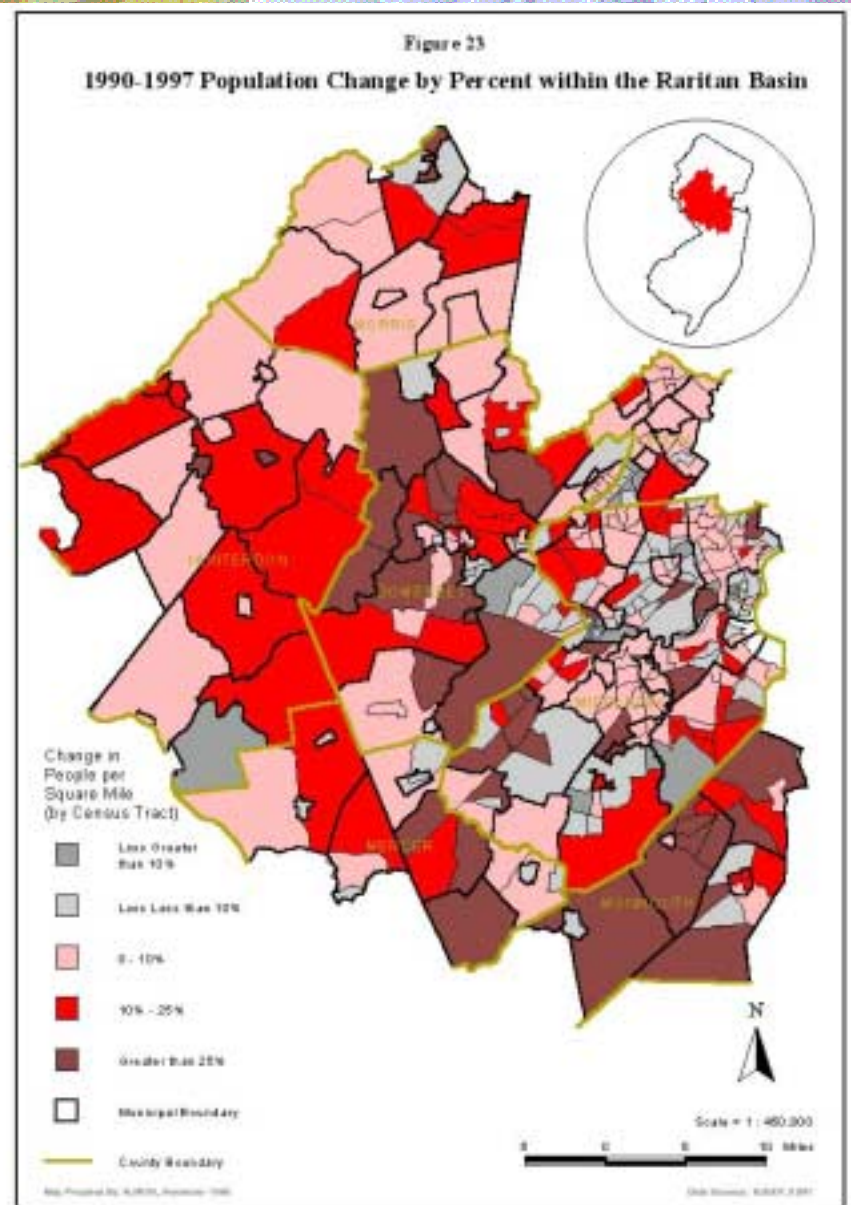
# Population

- Shows historic development patterns from coast to inland, and Route 1 corridor
- “Shifts” from urban to rural areas



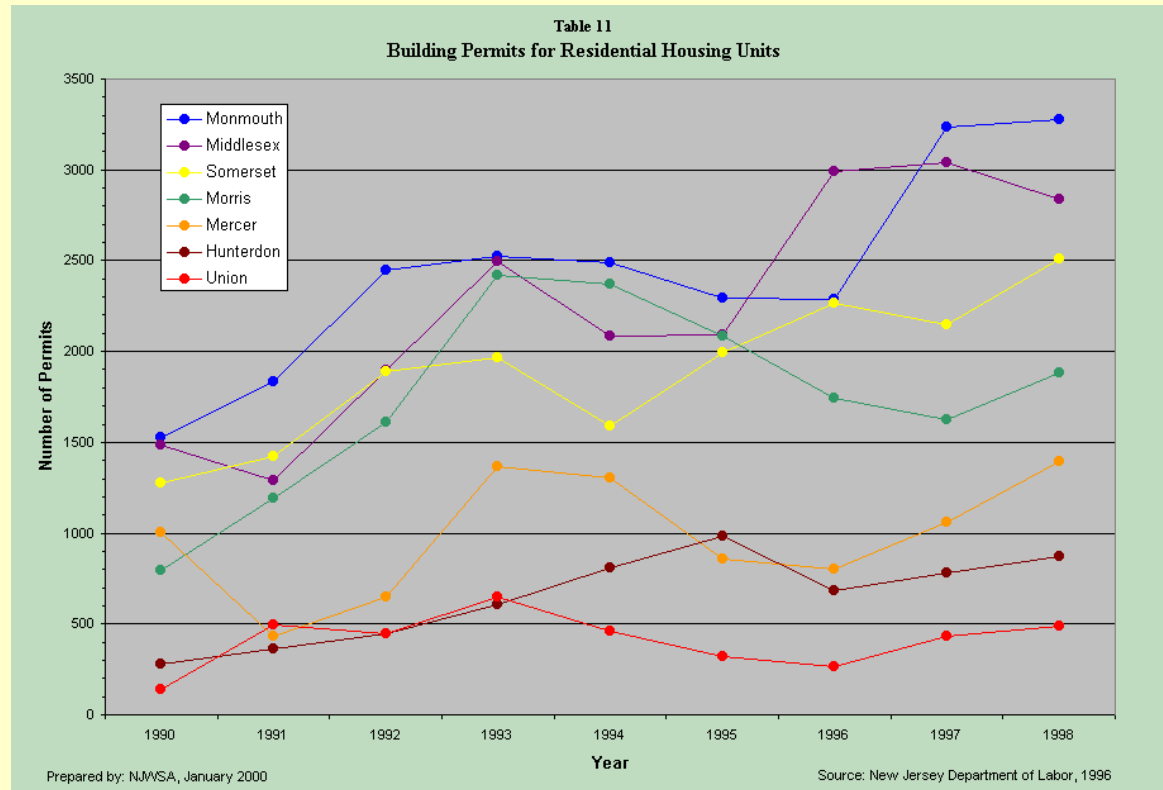
# Population Changes

- Clearly shows development intensity in the Raritan Basin



# Housing Trends

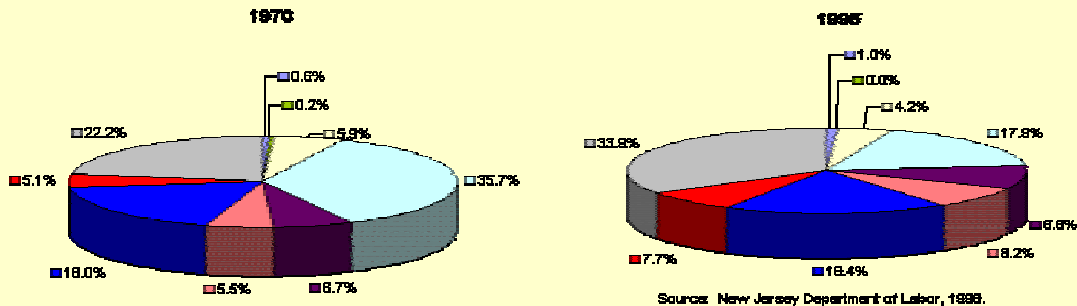
- Building Permit Data 1990-1998
- Steady upward trends
- Middlesex, Monmouth, Morris and Somerset Counties show greatest increase



# Employment Trends

- Total Employment by Economic Sector
- Regional increase in Services sector, decrease in Manufacturing

**Table 12**  
**Comparison of Total Employment by Economic Sector**  
**for the 7 Counties in the Raritan Basin**  
**For 1970 and 1995**



Source: Rutgers Regional Report, Volume 1, 1988.

Source: New Jersey Department of Labor, 1998.

■ Agriculture	■ Mining
■ Construction	■ Manufacturing
■ Transportation, Communications and Utilities	■ Wholesale Trade
■ Retail Trade	■ Finance, Insurance, and Real Estate
■ Services	

# Future Trends

- Continuation in “shift” from urban to rural areas
- 23% increase in State population by 2030
- Continued loss of open space areas, and degradation of natural resources

