

**BOROUGH OF AVALON  
CAPE MAY COUNTY, NEW JERSEY**

**MASTER PLAN RE-EXAMINATION  
APRIL 11, 2017  
EDA #A-231**



**BOROUGH OF AVALON  
PLANNING/ZONING BOARD**

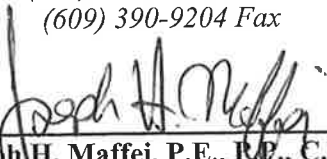
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**Prepared by:**

**ENGINEERING DESIGN ASSOCIATES, P.A.**

*5 Cambridge Drive  
Ocean View, NJ 08230  
(609) 390-0332 Phone  
(609) 390-9204 Fax*

  
**Joseph H. Maffei, P.E., P.P., C.M.E.**  
**NJPE License No. 37894**  
**NJPP License No. 5902**

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## **APPENDICES**

**2002 Master Plan Re-Examination Addendum I, Wireless Telecommunications**  
**2002 Master Plan Re-Examination Addendum II, Municipal Stormwater Management Plan**  
**2002 Master Plan Re-Examination Addendum III, Housing Element and Fair Share Plan**  
**2017 Master Plan Re-Examination Addendum IV, Green Master Plan**

## I. INTRODUCTION

The New Jersey Municipal Land Use Law (MLUL) Section 40:55D-89 requires the municipality to provide for the re-examination of their Master Plan every ten (10) years. The Reexamination Report shall state:

- a. The major goals and objectives relating to land development in the municipality at the time of the adoption of the last reexamination report.
- b. The extent to which such goals and objectives have been reduced or have increased subsequent to such date.
- c. The extent to which there have been significant changes in the assumptions, policies, and objectives forming the basis for the master plan or development regulations as last revised, with particular regard to the density and distribution of population and land uses, housing conditions, circulation, conservation of natural resources, energy conservation, collection, disposition, and recycling of designated recyclable materials, and changes in State, county and municipal policies and objectives.
- d. The specific changes recommended for the master plan or development regulations, if any, including underlying objectives, policies and standards, or whether a new plan or regulations should be prepared.

The last full master plan for the Borough of Avalon was adopted in January of 1979. Master Plan Activity since that time includes the following:

- 1982 - Re-examination
- 1988 - Re-examination and Housing Plan Element
- 1994 - Re-examination
- 2000 - Re-examination
- 2002 - Re-examination and Build-Out Analysis, including:
  - Wireless Telecommunications (Addendum I, July 5, 2005)
  - Municipal Stormwater Management Plan (Addendum II July 5, 2005)
  - COAH Plan (Addendum III July 5, 2005)
- 2007 - Re-examination and Build-Out Analysis, including:
  - Wireless Telecommunications (Addendum I, July 5, 2005)
  - Municipal Stormwater Management Plan (Addendum II July 5, 2005)
  - COAH Plan (Addendum III July 5, 2005)

In accordance with MLUL Section 40:55D-28, this report shall serve as a comprehensive plan setting forth the present-day conditions and issues affecting the Borough, as well as current goals and objectives. The purpose of this reexamination is to guide future development of land in a manner which will provide a balance between accommodating growth and protecting the environment, while ensuring the quality of life of the Borough residents and visitors.

This Re-examination Report is comprised of the following elements:

- A Land Use Plan Element
- A Housing Plan Element
- A Circulation Plan Element
- A Utility Service Plan Element

- A Community Facilities Plan Element

This report includes a complete housing element and fair share plan consistent with the requirements of the Council on Affordable Housing (COAH).

Specifically, this plan is intended to expand upon the recommendations of the 2007 Re-examination Report and provide specific recommendations for zoning ordinance and site plan and subdivision ordinance amendments.

A summary of achievements and actions is as follows:

- Cross Acceptance Report (January 2005)
- Revisions to the Borough Stormwater Ordinance
- Major revisions to the Zoning Ordinance Chapter 27 (October 2002 through January 2016) including:
  - Pervious Coverage
  - Increased Setbacks
  - Decreased Lot Coverage
  - Increased On-Site Parking
  - Added Stormwater Management
  - Added Floor Area Ratio (FAR)
  - Revised Landscape Ordinance to focus on conserving water and energy
  - Revised Business and Marina Zoning
  - Revised Telecommunications Ordinance
  - Revised Residential Parking Requirements
  - Revised Height Definitions to be Consistent with Updated FEMA Flood Maps
  - Revised Residential Floor Elevations to 3' Above Base Flood Elevation (BFE)
- Rezoning of areas within Business Zone
- Parking Plan
- Parking Study and modified Parking Ordinance
- Creation and Modifications to Landscape Ordinance in Chapters 26 & 27
- Rezoning of Marina District (R2B to ME)
- Rezoning of Hotel/Motel District
- Update of the Dune Protection Ordinance
- Avalon earned a Sustainable Jersey Bronze Certification in 2014 for creating a Green Team (which held three green fairs), water conservation measures, energy audits/upgrades, wind energy, habitat protection, tree protection, green grounds and pest management

## II. GOALS & OBJECTIVES

<u>GOALS</u>	<u>OBJECTIVES</u>
<ul style="list-style-type: none"> <li>• Provide protection from flooding</li> </ul>	<ul style="list-style-type: none"> <li>– Implement the Borough’s 2015 Flood Mitigation Plan</li> <li>– Research additional Bay Back improvements to alleviate flooding</li> <li>– Research additional outfall pipes and pumping systems to handle stormwater</li> <li>– Develop a flood proofing education program for businesses</li> <li>– Research possible State and Federal grant funding for flood protection</li> <li>– Develop a program or zoning ordinances to assist owners in the elevation of residential structures which exist below the FEMA Base Flood Elevation (BFE) + 3’</li> <li>– Identify and evaluate properties with repetitive flood losses</li> <li>– Identify and evaluate streets with repetitive flooding problems</li> <li>– Encourage the installation of additional check valves on outfall pipes</li> </ul>
<ul style="list-style-type: none"> <li>• Promote economically viable inter-local service agreements with other municipalities</li> </ul>	<ul style="list-style-type: none"> <li>– Expand economically advantageous inter-local shared service agreements with Stone Harbor, Sea Isle City, Ocean City, Middle Township, Cape May County and Cumberland County</li> </ul>



<ul style="list-style-type: none"> <li>• Promote the conservation of all natural resources</li> </ul>	<ul style="list-style-type: none"> <li>– Preserve our critical coastal beaches</li> <li>– Continue the green energy program for the use of alternative energy resources, including solar panels, geothermal, etc. for both private and public buildings</li> <li>– Encourage the Borough to perform a cost/benefit analysis of all new Borough structures</li> <li>– Restore the wooded areas and the freshwater and saltwater wetlands, around Armacost Park, to the optimal conditions</li> <li>– Restore full tidal access to Armacost Park's brackish section to maximize wildlife habitat</li> <li>– Develop a management plan for the Armacost Park's freshwater plants</li> <li>– Develop a cost effective and manageable program to eradicate and control phragmites</li> <li>– Create a butterfly habitat in Armacost Park by the use of indigenous plants which attract butterflies</li> <li>– Create a habitat to restore the maritime forest</li> <li>– Develop alternate solutions for beach replenishment</li> <li>– Encourage the use of rain sensors and other alternatives to reduce sprinkler water use</li> <li>– Develop a plan for the planting of indigenous vegetation on public properties</li> <li>– Develop an educational plan for the promotion of clean waterways</li> <li>– Encourage the use of biodegradable boat wash products</li> <li>– Provide education for the bird population and eco-tourism</li> <li>– Promote the retention of indigenous trees and vegetation</li> <li>– Investigate the reduction of light pollution in both Residential and Commercial Districts especially near waterways</li> </ul>
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<ul style="list-style-type: none"> <li>• Provide healthy air, adequate light, and open space</li> </ul>	<ul style="list-style-type: none"> <li>– Control building coverage, building heights, building setbacks, and building mass through existing zoning requirements</li> <li>– Enforce the provision of green space within all development through existing zoning requirements</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the safety and well-being of residents</li> </ul>	<ul style="list-style-type: none"> <li>– Ensure “Reverse 911” and all weather programs are available through various outlets including the Borough website and social media</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the appropriate population densities contributing to the well-being of all persons, neighborhoods, the community as a whole, and preservation of the environment</li> </ul>	<ul style="list-style-type: none"> <li>– Control density and land use through existing zoning requirements</li> <li>– Note any trends in development and prepare ordinance changes deemed appropriate</li> <li>– Encourage residents to apply to the Avalon Registry of Historic Places</li> <li>– Discourage unnecessary teardowns of historic structures</li> <li>– Educate residents regarding Avalon’s history and the importance of historic preservation</li> <li>– Encourage the reduction of carbon footprint associated with new construction</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the enhancement of community character and visual environment</li> </ul>	<ul style="list-style-type: none"> <li>– Enforce the streetscape provision of the landscape ordinance in both residential and commercial zones to enhance community character and appropriate visual environment</li> <li>– Utilize existing zoning requirements or develop new zoning requirements to ensure quality of life is provided</li> <li>– Encourage full time residency</li> </ul>
<ul style="list-style-type: none"> <li>• Provide support for the business community</li> </ul>	<ul style="list-style-type: none"> <li>– Encourage development in the Business Districts</li> <li>– Encourage year round tourism for the Business District</li> <li>– Encourage the investigation of additional parking in the vicinity of the Business District</li> <li>– Provide appropriate number of handicap accessible parking spaces in business area</li> <li>– Support the use of jitneys, trolleys and mass transportation including more hours and designated parking of jitneys</li> </ul>

	<ul style="list-style-type: none"> <li>– Provide signage to direct people to public parking facilities and pick-up locations</li> <li>– Encourage the enhancement of the visual environment within the Business District including landscaping, container plants, benches and bike racks</li> </ul>
<ul style="list-style-type: none"> <li>• Support the Borough's Department of Recreation &amp; Programming</li> </ul>	<ul style="list-style-type: none"> <li>– Promote the various recreational and sports activities available in the borough through the Borough's website and social media</li> <li>– Promote the various classes, events and family gatherings available in the Borough</li> <li>– Promote the use of the Avalon Free Public Library</li> <li>– Promote the use of the Avalon History Center</li> <li>– Establish a long range plan for the Avalon Community Hall</li> <li>– Investigate the construction of a community pool</li> <li>– Evaluate available facilities for recreation and programming community wide</li> <li>– Develop coordinated calendar for all groups representing public programs</li> </ul>
<ul style="list-style-type: none"> <li>• Provide adequate housing at a reasonable cost</li> </ul>	<ul style="list-style-type: none"> <li>– Develop zoning ordinances to provide reasonable cost housing that meets the needs of the community</li> <li>– Develop required affordable housing ordinances</li> </ul>
<ul style="list-style-type: none"> <li>• Support the continued dredging of our waterways</li> </ul>	<ul style="list-style-type: none"> <li>– Encourage the use of Macchia Island Confined Disposal Facility (CDF)</li> <li>– Maintain the Macchia Island CDF road</li> <li>– Promote the use of thin layer application of dredge material</li> <li>– Ensure waterways are clear and open for economic, recreation and fishing use</li> <li>– Ensure public access is provided to our waterways</li> <li>– Encourage the development of water related uses along our waterways including locations for kayak, canoe and paddleboard launching</li> </ul>

	<ul style="list-style-type: none"> <li>– Encourage access points to have sufficient water depths</li> <li>– Support the continued use of our back bay waterways</li> </ul>
<ul style="list-style-type: none"> <li>• Support the retention and reconstruction of existing marinas or development of new marinas</li> </ul>	<ul style="list-style-type: none"> <li>– Develop ordinances to encourage marina development/reconstruction/retention</li> <li>– Research the Blue Acre Grants Program</li> <li>– Encourage marinas to provide fueling facilities and boat launching</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the use of shoreline protection measures, including living shorelines, berms, dunes, seawalls and other alternatives</li> </ul>	<ul style="list-style-type: none"> <li>– Develop vegetation recommendations for the creation of living shorelines, berms and dunes</li> <li>– Encourage the use of alternative shoreline protection measures</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the use of bicycle routes</li> </ul>	<ul style="list-style-type: none"> <li>– Provide bicycle safety education</li> <li>– Ensure the enforcement of bicycle safety rules</li> <li>– Provide sufficient pavement markings and signage for bicyclist to follow</li> <li>– Investigate increasing bicycle lanes within the Borough</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the Borough's Beach Management Program</li> </ul>	<ul style="list-style-type: none"> <li>– Continue to update and implement the Beach Management Plan</li> </ul>
<ul style="list-style-type: none"> <li>• Promote the use of green building</li> </ul>	<ul style="list-style-type: none"> <li>– Develop design standards for green building</li> <li>– Encourage the use of non-polluting lumber</li> <li>– Encourage the use of private and public LED lighting</li> <li>– Encourage the historic preservation of structures and property to re-use existing facilities</li> <li>– Encourage Leadership in Energy and Environmental Design (LEED) construction</li> </ul>
<ul style="list-style-type: none"> <li>• Promote residential off-street parking</li> </ul>	<ul style="list-style-type: none"> <li>– Develop standards to utilize area under residential dwellings for parking</li> </ul>
<ul style="list-style-type: none"> <li>• Promote proper uses of the Business Zones</li> </ul>	<ul style="list-style-type: none"> <li>– Evaluate residential uses within the B-2 Zone</li> </ul>

### **III. LOCATION**

The Borough of Avalon is located in the middle portion of Cape May County along the eastern seaboard. It is surrounded by the Atlantic Ocean to the east; Stone Harbor to the south; the intercoastal waterway, salt marshes, and Middle Township to the west; and Townsend's Inlet and Sea Isle City to the north. The Borough consists of approximately 4.2 square miles of land area. The island on which Avalon is located projects farther east towards the Atlantic Ocean compared too many of its neighboring islands to the north and south.

### **IV. HISTORICAL PERSPECTIVE**

The Borough of Avalon was incorporated in 1892 when the island seceded from Middle Township. When Avalon was first developed, the early subdivision layouts provided lot widths of fifty to sixty feet, which were very generous at the time compared to other seaside resorts in New Jersey. Early land use ordinances established business and residential zones and wide public promenades. Later ordinances established minimum lot sizes of four thousand (4,000) square feet, front yard building setbacks of fifteen (15) feet, side yard setbacks of five (5) feet, and building heights of thirty (30) feet.

Other important community and public agency decisions include, establishing the dune line to preserve the remaining dune environment along the ocean front and preservation of wetlands and marshlands. These conservation efforts contribute to Avalon's charm and community character. Another aspect of Avalon's continued success, as an attractive resort designation has been the enforcement of zoning, floodplain, and construction regulations that govern development in the community.

### **V. SUMMARY OF 2007 RE-EXAMINATION REPORT**

The 2007 Re-Examination Report helped to guide the changes to the zoning ordinance and development of the Borough. In addition, the report discussed the community's desire to evaluate parking, traffic, open space, noise, light, air, water, sewer, stormwater runoff, community facilities, community services, affordable housing, green energy, and water conservation. The report recommended that changes be made to the site plan and subdivision ordinance, zoning ordinance, flood control ordinance, land use procedures ordinance, and municipal affairs.

A Planning Implementation Agenda (PIA) was prepared as part of the Centers Designation process in 2007. It lists various activities such as Land Use, Economic Development, Transportation, Housing, Infrastructure, Natural Resource Conservation, Recreation and Inter-Governmental Coordination.

One of the land use activities included is the reconstruction of the downtown area to encourage pedestrian circulation. This was done by creating better on-street parking along Dune Drive, including handicap-accessible spaces, widening sidewalks along with pedestrian-friendly amenities such as benches, trash receptacles, new lighting, landscaping

and bike racks. There were also amendments to the Business Zoning requirements to encourage the commercial uses frequented by seashore pedestrians and preserving the community character of a shore town. The Anchorage Area was rezoned for marina use to maintain the area's character. Avalon is approximately 98% developed.

Economic development is always an important factor in maintaining a viable community. As such, improving the downtown area and making changes to the Business Zone requirements as described above has encouraged revitalization of the commercial district along Dune Drive. Another benefit of the downtown revitalization is the improvement of the transportation facilities and parking along the Dune Drive Business/Commercial District. A trolley service was added in the summer of 2006 for visitors and patrons and replaced by the jitney system in 2015.

The amendment to the Business Zone included a mixed use which allows for the redevelopment and development of second- and third-floor residential units, thus providing newer and higher quality residential units. The Borough adopted a Housing Element and Fair Share Housing Plan in November 2006 to address affordable housing opportunities.

The downtown revitalization construction plan included the upgrade of the existing water, sanitary sewer and stormwater infrastructure and upgrades to the electric and gas facilities. This will help facilitate the new businesses and redevelopment in the Business District.

The Borough passed an amended Dune Protection Ordinance to help preserve and protect the dune areas, bird nesting habitat and plant life. A \$2.8 million beach replenishment project and a \$14.4 million seawall project were completed. It is anticipated that additional beach replenishment projects will be undertaken.

## VI. DEMOGRAPHIC PROFILE

The following is an overview of the characteristics of population, housing, employment, and labor in the Borough.

### A. Population Change

**Table 1 -Population Change 1950-2010**

YEAR	POPULATION	NUMBER INCREASE/ DECREASE	PERCENT CHANGE
1950	428	NA	NA
1960	695	267	62.4%
1970	1283	588	84.6%
1980	2162	879	68.5%
1990	1809	-353	-16.3%
2000	2143	334	18.5%
2003	2155	12	0.6%
2010	1334	-821	-38.1%

Source: U. S. Bureau of Census, 2010 & Avalon Borough Data

The year-round population in Avalon remained fairly steady from 1980 to 2003. There was a significant decrease (38.1%) in the year-round population from 2003 to 2010.

## **B. Seasonal Population Growth**

Seasonal population data is difficult to obtain because the U.S. Bureau of Census does not compile data for seasonal migration. The Cape May County Planning Department estimates seasonal population or seasonal migration. The Department estimates that the seasonal population figure is between 38,038 and 43,472 people. That estimate is based upon the number of dwelling units (5,434) multiplied by seven (7) or eight (8) persons or occupants.

The New Jersey State Police are required by law to provide annual mean population (AMP) estimates for resort municipalities in New Jersey in order to prepare per capita crime statistics. The State Police state very clearly that these estimates should not be used for any other purpose because the estimates are not a complete measure of seasonal population and only include only those living in rental housing units or in vacant year-round housing. Not counted are the many day visitors and persons who occupy campgrounds, hotels, motels, or bed and breakfast establishments or who stay with friends and relatives.

The State Police determine the Annual Mean Population using the following formula:

$$AMP = \frac{12P + 3SP}{12} \text{ OR } \frac{12AMP - 12P}{3}$$

Where AMP equals Annual Mean Population; P equals Population and; SP equals Seasonal Population. The AMP for 2011 is 5,005.

Therefore,

$$SP = \frac{12(5005) - 12(1334)}{3}$$

Equals: 14,684

According to the New Jersey State Police the seasonal population is 14,684 persons over the three-month summer period or summer season.

A seasonal population of 38,038 increases the year-round population in the community 2,851% or 28 times. A seasonal population of 43,472 increases the year-round population in the community 3,259% or 32 times. These figures represent a significant increase in the population due to tourism.

### C. Population Projection

**Table 2- Population Projections**

<b>Year</b>	<b>Population Projection</b>
2010	1334
2030	1366

Source: Cape May County Planning Department, November 2001  
New Jersey Department of Labor, 2010

The County population estimates illustrate that the year round population is expected to remain constant in the next 20 years.

### D. Population by Age

**Table 3- Age Characteristics  
Avalon, New Jersey**

<b>AGE GROUP</b>	<b>TOTAL</b>	<b>PERCENT %</b>
Under 5	32	2.4
5-17	87	6.5
18-20	21	1.6
21-24	29	2.2
25-34	73	5.5
35-44	85	6.4
45-54	158	11.8
55-59	130	9.7
60-64	179	13.4
65-74	296	22.2
75-84	170	12.7
85+	74	5.5
Total	1334	100

Source: US Census Bureau: 2010

### E. Household and Families

**Table 4 -Households and Families**

<b>Households and Families</b>	<b>2010</b>
Households	692
<i>Average Household Size</i>	1.93
Families	416
<i>Average Family Size</i>	2.45

Source: US Bureau of Census: 2010

The nature of Avalon's population is a relatively low household size and high median age.



**F. Housing Units by Tenure and Vacancy Status****Table 5 - Housing Units by Tenure and Vacancy Status**

	<b>Units</b>	<b>Percent of Total</b>
<b>Occupied</b>	<b>692</b>	<b>12.7%</b>
<i>Owner Occupied</i>	617	
<i>Renter Occupied</i>	75	
<b>Vacant</b>	<b>4742</b>	<b>87.3%</b>
<i>For Rent</i>	180	
<i>Seasonal, recreational, or Occasional Use</i>	4562	
<b>Total</b>	<b>5434</b>	<b>100%</b>

Source: US Bureau of Census: 2010

The total number of housing units in Avalon is 5,434 and, of that figure, there are 692 occupied units and 4,742 vacant (i.e., seasonal) units. The occupied units account for only 12.7% of the total units, while the vacant units account for the remainder, or 87.3%. It is evident that most of the units are seasonal in nature and account for the population swell in the summer months.

**G. Housing Units****Table 6 - Dwelling Units 2010-2000**

<b>YEAR</b>	<b>SINGLE-FAMILY UNITS</b>	<b>DUPLEX UNITS</b>	<b>TRIPLEX OR GREATER UNITS</b>	<b>TOTAL UNITS</b>
2010	4,240	604	566	5,410
2011	4,371	522	461	5,354
2012	4,311	575	470	5,356
2013	4,325	519	500	5,344
2014	4,517	275	573	5,365

Source: U.S. Bureau of Census: 2015

## VII. LAND USE ELEMENT

The land use plan element is required to show the existing location, extent, and intensity of development of land to be used in the future for varying types of purposes, including residential, commercial, recreational, educational, and other private and public purposes. The land use element is to relate to the existing and proposed zone plan and zone ordinance.

Avalon can be classified as a completely developed small stable village with a population of under 10,000 persons. The Land Use Plan targets specific plans for particular portions of the community to retain commercial uses and implement design improvements.

### A. Existing Land Use

Avalon Borough is completely developed and existing structures and facilities are being demolished, renovated, rebuilt and redeveloped in all residential and commercial zones.

**Table 7 - Lot Count by Zone**

ZONE	LOT COUNT	LOT COUNT 2016
R-1C	1,947	2,268
R-1B	1,207	1,295
R-M	515	303
R-2B	480	558
R-2A	448	629
R-1A	31	26
R1AA	11	11
B-1	236	244
M-B	90	271
B-2	57	68
<b>Total</b>	<b>5,349</b>	<b>5,673</b>

Source: Avalon Zoning Official Office, 2016

The total number of lots, including substandard lots, is 5,673. Substandard lots are those lots shown on the tax map, which do not conform to the requirements of the zone. A brief analysis determined that the substandard lots are not a significant portion of the lots counted. In some zones, there are no substandard lots, such as the R-1A and R-1AA Zones. Residential zones contain 5,090 lots or 90% of the units in the Borough. Commercial Zones encompass 583 parcels or 10% of the units.

The R-M (motel and hotel) Commercial District does not allow any residential use. The B-1 (business) Commercial District allows second and third floor residential as a Conditional Use. The B-2 (business) Commercial District allows single and two-family residential. The M-B (marina business) Commercial District allows multiple dwellings.

**Table 8 - Parcel Counts with Breakdown by Lot Frontage**

<b>Zone</b>	<b>Parcel Count</b>	<b>Frontage &lt;50 Linear Feet</b>	<b>Frontage &gt;50 Linear Feet</b>
R-M	112	0	112
R-2A	407	88	319
R-2B	418	208	200
B-2	38	1	37
B-1	182	50	132
M-B	90	0	90
<b>Total</b>	<b>1247</b>	<b>347</b>	<b>890</b>

Source: Avalon Planning Office, 2016

The parcel counts of the above zones were examined because these areas are likely to experience the most redevelopment at the highest densities.

**Table 9 - Percentage of Borough Land Area within Each Zone District**

<b>Zone</b>	<b>Percentage</b>
R-1C Single-Family Residential	42.12%
R-1B Single-Family Residential	39.34%
R-2B Two Family Residential	5.86%
R-2A Two Family Residential	6.03%
R-M Motels and Hotels	1.42%
B-1 Business	2.33%
M-B Marine Business	0.65%
R-1AA Single-Family	1.12%
R-1A Single-Family	0.99%
B-2 Business	0.13%
<b>Total</b>	<b>99.99%</b>

Source: Avalon Planning Office, 2016

1. The percent of land area calculation is based upon the existing zoning map and does not include non-conforming uses.
2. The P-U Public Use and P-C Public Conservation Districts are excluded from the calculation of percent land area for Table 9.

Table 9 illustrates that most land in the Borough is residential in nature. Please note that this table does not account for the single-family, two family, and multiple dwelling residential uses that are existing in the commercial zones.

In conclusion, the fact remains that a vast majority of the development in Avalon is residential with a portion utilized for commercial uses.

**1. Residential**

The existing residential zones do not require any land use amendments or changes to bulk standards, however the possibility of providing parking under homes should be reviewed. The Planning Board has identified the Residential Districts and districts containing Single-family and Two-family residential development in the community in need of review, relating specifically to the setbacks.

As stated previously, some residential uses are allowed in the B-1, B-2 and M-B Commercial Districts as conditional uses as well as principal permitted uses.

**2. R-M (Motels and Hotels) Zone**

The zone is located at the south end of town between 78<sup>th</sup> and 80<sup>th</sup> Streets from the beach to Ocean Drive.

In addition to motels and hotels, the permitted uses in the R-M Zone include essential services, public parks, public playgrounds and recreational areas operated by membership organizations for the benefit of their members or for the general public and not for gain, and Municipal buildings. Conditional uses include churches, public libraries, hospitals, nursing homes, public and private schools, wireless telecommunication towers and antennas. Private garages, tennis courts, swimming pools, off-street parking, signs, and private docks are permitted as accessory uses.

**3. B-1 (Business) Zone**

The B-1 Business District is located from 20<sup>th</sup> Street to 33<sup>rd</sup> Street along Dune Drive and extends to the east side of Ocean Drive from 20<sup>th</sup> Street to 29<sup>th</sup> Streets. The B-1 Business District permits retail stores and shops, personal service shops, banks, theaters, offices, restaurants, community services, light wholesale uses, and municipal buildings. Conditional uses include commercial tennis courts, churches, second and third floor residential, repair garages and automobile service stations, public libraries and public and/or private schools. Currently, off-street parking, signs, home occupations and automobile wash associated with a repair garage and convenience store associated with a repair garage are permitted accessory uses.

There has been a trend to create larger commercial buildings consisting of office and retail stores and shops, and second story residential, portions of which are leased or sold. Existing market trends generally do not create situations where owners and operators reside on the premises. The Planning Board seeks to continue to encourage redevelopment activity in the B-1 Zone and create a more dynamic streetscape by encouraging second floor and third floor residential uses as conditional uses. The Planning Board shall examine the setbacks where non-conforming residential properties exist.

The Board seeks to encourage redevelopment of existing commercial properties. Encouraging mixed uses, such as convenience stores with automobile filling stations could assist retention of the commercial uses. The Board also seeks to provide additional incentives and/or standards to retain or redevelop the restaurant uses.

The properties located on the southeast corner of 29<sup>th</sup> Street and Ocean Drive and also known as Block 29.04, Lots 65.04, 66.01, 66.02 and 66.03 are commercial properties and were rezoned B-1 in order to be consistent with the B-1 Zone located north of the parcels.

**4. B-2 (Business) Zone**

The B-2 Business District is located along Ocean Drive from 64<sup>th</sup> Street to 69<sup>th</sup> Street. Single-family dwellings, Two-family dwellings, retail stores and shops, personal service shops, banks, theaters, offices, restaurants, community services, retail or light wholesale uses, and municipal buildings are permitted uses. Permitted conditional uses include commercial tennis courts, churches, public libraries, and public or private schools. Accessory uses include private garages, signs, swimming pools, off-street parking, private tennis courts, home occupations, and second floor residential.

This area was intended to provide a commercial node for the surrounding residential development, but has historically developed with mostly residential and few commercial uses. In addition, accessory uses are uses which are incidental to the principal use of the land or building, located on the same lot with principal use. When second floor residential is permitted as an accessory use typically those uses are accessory to an office or business located on the premises and the residential use is used by the owner or operator. Existing market trends generally do not create situations where owners and operators reside on premises. The Planning Board seeks to maintain the existing development patterns, rather than create awkward non-conformities. This can be accomplished by permitting second floor residential uses as a conditional use, not an accessory use.

**5. M-B (Marine Business) Zone**

The M-B Marine Business District is located in two (2) sections within the Borough. The first is located at the northwest end of 20<sup>th</sup> Street along Pennsylvania Harbor and Ingram's Thorofare. It encompasses Block 19.09, Lots 1, 3, 5, 7, 8.01, 8.02, 9, 10.01, 10.02, 11, 12.01, 12.02, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 28, 30, 32, and 34; and Block 19.11, Lot 1. This is the location of the Avalon Anchorage Marina.

The second is located along Ocean Drive between 18<sup>th</sup> Street and 6<sup>th</sup> Street, parallel to the waterway. Within this area is the Commodore Bay Marina, along with various residential structures from single family structures to condominiums.

The permitted uses in the M-B Marine Business District consists of Marinas, essential services, municipal buildings, public parks and recreation areas operated by membership organizations for the benefit of their members or for the general public and not for gain. Conditional uses consist of restaurant/fast food establishment, retail stores/shops, public/private schools, churches, parish houses, church recreation buildings, public libraries, and various residential structures.

Accessory uses include private garages, off-street parking, signs, private docks and swimming pools. Off-street parking is an important aspect to ensure the allowable uses can also be accompanied with the required parking.

As a shore town, the Borough encourages the use of and access to the waterways by the public. As such, the retention and reconstruction of existing marinas and/or the development of new marinas is an important aspect of using and providing access to the waterways. The definition of marina should be expanded to provide marinas with flexibility and diversity in order to be economically feasible. The Board may provide recommendations for marina uses.

**6. P-U (Public Use) Zone**

The Borough contains several P-U Public Use Zoning District areas throughout town. These areas contain the beach, playgrounds, recreation complex, the Avalon Bay Park Marina, including the kayak park and the Avalon Sports Fishing Center Marina.

**VIII. COMMUNITY DESIGN PLAN**

The Community Design Plan is intended to provide building and development design standards. Good project design is important because new development and redevelopment should be harmonious in appearance.

**A. Design Guidelines**

The Planning Board created Design Guidelines for the Site Plan and Subdivision Ordinance for the B-1 Zone. These Design Guidelines enhance the Dune Drive Street Improvement Project undertaken by the Mayor and Council at the Planning and Zoning levels. The Center Design Guidelines provide continuity of design by reinforcing the streetscape, hardscape, and landscape improvements. In addition, the Board reviewed the sign regulations to further enhance the overall image of the Central Business District and other business districts.

Streetscape includes the building facades, attached signs and lighting. Hardscape is generally understood as the sidewalks, driveways, and parking lot materials. Landscaping includes street trees, planting strips, hedges, street furniture, benches, trash receptacles, bicycle racks, recyclable receptacles, mailboxes, and public

telephones. Both external and internal lighting, roof signs and window clutter would be addressed in the sign ordinance.

## **B. Pedestrian and Streetscape**

Pedestrian linkages such as sidewalks encourage walking and provide opportunities to meet and interact. A strong network of sidewalks and public promenades services Avalon.

- Enhancing the pedestrian experience includes appropriately sized and located crosswalks and depressed curbs.
- Ground texture is an important element of pedestrian amenity and increases values.
- Sidewalk width is also an important element.
- Complementary pedestrian amenities include light poles, benches, planters, waste receptacles, and bicycle racks. Light poles, ranging from nine to twelve feet in height are in human scale. Careful consideration of the lighting plan is important because too much lighting can drastically affect the character of an area.
- Quality signs greatly enhance the pedestrian experience. Signs can be of a small scale and attached to or hang from the building façade, painted on the inside of a window, or printed on an awning. Due to the mixed nature of Dune Drive especially, both larger signs and smaller signs are encouraged to provide information to motorists as well as pedestrians.
- Consideration shall be given for pedestrians to enjoy outdoor dining and still provide appropriate sidewalk circulation.

## **C. Open Space and Community Greenspace**

Open spaces include community greenspace as well as peripheral spaces. Avalon contains several outdoor gathering places. First and foremost is the beach along the Atlantic Ocean which extends south from 8<sup>th</sup> Street to 80<sup>th</sup> Street. There is public access at almost all street ends with pedestrian paths to access the public beach. Other outdoor open space and community greenspace areas include the 21<sup>st</sup> Street Pavilion, Armacost Park, Veteran's Plaza at 21<sup>st</sup> Street and Dune Drive, the access point on the west side of the 30<sup>th</sup> Street Bridge along Avalon Boulevard, the Recreation Field Complex and four (4) playgrounds at 8<sup>th</sup> Street & Ocean Drive, 30<sup>th</sup> Street & Avalon Beach, 39<sup>th</sup> Street & Dune Drive and 74<sup>th</sup> Street & Ocean Drive. In addition, there is a public boardwalk which extends from 21<sup>st</sup> Street to 32<sup>nd</sup> Street. Public parking and the Avalon Beach Patrol are all located near the 32<sup>nd</sup> Street end of the boardwalk.

In this context, Veteran's Park is considered a "community greenspace" because it is used especially for holiday parades and memorial ceremonies which begin at the Borough Hall and end at 21<sup>st</sup> Street. Historically, the circle was a gateway entrance to Avalon, when the Avalon Boulevard from Middle Township crossed over into Avalon on 21st Street. Typically, central greenspace or common areas are larger and act as a foundation for the social life of the community, including bazaars, holiday displays, and hubs of community activity. These areas include Veterans Plaza, 8<sup>th</sup> Street recreational area, 39<sup>th</sup> Street Park, the recreational complexes and all parks, public gardens and Dune Drive median islands.

Parking located around the greenspace can absorb large numbers of vehicles, reducing the need for off-street parking lots and enhancing pedestrian activity on the street. Typically the community greenspace contains some vertical element such as a larger community building or focal point. In this instance a flagpole is the vertical element. The Planning Board encourages the development and maintenance of community open space and greenspace. Additional controls should be reviewed for the access point and beach on the west side of the 30<sup>th</sup> Street Bridge along Avalon Boulevard

#### **D. Mixed and Multiple Uses**

Small communities should have mixed and multiple uses, consisting of varied housing types and costs, and affordable housing. Mixed uses come in many combinations such as, retail on the ground level with housing above and retail on the ground level with offices above. Avalon is witnessing a trend of conversion of office space to residential space above both ground floor retail and office space. Housing is one of the most appropriate uses on the second floor. Affordable housing dispersed in the mixed-use core area would provide needed low and moderate income housing space in the community.

#### **E. Property Maintenance**

Property maintenance is a critical aspect of any ordinance because visible deterioration negatively impacts the community. Property maintenance programs should include the following:

- Inspection;
- Sufficient time to repair or maintain once cited;
- Processing completed work in a timely manner;
- Pressing legal action where required; and
- Withholding permits.



## IX. HOUSING PLAN ELEMENT

The Housing Plan Element should address residential standards and proposals for the construction and improvement of housing. A housing plan is required in order for the governing body to amend the zoning ordinance relating to the nature and extent of the uses of land and of buildings and structures thereon. Table 10 lists the demolition permits issued each year from 2002 to 2015.

**Table 10 – Number of Demolition Permits by Year**

<b>Year</b>	<b>Number of Demolitions</b>	<b>Percent Change</b>
2002	113	N/A
2003	107	-5.3%
2004	148	+38.3%
2005	129	-12.8%
2006	81	-37.2%
2007	63	-22.2%
2008	48	-23.8%
2009	36	-25.0%
2010	48	+33.3%
2011	61	+27.1%
2012	46	-24.6%
2013	60	+30.4%
2014	62	+3.3%
2015	62	0.0%

Source: Avalon Zoning Office 2016

The redevelopment of existing residential and commercial structures through demolition and reconstruction has fluctuated from 2002 to 2015. Overall, the demolition and reconstruction results in infill development.

In addition, Addendum III, COAH Plan, of the 2002 Master Plan Re-examination, is referenced here to indicate the Borough's desire to implement an affordable housing program.

### A. Size of Residential Structures in Square Feet

The Assessor's office analyzed dwelling units in the R-1B, R-1C, R-2A and R-2B Zones, constructed from 1965 to 1970, from 2001 to 2007 and from 2008 to 2010. (See Table 11.)

**Table 11 – Average Square Foot Comparison**

<b>Zone</b>	<b>1965-1970 Average in SF</b>	<b>2001-2007 Average in SF</b>	<b>Percent Increase</b>	<b>2008-2010 Average in SF</b>	<b>Percent Increase</b>
R-1B	1,892	3,927	107.6%	4,186	6.6%
R-1C	1,771	3,270	84.6%	3,551	8.6%
R-2A	1,469	2,172	47.8%	2,287	5.3%
R-2B	1,684	2,526	50.0%	2,648	4.8%

Source: Avalon Tax Assessor's Office 2016

The area with the largest percent increase in the size is the R-1C Single-Family Residential Zone at 8.6%. The next highest percent increase was 6.6% for the R-1B Single-Family Zone. The increase in the average square footage has slowed down as indicated by the 2001–2007 time period.

The infill development or redevelopment of existing lots, is larger in square footage than most of the existing housing stock, resulting in reduced light and air, increased runoff, and increased parking demand and negative perceptions about the mass and visual impact on the community. However, the addition of a FAR of 0.70 for single- and two-family residences has helped to slow down the larger footprint.

In order to continue to accommodate growth and redevelopment while providing controls, the Borough shall continue to enforce the 0.70 FAR for one- and two-family residential structures.

## B. Density

Density is defined by the MLUL as the number of dwelling units per gross area of land to be developed.

**Table 12 – Density as Permitted in Existing Zoning Districts**

Zone	Residential Permitted Use	Minimum Lot Size in Square Feet	Density in Dwelling Units/Acre
R-1AA	Single-Family	22,000	1.98
R-1A	Single-Family	11,000	3.96
R-1B	Single-Family	6,000	7.26
R-1C/R-2A/B-2	Single-Family	5,000	8.71
R-2B	Two-Family	5,000	17.42
M-B	Multiple Dwelling <sup>1</sup>	2,178	20.00
B-1	2 <sup>nd</sup> & 3 <sup>rd</sup> Floor Residences <sup>1, 2</sup>	2,750	15.84

<sup>1</sup>Note: The multiple dwelling conditional use requirements set forth a minimum land area of 2,178 SF/Unit

<sup>2</sup>The 2<sup>nd</sup> and 3<sup>rd</sup> floor residential conditional use requirements set forth a minimum density of 2,750 SF/Unit and is not a minimum lot size.

The densities in Avalon vary a great deal from 1.98 dwelling units per acre in the R-1AA Zone up to 20 units per acre in the M-B Zones. The Planning Board has identified key issues related to density including population, traffic, and parking as concerns of this re-examination report.

The Planning Board has identified the R-2A Zone as an area of concern. The R-2A Zone is located on the west side of Ocean Drive from 20th Street to 41st Street, and also between Ocean Drive and Dune Drive from 32nd Street to 35th Street, and 22nd to 29th Streets. These areas of town are notoriously congested due to regional and local traffic on Ocean Drive. In addition, on-street and off-street parking demand becomes an issue regularly due to the residential uses, as well as commercial uses located nearby. The population in these areas swells tremendously during the summer months, especially on weekends.

## C. Mass and Scale

The Planning Board previously identified the mass and scale of structures as one of the key issues related to any Zoning Ordinance amendments. Mass in this context refers to a massive size or effect, such that the effect is imposing and large in comparison to what is considered typical. Building mass is the dimensional volume of the structure defined by the sides, and roofs and the footprint. Scale is the relationship of the structure to adjacent structures and to the human frame. This was addressed by the Borough by implementing a Floor Area Ratio (FAR) requirement.

#### **D. Flood Control**

The National Flood Insurance Act of 1968 administered by the Federal Emergency Management Agency (FEMA) an agency of the Housing and Urban Development (HUD) provides flood insurance protection to the property owners in flood prone areas. FEMA issued Preliminary Flood Insurance Rate Maps (FIRM) on June 30, 2014 and revised Preliminary FIRMs on January 30, 2015. All communities, which are part of the program must adopt and enforce flood plain management regulations, which are consistent with the Federal Government Guidelines. These regulations take precedence over any less restrictive local laws, ordinances, or codes. Avalon has determined that buildings be constructed by practices that minimize flood damage. Avalon requires that residential structures be elevated so that the top of block elevation is three (3) foot above base flood elevation (BFE). Commercial structures may either be three (3) feet above BFE or appropriately flood-proofed. Specifically, all new construction and substantial improvements must be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are located so as to prevent water from entering or accumulating within the components during conditions of flooding. In addition, the Borough of Avalon has achieved a Class 5 rating from the National Flood Insurance Program (NFIP), thus providing a 25% reduction in flood insurance premiums.

Addendum II, Municipal Stormwater Management Plan, of the 2002 Master Plan Re-examination Report, is referenced here to indicate the additional steps taken by the Borough to control flooding.

#### **E. Building Height**

Building height is defined by the existing Zoning Ordinance as the vertical dimension of a building measured from the elevation of three (3) feet above BFE as set forth by the Federal Flood Control Act to the highest point of the roof. The existing permitted height in all zones in the Borough is thirty (30) feet, as defined in the Ordinance.

The elevation of the Borough of Avalon above sea level varies from five (5) feet along the inland waterway to twelve (12) feet along the beach. The Zoning Ordinance requires that all principal structures in Avalon be three (3) foot above base flood elevation.

One of the key issues identified by the Planning Board is the mass of structures as it relates to height.

#### **F. Architecture**

The Planning Board has identified the lack of architectural details as an area of concern. Residential architectural design on the island from the 1960's has created homes that lack detail. The Board prefers to allow architects flexibility and creativity with design. Development in the community is typically completed on a lot-by-lot basis. The Board determined that architectural details would be encouraged through the Zoning Ordinance for residential structures. The Board seeks to actively encourage architectural detail in the Subdivision and Site Plan Ordinance for commercial structures in the business districts.

### **G. Height Exceptions**

Historically, homes in Avalon contained decorative roof elements. In order to promote architectural creativity and variation in design, the Planning Board encourages decorative features. Decorative features, which are not inhabited or habitable, including false fronts, roof parapets, falsework, cornices, cupolas, finials, spires, weather vanes and other decorative features are encouraged. Variances are required in order to accommodate any height in excess of the required maximum. The Planning Board may seek incentives such as those in the B-1 Zone to promote the use of architectural roof elements in the R-M Zone.

### **H. Building Coverage**

Building coverage is defined as the horizontal area measured along the outside perimeter of the exterior walls of the ground floor for all principal and accessory buildings on a lot, divided by the entire area of the lot. The existing permitted building coverage is 27%. The Board seeks to encourage architectural interests, such as roofed open porches, chimneys and open and covered stairs. Building coverage is distributed to permit 27% of coverage for principal building area and accessory building area and 38% when combined with principal building coverage for architectural details including, but not limited to, porches, decks, chimneys, stairs and etc.

### **I. Roof Pitch**

Many of the roof pitches of new single-family and two-family dwellings in Avalon tend to be flat or at an angle of two (2) feet of vertical rise in twelve (12) feet of horizontal run (2:12). Roof pitches greater than 2:12 are more consistent with the historical housing stock, generate visual interest and prohibit massive third floors, which greatly impact the human scale. The Borough has adopted ordinances requiring roof pitches of a minimum of 4:12 up to 8:12. In order to encourage architectural creativity, the Zoning Ordinance was amended to provide incentives for steeper roof pitches in the B-1 Zone.

No such roof pitch requirements are encouraged for multiple dwelling, townhouse, hotel and motel, retail and office buildings. The Planning Board may consider incentives such as those in the B-1 Zone for the RM Zone.

### **J. Third Story**

The Planning Board had identified a concern that third stories had become massive in scale and are perceived as imposing from the street. In addition, dwellings were constructed which were three-story, flat-roofed monolithic structures, which lacked appropriate detail and presented blank facades that are three stories high. This was addressed by the Borough by implementing a FAR requirement.

### **K. Garages**

In some areas of town, garages and driveways dominate the streetscape and the front yards of single-family and two-family dwellings alike. Limited off-street parking and the lack of sufficient parking standards exacerbate the problem. The Board has encouraged private garages in the rear

yard through a lot coverage bonus which provides additional off-street parking. Encouraging off-street parking is something that the Board is very interested in promoting. Increasing side yard setbacks to encourage driveways in side yards would increase off-street parking with or without the detached garage bonus.

#### **L. Decks/Porches**

The Borough adopted an ordinance to limit outdoor decks so that the floor of an outside deck shall be no higher than the floor of highest habitable floor in any structure. It also limits the amount of flat roof which is a pitch of 2:12 or less to 20% of the roof area. This has helped to reduce the size of the buildings but shall add architectural elements to enhance the back of the buildings.

#### **M. Front Yard Setbacks**

The Planning Board has identified the limited amount of parking available during the summer peak times. In an effort to provide and promote off-street parking, the front yard setbacks were evaluated and revised to require an 18' setback to the garage portion of the structure. All residential districts require a minimum 15 foot front yard setback which does not allow front yard parking.

#### **N. Bulkhead/Mean High Water Line**

The Borough created rear yard setbacks that protect and enhance the natural environment while creating a consistent appearance along the watercourse. This protects views from the parcels as well as along the watercourse.

Currently, the Zoning Ordinance requires that the rear yard setback along the inland waterways be taken from the bulkhead line or mean high water line. In the lagoon section of the Borough, a "bulkhead line" was established at the time of subdivision. There are many areas of town where there is no constructed bulkhead and the uplands begin where the waterway ends at the "mean high water line." The "mean high water line" is a commonly-surveyed line for waterfront properties.

The Borough measures the rear yard setback from the front lot line or street line. For interior bay front lots, the front lot line is the line parallel to the street line. For lots where the distance from the street line to the bulkhead line or mean high water line is one hundred and ten (110) feet or less, the rear setback is eighty-five (85) feet from the front property line, provided that a minimum of five (5) feet is maintained from the bulkhead line or mean high water line. In no case shall the rear yard setback on any floor above or including the second floor be less than five (5) feet.

The rear yard setback for any structures less than 18" can be zero. In the alternative, for lots where the distance from the street line to the bulkhead line or mean high water line is greater than one hundred and ten (110) feet, the rear setback is twenty-five (25) feet measured at the closest point between the bulkhead line or mean high water line and the street line or front lot.

It should be noted that, where the water line is between the bulkhead line and the upland, the water line prevails. In addition, all constructed bulkheads are measured from the edge closest to the water to determine the lot depth. The Planning Board has reviewed the required setbacks from a bulkhead as per the New Jersey Department of Environmental Protection (NJDEP). The Planning Board recommends the required setback to a bulkhead be consistent with NJDEP requirements.

### **O. Drainage**

Drainage issues have been cited as a common problem in the Borough related to roof drainage. Roof gutters and downspouts will be specified and can be attached, built-in, or integrated with the trim. The Zoning Officer in any community is usually not the appropriate person to review drainage issues and must seek assistance from an engineer and/or Construction Official. The Borough now requires a drainage plan to be submitted and reviewed for all applications. In addition, the Borough has adopted the New Jersey Stormwater Management standards for major development as well as updates to the existing stormwater management regulations pertaining to site plans and individual residential plans.

### **P. Green Space**

The Planning Board was concerned that some individual lots in the Borough were being developed without even minimal landscape planting. In order to promote stormwater infiltration and enhance the built environment, the Borough required that all lots which are subject to development reserve a portion of the lot for green space and plantings. The plantings could consist of lawn, ground cover, perennials, shrubs, and trees with mulch, if desired. Decorative stone and containers are not included in the minimum green space requirement.

### **Q. Landscape**

Landscape ordinances promote a desirable visual environment through creative design techniques and good civic design and arrangements; promote the conservation of open space and valuable natural resources in the Borough; and prevent urban sprawl and degradation of the environment through improper use of the land. Landscaping encompasses vegetation both existing and proposed, and other materials such as streetlights and benches. The Borough adopted a Landscaping Ordinance, which provides standards for redevelopment of larger parcels seeking site plan and subdivision review. In addition, the Borough included landscape requirements in the Zoning Ordinance for redevelopment occurring on a lot-by-lot basis.

The Ordinance seeks to accomplish the following:

- Enhance the front yard;
- Enhance the side and rear yards; including walls, fences and hedges;
- Create formal tree-lined avenues;
- Preserve existing vegetation where possible, through selective clearing and vegetation protection
- Promote a desirable list of street trees;
- Promote landscaped parking areas, site furnishings, and depressed curbs where appropriate;
- Set aside passive and active recreational open space on larger parcels;
- Create nuisance and filtered buffers and windbreaks, but avoiding living fences;
- Create unobstructed pedestrian passage; and
- Promote the use of underground irrigation systems and reduce the amount of water utilized.

## **R. Zoning Ordinance**

The Planning Board and staff have identified several areas of the Zoning Ordinance, both Chapters 26 and 27, requiring amendments, including the following:

- Language Interpretation and Definitions
- Establishment of Zone Districts
- Zoning District Regulations
- Permitted, Conditional and Accessory Uses
- Fences
- Off-Street Parking Requirements
- Curbing and Parking Access Standards
- Signs
- Non-Conforming Buildings, Structures and Lots
- Conformity of Building Setback Lines
- Administrative Guidelines
- Site Plan and Subdivision requirements

## **X. CIRCULATION PLAN ELEMENT**

The Circulation Plan Element describes how vehicles, pedestrians, bicycles and transit vehicles circulate about, through and into the community. One of the issues that the Planning Board has identified is the reliance of the public on automobiles and the lack of sufficient parking, especially during the seasonal peak period.

### **A. Functional Highway Classification System**

The capacity and efficiency of a municipal roadway system can be evaluated more readily if the individual streets are classified in terms of function. Functional classification serves as a tool for identifying deficiencies in the existing network, projecting the need for future upgrades and expansions, establishing design standards and prioritizing planned improvements.

#### *Freeways*

Freeways are high speed, high capacity, limited access highways devoted entirely to the movement of motor vehicles. They provide no direct access to abutting properties. They generally traverse large areas and provide for inter-regional traffic. There are no freeways in Avalon.

#### *Primary Arterials*

Primary arterial roads usually have four or more traffic lanes and may provide direct access to abutting properties, a secondary function which interferes with the flow of traffic.

Timed traffic signals, jug-handle intersections and grade-separated interchanges are used to control traffic at intersections. Center barriers and painted markings are often used to facilitate traffic flow. The recommended minimum right-of-way width for primary arterial roads is typically between 100 feet and 110 feet. There are no primary arterials in Avalon.

#### *Secondary Arterials*

Secondary arterials carry less traffic at slower speeds than do primary arterials. Recommended minimum right-of-way widths range from 72 feet to 80 feet, depending on traffic volumes.

Avalon Boulevard is classified as a secondary arterial street in Avalon.



### *Bridges*

As a barrier island, bridges are an essential part of the transportation network. The bridges provide a connection to the inland communities, adjacent barrier islands and portions of the Borough which are separated by water. Maintenance of these bridges is a critical issue.

There are four (4) bridges that serve Avalon; these are:

- 30<sup>th</sup> Street Bridge (main entrance from Middle Township to Avalon)
- Ocean Drive Bridge (Avalon to Sea Isle City)
- 25<sup>th</sup> Street Bridge (Ocean Drive to Harbor Avenue)
- 21<sup>st</sup> Street Bridge (Ocean Drive to Harbor Avenue)

### *Major Collectors*

Major collectors provide through traffic movements between local municipalities and serve commercial, industrial and residential properties along their routes, which tends to interfere with the flow of traffic.

Typically, major collectors provide for two (2) lanes of traffic plus parking on either side of the street. They often have signalized intersections. The minimum right-of-way width should be 66 feet.

Ocean Drive and Dune Drive are classified as major collectors.

The Borough has completed various improvements to Dune Drive. Ocean Drive, which is a County road, is currently being improved.

### *Minor Collectors*

Minor collector streets provide access to abutting properties, collect traffic from local streets and carry that traffic from neighborhoods to arterial roads and major collectors.

The recommended minimum right-of-way of 60 feet accommodates one (1) moving lane of traffic in each direction.

First Avenue, Avalon Avenue, 21<sup>st</sup> Street, 25<sup>th</sup> Street, 30<sup>th</sup> Street, and 42<sup>nd</sup> Street are classified as minor collectors.

### *Local Streets*

Local streets provide direct access to all abutting properties and connect with minor collector streets and some major collector streets. They are usually residential in nature.

Local streets have a right-of-way width of 50 feet.

Those streets in the Borough of Avalon that are not listed above under “Freeway,” “Arterial” or “Collector” classifications are considered local streets.

## **B. Bus/Trolley System**

New Jersey Transit runs the Number 315 and 319 routes all year and the Number 316 from June through September. Routes 315 and 316 link the Borough with Philadelphia, Pennsylvania through Camden, Vineland, Millville, Bayside Correctional Facility, Woodbine, Sea Isle City, Stone Harbor, Cape May Court House, North Wildwood, Wildwood, Wildwood Crest, and Cape May.

The Atlantic City to New York express (Number 319) will arrange for pick-up in Avalon and links the community to Wildwood, Ocean City, Atlantic City, Toms River, Newark, Jersey City and New York City. In addition, there is a jitney system in Avalon which is operated by a private entity and provides transportation for the residents and visitors of Avalon.

### **C. Linear Recreation and Bikeways**

Bikeways are useful for recreational purposes as well as an alternative means of transportation. There is a need to accommodate bicycles in Avalon, especially during the summer months when the population swells. Generally, bicycle paths have a critical role in complementing the pedestrian network. Most local streets have sufficiently low average daily trips (ADT) of 500 or less to accommodate vehicles and bicycles with little problem. When the ADT increases, it is usually important to create one-way bicycle lanes of three (3) feet, four (4) feet wide per bicycle. A bike path was established on Dune Drive to promote the use of this important mode of transportation. There are plans to add one way bike paths on First Avenue and Avalon Avenue.

In addition to bicycles used for recreation, people take to the streets to jog or run, walk, rollerblade and skateboard. On busy weekends in the summer, people take to the streets in large numbers, sometimes four abreast or more to exercise or to travel to another portion of the community. An extensive sidewalk network is located throughout most of the Borough, which is used mostly by people walking. The linear beachfront provides an unobstructed and enjoyable environment for walking and running mostly free of vehicles. The walk consists of a raised wooden platform which runs from 20<sup>th</sup> Street to 32<sup>nd</sup> Street, providing more opportunities for bicyclists for limited times and pedestrians to appreciate the outdoors.

### **D. Parking**

The Borough completed a parking study and evaluated it to determine the need for more parking standards. A petition to the Department of Community Affairs was done. In particular it created more parking spaces for residential uses by requiring one additional parking space for every bedroom over five (5) bedrooms.

The Planning Board has identified that existing portions of the community are currently in need of additional off-street parking and that, in the future, depending upon market forces, summer rental rates and build-out, the entire community may require additional off-street parking.

The Borough has enforced the 2-hour on-street parking requirement on main streets to help eliminate long-term parking in the streets and allow the spaces to be utilized by more people.

The Residential Site Improvement Standards (RSIS), or New Jersey Administrative Code Title 5, Chapter 21, Sections 1-8 (N.J.A.C. 5:21) is intended to provide predictability and streamline the development approval process for residential subdivisions and site improvements. In addition to many other regulations, the RSIS regulates off-street parking requirements for residential land uses. The municipality adopted the standards for use with residential site plan and subdivision reviews.

Each off-street parking space shall measure nine (9) feet in width by eighteen (18) feet in length. Parking spaces for people with disabilities shall be in accordance with the New Jersey Uniform Construction Code (N.J.A.C. 5:23-7) or the Americans with Disabilities Act, as applicable.

**E. Driveways**

A major concern of the Borough is vehicles extending into the sidewalk and the street. Front yard setbacks in the Borough are fifteen (15) feet to the dwelling and eighteen (18) feet to the garage. The accepted standard minimum size for an off-street parking space is eighteen (18) feet long by nine (9) feet wide. Another option is to provide parking in the side yard. A minimum side yard of ten (10) feet is required to accommodate a driveway where at least eleven (11) feet, six (6) inches is required to accommodate door swing. In the R-2B and M-B Districts, the existing side yard setbacks present problems in accommodating the parking in the side yard.

**F. Parking Lot Design Standards**

The Planning Board provided parking lot design standards for development in the Borough. Parking lot design standards include requiring landscaped islands within parking areas, visual screening of parking areas, pedestrian walkways, lighting and shade trees.

**XI. UTILITY SERVICE PLAN ELEMENT**

The community is serviced by municipal water, stormwater drainage system and sanitary sewage service, natural gas, electric, cable television and telephone. Utility Service Affiliates, a subsidiary of Middlesex Water Company currently maintains the water supply system and the Cape May County Municipal Utilities Authority (CMCMUA) supplies sanitary wastewater treatment services and wastewater capacity, as well as municipal solid waste.

**A. Water Supply**

In October of 1990, the New Jersey Department of Environmental Protection, Division of Water Resources, approved the allocation of water in the amount of 354.0 million gallons. The permit notes that the winter population is 3,500, which represented an average consumption of 132 gpcd (gallons per capita per day) and the summer population is approximately 30,000, which represented an average consumption of 58 gpcd. The permit is still valid and cites growth projections of summer peak population of 38,000 persons in 1993 and notes that wastewater flow will not exceed the maximum allocation of 2.74 million gallons per day established by the Cape May County Municipal Utilities Authority.

The Borough is encouraged to consider alternate water supply and implement water conservation practices.

**B. Drainage Control; Flood Control; Stormwater Management**

Avalon has implemented infrastructure improvements, including:

- Seven (7) stormwater pumping stations
- 8<sup>th</sup> Street Jetty extension
- Beach replenishment projects
- Sea wall construction
- Bulkhead replacements
- Stormwater infrastructure improvements
- Installation of backflow prevention devices.

Also, the Borough of Avalon has implemented administrative improvements as follows:

- Adopting a municipal stormwater plan in accordance with N.J.A.C. 7:14A-25 “Municipal Stormwater Regulations” and N.J.A.C. 7:8 “Stormwater Management Rules.”
- Placing restrictions on impervious coverage.
- Achieving a Class 5 rating from the National Flood Insurance Program (NFIP)
- Requiring higher finished floor flood elevations.
- Reducing flood insurance premiums by 25%.

### C. Sewage and Waste Treatment

The Cape May County Municipal Utilities Authority (CMCMUA) Capacity Assurance Program records the two (2) months (July and August) generating the highest average flows in million gallons per day (MGD). Based on those two months, an average flow is generated. Table 13 provides the flows and shows the fluctuation from year to year. Overall, the 10-year period from 2006 to 2015 shows a 3.73% increase in flow.

**Table 13 - Capacity Assurance Program Community (Sewage) Flow**

<b>Year</b>	<b>Two-Month Average July &amp; August (MGD)</b>	<b>Difference (MGD)</b>	<b>Percent Difference</b>
2006	1.770	-	-
2007	1.783	0.013	0.73%
2008	1.835	0.052	2.92%
2009	1.991	0.156	8.50%
2010	1.705	-0.286	-14.36%
2011	1.880	0.175	10.26%
2012	1.877	-0.003	-0.16%
2013	2.002	0.125	6.66%
2014	1.779	-0.223	-11.14%
2015	1.836	0.057	3.20%

Source: CMCMUA Capacity Assurance Report 2015

The CMCMUA has allocated 2.74 million gallons per day (MGD) of flow capacity (monthly average) within the wastewater system for the Borough of Avalon at full build-out. The table illustrates that the highest two month average was in the Year 2013 with 2.002 MGD. The Borough has also completed an infiltration and in-flow control program.

**D. Solid Waste Disposal and Recycling**

The Cape May County Municipal Utilities Authority (CMCMUA) retains records of solid waste tonnage generated for the municipality by year.

**Table 14 - Solid Waste Tonnage 2006-2015**

<b>Year</b>	<b>Municipal Waste</b>	<b>Bulk Construction/ Demolition Waste</b>	<b>Industrial and Asbestos Waste</b>	<b>Total</b>	<b>Percent Increase</b>
2006	3,197	9,405	122	12,724	—
2007	3,133	7,030	99	10,262	-19.3%
2008	2,797	7,238	60	10,095	-1.6%
2009	2,746	4,785	71	7,602	-24.7%
2010	2,740	5,112	56	7,908	4.0%
2011	2,839	6,010	69	8,918	12.8%
2012	3,028	6,984	73	10,085	13.1%
2013	2,797	7,668	130	10,595	5.1%
2014	2,660	7,403	56	10,119	-4.5%
2015	2,896	7,998	76	10,970	8.4%
<b>Total</b>	<b>28,833</b>	<b>69,633</b>	<b>812</b>	<b>99,278</b>	<b>--</b>

Source: CMCMUA

Table 14 indicates between the years 2011 and 2012, the greatest percent increase in the solid waste tonnage generated was 13.1%. The number reflects an increase in the bulk, construction and demolition waste tonnage from 6,010 to 6,984, or a 16.2% increase from 2011 to 2012. The bulk, construction and demolition waste components continued to increase but still did not match the 9,405 tons from 2006. A 15.0% overall decrease. This is consistent with the decrease in the number of demolition permits issued from 2006 to 2015 with an overall decrease of 23.4%. The municipal waste (or household waste) changed slightly between 2006 and 2015 with a 9.4% decrease.

The Planning Board is concerned about the impacts of any development or redevelopment on municipal services such as sanitary sewer capacity, water supply and municipal waste generation. The Planning Board encourages the use of recycling for weekly pick-up and for demolition projects.

### **E. Wireless Telecommunications**

The Borough of Avalon has adopted an ordinance to provide for expanded wireless communication coverage which benefits all the residents of Avalon and to encourage wireless communication providers by enabling effective co-locations for antenna placement.

The critical issue for wireless carriers is to provide adequate radio frequency (RF) signal coverage to serve their wireless customers. The wireless industry is governed by the rules of the FCC. The FCC mandates that each cellular carrier must provide “substantial” service in its licensed service area, or risk having their license revoked. The FCC defines “substantial” service in Section 22.940(a)(1)(I) as “service which is sound, favorable, and substantially above a level of mediocre service.” Most wireless carriers in the United States have adopted a standard RF signal strength in the range of -78 to -84 dBm (depending upon technology deployed) to provide “substantial” service in suburban environments like that in Avalon Borough. This is the actual RF signal strength measured at the wireless phone or handset. This RF signal strength is considered adequate to allow a wireless customer to reliably use his or her wireless phone.

The coverage that is generated from a given site is dependent upon the radio frequency used, the height of the antenna above the ground and the power of the radio transmitter, as well as the terrain and land use around the site. Land use is defined as dense urban, urban, suburban, forest, agriculture, prairie, water or bare land. Another significant factor that governs the ability of a site to serve a particular area is usage or the number of actual wireless calls taking place on that site and the proximity of those mobile units to the site.

A cell site will not be able to effectively serve an area if the number of users trying to access the site has increased beyond the site’s capacity. In a venue like Avalon Borough, where extreme seasonality is prevalent, capacity is as much and likely more of a problem for wireless carriers than actual signal coverage. In addition to extreme seasonality, the demographics profile of Avalon’s residents, both full and part time, is such that it is highly likely a very high ratio of wireless phones to population exists.

The addition of cellular antennas to the Borough water tower has dramatically improved cellular reception. Addendum I, Wireless Telecommunications, of the 2002 Master Plan Re-examination Report is referenced here to further state the Borough’s encouragement of this technology.

### **F. Renewable Energy Resources**

The Planning Board recommends a study of renewable energy resources and a recommendation that the Borough research the use of renewable energy resources in all new facilities. A copy of the Green Master plan created by the Avalon Green Team is included as Addendum IV.

## **XII. HISTORIC PRESERVATION ELEMENT**

### **A. Executive Summary**

In the fall of 2015, the Borough of Avalon formed an ad hoc Historic Preservation Committee in order to draft a Historic Preservation Element to the Borough's Master plan. Members include:

Michele Petrucci, Chair  
Sharon Cooper  
Dave Coskey  
Miriam Kauterman  
Joe Maffei  
Nina Ranalli  
Barbara Wilson

The purpose of this document is to articulate the Borough's objectives with respect to historic preservation and a plan for achieving them. The desired outcome of the adoption of this plan is to cultivate a culture of appreciation for historic resources by identifying significant places and recognizing property owners who choose to preserve them.

This document also includes contextual information on the value of historic preservation and a summary of local development patterns. Finally, it identifies buildings that have previously achieved historic status through various programs, and identifies avenues for research on the history of local properties.

### **B. Introduction**

Historic preservation is the practice of protecting historically significant buildings and landscapes. Both the federal and New Jersey governments provide standards for historic preservation, and many communities adopt legislation to encourage the practice. Avalon currently has no formalized historic preservation program; this document represents a first step in shaping the town's approach to preservation.

There are several compelling reasons to pursue preservation. Saving examples of construction from various periods of our history is one way to show our cultural heritage and civic pride; Avalon residents are proud of their past. Some buildings are particularly worthy of preservation due to their aesthetic qualities. In Avalon, many would identify the Victorian homes at the north end of the island as candidates for preservation due to aesthetic or architectural value.

There also are more practical reasons to pursue preservation. Old homes, buildings and sites can provide valuable information and serve as a record of the past. We may be able to learn about past craft techniques or better understand the history and culture of a period by studying a preserved building. Finally, preservation represents an environmentally friendly choice for communities. Preservation is, by definition, a sustainable practice.

There are a number of ways to approach the practice of preservation. The U.S. Department of the Interior recognizes four types of treatments for historic properties, and defines them as follows:

- **Preservation** is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.
- **Reconstruction** is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.
- **Rehabilitation** is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.
- **Restoration** is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

### C. Historic And Architectural Context

In developing a preservation plan for Avalon, it is important to understand the context of settlement patterns and architectural distinctions that have occurred throughout the town's history.

While some structures were present on the island prior to 1888, that year marks the beginning of permanent settlement of the town and presents the first identifiable era of building in Avalon. The formation of the Seven Mile Beach Development Company and subsequently the Seven Mile Beach Improvement Company, founded by Joseph Wells and George Rummel respectively, initiated the construction of the Avalon Hotel and several residential homes, along with the Townsend's Inlet railroad bridge and railroad stations to accommodate the extension of railroad tracks from Sea Isle City.

These initial developments occurred at the far north end of the island. The Hotel and railroad stations no longer survive, although there are reminders of them in our cultural landscape: a street called "Railroad Avenue" and deviations from the typical gridded street pattern that once accommodated stations. At least one of the sixteen residential homes placed by the Seven Mile Beach Development Company still stands: the Thomas Gill house, built November of 1889, at the time of this writing remains standing at its original location at 65 West 9th Street. Several other homes built in the final years of the 19<sup>th</sup> century survive. (See Robert Penrose's *Avalon on the Seven Mile Beach* for further information on the fate of early Avalon homes.)

Notably, both a Presbyterian Church (still standing and operating as the same at 126 9<sup>th</sup> Street) and a Methodist Church (now a private home) were established and built in 1892. Additionally, a public Lifesaving Station was constructed on 15<sup>th</sup> Street in 1894, and survives today as a private home.



After rebounding from the national recession of the mid 1890s and struggling through a slow dozen years wherein surrounding barrier islands were developed more quickly than Avalon, the Seven Mile Beach Development Company changed hands in 1905 and expansion continued apace. Several development companies split off various tracts of land, including what would become officially incorporated as the Borough of Stone Harbor in 1914. A section of town stretching from 25<sup>th</sup> to 42<sup>nd</sup> Streets, dubbed “Peermont” because of a hotel of the same name that briefly stood there, was developed under separate leadership. The Oceanside Realty Company bought and began developing 47<sup>th</sup> through 80<sup>th</sup> Streets (called “Holiday Beach”) in 1909, beginning the settlement of the south end of Avalon in earnest. In some cases, especially Peermont, the distinct architectural style of each developer is identifiable in properties that remain. In the period from 1905 to 1920, the Borough of Avalon made significant infrastructure improvements and implemented a variety of municipal systems including roads, fire suppression, street lighting, water and sewage.

The recession and economic panic of the 1920’s hit Avalon and its development companies hard. Even so, large tract development continued, most notably by William H. and George S. Cummings, who purchased many parcels in the Holiday Beach section of Avalon and also pioneered the development of “West Avalon” by building the Seagate community, a group of one-story cottages between Princeton and Pennsylvania Harbors west of Third Avenue.

Building slowed during the Great Depression and World War II. In fact, foreclosures due to non-payment of taxes were more common than new development during the war and postwar years. The tax sale of these foreclosed homes represented a significant source of turnover for Avalon’s properties, and marked a shift from large tract development to individual purchasers hiring contractors to build homes. A construction boom occurred in the 1950s and 1960s, and certain builders such as William Tozour Jr. and James Tracy constructed so many homes that portions of the island are identifiable by their individual styles.

Contemporary Avalon is characterized by the frequent replacement of modest cottages with large, modern homes, many of which serve as second or vacation properties for their owners. In addition to some of the historic homes and buildings identified above, just a few of Avalon’s older public buildings remain standing: a pump house / waterworks building on 13<sup>th</sup> Street, and a former two-room schoolhouse on 26<sup>th</sup> Street.

## D. Inventory

In addition to the summary of existing historic buildings provided in the previous section, several sources exist for those seeking additional information about Avalon's historic structures.

The ad-hoc Preservation Committee is undertaking an informal photographic survey of buildings that may be considered historic. The Committee has obtained a completed list of Avalon private properties with tax records dating pre-1965.

Avalon's entries on the New Jersey Register of Historic Places include the following:

- Avalon Lifesaving Station (ID#986)  
76 West 15th Street  
National Register (NR): 3/2/1979 (NR Reference #: 79001480)  
New Jersey Register of Historic Places (SR): 12/28/1978
- Townsend Inlet Bridge (SI&A # 3100003) (ID#4893)  
Ocean Highway (CR 619) over Townsend Inlet  
State Historic Preservation Officer (SHPO) Opinion: 10/30/2008
- Townsend's Inlet Cobblestone Wreck [Site] (ID#5293)  
SHPO Opinion: 10/3/2013

Avalon's entries in the Historic American Building Survey include "Town of Avalon" and "Avalon Life Saving Station."

Finally, relevant information about specific properties may be found in the collection of the Avalon History Center (215 39<sup>th</sup> Street), at the Borough Clerk's office, or with the Cape May County Clerk.

## E. Significance

Not every property is worthy of preservation, and it can be helpful to define our collective idea of what is considered a historically significant property in Avalon. As detailed in the section titled "Evaluation of Public Policy Choices," a program will be created to recognize sites and buildings important to Avalon's history. These properties will be granted a plaque and will be listed on the "Avalon Register of Historic Places." Criteria for inclusion are as follows.

### Evaluation Criteria for "Avalon Register of Historic Places"

- 1) The property was built or established 50+ years prior to the date of application.
- 2) The property meets one of the following criteria:
  - a. Associated with a person, institution, or event considered important to Avalon's history.
  - b. Exemplifies a distinctive architectural style.
- 3) The property's historic character is intact to the extent that the original site or structure is visually recognizable.

These criteria are inspired in part by the standards for inclusion on the National Register for Historic Places (SR). Regarding the first criterion: reaching fifty years of age is a standard across the preservation field for consideration as a significant building. Regarding the second criterion: many sets of standards, including those for the National Register (NR), include a more detailed breakdown of the ways in which a property might be considered important. However, the language listed here provides broad opportunity for property owners to justify their site or building's significance, and keeps the process accessible to laypeople by avoiding potentially confusing terms of art. Similarly, the third criterion provides space for property owners and the evaluation Committee to make reasonable judgements regarding the visual, material, and contextual integrity of applicant properties.

## **F. Integrity And Existing Conditions Issues**

A property's integrity is the extent to which it is historically authentic. One may consider many qualities in determining a property's integrity; the National Register program looks at location, design, setting, materials, workmanship, feeling, and association. As represented in the "Significance" section, a property is generally considered to have integrity if the physical characteristics that make it distinct to a certain time period have survived. It is also important to consider the environment that exists around a building—is it in its original location? Do the buildings around it provide appropriate context through similar style? What about the natural environment surrounding the building?

Some policies in Avalon promote the integrity of the cultural landscape. Zoning regulations prohibit buildings more than 30 feet tall, and environmental preservation measures keep historical buildings in a natural context similar to when they were built.

However, the threats to the integrity of historic buildings in Avalon are more significant than the successes. For decades, it has been Avalon's goal to be a "storm ready" community. Toward this end, the Borough adopted legislation requiring that any homeowner spending more than 50% of the building's value on renovations must also bring the home into compliance with all codes, including raising to three feet above base flood elevation. Although required to protect properties from flood and storm damage, this requirement does pose a threat to preservation.

Changing demographics present an additional threat. Avalon's year-round population has been steadily declining since the mid-1980s. Increasingly, properties are built to serve as summer homes with space for extended family, or to function as rental properties. Charming historic buildings are generally viewed as incompatible for these uses. This demographic trend is expected to continue.

### **XIII. CONCLUSION**

The authority to shape physical form fulfills several of the purposes of planning. Specifically, the Land Use Element, Housing Element, Utility Services Element, Transportation Element and the Community Design Plan fulfill several of the purposes of planning as listed in the MLUL:

To encourage municipal action to guide the use and development of all lands in this state in a manner which will promote the public health, safety, morals and general welfare.

To promote a desirable visual environment through creative development techniques and good civic design and arrangements.

To promote the conservation of open space and valuable natural resources in the state and to prevent urban sprawl and degradation of the land through improper use of the land.

To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies.

To provide sufficient space in appropriate locations for a variety of residential, recreational, and commercial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens.

To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and the more efficient use of the land.

In conclusion, the Planning Board has sought to articulate and define the alterations required of the zoning and site plan and subdivision ordinances that have been discussed at workshop meetings and in re-examination reports since the 1990s. The Planning Board seeks solutions to further enhance the community through implementation of the specific objectives listed in the body of the Master Plan, including:

- Promote alternate water and energy sources;
- Advance cultural programs through the Avalon Free Public Library and History Center long-range plans; and promote the consolidation of specific municipal functions with other barrier islands;
- Continue to seek solutions to alleviate flooding.

# ***BOROUGH OF AVALON***



## **WIRELESS TELECOMMUNICATIONS**

### **ADDENDUM I**

**TO THE**

**2002**

**MASTER PLAN REEXAMINATION REPORT**

**&**

**BUILD OUT ANALYSIS**

**JUNE 7, 2005**

**REVISED: JUNE 14, 2005**

**ADOPTED: JULY 5, 2005**

## **Planning/Zoning Board**

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**Brian P. Rosenberger, Board Secretary**



**Telecommunications Engineering**  
**Dominic C. Villecco**  
**V-Comm, L.L.C.**  
**3 Cedar Brook Drive**  
**Cranbury, N.J. 08512**

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## **Introduction**

New Jersey State law requires municipalities to update their Master Plans every six years in the form of a reexamination report. This report must examine the major land development problems and objectives present at the time of the last report and their current status; any changes that have occurred to the Master Plan's underlying assumptions, policies and objectives; and make recommendations for any changes to the master plan's objectives, policies or standards. Particular attention must be paid to the density and distribution of population and land uses, housing, motorized, and non-motorized circulation, the conservation of natural resources and energy (recycling) and changes in State, county, and municipal policies and objectives.

The latest Master Plan for the Borough of Avalon was adopted in April 2002. This addendum to the 2002 Master Plan is provided to plan for expanded wireless communications capacity of the Borough.

## **Goals**

Provide for expanded wireless communication coverage, which benefits all the residents of Avalon.

## **Objectives**

Encourage wireless communications providers, by enabling effective locations for antenna placement.



*To be added to Page 26 of the Master Plan*

## **Wireless Communications**

When designing a wireless network, an RF Engineer starts with a theoretical grid pattern and applies it to the licensed area. Each licensed area has many variables that can affect the design and must be considered. These variables include terrain features, land use considerations, zoning ordinances, use of existing structures, traffic distribution, and many others. In order to provide effective coverage while maintaining an efficient frequency reuse plan, the design engineer must perform a balancing test of all applicable variables. The primary variables that the engineer must balance take into consideration the overall height of the cell sites. If a cell site is too high, it will have increased coverage but will cause interference throughout the rest of the wireless network, thereby significantly affecting network efficiency. If a cell site is too low, it will provide ineffective coverage.

A proper wireless network design begins with strategically located cell sites. At each cell site there is a structure, building, tower or water tank, on which antennas are mounted. Typically, radio-transmitting equipment (BTS) is located at the base of the structure. Radio signals leave the BTS and travel through transmission lines to the antennas atop the structure. Radio signals are broadcast through the antennas and travel to the customer's wireless phone, thereby completing a call. When a wireless customer places a call, the signal is received by the antennas, travels down the transmission line and into the BTS. The BTS converts the signal into digital data and combines it with all the other wireless calls at that cell site. This data is then sent over digital leased telephone lines to the main switching computer. The main switching computer or Mobile Switching Center (MSC) is interconnected to the national Public Switched Telephone Network (PSTN) where calls are routed to other wireless or landline phones.

*To be added to Page 53 of the Master Plan*

## **Wireless Communications**

### **RF COVERAGE:**

The critical issue for wireless carriers is to provide adequate radio frequency (RF) signal coverage to serve their wireless customers. The wireless industry is governed by the rules of the FCC. The FCC mandates that each cellular carrier must provide "Substantial" service in its licensed service area, or risk having their license revoked. The FCC defines "Substantial" service in section 22.940(a)(1)(i) as "service which is sound, favorable, and substantially above a level of mediocre service." Most wireless carriers in the United States have adopted a standard RF signal strength in the range of -78 to -84 dBm (depending upon technology deployed) to provide "Substantial" service in suburban environments like that in Avalon Borough. This is the actual RF signal strength measured at the wireless phone or handset. This RF signal strength is considered adequate to allow a wireless customer to reliably use his or her wireless phone.

The coverage that is generated from a given site is dependent upon the radio frequency used, the height of the antenna above the ground and the power of the radio transmitter, as well as the terrain and land use around the site. Land use is defined as dense urban, urban, suburban, forest, agriculture, prairie, water or bare land. Another significant factor that governs the ability of a site to serve a particular area is usage or the number of actual wireless calls taking place on that site and the proximity of those mobile units to the site.

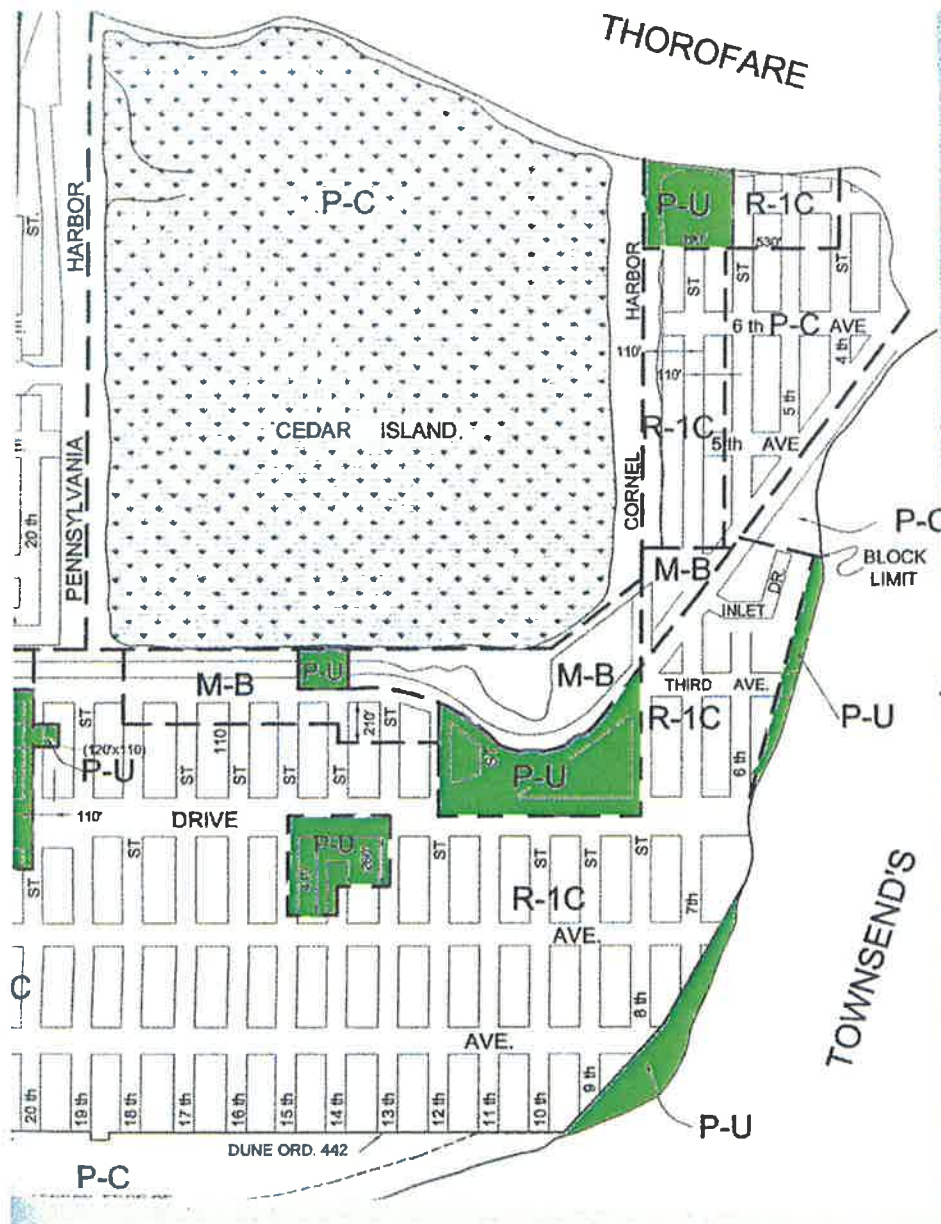
A cell site will not be able to effectively serve an area if the number of users trying to access the site has increased beyond the site's capacity. In a venue like Avalon Borough, where extreme seasonality is prevalent, capacity is as much and likely more of a problem for wireless carriers, than actual signal coverage. In addition to extreme seasonality, the demographics profile of Avalon's residents, both full and part time, is such that it is highly likely a very high ratio of wireless phones to population exists.

For all of the reasons outlined above, we recommend that the Borough of Avalon pursue a proactive approach of locating wireless carriers' facilities in areas within the Borough that will serve the carriers' needs, provide service to the residents and are aesthetically as the call, pleasing.

## ***PROPOSED ZONES IN AVALON BOROUGH WHERE WIRELESS FACILITIES WOULD BE PERMITTED:***

In order for wireless carriers to provide necessary levels of service throughout the Borough, zones must be available that will accomplish this. These zones must be distributed so as to avoid “pigeon – holing” or forcing the carriers to serve the Borough from a particular location. This “pigeon –holing” is also known as “spot – zoning” and forces carriers to take legal action against a town, if additional locations are required to meet FCC obligations. An example of ‘spot – zoning” would be if the Borough limited carriers to only the water tank at 38<sup>th</sup> and Dune. While this location certainly provides good service in the Borough, it is very likely the wireless carriers would be back to the Borough for future sites. Similar venues nearby with multiple wireless locations include Ocean City, Sea Isle and the Wildwoods.

We believe a balance between quality wireless service and the Borough’s regulations of wireless facilities can be accomplished with the use of the P-U zones. As can be seen on the maps on the next few pages, the P-U zone covers approximately 10% of the Borough’s landmass, but is evenly distributed throughout the Borough.

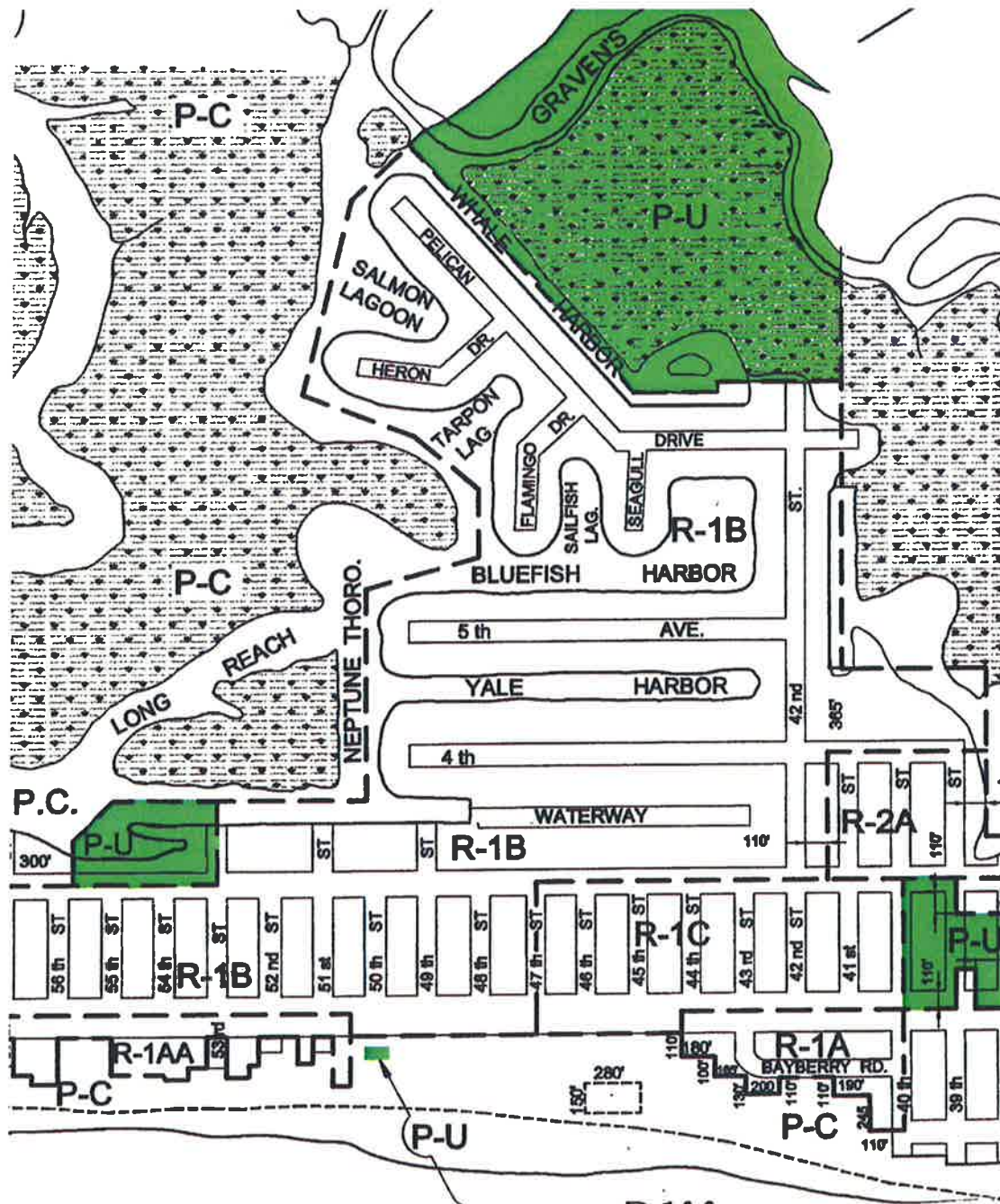


P-U Zones – North Avalon



P-U Zones - Avalon Center





P-U Zones – South Central Avalon



P-U Zones - South Avalon



## **PROPOSED LOCATIONS FOR WIRELESS FACILITIES IN COVERAGE IN AVALON BOROUGH:**

It is our opinion that wireless carriers will be able to provide coverage and needed capacity for the foreseeable future to Avalon Borough with 3 municipally owned locations. The first location is the existing water tank located at 3800 Dune Drive. Four carriers are either operating or will soon be operating from this location. The rest of the Borough can be covered by using the existing water tank at 13<sup>th</sup> Street and a stealth flagpole or similar structure located in one of the PU zones in the southern portion of the Borough.



13<sup>th</sup> Street Water Tank, Avalon, NJ

The water tank should be able to handle 2 to 4 carriers depending on loading and ground space needs for each carrier. If all the available space was used at the water tank, a “stealth” flagpole or similar structure could be built in the P-U zone at the ballpark across the street.





Park in North End of Avalon, NJ

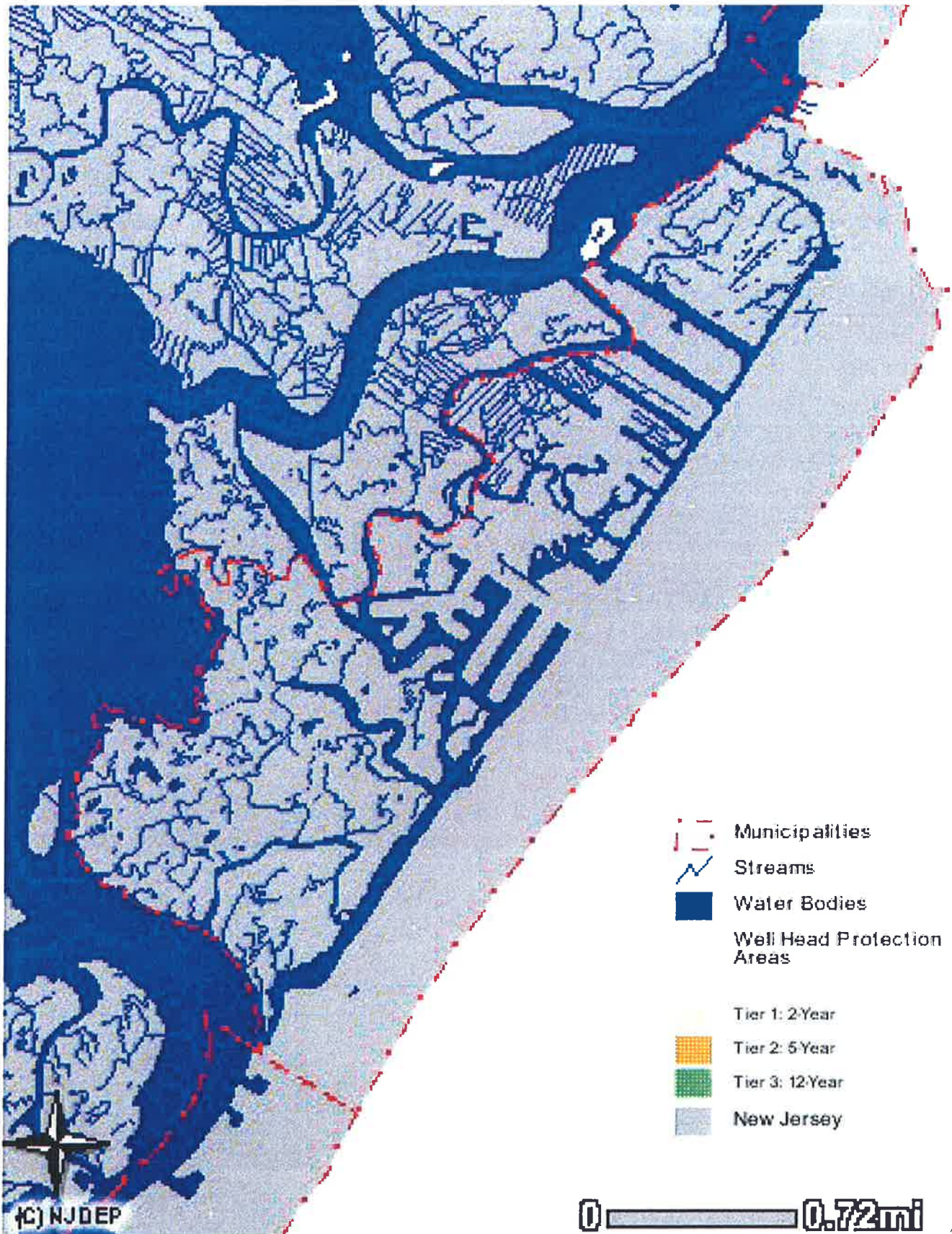
In the southern end of Avalon Borough, the Armacost Park located at 74<sup>th</sup> & Ocean could be used for a stealth flagpole installation. The installation may require one to three flagpoles depending upon the number of carriers. The carrier's equipment shelters could be camouflaged and placed next to the pump house, with matching façade and extensive landscaping.



Armacost Park, 74<sup>th</sup> & Ocean, Avalon, NJ



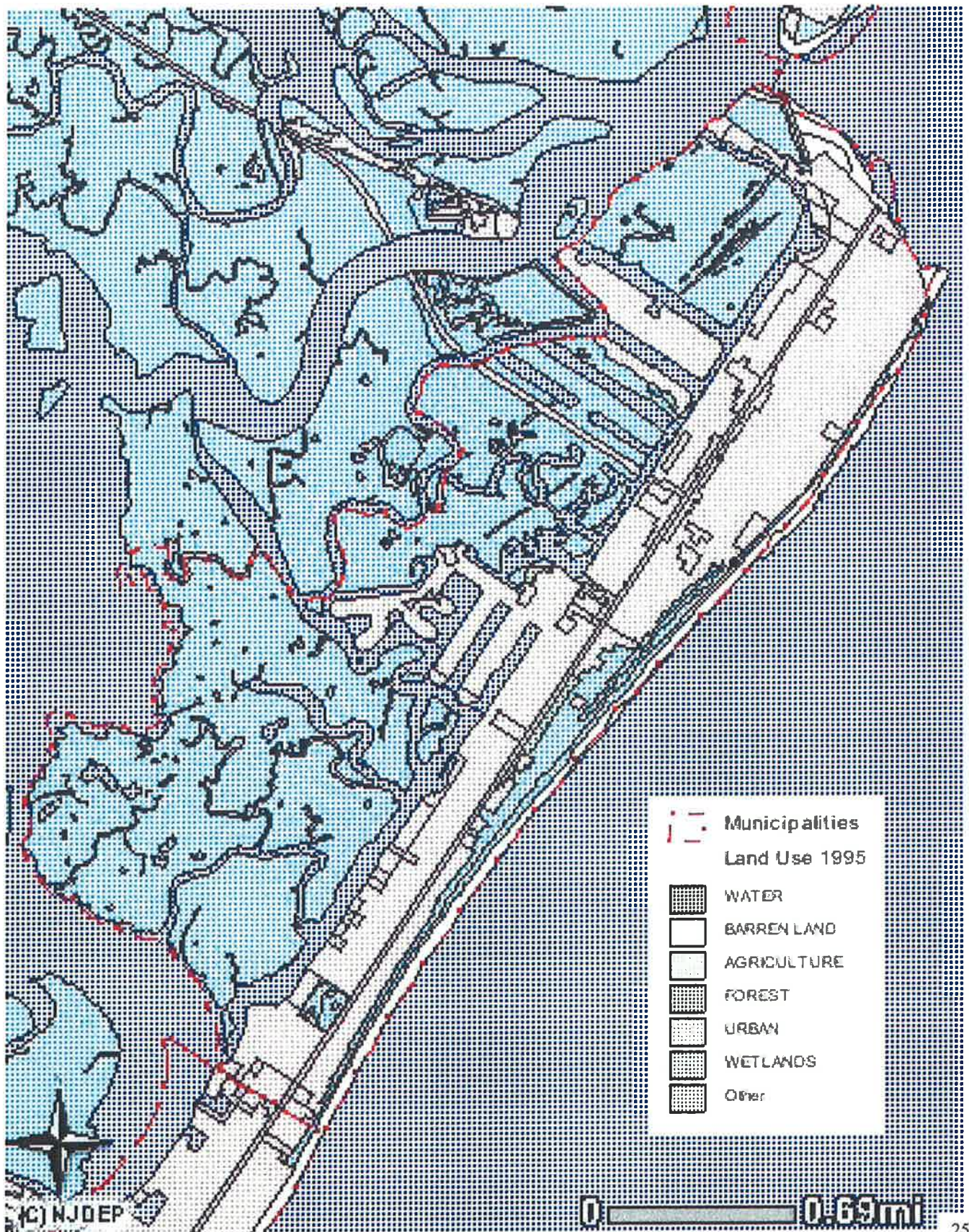
Figure 5: Wellhead Protection Areas





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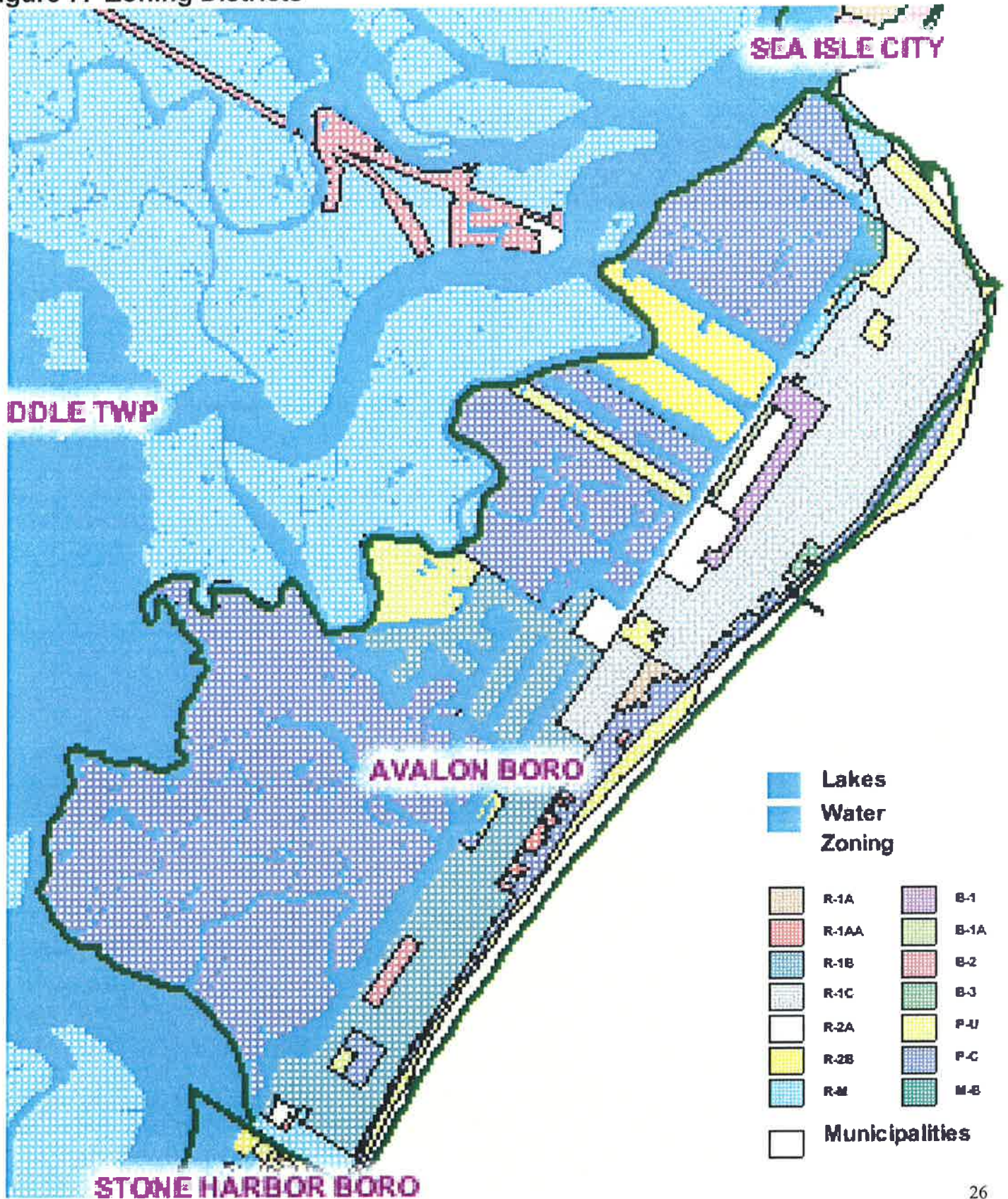
Figure 6: Municipality's Existing Land Use





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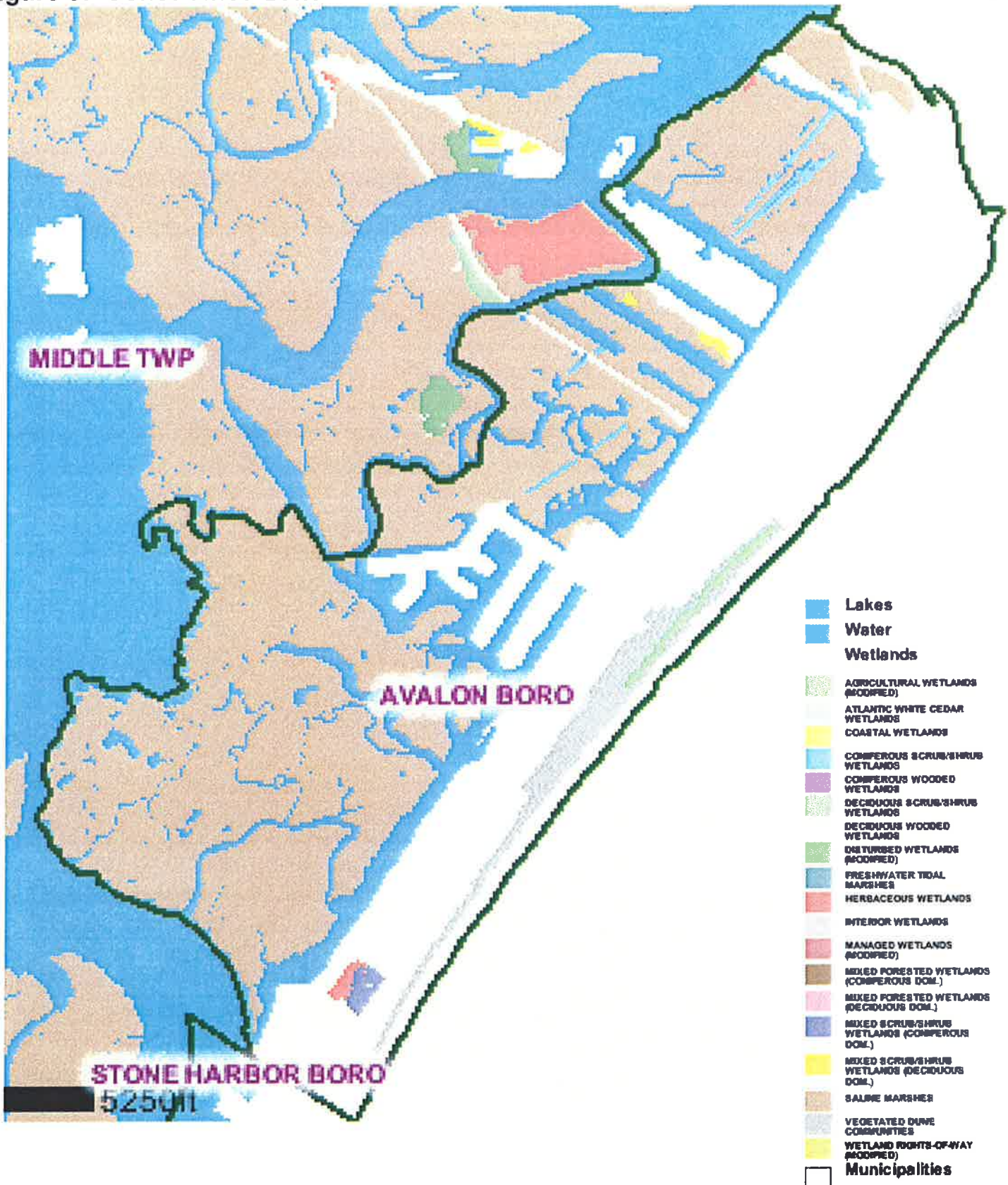
Figure 7: Zoning Districts





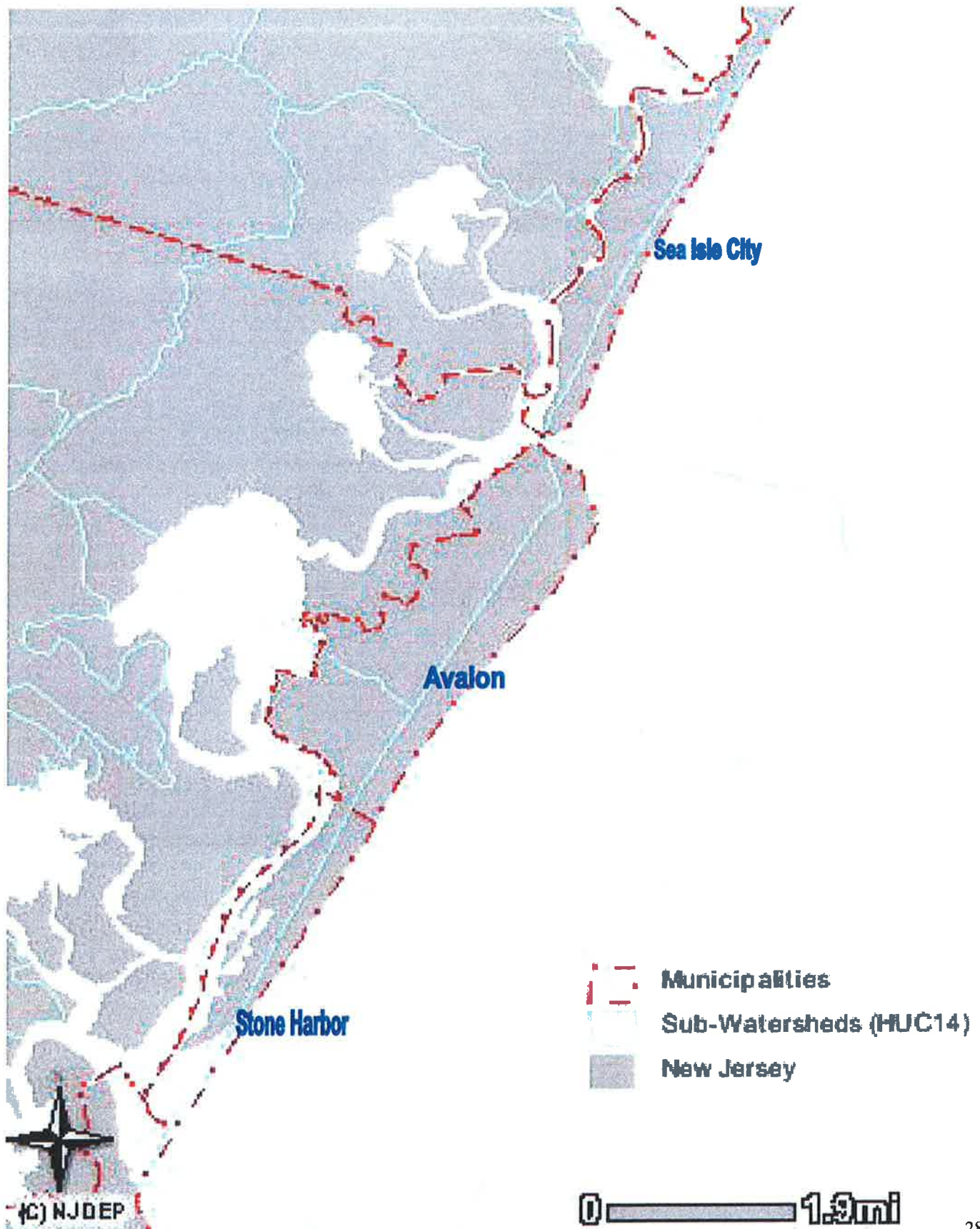
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Figure 8: Constrained Land



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**Figure 9: Hydrologic Units (HUC 14s)**





# ***BOROUGH OF AVALON***



## **MUNICIPAL STORMWATER MANAGEMENT PLAN**

### ***ADDENDUM II***

**TO THE**

**2002**

**MASTER PLAN REEXAMINATION REPORT**

**&**

**BUILD OUT ANALYSIS**

**MAY 4, 2005**

**REVISED: JUNE 10, 2005  
ADOPTED: JULY 5, 2005**

## **Planning/Zoning Board**

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**Ernest Jones, Jr., *Vice Chairman***  
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**Beth Tipping**

**John R. Armstrong, Board Solicitor**  
**Kona & Associates, Board Engineer**  
**Taylor Design Group, Board Planner**  
**Brian P. Rosenberger, Board Secretary**



**Charles Kona**  
**3101 Dune Drive**  
**Suite 109**  
**Avalon, N.J. 08202**



*To be added to Page 53 of the Master Plan*

### **Utility Service Plan Element**

The community is fully serviced by municipal water, stormwater drainage system and sanitary sewage service. The Planning Board has identified that a build-out analysis is required to ascertain if the existing services are sufficient for full build-out. The American Water Company currently maintains the water supply system and the Cape May County Municipal Utilities Authority (CMCMUA) supplies sanitary wastewater treatment services and wastewater capacity, as well as municipal waste.

#### **Water supply**

In October of 1990 the New Jersey Department of Environmental Protection Division of Water Resources approved the allocation of water in the amount of 354.0 million gallons. The permit notes that the winter population is 3,500, which represented an average consumption of 132 gpcd (gallons per capita per day) and the summer population is approximately 30,000, which represented an average consumption of 58 gpcd. The permit is still valid and cites growth projections of summer peak population of 38,000 persons in 1993 and notes that wastewater flow will not exceed the maximum allocation of 2.74 million gallons per day established by the Cape May County Municipal Utilities Authority.

#### **Drainage control; flood control; stormwater management**

Avalon is implementing an improvement to the existing drainage system, providing stormwater backflow prevention devices at the discharge points located along the inland waterways. Implementing impervious coverage restrictions will also assist in state and county efforts to address stormwater management issues.

**Addendum II** provides Municipal Stormwater Management Plan.

#### **Sewage and waste treatment**

The Cape May County Municipal Utilities Authority (CMCMUA) Capacity Assurance Program monitors the highest two monthly average flows for each year and generates an average of the two months.



# BOROUGH OF AVALON

CAPE MAY COUNTY, NEW JERSEY

## PLANNING/ZONING BOARD

### MUNICIPAL STORMWATER MANAGEMENT PLAN

Prepared for:  
Borough of Avalon  
Planning/Zoning Board

Prepared by:  
Kona & Associates

---

Charles Kona  
NJPE #24GE02581400  
NJPP#2241  
May 4, 2005  
*Revised: June 10, 2005*

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## **Introduction**

This Municipal Storm Water Management Plan (MSWMP) documents the strategy for the Borough of Avalon to address storm-water related impacts. The creation of this plan is required by N.J.A.C. 7:14A-25 Municipal Stormwater Regulations. This plan contains the required elements described in N.J.A.C. 7:8 Storm Water Management Rules. The plan addresses groundwater recharge, stormwater quantity and stormwater quality impacts by incorporating stormwater design and performance standards for new major development. These standards are intended to minimize the adverse impact of stormwater runoff on water quality and water quantity and the loss of groundwater recharge that provides base flow in receiving water bodies. The plan describes long-term operation and maintenance measures for existing and future stormwater facilities.

A build-out analysis will be performed if the existing zoning and land available for development exceeds the thresholds set forth by the NJDEP. The plan also addresses the review and update of existing ordinances, the Borough of Avalon Master Plan, and other planning documents to allow for project designs that include low impact development techniques. The final component of this plan is a mitigation strategy used when a variance or exemption is sought by the Applicant.

## **Goals**

The goals of this MSWMP are listed below. Several of the required goals may not be applicable to the Borough of Avalon.

- Reduce flood damage, including damage to life and property;
- Minimize, to the extent practical, any increase in stormwater runoff from any new development;
- Reduce soil erosion from any development and construction project;
- Assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- Maintain groundwater recharge;
- Prevent, to the greatest extent feasible, an increase in nonpoint pollution;
- Maintain the integrity of stream channels for their biological functions, as well as for drainage;
- Minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational and other uses of water; and
- Protect public safety through the proper design and operation of stormwater basins.

- Maintain existing Ordinance provisions requiring stormwater management for all development below the threshold of major development.

To achieve these goals, this plan (by reference) outlines specific stormwater performance standards for new major development. Additionally, the plan proposes stormwater management controls to address impacts from existing development. Preventative and corrective maintenance strategies are included in the plan to ensure long-term effectiveness of stormwater management facilities. The plan also outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

### **Stormwater Discussion**

Land development can dramatically alter the hydrologic cycle of a site and, ultimately, an entire watershed. (See Figure 1 – Groundwater Recharge in the Hydrologic Cycle). Prior to development, native vegetation can either directly intercept precipitation or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration. Development can remove this beneficial vegetation and replace it with lawn or impervious cover, reducing the site's evapotranspiration and infiltration rates. Clearing and grading a site can remove depressions that store rainfall. Construction activities may also compact

the soil and diminish its infiltration ability, resulting in increased volumes and rates of stormwater runoff from the site. Impervious areas that are connected to each other through gutters, channels, and storm sewers can transport runoff more quickly than natural areas. This shortening of the transport or travel time quickens the rainfall-runoff response of the drainage area, causing flow in downstream waterways to peak faster and higher than natural conditions. These increases can aggravate and create new existing downstream flooding and erosion problems and increase the quantity of sediment in the channel. Filtration of runoff and removal of pollutants by surface and channel vegetation is eliminated by storm sewers that discharge runoff directly into a stream. Increases in impervious area can also decrease opportunities for infiltration which, in turn, reduces stream base flow and groundwater recharge. Reduced base flows and increased peak flows produce greater fluctuations between normal and storm flow rates, which can increase channel erosion. Reduced base flows can also negatively impact the hydrology of adjacent wetlands and the health of biological communities that depend on base flows. Finally, erosion and sedimentation can destroy habitat from which some species cannot adapt.

In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface that runoff can mobilize and transport to streams. New impervious

surfaces and cleared areas created by development can accumulate a variety of pollutants from the atmosphere, fertilizers, animal wastes, and leakage and wear from vehicles. Pollutants can include metals, suspended solids, hydrocarbons, pathogens, and nutrients.

In addition to increased pollutant loading, land development can adversely affect water quality and stream biota in more subtle ways. For example, stormwater falling on impervious surfaces or stored in detention or retention basins can become heated and raise the temperature of the downstream waterway, adversely affecting cold water fish species such as trout. Development can remove trees along stream banks that normally provide shading, stabilization, and leaf litter that falls into streams and becomes food for the aquatic community.

### **Background**

The Borough of Avalon encompasses 4.6 square miles located on Seven-Mile Beach in Cape May County. It is surrounded by the Atlantic Ocean on the east; the Borough of Stone Harbor to the south; the intercoastal waterway, salt marshes, and Middle Township to the west and Townsend's Inlet and Sea Isle City to the north. There are no rivers or streams in the Borough of Avalon. (See



Figure 2 – Municipality and Its Waterways) and (Figure 3 – Municipal Boundary on USGS Quadrangle).

The Borough of Avalon had a year round population of 2143 according to the 2000 census. This is an 18% increase from 1990. As a resort community it has a substantially higher population from May to September. The Cape May Planning Board projects that the Borough of Avalon will have a summer population of 30,229 in 2005.

Because the Borough of Avalon is over 98% developed there is a high level of imperviousness; as a result there is no significant ground water recharge. (See Figure 4 – Groundwater Recharge Areas). The wellhead protection areas in the Borough of Avalon appear to coincide with the public wells. (See Figure 5 – Wellhead Protection Areas). The Zoning Ordinance requires that residential property have a maximum impervious coverage of 70%. Residential property comprises 96% of the land use in the Borough of Avalon. There is no maximum impervious coverage limit for commercial property. Commercial property comprises 4% of the land use in the Borough of Avalon.

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The Borough of Avalon has exhibited water quantity (flooding) and water quality problems on occasion. These are the result of lunar high tides combined with the effects of strong to severe northeasterly storms. Heavy rains combined with periods of high tide can also cause street flooding in parts of the town.

Over the past three (3) years, the Borough of Avalon has made significant revisions to its Development Regulations - Site Plan/Subdivision Ordinance and Zoning Ordinances relative to protecting its natural resources. The Borough of Avalon consists of approximately 90% percent of land zoned for single family or two-family development. This land was not previously regulated relative to impervious coverage, landscaping or stormwater management. The Zoning Ordinance was amended to include a maximum of 70% impervious area consistent with the CAFRA regulated development and the Borough of Avalon's Town Center Designation while at the same time reducing building coverage from 30% to 27%. The Zoning Ordinance was also amended to include landscaping and stormwater management requirements not only for all newly constructed single family and two family properties, but including alterations to an existing single family or two family that involved more than 500 square feet of either structure or impervious area. The landscaping provisions permit only drip irrigation systems in most areas which conserve a considerable amount of water

over the old style spray irrigation systems. Rain sensors or soil moisture sensors are recommended to supplement the irrigation system. Further water conservation is achieved by only allowing the use of vegetation from an approved list of indigenous species. The landscaping provisions have contributed to improving the quality of life in the greening of the Borough of Avalon to assist in creating a Community of Place. The Stormwater Management provisions have required infiltration of stormwater runoff on the subject property, thereby reducing the runoff to the streets and ultimately the waterways. The reduction of runoff to the waterways reduces the pollution potential.

The Borough of Avalon has historically recognized the importance of protecting, enhancing, maintaining and conserving natural resources. The Borough of Avalon's responsibility and commitment has been demonstrated by the various programs, projects and ordinances enacted and implemented on a continual basis. A sampling of these efforts is described later in this report.

#### **Borough Programs, Projects and Ordinances**

The following is a list of programs, projects, Ordinance amendments, etc. that have been authorized and implemented in the Borough of Avalon relative to stormwater management and flood mitigation:

- Business District Storm Sewer Improvements Project

The first stage of the project, 3<sup>rd</sup> Avenue Storm Sewer Improvements, consisted primarily of the installation of seven pumping stations and associated stormwater piping covering a 16-block section of Ocean Drive (3<sup>rd</sup> Avenue). Completed in May 2002. This effort has significantly reduced the effects of tidal and storm flooding within this portion of the Borough. The second stage of the project was completed under the Business District Improvement Project. This project, which involved the reconstruction of Dune Drive and adjacent streets between 19<sup>th</sup> and 33<sup>rd</sup> Streets, and associated streetscape and utility improvements, included as a major component the replacement and reconstruction of the stormwater system in the Dune Drive corridor. The work included new and upgraded stormwater piping, inlets, and manholes, which will significantly improve the gravity stormwater system in the Business District. The gravity system ties into the above referenced pump stations constructed on 3<sup>rd</sup> Avenue. An additional pump station ties into a force main constructed in the 3<sup>rd</sup> Avenue project. The Business District Improvement Project began in January 2003. Phase 1 (33<sup>rd</sup> Street to 27<sup>th</sup> Street) was completed in June 2003; Phase 2 (27<sup>th</sup> Street to 22<sup>nd</sup> Street) began in September 2003 and was completed late December 2003; Phase 3 (22<sup>nd</sup> Street to 19<sup>th</sup> Street) was completed in May 2004.

- 8<sup>th</sup> Street Jetty Extension

Completed in 2002, this project will significantly reduce beach erosion over a large area, thereby reducing the effects of tidal flooding of many properties in the northeast section of the Borough of Avalon.

- Beach Replenishment Project

Recently completed and administered through the U.S. Army Corps of Engineers, this project included replenishment of the beaches between 8<sup>th</sup> Street and 28<sup>th</sup> Street and between 76<sup>th</sup> Street and 80<sup>th</sup> Street with approximately 1.4 million cubic yards of sand, providing additional protection to properties in this area.

- Borough of Avalon Sea Wall

The U.S. Army Corps of Engineers has started construction of a large-scale seawall extending from the northern end of the Borough at Inlet Drive to the 8<sup>th</sup> Street Jetty. The project, estimated to cost \$13 million, will dramatically reduce flooding of the areas along Townsend's Inlet, one of the areas of the Borough most vulnerable to flooding from nor'easters and tropical storms.

- 74<sup>th</sup> and 76<sup>th</sup> Street Bulkhead Replacement

In 2003 the Borough of Avalon completed the reconstruction of bulkheads at two street-ends along the bay at 74<sup>th</sup> and 76<sup>th</sup> Streets, bringing the top of the

bulkhead to an elevation of eight feet. Adjacent property owners in these locations recently replaced their bulkhead to the same elevation; therefore, tidal flooding in these locations will be significantly mitigated.

- 8<sup>th</sup> Street and Ocean Drive – Stormwater Infrastructure Improvements Project

The improvements consisted of upgrading the gravity system at 7<sup>th</sup> Street and 3<sup>rd</sup> Avenue and tying in to upgrades at 8<sup>th</sup> Street extending to Cornell Harbor. A pump station similar to those constructed under the 3<sup>rd</sup> Avenue project was installed at this location. This project also included the installation of a light duty flap-gate on an existing stormwater gravity outfall to prevent tidal flooding. They will significantly reduce flooding in the area.

- 8<sup>th</sup> Street and 21<sup>st</sup> Street Bulkhead Replacements

The Borough of Avalon authorized the design of a replacement bulkhead at 8<sup>th</sup> Street and Cornell Harbor and 21<sup>st</sup> Street at the westernmost point of the peninsula. These projects, in conjunction with the above referenced gravity system and pump station improvements, will greatly reduce flooding in these areas.

- Reconstruction of Various Streets

A portion of Dune Drive from 33<sup>rd</sup> Street to 34<sup>th</sup> Street was recently reconstructed. This project consisted of the installation of various inlets and

stormwater piping, including tying into the existing stormwater pumping station at the end of 34<sup>th</sup> Street near Ocean Drive. These stormwater improvements significantly reduce the flooding in the vicinity of the old siphon system that was replaced under this Contract.

- Stormwater Collection System

The Borough of Avalon has a contract with New Jersey American Water Company to inspect and maintain their stormwater collection system.

- The Borough of Avalon has established a weather warning system consisting of a low-watt AM radio broadcast to warn residents and visitors of impending hazardous weather conditions. In conjunction with this, the Borough of Avalon has installed Light Emitted Diode (LED) programmable signs at the entrances to the Borough of Avalon to advise motorists to tune in to the AM station for weather advisories and instructions.
- The Borough of Avalon has amended its Zoning Ordinance by requiring stormwater management for all new single family and two (2) family construction. These amendments require that properties be graded and that the roof or equivalent impervious area stormwater runoff be retained and infiltrated on site. There are also stormwater management requirements for all other zoned properties.

- The Borough of Avalon has amended its Zoning Ordinance to restrict the amount of vegetation that can be removed during redevelopment of a property, and also to require at least 15% of the lot area to be planted in indigenous vegetation for single family dwellings and two (2) family dwellings. There are also landscaping requirements for all other zoned properties.
- The Borough of Avalon has amended its Zoning Ordinance to increase the FEMA requirements by requiring a 1' freeboard above the base flood elevation for all new construction.

In March, 2004 the Borough of Avalon submitted a Request for Authorization (RFA) under the NJDEP's Pollutant Discharge Elimination System (NJPDES) General Permit for Tier A Municipalities. This permit, established under the DEP's recently adopted stormwater management rules, requires that the Borough of Avalon perform a variety of activities intended to reduce stormwater runoff and reduce "non-point source pollution".

Ongoing Programs and Future Projects to be Implemented by the Borough of Avalon Include:



- Continuation of monitoring and study by Stockton College, Coastal Research Center, on beach erosion and renourishment and engineered beach performance.
- Continuation of the County and Borough program of installing new back-check valves on the stormwater outfalls to the back-bay.
- The Borough of Avalon has budgeted for various stormwater system improvements and upgrades to be completed in 2004-2005.
- The Borough of Avalon is a voluntary participant in FEMA's Project Impact Program, and is continuously involved in efforts to encourage and assist businesses and homeowners to prepare for flooding and other possible disasters.
- Continuation of practice of providing residents with local information database on comprehensive flood proofing systems and mitigation techniques.
- Continuation of U.S. Army Corps of Engineers project participation.
- Implementation of the Statewide Basic Requirements under the NPJDES General Permit for Tier A Municipalities, described above.

### **Design and Performance Standards**

The Borough of Avalon will adopt or amend ordinances as applicable (for major development only) consistent with the design and performance standards at

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N.J.A.C. 7:8-5; maintenance standards at N.J.A.C. 7:8-5.8; and the safety standards at N.J.A.C. 7:8-6.

A Stormwater Control Ordinance will be prepared consistent with the intent of the NJDEP sample ordinance contained in the BMP manual Appendix D. It is anticipated that the same format in Appendix D will be utilized. The design and performance standards will be incorporated into the 'Stormwater Control Ordinance'. It is anticipated that the 'Stormwater Control Ordinance' will be adopted during April, 2006.

During construction, Municipal inspectors will observe the construction of any applicable project to ensure that the stormwater management measures are constructed as designed.

### **Plan Consistency**

The Borough of Avalon is not within a Regional Stormwater Management Planning Area and no total daily maximum loads (TDMLs) have been developed for waters within the Borough of Avalon. As such, consistency with a regional stormwater management planning area and total daily maximum loads are not applicable at this time.

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The Municipal Stormwater Management Ordinance will require all new development and redevelopment plans to comply with New Jersey's Soil Erosion and Sediment Control Standards. During construction, Municipal inspectors will observe on-site soil erosion and sediment control measures and report any inconsistencies to the local Soil Conservation District.

If any RSWMPs or TMDLs are developed in the future, this Municipal Stormwater Management Plan will be updated to be consistent.

The MSWMP will reference the existing Municipal Ordinances which utilize the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The Borough of Avalon will utilize the most current update of the RSIS in the stormwater management review of residential areas. This MSWMP will contain a reference to updates to the RSIS so that the plan will not have to be frequently updated.

The Borough's Construction Department requires all new development and redevelopment plans comply with New Jersey's Soil erosion and Sediment Control Standards as a prerequisite to issuing a construction permit.

### **Non-Structural Stormwater Management Strategies**

The Borough of Avalon will review its Master Plan and Development Ordinances, and will provide a list of the sections in the land use and zoning ordinances that

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are to be modified to incorporate nonstructural stormwater management strategies. These are the ordinances identified for revision. Once the ordinance texts are completed, they will be submitted to the County Review Agency for review and approval. A copy will be sent to the Department of Environmental Protection at the time of submission.

### **Land Use/Build-Out Analysis**

The Tax Assessor-Zoning Officer indicates that there is no agriculturally zoned or used land within the Borough of Avalon, and less than two (2) acres of vacant unconstrained land. As such a build out analysis is not required. (See Figure 6 – Municipality's Existing Land Use), (Figure 7 – Zoning Districts) and (Figure 8 – Constrained Land).

### **Mitigation Plan**

Few, if any, projects will meet the threshold for a major development. However, it is anticipated that a major project would have difficulty in meeting DEP Standards. As such, the Borough of Avalon will consider granting variances – exceptions to the Standards pursuant to the criteria below.

1. The mitigation project must be implemented in the same drainage area as the proposed development. (See Figure 9 – Hydrologic Units (HUC14s). The

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project must provide additional groundwater recharge benefits, or protection from stormwater runoff quality and quantity from previously developed property or flooding that does not currently meet the design and performance standards outlined in the Municipal Stormwater Management Plan. The developer must ensure the long-term maintenance of the project, including the maintenance requirements under Chapters 8 and 9 of the NJDEP Stormwater BMP Manual. The Applicant can select from a list of Municipal Projects. This list will be updated on a continual-need basis.

2. If a suitable site cannot be located in the same drainage area as the proposed development, as discussed in Option 1, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought, but that addresses the same issue. The Applicant can select from a list of Municipal Projects. This list will be updated on a continual-need basis.

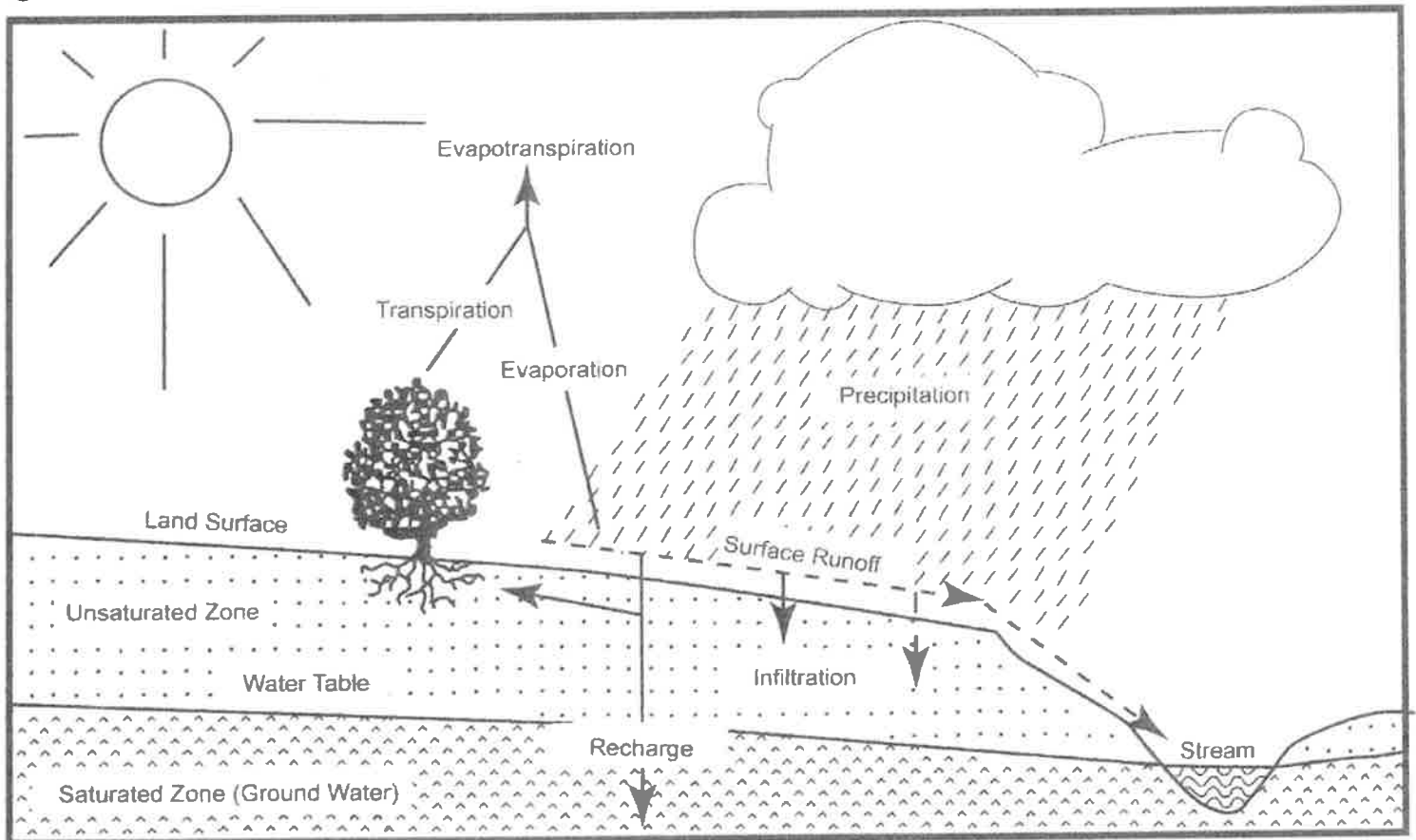
The Municipality may allow a developer to provide funding or partial funding to the Municipality for an environmental enhancement project that is on the Municipal List of Projects or towards the development of a Regional Stormwater Management Plan. The funding must be equal to or greater than the cost to implement the mitigation outlined above, including costs associated with purchasing the property or easement for mitigation, and the

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cost associated with the long-term maintenance requirements of the mitigation measure.

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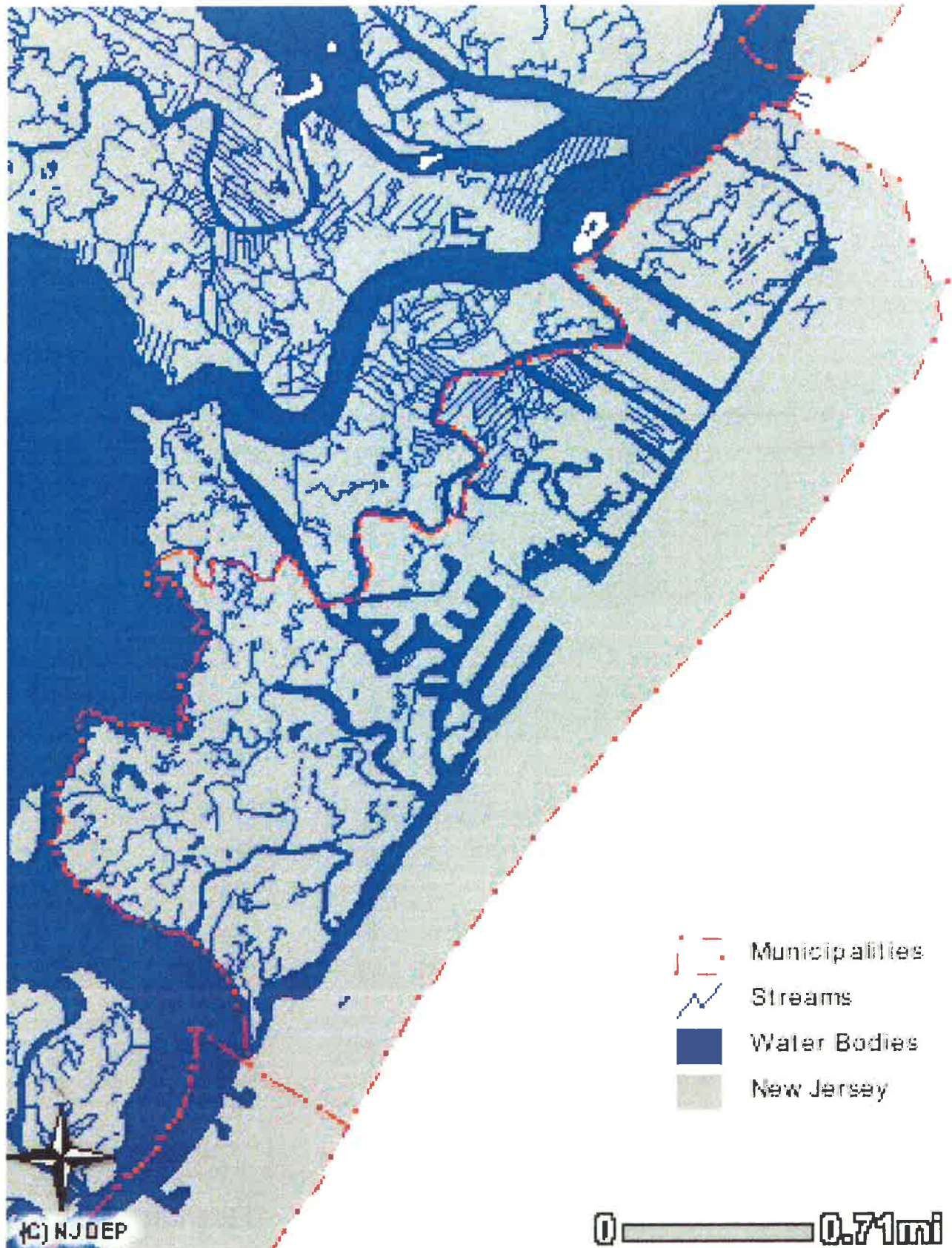
**Figure 1: Groundwater Recharge in the Hydrologic Cycle**



Source: New Jersey Geological Survey Report GSR-32.

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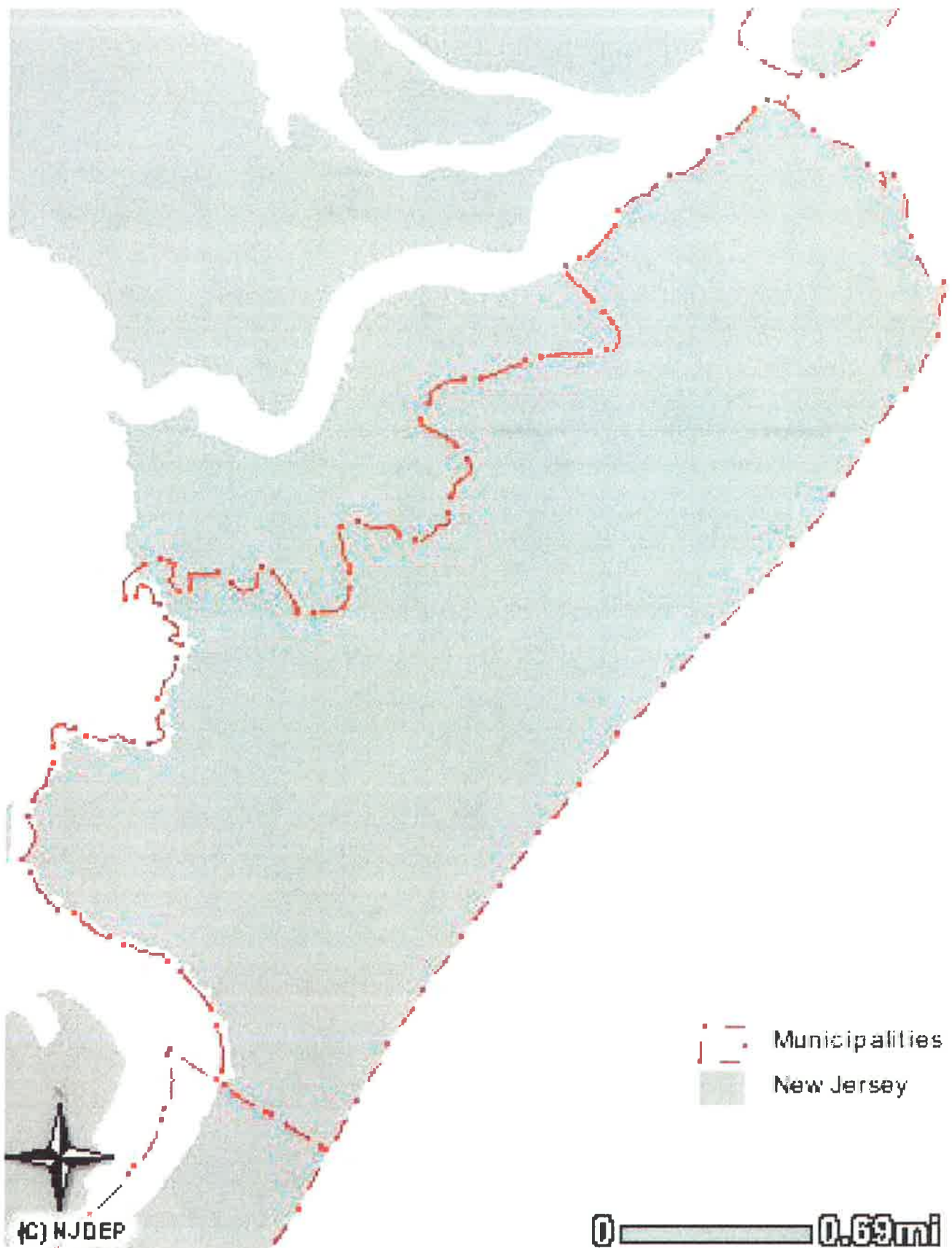
Figure 2: Municipality and Its Waterways





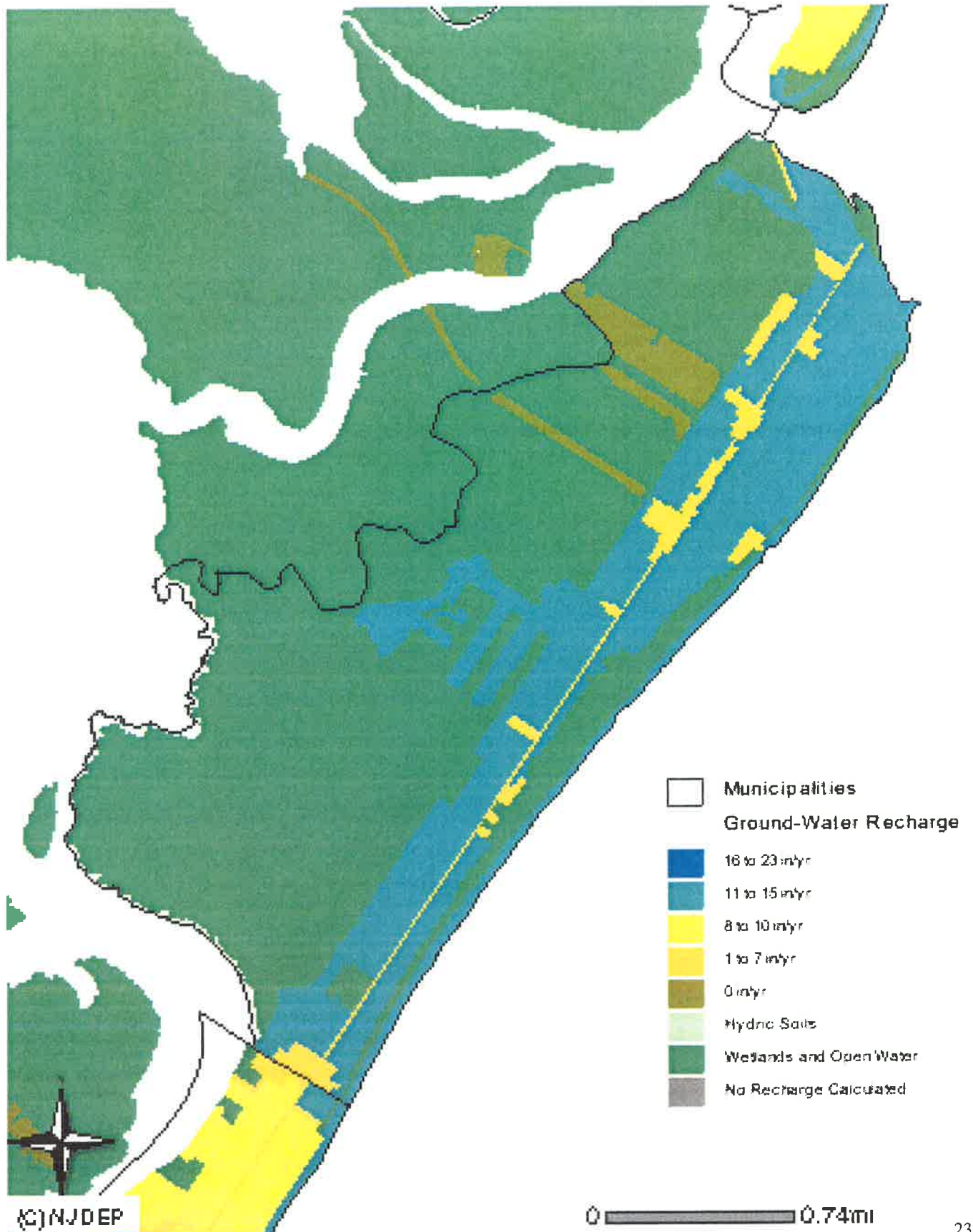
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Figure 3: Municipal Boundary on USGS Quadrangles



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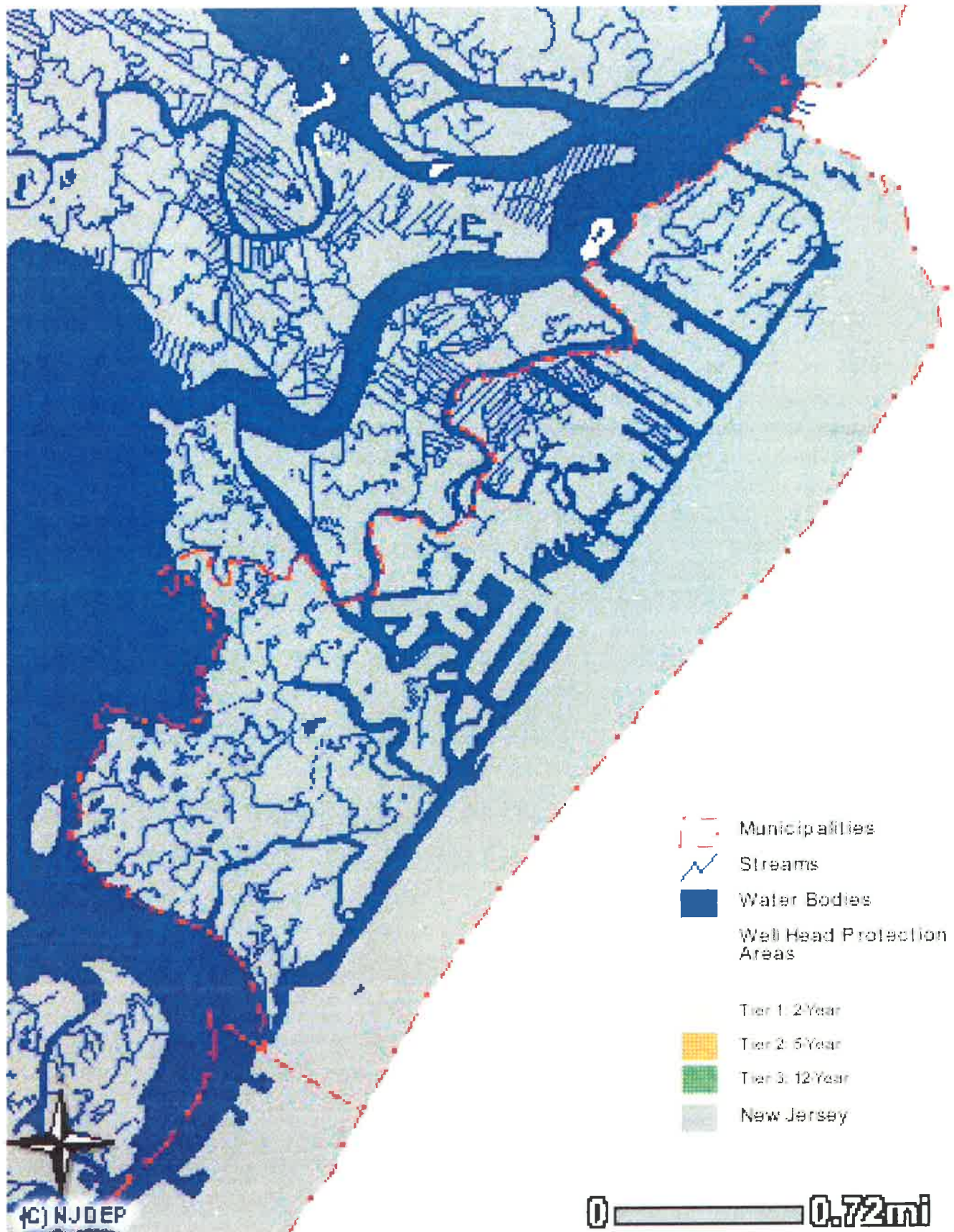
Figure 4: Groundwater Recharge Areas





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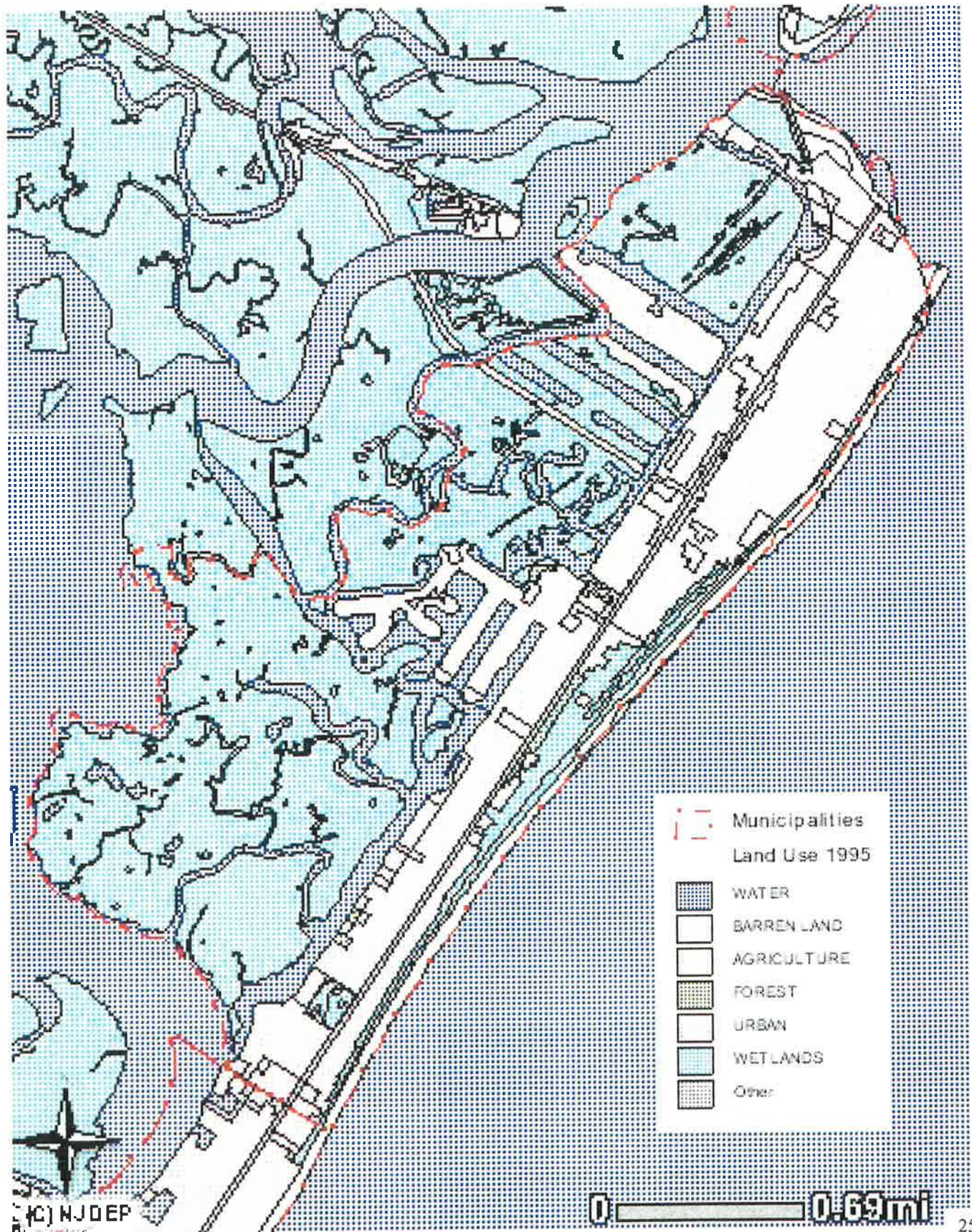
Figure 5: Wellhead Protection Areas





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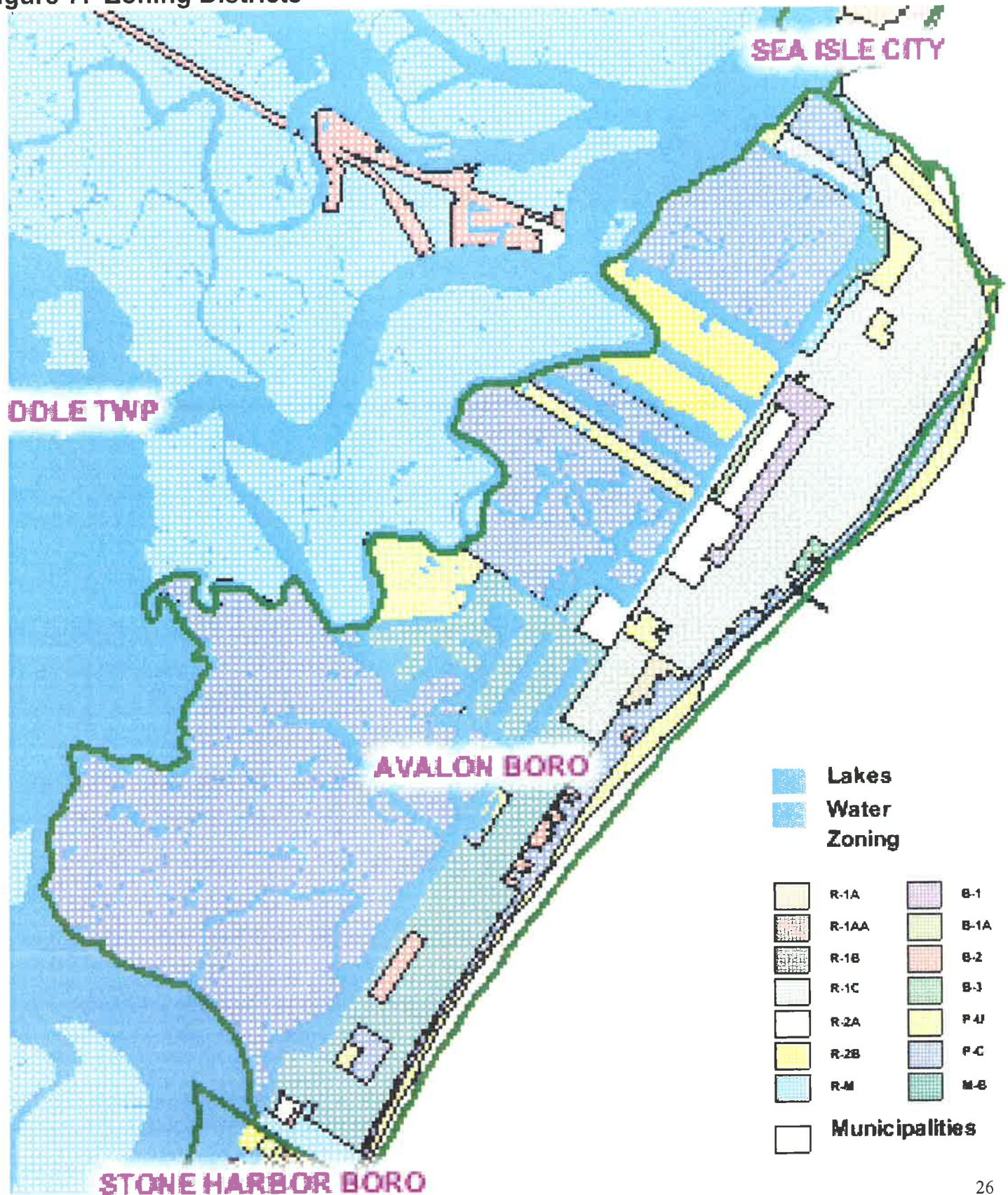
Figure 6: Municipality's Existing Land Use





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Figure 7: Zoning Districts





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Figure 8: Constrained Land

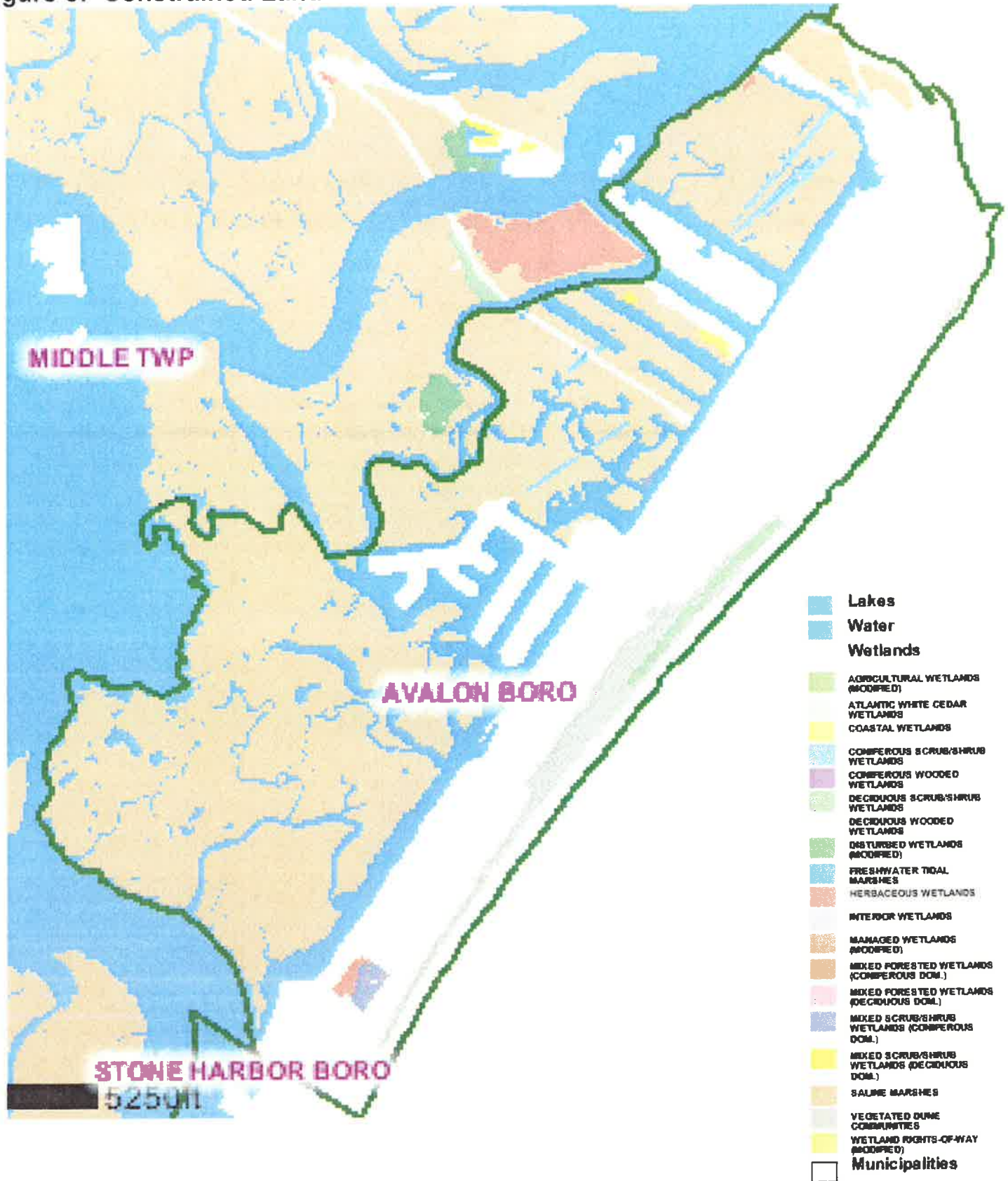
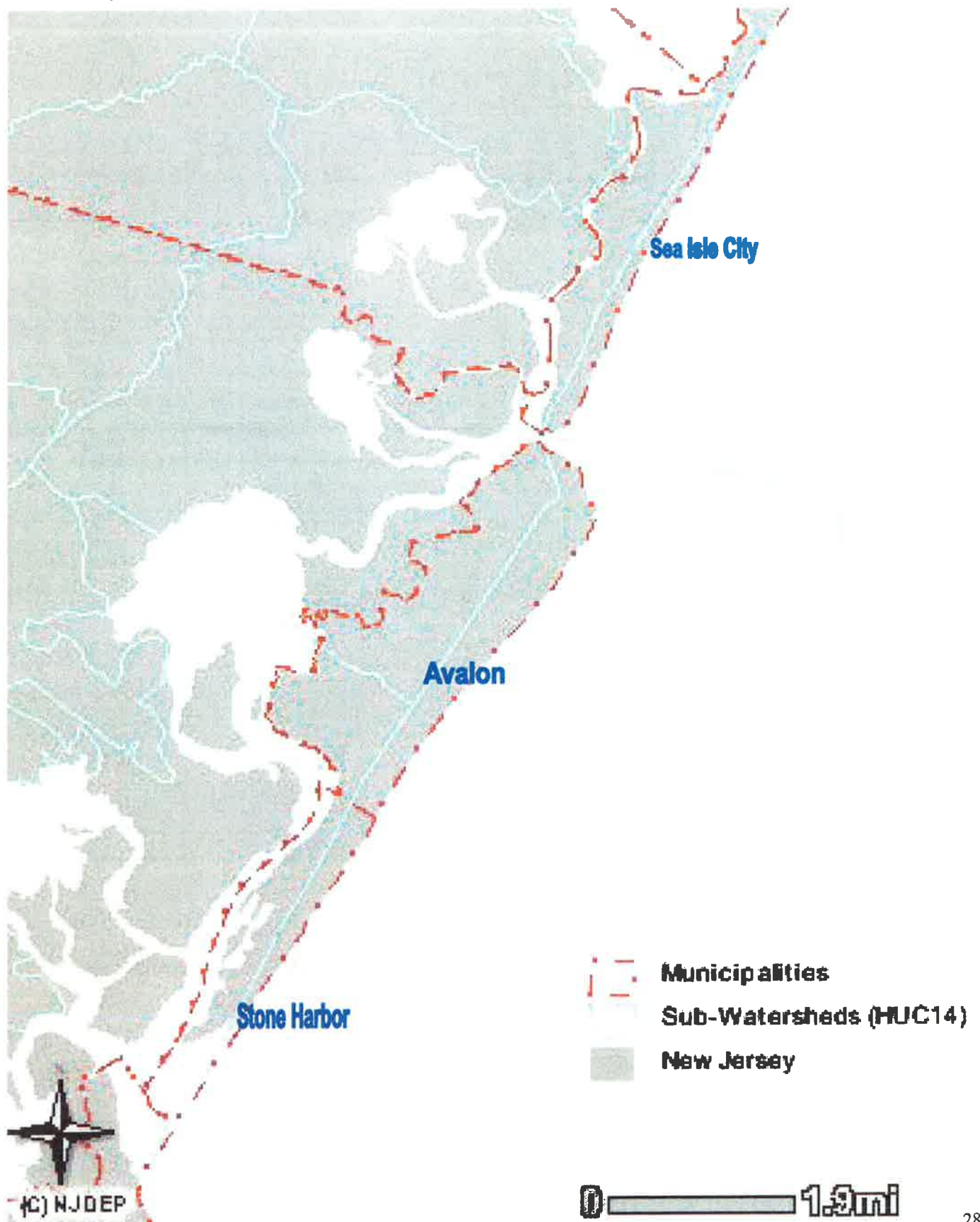


Figure 9: Hydrologic Units (HUC 14s)





# ***BOROUGH OF AVALON***



## **HOUSING ELEMENT AND FAIR SHARE PLAN**

### ***ADDENDUM III***

**TO THE**

**2002**

**MASTER PLAN RE-EXAMINATION REPORT**

**&**

**BUILD-OUT ANALYSIS**

**October 4, 2006**

**ADOPTED: October 17, 2006**

# **BOROUGH OF AVALON**

**2006**

## **HOUSING ELEMENT AND FAIR SHARE PLAN**

**Prepared by:  
Planning Design Collaborative, LLC**



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**Kendra Lelie, PP, AICP**

**License # 5537**

**October 4, 2006**



## **INTRODUCTION**

Providing affordable housing is a constitutional obligation, required by the Fair Housing Act of 1985 (FHA). The law recognizes that every New Jersey municipality shall provide “a realistic opportunity for a fair share of its region’s present and prospective needs for housing low and moderate income families”. The FHA made the Housing Element a mandatory part of the municipal master plan and also required the preparation of a Fair Share Plan describing how the goals of the Housing Element would be achieved.

The FHA directs the New Jersey Council On Affordable Housing (COAH) to provide regulations that allow municipalities to prepare a comprehensive planning and implementation response to the constitutional obligation to provide a realistic opportunity for the provision of affordable housing. COAH is directed to review the municipal Housing Element and Fair Share Plan and is empowered to grant substantive certification. Once certified, a municipality is protected from allegations of exclusionary zoning for a period of 10 years or until December 20, 2015, whichever is earlier.

On December 20, 2004, the third round substantive and procedural rules became effective. The third round rules use a methodology known as growth share, to calculate the municipality’s new construction affordable housing obligation, which is based on actual growth occurring in the municipality. The affordable housing obligation assigned as a proportion of that growth. The obligation is cumulative, covering a period of need from 1987 to 2014 and consists of three components including:

- The rehabilitation share (2000)
- The prior round obligation (1987-1999)
- Growth share (1999-2014)

The rehabilitation share is a measure of old, crowded, deficient housing that is occupied by low- and moderate-income households. The rehabilitation share is provided by COAH and based on 2000 Census data. The prior round obligation is the municipality’s new construction obligation from 1987 to 1999. The unmet balance of the previous obligation must be satisfied as part of the third round fair share plan. COAH has recalculated the obligations from the previous rounds based on data from the 2000 Census.

In 2005, the Borough of Avalon, Cape May County retained Planning Design Collaborative, LLC to assist the Borough with the preparation of a Housing Element and Fair Share Housing Plan. This report presents the background data required by the applicable provisions of COAH and the New Jersey Municipal Land Use Law (MLUL). The first portion of this document contains background data required by COAH, including the obligatory 2000 census data. The second portion of this document sets forth the Fair Share Plan in the prescribed format.

## **COMMUNITY OVERVIEW**

The Borough of Avalon is located in the middle-eastern portion of Cape May County and is surrounded by the Atlantic Ocean to the east; Stone Harbor to the south; the intercoastal waterway, salt marshes, and Middle Township to the west; and Townsend's Inlet and Sea Isle City to the north.

Avalon Borough can be characterized as a completely developed village that is experiencing growth through redevelopment. Residential structures account for the majority of the land use within the Borough with a small portion of the Borough dedicated to commercial uses.

## **INVENTORY OF MUNICIPAL HOUSING STOCK**

This section of the Housing Element provides an inventory of Borough of Avalon's housing stock. COAH requires the municipal housing inventory to identify the local housing stock relative to the number of year-round and seasonal units, housing age, housing conditions, purchase and rental value and occupancy characteristics. Additionally, the inventory includes the number of affordable units available to low and moderate income households and the number of substandard housing units capable of being rehabilitated.

### **Number of Housing Units**

The 2000 Census reveals the total number of housing units in Borough of Avalon is 5,281 units, which is a 4.8 percent increase from the 5,026 units indicated in the 1990 Census. The number of occupied units increased from 838 units in 1990 to 1,045 units in 2000 while the number of seasonal units has increased from 3,577 units in 1990 to 3,697 units in 2000. Between 1990 and 2000 the number of vacant units in Borough of Avalon decreased by 13.3 percent. Table No. 1 outlines these findings.

**TABLE NO. 1  
HOUSING UNIT CHARACTERISTICS  
AVALON BOROUGH, NJ**

CHARACTERISTICS	1990	2000	CHANGE (%)
Total Units	5,026	5,281	+4.8
Total Vacant Units	4,188	4,236	+1.1
Total Seasonal Units	3,577	3,697	+3.2
Total Vacant Units	611	539	-13.3
Total Occupied Units	838	1,045	+19.8
Owner-Occupied Units	665	908	+26.8
Renter-Occupied Units	173	137	-26.2

Source: US Census Bureau; 1990 & 2000

### **Housing Age**

Table No. 2 summarizes the relative age of housing in the Borough of Avalon. The table indicates the peak housing construction period of the Borough as pre-1980's. Housing constructed from 1990 to 2000 totals 388 dwelling units, which is approximately 7.3 percent of the total number of units.

**TABLE NO. 2  
YEAR STRUCTURE BUILT  
AVALON, NEW JERSEY**

YEAR CONSTRUCTED	NUMBER	PERCENT (%)
1999 to 2000	23	0.4
1995 to 1998	85	1.6
1990 to 1994	280	5.3
1980 to 1989	1106	20.9
1970 to 1979	1452	27.5
1960 to 1969	1146	21.8
1940 to 1959	625	11.8
Pre – 1940	564	10.7
Total	5,281	100.0

Source: US Census Bureau; 2000.

### **Housing Conditions**

Occupancy per room is reported in Table No. 3. It appears that households in the Borough maintain adequate occupancy per room.

**TABLE NO. 3  
OCCUPANTS PER ROOM  
OCCUPIED UNITS  
AVALON, NEW JERSEY**

OCCUPANTS PER ROOM	1990	2000
1.00 person or less	834	1,045
1.01 – 1.50 persons	4	-
1.51 persons or more	0	-
Total	838	1,045

Source: US Census Bureau; 2000

Table No. 4 summarizes house heating fuel in the Borough. The 2000 Census indicates that utility gas used in the majority of dwellings.

**TABLE NO. 4  
HOUSE HEATING FUEL  
AVALON, NEW JERSEY**

TYPE OF HEATING FUEL	OCCUPIED UNITS	PERCENT (%)
Utility gas	749	71.7
Bottled, tank, or LP gas	25	2.4
Electricity	251	24.0
Fuel oil, kerosene, etc.	17	1.6
Coal or coke	-	-
Wood	3	0.3
Solar energy	-	-
Other fuel	-	-
No fuel used	-	-
<b>Total</b>	<b>1,045</b>	<b>100.0</b>

Note: (-) denotes zero or rounds to zero

Source: US Census Bureau; 2000

### Purchase and Rental Values

The distribution of housing costs of owner-occupied housing units is summarized in Table No. 5. The median value of such units was \$285,700 in 1990 and \$443,300 in 2000. The following Table No. 6 outlines housing information for renter-occupied housing. The median monthly rent has increased from \$661 in 1990 to \$719 in 2000.

**TABLE NO. 5**  
**SPECIFIED OWNER-OCCUPIED HOUSING UNITS BY VALUE**  
**AVALON, NEW JERSEY**

VALUE	1990	PERCENT (%)	VALUE	2000	PERCENT (%)
Less than \$75,000	7	1.2	Less than \$50,000	-	-
\$75,000 – \$99,999	4	0.7	\$50,000 - \$99,999	-	-
\$100,000 - \$124,999	10	1.8	\$100,000 - \$149,999	32	3.9
\$125,000 - \$149,999	17	3.0	\$150,000 - \$199,999	34	4.1
\$150,000 - \$174,999	23	4.1	\$200,000 - \$299,999	146	17.7
\$175,000 - \$199,999	43	7.6	\$300,000 - \$499,999	293	35.5
\$200,000 - \$249,999	103	18.3	\$500,000 - \$999,999	262	31.8
\$250,000 - \$299,999	105	18.6	\$1,000,000 or more	58	7.0
\$300,000 - \$399,999	106	18.8			
\$400,000 - \$499,999	51	9.1			
\$500,000 or more	95	16.8			
<b>Total</b>	<b>564</b>	<b>100.0</b>	<b>Total</b>	<b>825</b>	<b>100.0</b>
<b>Median Value</b>	<b>\$285,700</b>		<b>Median Value</b>	<b>\$443,300</b>	

Note: (-) denotes zero or rounds to zero

Source: US Census Bureau; 1990 & 2000



**TABLE NO.6**  
**SPECIFIED RENTER-OCCUPIED HOUSING UNITS**  
**AVALON, NEW JERSEY**

RENT	1990	PERCENT (%)	RENT	2000	PERCENT (%)
Less than \$100	-	-	Less than \$200	-	-
\$100-\$149	-	-	\$200 - \$299	-	-
\$150 - \$199	-	-	\$300 - \$499	15	<b>11.0</b>
\$200 - \$299	3	1.7	\$500 - \$749	45	<b>33.1</b>
\$300 - \$399	7	4.0	\$750 - \$999	36	<b>26.5</b>
\$400 - \$499	14	8.1	\$1000 - \$1,499	-	-
\$500 - \$599	32	18.5	\$1,500 or more	9	<b>6.6</b>
\$600 - \$699	24	13.9			
\$700 - \$749	14	8.1			
\$750 - \$999	22	12.7			
\$1,000 or more	22	12.7			
No cash Rent	35	20.3	No cash Rent	31	<b>22.8</b>
Total	173	100.0	Total	136	<b>100.0</b>
Median Value	\$661		Median Value	\$719	

Note: (-) denotes zero or rounds to zero  
Source: US Census Bureau; 1990 & 2000

### **Occupancy Characteristics and Types**

A variety of residential development exists in Avalon. The majority of housing structures consist of single-family homes, which comprise approximately 65.4 percent of the total dwelling units. The second largest number of housing structures is comprised of multi-family residences. Table No. 7 outlines units in structure from the 2000 Census.

**TABLE No. 7  
UNITS IN STRUCTURE  
AVALON, NEW JERSEY**

UNITS IN STRUCTURE	NUMBER	PERCENT
One Unit Detached	3,452	65.3
One Unit Attached	473	9.0
2 Units	728	13.8
3 or 4 Units	164	3.1
5 to 9 Units	222	4.2
10 to 19 Units	64	1.2
20 or More Units	178	3.4
Mobile Units	-	-
Boat, RV, van, etc.	-	-
Total	5,281	100.0

Note: (-) denotes zero or rounds to zero

Source: US Census Bureau; 2000

The number of bedrooms per dwelling unit is reported in Table No. 8. The 2000 Census indicated 14.8 percent of dwelling units, or 782 units contained five or more bedrooms.

**TABLE NO. 8  
NUMBER OF BEDROOMS IN HOUSING UNITS  
OCCUPIED UNITS  
AVALON, NEW JERSEY**

BEDROOMS	NUMBER	PERCENT (%)
None	-	-
One	73	1.4
Two	648	12.3
Three	2,093	39.6
Four	1,685	31.9
Five or more	782	14.8
Total	5281	100

Source: US Census Bureau; 2000

Table No. 9 provides data concerning kitchen and plumbing facilities. As indicated by the numbers from the 1990 Census data and 2000 Census data, there are 8 dwellings lacking kitchen facilities and no dwellings lacking plumbing facilities in the Borough of Avalon.

**TABLE NO. 9**  
**KITCHEN AND PLUMBING FACILITIES**  
**AVALON, NEW JERSEY**

FACILITIES	1990		2000	
	Number	Percent (%)	Number	Percent (%)
Kitchen Facilities:				
Lacking Complete Facilities	-	-	8	0.2
With Complete Facilities	5018	100	5,273	99.8
Plumbing Facilities				
Lacking Complete Facilities	4	0.1	-	-
With Complete Facilities	5022	99.9	5,281	100
Total Housing Units	5026		5,281	

Note: (-) denotes zero or rounds to zero

Source: US Census Bureau; 1990 & 2000

#### **Number of Units Affordable to Low and Moderate Income Households**

The 2000 US Census recorded a median family income of \$59,196, which is approximately 37 percent greater than the \$37,097 reported in 1990. Based upon the standard that moderate income households would represent no more than 80 percent of this number, 1990 moderate income levels would be no higher than \$29,677. Low income households are defined as earning 50 percent of the median income. Low income households in the Borough of Avalon in 1990 would have earned \$18,549. In 2000, moderate income levels would be no higher than \$47,357, while low income levels would be \$29,598.

With the exception of adjustments for family size and using a rule of thumb of two times income for sales housing and one-quarter yearly income for rental housing, housing costs and rental costs for 2000 were calculated for Borough of Avalon. Based on Borough of Avalon Census data, moderate income housing costs were determined to be \$94,714 for sale housing. This in effect suggests that no housing units in the Borough could be described as in the price range of moderate income households. Moderate income renters could afford to spend \$986 per month on housing. Low income housing costs were determined to be \$59,196, of which no housing units in Borough of Avalon were available to low income families. Low income renters could afford to spend \$617 per month on housing.

## POPULATION ANALYSIS

The COAH regulations call for an analysis of the community's socio-economic characteristics, including an assessment of population size, rate of population growth, age and gender characteristics, income levels, and household size. Each of these items is described in this section of the report.

### Population Size

The total population in Borough of Avalon is reported as 2,143 persons in the 2000 Census. The population has increased from the 1809 persons recorded in 1990.

### Rate of Population Growth

The population growth rate from 1970 to 2000 is summarized in Table No. 10. From 1970 through 1980, Borough of Avalon experienced a sizable increase in population.

**TABLE NO. 10**  
**RATE OF POPULATION GROWTH**  
**AVALON, NEW JERSEY**

YEAR	POPULATION	CHANGE (NO.)	CHANGE (%)
1970	1283	-	-
1980	2162	879	<b>41</b>
1990	1809	-353	<b>-19.5</b>
<b>2000</b>	2143	<b>334</b>	<b>15.5</b>

Note: (-) denotes zero or rounds to zero

Source: US Census Bureau, 1990 & 2000  
1996 Avalon Housing Element; 2002 Reexamination Report

### **Age, Gender and Race Characteristics**

The following table provides age and gender characteristics in Avalon.

**TABLE NO. 11  
AGE AND GENDER CHARACTERISTICS  
AVALON, NEW JERSEY**

<b>AGE GROUP</b>	<b>MALE</b>	<b>FEMALE</b>	<b>TOTAL</b>	<b>PERCENT (%)</b>
Under 5	35	26	61	<b>2.8</b>
5 – 9	51	39	90	<b>4.2</b>
10 – 14	53	48	101	<b>4.7</b>
15 – 19	39	28	67	<b>3.1</b>
20 – 24	26	20	46	<b>2.1</b>
25 – 29	32	25	57	<b>2.7</b>
30 – 34	43	46	89	<b>4.2</b>
35 – 44	94	110	204	<b>9.5</b>
45 – 54	156	158	314	<b>14.7</b>
55 – 59	103	111	214	<b>10.0</b>
60 – 64	101	98	199	<b>9.3</b>
65 – 74	180	197	377	<b>17.6</b>
75+	130	194	324	<b>15.1</b>
Total	1,043	1,100	2,143	<b>100</b>
Median Age	54.5	57.3	56.0	

Source: US Census Bureau: 2000

The Borough's racial composition is outlined in Table No. 12. White population represents 99 percent of the residents. Non-white population consists of 0.1 percent of the community.

**TABLE NO. 12  
RACIAL COMPOSITION  
AVALON, NEW JERSEY**

<b>RACE</b>	<b>NUMBER</b>	<b>PERCENT (%)</b>
White	2,115	98.7
Black or African American	3	0.1
Other	14	0.7
Two or more races	11	0.5
Total	2143	100

Source: US Census Bureau: 2000

### **Income Level**

Table No. 13 outlines household income by income category. The median household income for 2000 was \$59,196 which is a 37 percent increase compared to the 1990 median household income of \$37,097.

**TABLE NO. 13  
HOUSEHOLD INCOME  
BOROUGH OF AVALON, NEW JERSEY  
1999 HOUSEHOLDS**

INCOME CATEGORY	NUMBER	PERCENT
<\$10,000	15	1.4
\$10,000 - \$14,999	47	4.5
\$15,000 - \$24,999	114	11.0
\$25,000 - \$34,999	112	10.8
\$35,000 - \$49,999	157	15.1
\$50,000 - \$74,999	197	18.9
\$75,000 - \$99,999	98	9.4
\$100,000 - \$149,999	91	8.7
\$150,000 - \$199,999	57	5.5
\$200,000+	153	14.7
Total	1,041	100
Median Household Income	\$59,196	

Source: US Census Bureau: 2000

### **Household Size**

The Borough's average household size is 2.05 persons per household according to the 2000 census. The Borough of Avalon experienced an increase in both the number of households and the population size. Borough of Avalon's average household size is summarized in Table No. 14.

**TABLE NO. 14  
AVERAGE HOUSEHOLD SIZE  
AVALON, NEW JERSEY**

YEAR	TOTAL POPULATION	NUMBER OF HOUSEHOLDS	HOUSEHOLD SIZE
1990	1809	838	2.16
2000	2,143	1,045	2.05

## EMPLOYMENT CHARACTERISTICS AND TRENDS

The COAH regulations require an analysis of the existing employment characteristics of the community, including current and historic trends of employment in the municipality. These items are addressed below in detail.

### Employment Trends

Employment data from 1997 to 1999 is reported in Table No. 15. The data indicates that the number of private jobs in Avalon has been increasing while the number of government jobs has remained constant. Private weekly wages show an increase while government weekly wages have only increased from \$509 to \$559 for the three-year period.

**TABLE NO. 15  
COVERED EMPLOYMENT  
AVALON, NEW JERSEY**

YEAR	NUMBER OF JOBS	WEEKLY WAGE
1997		
Private	148	\$362.00
Government	3	\$509.00
1998		
Private	157	\$412.00
Government	3	\$551.00
1999		
Private	167	\$568.00
Government	3	\$559.00

Source: State of New Jersey, Department of Labor, Office of Labor Planning & Analysis, Trends in Employment and Wages Covered by Unemployment Insurance (1997-1999)



**Employment Characteristics and Occupation Patterns of the Community's Residents**

Table No. 16 summarizes employment status of persons at the age of 16 and over by gender. Approximately 47.1 percent of the residents in Borough of Avalon are participating in the civilian labor force, of which 97 percent are employed. An overall unemployment rate is relatively low at 3.3 percent.

**TABLE NO. 16  
EMPLOYMENT STATUS  
OF PERSONS 16 AND OVER BY GENDER  
AVALON, NEW JERSEY**

<b>EMPLOYMENT STATUS</b>	<b>MALE</b>	<b>FEMALE</b>	<b>TOTAL</b>
Armed Forces	6	-	<b>6</b>
Civilian Labor Force	504	380	<b>884</b>
Employed	489	366	<b>855</b>
Unemployed	15	14	<b>29</b>
(Unemployment Rate: %)	3.0	3.7	<b>3.3</b>
Not in Labor Force	382	603	<b>985</b>
Total	892	983	<b>1,875</b>
(Participation Rate: %)	63.2	38.7	<b>50.3</b>

Note: (-) denotes zero or rounds to zero

(\*) denotes information not provided

Source: US Census Bureau: 2000

Table No. 17 outlines resident employment by occupation for employed persons at the age of 16 and over. In 2000, the majority of resident employment is classified as sales, office occupations, management, professional and related occupations.

**TABLE NO. 17**  
**EMPLOYED PERSONS 16 AND OVER BY OCCUPATION**  
**AVALON, NEW JERSEY**

INDUSTRY	NUMBER	PERCENT
Management, professional and related occupations	355	41.5
Service occupations	109	12.7
Sales and office occupations	257	30.1
Farming, fishing, and forestry occupations	5	0.6
Construction, extraction and maintenance occupations	73	8.5
Production, transportation, and material moving occupations	56	6.6
Total	855	100

Source: US Census Bureau; 2000

## MUNICIPAL GROWTH SHARE OBLIGATION PROJECTION

### Residential Component

The South Jersey Transportation Planning Organization (SJTPO) provides growth projections for Borough of Avalon. The projections indicate total population in five year increments. The number of affordable units or growth share to be provided by Borough of Avalon is based upon the change in households from 2005 to 2015. Table No. 18 provides the population and household projections for 2015 based upon information from SJTPO.

**TABLE NO. 18  
SJTPO RESIDENTIAL GROWTH PROJECTION  
BOROUGH OF AVALON , NEW JERSEY**

2015 Population	2005 Population	Population Change	2000 Household Size	Household Growth
2325	2204	121	2.05	59

Source: South Jersey Transportation Planning Organization; COAH third round resources

Table No. 19 provides historic data regarding Certificates of Occupancy and Demolitions permits approved within the last 10 years for Borough of Avalon. This information is utilized to help predict likely future growth. The net calculations provide a basis comprising the first component of the growth share calculation. As indicated below the trend of net housing units diminished over the past ten years with a net result of a loss of units occurring between 2001 and 2004. The Borough anticipates the recent declining trend to continue over the next ten years.

**TABLE NO. 19  
TEN-YEAR HISTORIC TREND  
CERTIFICATES OF OCCUPANCY AND DEMOLITION PERMITS**

	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04
COs issued	27	32	85	66	89	99	68	92	108	135
Demolitions	18	26	26	55	85	80	86	113	107	148
Net	9	6	59	11	4	19	-18	-21	1	-13

Source: Department of Community Affairs, Borough Construction Official

The following Table provides projections of future residential construction that will occur in Borough of Avalon based on a site-specific analysis of approved and anticipated development applications and the historic rate of development drawn from Table No. 19. Based upon the historic trend eight out of the past ten years the Borough of Avalon has experienced a positive net increase in housing units.

**TABLE NO. 20**  
**ANTICIPATED DEVELOPMENTS AND NUMBER OF RESIDENTIAL UNITS**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'05	'06	'07	'08	'09	'10	'11	'12	'13	TOTAL
Approved Development Applications										
Commodore Bay				6						6
Breezes Investment					8					8
Avalon Station			2							2
Other Projected Development	101	100	98	92	88	145	135	124	90	973
	101	100	100	98	96	145	135	124	90	989

Source: Avalon Township Construction and Zoning Department

Table No. 21 provides the net number of future residential units based upon the information provided in Table No. 20 and anticipated demolitions predicted from the historic trend information.

**TABLE NO. 21**  
**PROJECTED CERTIFICATES OF OCCUPANCY AND DEMOLITION**  
**PERMITS**  
**TOTAL NET RESIDENTIAL GROWTH**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	TOTAL
Total COs issued	135	101	100	100	98	90	145	135	124	90	1118
Demolitions	148	137	120	100	90	89	90	98	92	96	1060
Net	-13	-36	-20	0	8	1	55	37	32	-6	58

The affordable housing unit growth projections are based on the net residential growth provided in Table No. 21. The growth share obligation is arrived by dividing 58 units by nine for a total of 6 units to meet the third round low and moderate income housing obligation.

**Non – Residential Growth Component**

The South Jersey Transportation Planning Organization (SJTPO) provides growth projections for non-residential development in Avalon. The projections indicate total job growth in five-year increments. The number of affordable units or growth share to be provided by Avalon is based upon the change in jobs from 2005 to 2015. Table No. 242 provides the employment and employment change for 2015 based upon information from SJTPO.

**TABLE NO. 22**  
**SJTPO NON RESIDENTIAL GROWTH PROJECTION**

2015 EMPLOYMENT	2005 EMPLOYMENT	EMPLOYMENT CHANGE
1558	1491	67

COAH requires a review of the historic data for the last 10 years regarding the number of certificate of occupancy and demolition permits issued. The trend data will provide a portion of the basis in projecting likely future non-residential growth.

**TABLE NO. 23**  
**Ten-Year Historic Trend of Certificates of Occupancy**  
**And Demolition Permits by Square Feet**

	'95 Sq.ft	'96 Sq ft.	'97 Sq ft.	'98 Sq ft.	'99 Sq ft.	'00 Sq ft	'01 Sq ft	'02 Sq ft	'03 Sq ft	'04 Sq ft
CO's Issued B – Office		16,100			6,016		2,832	6,771	689	
CO's Issued M – Retail			270		3,782				5,720	
CO's Issued A-2 – Rest.			8,000	8,179		8,179				
CO's Issued A-3 – Assembly									6,754	
CO's Issued A-4 – Assembly					192					
CO's Issued R-1 – Hotel/Motel			3,011					11,814		
Demolitions B-Office				2,000	1,200	3,000		2,700		
Demolitions A-2 – Rest.			7,100			5,880				2,200
Demolitions A-3 – Assembly						1,200				
Demolitions R-1 – Hotel/Motel										

Source: Department of Community Affairs, Borough Construction Official

**TABLE NO. 24**  
**“B” Use Group: Actual and Projected Developments**  
**“B” USE GROUP - OFFICE (3 jobs per 1,000 sq.ft)**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total Square Feet	Job
Other Projected Development			3240	3240	3240	3240	3240	3240	3240	3240	25920	77.76
Total New Development		-	3240	3240	3240	3240	3240	3240	3240	3240	25920	78
Total Demolitions		6857	1112	1112	1112	1112	1112	1112	1112	1112	15753	47

**TABLE NO. 25**  
**“M” Use Group: Actual and Projected Developments**  
**“M” USE GROUP- RETAIL (1 job per 1,000 sq.ft)**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total Square Feet	Job
Other Projected Development		15,501	977	977	977	977	977	977	977	977	23317	23
Total New Development		15,501	977	977	977	977	977	977	977	977	23317	23
Total Demolitions		11116									11116	11

**TABLE NO. 26**  
**“A-2” Use Group: Actual and Projected Developments**  
**“A-2” USE GROUP - RESTAURANT (3 jobs per 1,000 sq.ft)**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total Square Feet	Job
Other Projected Development			3044	3044	3044	3044	3044	3044	3044	3044	24358	73
Total New Development		-	3044	3044	3044	3044	3044	3044	3044	3044	24358	73
Total Demolitions			1897	1897	1897	1897	1897	1897	1897	1897	15180	46

**TABLE NO. 27**  
**“A-3” Use Group: Actual and Projected Developments**  
**“A-3” USE GROUP - ASSEMBLY (3 jobs per 1,000 sq.ft)**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total Square Feet	Job
Other Projected Development			844	844	844	844	844	844	844	844	6754	20.26
Total New Development		-	844	844	844	844	844	844	844	844	6754	20
Total Demolitions			150	150	150	150	150	150	150	150	1200	4

**TABLE NO. 28**  
**“R-1” Use Group: Actual and Projected Developments**  
**“R-1” USE GROUP – HOTEL/MOTEL (0.8 jobs per 1,000 sq.ft)**  
**BY THE YEAR THAT COS ARE ANTICIPATED TO BE ISSUED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total Square Feet	Job
Other Projected Development			1853	1853	1853	1853	1853	1853	1853	1853	14825	11.86
Total New Development		-	1853	1853	1853	1853	1853	1853	1853	1853	14825	12
Total Demolitions												



**TABLE NO. 29**  
**NET PROJECTED NON-RESIDENTIAL (EMPLOYMENT) GROWTH – JOBS**  
**SUM OF ACTUAL AND PROJECTED**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Jobs
Table No. 24 Total New Development			9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	78
Table No. 25 Total New Development		16	.97	.97	.97	.97	.97	.97	.97	.97	23
Table No. 26 Total New Development			9	9	9	9	9	9	9	9	73
Table No. 27 Total New Development			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	20
Table No. 28 Total New Development			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	12
Table No. 24 Total Demolitions		21	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	47
Table No. 25 Total Demolitions		11									11
Table No. 26 Total Demolitions			5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	46
Table No. 27 Total Demolitions			0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	4
Subtotal New Development		16	23.67	23.67	23.67	23.67	23.67	23.67	23.67	23.67	205
Subtotal Demolitions		32	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	107
Total Projected Net Employment Growth		-16	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	98



Table No. 32 provides the projected and actual job growth from 2004 through 2014. The non-residential growth share obligation is based on the non-residential growth figures divided by 25.

**TABLE NO. 30**  
**TOTAL NET NON-RESIDENTIAL (EMPLOYMENT) GROWTH (SUM OF**  
**ACTUAL AND PROJECTED GROWTH)**  
**AFFORDABLE HOUSING UNIT OBLIGATION**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total
New Development		-16	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	98
Divided by 25		-.64	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4
Total		<b>-.64</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>4</b>

**TABLE NO. 31**  
**TOTAL PROJECTED AFFORDABLE HOUSING OBLIGATION GENERATED**  
**BY RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT 2004-2014**

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	Total
Residential	-1.4	-4	-2.2	0	0.88	0.11	6.1	4.1	3.5	-.66	6
Non-Residential	-	-.64	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4
Total	-1.4	-4.64	-1.6	0.6	1.5	0.71	6.7	4.7	4.1	-0.06	10

Source: Table No. 23 and No.29; 2005 Housing Element and Fair Share Plan

## **FAIR SHARE PLAN**

Avalon Borough's fair share obligation is the sum of the rehabilitation share (2000), the remaining prior round obligation (1987-1999) and the growth share (2004-2014).

<b>(a) Rehabilitation Share (2000) (0).....</b>	<b>0</b>
<b>(b) Recalculated Obligation (251).....</b>	<b>251</b>
<b>(c) Growth Share</b>	
<b>Residential Share (6) + Non-Residential Share (4).....</b>	<b>10</b>

### **Prior Round - Recalculated Obligation**

The Borough of Avalon is requesting an adjustment of the prior round Fair Share obligation due to a lack of vacant land in the prior cycles (1993 – 1999). Due to the lack of available land capacity, the Borough cannot provide sufficient land to accommodate the affordable housing obligation. An existing land use map to display land uses of each parcel within the Borough is attached. The map displays land uses in the following categories: single-family, two-four family, other multi-family, commercial, industrial, parkland, other public uses, semi-public uses and vacant land. A listing of vacant land is also provided. The vacant land inventory excludes any land owned by the Borough as of January 1, 1997, land in private ownership which accommodates less than five dwelling units and parcel within the areas of the State regulated by the Division of Coastal Resources. In addition, historically and architecturally important sites, active recreational lands and conservation, parkland and open space lands are not included in the vacant land inventory. As evidenced by the vacant land inventory, the Borough does not have sufficient land area to meet the Fair Share obligation (1993-1999) of 251 affordable housing units.

### **Third Round - Growth Share**

The Borough of Avalon proposes to utilize accessory apartments as a method to meet the third round affordable housing obligation of ten (10) units. An accessory apartment is defined as “a self-contained residential dwelling unit with a kitchen, sanitary facilities, sleeping quarters, and a private entrance, which is created within an existing home, or through the conversion of an existing accessory structure on the same site, or by an addition to an existing home or accessory building.” The Borough currently permits accessory apartment uses on the second and third floor of structures within the Business (B-1) zoning district. The B-1 zoning district provides opportunities for the conversion of market rate units to units affordable to low income households and the creation of new affordable

accessory apartments. All parcels are serviced by public sewer and water systems.

The Borough is committed to bond a minimum of \$20,000 per unit for a total subsidy of \$200,000 to help create affordable accessory apartments for low income households if other funding is not available. The Borough will implement an ordinance requiring an in lieu contribution for new construction to fund eligible affordable housing activities such as the accessory apartment program. The in lieu contribution requirement will be implemented via ordinance and the amount necessary to fund projected costs to subsidize the conversion and/or construction of affordable accessory apartments.

The Borough will contract with a private administrator to provide affirmative marketing and income qualification services for the accessory apartment program.

# ***BOROUGH OF AVALON***



**GREEN MASTER PLAN  
ADDENDUM IV  
TO THE  
2017  
MASTER PLAN REEXAMINATION REPORT**



# BOROUGH OF AVALON GREEN MASTER PLAN

# **AVALON GREEN MASTER PLAN**

## **INTRODUCTION**

The Borough of Avalon, through its 2002 Master Plan and 2008 Master Plan Re-examination finds a need to advance the prospects and opportunities to grow as a green community. Specifically the Master Plan calls for (in part);

- Continue(ing) the conservation of all natural resources including dunes, bay waters and beaches
- Provide healthy air, appropriate safe lighting and protected open space
- Develop an environmental resource inventory
- Promote and improve environmental and recycling programs

To this end, the Avalon Planning Board, with support and consent from the Mayor and Borough Council, has created a Municipal Green Team. Their primary responsibility will be to study and codify those steps necessary to forward Avalon's desire to create and implement a Green Master Plan. As many of the actions to achieve these goals are already being performed by the Borough, the committee also endeavors to codify a comprehensive plan to outline, implement and monitor all green activities in the Borough of Avalon.

## **ALTERNATE ENERGY / RESOURCE UTILIZATION PLANNING PROCESS**

*Vision-* A green Avalon, where energy and water costs are offset by independent energy and water generation, promoting conservation and generating tax savings to its residents through excess energy and water generation credits.

*Mission Statement-* Reduce the cost of energy and other natural resource usage to the Avalon tax payers by practicing energy efficient techniques and utilizing, where appropriate, alternative energy and ground water conservation technologies while creating a Green culture for the Borough and its residents.



### *Green Team Support Structure-*

- A Borough employee as administrative coordinator, recording secretary, information manager and go between for Borough Departments and related activities;
- A Planning Board Member in support of Borough Management for financial analysis on funding, grants, feasibility on long term programs and in coordination of Borough energy cost reduction programs;
- An Avalon Home and Land Owners Association (AHLOA) official to coordinate community outreach programs, communications in conjunction with the Borough Public Relations Officer on energy / water conservation plans; including the potential Fall Green Fair to kick off the program.

### **GOALS**

The Goals of this report as determined by the Avalon Planning/Zoning Board are as follows:

- Establish clear objectives and guidelines in all aspects of our Green Community;
- Support and expand existing conservation of all dunes, bay waters and beaches and wetland areas;
- Examine the cost/benefit of available technology to support green initiatives;
- Develop and maintain an environmental resource inventory;
- Support and expand the water resource management of the Borough;
- Implement and monitor energy efficiency guidelines for Borough facilities and vehicles;
- Plan and implement green alternatives for maintaining borough facilities;
- Educate and encourage Borough employees in maintaining green objectives;
- Educate, inform and involve citizens in the Borough's green objectives;
- Expand on the current Borough recycling programs;

- Establish short term goals to use energy more efficiently to reduce the Borough's carbon footprint and reduce fuel/energy consumption thereby reducing the Borough's energy costs;
- Establish intermediate term goals to convert Borough facilities partially to alternative energy sources;
- Establish realistic long term goals for alternative energy resources such as solar, wind, geo-thermal and wave energy technology;
- Investigate and develop alternative water sources such as reuse and / or desalinization.

Through these goals the Borough can begin to realize the promise of a community committed to enhancing its quality of life. These goals will lead to decreased reliance on antiquated energy sources, reduced energy costs borne by the tax payer, an enhanced useable water supply, clean safe streets and beaches, fresh clear air, clean productive bay waters, informed and involved citizens, attractive housing, enhanced natural areas and a sustainable Green Community.

## **LOCATION AND HISTORICAL PROSPECTIVE**

The Borough of Avalon is located in the middle portion of Cape May County along the Atlantic Ocean seaboard. Avalon is located on the northern side of the barrier island, Seven Mile Island. It shares this island with Stone Harbor to the south. The inter-coastal waterway, salt marshes, and Middle Township are to the west and Townsend's Inlet and Sea Isle City are to the north. The Borough consists of approximately 4.2 square miles of land area. The island on which Avalon is located projects farther east towards the Atlantic Ocean compared to many of its neighboring islands to the north and south. All of Avalon is located in the Special Flood Hazard Zone and under CAFRA jurisdiction. There are no rivers or streams in the Borough.

The Borough of Avalon is a seasonal resort community that is almost completely developed. Limited vacant parcels of land and environmental constraints limit future residential and commercial growth. Avalon Boulevard (CR 619) provides the link to the island from Route 9 and the Garden State Parkway. The year round population has remained fairly steady since 2000, with an average year round population of approximately 2,000 people. The Cape May County Planning Department has estimated the seasonal population figure between 36,967 and 42,248 people.

The Borough of Avalon has been an established resort community since the early 1800s. Avalon officially became a borough in 1891. When Avalon was first developed, the early sub-division layouts provided lot widths of fifty to sixty feet, which were very generous at the time compared to other seaside resorts in New Jersey. Early land use ordinances established business and residential zones and wide public promenades. Other important community and public agency decisions include, establishing a dune line to preserve the remaining dune environment along the ocean front and preservation of the wetlands. These conservation efforts contribute to Avalon's charm and community character.

### *Natural Resources*

The Borough of Avalon has historically recognized the importance of protecting, enhancing, maintaining and conserving natural resources. The Borough of Avalon is endowed with a beautiful coast line with historic sand dunes, natural plant life and bird nesting habitats. Beach erosion, existence of wetlands and marshlands, and the diminishing Seven Mile Island wilderness require continued protection and preservation efforts. The Borough has passed an amended Dune Protection Ordinance to help protect these resources. After the Ash Wednesday storm of 1962, rock barriers were placed around 8<sup>th</sup> Street to try to block the ocean. Recently a \$2.8 million beach replenishment project and a \$14.4 million seawall project were completed. Engineers are using the latest technology to strategically reinforce the sand dunes on the inlet side of Avalon and protect the coast line.

The Borough of Avalon has exhibited flooding and water quality problems on occasion. These are a result of lunar high tides combined with the effects of strong to severe northeasterly storms. Heavy rains combined with periods of high tide can also cause street flooding in parts of the town. An important goal is to protect the natural resources. The Borough's commitment and responsibility has been demonstrated by the various programs, projects and ordinances enacted and implemented on a continual basis. Over the past three (3) years, the Borough has made significant revisions to its Development Regulations – Site Plan/Sub-division Ordinance and Zoning Ordinances. New storm water management provisions have also been put in place to require infiltration of storm water runoff on the subject property. In addition, the Borough has achieved a class 6 rating from the National Flood Insurance Program (NFIP).

### *Municipal Goals and Objectives for Plan Endorsement*

The Borough of Avalon is undertaking the Plan Endorsement process to achieve the land use vision that has been established, maintain center designation status and to ensure that the Borough is entitled to financial and technical benefits associated with Plan Endorsement. The Borough of Avalon does not anticipate any significant population growth over the years to come, however, the Borough does have environmental, historic and cultural resources that will be negatively impacted if recommendations are not addressed or policies implemented in the near future.

The Borough sees the Plan Endorsement process as a mechanism to co-ordinate the state, regional and county agencies to see the plan to fruition by dealing with infrastructure, financial and technical needs.

Relevant planning issues that require attention during this process include:

- Continuing the conservation of all natural resources including dunes, bay waters, wetland areas, surface and ground water, marshland and beaches;
- Understanding the development build-out with the future vision and providing for the necessary infrastructure (public sewer, public water, road network and pedestrian mobility);
- Developing design guidelines and standards for new development and redevelopment to ensure a harmonious appearance;
- Developing an on-going technological improvement program for residential safety and well being; and
- Establishing a “Green Team” to develop a Green Master Plan.

Environmental and resource protection has always been addressed in Avalon. Starting with the 2002 Master Plan and enforced by the 2008 Master Plan re-examination, Avalon has initiated and modified a Landscaping Ordinance, established requirements for impervious coverage, increased setbacks, decreased allowable lot coverage, established storm water management rules, promoted use of underground irrigation systems and not

lawn sprinklers, revised Marina and Business Zoning and established a water usage ordinance.

The Master Plan established goals and objectives for conservation of all natural resources, development of environmental resource inventory, development of a dredge facility, preservation of waterways and critical coastal resources.

Central objectives for alternate energy and water sources are:

- Develop a “green” energy program for the future use of alternative energy resources including solar panels, wind turbines and wave energy;
- Encourage the Borough to perform a cost/benefit analysis of all new Borough structures;
- Develop water conservation programs and alternate water sources;
- Develop a marketing plan for environmental planning; and
- Utilize Geographic Information System (GIS) mapping and information for Borough operations

## **OBJECTIVES**

### **Borough:**

#### *Grounds and Maintenance:*

The Borough of Avalon has and maintains an extensive inventory of public parks, natural lands, beaches, dunes, bay waters, streets and sidewalks. These areas are expertly maintained by the Borough Public Works Department, private landscape contractors and in some cases private citizens and civic groups. To further enhance these areas and promote the implementation of green practices, the following objectives are recommended:

- The Borough will complete a comprehensive inventory of all public areas to be coordinated with the Borough Geographic Information System (GIS) to better identify those areas in need of green initiatives;
- The Borough will review the current maintenance practices, with the help and guidance of the Director of Public Works, to identify energy conservation opportunities and recycling strategies;
- The Borough will identify those facilities that would effectuate better cost savings by replacing them with newer and/or green technologies and products;
- An audit of the Borough water usage will be completed and recommendations made on further water conservation steps;
- An audit of all street and parking lot lights will be completed to establish baseline usage numbers;

Specific Goals- The following are actions to be implemented to achieve the stated objectives:

- Where feasible, inefficient incandescent lighting will be replaced with efficient LED (light emitting diode) and/or CFL (compact fluorescent lights) or any other technology which affords better energy efficiency;
- Where feasible, inefficient street and parking lights will be replaced with new energy efficient light technology;
- Dune Drive Holiday lights will be reset to reduce overnight usage and the units will be replaced by LED lighting;
- Solar power will be installed to power low level lighting and signs;
- Where possible, landscape plantings will be replaced with drought tolerant and native plant species;
- Any existing broadcast water sprinklers will be replaced with drip and/or soaker irrigation;

#### Facilities:

The Borough of Avalon has and maintains five (5) major Municipal facilities (Public Works, Recreation/Community Center, Public Safety Building, the



Avalon Elementary School/Free Public Library and Borough Hall) and several minor Municipal Facilities (Bay Park Marina, Moran's Dockside Marina, the Borough tennis courts and ball fields and the Lifeguard station). All these facilities currently use gas, electric water and sewer systems. The Public Works Buildings and Borough Hall are about fifteen (15) years old. The Public Safety Building was completed in the summer of 2008 and is currently being retro-fitted to be attached to the existing fire house. The Recreation/Community Hall was built in 1965. Occasional upgrades were made to each of the facilities as wear and tear has warranted. Recently, as part of the Public Safety building project, Borough Hall was connected to the central heat/cooling plant constructed for the new facility. Ongoing is the installation of a new heating/cooling system for the Recreation/Community Hall. The ball fields require landscape care and watering. The Marinas require yearly maintenance due to the harsh marine environment as well as strict trash and recycling policies to avoid bay water pollution. To identify possible energy efficiency measures, cost savings options, improved recycling policies and green opportunities the following objectives are recommended:

- The Borough will apply for and complete an energy audit through the New Jersey Clean Energy Audit Program;
- The Borough will implement (to the extent they are feasible) the recommendations of the Energy Audit;
- The Borough will audit all water usage in borough facilities to identify areas of cost savings and conservation;
- An audit of the energy usage of all Borough street lights, parking lot lights and decorative lights on the Dune Drive Business district will be completed to identify and implement cost savings measures and reduce energy usage;
- An inventory will be completed of all Borough vehicles, with the advice and consent of the Director of Public Works, Chief of Police and Chief of the Fire Department, to identify those that are not energy efficient and recommend steps to replace them with energy efficient or alternative energy vehicles;
- Avalon's current recycling program will be reviewed to identify areas of possible expansion such as composting and mulching waste products from the Borough's landscaping operations;

Specific Goals- The following are actions to be implemented to achieve the stated objectives:

- Where feasible, inefficient incandescent lighting will be replaced with efficient LED (light emitting diode) lights;
- Where feasible solar powered lights and ventilation will be used;
- Where feasible a plan will be developed for the replacement of older, inefficient vehicles with electric, alternative fuel or hybrid models with a goal of maintaining a fleet consisting of twenty-five (25%) percent of all vehicles being electric/hybrid/alternative fuel;

Personnel:

The Borough of Avalon employs approximately 96 full time and hundreds of part time employees. These employees range from Borough Hall Office staff to police officers to beach-taggers and Life Guards to Public Works Staff . Each has a unique and integral part of ensuring Avalon's place as the premier resort and family town in New Jersey. To further advance the goals of the Green Team initiative the following objectives are suggested:

- All Borough employees will be educated and trained to implement the recommendations of the New Jersey Clean Energy Audit;
- Clear and comprehensive guidelines will be developed to help employees reduce and conserve energy usage in Borough facilities;
- Clear and comprehensive guidelines will be developed through the Cape May County Utilities Authority for enhanced recycling practices in Borough facilities;
- All Borough Personnel required to operate motor vehicles, with the advice and consent of the Department Heads, will be trained and educated in techniques to reduce energy consumption;
- Support and encourage incentive programs for employees who help successfully reduce energy cost or usage;

Goals Summary- The following are actions to be implemented to achieve the stated objectives:

- Each Borough department will coordinate an action plan for short and long term energy and water conservation and reduction;
- A goal of reducing energy and water usage is as follows:
  - 2012- energy/water usage reduction of ten (10%) percent of 2009 usage
  - 2015- energy/water usage reduction of twenty (20%) percent of 2009 usage
  - 2020- energy/water usage reduction of thirty (30%) percent of 2009 usage

### **Community:**

Avalon has long enjoyed an active and dedicated citizenry. Our citizens and visitors are passionate and committed to maintaining and enhancing the quality of life we all enjoy in Avalon. The community enjoys the benefits of volunteer groups and civic organizations such as the AHLOA, the Avalon Chamber of Commerce, the Avalon Environmental Commission and Borough sponsored organizations such as the Avalon Free Public Library and the Avalon Volunteer Fire Company. It is with these groups in mind that the Avalon Planning / Zoning Board endeavors to create objectives to involve the public in accomplishing the Board's green goals. These objectives are:

- The Borough will create and plan a Green Fair to further the education and information distribution to the public;
- A community outreach program will be created to involve the specific volunteer groups mentioned;
- In co-ordination with these civic organizations, yearly projects such as beach clean ups, dune grass plantings, community recycle events, conservation and green technology seminars, bay water clean ups and water conservation seminars will be encouraged;

**Specific Goals-** The following are actions to be implemented to achieve the stated objectives:

- A 2009 Green Fair will serve to kick off the program;
- A communications plan (the Plan) will be developed for awareness to include a rationale for energy and water conservation;

- The Plan will include a “what’s in it for me” information list for all residents;
- The Plan will clearly relay all pertinent Borough Ordinances and regulations to the public and any civic organizations;
- The Plan will establish a method of publishing Borough performance metrics;
- Conduct ongoing resident awareness and education sessions;
- Involve various related vendors, contractors and landscapers to promote efficiency and offer upgrade incentive programs;
- Encourage and promote the use of indigenous and drought resistant plantings for residential landscaping;
- Refine and / or develop ordinances and enforcement policies that promote energy and water conservation;
- A goal of reducing private residential energy and water usage is as follows:
  - 2012- energy usage reduction below 2009 levels
  - 2012- water usage below 2009 levels in order not to exceed State Water Allocation to the Borough of Avalon
  - 2012- encourage the reduction or elimination of wasted water

### **Resource Management and Planning:**

As energy and fresh water supplies and demands reach critical levels, the Borough of Avalon should make specific long range plans for the study and implementation of alternate energy and water sources. These would include solar electric, wind turbine, geothermal, water desalinization and wave energy technology. As part of this policy the following objectives are suggested:

- The Borough will develop a knowledge base in the areas of alternative energy sources and salt water desalinization practices by maintaining contact lists of industry professionals in these fields;
- Analyze all cost/benefit projections for these technologies;
- Evaluate the environmental impact of these options;
- Evaluate (through the proper advisor) all aspects and risks associated with these projects as well the pertinent regulatory problems and applications that will be required;

- Support and encourage financing options such as Federal, State and County Grants, subsidies, loans and shared services contracts;
- Evaluate the cost/benefit of procuring private funding for capital green projects;
- Develop clear and comprehensive long term energy goals in alternate energy construction and efficiency, and alternate water sources and conservation;
- Support and encourage information and data sharing with applicants and associations who are like wise endeavoring to create and implement green technologies;

Specific Goals- The following are actions to be implemented to achieve the stated objectives:

- 2010 goal- Basic analysis, pre-feasibility, funding options and goal setting vetted and approved
- 2012 goal- Approved programs under way with project specific economics and goals established
- 2015 goal- Project reviews validate long term goals and economics
- 2020 goal- Energy and/or water creation in excess of Borough usage in place, within budgeted economics, with the potential to create tax savings and / or energy credits to Borough tax payers / rate payers.

## **ENERGY AUDIT**

*<This space is reserved>*

## **CONCLUSION**

In its hope and desire to promote Avalon as a green community, the Planning / Zoning Board has established its intent to diligently pursue all available technologies, experts, agencies, funding opportunities and means at its disposal, and at the disposal of the Borough of Avalon, to accomplish this task. The Board has sought to articulate and define those areas which best further its intentions for a Green Community. To that end this document will serve as a blue print for its future actions to advance these goals and objectives.

