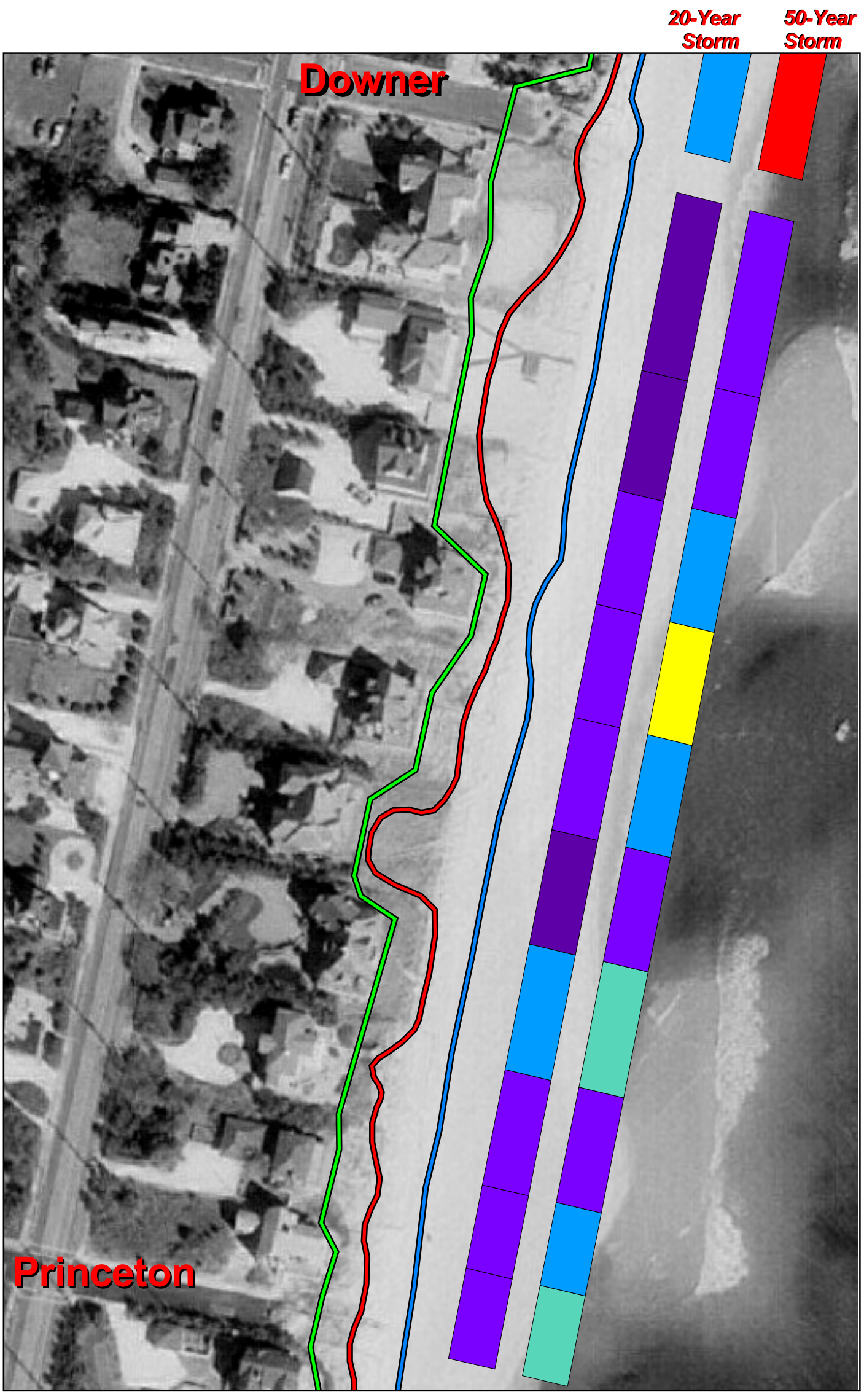
Borough of Mantoloking
Dune-Beach System Erosion Susceptibility
Downer to Princeton Streets

The Borough of Mantoloking is located on a low-lying barrier beach in northern Ocean County, New Jersey. Coastal communities and economies are important to New Jersey's prosperity and quality of life, but they are vulnerable to devastating affects from northeast storms and hurricanes. The 2004 storm season was unusually active and it is anticipated that the 2005 season will be similar, continuing a 20-25 year long trend of enhanced activity in the Atlantic basin that began in 1995. This increasing trend in storm activity coincides with a decreasing trend in Federal funding for shore protection and beach nourishment. Since about 2002, responsibility for protecting and maintaining the coast has been incrementally shifting to the State and municipal governments. During 2003-2004, an assessment was carried out at the lot-and-block level to determine the ability of the Borough's dune-system to withstand 2-year, 5-year, 10-year, 20-year, 50-year, and 100-year storm events. The assessment represents the condition of the dune system as of Fall 2000 (the most recent date for which key data are available). Prepared August, 2005.

Richard Stockton College - Coastal Resarch Center - Dr. Mark J. Mihalasky & Dr. Stewart C. Farrell



Reading & Interpreting the Assessment:

The assessment is presented as two multicolor strips that are overlain along the extent of the beachfront. The strips are subdivided into segments that correspond to the approximate width of a given beachfront property.

The strip closest to the shoreline (labeled 20-Year Storm) represents the susceptibility of the dune system to erosion from a 20-year storm event. The strip furthest from the shorline represents susceptibility from a 50-year event.

Warmer colors (reds) represent higher susceptibility to storm erosion. Cooler colors (blues) represent lower susceptibility. Failure of the dune system occurs when the foredune is eroded landward far enough to breach the dune crest.

NOTE: The landward dune toe may appear to cut certain features, particularly newer construction. This is due to time differences between when the dune toe data were collected and when the aerial photograph was taken (in Fall of 2000).

Beach-Dune System Susceptibility

Percentage of Foredune Erosion Due To Storm

- < 10 %
- 10-25 %
- 25-50 %
- 50-75 %
- 75-90 %
- > 90 %
- Dune Crest Breached

Dune Features

- Dune Toe Landward
- Dune Crest-Line
- Dune Toe Seaward

N
W E
S

1:1,200
Scale

0 50 100 Feet

mjm Aug. 2005