

# { Preface



Photo - Andrew Lapiska

A typical stretch of Pennsylvania's Lake Erie shoreline, where bluffs can range from zero to 180 feet in height.

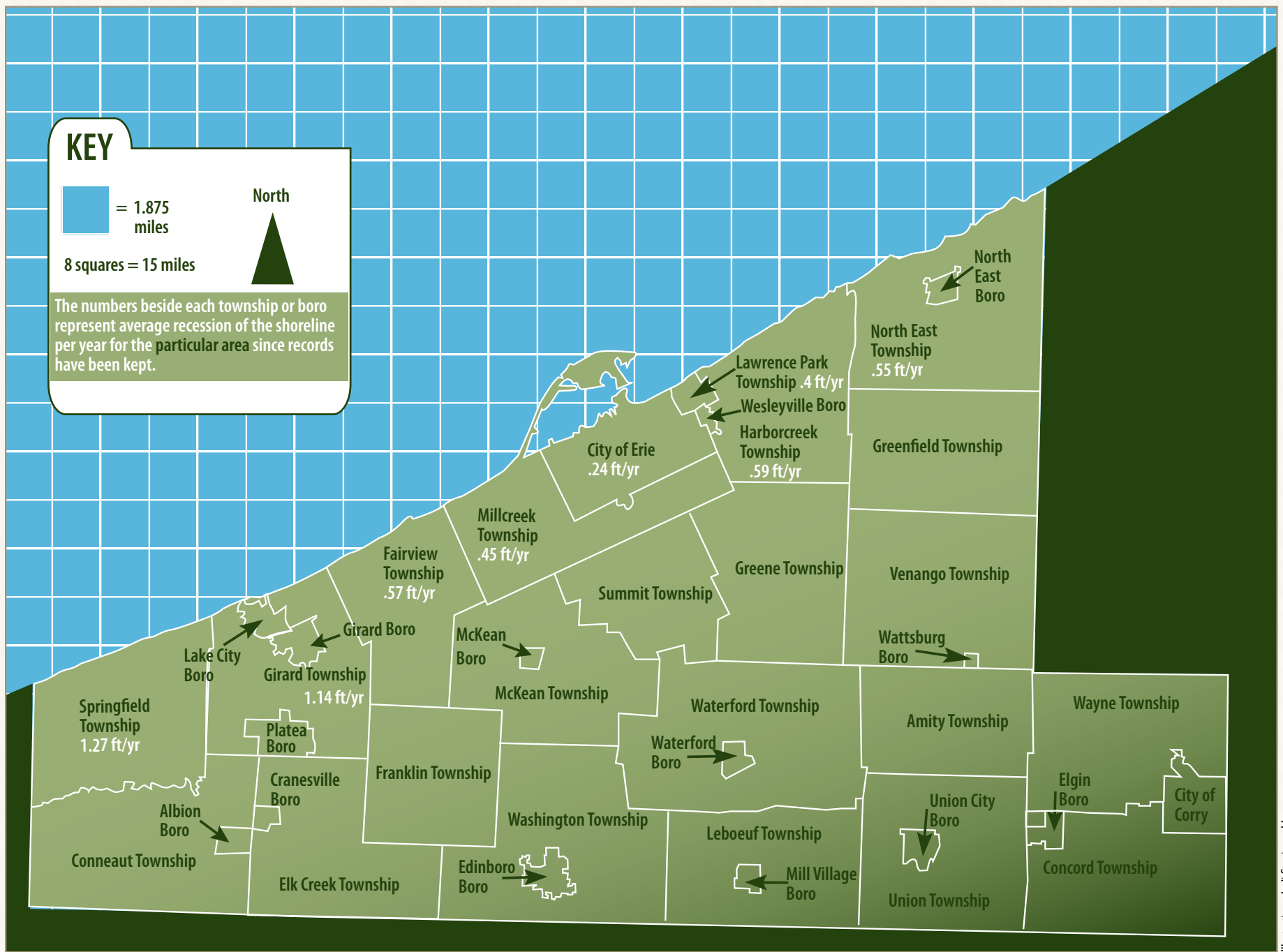
One of the goals of the Pennsylvania Coastal Resources Management (CRM) Program is to provide "...technical assistance to Lake Erie property owners affected by shoreline erosion and bluff recession" (DEP, 1996). This manual is meant to give property owners information regarding how to use and manage vegetation on their bluff properties in order to minimize erosion.

It is important to understand that even the very best management of bluff vegetation will not prevent all bluff recession. Bluff recession is a naturally occurring phenomenon and is a part of a larger cycle of physical processes happening every day along the Lake Erie shoreline. Bluff recession and shoreline erosion will occur with or without human influences. However, human activities, including development, may significantly increase the rate of bluff recession. Because of human activities, more structures have

been built along the bluff. Construction and excavation have meant the removal of deeply rooted trees and other vegetation along the bluff. This has led to an increase in groundwater and surface water runoff and the bluff has become less stable.

Average bluff recession rates for the nine coastal municipalities of Erie County range from 0.24 to 1.27 feet of lost land per year. These numbers, however, do not really reflect the true situation. A more accurate picture of bluff recession includes the idea that in some areas, the bluffs appear stable and recession rates are essentially zero; while, in other areas—perhaps right next door—large pieces of land may be lost in a single collapse. It is estimated that 417,519 cubic yards of sediment are eroded from the bluffs and shoreline along Pennsylvania's Lake Erie coast each year (Knuth, 2001). That is equivalent to about 19,000 semi-trailer loads of sediment.

Ultimately, it is the Lake Erie shoreline property owners who decide how to manage the vegetation on their individual parcels of shoreline property. Each and every site is unique and is in a constant state of change. This manual contains information that will help the homeowner develop a plan of action to manage vegetation in order to help foster bluff stability. For more information on specific topics, please see the accompanying Web site or contact one of the experts listed in the appendix. We recommend that property owners consult with the Coastal Resources Management specialist working for the Department of Environmental Protection.



**FIGURE 1** The focus area of this manual is the Pennsylvania – Lake Erie shoreline from the Ohio border in the west to the New York border in the east. Average recession rates for each part of the shoreline are shown.

Illustration - Jodi Stantunas-Hopper