Thanks to

Association of State Floodplain Managers

Sea Grant
University of Wisconsin

Wisconsin Coastal Management Program

University of Wisconsin
1976 and again in 1995
USACE 2012 lidar
LP 360 in arcmap
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(many points not shown in this figure)
Lake level 580'

USACE Bathy lidar
The bluffs have definitely become more stable since 1976.

In 1976, the mean lowest factor of safety of 113 profiles was 0.85.

By 1995, the 148 profiles analyzed had a mean lowest factor of safety of 1.28.

By 2012, this number had risen to an average of 1.47 for 154 profiles analyzed.
In 1976, 82 of the 118 profiles analyzed, or 73%, had a lowest factor of safety less than 1.00.

In 1995, 57 of the 148 profiles, or 38%, had a lowest factor of safety’s less than 1.00.

In 2012, 21 of 154 profiles, or 14%, had a lowest factor of safety less than 1.00.
Table 3. Percent of classified shore that is armored with shore parallel, on-shore structures.

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent armored in 1976</th>
<th>Percent armored in 2007-08</th>
<th>1976-2007 change in percent armored</th>
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<td>Oconto</td>
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<td>Brown</td>
<td>na</td>
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<td>Door</td>
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<td>Kewaunee</td>
<td>5.9</td>
<td>14.9</td>
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<td>Manitowoc</td>
<td>22.4</td>
<td>26.6</td>
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<td>Sheboygan</td>
<td>31.1</td>
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<td>Milwaukee</td>
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<td>62.7</td>
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<td>Racine</td>
<td>56.5</td>
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<td>Kenosha</td>
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<td>85.7</td>
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<td><strong>Total L. Michigan</strong></td>
<td><strong>16.6</strong></td>
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WAKE UP!