



# City of South Haven

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January 22, 2020

**The Honorable Sue Allor, Chairman  
Appropriations Subcommittee on Natural Resources and Environmental Quality  
Michigan House of Representatives  
Anderson House Office Building  
124 N. Capitol Avenue  
Lansing, MI 48909**

Dear Chairman Allor:

Thank you for providing the City of South Haven the opportunity to share with you and the members of the committee the significant risk that the residents, neighbors, and visitors to the City of South Haven have due to the severe erosion and high lake water levels on Lake Michigan.

The City of South Haven waterfront includes both Lake Michigan coastline and the banks of the Black River. High water conditions on Lake Michigan causes river levels to rise, especially on the lower stretches of the Black River. High pressure storm systems increase water levels on Lake Michigan and the Black River by more than two feet for periods of twelve to twenty-four hours. This has resulted in significant damage within the harbor and along the coast. Below is a partial list of the expected costs to the city and its taxpayers for the damage that has occurred since January of 2019.

**1. City Right-of-Ways and Parks**

**Estimated Cost: Varies by site; Total of \$500,000 – \$2,000,000+**

**2. Riverbank erosion is occurring along the Black River. Aging seawalls are constructed to elevations that do not completely prevent overtopping and overwash scour. Inner harbor revetments are eroding, and sidewalks and bulkheads are being undercut. Examples of recent damage include: (1) Sidewalk damage and revetment damage along Water Street, downstream from the South Side Marina, (2) sidewalk undercutting and retaining wall damage at the North Side Marina, (3) riverbank settlement downstream of the North Side Marina, and (4) riverbank erosion/destabilization at South Side Marina and at Museum Marina.**

**Estimated Cost: \$500,000 - \$2,000,000+**

**3. Harbor Wave Mitigation** – Waves have historically propagated upstream into the Black River. However, during high water conditions, this occurrence results in damage to docks, boats, seawalls, revetments, and other harbor components. Reduction of this wave energy was studied in 2017 and 2018, with funding assistance from the State of Michigan through a Waterways Grant. Several concepts were modeled using wave software modeling and results indicated that the construction of pocket wave absorbers in each of the jetties would improve conditions in the harbor for all users. Pocket wave absorbers were constructed in several other Great Lakes harbors by the U.S. Army Corps of Engineers.

**Estimated Cost: \$4,800,000**

**4. Beach Erosion & Beach Nourishment** - High water conditions and storms have eroded beaches in the City. Beaches attract visitors and therefore are a critical component of the tourism industry. Wide beaches and gentle slopes can also help to dissipate waves and minimize upland flooding and overwash scour. To restore beaches for summer use, the City could pursue beach nourishment. Typically, nourishment is sourced from dredging of navigable waterways and deposition of sand onto the beach, as it was in 2019 in South Haven. Erosion along the waterfront might have been worse had the nourishment not been completed in 2019. Another cycle should be considered in 2020. If channel dredging isn't needed, the upland sand sources or sand reclamation from beyond the depth of closure could be considered.

**Estimated Cost: \$250,000 – \$1,000,000**

**5. Marinas** - All four of the City's marinas are at risk due to high water. All docks are fixed-height timber construction so during high water conditions, water and ice can damage docks and utilities. At the South Side Marina, high water may damage the boater services building due to its low finished floor elevation and location relative to Lake Michigan. During the boating season, docks may not be useable due to high water over the docks, the need to shut off power for safety, or other associated reasons. Each of the marinas will require modifications to support use during high water conditions in 2020. If no modifications are completed, the marinas may need to be closed for portions of the season or the whole season.

**South Side Marina Estimated Cost: \$500,000 - \$1,000,000+**

**North Side Marina Estimated Cost: \$500,000 - \$1,000,000+**

**Maritime Museum Marina Estimated Cost: \$1,000,000 – \$3,000,000+**

**Black River Park Marina Estimated Cost: \$250,000 - \$1,000,000+**

**6. Stormwater Infrastructure** - Several of the City's stormwater conveyance systems discharge to the Black River and/or Lake Michigan. As the water level of the Black River rise, stormwater conveyance systems may back up, creating flooding and potential weakening at connections. In addition, surface water entering the systems through catch basins or inlets may become backed up into roadways, parking lots, or buildings.

**Estimated Cost: \$250,000 – \$500,000+**

7. **Utility Infrastructure** - Coastal erosion and/or riverbank erosion may threaten utility systems such as water mains, sanitary sewers, electrical systems, and communications systems. The extent of potential damage has not been studied to-date.

**Estimated Cost: Unknown**

8. **Flooding** along the Black River could cause damage to both private and public infrastructure. As water levels rise, short-term/temporary flood protection measures may be needed to maintain access to dwellings and businesses. The City could consider purchase of temporary flood control systems for swift deployment during flood events.

**Estimated Cost: \$20,000 – \$50,000+**

**TOTAL ESTIMATE COST:**

**\$8.5 million to \$16.3-million (including \$4.8-million harbor wave mitigation)**

As you can see, we are facing significant costs for infrastructure repairs as detailed above. However, it must be noted that as a vibrant west Michigan tourist town, the economic damage may be even more significant to the businesses, restaurants, and merchants that rely on a steady tourist presence. If the water levels continue to damage the infrastructure, we will most certainly see a loss in tourist revenue.

Thank you for taking the time to hear from one beach town in West Michigan that is looking to you, the members of the appropriations committee, to consider how we can recover from the historic and devastating impact that the high lake water levels have had on our community.

Sincerely,



Scott Smith  
Mayor, City of South Haven

CC: The Honorable Aric Nesbitt  
The Honorable Beth Griffin  
South Haven City Council