

BALTIMORE HARBOR'S ECOLOGICAL AND HUMAN HEALTH: 2010

To help lead private citizens, government, and businesses toward a healthy Baltimore Harbor, the Waterfront Partnership of Baltimore needed to know the current health of the Harbor and its watershed. Using six ecological indicators and three human indicators, the current health of Baltimore's Harbor was established. This newsletter provides the overall results of the full report.

Inner Harbor health

Overall, the ecological health of the Inner Harbor reporting region was assessed as poor. The Harbor is polluted with nutrients and sediments. There is not enough oxygen to support fish and other organisms. Bacteria in the Inner Harbor scored poorly. This means that a majority of the time it was unsafe to swim in the Inner Harbor. While trash could not be scored, the Inner Harbor is impaired by trash. Trash continues to be a problem in the Inner Harbor.

Indicator	Score (%)	Grade	Narrative
<i>Ecological health</i>			
Water Quality Index	30.1	D	Poor
Dissolved oxygen	32.8	D	Poor
Chlorophyll <i>a</i>	41.8	C-	Moderately poor
Water clarity	41.4	C-	Moderately poor
Total nitrogen	11.4	F	Very Poor
Total phosphorus	22.9	D-	Poor
Benthic community	n/a	n/a	Very poor
Aquatic grasses	n/a	n/a	Very poor
Toxicants (sediment)	n/a	n/a	Very poor
<i>Human health</i>			
Bacteria	27	D	Poor
Fish toxicity	n/a	n/a	Poor
Trash	n/a	n/a	Poor

Very Good

All water quality and biological health indicators meet desired levels. Water quality in these locations tends to be very good, most often leading to very good habitat conditions for aquatic organisms.

Good

Most water quality and biological health indicators meet desired levels. Water quality in these locations tends to be good, often leading to good habitat conditions for aquatic organisms.

Moderate

There is a mix of good and poor levels of water quality and biological health indicators. Water quality in these locations tends to be fair, often leading to fair habitat conditions for aquatic organisms.

Poor

Some or few water quality and biological health indicators meet desired levels. Water quality in these locations tends to be poor, often leading to poor habitat conditions for aquatic organisms.

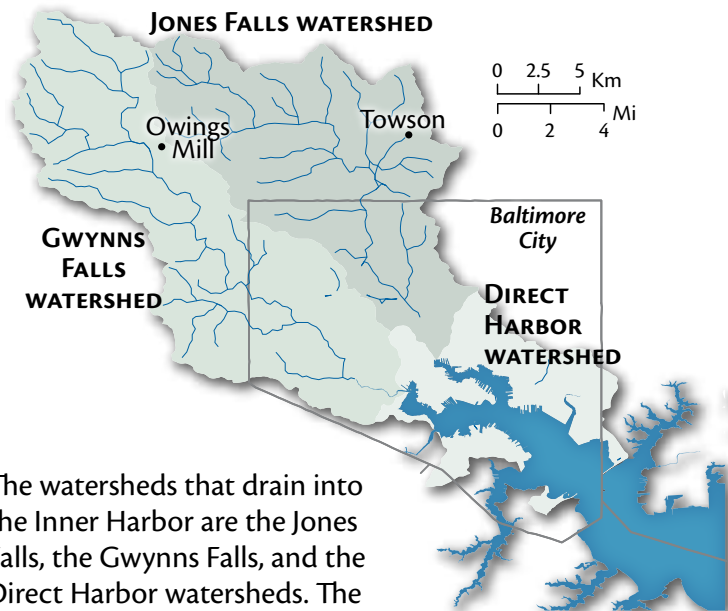
Very Poor

Very few or no water quality and biological health indicators meet desired levels. Water quality in these locations tends to be very poor, most often leading to very poor habitat conditions for aquatic organisms.

Watershed health

Key watershed indicators, such as conductivity, total phosphorus, and benthic community scored poorly, which means the watershed ecological health is degraded. The human health of the watershed is degraded, but slightly better than the ecological health. Bacteria in the streams is high, meaning that the streams are unsafe to swim or wade in. There is a significant amount of trash on the land.

Indicator	Score (%)	Grade	Narrative
<i>Ecological health</i>			
Conductivity	33.1	D	Poor
Total nitrogen	63.4	B-	Moderately good
Total phosphorus	41.6	C-	Moderately poor
Total Suspended Solids	n/a	n/a	n/a
Benthic community	n/a	n/a	Poor
<i>Human health</i>			
Bacteria	n/a	n/a	n/a
Trash	n/a	n/a	Poor



The watersheds that drain into the Inner Harbor are the Jones Falls, the Gwynns Falls, and the Direct Harbor watersheds. The lack of aboveground streams in the lower watersheds, especially in the Direct Harbor watershed, is due to channelization of streams into storm drains under the city.

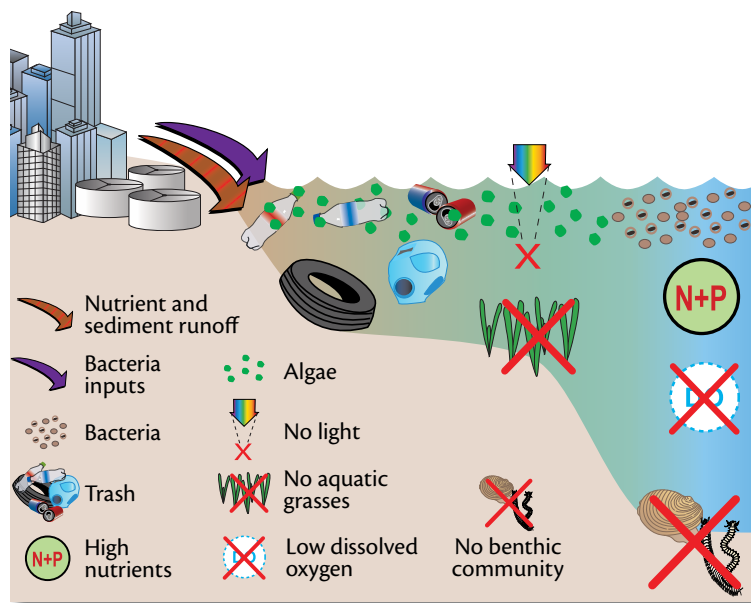
Major effort underway to clean up Harbor

Baltimore, Maryland is a highly urbanized area with a long history of nutrients and sediments washing into local streams and eventually into the Harbor. The increased nutrients and sediment lead to large amounts of algae in the water, which block sunlight to the bottom. This leads to low dissolved oxygen conditions when the algae dies, which is bad for fish, oysters, and blue crabs. When it rains, bacteria from overflowing sewer pipes and from family pets are carried into streams and the Harbor, creating unsafe swimming conditions. Trash, a major problem in Baltimore, also washes into the Harbor, despite several innovative ways to prevent it.

The Waterfront Partnership of Baltimore (waterfrontpartnership.org) leads a team of property owners, city officials, nonprofit organizations, and citizens to bring a new spirit of vitality and stewardship to the Baltimore Harbor and its waterfront. In 2009, they launched their Healthy Harbor Initiative, which includes a set of goals and implementation actions to make the Harbor swimmable and fishable by 2020.

To help achieve a healthy Harbor, the Waterfront Partnership of Baltimore needed to know the current health of the Harbor and its watershed. A baseline conditions assessment was conducted to determine this. Using six ecological indicators and three human indicators, the current health of Baltimore's Harbor was established. An annual report card will be produced each year from which citizens can track the health of the Harbor (Inner Harbor and Middle Branch regions) and its watershed.

Governments, non-profits, businesses, and citizens must work together to clean and green our neighborhoods, our city, and our water. No one can do it alone! Visit healthyharborbaltimore.org to learn more and get involved in creating a Healthy Harbor!



Conceptual diagram of nutrient and sediment impacts on Baltimore's Inner Harbor.



Aerial view of Baltimore City, with suburbs in background.



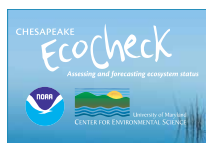
Trash accumulates along the shoreline of Fort McHenry.

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Further information at:
www.waterfrontpartnership.org
www.healthyharborbaltimore.org
www.eco-check.org

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