

## **Lake Michigan Beaches TMDL Stage-One Responsiveness Summary**

This responsiveness summary responds to substantive questions and comments on the TMDL development for 51 Lake Michigan Beaches in Cook and Lake Counties, Illinois, received during the public comment period from March 16 through April 15, 2012. The summary includes questions and comments from the March 16, 2012, public meetings as discussed below.

### **What is a TMDL?**

A Total Maximum Daily Load (TMDL) is the sum of the allowable amount of a pollutant that a water body can receive from all contributing sources and still meet water quality standards or designated uses. Each contributing source of the pollutant will be assigned an amount of pollutant which it cannot exceed if the TMDL is to be met. This amount is called an “allocation.” A TMDL is developed for each water body that is impaired by pollutants that have numeric water quality standards. Some pollutants do not have numeric standards. The Illinois EPA implements the TMDL program in accordance with Section 303(d) of the Federal Clean Water Act and regulations there under.

### **Background**

Over the last 30 years, waters in Illinois have been monitored for chemical, biological and physical conditions. In some cases, the conditions of those rivers and lakes fall short of the need to support basic water quality use goals. These waters are deemed impaired since they cannot meet use expectations set for them under state and federal law. When this happens TMDL reports are developed for impaired waters to determine the maximum amount of a pollutant a water body can receive and still meet water quality standards and support its designated uses. Designated uses include aquatic life, public water supply, swimming, recreation, fish consumption, and aesthetic quality. The Illinois EPA makes the decision to list a beach as not meeting its Primary Contact use of swimming and recreation based on the Illinois Department of Public Health beach closings.

TMDLs are done in stages to allow for public involvement and input. TMDL development in Illinois begins with the collection of vast amounts of data—water quality, point source discharge, precipitation, soils, geology, topography, and land use—within the specific watershed. All impaired water body segments within the watershed are identified, along with potential pollutants causing the impairment. Illinois EPA determines the tools necessary to develop the TMDL. In most cases, computer models are used to simulate natural settings and calculate pollutant loads. Along with data analysis, model recommendations are made in the first stage of the TMDL. This information was presented at the first public meetings.

The appropriate model or models are selected based on the pollutants of concern, the amount of data available and the type of water body. In some cases, additional data needs to be collected before continuing. The model is used to determine how much a pollutant needs to be reduced in order for the water to be meeting its designated uses. The model selected for the Lake Michigan beaches is a statistical model. It leverages the data more efficiently by grouping the beaches on various characteristics.

An implementation plan is then developed for the watershed spelling out the actions necessary to achieve the goals. The plan can specify limits for point source dischargers and recommend best management practices (BMPs) for nonpoint sources. Another public meeting is held to discuss this plan and to involve the local community. Commitment to the implementation plan by the citizens who live and work in the watershed is essential to success in reducing the pollutant loads and improving water quality.

All of the beaches along Lake Michigan are included on the impaired waters listing for Escherichia Coli (E. coli), Mercury and Polychlorinated biphenyls. This TMDL is to address the E. coli impairment.

### **Public Meetings**

Public meetings were held on March 16, 2012, at U.S. EPA Region 5 in Chicago at 9:30 a.m. and the Gorton Community Center in Lake Forest at 3:00 p.m. The purpose of the meetings was to provide the public with an opportunity to learn about and comment on the proposed concentration and grouping method/modeling and to provide additional data to further inform the TMDL process.

The Illinois EPA provided a public notice for both meetings by placing a display ad in the local newspapers along the Lake Michigan beaches of concern: *Lake County News Sun*, *Highland Park News*, *Lake Forest Pioneer*, *Evanston Review*, *Glencoe News*, *Wilmette Life*, *Winnetka Talk*, and the *Zion-Benton News*. The public notice gave the date, time, location, and purpose of the meetings. It also provided references to obtain additional information about this specific site, the TMDL Program, and other related issues. Nearly 230 municipalities, organizations and individuals were sent the public notice by e-mail or first class mail. Approximately 12 people attended the first meeting and 17 attended the second meeting.

A fact sheet for the Lake Michigan Beaches TMDL and a presentation that was given at the two public meetings were made available for review on the Agency's Web page at <http://www.epa.state.il.us/water/tmdl>.

## Questions & Comments:

1. The goal of establishing TMDLs is to restore pollutant-impaired waters to their intended uses. The proposed TMDL design does not track the way the Illinois EPA determines impairment of the Lake Michigan beaches.

**Response:** Through this TMDL process it has become clear that Illinois EPA may need to reassess their current listing methodology and determine if it currently meets our needs or if a new methodology should be adopted.

2. It is recommended that the TMDL use both the geometric mean and a daily maximum approach in conjunction.

**Response:** From Federal Water Pollution Control Act Section 303 (d)(1)(C): “. . . Such load shall be established at a level necessary to implement the applicable water quality standards **with seasonal variations and a margin of safety** which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality (emphasis added).” The use of the geometric mean automatically provides for seasonal variations across the swimming season and yields a more accurate Margin of Safety.

3. When developing a TMDL, it is essential that satisfaction of the TMDL remedies the listed impairment under Section 303(d) of the Clean Water Act. With that in mind, it is clear that the discrepancy between the proposed TMDL design standard and the established impairment listing process destroys this link.

**Response:** Through this TMDL process it has become clear that Illinois EPA may need to reassess their current listing methodology and determine if it currently meets our needs or if a new methodology should be adopted. This re-evaluation of the methodology will address this comment.

4. There is no guarantee that the beaches will be cleaned-up by these TMDLs.

**Response:** That is correct. The TMDLs will provide suggested improvements that could be put into place to address the pollutant in discussion. However, these are recommendations. It is the responsibility of the beach authority to decide which, if any, of these suggestions will be implemented. A survey of the beach managers is planned as part of the TMDL development process to determine what improvements they would consider. The beaches will still be monitored and assessed as well as the efficacy of any improvements that are put into place.

5. Will the opening of the locks (Bypasses) by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) be addressed?

**Response:** This issue will be addressed in the TMDL. The data is for an episodic event, but will not be included as having a Waste Load Allocation. The opening of the locks is legislatively mandated and is not permitted by the U.S. EPA or Illinois EPA. By 2015 the City of Chicago will begin disinfection of the Chicago River, and it will be safer for boating and fishing.