

Water Protection Activities in Washtenaw County

January 2008

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Thank you for your continued interest in the welfare of Washtenaw County.

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Forward

This report represents a first step in developing a periodic report on water and water quality in Washtenaw County.

The intent of this document is to provide information of general interest to the public. While not intended to be a comprehensive technical report, much of the information and many links to the information contained here will aid readers in determining where their drinking water comes from, what steps are being taken to assure it's safe, what major bodies of water are in their area, what threats to water quality exist, how they are being addressed and recommended next steps.

This report does not include all of the activities, organizations and programs that play a vital role in the protection and enjoyment of water resources of Washtenaw County. It is a foundation that will be improved upon, both in content and format in future iterations. We encourage you to contact us with your comments, suggestions, additions or deletions so that future reports will be more comprehensive.

Executive Summary

Introduction

The intent of the Washtenaw County Water Protection Activities in Washtenaw County Report (WPA) is to provide a single source of information for individuals interested in potential sources of contamination to groundwater and surface water in the County, and to highlight the protection activities designed to address those concerns. The report further identifies sources of drinking water and the underlying geology that affects those sources. The report is the product of collaboration between the Washtenaw County Drain Commissioner's Office and the Planning and Environment Department. The protective actions identified in the report feature programs administered or most frequently referenced by the two offices. It is recognized this is not an exhaustive listing of all of the actions being taken to protect, preserve or restore water quality in the County.

Groundwater

Historic information regarding the quantity and quality of groundwater was gathered primarily from databases maintained by Washtenaw County Planning and Environment (WCPE), and the Michigan Department of Environmental Quality (MDEQ). Those records were utilized to determine that generally the groundwater in the area is plentiful, of a high quality, and serves as the source of drinking water for over 50% of the residents and businesses in the County. The programs in place to address groundwater protection have been highly successful. However, there are still challenges to the County's groundwater, including:

Arsenic

Naturally occurring arsenic exceeding drinking water standards has been detected in approximately 10% of the individual drinking water wells tested in the County. To address this issue, WCPE now requires testing of all new wells, replacement wells, and residential wells at time of property transfer. Treatment or replacement of the wells are options to address this issue.

Quantity

Individuals in some parts of southeast Washtenaw County have had difficulty in obtaining a reliable, high-quality drinking water well. The combination of hydrogen sulfide and low-yielding upper aquifer formations have been particularly challenging in Augusta Township. To address this need, municipal water was extended to approximately 30 miles of the Township in the mid 1990's. Well testing occurs in the southeast portion of the County and in ten other isolated locations throughout the County to assure adequate water can be obtained before issuing a construction permit for new homes. Additional storage is often installed in homes to compensate for low producing wells.

1,4-dioxane

The groundwater in areas of Scio Township and the City of Ann Arbor is contaminated with 1,4-dioxane, a suspected carcinogen. The contamination plume, which is currently estimated as three miles long and one mile wide, is the result of manufacturing practices by Gelman Sciences (now Pall Life Sciences) from 1968 - 1986. The risks, methods and degree of remediation of the contamination have sparked scientific debate, public activism, government resolutions, and lawsuits. Due to the nature of the contaminant and the complex geology in the area, the problem will likely continue for years to come.

Other sites of 1,4-dioxane groundwater contamination in Washtenaw County include the North Staebler Road Site and the City of Ann Arbor landfill.

Surface Water

Surface water is subject to contamination from a variety of sources such as humans, wildlife, permitted and non-permitted discharges, soil erosion, and pesticide and fertilizer runoff. Making an assessment of the quality of the surface water in Washtenaw County is limited due to the lack of monitoring data for most of the waters of the County, the variability of water quality at any given time, and the vast area surface water covers in the County.

Twenty segments of waterways or entire waterways have been identified as failing to meet water quality standards established by MDEQ and the U.S Environmental Protection Agency (EPA). These range from bacterial counts in stretches of the Huron and Saline Rivers to high phosphorus in Ford Lake. In addition, PCB, Mercury, low dissolved oxygen, and low levels of fish and macroinvertebrates have all been identified in waters of the County.

For the most part, surface water contamination in the County is not the result of point source discharges, but rather from runoff. The largest contributor to runoff is land development and land change activities. As more impervious surfaces are built, uncontrolled water runs off at an increased rate and results bacterial, chemical and physical contaminants entering rivers, lakes and streams. This increased rate of runoff also contributes to soil and bank erosion. These findings are not surprising and are typical of urban watersheds.

Programs, organizations, and volunteers have worked together to develop watershed plans to prevent water pollution and remediate water quality problems. A summary of Best Management Practices (BMPs) identified in Washtenaw County watershed plans is included in this report. These BMPs have been incorporated in many of the land use regulations adopted locally. Other regulatory efforts designed to address surface water quality include:

- The Michigan Drain Code and Washtenaw County Drain Commissioner's Stormwater System Design Standards
- Clean Water Act
- Inland Lake Level Act
- National Pollution Discharge Elimination Permits
- Beach Monitoring

Additionally, public information and stewardship programs have been utilized as a means to involve the public in projects focused on prevention, preservation and restoration of surface waters in the county. Programs aimed at protecting and improving the surface waters of Washtenaw County include:

- Community Partners for Clean Streams
- Watershed Management Planning
- Water Quality Stewardship Program
- Watershed Council Programs (including Adopt-a-Stream)
- Riversafe Homes

Local Water Quality Information

The report contains a section that provides general water quality information within political boundaries. This information includes:

- Geological groundwater formations
- Drinking water information, including sources of drinking water and water testing results
- Major surface water features
- Potential sources of water contamination within local government boundaries, such as:
 - National Pollution Discharge Elimination System (NPDES) Permits
 - Total Maximum Daily Load (TMDL) Sites
 - Aboveground Storage Tank (AST) Sites
 - Leaking underground Storage Tank (LUST) Sites
 - Oil and Gas Sites (Public Act 451 – Part 615)
 - Sites of Known Environmental Contamination (Public Act 451 – Part 201)
 - Solid and Hazardous Waste Sites

Residents can use this section of the report to review the characteristics that comprise their local groundwater and surface water, and to determine the location of potential contamination sources in their area.

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