

The communities in the Lower 2 Rouge River subwatershed are faced with the substantial challenges of a fully developed community. At the same time they are presented with substantial opportunities unique to their subwatershed.

The Rouge River Watershed covers 438 square miles of southeast Michigan (metropolitan Detroit) and is home to more than 1.5 million people in parts of three counties – Wayne, Oakland and Washtenaw. The Rouge River, a tributary to the Detroit River in southeastern Michigan, has been documented as a significant source of pollution to the Great Lakes system (see Figure 1-1.)

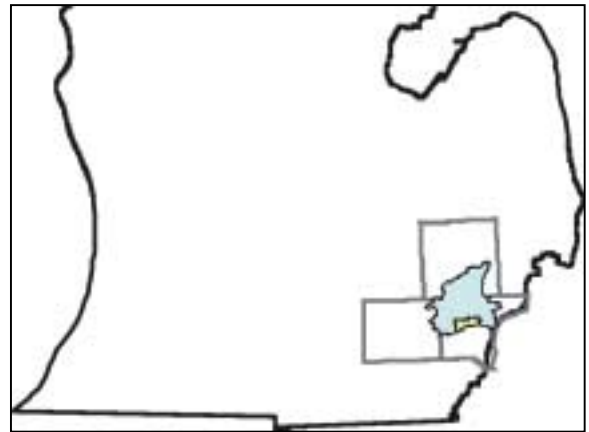


Figure 1-1: Location of watershed within Southeast Michigan

The Rouge River was once a vibrant waterway that supported a number of recreational uses and a broad range of fish and wildlife species. These and other attributes attracted a large number of people and businesses that ultimately made the Rouge River Watershed the most populated and industrialized area of the state. Today, over 50% of the land in the Rouge River Watershed is classified as urban and less than 25% is considered undeveloped. The land uses range from undeveloped land and farms in the western edge of the watershed to heavily urbanized sections in the eastern part. The Lower 2 Subwatershed is located in the eastern, highly urbanized portion of the watershed. The high population density of the watershed has placed the Rouge River under a great deal of stress.

As older urban communities, the Lower 2 communities are faced with the tremendous financial burden of repairing and replacing their aging infrastructure. Much of the existing infrastructure was designed at a time when frequent discharges of sewage contaminated storm water was an acceptable engineering practice. This is no longer the case. This change in professional practice substantially increases the cost of upgrading the system. Combined sewer overflow (CSO) control and sanitary sewer overflow (SSO) control will lead to some of the largest public works projects in the history of these municipalities. The costs of pollution control to the Lower 2 communities will be staggering. Thus, actions under the watershed plans are scheduled in a way to allow the municipalities to address the financial burdens of the program. Since the residents of the communities will be required to pay hundreds of millions of dollars for these improvements, it is important that they can understand the benefits expected from these investments. This document details the expected benefits of a comprehensive, cooperative watershed approach to these problems.

The communities of Dearborn, Dearborn Heights, Garden City, Inkster, Romulus, Wayne and Westland have chosen to work cooperatively with the regulatory authorities to develop a watershed specific plan for improving the water resource with an ultimate goal of achieving water quality standards. This approach was facilitated by the introduction of the Michigan Voluntary General Storm Water Permit process. The communities' leaders sought coverage under this permit and have committed to addressing the broad range of sources that

negatively impact the river. Each community has recognized their individual contribution to the problem and has outlined a program to address their contribution. These individual programs will be implemented through a Storm Water Pollution Prevention Initiative (SWPPI) process.

1.1 PURPOSE

This Lower 2 Rouge River Subwatershed Management Plan lays the groundwork to restore the uses of the Rouge River impaired by flow variability, high bacteria levels and low dissolved oxygen levels. The Lower 2 Subwatershed is one of the seven Rouge River subwatersheds established under the Michigan Department of Environmental Quality Voluntary General Storm Water Permit. The subwatersheds were created based on hydrological boundaries rather than political ones. The subwatershed communities have agreed to work together under the umbrella of a Subwatershed Advisory Group (SWAG), and are required to develop a single subwatershed management plan to identify and implement actions needed to address water quality issues within the subwatershed. This document fulfills that requirement. An emphasis of each individual subwatershed management plan is to mitigate the broad range of undesirable impacts occurring within the subwatershed. In addition, to receive a Certificate of Coverage under the voluntary permit program, the individual communities of the subwatershed were required to develop an illicit discharge elimination program and a public education program. Forty-four communities and agencies within the Rouge River Watershed have applied for and obtained a Certificate of Coverage for storm water discharges under the new general permit.

1.2 BACKGROUND

Due to public outcry about the condition of the Rouge River in 1985, the State of Michigan adopted the Rouge River Basin Strategy. A key element in this strategy was the development of a plan to clean up the river – the Rouge River Remedial Action Plan (Rouge River RAP). The original RAP was completed in 1989 consistent with the commitments made by the states, Canadian provinces and two federal governments as part of a Great Lakes Water Quality Agreement. This international agreement, signed by the United States and Canada, identified 42 Areas of Concern (AOCs) in the Great Lakes Basin that needed attention. The Rouge River was one of the AOCs to be listed.

1.3 ROUGE RIVER RAP

The original Rouge River RAP, a nine-volume document, defined an ambitious 20-year program of actions needed to protect the public health and to make substantial progress restoring the designated uses of the river. The RAP focused on controlling the most easily regulated sources of pollution to the river, namely large industrial and municipal wastewater treatment plant discharges. At the time, the full cost of clean up was estimated at \$900 million. Subsequent updates of the original RAP indicate that the full cost to restore the river is much higher.

In 1993, the state reorganized the committee originally established to prepare the Rouge River RAP and expanded its membership to include a broad range of citizen, government and business stakeholders. The new organization was called the Rouge RAP Advisory Council (RRAC). In 1994, under the guidance of the RRAC, a revised 1994 Rouge River Remedial Action Plan was published. This 136-page-report outlined the considerable progress that had been made in addressing major pollution sources in the river and outlined the additional steps needed to restore uses that were still impaired. The 1994 report documented the contributions of the Rouge River National Wet Weather Demonstration Project (Rouge Project) in accomplishing many of the objectives outlined in the original 1989 Rouge River RAP.

1.4 THE ROUGE PROJECT

In 1992, The U.S. Environmental Protection Agency (EPA) provided \$46 million to Wayne County to fund the Rouge Project with a primary goal of establishing a watershed-wide approach to addressing the problems of an urban river. This meant looking beyond the obvious impacts (i.e., CSOs) to matters of recreational use and habitat restoration. While final design decisions for the major civil structures remained with the local communities, the Rouge Project provided overall coordination to encourage substantial differences among the designs commensurate with the intent of the demonstration project.

In addition to providing several million dollars in grant funds to communities to help design and construct CSO control facilities (separated sewers and retention basins), the Rouge Project has funded local community pilot projects that demonstrate how other sources of pollution can be controlled. A part of the Rouge Project has also included extensive monitoring of the water quality and related aquatic habitat of the river to measure progress and pinpoint areas that need further attention.

Within the first few years of monitoring, the Rouge Project documented problems in the river unrelated to CSOs. It became clear as the water quality monitoring results accumulated throughout the watershed that without a comprehensive, watershed approach, the investments made to address CSOs would not restore the designated uses identified in the RAP. Contaminated storm water discharges, sanitary sewer overflows, illicit discharges, failing septic systems, excessive run-off from developed areas, bank erosion, construction activities and a number of other sources and activities were degrading the water quality.

1.5 THE U.S. FEDERAL COURT

Since the 1970s, the United States District Court for the Eastern District of Michigan has been involved in overseeing compliance with the Federal Clean Water Act with respect to the City of Detroit WWTP and collection system, and the suburban customers of its Detroit Water and Sewerage Department. The federal court initially became involved through enforcement actions brought by the state and federal regulatory agencies concerning the operation of the Detroit WWTP.

In the early 1990s, under the oversight of the federal court, the MDEQ facilitated a resolution to the state-ordered correction of CSOs that resulted in a phased approach in which the responsible local agencies would be allowed to demonstrate various alternatives to capture and treat these discharges CSO discharges, or eliminate them through sewer separation projects.

With early reports from the Rouge Project that the control of CSOs alone would not address all the pollution problems in the river, the federal court urged the 48 local public agencies within the Rouge River watershed to adopt a more comprehensive approach. In response to the court's concerns, a group of local agencies working within the Rouge Project proposed a watershed approach to the MDEQ that involved development of a new regulatory framework for the management of storm water and certain other pollution sources. The federal court encouraged the communities to pursue this approach, which was subsequently embraced by the MDEQ when it adopted the voluntary watershed-based general storm water permit in 1997. The U.S. EPA subsequently endorsed the state's general storm water permit.

Through this initial involvement, the federal court has continued to play an active role in the restoration of the Rouge River watershed.

1.6 VOLUNTARY GENERAL STORM WATER PERMIT

The MDEQ adopted an innovative approach to the regulation of storm water discharges from publicly controlled separate storm water conveyances that was modeled after an approach recommended by public agencies within the Rouge River Watershed. This unique regulatory approach requires the formation of subwatershed groups where communities and other public agencies work cooperatively to develop and implement plans to address sources of pollution.

Their permit requires the subwatershed communities to work cooperatively to draft a subwatershed plan. This document fulfills that requirement for the Lower 2 Rouge River subwatershed communities. After a plan is adopted and submitted to the MDEQ, each public agency must submit a Storm Water Pollution Prevention Initiative (SWPPI) that commits the public agency to the specific actions that it intends to undertake consistent with the cooperatively developed subwatershed management plan. While voluntary for most public agencies now, new federal storm water regulations will require all communities within the Rouge River Watershed to obtain a permit to discharge storm water by March of 2003. The U.S. EPA has pledged that the Michigan watershed-based general permit will meet the new federal requirements.

1.7 Clean Michigan Initiative Requirements

The Watershed Management Plan does not require format approval by the MDEQ. However, if communities want to be eligible for Clean Michigan Initiative funds then MDEQ approval is necessary. Table 1-1 presents a comparison of CMI Watershed Management Plan Requirements and the contents of the Lower 2 Subwatershed Management Plan. In some cases detailed information on community actions will be included in their SWWPI.

Table 1-1: CMI Chart: Comparison of CMI Watershed Management Plan Requirements and Contents of Lower 2 Watershed Management Plan

| CMI REQUIREMENT | WATERSHED MANAGEMENT PLAN REFERENCE |
|--|--|
| 1. Geographic scope, including map with watershed boundaries, plus description of the watershed | Page 1-1, Figure 2-1, Chapter 2 |
| 2. List of (a) designated uses not being met, or threatened, plus (b) desired uses | Tables 3-1 & 4-1 |
| 3. List of known or suspected pollutants | Tables 3-1 & 4-1 |
| 4. List of potential causes for each known and suspected pollutant | Tables 3-1 & 4-1 |
| 5. List of WQ improvement or protection goals, based on designated uses | Table 4-1, Chapter 4 |
| 6. Identification of critical area(s) | Table 4-1, Section 3.3, Appendices I, J, K |
| 7. List of (a) sources and causes for each pollutant, (b) number and location of sites for each source, and (c) method used to conduct inventory | Sections 3.1, 3.2, 3.3, Table 4-1, Appendices I, J and K |
| 8. Prioritized list of designated uses, pollutants, sources, and causes, and methods used to prioritize | Table 4-1, Appendix B |
| 9. List of BMPs for each source, and estimated costs | Chapter 6 Appendix A |
| 10. List of tasks needed to implement the BMPs, and estimated costs | Chapter 6 Appendix A, Appendix C |
| 11. Summary of local projects, programs and ordinances, including tasks, responsible parties, milestones, and a timeline for improving or adding to them | Chapter 5, Table 5-1, Table 5-2 |
| 12. Summary of information/education and public participation process | Section 4.3.1, Section 6.2.7, Chapter 5 |
| 13. Process to evaluate effectiveness of implementing plan and achieving its goals | Chapter 7, Chapter 8 |
| 14. Tasks to institutionalize watershed protection | Table 5-1, Chapter 7, Chapter 8 |