

THE ROUGE RIVER PROJECT  
A WORLD CLASS EFFORT



BRINGING OUR RIVER BACK TO LIFE

## USING THE PROJECT WEB SITE AS THE PRIMARY INFORMATION DISTRIBUTION TOOL

BY

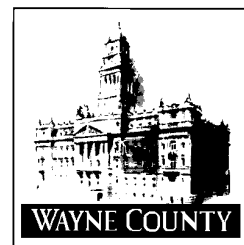
**Charles R. Bristol, P.E.**  
**Technical Manager**  
**Wayne County Rouge Program Office**

**Tim Kruse**  
**Systems Manager**  
**Wayne County Rouge Program Office**

**Barb Farrah**  
**Public Affairs**  
**Wayne County Dept. of Environment**

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## ***What is the Rouge River National Wet Weather Demonstration Project (RRNWWDP)?***

### **The Watershed**

The Rouge River Watershed, located in southeast Michigan, runs through the most densely populated and urbanized land area in the state. The watershed is approximately 438 square miles in size and includes all or part of 48 municipalities in three counties, with a population of over 1.5 million. The Rouge River empties into the Detroit River. The Detroit River is the connecting channel between Lakes St. Clair and Erie.



### **Statistics**

- More than 50 miles of the Rouge River flows through public parklands, making the Rouge River one of the most publicly accessible rivers in the State.
- There are over 400 lakes, impoundments, and ponds in the watershed.
- More than 50% of the watershed is considered urbanized, mostly in the south and east portions.
- 25% of the land in the watershed is undeveloped.
- The Rouge River itself totals more than 126 miles in length and is actually four separate branches, the Main, Upper, Middle, and Lower.
- The Rouge River affects the water quality of the lower 20 miles of the Detroit River and Lake Erie.

## History

The Woodland Indians were the first to settle in the Rouge River Watershed (approximately 1700-1850) followed by the French, the British and finally by Americans. Because the Rouge supplied them with food, water, and a mode of transportation, all these early settlers depended upon the Rouge River for their survival.

The years of 1850-1940 were characterized by immigration, industrial development, and rapid urban growth. However, it was this development and growth that led to the first forms of river pollution. To deal with the increase in population, sewer pipes were built to carry sewage and storm water, which emptied directly to the Rouge River. Similarly, industrial wastes were poured, buried or dumped in the most convenient location, which was often adjacent to or in the river.

Although pollution increased in the 20th century, from 1940 to the present there has been an effort to protect the quality of life along the Rouge River. To protect public health and the environment, the Detroit Wastewater Treatment Plant was built in 1940, and over 50 miles of parkland adjacent to the Rouge River has been acquired for public use. Numerous federal, state, and local regulations have been implemented to protect water quality.

## Rouge River National Wet Weather Demonstration Project

The Rouge River has been classified as one of the most polluted rivers in the United States and in 1981 was designated an Area of Concern by the International Joint Commission because of its severely degraded condition and its impact on the Great Lakes.

However, the Rouge River is being restored. Through the efforts of various agencies, including the Rouge River National Wet Weather Demonstration Project (Rouge Project) the water quality of the Rouge is improving. The Rouge Project, which began in 1992, is funded through grants from the [United States Environmental Protection Agency](#) and is being managed by [Wayne County](#). The Rouge Project recognizes the importance of addressing wet weather pollution problems in the river and developing a cost-effective watershed wide approach to deal with them. This comprehensive program deals with the problems of [combined sewer overflows](#), [polluted storm water runoff](#) and various other [nonpoint source pollutants](#). Also included in the Rouge Project is an intensive [monitoring/sampling program](#), [modeling](#) and [geographic information systems](#) and [public outreach](#). Other urban watersheds throughout the country can use the results of this watershed management effort.

## ***The History of RougeRiver.com***

The beginnings of the Rouge Project web site came out of the public information and public involvement tasks of the project. In 1995 and 1996, the project published its first web site using free hosting services provided by Great Lakes Information Network (GLIN). The site provided project overview pages and some pages discussing the public information available in other formats (i.e. brochures, technical papers, etc.), which were available by contacting the project by phone or mail.

Late in 1996 and into 1997, a decision to significantly change and enhance the web site was made. The project had recently purchased two kiosk units in which a large effort to collect information had been made. By reusing much of the content gathered for the kiosks and by modeling the web site's navigation in a similar fashion as the kiosks, the web site grew in tremendously in available content. In addition, the site was expanded to include the complete RPO Products and Data catalog. This catalog provided interested individuals an opportunity to read abstracts and on-line order the entire project's numerous papers, reports, technical memoranda, maps and data produced by the staff of the RPO.

Another significant milestone in the history of the RPO web site was the decision to purchase the rights to use the domain name ***rougeriver.com***. By having our own domain name, we were able to advertise and spread the word about our site using an easy to remember URL. Following our decisions to use ***rougeriver.com***, and in combination with a more significant "get the word out" campaign, we saw our monthly web site hits increase from 5,000 to 10,000 per month to over 35,000 to 45,000 per month. And this trend of attracting more visitors to our site is continuing.

Some other significant enhancements, that have shaped the site into what it is today, are as follows:

- Added historical monitoring data collected at over 100 different schools located throughout the watershed.
- Enhanced and expanded our wildlife section to include over 250 different animals that call the Rouge watershed their home and many links to other nature and wildlife sites with more detailed content about specific animals
- Increased the availability to documents on-line by publishing most project manuscripts and deliverables in Adobe Acrobat PDF file format. Today, over 100 documents and maps are available in PDF for retrieval from the site.
- Expanded all of our major content sections to include information about almost all of the activities of the project.
- Used the site as the primary delivery tool of the RPO developed Watershed Management Model (WMM) software application. We provide both the application and the user documentation (in PDF) exclusively through the web site.

Today the site contains over 500 maintained pages of content, hundreds of photos and graphics. We expect to expand our content even further and plan on providing even more of the projects deliverables in PDF. In addition, through the use of the latest release of our current monitoring data analysis tool *DataView*, we plan to make our current years monitoring data immediately available via download when it has passed quality assurance/quality control inspection instead of only once per year using a distribution CD as we have in the past. These changes will help ensure that the 30,000 to 40,000 visitors per month that view the site will find an up-to-date and even more valuable tool to access the information and materials produced by the Rouge Project Office.

## *How is the Content Organized?*

The web site is structured as shown in the following graphic. This is the site map or navigation bar on the left side of the screen that travels with the user no matter where in the site they currently are. Each of the sections is described below:

**General Information** – In this section resides the following topics : An Overview of the Rouge River; The Mission of the project; Progress Reports; and the Year in Review.

**Products and Data** – the Rouge project products catalog is posted here. All available papers, reports, maps, and data sets are listed and can be downloaded.

**Contact Us** – a list of people involved in the Rouge Project by technical topic. Their names, addresses, phone numbers and Email address are available.

**Technical Information** – descriptions of the many technical areas covered by the Rouge project including combined sewer overflows, wetlands, nonpoint source controls, GIS and data base management; and sampling and monitoring.

**Water Quality Issues** – several articles and reports which focus on water quality issues. The Rouge Report Card describing the water quality conditions of the river are available here in a PDF file.

**Getting Involved** – information on how to join the various organizations operating within the Rouge watershed. This includes information on how to become a Rouge Friendly Business or Neighbor.

**Current Restoration Projects** – this section describes with text and pictures the restoration projects being conducted around the watershed. This includes such projects as the Newburgh Lake Restoration; Inskter Constructed Wetlands; and the CSO Basins being constructed by several communities.

**Wildlife and Recreation** – this section points the user to other sites describing the parks available throughout the watershed. In addition, information is also provided on the various types of wildlife found in the watershed.



**Events Calendar** – various events around the watershed and the region which are focused on environmental aspects are described in this section. Links are also available to take the user to the organization hosting the event.

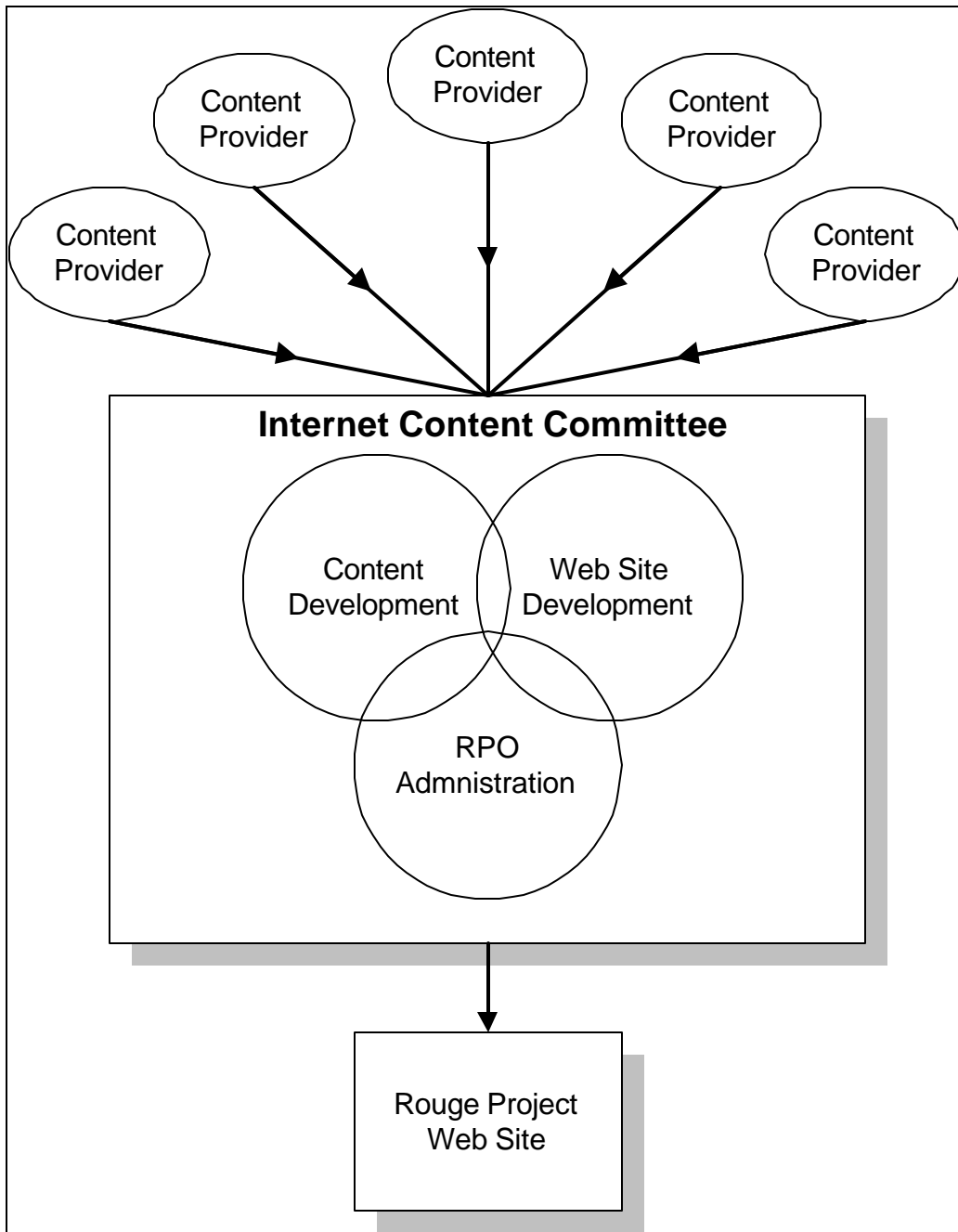
**Related Internet Sites** – this section holds links to many, many other related sites. These related sites include the Rouge watershed communities, counties, agencies and organizations. Links to other environmental sites such as the EPA and the Watershed Council.

**Search** – a typical search engine for retrieving specific information from the site.

**Students and Teachers** – this section provides information and documents designed for teachers in the environmental science programs. A copy of the Rouge River Activity Book is available on-line. Other links to sites designed for environmental science teachers are listed here. Also, an extensive archive of historical monitoring data collected by over 100 schools within the watershed is available in this section.

## *How is the Site Maintained?*

The site's upkeep and maintenance is a collaborative effort. At the heart of this collaboration is the **Internet Content Committee**. This committee is comprised of individuals representing content development, web site architecture and development and Rouge Project Office project administration. They meet on a monthly basis and have one primary objective, "to decide what, and in what priority, should be added or changed to the web site."



**Figure 1: Web site update process**

The site's content is gathered by the content developers working with the various content providers; those individuals on the project who, as part of their project responsibility, have information or products that might be used on the web site. The information and data is then analyzed, and a decision is made if this content should be placed on the web site. If the information is to be used on the web site, this content is shared with the web developers to decide what format it should be displayed in, HTML, PDF or a combination of the two. The final decision is to finalize where in the site's navigation the new content should be placed and what other pages should be linked to it. All this information and content is then handed to the web developers who build the pages and/or links to accomplish the desires of the Internet Content Committee.

Throughout the process, senior project staff via a traditional site visit and documenting issues, content and problems conducts quality control and reviews. Senior project staff is also often present at the Internet Content Committee meetings. A large portion of the success of the site can be directly attributable to the strong support by senior project management. They have consistently helped push content providers into timely providing information, modified project policies and procedures to support the web site and have supplied sufficient budget to maintain the site.

The web developers use a combination of web site design tools in order to maintain the site. The primary software tool used is Microsoft FrontPage 98. FrontPage provides a user-friendly interface and sufficient tools to keep the complex site navigation working properly. Our web developers also use Allaire's HomeSite. HomeSite provides a stronger raw HTML editor and adds less automatically generated formatting codes than does FrontPage. We use it to help debug and fix browser specific related problems that arise when users aren't using Microsoft's Internet Explorer web browser. As described earlier, the site uses Adobe Acrobat to create many documents in their Portable Document Format (PDF) file format.

The numbers of people involved in the web site are many. There are currently two to three content developers, two web developers and numerous individuals providing content and converting documents into PDF. The Rouge Project Office has made a significant investment in the upkeep and expansion in the site and the results prove it.

## ***What Does the Future Hold?***

The Rouge Project web site will undergo some expansions in the future. We plan to expand the information being distributed via the site to include monitoring data and dynamic maps. Currently, the site has static maps in PDF format and data provided in text format. The future site enhancements will include

Database driven site (using Cold Fusion) to make the products list more dynamic and easier to maintain as changes occur.

Monitoring data attached to a map showing the monitoring site. This data will be provided to the Rouge watershed communities within 60 days of collection. Users will be able to select the monitoring sites in their community and download the most recent data in a format compatible with the DataView application.

Volunteer monitoring data will be accepted in the future through the web site. Data ranging from school programs collecting water quality samples to Rouge Friendly Businesses logging their monthly activities. This will allow data to be gathered quickly and then made available back to other site visitors.

Software applications such as DataView and WMM (Watershed Management Model) will be distributed on line. These applications, plus others, have been developed by the Rouge Program Office for use by the Rouge watershed communities (and others throughout the US involved in watershed management). Updates or new versions along with examples data sets and appropriate documentation will be posted to the web site. In addition, registered users of the applications will be automatically notified when new releases are available on the web site.

Watershed reporting by the Rouge communities into the web site and out to the state regulators. Working closely with the state Department of Environmental Quality, reporting tools will be developed which will assist the Rouge communities in their annual progress reports to the state for the work completed. This will allow the Rouge Program office to facilitate the reporting plus summarize watershed management activities for the entire watershed.

## *What Have We Learned?*

- Getting consensus on the content to be posted on the web is a multi-participatory process. Many stakeholders must be involved ranging from the organization who “owns” the site to the staff whose work will be displayed on the site to the technical staff who make the web site technologies work.
- The latest web site technologies do not always make a good information distribution site. For example, fancy backgrounds and time consuming graphics do not add to a site that is designed to provide documents and data. It must look nice but “zoomy” graphics are not required.
- Most of the cost of a web site is in the ongoing upkeep and maintenance of the site. While a significant investment to initially gather and post a web site may appear affordable, realizing that even more effort and funds will be required to continually provide fresh content is important.
- Through hard work and much effort, a web site can be used as a primary distribution tool for a project’s many and diverse products and data.