



# Rouge River National Wet Weather Demonstration Project

Wayne County, Michigan

## TASK PRODUCT MEMORANDUM

Progress Report on Pilot Source Control Best  
Management Practice Project  
Nonpoint Work Plan No. URBSW3

RPO-NPS-TPM43.00

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Nonpoint Work Plan No. URBSW3, Task No.

Author: Karen Reaume

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### Rouge River National Wet Weather Demonstration Project

#### MISSION STATEMENT

The mission of the Rouge River National Wet Weather Demonstration Project is to demonstrate effective solutions to water quality problems facing an urban watershed highly impacted by wet weather and develop potential solutions and implement projects which will lead to the restoration of water quality in the Rouge River. The project will address both conventional and toxic pollutants to:

- provide a safe and healthy recreational river resource for present and future generations;
- re-establish a healthy and diverse ecosystem within the Rouge River Watershed;
- protect downstream water resources such as the Detroit River and Lake Erie; and
- help ensure compliance with federal, state and local environmental laws which protect human health and the environment.

This will be accomplished through the development, implementation and financial integration of technical, social and institutional frameworks leading to cost-efficient and innovative watershed-based solutions to wet weather problems. This watershed-based national demonstration project will provide other municipalities across the nation facing similar problems with guidance and potentially effective solutions.

## PREFACE

The Rouge River and its watershed are a primary source of pollution to the Great Lakes. The Clean Water Act of 1972 intended to make waterways "fishable and swimmable" by 1972. Although that goal has not been reached, great progress has been made in improving water quality in most waterways. The Rouge River Remedial Action Plan (RAP) provided a basis for which The Rouge River National Wet Weather Demonstration Project (Rouge Project) efforts were created: it identified the major sources of pollution and measured the relative contributions of each. The RAP is the continuing foundation for the Rouge Project and presents a framework for addressing the problems within the Rouge River by looking beyond treatment and focusing instead on prevention methods.

The Rouge Project was established under the initial Rouge Grant 1 from the United States Environmental Protection Agency, Region 5, and enabled Wayne County to initiate a comprehensive watershed-wide pollution-control approach that addresses combined sewer overflow (CSO), stormwater management, and other nonpoint source controls through the application of innovative technologies, progressive financial and institutional arrangements, and creative public involvement and education programs.

Rouge Grant 2 provides the framework for the progression and implementation of Project goals as Wayne County continues its mission to develop potential solutions and implement projects which will lead to the restoration of water quality in the Rouge River. The Project will address both conventional and toxic pollutants to:

- provide a safe and healthy recreational river resource for present and future generations;
- re-establish a healthy and diverse ecosystem within the Rouge River Watershed;
- protect downstream water resources such as the Detroit River and Lake Erie; and
- help ensure compliance with federal, state, and local environmental laws which protect human health and environment.

This will be accomplished through the development, implementation, and financial integration of technical, social, and institutional frameworks leading to cost-efficient and innovative watershed-based solutions to wet weather problems. This watershed-based national demonstration project will provide other municipalities across the nation facing similar problems with guidance and potentially effective solutions.

Under Rouge Grant 2, the Rouge Project will build on lessons learned from Grant 1 efforts and focus on further integration of the goals of the overall Mission. To this end, Rouge Grant 2 concentrates on the following key Project areas:

- **Watershed Management** will continue under Rouge Grant 2 with the development and evaluation of wet weather and stormwater alternatives, the planning of long-term monitoring programs, and the ongoing efforts to enhance instream water quality, monitor rain and flow levels, interpret data analysis, and present recommendations.
- **Nonpoint Source Pollution Control** will provide for the stormwater management, permit applications, and development of financial and institutional alternatives for wet-weather watershed management in concert with enhanced efforts to establish institutional partnerships. Toward the goal of institutional partnering, several community projects will be undertaken with watershed communities. Additional efforts include the inventory of wetlands and measurement of pollutant loads from abandoned dumps and air deposition with possible remediation of some sites.
- **CSO Construction Coordination** will continue to monitor the construction of CSO demonstration projects established under Grant 1. Additional planning and assistance will allow project coordinators to make additional recommendations on the design criteria of future CSO abatement facilities.
- **Public Involvement and Information** will reach and interact with more stakeholders, institutions, and regulatory agencies, thus fostering a renewed understanding and continued commitment to reducing pollution, and continuing the transfer of watershed management approaches way beyond the project. It will be the central mechanism for transmittal of the Project's Decision Support System tools, processes, and information necessary for sustaining a watershed management support system directly to varied audiences both within and outside the Rouge watershed.

Additional information on the Rouge River Project is available from many sources, including the Wayne County Department of Environment (WCDOE) and the Rouge Program Office (RPO).

## ABSTRACT

The task product memorandum titled "Progress Report on Pilot Source Control Best Management Practice Project Nonpoint Work Plan No. URBSW3 (RPO-NPS-TPM43.01), summarizes the progress made on the implementation of Best Management Practices (BMPs) in the pilot source control areas. First, the memorandum summarized the Rouge Friendly Business and Neighborhood Programs, the program development methodology, suggested pollution control criteria and the implementation approach. Next, the program development for municipal BMPs, specifically roadways, parking lots and drainage systems, is summarized. Finally, an update is included on the implementation of the source control programs for three residential areas of the industrial/business area.

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**1.0 INTRODUCTION.** Source Control Best Management Practices (BMPs) are designed to reduce the amount of pollutants available for transport to receiving waters and/or to prevent pollutants from contacting runoff. Because individual BMPs do not usually provide significant reduction in stormwater pollutant loads, pilot source control programs are being devised to utilize multiple BMPs to reduce pollutant loads being transported to the receiving water by stormwater to the maximum extent practicable (MEP). The objective of this project is to define an MEP Source Control Program for Residential and Business areas and to implement this program in five pilot study areas.

Five pilot source control areas were selected and a demonstration program of source control BMPs was defined for each site. Data derived from these pilot source control programs will serve as the basis for developing a cost effective program that can be implemented watershed-wide. The planning process used to develop these programs consisted of the following:

1. Define existing knowledge about water quality impacts of stormwater pollution in the watershed and the activities that may cause this pollution;
2. Define approaches for MEP control of impacts of priority pollutant-generating activities and the materials needed to implement this approach.

The first steps are documented in the Rouge Project technical report entitled: "Pilot Source Control Assessment and Prioritization" (RPO-NPS- TR08). The third and fourth steps are being documented through these progress reports listed below.

3. Implement this approach within a set of small single land use watersheds that characterize the range of land use and demographic conditions within the entire watershed; and
4. Establish a water quality monitoring program to determine if reductions in river impairment, attributable to these source controls, could be quantified.

The overall strategy is to approach source control on a "grass roots" level, with the expected benefit of having increased involvement from all watershed participants. To accomplish this goal, the following programs have been developed: a Rouge Friendly Business Program; a Rouge Friendly Neighborhood Program; public outreach; focused business outreach in the form of a business roundtable; pilot business area source control; and pilot residential area source control projects.

**1.1 SELECTION OF PILOT AREAS.** The pilot areas chosen were characteristic of conditions that affect stormwater management within the entire Rouge River Watershed. The most significant characteristics are summarized below:

**1.1.1 Residential Land Use.** About half of the watershed is residential; development density, age of housing, owner occupancy, and vehicle usage were all taken into consideration.

**1.1.2 Public Opinion.** Knowledge, perceptions and attitudes of residents were accounted for when designing these source control programs, because many controls require behavior changes by individuals. Three primary tools were used to measure public opinion: interviews with stakeholders in stormwater pollution management, focus groups of individuals active in their communities and a watershed-wide telephone survey. The themes that emerged from this research have been incorporated into the source control programs; they are:

- Actively involve stakeholders and community leaders;
- Establish and expand the environmental education curriculum for grades K-12;
- Work through existing organizations and use existing communication tools already in place throughout the watershed; and
- Direct most information through the major media, which is where most people obtain a significant amount of information.

**1.1.3 Industrial/Commercial Land Use.** About 20 percent of the land in the Rouge River Watershed is used for composed of commercial, industrial, or transportation purposes. The imperviousness of these areas is usually greater than 50 percent and often approaches 100 percent. This causes significant quantities of stormwater runoff and accelerates washoff of pollutants. The activities within those land uses varies widely. Thus control of stormwater pollution from all industrial and commercial land uses is needed.

**1.1.4 Roadways and Parking Lots.** Roadways and parking lots are significant sources of stormwater pollution to the Rouge River. Although they lie within residential, commercial and industrial areas, they have been identified as a separate land use for the pilot source control study because their pollutants are caused by different types of activities and pollutant control is similar despite the primary land use.

**1.2 APPROACHES AND MATERIALS.** A systematic approach was developed to implement nonpoint source controls using BMPs. First, significant pollutant sources within the watershed had to be identified, source controls prioritized, and potential participants selected. Next, materials had to be developed that provided technical information as well as encouraged public information and participation. The last step will be to evaluate the program's effectiveness.

Pollutant source control priorities were established for the watershed using a three stage process. First, the pilot source control programs focused on the predominant land uses in the watershed. Next, categories of pollutant sources in these predominant urban land use areas were identified and assigned priorities. Finally, the number of pollutant sources was narrowed down to those that had a maximum impact on the river. See *Appendix A* for a

table of significant pollutant sources in the watershed and the sources targeted for control by this program.

The Rouge Project team conducted in-depth evaluations of the areas to implement pilot source control programs to the maximum extent practicable (MEP). Site selection was based on criteria such as:

- Applicability in the watershed
- Monitoring considerations
- Cost
- Characteristics of the pilot area
- Geographical distribution
- Implementability

Seven areas within three communities were evaluated for source control activities in business/commercial areas, 47 areas within seven communities were evaluated for source control activities in residential areas, and 17 areas within three communities were evaluated for source control activities served by combined sewers. *Table 1.1* presents the sites selected for the pilot source control studies. Site summary maps can be found in *Appendix B*.

The industrial site selected in a separated sewer area is representative of the light to medium industrial development in the watershed. This is a relatively large, fully-developed, single land use area in which storm event monitoring can be conducted. The City of Livonia expressed a willingness to participate in the pilot program which increased the likelihood for successful implementation. The industrial site located in a combined sewer area had to be abandoned due to the problems encountered with monitoring and sampling.

The three residential pilot areas selected are relatively large (20 to 33 acres) single land use areas and fully developed. The geographical distribution is such that these demonstration sites are located throughout the watershed, monitoring can be conducted and each area has an active homeowner or subdivision association. Some pilot area locations have changed from those presented in the initial assessment report (RPO-NPS-TR08). To successfully monitor stormwater in the combined sewer pilot area (Brightmoor), two sampling locations were necessary due to the configuration of inflows and drainage in this area. The West Bloomfield residential area is also a change from the initial assessment report. A neighborhood in the West Bloomfield area was chosen so the geographic and economic distribution of the watershed would be reflected in the pilot areas.

The rest of this document will report on the implementation efforts of several nonpoint source pollution (NPS) source control pilot projects. These activities include the technical assistance outreach efforts of the Rouge Friendly Business and Neighborhood programs as well as infrastructure operation and maintenance activities that are designed to prevent pollution from entering the Rouge River.

Pilot project summaries can be found in Section 5.0 and 6.0 for the industrial and residential programs, respectively.

**Table 1-1  
Pilot Source Control Study Areas in the Rouge Watershed**

Site	Location	Predominant Land Use	Drainage Area (acres)
<b>Separate Storm Drainage Areas</b>			
LI5	City of Livonia South of I-96 between Levan Rd. and Stark Rd.	Industrial	373
D7	City of Dearborn Heights Golfview Manor A: Hines Dr. and Charlesworth	Residential	20
WB1	City of West Bloomfield West Bloomfield Place: Haggerty Rd. and 14 Mile Rd.	Residential	33
<b>Combined Sewer Areas</b>			
B5A	Detroit Brightmoor area: Lamphere north	Residential	15
B5B	City of Detroit Brightmoor area: Lamphere south		11

**2.0 ROUGE FRIENDLY BUSINESS PROGRAM.** The Rouge Friendly Business Program uses outreach and incentives to small business owners in the watershed to encourage businesses to implement source controls. This program is working to develop a comprehensive business recognition model which will recognize and promote local businesses in the three counties of the Rouge River Watershed which demonstrate nonpoint source, "Rouge Friendly," pollution prevention practices.

The goal of the Rouge Friendly Business Program is to educate small businesses about preventing pollution and decreasing the amount and volume of pollutants in stormwater runoff. This goal can be accomplished by informing small businesses that stormwater runoff is a major source of pollution to the Rouge River; informing small businesses that they operate in the watershed and contribute to this type of pollution; and educating small business owners to make small changes in their operations to reduce pollution loadings to the Rouge River.

This program was developed through regular business roundtable meetings. A business specific roundtable was formed with automotive related businesses/organizations, government representatives, regulatory staff and RPO staff. The initial meeting was held on December 12, 1995 with subsequent meetings on February 8, 1996, March 28, 1996, and June 20, 1996. This roundtable is composed of key business leaders in the vehicle service industry and designated staff from the Wayne County Rouge Program Office and the Environmental Assistance Division (EAD) of the Michigan Department of Environmental Quality. The vehicle service industries represented are: Michigan Car Wash Association, Automotive Service Association of Michigan, American Petroleum Institute (Michigan Office) Detroit Service Station Association, Midwest Auto Auction, Inc., and the Greater Detroit Chamber of Commerce.

These members have had valuable input for the Rouge Friendly Business Program on educational materials, presentation of technical materials and program outreach. Feedback from this group resulted in a name change of the "Clean Business Program" to "Rouge Friendly Business". Meeting notes can be found in *Appendix C*.

Consensus was also reached on the components of a source control program for vehicle service facilities as follows: a self assessment form/ Rouge Friendly action plan; site visits; workshops; recognition materials such as a logo that businesses can display on their window; stickers that businesses can hand out; a pledge and recognition certificate; and newspaper recognition of businesses meeting the criteria. The developed materials have been assembled into a Recruitment and Welcome Package which can be found in *Appendix D* and *E*, respectively. The business roundtable members stressed that the simpler the program the better, as the businesses time commitment must be considered. The recognition award must be simple and recognizable as this promotional piece will provide businesses with a marketing opportunity. The logo developed for the Rouge Friendly Business Program shown in *Figure 2-1* is the image used in all recognition products. The

program logo contains the figure of SnoopaSaurus, which is the creation of the Detroit Water and Sewerage Department for their pollution prevention initiatives. They have allowed us to use this figure in our logo which should increase the recognition/awareness of both programs throughout the watershed.



**Figure 2-1: Rouge Friendly Business Program Logo - SnoopaSaurus**

**2.1 SELECTION OF PRIORITY BUSINESSES.** A commercially available locational database was obtained to help target the locations and types of businesses for the Rouge source control pilot program. This information was incorporated into the Rouge Geographic Information System (GIS). From the database the RPO found the number of businesses and industries present in the watershed to be over 42,000. In order to phase the program implementation, a greater emphasis was placed on the most significant pollutant sources. To select the priority businesses the RPO used a process based on the system developed by the Wayne County Environmental Health Division (WCEHD). A priority business must meet the following criteria:

- The business has a high incidence of illicit connections to storm drains as defined by WCEHD (e.g. automobile related businesses and heavy industry);
- The businesses conduct a significant number of pollutant generating activities outdoors; (e.g. storage, loading and unloading, and waste disposal); and
- The business type is found in large numbers within the watershed.

Based on these criteria, RPO staff defined the following priority businesses in the Rouge Watershed:

<u>Business Type</u>	<u>Number of Businesses in Watershed</u>
Automotive service businesses	3,327
Construction related	2,970
Food related	3,401
Metal products and machinery	1,102

The Rouge Friendly Business Program is initially focused on automotive service businesses.

**2.2 BUSINESS ACTIVITIES.** Each type of business conducts certain activities that, without proper control, may cause nonpoint source pollution. The focus is on businesses where significant pollutant generating activities typically occur outside and/or where pollutants may be transported outdoors via spills, loading/unloading, cleaning, repair, waste disposal, or illicit discharges. These business activities were determined by field reconnaissance surveys and the prevalence of the source in the area. RPO staff has reviewed literature on these pollutant sources to gain a better understanding of the relationship between pollutants of the Rouge River, the materials present in the environment that may be sources of these pollutants and the mechanisms that may turn these materials into pollutants. The following activities were found to be common throughout all business types:

- Maintaining lawns;
- Cleaning paved surfaces;
- Cleaning up spills and leaks;

- Storing and disposing wastes;
- Storing and handling inventory;
- Cleaning parts, tools and equipment; and,
- Vehicle and equipment cleaning.

### **2.3 SUGGESTED POLLUTION CONTROL CRITERIA FOR EACH BUSINESS TYPE.**

A three stage process was used to develop control criteria for each selected business type.

First, all activities that take place at each business have to be identified, e.g., changing automotive fluids, repairing vehicles, removing and storing batteries. Next, these activities have to be assessed for their pollution generating potential. The last step in the process is to provide pollution control criteria in the form of BMPs. *Table 2.1* lists the BMPs for each business type.

**Table 2.1**  
**Source Control BMPs for Selected Business Types**

<b>Rouge Friendly Business BMP</b>	<b>Auto</b>	<b>Food</b>	<b>Metal</b>	<b>Construction</b>	<b>Other</b>
Repairing vehicles	X			X	
Fueling and servicing vehicles	X			X	
Removing and storing batteries	X				
Grinding, finishing and painting metal	X		X		
Managing outdoor work areas				X	X
Cleaning paved surfaces	X	X	X	X	X
Cleaning up spills and leaks	X	X	X	X	X
Cleaning parts, tools and equipment	X	X	X	X	X
Storing and handling inventory	X	X	X	X	X
Storing and disposing waste	X	X	X	X	X
Parking vehicles outside (storage)	X				
Employee education	X	X	X	X	X
Grease handling and disposal		X			

**2.4 POTENTIAL SPONSORING AGENCIES.** The RPO is also preparing information on how local communities can implement the source control BMPs shown in *Table 2.1*, as part of their own nonpoint pollution control activities. This is only one segment of the watershed-wide program initiated by the RPO and it will allow communities to refine the program to reflect community conditions and concerns.

To be successful at the local level, the Rouge Friendly Business Program needs a sponsoring agency from that community. Local sponsors would best know the mix of businesses and the concerns of the community. In addition, a local group could easily confirm business activities and define a pollution control objective for each activity of concern. These pollution control objectives could then serve as the primary criteria for determining if a business qualifies as a Rouge Friendly Business.

Ideally, these objectives and BMPs should be defined using business owners, business leaders and municipal staff familiar with business operations. Any of these groups could become the sponsoring agency (e.g., Chamber of Commerce, trade associations or municipal staff). The local Chamber of Commerce has the respect of the business community, however, they may not have the trained staff available to sustain such a program. Trade associations have trained staff, but the focus is only on one segment of the business population. Municipal staff such as code enforcement or pretreatment inspectors may be the best option as a program sponsor as they have seen various types of business operations and have the technical background to define pollution control objectives. Wayne County Department of Environment may also be considered as a sponsoring agency as they are one of the partners with the businesses throughout these pilot projects.

The RPO is the initial sponsoring agency until a sponsoring group or series of sponsoring groups can be found. As the initial sponsoring agency, the RPO will be signing the recognition pledge that a business will receive for being "Rouge Friendly."

**2.5 IMPLEMENTATION APPROACH.** Any number and types of small businesses may be included in the Rouge Friendly Business Program. To implement this program, the following specific requirements were established with input from the Business Roundtable:

1. The business is located in the Rouge River Watershed.
2. The business is sent a "recruitment package" (see *Appendix D*) which includes a Rouge Friendly Business Program Brochure, self-assessment form /Rouge Friendly action plan and BMP manual and response post card. The business completes the form themselves or requests a visit from the Rouge Project technical assistance team to assist with the self-assessment form.

The Rouge Project technical assistance team is composed of staff from the private sector with experience in pollution prevention. In addition, technical assistance members are all certified stormwater operators in the State of Michigan.

3. The business will be visited by the Rouge Project technical assistance team approximately 60 days from the date the self-assessment form/action plan was completed. This will allow the business time to make environmental improvements as identified on the action plan.
4. The Rouge Project technical assistance team will conduct the site visit with the business owner/manager to determine if the business has begun implementation of the action plan and is eligible for recognition as a Rouge Friendly Business.

The Rouge Project will be the “sponsoring” agency for the businesses in the pilot area and will provide recognition to those businesses that comply with all of the above. The key to this recognition program is a recognizable sticker that conveys the businesses success in environmental responsibility directly to their customers. The Rouge Project will provide the “Welcome Package” for all businesses that qualify (see *Appendix E*):

- Recognition award;
- Window decal;
- Stickers and magnets for distribution;
- Automotive business BMP poster;
- Customer awareness BMP poster; and
- Customer awareness brochures for distribution.

To evaluate program effectiveness in the pilot area, the Rouge Project has developed an exit questionnaire for all businesses that receive a recruitment package and site visit. The assessment form/action plan and BMP manual will be used in the pilot area and will be revised accordingly before distribution watershed-wide. Rouge Project staff are conducting water quality sampling in the storm drain, from the LI5 area, before and after the pilot source control program is implemented to determine if pollutant loads in the runoff from this area are changed by this source control program.

The Rouge Project technical assistance team visits are confidential in nature and the completed assessment form/action plan remains with the business. In addition, any action item discussed with the business owner/operator is not binding on that business. That is they are under no obligation to pursue any action item as these site visits are not being conducted by any regulatory agency personnel. For those volunteers that become a “Rouge Friendly Business,” there is an annual re-assessment procedure. To keep the designation as “Rouge Friendly,” a business must complete the self-assessment form/action plan each year and agree to a confirmatory site visit.

**2.6 GUIDANCE MATERIALS FOR SPONSORING AGENCIES.** Specific materials are currently under development.

**2.7 OUTREACH MATERIALS FOR BUSINESSES.** A set of outreach materials are being prepared for each of the four priority businesses plus a fifth set that is appropriate for any type of business (see *Appendix E*). Each set of material will include a:

- Standard letter of introduction that can be customized by the sponsoring agency;
- Brief brochure explaining business' role in controlling nonpoint source pollution;
- Poster demonstrating proper controls for their business activities;
- Self-assessment to be completed by the business;
- Fact sheets on appropriate control measures (BMPs);
- Outreach materials for the business to distribute to their customers; and
- Recognition and promotional materials for business that satisfy program criteria.

**3.0 ROUGE FRIENDLY NEIGHBORHOOD PROGRAM.** The Rouge Friendly Neighborhood Program is a pollution prevention initiative stressing environmental awareness to the general public within the watershed. Under this program, an appropriate organization will sponsor nonpoint pollution source controls within neighborhoods. The Wayne County Rouge Program Office, Friends of the Rouge (FOTR) and others will help this organization conduct outreach to the residents of the neighborhood. The following activities are planned:

- Workshops/community meetings;
- Educational programs/curricula coordination with neighborhood schools;
- Neighborhood “patrols” searching for evidence of pollution;
- Neighborhood clean up days;
- Distribution of educational materials (directly or through articles in existing neighborhood newsletters);
- Storm drain inlet stenciling programs;
- Displays/presentations at neighborhood events; and
- Participation in the Rouge River Watch and annual Rouge Rescue clean up.

The neighborhood will qualify as a “Rouge Friendly Neighborhood” depending on the degree of participation in these activities and visual observations that source controls are being practiced effectively by residents. The objectives of this program are to: 1) educate the general public regarding the Rouge River and how their daily activities effect the health of the River; 2) motivate them to change their behavior; and 3) involve local neighborhood groups, organizations and individuals in helping educate themselves and their neighbors regarding actions that they can take to help restore and protect the Rouge River.

**3.1 PROGRAM DEVELOPMENT METHODOLOGY.** The program was developed with the focus on residential homeowners minimizing nonpoint source pollution from their homes and neighborhoods. Three residential pilot areas were chosen for testing the program in the watershed. Two areas are in a separated sewer section of the watershed and one is in a combined sewer area. These pilot programs are in both Wayne and Oakland Counties to capture the diverse residential development and demographics this watershed represents.

After the pilot areas were chosen, pollutant sources were characterized and residential source controls identified. To implement the program, a sponsoring organization needs to be identified in that neighborhood. Rouge Project staff, FOTR and others will help this “sponsor” and conduct outreach to the residents.

Community presentations were made to the Golfview subdivision in Dearborn Heights and the Brightmoor Concerned Citizens in Detroit. The Rouge Project asked each community’s governing body to form a neighborhood focus group to help the Rouge Project tailor the Rouge Friendly program to the specific needs of that neighborhood. This neighborhood group will be the link to the community’s knowledge about the Rouge Project, the concerns

of the neighborhood, and the most prevalent pollutant-generating activities in the neighborhood. The following list summarizes the expectations the Rouge Project has for the neighborhoods governing body in each pilot area:

1. Choose 10 residents to serve as a focus group to review a pollution prevention survey and other Rouge Friendly materials. The focus group will help choose positive incentives that would motivate residents (i.e., signs, stickers, t-shirts etc.)
2. Revise and distribute a survey to evaluate residents' knowledge base of water quality problems/issues before the start of the program and again at the end of the program.
3. Distribute/support participation forms to residents to verify participation by residents before the start of the program, one possible incentive is a sticker/decal stating "I care" will be distributed with the form for residents to display.
4. Promote the program and its importance by word of mouth, articles in newsletters, meetings, etc.
5. Meet with the Rouge Project staff on a regular basis to help identify activities in the neighborhood that may cause pollution and ways to control those activities.

Continued progress on the Rouge Friendly Neighborhood Program development in the pilot areas will be reported in future documents.

**3.2 SUGGESTED POLLUTION CONTROL CRITERIA.** Rouge Project staff have conducted literature reviews and field reconnaissance surveys in two pilot study areas to visually quantify the nature and prevalence of pollutant sources in the pilot study areas. The following activities were identified as a potential source of nonpoint source pollution in the Golfview and Brightmoor areas:

- Increased runoff;
- Outdoor activities and materials such as landscape and structure maintenance;
- Animal/pet care; and
- Vehicle/equipment fueling, maintenance and repair.

Specific pollution control activities for each neighborhood will be selected based on a needs assessment of that neighborhood. The needs assessment will consist of an initial survey followed by community meetings. The pollution control topics are:

- Maintaining lawns and gardens
- Cleaning home and property
- Painting and remodeling your home
- Pet care
- Installation and repair of plumbing
- Changing car fluids
- Repairing cars
- Washing cars

- Cleaning up spills and leaks
- Installation/repair of driveways, walkways and patios
- Storage and disposal of household hazardous materials
- Maintaining a septic system
- Installation/repair of down spouts and gutters

**3.3 POTENTIAL SPONSORING ORGANIZATIONS.** The Rouge Friendly Neighborhood Program is designed to be carried out by responsible neighborhood organizations. Various groups could be “sponsoring” organizations, such as Chamber of Commerce, Church groups, Friends of the Rouge, and Local Units of Government. Sponsoring organizations need to be at a local level as each neighborhood has different quality of life issues. The “sponsor” needs to be aware of these issues and sensitive to the level of effort needed to obtain source control implementation. Wayne County Department of Environment may also be considered as a sponsoring agency as they are one of the partners with the community and FOTR throughout these pilot projects.

The RPO is the initial sponsoring agency until a sponsoring group or series of sponsoring groups can be found. As the initial sponsoring agency, the RPO will be distributing the technical and recognition materials that a neighborhood group will receive for being “Rouge Friendly.”

**3.4 IMPLEMENTATION APPROACH.** After the neighborhood surveys were returned, Rouge Project staff has worked closely with committees composed of neighborhood leaders in each pilot study area to review findings, expand the understanding about the nature and prevalence of each pollutant source, and establish pollutant control priorities for sources most frequently encountered. We found different concerns were a priority for each pilot area. These concerns translated into quality of life issues for each community, they are as follows:

- Illegal dumping;
- Abandoned housing;
- Rat control; and
- The diminishing of a neighborhood wetland.

These quality of life issues were the starting point for discussing additional source controls that a neighborhood could implement such as:

- Involving local businesses to participate in the Rouge Friendly Business Program;
- Practicing Rouge-friendly car maintenance;
- Lawn & garden maintenance;
- Participation in neighborhood clean ups such as “Clean Sweep”;
- Creation of a compost pile; and
- Maintaining a vacant lot near your home.

**3.5 OUTREACH MATERIALS FOR NEIGHBORHOODS.** There have been a number of outreach methods developed for the general public and particularly for neighborhoods. Methods of outreach have included workshops, flyers, radio, newspaper, television, and school programs. Some of these materials are:

**3.5.1 Advertisements.** Ads are being shown within the watershed theaters. One set promoted the project and Rouge Rescue, the annual Rouge clean up. Another set running through the summer promotes “Rouge Friendly” behavior.

**3.5.2 Brochures.**

What does Southeast Michigan Have...That No One Else In The Country Has? General Brochure describing Rouge River and the Rouge Project.

Making Your Yard, Car and Home “Rouge River Friendly” A Spring Primer

Tri-fold brochure providing helpful “do’s” and “don’ts” as citizens do their spring cleaning and begin lawn and garden work. Includes sections on household hazardous waste and auto maintenance.

Making Your Yard, Car and Home “Rouge River Friendly” A Fall Primer

Tri-fold brochure providing helpful “do’s” and “don’ts” as citizens prepare for winter. It includes a section on household hazardous waste and auto maintenance.

Would you Rather...?

Tri-fold brochure describing combined sewer overflows (CSOs) and how they impact the Rouge River. A description of the Rouge Project efforts to control CSOs is also included.

**3.5.3 Displays.** The Rouge Project has several different display board messages including:

- Project Overview
- CSO Construction Projects
- Neighborhood Pollution Prevention Activities

**3.5.4 Fact Sheets.**

The Watershed - Description and map of Rouge River Watershed.

Rouge River National Wet Weather Demonstration Project - Highlights major facts of the Project.

An Introduction to the Rouge Geographic Information System (GIS) - Explanation of what a GIS is and how it will be used by the Rouge Project.

Rouge Education Project - Water sampling and data sharing program for schools operated by FOTR.

Stormwater Management: Best Management Practices - Briefly describes problems associated with stormwater and BMPs to help minimize the impacts.

Household Hazardous Waste - Lists common household hazardous wastes and explains proper disposal techniques. Also includes alternatives to hazardous products.

Wetlands - Describes functions of wetlands and how they can impact the river system. Also includes a description of common wildlife found in wetlands.

Combined Sewer Overflows - Describes the problems of and possible solutions to the CSOs into the Rouge River.

### **3.5.5 DemoBulletins.** Eight page descriptions of individual topics.

Stormwater Management - In depth look at stormwater management problems and solutions.

Combined Sewer Overflows - Shows why CSOs were created and discusses the problems they create as well as the solutions being utilized by the Rouge Project.

What We Have Learned 1994 and 1995 - Contains results of the sampling program for the calendar years 1994 and 1995.

### **3.5.6 Posters.**

The Rouge - a 4-color illustration of a riverbank scene depicting man and nature co-existing along the banks of the Rouge River. Twenty-one features of the Rouge including flora, fauna, log jams, combined sewer outfalls, bank erosion and concrete channels are identified.

### **3.5.7 School Curriculum/Program.**

Rouge Education Project - a program operated by FOTR to integrate chemical testing, stream surveys, and calculation of pollution tolerance indices using benthic macro invertebrates. This program is for all grade levels according to their abilities. Data is shared between schools via a computer network and all schools are invited to the Rouge River Youth Congress each year to display the results of their efforts.

### **3.5.8 Storm Drain Stenciling Program.** FOTR operates a storm drain stenciling program in conjunction with their Rouge Friendly and Rouge Education Project activities.

**3.6 GUIDANCE MATERIALS FOR SPONSORING ORGANIZATIONS.** Most of the materials can be easily adapted for use by a Sponsoring Organization. A specific “train the trainer” manual is currently under development

## **4.0 MUNICIPAL BMPS.**

**4.1 CONTROLS FOR ROADWAYS AND PARKING LOTS.** Each municipality in every pilot area will be asked to participate by sweeping the roadways. Pollutant discharges to stormwater will be reduced by cleaning the pavement regularly with a combination of mechanical broom sweepers and vacuum sweepers.

**4.1.1 Program Development Methodology.** Programs are being established by the local municipalities to allow for regular sweeping of streets in the pilot study areas. Different cleaning frequencies, methods and equipment will be evaluated, as well as the effectiveness of different methods of parking restrictions during cleaning events. Litter will be regularly collected along streets, roadways, and trash receptacles in and near the pilot areas, and residents/business owners, and solid waste collectors will be educated on ways to prevent refuse from blowing from receptacles and collection vehicles.

**4.1.2 Suggested Pollution Control Criteria.** Rouge Project staff will ask each municipality to sweep the streets in the pilot area once a week. Parking restrictions will be established during sweeping periods and trucks will be weighed after the streets are swept to establish gross weights of material removed. The street sweeping will be scheduled after the “initial monitoring” is completed and education of the residents has started.

**4.1.3 Implementation Approach.** Currently under development.

**4.1.4 Guidance Materials.** Currently under development.

**4.2 CONTROLS FOR DRAINAGE SYSTEMS.** Each community in every pilot area will be asked to participate in catch basin and storm drain cleaning programs. These systems have the capacity to capture and temporarily store sediments and debris (e.g. drop inlets, sump pits and/or catch basins). Catch basins can trap and retain sediments up to 60 percent of their total basin volume. However, when a large storm event occurs, it can flush out much of this sediment and deliver it to the river. By cleaning out the drainage system on a regular basis, the amount of stormwater pollutants reaching the river system can be decreased.

**4.2.1 Program Development Methodology.** Programs are being established by the local municipalities to allow for regular cleaning of catch basins in the pilot study areas. Increased cleaning frequencies, methods and equipment will be evaluated.

**4.2.2 Suggested Pollution Control Criteria.** Bi-weekly cleaning of industrial inlets.

**4.2.3 Implementation Approach.** Currently under development.

**4.2.4 Guidance Materials.** Currently under development.

## **5.0 PILOT AREA: INDUSTRIAL/BUSINESS.**

### **5.1 PROGRAM DESCRIPTION.**

The pilot source control program will use an integrated set of BMPs implemented to the MEP for pollutant generating activities in a business district. The activities included in the pilot business area (LI5) will be as follows:

- Rouge Friendly Business Program;
- Pavement cleaning;
- Catch basin cleaning;
- Storm drain stenciling; and
- Detection and elimination of illicit storm sewer connections for businesses in the area.

**5.2 APPLICATION IN THE ROUGE WATERSHED.** The intent is to establish an approach document that local communities can use to guide source control efforts in their communities. This approach document will be based on lessons learned in the pilot study areas.

**5.3 LIVONIA PILOT PROGRAM (PILOT AREA LI5).** To implement source controls at the MEP the following steps were taken:

1. A meeting was held with City of Livonia Department of Public Works (DPW) and business representatives to discuss the MEP program and goals and ask for assistance.
2. A listing of businesses was generated from the Rouge Project GIS system; 205 business names were identified within the 373 acre pilot area.
3. This business listing was verified for contact name and address. The verification process took approximately two weeks and consisted of reviewing names in the Livonia Chamber of Commerce Business Directory, visual observation of the business, and personal knowledge.
4. A letter introducing the Rouge Friendly Business Program to the business community was mailed to each pilot area business by the Mayor of the City of Livonia.
5. Rouge Project staff followed up the mailing by telephone contact. One hundred seventy-seven businesses were contacted. The difference in the number contacted from the GIS listing was due to business closing and/or moving. Additionally, dentists and medical clinics were not contacted.

**5.3.1 Demonstration Activities.** The activities planned for this area include:

- Rouge Friendly Business Program;
- Illicit connection detection;
- Street sweeping;
- Catch basin cleaning;
- Storm drain stenciling; and
- Storm water monitoring - both before and after program implementation.

**5.3.2 Site Characteristics.** The pilot area in Livonia is designated as site LI5. This area is a single land use composed of an industrial park with a drainage area approximately 373 acres in size. There are approximately 205 businesses or industries within the drainage area. The types of businesses in this area include, but are not limited to: vehicle service, heavy manufacturing facilities, lawn/garden services, and print shops.

**5.3.3 Implementation Experience.** A letter was drafted and sent to the Mayor's office along with a listing of business addresses. (electronic and hard copy). A letter was sent out and signed by the Mayor of Livonia on July 5, 1996. One hundred seventy-seven businesses were contacted by telephone during the week of July 15-19, 1996. An introductory statement and questionnaire was prepared and used when making telephone contact with the businesses.

Out of 177 businesses called, 12 percent (21) were willing to participate in the program, 35 percent (62) indicated they would call back with further questions, and 19 percent (34) requested another call as the contact person was not available. Additional telephone calls will be made to 54 percent of the businesses in this area followed by specific information on the Rouge Friendly Business Program. Pavement cleaning and catch basin cleaning have not yet been implemented, but are planned for early 1997.

Future efforts include:

- additional mailings to the 54 percent of businesses that indicated some level of interest;
- site visits to businesses that want to participate;
- possible workshop for this area; and
- street sweeping and catch basin cleaning.

**5.3.4 Program Effectiveness Evaluation.** The various parties responsible for implementing the program (i.e., Rouge Project staff, County and municipal staff, etc.) will receive appropriate forms, questionnaires, and other evaluation tools for reporting levels of participation in outreach activities. Additionally, feedback from attendees of these activities will be recorded and any actions taken to implement source controls and verification of visual signs of effectiveness. In addition, municipalities will record quantitative measures of materials removed from drainage systems and swept from the streets. Rouge Project staff will conduct follow up field reconnaissance surveys to detect visual changes in the pilot areas.

Finally, Rouge Project staff will sample water quality in the storm drain in each pilot area. Sampling and monitoring will be conducted before and after the pilot source control program is implemented to determine if pollutant loads in runoff from these areas is changed by the source control program. The sampling and monitoring program is being conducted according to the protocols identified in the Rouge Project field sampling plan "Non-Point Source Storm Event Monitoring Program" (RPO-NPS-FSP11).

**5.3.5 Pre/Post Program Water Quality Monitoring.** The pre-program water quality monitoring has been completed in this area and results will be summarized in the next progress report. See *Appendix F* for the Summary of Source Control Monitoring Events for all pilot areas.

**5.3.6 Costs.** This information will be compiled and presented in a future report; complete cost data is not yet available.

**5.4 CSO AREA.** Upon careful examination of 17 business areas in the watershed that are served by a combined sewer, there were no viable candidates for a pilot study area. The process used was the following:

- Examination of the watershed GIS maps to determine the overlaps of industrial land use areas and combined sewer drainage areas. The overlap areas were considered potential pilot study areas.
- Sewer maps were obtained of each area to determine if a specific sewer system covered a large enough land area for an effective study.
- Once a potential area was identified, a site visit was conducted to pinpoint the location for monitoring purposes. Visual observations were made of sampling location, size of the sewer caps for insertion of sampling equipment, how many and what types of businesses were in the area.
- The sampling and monitoring team then made the final assessment if the potential area was indeed viable.

The types of problems encountered were:

- Sewer drainage areas did not cover a large enough area.
- Sewer caps were off-set from the actual sewer so sampling equipment could not be placed due to space constraints.
- Sewer entrances were located in the middle of busy streets causing potential dangerous situations for sampling purposes.
- Not enough viable businesses were within the drainage area, only two or three active businesses were found in most areas.
- Too many pipes, three or four, leading into the sewer causing turbulence.

A sampling and monitoring program in a CSO area is not feasible in the Rouge River Watershed. However, the elements of the Rouge Friendly Business Program could be implemented watershed-wide. Awareness and education of nonpoint source pollution can have a positive impact on the amount and types of pollutants that the local waste water treatment plant encounters. Program effectiveness can be measured by success indicators such as surveys, number of businesses awarded a Rouge Friendly Business sticker, and business recommendations.

## **6.0 PILOT RESIDENTIAL AREA SOURCE CONTROL PROGRAMS.**

**6.1 PROGRAM DESCRIPTION.** We expect to pilot the Rouge Friendly Neighborhood Program in each selected area along with municipal support providing street sweeping and catch basin cleaning to the maximum extent practicable.

**6.2 APPLICATION IN THE ROUGE WATERSHED.** The intent is to establish an approach document that local communities can use to guide source control efforts in their communities. This approach document will be based on lessons learned in the pilot study areas.

**6.3 DEARBORN HEIGHTS PILOT AREA (Pilot Area D7).** The Golfview subdivision in Dearborn Heights was chosen as a pilot area. Rouge Project staff met with the community group twice and a focus group emerged. Rouge Project staff met with this focus group and determined that the best avenue of communication would be the subdivision newsletter. The focus group reviewed the survey form and distributed it in the February 1996 newsletter.

**6.3.1 Demonstration Activities.** A pollution prevention survey was included in the Golfview Manor newsletter. Of the approximately 500 surveys distributed, 105 surveys were returned. With a response rate of 21 percent, this survey was statistically significant. Below are the major issues extracted from the survey.

- Seventy-eight percent thought the Rouge River was polluted or very polluted, but only 10 percent thought the river was getting worse.
- Sixty percent incorrectly answered or didn't know that storm drains lead directly to the Rouge River. However, 77 percent understood that sanitary sewers go to the waste water treatment plant (WWTP).
- Twenty-six percent correctly answered that industry pollutes the Rouge the least. Fifty-six percent thought stormwater pollutes the least.
- Seventy-eight percent maintain their own lawn. There is an even distribution among those who fertilize their lawns 1-2 times, 3-4 times and more than 4 times.
- Seventy-seven percent don't change their own oil.
- Sixty-six percent take their car to a car wash instead of washing it themselves.
- Ninety-six percent claim they know what a household hazardous waste is, and 98 percent correctly identified the household hazardous waste. However, 53 percent don't properly dispose of their wastes.
- Following are issues in order of importance to the subdivision:
  1. Illegal dumping
  2. Household hazardous materials
  3. Abandoned buildings
  4. Overuse of pesticides

5. Recycling
6. Overuse of fertilizers
7. Composting
8. Frequency of street sweeping and storm drain cleaning
9. Do-it-yourself car repair
10. Other

- Seventy percent are committed/very committed to make small changes to prevent pollution.
- Seventy-seven percent have three or less people in the household and 68 percent have no children.
- The gender is almost evenly distributed.
- Seventy-five percent have had some higher education by attending some college, completing college or attending graduate or professional school.

This survey shows that this neighborhood is willing to make a change in their lifestyle to improve the condition of the Rouge River. It is significant that 60 percent of the residents surveyed did not know that the storm drains lead directly to the Rouge River. This is a critical message that our public education efforts need to focus on. Until the residents understand how the pollutants get into the river, they cannot know what behaviors they need to change.

**6.3.2 Site Characteristics.** This pilot area, D-7, is a single land use made up of approximately 20 acres of residential development. This site is located near Inkster Road and Warren Avenue in Dearborn Heights. The outfall for this area drains into the Middle-3 subwatershed of the Middle Rouge River.

**6.3.3 Implementation Experience.** The neighborhood association was initially contacted by letter on September 27, 1994. A presentation was made to the Golfview Manor board of directors in July 1995, with an article appearing in the association newsletter in October of 1995. The survey was distributed in the January 1996, newsletter to 525 residents. The survey results were presented to the residents at the regular association meeting by Rouge Project personnel and the Golfview organizer. Meetings were held with Golfview representatives to plan activities for the neighborhood. The following is a description of these activities:

- Riverfest planning meeting with residents on May 20, 1996. The event was planned for June 15 at a nearby park. A packet of information was distributed to residents which included Rouge Rescue and Riverfest flyers; spring Primers and forms to participate in Riverwatch activities.
- June 1996: Riverfest was canceled due to lack of interest. Few residents participated in Rouge Rescue activities. A meeting was held with Rouge Project

staff and FOTR to discuss future activities. It was decided that the program needed to offer incentives to encourage residents to participate. It was also agreed that the Rouge Project and FOTR would attend the July 20 Golfview Manor picnic to distribute materials, answer questions and display Rouge information. It was also agreed we would begin storm drain stenciling activities and do a door-to-door survey of the neighborhood.

- July 20, 1996: Education Day - this was combined with the annual picnic to talk to residents about the Rouge Friendly program and pollution prevention activities. A small display was set up and hand out materials were brought. Approximately 20 people approached and asked about the program. Most, if not all, did hear of the program, which indicates that the message is being directed through the right channel.

**6.3.4 Preliminary Assessment of Benefits.** The neighborhood residents have heard about the Rouge Project and understand that they are part of the Rouge Friendly Pilot Program. However, there is a general lack of interest in getting participants involved in storm drain stenciling and other activities. Some of the implementation problems are due to personal problems of the subdivisions focus group (poor health).

**6.3.5 Pre/Post Program Water Quality Monitoring.** This pilot area is being done as a paired watershed. Pre-monitoring is complete and post - monitoring may be started as early as October of 1996. Results will be summarized in the next progress report. See *Appendix F* for sampling dates.

**6.3.6 Costs.** This information will be compiled and presented in a future report; complete cost data is not yet available.

**6.4 BRIGHTMOOR PILOT AREA (Pilot Area B5A and B5B).** The Brightmoor neighborhood is an urban area located in a combined sewer area. The area was developed in the 1920s as an area for working class families. Most houses are frame, with the newer areas of the neighborhood of brick construction. In the past 15 years this area has deteriorated. The business strip, located on Fenkell Avenue, is now dotted with boarded, vacant buildings, graffiti, trash and debris. Whole blocks of residential land are vacant and overgrown. Illegal dumping is abundant and dozens of cottage industry auto repair/chop shop businesses are on residential streets. When discussing the Rouge Friendly program with residents, there was a concern expressed that it may be difficult to promote such a program when there is so much abuse and neglect in the area where they live. A partnership with the schools, business community and local government was suggested.

**6.4.1 Demonstration Activities.** A pollution prevention survey was included in the area newsletters. Of the approximately 2,200 surveys distributed, 131 completed surveys were returned. Since there were significant distribution problems with a number of the surveys,

a statistical analysis cannot be performed; however, Rouge Project staff feel that the survey results are representative of this neighborhood. Below are the major issues extracted from the survey:

- Seventy-eight percent thought the Rouge River was polluted or very polluted, and 20 percent thought the river was getting worse.
- Thirty-eight percent incorrectly answered or didn't know that storm drains lead directly to the Rouge River. However, 56 percent understood that sanitary sewers go to the WWTP.
- Eighteen percent correctly answered that industry pollutes the Rouge River the least. Sixty-six percent thought stormwater pollutes the least.
- Eighty-seven percent maintain their own lawn. There is an even distribution among those who never fertilize their lawns and those that fertilize 1-2 times per year.
- Seventy-five percent don't change their own oil.
- Eighty percent take their car to a car wash instead of washing it themselves.
- Ninety-two percent claim they know what a household hazardous waste is, and 73 percent correctly identified motor oil as a household hazardous waste. However, 54 percent don't properly dispose of their wastes.
- Following are issues in order of importance to the subdivision:
  1. Abandoned buildings
  2. Illegal dumping
  3. Household hazardous materials
  4. Frequency of street sweeping and storm drain cleaning
  5. Recycling
  6. Do-it-yourself car repair/illegal car lots on residential streets
  7. Overuse of garden/lawn pesticides
  8. Overuse of fertilizer
  9. Composting
- Eighty-three percent are committed/very committed to make small changes to prevent pollution.
- Thirty-one percent have 2 people in the household with fairly even distribution among the one, three, and four people living at the residence (17 percent)
- Fifty-eight percent have no children, 13 percent have one child and 15 percent have two children.
- Seventy-one percent of the respondents were female.
- Thirty-six percent were between 31 and 45 years old. The next highest was 26 percent between 40 and 60 years old.
- There was no dominant figure in education. The highest percentage was 37 percent have had some college, followed by 27 percent finishing high school.

This survey shows that a large portion of this neighborhood is willing to make a change in

their lifestyle to improve the condition of the Rouge River and their neighborhood. This neighborhood has different quality of life issues than the other pilot areas with abandoned buildings and illegal dumping being at the top of their list.

**6.4.2 Site Characteristics.** This combined sewer pilot area is a mixed land use area with the majority of land being residential. The entire pilot area is bounded by Evergreen on the east, Puritan on the north, Fullerton on the south and Telegraph on the west. There are two monitoring stations located within this area, designated as B5A and B5B. The areas being monitored are approximately 25 acres.

**6.4.3 Implementation Experience.** A number of informal discussions with the Brightmoor Concerned Citizens and Community Center personnel took place throughout 1995. A Rouge Friendly program presentation was made to the Brightmoor Concerned Citizens board on January 17, 1996. Subsequent meetings were held during February and March to discuss the survey, interactions with FOTR and other ways to get residents involved (e.g. Riverfest and Rouge Rescue). The Rouge Project and FOTR made a joint presentation to the general membership at the May meeting. The general membership was enthusiastic about the program. A plan of action was established with regard to the Rouge Friendly Neighborhood Program, it included government responsibilities and community responsibility. They are as follows:

#### **6.4.3.1 Action Plan for Brightmoor**

- Urban gardens on vacant lots: recognition of efforts
- Composting education
- An attempt to get rid of the massive log jam at the confluence of the Upper and Main Rouge in Eliza Howell Park
- A tour of the area for Judge Norma Dotson (environmental court judge)
- Lawn signs that read "I support the Rouge Friendly Program"
- A Brightmoor Rouge Friendly Business Program
- A renter's workshop to educate tenants about their rights and responsibilities and the responsibilities of landlords
- Educational materials to be distributed in the newsletter

#### **6.4.3.2 Government Responsibilities**

- Target tax delinquent landlords
- Enforce environmental laws/ordinances
  - Illegal dumping
  - Unregistered/abandoned cars
  - Rental property inspections/rental registration
  - Open and dangerous buildings
  - Overgrown weeds

- Maintenance of street lights
- Maintenance of vacant lots

### **Community Responsibilities**

- “Take care of your piece of Brightmoor”
- Residents willing to research tax delinquencies, property ownership, etc. to help city and county do its job
- “Ride it and report it” - residents would be eyes and ears of the community
- Residents and businesses would take care of their yard and homes
- Residents that take care of nearby vacant lots would be willing to continue

Additional community activities are as follows:

- June 1, 1996 - held Rouge Rescue at Eliza Howell Park and a Riverfest featuring children’s activities, tour of the CSO basin and conducted storm drain stenciling.
- June 13, 1996 -Held Rouge Friendly meeting with core group of Brightmoor residents and developed goals for the neighborhood.
- June 19, 1996 - First Brightmoor Business Association meeting to discuss Rouge Friendly practices and to explain Rouge Friendly pilot in Brightmoor. Business owners expressed their concerns about illegal dumping and crime.
- June 29, 1996 - Toured neighborhood with Brightmoor residents to see condition of neighborhood and to also look for Rouge Friendly gardens for promotional campaign.
- July 10, 1996 - Second Brightmoor Business meeting. Business owners expressed interest in participation in Rouge Friendly Business program.
- July 12, 1996 - Met with Brightmoor core group to discuss storm drain stenciling activities and plans to expand core group to include other interested activists. Also planned to have Detroit Parks representative at meeting to discuss Eliza Howell Park grant, and to have draft lawn sign.
- August 1, 1996 - Met with core group, larger meeting rescheduled for Wednesday, August 21. Tour of Brightmoor with Judge Norma Dotson slated for August 19.
- August 7, 1996 - Third Brightmoor Business Owners meeting. A presentation was made about Wayne County’s new illegal dumping program. Continued discussion about the possibility of closing alleys to prevent dumping. Tour of Brightmoor with residents to find examples of environmental violations for tour with Judge Dotson.
- August 19, 1996 - Toured Brightmoor with Judge Dotson.
- August 21, 1996 - Discussed goals and time line for Rouge Friendly Program with enlarged group. Scheduled presentation to general membership for September 18.

**6.4.4 Preliminary Assessment of Benefits.** Brightmoor is a community that has significant quality of life issues and the residents are willing to make extensive personal efforts to bring about change. A number of efforts are already ongoing, such as “Paint the Town” and “City

Tire Sweeps". The Rouge Friendly Program has been used as a catalyst to: 1) get all community groups together to discuss common problems, 2) get the business community re-involved, 3) get various governmental agencies (i.e. police precincts, Mayors community office, City of Detroit DPW, City of Detroit Parks and WCDOE involved in discussions with the community group.

**6.4.5 Pre/Post Program Water Quality Monitoring.** This pilot area is being monitored in two separate blocks. Pre-monitoring has started and will continue through fall of 1996. Results will be summarized in the next progress report. See *Appendix F* for sampling dates.

**6.4.6 Costs.** This information will be compiled and presented in a future report; complete cost data is not yet available.

**6.5 WEST BLOOMFIELD PILOT AREA (Pilot Area WB1).** West Bloomfield Place (WB1) is the third pilot area selected. This is the second residential source control pilot area served by separated sewers. This neighborhood in Oakland County was chosen as a representation of the diverse demographics of the watershed. A previous site in Oakland County near Walnut Lake was first considered, however, it could not be sampled due to the setup of the drainage system. The Walnut Lake neighborhood was served by drainage ditches that fed directly into the lake, with very few enclosed pipes, making sampling and monitoring difficult.

**6.5.1 Demonstration Activities.** The Rouge Project approached West Bloomfield's Environmental Management Planner and held discussions about the Rouge Project and the Rouge Friendly Neighborhood Program in particular in the Summer of 1995. The president of West Bloomfield Place was first approached, by telephone, in March of 1996. This was followed up by an informational mailing in April 1996. By May 10, 1996, the Rouge Project had obtained permission to install samplers in the area. To date, there has not been a meeting with the executive board or the general membership of this subdivision to further explain the program.

**6.5.2 Site Characteristics.** This pilot area, WB1, is a single land use made up of approximately 34 acres of low and high density residential development. This site is located north of 14 mile road between Haggerty and Halsted Road in West Bloomfield. The outfall for this area drains into a wetland and ultimately into the Upper-1 subwatershed of the Upper Rouge River.

**6.5.3 Implementation Experience.** None to date.

**6.5.4 Preliminary Assessment of Benefits.** None to date.

**6.5.5 Pre/Post Program Water Quality Monitoring.** Pre-monitoring has started and will continue through Fall of 1996. See *Appendix F* for sampling dates.

**6.5.6 Costs.** Cost information has not yet been compiled.

**6.6 WATERSHED-WIDE IMPLEMENTATION CONSIDERATIONS.** Based on the information gathered to date, it will require a multimedia public education campaign to generate enough interest in the Rouge Friendly and Rouge Friendly Business Programs to successfully implement watershed-wide. It seems that the more “quality of life” issues a neighborhood faces, the more interest they have in getting involved in these programs. The neighborhoods with less quality of life issues talk about their interest in “Cleaning up the River” but have not done much to date. Clearly communicating the message, “Become Rouge Friendly Neighborhood and make your home and neighborhood a more enjoyable place to live,” will increase the interest.

The pollution prevention information distributed through community newsletters seems to be working well and this approach should continue. In addition, each community or neighborhood needs to identify a “champion” to forward the public education and involvement efforts.

**7.0 CONCLUSIONS.** This section will be completed when further progress is made.

**APPENDIX A**  
**SIGNIFICANT POLLUTANT SOURCES**

## Significant Pollutant Sources in the Rouge River Watershed

C o m m e r c i a l	Land Use							Address in Pilot Study?
	For est R u r a l	Ur ba n O p e n	A g r i c u l t u r a l	R e s i d e n t		R o a d w a y	C o n s t r u c t i o n	
Pollutant Source								
Air Deposition	●	●	●	●	●	●	●	No
Increased Runoff				●	●	●		Partially
Destabilized Soils		●	●				●	No
Pavement and Structure Wear/Corrosion				●	●	●		No
<b>Outdoor Activities and Materials</b>								
Vegetation/Landscape Maintenance	●	●	●	●	●	●	●	Yes
Structure Maintenance				●	●			Yes
Pavement Maintenance						●		Yes
Animal/Pet Care		●	●	●				Yes
Work Areas					●			Yes
Storage, Loading and Unloading					●		●	Yes
Waste Disposal				●	●		●	Yes
<b>Vehicles and Equipment</b>								
Wear, Leaks and Emissions					●	●	●	Partially
Fueling, Maintenance and Repair				●	●		●	Yes
<b>Illicit Discharges</b>								
Littering		●				●	●	Yes
Illicit Connections				●	●			Yes
Illegal Dumping		●		●	●	●	●	Yes

**APPENDIX B**  
**SITE SUMMARY MAPS**

**APPENDIX C**  
**BUSINESS ROUNDTABLE MEETING NOTES**

## **APPENDIX D**

### **RECRUITMENT PACKAGE FOR ROUGE FRIENDLY BUSINESS**

- **Rouge Friendly Business Program Brochure \***
- **Example Cover Letter**
- **Automotive Services BMP Manual and Assessment form**
- **Response Post Card \***

**\* This item can be found in the attached folder.**

## **APPENDIX E**

### **WELCOME PACKAGE FOR ROUGE FRIENDLY BUSINESS**

- **Recognition Award/Pledge**
- **Window Decal \***
- **Stickers and Magnets for Distribution \***
- **Automotive Awareness BMP Poster \***
- **Customer Awareness BMP Poster \***
- **Customer Awareness Brochures for Distribution (Spring Premier) \***

**\* This item can be found in the attached folder.**

**APPENDIX F**  
**SUMMARY OF MONITORING EVENTS**

### Summary of Monitoring Events

Sample Date	Residential			CSO		Industrial
	Dearborn Heights		West Bloomfield	Brightmoor		Livonia
	Control	Test		Lamphere North	Lamphere South	
11/21/94						x
12/16/94						x
1/19/95						x
02/2/95						x
03/05/95						x
03/07/95						x
04/27/95						x
05/11/95						x
06/27/95						x
06/29/95						x
07/14/95						x
08/02/95						x
08/09/95						x
08/13/95						x
10/20/95		x				
10/27/95	x	x				x
11/01/95		x				
11/11/95	x	x				
11/27/95	x	x				
12/14/95	x					
04/29/96	x	x				
05/21/96	x	x				
06/03/96	x	x				
06/09/96			x			
06/12/96			x			
06/18/96			x	x	x	
07/24/96				x	x	
07/29/96				x		