Louisville and Jefferson County
Metropolitan Sewer District (MSD)

Proposes To

REINVENT LOCAL PRETREATMENT PROGRAM
TO ACHIEVE FURTHER WATER QUALITY IMPROVEMENT

I. INTRODUCTION

A. Description of the Facility/Community/Geographic Area

**MSD OVERALL.** Jefferson County is located in north central Kentucky, bordering the Ohio River. The area of Jefferson County is approximately 375 square miles. According to the most recent census, the population of Jefferson County is 665,000. This represents approximately 18% of the Commonwealth’s population. Louisville, the Commonwealth’s most populous city, is located in Jefferson County. Eleven watersheds are within or partially within Jefferson County. Land use around these watersheds ranges from predominantly urban to mostly rural.

MSD is a regional public utility, formed in 1946 to operate and maintain Louisville’s combined sanitary and storm sewer system and sanitary-only sewer system. Today, MSD manages a broad array of programs designed to protect and enhance the environment, including: an expanding wastewater collection and treatment network; a comprehensive public stormwater drainage system for most of Jefferson County; flood management and control; the local Pretreatment Program; the LOJIC computerized mapping and geographic information system; and other programs, including stream monitoring and hazardous materials control.

MSD’s Executive Staff and Board have shown a strong commitment to the improvement of our environment. MSD has adopted the following to define the Agency’s vision:

<table>
<thead>
<tr>
<th>Putting our customers first:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Water</td>
</tr>
<tr>
<td>Green Environment</td>
</tr>
<tr>
<td>Growing Community</td>
</tr>
</tbody>
</table>

MSD owns and operates 42 wastewater treatment plants (WWTPs) throughout Jefferson County. Each of these WWTPs have their own KPDES permits, allowing direct discharge of the treated effluent to a receiving stream, but only four of the treatment plants have permitted commercial/industrial discharges in their collection systems. Therefore, MSD manages the Pretreatment Program for these four regional WWTPs. A summary of the Pretreatment Program implementation procedures is presented in the “Pretreatment Program Overview” document included in Appendix A. Some statistical data about these four WWTPs and their collection systems are summarized in Appendix B.

**STUDY AREA.** This project will focus on one watershed area – the Chenoweth Run watershed – and the Pretreatment Program as it is applied to one WWTP – the Jeffersontown WWTP. A map of the Chenoweth Run watershed and the Jeffersontown sewershed is shown in Appendix C.

**Watershed Description and Issues.** Chenoweth Run, a tributary of Floyds Fork, flows approximately nine miles through the eastern portion of Jefferson County, draining a 17 square mile area. Its designated uses are primary contact recreation, secondary contact
recreation, and warm water aquatic habitat. Chenoweth Run does not currently support recreational use. The Jeffersontown WWTP, is located at mile 5.2 on Chenoweth Run and marks the dividing point between the upper and lower watershed where predominant land use and water quality differ significantly. The Jeffersontown WWTP discharges to the Chenoweth Run receiving stream, which is considered by the Kentucky Division of Water to be a “no-flow” stream at this point. (The Jeffersontown WWTP, therefore, is subject to stringent water quality criteria limits.) Two other relatively small WWTPs (Chenoweth Hills and Lake of the Woods) are located on Chenoweth Run tributaries and serve individual developments.

The seven square mile drainage area above the Jeffersontown WWTP is densely developed and includes residential areas, the Bluegrass Industrial Park and much of downtown Jeffersontown. The rest of the drainage area downstream of the Jeffersontown plant is much less developed than the upper watershed, with some areas still in agricultural use. However, subdivisions have been developed in the lower watershed and more are either under construction or planned.

The Division of Water’s 1996 report “Water Quality Study of Chenoweth Run,” identified some important issues and concluded:

“Data collected for this study and previous studies show a variety of water quality problems in Chenoweth Run. During low to moderate flows, it appears that high phosphorus concentrations are severely impacting both Chenoweth Run and Floyds Fork downstream of Chenoweth Run. The primary source of this phosphorus is the Jeffersontown WWTP. At higher flow conditions, runoff from urban, industrial, and construction areas increases sediment concentrations, contributes to metal criteria violations, and adds nutrients and other chemicals.”

A June 22, 1998 Kentucky Division of Water (KDOW) report referenced the Chenoweth Run stream in its update regarding “Ongoing Projects from Previous 303(d) Reports”. That report noted that the Chenoweth Run stream was listed (as recent as the 1996 303(d) list):

“…because it was not meeting the aquatic life or swimming use along its nine mile length. Poor water quality in Chenoweth Run is also impacting its receiving stream, Floyds Fork, which has been the subject of previous 303(d) reports. The KDOW applied for and received a U.S. EPA TMDL [Total Maximum Discharge Load] grant to conduct a study of the stream and recommend solutions. The report was published in June 1996 and submitted to EPA for approval as a TMDL. The U.S. EPA approved this project as a TMDL in September 1997. Three measures are needed to achieve standards:

1. phosphorus removal at the 4 million gallons per day (MGD) WWTP;
2. creation of riparian zones and tree planting to provide shade over the stream; and,
3. effective storm water management controls.

The KDOW will be working with local agencies and citizen groups to implement these solutions. Phosphorus removal will be required at the next issuance of the discharge permit for the Jeffersontown facility in June 2000.”

MSD recently added a phosphorus removal system at the J-town plant that is expected to reduce phosphorus in the WWTP effluent to less than 1 mg/l. MSD is concerned,
however, that even with phosphorus reduction, algae problems in the stream may continue because the stream is nitrogen limited. Therefore, MSD plans to investigate other options for addressing the algae problem such as creation of additional shade.

This XL project will use non-traditional Pretreatment Program controls in conjunction with stakeholder involvement to achieve greater environmental benefit for the Chenoweth Run Watershed. For example, creating riparian zones and planting trees could be beneficial, and even though these activities are not directly within MSD’s jurisdiction for this area, it is possible that water quality issues might be partially addressed through the XL project via industrial agreements that involve such restoration activities.

Significant Inflow and Infiltration (I/I) exists in the Jeffersontown sewer system. As a result, MSD initiated an aggressive sanitary sewer remediation program to address the problem. The plan includes upgrade to the Jeffersontown WWTP and various Sewer and Manhole Rehabilitation Projects throughout the system over the next five years. The estimated cost of this program is over 11 million dollars within this area alone. The specifics of the program are discussed in MSD’s annual Sanitary Sewer Overflow Abatement and Elimination Plan, which KDOW is currently reviewing.

A report prepared for MSD entitled “Water Quality in Jefferson County, Kentucky—A watershed synthesis report, 1991 – 1998” will soon be published. That draft report presented results regarding samples collected from Chenoweth Run (at Gelhaus Lane, approximately three miles downstream of the WWTP discharge). That data indicates that less than six percent of the total samples were in violation (42 of 721). Approximately 88 percent of these violations were due to fecal coliform bacteria violations. But it should be noted that MSD collected almost all of these samples during low flow conditions. Very little high flow data exists for assessing nonpoint source pollution. MSD plans to collect data from the Chenoweth Run stream during high flow conditions (as a part of another project). This data will be useful in trying to better understand the true water quality issues of the stream.

**Sewershed Description and Issues.** The Jeffersontown sewer collection system serves over 5,000 residential customers (51 percent of flow volume), over 700 commercial customers (44 percent of flow volume), and 39 industrial customers (five percent of flow volume). Water company flow volumes have increased by approximately 10 percent over the last five years. Seven of the industrial customers are classified as Significant Industrial Users (SIUs), three of which are Categorical (“Categorical industries” are those which are subject to National Categorical Pretreatment Standards. These are regulations containing pollutant discharge limits promulgated by the EPA in accordance with Section 307(b) and (c) of the Act (33 U.S.C. 1347) and 40 CFR 403 which applies to a specific category of industrial users.). Twenty-two (22) of the customers have General Permits, and MSD does not currently permit the remaining industrial accounts. Most of the commercial/industrial dischargers are located in the Bluegrass Industrial Park. The industrial park directory notes that it is “the second largest industrial complex in the world by employment.”

The Significant Non-Compliance (SNC) rate for the Jeffersontown dischargers during the July to December 1998 period is 22 percent. This SNC rate is based on the fact that two low flow SIUs each exceeded the specified criteria for one pollutant in the reporting period.

**Treatment Plant Description and Issues.** The Jeffersontown WWTP is a secondary treatment plant with a design flow of 4 MGD, and wet weather flows approaching 20 MGD. Construction upgrading and improving the plant was recently completed. Major construction activities include: adding Ultraviolet (UV) Disinfection technology; providing
wet weather treatment capabilities such that plant will treat excessive wet weather flows (up to 20 MGD, screening/grit removal and primary treatment) prior to UV Disinfection and prior to discharge; a new bar screen; a new influent parshall flume (for flow measurement); and phosphorus removal (aluminum sulfate) technology. MSD trucks Jefferson town WWTP biosolids to its Morris Forman WWTP for treatment. The Jefferson town WWTP is in full compliance with its KPDES permit.

The Chenoweth Run watershed and Jefferson town sewer collection system are proposed as a test site for this XL project for several reasons, including but not limited to those listed below.

♦ MSD wants to develop and test out the methodology of this pilot project in a relatively small system, learn the lessons, and then transfer the methodology to the Pretreatment Program in its Hite Creek, West County, and Morris Forman regional WWTP systems. Jefferson town industries’ and the WWTP’s compliance records are good, so it is a relatively “safe” environment to test the reinvention initiatives;

♦ MSD received a 104(b)(3) Grant from US EPA for the development of Pretreatment Performance Measures in the Jefferson town system. This work, which began in September 1998, is essentially the first phase of the XL project;

♦ Along with MSD, two environmental groups are active in the XL project watershed: the Association of Chenoweth Run Environmentalists (ACRE) and the Floyds Fork Environmental Association (FFEA) are working to protect the Chenoweth Run stream and increase the awareness of its value. The support and interest of these stakeholder groups will be invaluable in an XL project which requires innovation and commitment.

♦ Because nearly all of the Jefferson town sewer collection system is located within the Chenoweth Run watershed, MSD has chosen to focus wet weather and pretreatment study efforts in the same basin. For instance, MSD is also proposing a project (separate from the XL project) to develop a computerized watershed-simulation model that MSD can use to optimize management decisions relating to water quality and quantity in the Chenoweth Run drainage basin. The results of this study will provide a basis for understanding the dominant processes controlling water quantity and quality in the streams of the Chenoweth Run Basin. Therefore, MSD will benefit from the overlap of these two environmental efforts.

B. Contact Information

For further information regarding this proposal, contact:

Sharon K. Worley, P.E., Project Manager
Metropolitan Sewer District
700 West Liberty Street
Louisville, KY 40203

Phone: (502) 540-6464
Fax: (502) 540-6563
E-mail: Worley@MSDLOUKY.org

MSD Homepage at www.msdlouky.org.

II. PROJECT DESCRIPTION

A. Summary or Overview of Project

The National Pretreatment Program is primarily focused on procedural aspects of regulating indirect dischargers rather than on evaluating whether the environment (water
quality) is being positively or negatively impacted. This focus is largely due to the lack of a
direct link to environmental endpoints. EPA and states evaluate pretreatment programs on
the percent of industries in significant non-compliance (SNC). Significant Industrial Users
(SIUs) are in SNC if a certain fraction of their wastewater samples have pollutants at
concentrations above set standards or if they submit monitoring reports late.

MSD’s Pretreatment Program, the largest program in the Commonwealth of Kentucky
and in EPA Region IV, is an example of a program that, based on “programmatic and
administrative accomplishments,” is very successful. MSD’s Pretreatment Program SNC
has been reduced from approximately 44 percent to less than EPA’s (informal) 10 percent
target since the early 1990s. The following table shows the downward trend in SNC:

But, reducing SNC does not necessarily improve receiving stream quality. In fact, MSD
manages its Pretreatment Program more rigorously than is required by the
WWTP’s KPDES permit, but there are still no direct measures of the program’s
effectiveness for the goal of clean water.

In many cases, MSD routinely collects more samples from industries than regulations
require because MSD is concerned that the minimum required three samples per year (two
by industry, one by MSD) from SIUs is not a sufficient basis for determining environmental
non-compliance (i.e. SNC). So, MSD, in an effort to determine whether an IU is really
consistently in violation, routinely conducts more sampling events.

In some cases, if facilities were not defined as SIUs (and therefore not subject to SNC),
MSD would reduce monitoring based on a long history of environmental compliance. But
the current regulations require some monitoring regardless of the potential for
environmental impact. Regulations require Categorical Users, for instance, to monitor for
all the pollutants regulated under that category, even though they demonstrate that
those pollutants are not present. This results in a needless expense by both industry
and MSD. Also, low flow, low impact Categorical Users exist for which MSD expends
significant resources for inspection and sampling activities while their potential for affecting
water quality may be minimal.
But, even with a considerable amount of industrial monitoring, the data is of limited value because it is collected without relating it to other possible pollutant sources in the system. The CURRENT pattern for industrial and WWTP monitoring in the Jeffersontown system is shown on the following chart:

<table>
<thead>
<tr>
<th>#</th>
<th>COMPANY NAME</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adam Matthews</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Beechmont Press</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Brandeis Machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Courier Carton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Cummins Cumberland Inc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Derby Cone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7</td>
<td>Dispenser's Optical</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>JONES PLASTICS &amp; ENGINEERING</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Southern Standard Carton</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>WAUKESHA CHERRY-BURRELL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>WINSTON PRODUCTS</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Midland Communications Pkg</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Clarke Detroit Diesel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Ryder Truck &amp; Car Rental</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>WHITE CASTLE DISTRIBUTING</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>INNOVATIVE ELECTRONIC DESIGN</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>H L LYONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>CONDEA VISTA CO</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>DCE, INC</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Jeffersontown WWTP Influent</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Jeffersontown WWTP Effluent</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Jeffersontown WWTP Biosolids</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Chenoweth Run (upstream)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Chenoweth Run (downstream)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: The X’s on the chart refer to periods of composite sampling. (Typically 4 to 7 days.)

Note 2: The numbers 1, 2, 3, and 4 shown on the chart refer to Collection System Monitoring points (as shown on the map in Appendix C).

Note 3: The Company names shown in all caps with bold type are SIUs.

This chart illustrates that MSD conducts sampling randomly at the industries and does not schedule industrial sampling to coincide with WWTP influent/effluent sampling. MSD collects data from individual industries, but not from strategic points in the sewer collection system or from the receiving stream. And, MSD evaluates samples using concentration limits, but typically does not consider total mass of pollutant in the system. Therefore, MSD has no estimate of loading patterns. (Loading data, rather than just concentrations, is important because it gives an accurate representation of the relative significance of pollutants.) Therefore, under this XL project, MSD will “reinvent” its pretreatment program to provide a better mechanism to achieve cleaner water.

**B. Specific Project Elements**

MSD has a good idea of the kinds of program changes that could improve water quality, based on staff experience and involvement with AMSA’s and EPA’s Pretreatment Program reinvention efforts. But, MSD needs more information to specifically design and justify appropriate reinvention efforts. For this reason, the XL project will
proceed in three phases: Data Collection and Development of Pretreatment Performance Measures; Program Redevelopment; and Program Implementation.

- **Phase 1: Data Collection and Development of Pretreatment Performance Measures.**

**MSD will collect more data and better data in this phase of the XL project.** MSD will collect/analyze samples and collect flow data from “strategic” points in the sewer collection system and also from the WWTP influent/effluent/biosolids, from the receiving stream, and from industrial discharges. Because EPA awarded a grant to MSD in September 1998 for a separate but related project, MSD has already begun some system monitoring. Through this work, MSD has identified strategic points which appear on the map in Appendix C. MSD has already collected and analyzed some wastewater samples from these, measured flow, and calculated pollutant loadings. Section III (A) presents some of the results of this sampling.

After reviewing this initial data, MSD determined that the pattern for industrial monitoring should be modified to coincide with the comprehensive collection of loading data. The following chart is an example of the pattern MSD will follow for one year of Baseline Monitoring:

<table>
<thead>
<tr>
<th>#</th>
<th>Company Name</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adam Matthews</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Beechmont Press</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Brandeis Machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Courier Carton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Cummins Cumberland Inc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Derby Cone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Dispenser’s Optical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Jones Plastics &amp; Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Southern Standard Carton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Waukesha Cherry-Burrell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Winston Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Clarke Detroit Diesel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Midland Communications Pkg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ryder Truck &amp; Car Rental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>White Castle Distributing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Innovative Electronic Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>DCE, Inc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>H L Lyons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>Condea Vista Co</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Jtown WWTP Influent</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Jtown WWTP Effluent</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Jtown WWTP Biosolids</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Chenoweth Run (upstream)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>Chenoweth Run (downstream)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Collection System #1</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #2</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #3</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collection System #4</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: The X’s on the chart refer to periods of composite sampling. (Typically 4 to 7 days.)

Note 2: The numbers 1, 2, 3, and 4 shown on the chart refer to Collection System Monitoring points (as shown on the map in Appendix C).

Note 3: The Company names shown in all caps with **bold type** are SIUs.

Under this pattern, MSD will account for pollutant loads coming from key points in the collection system. MSD also will compare the total pollutant loading from the permitted...
dischargers in a particular section of the collection system to the pollutant loading at the collection system monitoring point. This type of information will provide MSD with a better strategy for determining non-permitted pollutant sources.

Using this data, stakeholders will assist MSD to develop Pretreatment Performance Measures appropriate for the assessment of the effectiveness of the Pretreatment Program in the Jeffersontown system. MSD will draw on information from AMSA’s 1994 publication, “Performance Measurement and the National Industrial Pretreatment Program.” Once MSD has collected and assessed this comprehensive data and developed Performance Measures, then MSD will be in a position to make commitments to Superior Environmental Performance based on anticipated pollutant reductions. See Section VI for more information on the XL project schedule.

Also, because MSD will collect receiving stream data, it will also examine other point and nonpoint source impacts on the watershed. This type of information will be the foundation for MSD to move away from compartmentalized NPDES programs to a more holistic watershed protection strategy.

• Phase 2: Program Redevelopment.

Using information from Phase 1, MSD and the stakeholders will identify and evaluate more environmentally desirable loading patterns—including loadings to the collection system and treatment plants, stormwater facilities, and from plants and facilities to receiving waters. MSD will then craft new pretreatment program elements. For instance, if MSD determines that levels of a particular pollutant are too high, this comprehensive type sampling will provide a basis for determining the source of most of the pollutant load.

New and modified program elements will have two primary objectives: (1) achieve additional reductions in key pollutant loadings; and, (2) identify areas of ineffective resource utilization to free-up resources that can be applied to achieve greater environmental benefits.

• Phase 3: Program Implementation and Evaluation.

Once MSD identifies target areas, it can then apply resources to reduce the majority of the pollutant. This might mean reallocating some resources to focus on a particular section of the industrial users or on residential contributions or on some other source (such as stormwater runoff, pollution prevention, or stream restoration). MSD will reallocate resources according to its specific “prioritization strategy.” Section III (A) provides additional details on this strategy.

III. PROJECT XL CRITERIA

A. Superior Environmental Performance

MSD has developed a specific, priority-driven, and trackable strategy to achieve Superior Environmental Performance (SEP) in this project. MSD will develop better information to provide a basis for reallocating resources to create environmental benefits, first where appropriate within the pretreatment program, and then elsewhere in the watershed. Additionally, where possible and appropriate, MSD will bring additional resources to bear to create environmental benefits, for example from other MSD programs, indirect dischargers, and other stakeholders.

MSD’s specific SEP strategy is prioritized as follows:

1. Additional monitoring and pollutant source identification come first—under the XL project, MSD expects to shift resources away from monitoring indirect dischargers whose impacts are known to be minimal or non-existent and target resources to expanding in-
system monitoring and special investigations to identify sources of particular pollutants at
the category level (e.g., residential, commercial), and at the facility level if necessary;

2. After monitoring and special investigations, if indicated as environmentally
beneficial, MSD will invest cost-savings in pollution prevention outreach, education,
and technical assistance—these expanded programs will target categories, groups,
and/or individual dischargers based on the evaluation of data collected under #1 above; and

3. When and where environmental priorities and cost-effectiveness analysis indicates,
MSD will invest cost-savings in watershed-based improvements—MSD will invest
reallocated pretreatment program resources in riparian restoration, for example, and other
nonpoint source management efforts to improve priority conditions, especially where
returns on such investments in watershed-based reductions, are greater than an equal
investment in the pretreatment program.

Implementing this strategy will follow the three-phased approach outlined in Section II.B
(Specific Project Elements) and rely on using the comprehensive system data (referenced
above) to first conduct a thorough assessment of the water quality issues of the receiving
watershed. MSD will determine the “issues of concern” by considering several factors. For
instance, MSD may compare treatment plant effluent data to receiving stream (upstream /
downstream) data and to water quality criteria, and compare biosolids data with local and
federal biosolids regulations (for “clean” sludge). MSD will rely on stakeholder involvement to
help determine the issues of concern and the relative significance of each issue. If MSD
identifies issues of environmental concern, then MSD will make a further assessment to
identify the sources of pollution.

Tier 1. The Baseline. MSD will establish the pollutant loading baselines for this XL project
with the data it is currently collecting as part of the 104(b)(3) grant involving the Jefferstown
WWTP and Chenoweth Run. With additional data that MSD will develop under Phase I of this
XL project (see Section II.B, Specific Project Elements, and Section VI, Schedule). This
means that MSD will not establish baselines until it completes Phases I and II of the XL
project. Data collection under the grant project began in September 1998. MSD will begin the
additional monitoring described in Section II prior to execution of the Final Project Agreement
(estimated May 2000) and continue the initial protocol for at least a year.

MSD will develop the baselines in cooperation with the stakeholders participating in this
project, within the stakeholder process described in Section III.C. MSD also will strive
specific and enforceable and/or voluntary commitments to reduce loadings of selected
pollutants below the baseline(s), as opportunity is indicated by the data, technical, and financial
feasibility (see also under Tier 2, below).

In preparing this proposal, MSD attempted to develop baselines for several pollutants, including
those that have been identified as possible priority issues in Chenoweth Run. However, upon
review of historical WWTP effluent and biosolids data, MSD determined that insufficient data
are available with which to draw reliable conclusions. Also, because of the significant inflow
and infiltration in the Jefferstown sewer system, MSD must give additional consideration
regarding wet weather and dry weather sampling to ensure that representative data are
evaluated. Because MSD recently upgraded the Jefferstown WWTP, additional data must
be collected to help establish a representative baseline.

For these reasons, MSD will phase development of the baselines in synch with the other
phases of this XL project. Data collected under the grant project and as part of this XL project
will provide a much sounder and rigorous body of information from which to develop baselines.

As indicated in the proposed schedule, MSD will not implement new pretreatment
program elements that revisions to CFR Section 403 will offer until MSD has
developed the baselines and SEP projections and has more specifically articulated the enforceable and voluntary commitments it will make under this XL project.

**Tier 2.** For the same reasons that MSD is not projecting baselines at this time, MSD also is not projecting loadings or loading reductions anticipated under this XL project at this time. As with the baselines, MSD will develop “with XL” loading projections *in cooperation with the stakeholders* participating in this project, *within the stakeholder process* described in Section III.C. This notwithstanding, MSD’s phased approach to this XL project and its SEP strategy (detailed above) establishes the process by which it will develop and implement SEP projections.

MSD will first collect the data, then make the projections. Because MSD will reallocate resources to first, collect better data, and second, to achieve pollutant loading reductions, the result will be improved environmental performance with this XL project. **As a result of having better data, MSD will be in a better position to manage the program effectively and to reduce loadings to the watershed under the assumptions outlined below:**

- MSD will focus pollution prevention efforts on the pollutants of concern and on the areas with the largest loadings.
- Where MSD finds that industrial users are potential threats to watershed health, MSD will inspect them more frequently, require more precise permitting and more detailed monitoring, and take more aggressive enforcement action.
- Where indirect dischargers have little impact on the watershed, MSD will use the regulatory flexibility EPA provides to achieve more efficient utilization of resources, and MSD will thus focus its resources on the most significant pollutant loadings.
- With regulatory flexibility, industrial users may be able to use their resources more efficiently. MSD is considering establishing agreements, such that at least half of the industries’ cost savings will be channeled into environmentally beneficial efforts (such as stream restoration or Pollution Prevention.) It should be noted, that in determining how best to interface with an industry, MSD believes that the historical compliance and performance record of the industry, as well as its impact on watershed health, are critical criteria. MSD will develop strict performance and compliance criteria to ensure that its partners in innovation are those firms and industries with solid environmental records.

If, for example, MSD determines that mercury is a pollutant of concern in the receiving stream, MSD will evaluate baseline data to assess where the origin of the various contributions. If MSD determined that a significant portion of the mercury was coming from the sewer collection system and WWTP, MSD would assess collection system monitoring data to determine which points in the collection system have the most significant loadings. MSD would then redirect resources to reduce mercury from those areas.
For instance, if a significant portion of the total mass of a pollutant of concern appears to be discharged from the WWTP, then MSD would make an assessment of the pollutant sources in the sewer collection system. As an example of how MSD might accomplish this, data from some preliminary sampling at strategic points in the collection system is shown here:

**Comparison of the Monitoring Points’ Contribution in Each Parameter**

10/14/98 - 10/21/98

![Chart showing percentage contribution of each monitoring point for various parameters](image)

Based on this chart, if mercury were the issue (as an example), MSD should focus resources more on Section 3 (which is primarily commercial/residential) than on other sections of the collection system, for example by expanding specific pollution prevention efforts to achieve the desired reductions. If the source of pollutant appears to be from sources other than the WWTP and its collection system (such as from non-point sources, etc.), then MSD would invest resources in watershed-based improvements.

MSD expects that this strategy will provide better data upon which to make decisions because it will provide the basis for:

- An understanding of the loading patterns to the WWTP;
- A premise for prioritizing resources according to environmental benefit;
- A more holistic understanding of the environmental stressors on the watershed;
- Opportunities for expanded and meaningful pollution prevention;
- Potential opportunities to partner with industry to focus on water quality improvement;
- Permanent flow monitoring in the sewer collection system which will enhance planning and operations; and,
- Stream sampling (upstream/downstream) information which MSD can use to determine WWTP impact to the stream.

If the collection system and/or WWTP were not a significant source of the mercury loadings, then MSD would shift resources to address the identified sources. Whatever the case, MSD would utilize the same methodology described below to address and reduce the pollutant of concern (reports such as the “Draft Wisconsin Mercury Sourcebook” would be referenced for this work):
• Assess baseline data to determine pollutants of concern;
• Select a reduction team & form partnerships;
• Reassess baseline data and set goals;
• Identify sources of the pollutant;
• Evaluate tools and objectives;
• Set objectives and implement; and
• Measure your success.

B. Cost Savings and Paperwork Reduction

MSD’s XL project is designed to produce cost-savings over the long-term that MSD will reinvest in environmental protection. MSD expects the result will be more efficient and environmentally effective application of program resources—i.e., greater environmental returns on investments. MSD is not attempting to achieve a net reduction in water quality-related program expenditures.

As articulated in Section II and III.A, MSD’s strategy to achieving Superior Environmental Performance (SEP) is to apply a combination of better information and actual cost-savings achieved from changes within the pretreatment program to create environmental benefits first where possible within the pretreatment program and then elsewhere in the MSD system and service area. Also, where possible and appropriate, MSD will bring additional resources to bear, e.g., from other MSD programs, indirect dischargers, and other stakeholders.

This means that in the first several years of the XL project, MSD projects no net cost savings. In fact, MSD reallocates monitoring, sampling, inspection, and other programmatic resources to provide better information, these investments could conceivably increase—they certainly will not decrease significantly. Only after MSD optimizes pretreatment program resources, will it apply any cost savings to new initiatives.

With respect to SIUs and other users currently regulated under the pretreatment program, MSD expects that proposed changes will result in reduced monitoring, sampling, and reporting costs for dischargers that meet certain criteria, as described in Section II. MSD plans to establish agreements with users benefiting from the regulatory flexibility under Project XL to reinvest approximately half of their cost-savings in MSD-approved environmental protection and restoration initiatives, in accordance with MSD’s SEP strategy. The table below presents additional detail on expenditures, cost savings, and reinvestments under MSD’s XL project.

<table>
<thead>
<tr>
<th>Short Term Increases</th>
<th>Cost Savings</th>
<th>Use of Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection System Sampling and Flow Monitoring</td>
<td>Less permitting</td>
<td>Additional monitoring</td>
</tr>
<tr>
<td>Receiving Stream Sampling and Flow Monitoring</td>
<td>Fewer inspections</td>
<td>Source identification</td>
</tr>
<tr>
<td>Administration and Stakeholder Interaction</td>
<td>Less data entry</td>
<td>Special investigations</td>
</tr>
<tr>
<td></td>
<td>Less time spent on compliance issues</td>
<td>Pollution prevention</td>
</tr>
<tr>
<td></td>
<td>Reductions in monitoring, sampling, reporting for selected industrial users</td>
<td>Outreach, technical Assistance, and Education</td>
</tr>
<tr>
<td></td>
<td>Longer term—reductions in activities that caused short-term</td>
<td>Watershed-based improvements if appropriate,</td>
</tr>
</tbody>
</table>
Regarding paperwork reduction, MSD expects that some of the regulatory flexibility ultimately implemented will decrease the amount of administrative reporting for selected dischargers—this will be one source of cost savings for affected users. Additionally, MSD is exploring increased use of electronic reporting in the pretreatment program, and in other programs, which will further reduce paperwork and generate cost savings.

C. Stakeholder Involvement

MSD plans to use existing and new mechanisms to involve stakeholders and citizens in building a bridge between the pretreatment program and watershed management programs under this XL project. This section describes MSD’s stakeholder involvement strategy, activities conducted to date, and activities planned for the near future and over the course of the XL project. MSD will more fully develop the stakeholder involvement strategy outlined below into a Stakeholder Involvement Plan, including a schedule of activities, and assumptions about roles and responsibilities, for attachment to the Final Project Agreement.

MSD’s Stakeholder Involvement Strategy

MSD is committed to providing opportunities for meaningfully involving stakeholders in this XL project, and to actively encourage and facilitate participation in a role commensurate with each stakeholder’s level of interest, availability, and commitment. MSD has built its strategy on the following tenets:

♦ Reach out early and relatively often, especially at key points;
♦ Create “standing” sources of information;
♦ Issue updates regularly;
♦ Offer clear and accessible points of contact;
♦ Invite outside expertise;
♦ Take whatever time and use whatever means to ensure each stakeholder fully understands the XL project and has sufficient information with which to offer input;
♦ Build in flexibility to account for how involvement needs and opportunities may change over time, and across (and during) project phases;
♦ Structure the process to accommodate different levels of involvement; and
♦ Promote accountability, in part, through building capacity among stakeholders for evaluation and assessment of MSD’s performance relative to environmental targets and other XL project commitments.

Activities Conducted to Date

MSD began reaching out to stakeholders shortly after EPA’s June 1998 announcement of pretreatment pilot opportunities under Project XL. This outreach continued as MSD developed its pre-proposal (submitted September 22, 1998), and throughout the fall and winter as MSD waited to hear of its acceptance into the program.

MSD conducted a series of meetings over several months with key stakeholders and professionals at other WWTPs, culminating in a formal Stakeholder Orientation Meeting. The express purpose of these meetings was to explain what an XL project is (if necessary), provide an overview of MSD’s pretreatment program and how it could be reinvented, solicit comments on the concept and details of MSD’s proposed XL project, and invite future participation.

♦ On August 20, 1998, MSD staff met with a representative of the Kentucky Resource Council to explain the project and to get input regarding local environmental groups who may want to participate.
♦ On August 28, 1998, MSD staff met with representatives of the Kentucky Division of Water to explain the project and to request their support of the proposal and their commitment to participate in project development. Their letter of support, dated October 2, 1998, is attached in Appendix D.

♦ On September 15, 1998, MSD staff met with the Greater Louisville Inc.’s Environmental Affairs Water Subcommittee to explain the project and to request their support.

♦ On October 2, 1998, MSD staff met with the Louisville Urban Environmental Leadership Institute (LUELI) and gave a brief presentation to explain the project. The LUELI is a group of concerned citizens who met together in order to increase their awareness of local environmental issues.

♦ On October 7, 1998, MSD staff gave a brief overview of the project to the Pretreatment Workgroup at the Water Environment Federation conference.

♦ On October 27 – 30, 1998, MSD staff attended the AMSA/EPA Pretreatment Coordinators’ Workshop and gave a presentation about MSD’s XL project.

♦ On December 8, 1998, MSD staff hosted a Stakeholder Orientation Meeting and invited representatives from key state, regional, and local organizations with interests and/or responsibilities in water quality issues to that meeting:
  § Association of Chenoweth Run Environmentalists (ACRE);
  § Floyds’ Fork Environmental Association;
  § Kentucky Resource Council;
  § Jeffersontown Industry;
  § Sierra Club;
  § Audubon Society;
  § Kentucky Pollution Prevention Center;
  § Greater Louisville Inc. Environmental Affairs Water Subcommittee;
  § EPA Region IV;
  § Kentucky Division of Water (KDOW);
  § Kentucky Waterways Alliance; and
  § Jeffersontown Public Works.

Activities Planned for March 1999 through Final Project Agreement (FPA) Execution

After taking a short break for the winter holidays and to spend some intensive effort on proposal development, MSD is about kick-off a second round of stakeholder activities. Since the first round of meetings, MSD has identified other stakeholder organizations and will invite representatives to participate in future stakeholder activities, including: Friends of Beargrass Creek; the Louisville chapter of the Home Builders Association, and the University of Louisville.

MSD has engaged the services of a professional “Convenor.” A convenor is someone who helps to organize the stakeholder process by assisting with stakeholder identification and by interviewing each of the identified stakeholders to draw out and summarize their issues of particular interest in this project. One benefit to this is that an impartial convenor can help elicit full and candid input from stakeholders since participants may feel able to be more candid with someone who has no vested interest in the project. A neutral convenor can maintain confidentiality if a stakeholder requests it, while still integrating the stakeholders’ input into the recommendations. In this way, the stakeholder process can be based on complete and accurate information and the conditions for constructive dialogue strengthened. The findings of the convenor will be shared with the stakeholders in one of the stakeholder meetings.

When MSD meets with the stakeholders, the next steps in the stakeholder process will be identified with respect to the proposal and FPA development, based in part on stakeholder input
gathered by the Convenor. Additional activities to support FPA development and execution may include, but would not be limited to the following: additional “all” stakeholder meetings; smaller workgroup meetings (e.g., to address a particular issue or set of issues); special education and outreach sessions involving specific groups (e.g., industry, environmental); and site visits. These additional activities will likely include presentations by MSD and other core participants (i.e., KDOY, EPA, industry), as well as opportunity for interactive discussion and input.

Stakeholder Activities during Project Phases

MSD will structure the stakeholder process to match the three XL project phases. The phases themselves entail different activities, with different needs and opportunity for stakeholder involvement and input. MSD’s strategy is to keep stakeholders informed about XL project activities on a regular basis, while maintaining a balance between overwhelming them (and MSD) with too many opportunities and having them lose interest if too few are provided.

♦ Phase 1—Data Collection and Development of Pretreatment Performance Measures. During this phase, MSD’s primary focus will be on making sure all stakeholders understand the XL project, completing any education or outreach activities needed for late-comers, and focusing on keeping stakeholders up to date during what will be a six month to year-long data collection and evaluation period. After some initial data collection and analysis, MSD will begin developing performance measures appropriate to assess the effectiveness of the pretreatment program. As the measures are developed and as they are being tested out, MSD expects industrial, business, and some residential groups may become more active, and MSD will encourage them to do so. Additionally, the environmental groups might become more engaged during the performance measure development/testing period as watershed issues move to the forefront. Again, MSD will encourage their involvement and participation. MSD expects to conduct “all” stakeholder meetings, and probably several issue or group-specific sessions.

♦ Phase 2—Program Redevelopment, including Baseline and SEP Projections. In this stage, MSD will engage stakeholders to help identify how MSD should implement the regulatory changes requested under Section IV. Involvement of the various indirect discharger groups will be particularly important here. MSD also will create an organized and step-wise process to involve stakeholders in developing pollutant loading baselines, and in estimating the level of reductions—i.e., SEP, expected after regulatory changes and associated programmatic changes are implemented. MSD will look to stakeholders for ideas about how to implement the SEP strategy, discussed in Section III.A, including which specific initiatives should be tried first, and how effective MSD should assume them to be. Again, involvement of users will be key, but so will involvement of watershed groups that can help identify stream-based and nonpoint source reduction projects that could be viable candidates. Again, MSD expects to conduct several meetings on these issues.

♦ Phase 3—Program Implementation and Evaluation. Once the baselines are developed, SEP projections completed, and enforceable/voluntary commitments articulated, program implementation—and evaluation—begins. During this phase, MSD will rely on stakeholders to help track progress on activity-based and environmental objectives. Is MSD doing what it said it would, when it would? Is it following the process and framework laid out in the FPA? Is MSD adhering to its SEP strategy, and prioritizing activities accordingly? Is it adhering to its Stakeholder Strategy? Through the stakeholder process, MSD will promote accountability by making sure stakeholders fully understand MSD’s commitments, are familiar with the information and tools MSD will provide to track progress, have access to information they will be provided to evaluate the progress and success of this XL project. MSD expects to conduct stakeholder activities on a periodic basis and to match activities to XL project milestones.
A Final Note on Communication Among and With Stakeholders

Upon submission of this proposal to EPA, MSD intends to take advantage of EPA’s electronic infrastructure dedicated to the XL program (including e-mail and web sites) to facilitate communication among participants and other interested parties, organize comment submissions, accept other project input, and generally serve as a clearinghouse for information about the initiative. MSD will work with EPA to identify and develop linkages to and between other web sites—including especially MSD’s site—where such linkages would enhance communication and stakeholder involvement, for example to a project sponsor or direct participant site. This approach is consistent with MSD’s and EPA’s commitment to a visible and accessible process. As we will provide for in our stakeholder involvement plan, other avenues of communication will not be neglected to ensure that those parties who may not have access to electronic media can still participate and be informed.

Additionally, MSD will take advantage of its existing publications, such as Streamline, and a newsletter to the Jeffersontown residents to inform stakeholders and the community about the XL project. Streamline is published periodically and reaches over 3,000 customers and generally provides information about the pretreatment program. The Jeffersontown newsletter is a new publication which is planned to inform the local residents regarding MSD efforts in their neighborhood.

B. Innovation/Multi-Media Pollution Prevention

MSD’s XL project will test innovative strategies for achieving Superior Environmental Performance drawn from three primary sources:

- MSD staff’s long-term experience with MSD’s operations and their best professional judgement about how MSD can better integrate its pretreatment with other environmental monitoring and management programs to allow more efficient use of resources while providing superior environmental performance;
- Several of the 13 streamlining concepts developed by AMSA and EPA (see Appendix E); and
- Several of the 18 results-oriented measures for assessing performance of Pretreatment Programs developed by a special AMSA committee in 1994, under a cooperative agreement grant with EPA. (See Appendix F).

By definition, these reinvention and streamlining elements are innovative. See Section IV of this proposal for a discussion of revisions MSD will adopt. Section II describes MSD’s overall approach to its XL project, which itself is innovative in its system-wide approach (operationally and environmentally).

MSD’s XL project places a heavy emphasis on pollution prevention, after the initial phase focusing primarily on enhancing the quality and quantity of information and data available about pollutants from indirect dischargers, through the collection system and treatment plant, to the watershed. As indicated in Section III.B, MSD’s Superior Environmental Performance strategy features reinvesting cost-savings into pollution prevention activities, including outreach, education, and technical assistance, first within the pretreatment program, then in other watershed-based programs.

Examples of existing pollution prevention programs MSD runs or sponsors that may be expanded under the XL project include: catch basin labeling to prevent inappropriate use; education for homeowners; technical assistance training; flood control planning and comprehensive land use planning; greenways programs; wet weather programs; school
partnerships; educational environmental videos; and MSD’s STREAMLINE newsletters which are distributed to commercial and industrial dischargers. MSD will be innovative in developing new pollution prevention initiatives as indicated by the findings of the various source identification and relative impact analyses performed as part of the study phase of this project.

E. Transferability

MSD has deliberately designed its XL project around the concept of transferability in several respects. MSD has structured its XL project in phases to test several pretreatment reinvention and streamlining elements at one WWTP. MSD intends to evaluate interim and milestone results with an eye toward the implications for adopting some or all of the tested elements at its three other regional WWTPs.

Thus, within MSD’s XL project, other sewer agencies (small, medium, and large) will be able to draw valuable lessons from MSD’s experience, as it relates to implementing a performance-based program in individual facilities, and ultimately across a multi-plant, multi-watershed sewer district. Furthermore, as stated earlier, MSD’s XL project incorporates several of the 13 streamlining elements and 18 performance measures already identified by AMSA, EPA, and numerous individual municipalities and industry participants as having a high degree of transferability. Finally, MSD’s XL project confronts the operational, data collection and analysis, and environmental management challenges posed by a regulatory structure that compartmentalizes programs that in practice would benefit from a much more holistic approach (i.e., the ability to deal with them all together in parallel, rather than serial fashion) and will attempt to build links between the pretreatment program and the rest of the system. Almost every sewer agency confronts this same challenge and will benefit from MSD’s exploration and investigation of viable technical solutions and management approaches.

F. Feasibility

MSD can demonstrate that its proposed project is technically, administratively, and financially feasible.

- **Technical Feasibility**—MSD will implement several new monitoring protocols, evaluation paradigms, and management approaches that, while challenging, do not involve any unproven techniques or environmental concepts. MSD has or will collect sufficient data to enable identification of pollutant sources, from the watershed up through the plant and collection system, to indirect dischargers, including industrial and other sources. MSD has the technical expertise to analyze and evaluate this data, and make determinations about relative impact. With respect to pollution prevention and control techniques, MSD anticipates relying on approaches that have already been proven in MSD’s system or at other sewer agencies and in other watersheds and have been demonstrated to be technically feasible.

- **Administrative Feasibility**—MSD’s Executive Director has made a commitment to ensure that sufficient and appropriately qualified staff are available to implement this XL project. These same staff members have been integrally involved in initiating and developing MSD’s Pretreatment Reinvention concepts and this proposal. MSD has assembled a multi-disciplinary team to design and implement the XL project, drawing from the pretreatment program as well as other programs. Members of the multi-disciplinary team have initiated and managed numerous other special projects at MSD that involved cross-departmental teams, stakeholder involvement, and interaction with regulatory agencies. Key staff members of the XL project include the following:
  - Michael W. Sweeney, Ph.D., Director of Research and Productivity Assessment;
  - Sharon Worley, PE, Technical Services Engineer; and
• Financial Feasibility—MSD’s Executive Director has made a commitment to ensure that sufficient resources are available to pretreatment program staff and other MSD staff, both for labor and for non-labor expenses, to carry out this XL project. MSD is aware of and has planned appropriately for the fact that the XL project may generate a net increase in expenses in the first year or two as MSD brings additional resources to bear on certain monitoring, sampling, and analysis activities. Also, some in-kind and contractor expenses have been associated with preparing this proposal, which may continue at some level during implementation. MSD believes after the initial data gathering phase, cost savings will accrue from reduced and eliminated activities. MSD will reallocate these resources to other activities. MSD is financially sound, as evidenced in its 1998 Annual Report, and has the financial expertise to monitor the expenses and reallocations that will be associated with this project.

G. Monitoring, Reporting, and Evaluation

1. Accountability

MSD will make the commitments outlined below. This XL project will be implemented in several phases (see Sections II, A and B, and III, A and B), the first of which it is anticipated will greatly increase the quantity and quality of data available for assessment and decision making. As a result, MSD will refine and elaborate upon these commitments in the future [in a subsequent phase of Final Project Agreement (FPA) development, and appearing as separately negotiated and signed addenda to the FPA].

Enforceable Commitments:

- MSD will commit to additional monitoring and analysis as a condition of MSD’s NPDES permit for the Jeffersontown WWTP, and as contained in other documents and regulations that will govern this project. The specific monitoring pattern will be determined with stakeholder involvement in Phase 2 of this project.

Voluntary Commitments:

- MSD will voluntarily commit to implementing its Superior Environmental Performance strategy, according to the stepwise processes and priorities established therein, as laid out in Sections II and III.

- MSD will voluntarily commit to entering into agreements with indirect dischargers who are eligible and who desire to receive flexibility under this project to reinvest approximately half of their resulting cost-savings in MSD-approved environmental protection and improvement activities that will be implemented as part of MSD’s Superior Environmental Performance strategy (see Section III.A for MSD’s identification and prioritization of activities).

Aspirations:

- MSD will strive to reduce pollutant loadings for selected pollutants below baseline levels projected in Section III.A., on an average annual basis. This aspiration excludes acts of God (e.g., flood), other unforeseeable events, and events that are otherwise uncontrollable within the scope of MSD’s Superior Environmental Performance strategy.

- MSD aspires to develop a more holistic watershed management approach.

2. Monitoring and Reporting
As discussed in Section III.C, MSD will make an array of information about this project, including performance data, available to stakeholders and the general public. As described in Section III.A, MSD has laid out a phased strategy to achieve SEP that incorporates clear measures of environmental outcomes and results along with specific project milestones. Some of these measures are based on loadings, per EPA’s SEP definition, and others are based on programmatic activities, environmental projects, and assessment checks. MSD has spelled these out in as much detail in Section III.C as is possible at the outset of this XL project. MSD commits to updating and enhancing these measures as the XL project moves forward and new information affords opportunity for greater specificity. MSD will draw many of the measures from the list of 18 AMSA-developed environmental performance measures for pretreatment programs. Because MSD’s XL project extends beyond the pretreatment program into other parts of the system and watershed, MSD will develop additional performance measures appropriate to this XL project as necessary.

At minimum, MSD will submit semi-annual reports describing the progress of its XL project, including MSD’s activities and accomplishments, as well those of participating agencies, industries, and public initiatives, as relevant. Additionally, MSD will take advantage of other avenues to share information about this project and provide stakeholders with opportunities to assess progress and ensure that MSD is meeting its commitments. For example, MSD staff expect to present papers at key conferences about their XL project during the course of the project, post interim and milestone results on the internet, maintain data in MSD’s files, summarize results in newsletters, and speak about the project at local events, including government meetings, local school events, and public tours of MSD facilities.

In these documents and presentations, MSD will clearly specify its commitments, including key environmental and strategic benchmarks, per Section G.1, above and any future addenda to this FPA, and describe its performance relative to these benchmarks. MSD has significant experience successfully providing information about its various operations to many different audiences at a level of detail and in a format that is easily understandable, and will bring this expertise to bear in the XL project. Examples of effective communication materials include: MSD’s Annual Report; MSD’s special publication, Fifty Years of Service; the newsletter Streamline.

Section VI presents a proposed schedule for this XL project indicating the time frame within which predicted results should be achievable.

H. Shifting of Risk Burden

MSD’s XL project will have no negative environmental impacts, and therefore it is consistent with Executive Order 12898 on Environmental Justice. With respect to worker safety, MSD’s XL project will keep all existing Pretreatment Program requirements necessary to protect worker safety in place. MSD is requesting regulatory flexibility only for those pollutants and indirect dischargers that it ultimately determine has little or no impact on the WWTPs treatment efficiency or on the environment.

MSD’s SEP strategy is to apply cost-savings achieved through reducing certain administrative and monitoring activities—that pose no threat of resulting in any increased loadings above what is projected to occur absent XL—to pollution prevention and selected control and restoration activities. Additionally, MSD anticipates no adverse shifts in loadings across media. Finally, MSD believes that the environmental benefits from its XL project will be evenly distributed across the community and watershed, and will not result in any one group receiving a disproportionate share of the benefits.

I. REQUESTED FLEXIBILITY
MSD's approach is to gather data, set clear environmental goals based on that data, and then implement specific regulatory changes as outlined below.

Where industrial users are potential threats to watershed health, MSD will inspect more frequently, require more precise permitting and more detailed monitoring, and take more aggressive enforcement action. Where indirect dischargers have little impact on the watershed, MSD will use the regulatory flexibility requested to achieve more effective utilization of resources. MSD believes that the timing of any regulatory or resource allocation decisions should coincide with the timing of commitments to definitive watershed health objectives.

It should be noted, that in determining how best to interface with an industry, MSD believes that the historical compliance and performance record of the industry, as well as its impact on watershed health, are critical criteria. MSD will develop strict performance and compliance criteria to ensure that its partners in innovation are those firms and industries with solid environmental records.

MSD requests regulatory revisions that will allow it to target the pretreatment activities toward those factors that have the greatest impact on watershed health. MSD’s specific requests are detailed below.

- Allow a redefinition of Significant Industrial User (SIU) to alleviate some of the current requirements for industrial users. Some of the industries currently classified as SIU’s (including Categorical Users) that MSD determines have little or no impact on the environment will be reclassified to non-SIU status. MSD, together with local stakeholders will develop criteria, based on the potential for environmental impact and the compliance history of an industry to determine if MSD could reclassify them to non-SIU status or eliminate them from permitting altogether.

- Allow flexibility from the regulatory requirements for an SIU regarding inspection and monitoring. MSD will set risk-based inspection and monitoring frequencies based on potential environmental impact and prior compliance history.

- Allow MSD and Industrial Users the flexibility to monitor and analyze for only those pollutants reasonably expected to be present and historically shown to not be present.

- Allow local determination of what constitutes Significant Noncompliance (SNC). This may include the following:
  - Elimination of minor reporting violations;
  - Elimination of the Technical Review Criteria in determining SNC; and,
  - Modification of the SNC definition such that it is based on six calendar months of data rather than rolling quarters.

- Allow MSD to develop and report to the Approval Authority a revised Pretreatment Report that would reflect specifically developed environmental performance measures versus the current annual pretreatment report that relies on quantitative rather than environmental measures.

- Allow MSD to utilize general permits for “like” dischargers and the inclusion of Best Management Practices on discharge permits in lieu of local limits.

This flexibility will result in shifts of resources to the highest priority problems, while meeting the original intent of the National Pretreatment Program at lower cost and with greater certainty. The pretreatment program (in the Jeffersontown system) will be able to focus on those sources known to cause or suspected of causing water quality problems and less on sources proven to be insignificant. MSD will likely increase its efforts to enhance pollution prevention programs, and
increase levels of collection system and stream monitoring. In this way, the requested regulatory flexibility will allow MSD’s pretreatment program to report on environmental results and not just programmatic statistics.

J. COMPLIANCE AND ENFORCEMENT PROFILE

The Jeffersontown WWTP received the Platinum Award from the American Metropolitan Sewerage Agencies (AMSA) for five consecutive years of permit compliance.

MSD is currently under an Administrative Order with KDOW, specifically with regard to Inflow and Infiltration (I/I) remediation in the Jeffersontown system. The WWTP and collection system is currently undergoing upgrades to address some of the issues noted in this proposal (i.e., SSOs, I/I issues, and phosphorus removal).

K. SCHEDULE INFORMATION

The chart shown in Appendix G is the schedule for this XL Project.