

### 3.10 CEDAR CREEK

This report is an update to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*. For additional information on the Cedar Creek Watershed, refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* located on the CD in Appendix I.

*Figure 23. Cedar Creek Watershed*

Exhibit 13 illustrates several features of the Municipal Separate Storm Sewer System (MS4) and Sanitary Sewer Overflow (SSO) Programs in the Cedar Creek Watershed.



#### 3.10.1 HISTORY, DEMOGRAPHIC AND COMMUNITY INFORMATION

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

#### 3.10.2 HYDROLOGY AND FLOODING

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

##### 3.10.2.1 Flood Prevention Measures

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

#### 3.10.3 STATUS OF WATER QUALITY

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

#### 3.10.4 WATER QUALITY IMPACTS

Water quality data collected during this reporting period and the last reporting period, has been analyzed. The majority of the data was collected with minimonitors from the ambient monitoring sites. A summary of the water quality violations for all of Jefferson County can be found in the *WATERS of Jefferson County Report – July 1, 2000 to June 30, 2001 CD* located in Appendix I. Table 57 shows a summary of the water quality violations within the Cedar Creek Watershed.

**Table 57. Summary of Water Quality Violations in the Cedar Creek Watershed – 3<sup>rd</sup> Qtr 1999 to 3<sup>rd</sup> Qtr 2000**

	% Temp Violations*	% Acute D.O. Violations*	% Acute D.O. Violations (exclude)	% Chronic D.O. Violations*	Average Duration of Chronic D.O. (Hrs)	% of pH Violations < 6 SU	% of pH Violations > 8 SU	# of pH Violation Periods***
Cedar Creek at Thixton Road	0.00%	9.74%	1.59%	2.46%	29	0.00%	47.62%	26

\* Per Time Interval

\*\* Per Time Interval Excluding Questionable Values

\*\*\* One Unit Change Per 24 Hours

### 3.10.4.1 Point Source

Table 58 summarizes point sources in the Cedar Creek Watershed.

**Table 58. Summary of Point Sources – Cedar Creek Watershed**

Sanitary Sewer Overflows	Combined Sewer Overflows	Storm Water Outfalls	General Permittees	Significant Industrial Users	Wastewater Treatment Plants
Recurring: 1 Investigated: NA Eliminated: 5	NA	Year Sampled: 1999 Total: 286 Contaminated: 5 (.017%)	0	0	MSD Regional: 1 MSD small: 1 Private: 8

SSO fact sheets are located in Appendix V.

### 3.10.4.2 Non-Point Source

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

### 3.10.4.3 Habitat and Biological Quality

During the reporting period algae and macroinvertebrates were sampled at the ambient stream monitoring locations. Algae were sampled six different times (three days at a time) at the ambient monitoring sites. Three-day growth rates, maximum carrying capacity, community structure, and biomass estimates are being analyzed for each sample. The algal and macroinvertebrate samples have been processed, but the taxonomic data will not be ready until the next reporting period. All algal and macroinvertebrate data will be included in the *WATERS of Jefferson County Report – July 1, 2001 to June 30, 2002*.

### 3.10.5 TRACKING CHANGES IN WATER QUALITY

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000*.

### 3.10.6 MS4 PROGRAM – CO-PERMITTEES

There are three co-permittees in the Cedar Creek Watershed that are responsible for fulfilling the requirements of the MS4 Permit. The co-permittees include:

- Jefferson County
- Kentucky Transportation Cabinet, District Five
- MSD

Following are watershed-specific highlights from the co-permittees' MS4 Programs. Only those permit elements that have highlights are listed. For highlights that are not watershed-specific, refer to the MS4 Programmatic section of the *WATERS Report*. All MS4 Permit activities for each of the co-permittees is detailed in Appendix III.

#### 3.10.6.1 Jefferson County



Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* for information on Jefferson County.

##### *Post Construction Controls, Jefferson County*

Fern Creek Christian Church is located on Bardstown Road at Cedar Creek. The church is required to install a storm water BMP on site. A Stormceptor® is being considered.

The Kroger store located on Bardstown Road at Cedar Creek is required to install a storm water BMP on site. A Stormceptor® is being considered.

#### 3.10.6.2 Kentucky Transportation Cabinet, District Five



Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* for information on the Kentucky Transportation Cabinet, District Five (KyTC).

There are no watershed-specific MS4 activities to highlight for KyTC during the reporting period.

#### 3.10.6.3 MSD

Refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* for information on MSD.

### **Monitoring, MSD**

*Minimonitors* - MSD has one long-term monitoring location in the Cedar Creek Watershed as part of their ambient monitoring program (see Table 59). The location has a minimonitor and a United States Geological Survey (USGS) stream flow gauge, which operate continuous node-collectors. Data is recorded at intervals of 15 minutes, 24 hours per day.

**Table 59. Monitoring Location – Cedar Creek Watershed**

<i>MS4 Related Monitoring</i>
<ul style="list-style-type: none"> <li>• Cedar Creek at Thixton Rd</li> </ul>

A summary of the water quality data collected during the current and previous reporting periods can be found in *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* CD in Appendix I.

*Project XL* - MSD received a grant from the U.S. Environmental Protection Agency (USEPA) to help develop Performance Measures designed to show how the Pretreatment Program is performing environmentally. The Performance Measures will help the Pretreatment Program move from simply monitoring to one that demonstrates the environmental impact pretreatment has on water quality.

In addition, MSD is one of only five municipalities in the US participating in USEPA's Project XL pilot program for Pretreatment Reinvention. As a part of that project, a comprehensive evaluation of the Jeffersontown sewershed and Chenoweth Run Watershed is being conducted. Effects of the Pretreatment Program, as well as other point and non-point source control measures, are being assessed. Through this project, MSD plans to identify and evaluate more environmentally desirable loading patterns and craft new program elements to get MSD from its existing loading patterns to new target loading patterns. MSD will address the pollutants seen as most important for water quality in Chenoweth Run. Implementation will look beyond the classic pretreatment program and consider all sources of pollutants of concern.

The final rule authorizing Project XL for the five approved Pretreatment Programs was published in the federal register on October 3, 2001 (66 Fed. Reg. 50,334). "Several of these Privately Owned Treatment Works (POTWs) want the opportunity to implement local pretreatment programs with effectiveness measured against environmental results rather than strict adherence to programmatic and administrative measures," EPA said in the notice. Once the KY Division of Water approves the Wastewater Discharge Requirements modifications with Project XL language, MSD may begin modifying affected industrial permits.

**3.10.7 SSO PROJECTS – MSD**

***SSO Projects***

MSD conducted the following projects during the reporting period as part of the SSO Program:

*Cedar Creek 2 I/I Remediation* – Under this project the following rehabilitation took place in the Cedar Creek watershed.

- 1,520 LF of cured-in-place sewer main rehabilitation.
- 6 cured-in-pace lateral rehabilitations.
- 998 manhole chimney seal installations.

*Cedar Creek Model* – The Cedar Creek watershed contains 374,000 LF of the 506,000 LF of collection system that was modeled in this project.

***SSO Planning***

SSO Project Planning is revised constantly based on the results of ongoing investigations and rehabilitation projects. The following projects are included in the current 5-year plan approved by the MSD Board:

- *Cedar Creek Rehab Phase 2 – fiscal year 2002*
- *Detailed Interceptor Evaluation – fiscal year 2002*
- *I/I General Services – fiscal year 2002*
- *I/I General Services – fiscal year 2003*
- *I/I General Services – fiscal year 2004*

Planned SSES or rehabilitation will be similar to ongoing SSES or rehabilitation projects.

***SSO Education***

The following public meetings were held in the Cedar Creek Watershed:

- *Cedar Creek I/I Remediation Phase 2, Public Meeting July 2001*

***SSO Related Costs***

Table 60 summarizes the SSO Program related costs for the reporting period and projected costs for the next three years in the Cedar Creek Watershed.

**Table 60. SSO Program Related Costs for July 2000 to June 2004 – Cedar Creek**

<i>SSO Program</i>	<i>July 2000 – June 2001</i>	<i>July 2001 – June 2002</i>	<i>July 2002 – June 2003</i>	<i>July 2003 – June 2004</i>
Cedar Creek 2 I/I Remediation*	\$1,086,075	\$0	\$0	\$0
Cedar Creek Hydraulic Model*	\$60,728	\$0	\$0	\$0
I/I General Services*	\$854,439	\$830,043	\$400,000	\$250,000
<b><i>Total</i></b>	<b><i>\$2,001,241</i></b>	<b><i>\$830,043</i></b>	<b><i>\$400,000</i></b>	<b><i>\$250,000</i></b>

\*Only portions of these funds were expended in the Cedar Creek watershed.





# EXHIBIT #13

## Cedar Creek Watershed

Exhibit #13 may be downloaded at:

<http://www.msdlouky.org/insidemsd/waters/2001/exhibit13.pdf> (, 946Kb)