

3.2 GOOSE 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 Goose Creek Watershed, refer to the *WATERS of Jefferson County Report – July 1, 1999 to June 30, 2000* located on the CD in Appendix I.

Exhibit 5 illustrates several features of the Municipal Separate Storm Sewer System (MS4) and Sanitary Sewer Overflow (SSO) Programs in the Goose Creek Watershed.

Figure 6. Goose Creek Watershed



3.2.1 HISTORY, DEMOGRAPHIC AND COMMUNITY INFORMATION

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

3.2.2 HYDROLOGY AND FLOODING

There are approximately 1.5 square miles of flood hazard area (area within the 100-year Federal Emergency Management Administration (FEMA) Floodplain) and there are an estimated 245 structures located within this floodplain.

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

3.2.2.1 Flood Prevention Measures

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

3.2.3 STATUS OF WATER QUALITY

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

3.2.4 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 22 shows a summary of the water quality violations within the Goose Creek Watershed.

Table 22. Summary of Water Quality Violations in the Goose Creek Watershed – 3rd Qtr 1999 to 3rd 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***
Little Goose Creek at U.S. Hwy 42	0.00%	25.43%	8.03%	11.33%	132	0.00%	56.21%	0
Goose Creek at U.S. Hwy 42	0.00%	0.00%	0.00%	0.00%	0	0.00%	52.47%	1
Goose Creek at Old Westport Road	0.00%	16.37%	16.37%	20.87%	98	0.00%	17.32	7

* Per Time Interval

** Per Time Interval Excluding Questionable Values

*** One Unit Change Per 24 Hours

3.2.4.1 Point Source

Table 23 summarizes point sources in the Goose Creek Watershed.

Table 23. Summary of Point Sources – Goose Creek Watershed

Sanitary Sewer Overflows	Combined Sewer Overflows	Storm Water Outfalls	General Permittees	Significant Industrial Users	Wastewater Treatment Plants
Recurring: 2 Investigated: 5 Eliminated: 1	NA	Year Sampled: 1997 Total: 293 Contaminated: 1 (.003%)	0	0	MSD Regional: NA MSD small: 2 Private: 8

SSO fact sheets are located in Appendix V.

3.2.4.2 Non-Point Source

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

3.2.4.3 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*.

3.2.5 TRACKING CHANGES IN WATER QUALITY

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

3.2.6 MS4 PROGRAM – CO-PERMITTEES

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

- City of Anchorage
- City of Prospect
- 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.

3.2.6.1 City of Anchorage



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

Post Construction Controls, Anchorage

The Forest School Estates subdivision consists of approximately 14 homes. These homes are smaller than traditional zoning, the streets are narrower, and the drainage easements are wider. There is also a horse and pedestrian trail being constructed. The intent of the modifications is to reduce the amount of impervious surface within the development.

3.2.6.2 City of Prospect



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

Post Construction Controls, Prospect

The Innesbrook Subdivision is using a lesser zoning and the streets will be narrower than required by Louisville and Jefferson County Planning and Zoning. This will result in a reduction of impervious area on the site.

3.2.6.3 Jefferson County



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

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

3.2.6.4 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.

3.2.6.5 MSD



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

Monitoring, MSD

MSD has three long-term monitoring locations in the Goose Creek Watershed as part of their ambient monitoring program (see Table 24). 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 24. Monitoring Locations – Goose Creek Watershed

<i>MS4 Related Monitoring</i>
<ul style="list-style-type: none"> • Little Goose Creek at US Hwy 42 • Goose Creek at US Hwy 42 • Goose Creek at Westport Rd

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.

3.2.7 SSO PROGRAM – MSD

SSO Projects

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

High School Inflow Source Identification Program – The 2001 High School Program inspected 83,405 LF of interceptor finding three possible pipe defects and 22 defected manholes in the Goose Creek watershed.

Middle Fork SSES Phase 2 – The Goose Creek watershed contains 26,600 LF of the 242,800 LF of collection system that was analyzed and investigated during 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:

- *I/I General Services – fiscal year 2002*
- *I/I General Services – fiscal year 2003*
- *I/I General Services – fiscal year 2004*

SSO Education

Two public meetings were held to educate residents about SSOs and investigation activities:

- *Middle Fork SSES Phase 2, Public Meeting August 2000*
- *Prospect SSES, Public Meeting August 2000*

SSO Related Costs

Table 25 summarizes the SSO Program related costs for the reporting period and projected costs for the next three years in the Goose Creek Watershed.

Table 25. SSO Program Related Costs for July 2000 to June 2004 – Goose Creek Watershed

<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>
High School Inflow Source Identification Program*	\$215,581	\$0	\$0	\$0
Middle Fork SSES Phase 2*	\$389,304	\$0	\$0	\$0
I/I General Services*	\$854,439	\$830,043	\$400,000	\$250,000
Total*	\$1,459,324	\$830,043	\$400,000	\$250,000

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

EXHIBIT #5

Goose Creek Watershed

Exhibit #5 may be downloaded at:

<http://www.msdlouky.org/insidemsd/waters/2001/exhibit5.pdf>  (1.2Mb)