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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
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FRANKFORT, KENTUCKY 40601

October 1, 1990

Daniel B. Ahern, Chief
Water Quality Standards
and Monitoring Section
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Dear Mr. Ahern:

I am submitting Kentucky's waterbody list developed pursuant to Section 303(d) of the Clean Water Act. The attached documentation provides details regarding our methodology and our proposed approach for TMDL development.

Please share this information with the appropriate Region IV staff. Contact me at 502/564-3410 if you have any questions.

Sincerely,

Robert W. Ware, Manager
Water Quality Branch
Division of Water

RWW:jbd

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SECTION 303(d) LIST OF WATERBODIES FOR KENTUCKY

Pursuant to Section 303(d) of the Clean Water Act, the State of Kentucky has developed a list of waterbodies presently not supporting applicable water quality standards (Tables 1A, 1B, and 1C). From this list, twenty waterbodies were selected as priority candidates for TMDL development (Table 2).

The list of waters not meeting water quality standards was derived primarily from the "1990 Kentucky Report to Congress on Water Quality" (Kentucky Natural Resources and Environmental Protection Cabinet, 1990) and "Assessment of Water Quality Conditions, Ohio River 1988-89" (ORSANCO, 1990). Monitored instream data were principally used; however evaluated data (site surveys, questionnaires, scientific reports, and professional judgement) were also considered in the determination of use support. A non-support use designation was based on greater than 25% of ambient water quality data(from October 1987 thru September 1989) exceeding a criterion, or the criterion being exceeded 11-15% of the time and with the mean greater than the numerical criterion. Special water quality monitoring studies conducted over shorter periods of time were also used to indicate use non-support. For biological data, a reach did not support uses if the biological community was severely altered (dominated by pollution tolerant species, very high or low biomass, other functional group

Table 1A

Section 303(d) List
Rivers and Streams

STREAM NAME	WATERBODY ID NUMBER	WAH (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	PCR (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	CAUSE	SOU
Tug Fork - Mainstem	KY5070201-001	0.0	0	0	0	0	36.3	1700	200	0	1000	0	
Tug Fork - Mainstem	KY5070201-004	0.0	0	0	0	0	21.6	1700	200	0	1000	0	
Big Creek	KY5070201-005	19.7	1100	1000	0	5000	0.0	0	0	0	0	0	
Knox Creek	KY5070201-010	0.0	0	0	0	0	7.6	1700	1000	0	0	0	
Shelby Creek	KY5070202-002	0.0	0	0	0	0	10.0	1700	200	0	0	0	
Russell Fork - Mainstem	KY5070202-004	0.0	0	0	0	0	16.0	1700	1000	0	200	0	
Elkhorn Creek	KY5070202-005	0.0	0	0	0	0	27.4	1700	200	0	0	0	
Paint Creek	KY5070203-005	0.0	0	0	0	0	1.0	1700	4000	0	0	0	
Levisa Fork - Mainstem	KY5070203-010	0.0	0	0	0	0	13.0	1700	200	0	0	0	
Left Fork Middle Creek	KY5070203-014	9.5	1000	5000	0	0	9.5	1000	5000	0	0	0	
Levisa Fork - Mainstem	KY5070203-016	0.0	0	0	0	0	3.8	1700	200	0	1000	0	
Beaver Creek	KY5070203-018	0.0	0	0	0	0	7.0	1700	200	0	0	0	
Levisa Fork - Mainstem	KY5070203-021	0.0	0	0	0	0	28.5	1700	200	0	1000	0	
Mud Creek	KY5070203-022	17.0	1200	1000	1100	5000	0.0	0	0	0	0	0	
Blaine Creek - Mainstem	KY5070204-006	11.5	1300	5000	0	0	0.0	0	0	0	0	0	
Tygarts Creek - Mainstem	KY5090103-001	0.0	0	0	0	0	45.7	1700	200	0	1000	0	
Little Sandy River - Mainstem	KY5090104-001	0.0	0	0	0	0	11.7	1700	1000	0	200	6700	
Little Sandy River - Mainstem	KY5090104-004	0.0	0	0	0	0	39.3	1700	1000	0	200	6700	
Newcombe Creek	KY5090104-009	6.9	1300	5000	0	0	0.0	0	0	0	0	0	
North Fork Licking River	KY5100101-012	0.0	0	0	0	0	13.9	1700	1000	0	0	0	
North Fork Licking River	KY5100101-014	0.0	0	0	0	0	5.6	1700	1000	0	0	0	
Licking River - Mainstem	KY5100101-034	6.4	1300	5000	0	0	6.4	1700	200	0	0	0	
Lick Creek	KY5100101-037	9.2	1300	5000	0	0	0.0	0	0	0	0	0	
Raccoon Creek	KY5100101-037	5.2	1300	5000	0	0	0.0	0	0	0	0	0	
Burning Fork	KY5100101-038	7.5	1300	5000	0	0	0.0	0	0	0	0	0	
State Road Fork	KY5100101-038	5.1	1300	5000	0	0	0.0	0	0	0	0	0	
South Fork Licking River	KY5100102-008	0.0	0	0	0	0	14.8	1700	200	0	0	0	
Indian Creek	KY5100102-009	0.0	0	0	0	0	0.6	1700	200	0	0	0	
South Fork Licking River	KY5100102-010	0.0	0	0	0	0	15.3	1700	1000	0	4000	0	
Stoner Creek - Mainstem	KY5100102-012	0.0	0	0	0	0	9.6	1700	1000	0	200	0	
Houston Creek	KY5100102-013	0.0	0	0	0	0	19.0	1700	1000	0	0	0	
Hancock Creek	KY5100102-017	0.0	0	0	0	0	7.6	1700	1000	0	0	0	
Strodes Creek	KY5100102-017	0.0	0	0	0	0	26.5	1700	200	0	1000	0	4
Hinkston Creek - Mainstem	KY5100102-024	0.0	0	0	0	0	19.8	1700	200	0	1000	0	
North Fork Ky River - Mainstem	KY5100201-002	0.0	0	0	0	0	28.5	1700	200	0	4000	0	
North Fork Ky River - Mainstem	KY5100201-005	0.0	0	0	0	0	17.6	1700	200	0	4000	0	
Quicksand Creek	KY5100201-007	0.0	0	0	0	0	20.8	1700	1000	0	0	0	
South Fork Quicksand Creek	KY5100201-007	0.0	0	0	0	0	13.8	1700	1000	0	0	0	
Spring Fork	KY5100201-007	15.0	1100	5000	0	0	0.0	0	0	0	0	0	
Lost Creek	KY5100201-009	18.5	1100	5000	0	0	0.0	0	0	0	0	0	
Troublesome Creek	KY5100201-009	0.0	0	0	0	0	49.5	1700	200	0	6700	0	
Rockhouse Creek	KY5100201-021	24.3	1100	5000	0	0	0.0	0	0	0	0	0	
Cutshin Creek	KY5100202-006	28.8	1900	5000	1100	0	0.0	0	0	0	0	0	
Raccoon Creek	KY5100202-008	7.3	1900	5000	1100	0	0.0	0	0	0	0	0	
Big Sinking Creek	KY5100204-009	14.1	1300	5000	0	0	0.0	0	0	0	0	0	
Bailey Fork	KY5100204-009	8.1	1300	5000	0	0	0.0	0	0	0	0	0	
Millers Creek	KY5100204-009	6.4	1300	5000	0	0	0.0	0	0	0	0	0	

Table 1A

Section 303(d) List
Rivers and Streams

STREAM NAME	WATERBODY ID NUMBER	WAH (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	PCR (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	CAUSE	SOUR
Red River - Mainstem	KY5100204-013	0.0	0	0	0	0	10.0	1700	200	0	0	0	
Sand Lick Fork	KY5100204-018	5.0	1300	5000	0	0	0.0	0	0	0	0	0	
South Fork Red River	KY5100204-018	10.1	1300	5000	0	0	0.0	0	0	0	0	0	
North Elkhorn Creek - Mainstem	KY5100205-022	2.0	700	200	900	0	0.0	0	0	0	0	0	
South Elkhorn Creek - Mainstem	KY5100205-026	17.6	1200	200	500	4000	17.6	1700	200	0	4000	0	
Lee Branch	KY5100205-027	1.0	1200	200	0	0	0.0	0	0	0	0	0	
Town Branch	KY5100205-028	11.3	1200	200	500	0	0.0	0	0	0	0	0	
Clarks Run	KY5100205-039	8.0	100	200	1200	0	0.0	0	0	0	0	0	
Brushy Fork	KY5100205-052	0.2	900	200	0	0	0.0	0	0	0	0	0	
Silver Creek	KY5100205-052	2.0	1200	200	900	0	0.0	0	0	0	0	0	
Bacon Creek	KY5110001-009	0.0	0	0	0	0	31.2	1700	1000	0	0	0	
Nolin River - Mainstem	KY5110001-010	0.0	0	0	0	0	39.8	1700	200	0	0	0	
Valley Creek	KY5110001-012	17.5	1200	200	1300	4000	0.0	0	0	0	0	0	
Little Pittman Creek	KY5110001-026	12.9	1300	200	100	1000	0.0	0	0	0	0	0	
Barren River - Mainstem	KY5110002-004	14.2	500	4000	0	0	0.0	0	0	0	0	0	
Drakes Creek	KY5110002-006	23.5	300	100	0	0	0.0	0	0	0	0	0	
West Fork Drakes Creek	KY5110002-007	23.4	300	100	0	0	0.0	0	0	0	0	0	
Pond Creek	KY5110003-003	23.8	1000	5000	500	5000	23.8	1000	5000	0	0	0	
Mud River - Mainstem	KY5110003-005	24.7	300	100	0	0	0.0	0	0	0	0	0	
Mud River - Mainstem	KY5110003-008	40.0	300	100	0	0	34.2	1700	200	0	0	0	
Town Branch	KY5110003-008	6.7	300	100	0	0	0.0	0	0	0	0	0	
Cypress Creek	KY5110006-002	33.3	1000	5000	0	0	33.3	1000	5000	0	0	0	
Harris Branch	KY5110006-002	2.6	1000	5000	0	0	2.6	1000	5000	0	0	0	
Flat Creek	KY5110006-005	10.6	1000	5000	0	0	10.6	1000	5000	0	0	0	
Drakes Creek	KY5110006-006	21.3	1000	5000	0	0	21.3	1000	5000	0	0	0	
Cumberland River - Mainstem	KY5130101-019	0.0	0	0	0	0	16.1	1700	200	0	6000	0	
Cumberland River - Mainstem	KY5130101-025	0.0	0	0	0	0	25.3	1700	200	0	6000	0	
Yellow Creek	KY5130101-031	0.0	0	0	0	0	9.5	1700	200	0	0	0	
Cranks Creek	KY5130101-038	15.1	1100	5000	1000	0	0.0	0	0	0	0	0	
Big Lily Creek	KY5130103-011	2.6	1300	200	500	0	0.0	0	0	0	0	0	
Elk Spring Creek	KY5130103-018	1.5	1200	200	0	0	0.0	0	0	0	0	0	
Rock Creek	KY5130104-007	4.0	500	5000	1000	0	4.0	1000	5000	0	0	0	
Roaring Paunch Creek	KY5130104-008	15.6	1300	5000	1100	0	0.0	0	0	0	0	0	
North Fork Little River	KY5130205-009	0.0	0	0	0	0	14.0	1700	1000	0	200	0	
Elk Fork	KY5130206-002	7.0	1200	200	0	1000	0.0	0	0	0	0	0	
Middle Fork Beargrass Creek	KY5140101-002	2.5	1200	4000	0	0	13.6	1700	4000	0	0	0	
Muddy Fork Beargrass Creek	KY5140101-002	0.0	0	0	0	0	6.9	1700	200	0	0	0	
South Fork Beargrass Creek	KY5140101-002	0.0	0	0	0	0	14.6	1700	4000	0	0	0	
Goose Creek	KY5140101-003	0.0	0	0	0	0	12.2	1700	200	0	0	0	
Little Goose Creek	KY5140101-003	0.0	0	0	0	0	8.7	1700	200	0	0	0	
Harrods Creek	KY5140101-004	4.0	1200	200	900	0	0.0	0	0	0	0	0	
Brier Creek	KY5140102-002	5.7	1200	200	100	0	0.0	0	0	0	0	0	
Fishpool Creek	KY5140102-002	5.4	100	200	1200	0	5.4	1700	200	0	0	0	
Knob Creek	KY5140102-002	15.3	100	200	1200	0	0.0	0	0	0	0	0	
Pond Creek	KY5140102-002	17.0	1200	200	500	0	17.0	1700	200	0	0	0	
Mill Creek	KY5140102-003	0.0	0	0	0	0	13.5	1700	200	0	0	0	
Salt River - Mainstem	KY5140102-005	0.0	0	0	0	0	13.8	1700	200	0	1000	0	4

Table 1A

Section 303(d) List
Rivers and Streams

STREAM NAME	WATERBODY ID NUMBER	WAH (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	PCR (MILES)	CAUSE	SOURCE	CAUSE	SOURCE	CAUSE	SOUR
Floyds Fork - Mainstem	KY5140102-007	24.2	1200	200	900	0	24.2	1700	200	0	0	0	
Cedar Creek	KY5140102-008	15.2	1200	200	0	0	15.2	1700	200	0	0	0	
Pennsylvania Run	KY5140102-008	0.0	0	0	0	0	3.0	1700	200	0	0	0	
Brooks Run	KY5140102-009	6.0	1200	200	0	0	6.0	1700	200	0	0	0	
Chenoweth Run	KY5140102-010	9.1	1200	200	0	0	9.1	1700	200	0	0	0	
Floyds Fork - Mainstem	KY5140102-011	23.6	1200	200	900	0	23.6	1700	200	0	0	0	
Floyds Fork - Mainstem	KY5140102-014	0.0	0	0	0	0	13.8	1700	200	0	0	0	
Salt River - Mainstem	KY5140102-029	10.5	900	200	0	1000	0.0	0	0	0	0	0	
Salt River - Mainstem	KY5140102-031	40.0	900	200	0	1000	0.0	0	0	0	0	0	
Salt River - Mainstem	KY5140102-033	20.2	900	200	0	1000	0.0	0	0	0	0	0	
Rolling Fork - Mainstem	KY5140103-001	0.0	0	0	0	0	20.2	1700	1000	0	200	0	
Rolling Fork - Mainstem	KY5140103-005	0.0	0	0	0	0	87.8	1700	1000	0	200	0	
Crab Orchard Creek	KY5140205-003	22.6	1000	5000	1100	1000	22.6	1000	5000	0	0	0	
Clear Creek	KY5140205-008	28.1	1000	5000	1100	1000	28.1	1000	5000	0	0	0	
Lick Creek	KY5140205-008	18.1	1000	5000	1100	1000	18.1	1000	5000	0	0	0	
Cany Creek	KY5140205-015	11.3	1000	5000	1100	1000	11.3	1000	5000	0	0	0	
Buffalo Creek	KY5140205-016	7.8	1000	5000	1100	1000	7.8	1000	5000	0	0	0	
Little Bayou Creek	KY5140206-002	6.5	300	6600	0	0	0.0	0	0	0	0	0	
Cypress Creek	KY6040006-013	19.4	100	100	300	0	0.0	0	0	0	0	0	
Mayfield Creek - Mainstem	KY8010201-004	0.0	0	0	0	0	31.8	1700	1000	0	200	0	
*** Total ***		890.5					1269.3						

Cause Codes

0100 - Unknown toxicity
0300 - Priority organics
0500 - Metals
0700 - Chlorine
0900 - Nutrients
1000 - pH
1100 - Siltation
1200 - Organic enrichment/DO
1300 - Salinity/TDS/chlorides
1700 - Pathogens
1900 - Oil and grease
0 - Not applicable

Source Codes

0100 - Industrial point source
0200 - Municipal point sources
1000 - Agriculture
4000 - Urban runoff/storm sewers
5000 - Resource extraction
6000 - Land disposal
6600 - Hazardous waste
6700 - Septage disposal
0 - Not applicable

WAH - Warmwater Aquatic Habitat
PCR - Primary Contact Recreation

Table 1B
Section 303(d) List
Ohio River[a]

STREAM NAME	WATERBODY ID NUMBER	PCR (MILES)	CAUSE	SOURCE	SOURCE
Ohio River	ORWB 16	23.9	1700	0200	0400
Ohio River	ORWB 17	15.5	1700	0200	0400
Ohio River	ORWB 18	79.7	1700	0200	0400
Ohio River	ORWB 19	27.9	1700	0200	0400
Ohio River	ORWB 20	6.1	1700	0200	0400
Ohio River	ORWB 21	20.9	1700	0200	0400
Ohio River	ORWB 22	40.4	1700	0200	0400
Ohio River	ORWB 24	11.0	1700	0200	0400
Ohio River	ORWB 25	23.1	1700	0200	0400

Cause Code

1700 - Pathogens

Source Codes

0200 - Municipal point sources
0400 - Combined sewer overflows

PCR - Primary Contact Recreation

[a]Source: ORSANCO (1990)

Table 1C
Section 303(d) List
Lakes

LAKE NAME	WATERBODY ID NUMBER	WAH (ACRES)	CAUSE	SOURCE	CAUSE	SOURCE	DWS (ACRES)	CAUSE	SOURCE	CAUSE	SOURCE
Corbin	KY5130101-006L01	0.0	0	0	0	0	139	0900	0200	0	1000
Jericho	KY5140101-006L01	137	0900	1000	0	0	0.0	0	0	0	0
Loch Mary	KY5140205-008L02	0.0	0	0	0	0	135	0900	5000	0800	0
Reformatory	KY5140101-004L01	54	0900	1000	0	0	0.0	0	0	0	0
Sympson	KY 5140103-001L01	0.0	0	0	0	0	184	0900	1000	0	0
Taylorsville	KY5140102-025	3,050	0900	0200	0	1000	0.0	0	0	0	0

Cause Code

0900 - Nutrients
0 - Not applicable

Source Codes

0200 - Municipal point sources
0800 - Other inorganics
1000 - Agriculture
5000 - Resource extraction
0 - Not applicable

WAH - Warmwater Aquatic Habitat
DWS - Domestic Water Supply

Table 2
Section 303(d) List of Waterbodies
Priority Candidates for TMDL Development

WATERBODY NAME	WATERBODY ID NUMBER	MILES (ACRES)
Blaine Creek - Mainstem	KY5070204-006	11.5
Newcombe Creek	KY5090104-009	6.9
Licking River - Mainstem	KY5100101-034	6.4
Lick Creek	KY5100101-037	9.2
Raccoon Creek	KY5100101-037	5.2
Burning Fork	KY5100101-038	7.5
State Road Fork	KY5100101-038	5.1
Big Sinking Creek	KY5100204-009	14.1
Billey Fork	KY5100204-009	8.1
Millers Creek	KY5100204-009	6.4
Sand Lick Fork	KY5100204-018	5.0
South Fork Red River	KY5100204-018	10.1
Roaring Paunch Creek	KY5130104-008	15.6
Harrod's Creek	KY5140101-004	4.0
Floyds Fork	KY5140102-007	24.2
Floyds Fork	KY5140102-011	23.6
Salt River	KY5140102-029	10.5
Salt River	KY5140102-031	40.0
Salt River	KY5140102-033	20.2
Taylorsville Lake	KY5140102-025	(3,050)

alterations) or habitat characteristics were severely reduced or eliminated. Where both physicochemical and biological data were available, the latter were generally the predominant factor for assessing aquatic life use support status.

Monitoring data generated since the 1990 305(b) Report resulted in the listing of additional segments. Harrods Creek and an expanded reach of Floyds Fork in Jefferson County were included because of documented stream impacts caused by numerous domestic wastewater treatment plants. Additional segments of the Salt River above Taylorsville Lake were included because of nutrient loading from point and nonpoint sources in the watershed.

It is evident from the sources of non-support listed in Tables 1A and 1C that many waterbodies are listed because of nonpoint source contributions. This is partly due to actual instream conditions, but is also an indication of the type of data that were used. Data collected monthly from the ambient station network are not likely to point out instream problems below specific discharges during periods of low flow. Very little data would have been collected during critical low flow periods, and then usually not directly below a discharge. To evaluate the impact of point source discharges, it would be necessary to take existing discharge data, and using either actual or critical flow, estimate instream

impacts. The recent 304(l) short list reflects priority pollutant problems from point source discharges, using theoretical instream conditions derived from calculated critical low flow and actual discharge monitoring data.

Tables 1A, 1B, and 1C indicate that municipal and package sewage treatment plants are significant sources of pollutants causing use nonsupport. These point source problems are usually not the result of insufficient permits, but of wastewaters exceeding permit limits or, in the case of sewage treatment plants, bypasses occurring during periods of equipment failure or heavy rainfall. Kentucky has written water quality-based KPDES permits since it received primacy in the NPDES program in 1983. Permit limits have become more stringent and have included more parameters as water quality standards have been revised. Permit limits are now derived from the most stringent of aquatic life, human health, recreation, or technology-based criteria. The recently completed 304(l) lists identified point source problems with priority pollutants. As a result of this work, several permits were revoked and reissued prior to their normal 5-year schedule in order to satisfy the 304(l) schedule requirements. The compliance/enforcement component of the regulatory process must ensure that water quality problems do not occur as a result of

inadequate maintenance and/or treatment operations at the permitted facilities. However, Kentucky will investigate the waterbodies shown in Table 2 impacted by point source pollution to ensure that appropriate permit limits are in place.

Kentucky has developed and is implementing a strategy to assess the needs and opportunities to reduce small point-source sewage dischargers in the state. The state has a large number of these "package" plants. Nonpoint source contamination from on-site treatment systems (principally septic tanks) is also being reviewed. These discharges affect both surface and groundwater quality. Location, age, physical condition, capacity, operating performance, enforcement history, discharge elimination possibility, and environmental impact are among the categories of information being compiled for existing facilities. Kentucky is attempting to reduce the number of such dischargers and pollution sources by requiring connection to available comprehensive public sewer systems, or by seeking the development of a regional scheme.

Coal mining accounted for numerous stream segments not meeting aquatic life and/or recreational uses because of pH violations and for one lake not meeting the domestic water supply use because of high levels of iron. In the past, these problems were not addressed by regulatory mechanisms. However, recent regulations passed by Kentucky on remining may help to reduce contaminated

runoff from some abandoned mine areas. These regulations will allow new mining activities in previously mined areas to be exempted from certain water quality criteria as long as there is a good potential that the quality of waters emanating from these areas will be improved.

Agricultural activities were reported to be a contributing source of water quality standards excursions in many waterbodies. Kentucky's Nonpoint Source (NPS) program is prioritizing streams that have been identified as impacted by nonpoint sources, especially problems resulting from agricultural activities. Watersheds will be targeted for cost-shared best management practice (BMP) studies to evaluate the effectiveness of implementing pollution control measures. Presently, this kind of BMP cost-sharing activity is only implemented for agricultural projects with the cooperation of the United States Department of Agriculture (USDA). While it is possible that in the near future some type of demonstration project will be undertaken for other nonpoint source activities, such as silviculture or construction, under the current program education and voluntary measures are the primary means of controlling nonpoint source pollution. A NPS regulatory program will only be implemented if voluntary measures fail to be effective and appropriate legislation is passed.

Another category of pollution source for which there exist few controls is combined sewer overflows (CSOs). In their assessment of the Ohio River, ORSANCO (1990) identified every water quality monitoring station in or adjacent to Kentucky, except Evansville, as not meeting contact recreation bacteria criteria in 1989, a year in which flows were higher than average. For the 2-year reporting period, 248.5 miles of the Ohio River bordering Kentucky did not meet the recreational use. This was presumed to be mainly caused by CSOs from communities along both sides of the Ohio River. There are also some sewer overflows discharging raw sewage to the river that occur even during dry conditions because of system malfunctions or high river stages that cause some of the older sewage collection systems (constructed prior to the advent of the high-lift dams) to be bypassed. Kentucky will be taking steps to require cities to identify overflow points and conditions that result in overflows. The next logical step will be to apply all practicable controls to prevent the CSOs without construction of costly new collection systems or complete segregation of the old collection systems.

The waterbodies listed in Table 2 represent those waterbodies that will be considered as the highest priority for TMDL development. This prioritization is not based on an assessment of relative water quality impairment, but, rather, reflects Kentucky's opinion that the cause and source of contamination in these waterbodies are more logically addressed by the TMDL concept than

the other waterbodies. TMDLs for chloride will be used to control impacts from oil and gas production facilities in the first 13 streams in Table 2. Kentucky's WLA modeling procedure will generate appropriate TMDLs for limiting the number of sewage treatment plants to be permitted in the highly developed segments of Harrods Creek and Floyds Fork, near Louisville. Additional monitoring data will be needed to set TMDLs for nutrients in the Salt River basin above Taylorsville Lake and to develop appropriate point and nonpoint source control strategies. Expansion of the existing monitoring program is being evaluated.

The development of TMDLs for the remaining waterbodies will depend upon the resolution of technical issues related to the implementation of TMDLs. Kentucky encourages EPA to address this problem through the development of appropriate protocols and national guidance.