Kansas Nonpoint Source Control Program
2003 - 2004 Annual Report

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Nonpoint Source Management Plan

In 1987, Congress established Section 319 of the Clean Water Act, "Nonpoint Source Management Programs." Section 319 established a grant program designed to assist states with implementing policy and programs for the control of nonpoint source pollution. To be eligible to receive these grants, states were required to prepare a nonpoint source management program with three components. One, identify the best management practices and measures needed to reduce nonpoint source pollutant loadings. Two, identify the programs to be used to achieve implementation of the identified best management practices. Lastly, develop an implementation schedule. The Kansas Nonpoint Source (NPS) Management Plan was approved by EPA in 1989. The Kansas Nonpoint Source Pollution Management Plan was last updated in the year 2000 and will be revised in 2005.

The Kansas vision is that all nonpoint pollutant sources are implementing water quality protection measures so that Kansas' lakes, rivers, wetlands and groundwater will be free of pollution caused by nonpoint pollutant sources. This vision will be achieved through setting and completing both long and short term goals.

Long Term Goals
Nonpoint Source Management Plan

1. Insure all of Kansas' water resources are free of water quality impairments caused by nonpoint pollutant sources. This will be achieved by:

- Developing Total Maximum Daily Loads (TMDLs)
- Implementing TMDLs
- Completing source water assessments (page 17)
- Developing and implementing source water protection plans (page 17)

2003 - 2004 Update:

- Developing TMDLs:

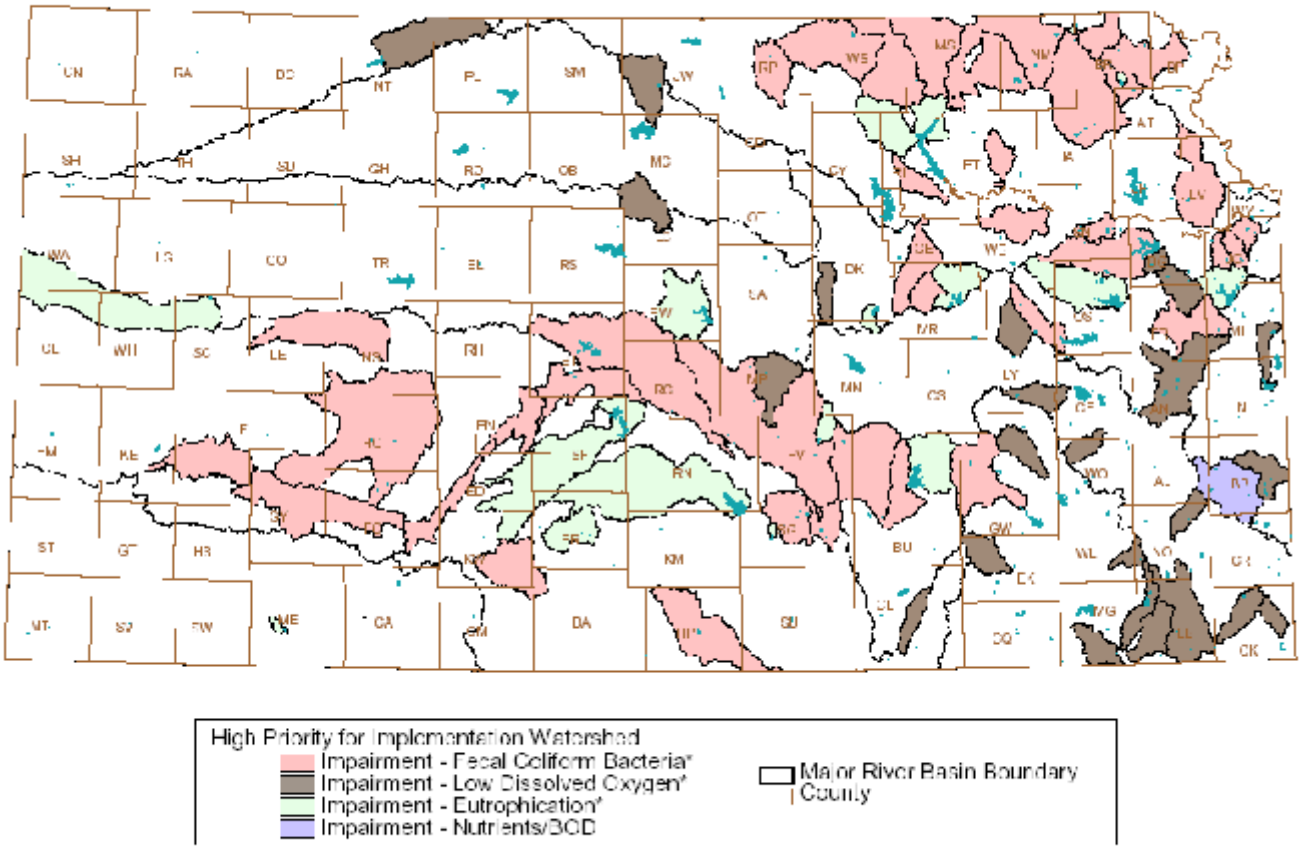
Status of Kansas TMDL Program as of December 2004

1. Ten Basins Complete under Court Decree
2. Smoky Hill-Saline Basin Complete - Chloride/Sulfate TMDLs
3. Neosho Basin Completed in December - 2002 Listings; Spring River Metals TMDL
4. 2004 303(d) Impaired Waters List Submitted after Smoky Hill and Neosho TMDLs - January 1, 2005
5. Selected KLR New and Revised TMDLs to be completed by June 2005
6. Lower Arkansas Basin to be Complete by June 2006
7. Upper Republican Basin - SB 204 Stream TMDLs Complete by June 2006; Closes Court Decree
8. Development of Upper Arkansas Basin Total Dissolved Solids TMDL in 2006

- Implementing TMDLs:

TMDLs with High Priority are slated to be implemented over the period of State Fiscal Years (SFY) 2004 - 2010. Implementation of TMDLs with Medium Priority will be deferred until after Fiscal Year 2010, after a review and reevaluation of implementing those TMDLs by the Basin Advisory Committees in 2010. TMDLs with Low Priority will continue to have data collected on those impaired streams and lakes and will have their impaired status reevaluated as part of the process of developing the 2006, 2008 and 2010 Section 303(d) lists. Should they continue to be impaired, those Low Priority TMDLs may begin implementation after Fiscal Year 2010. On the next page is a map of high priority TMDLs.

Kansas High Priority for Implementation TMDLs



* A Eutrophication TMDL has been added for Marion Reservoir since the maps creation.

Smoky Hill/Saline Basin High Priority TMDLs

Impairments from the 1998 303(d) list were carried over and combined with the 2002 303(d) list to identify 53 impairments in 27 watersheds and 23 lake impairments in 17 lakes in the Smoky Hill-Saline Basin. High priority TMDLs in the Smoky Hill-Saline basin include dissolved oxygen for Spillman and Holland creeks, Herington Reservoir and Lake Scott; eutrophication for Kanopolis and Herington reservoirs; and ph and aquatic plants for Lake Scott.

TABLE 2
SMOKY HILL-SALINE BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
		STREAM SEGMENTS	
1	Spillman Creek	DO	10260010020
2	Holland Creek	DO	10260008040
		LAKES	
3	Kanopolis Lake	E	10260006060
4	Herington Reservoir	E, DO	10260008070
5	Lake Scott	E	10260004010, 10260004020, 10260004050

Key:
DO: (IN LAKES) Low dissolved oxygen in upper 3 meters of water column over deepest location in water body. (IN STREAMS) Low dissolved oxygen (<5 mg/L).
E: Eutrophication, biological community impacts and excessive nutrient/organic loading. If applicable, the Eutrophication TMDLs are bundled with pH, aquatic plants, and/or DO impairments. These impairments are all interrelated and effected by nutrient loading.
HUC: U.S. Geologic Survey Hydrologic Unit Code

In this basin there are seven contamination sites for which the state has assumed responsibility. All counties have adopted state approved sanitary/environmental codes. One hundred public water suppliers have conducted source water assessments. One public water supply was recommended by the United States Environmental Protection Agency (EPA) for participation in the 2003 atrazine monitoring program which is to run for five years. The atrazine risk reduction program includes runoff prevention in watersheds feeding the public water supply. Twenty nine conservation districts have local nonpoint source pollution management plans.

Solomon Basin High Priority TMDLs

Impairments from the 1998 303(d) list were carried over and combined with the 2002 303(d) list to identify forty-seven stream impairments in 18 watersheds and nine lake impairments in seven lakes in the Solomon Basin. The high priority TMDLs that have been established are shown in the table below.

TABLE 1
SOLOMON BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
STREAM SEGMENTS			
1	Limestone Creek	DO	10260015010

Key:
DO: Low dissolved oxygen (< 5 mg/L in stream)
HUC: U.S. Geologic Survey Hydrologic Unit Code

In this basin there are seven contamination sites for which the state has assumed responsibility. All counties have adopted state approved sanitary/environmental codes. Forty-six public water suppliers have conducted source water assessments. Two public water supplies were recommended by the United States Environmental Protection Agency (EPA) for participation in the five year, 2003 atrazine monitoring program. This atrazine risk reduction program includes runoff prevention in watersheds feeding the public water supply. All conservation districts in the basin have local nonpoint source pollution management plans.

Upper Republican Basins High Priority TMDLs

Impairments from the 1998 303(d) list were carried over and combined with the 2002 303(d) list to identify fifteen stream impairments on six watersheds and two lake impairments in the Upper Republican Basin.

TABLE 2
UPPER REPUBLICAN BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
STREAM SEGMENTS			
1	Lower Prairie Dog Creek	DO	10250015020, 10250015037, 10250015047

Key:
DO: Dissolved oxygen
HUC: U.S. Geologic Survey Hydrologic Unit Code

In this basin there are two contamination sites for which the state has assumed responsibility. All counties in the basin have adopted state approved sanitary/environmental codes. Twenty-seven public water suppliers have conducted source water assessments. All conservation districts in the basin have local nonpoint source pollution management plans.

Kansas-Lower Republican Basin High Priority TMDLs

The protection and restoration of watersheds, particularly those watersheds above public water supply reservoirs, is a priority in the Kansas-Lower Republican Basin. Kansas-Lower Republican Basin Section 4 TMDLs for the Kansas-Lower Republican Basin were submitted to the Environmental Protection Agency June 30, 1999. The Table below provides information on rivers and lakes within the basin that are designated as a high priority for TMDL implementation.

TABLE 1 KANSAS-LOWER REPUBLICAN BASIN HIGH PRIORITY TMDLS			
MAP ID	**WATERBODY**	**IMPAIRMENTS**	**HUC 11S WATERSHEDS**
STREAM SEGMENTS			
1	Big Blue River	FCB	10270205(044,060)
2	Little Blue River	FCB	10270207(083,090)
3	Black Vermillion River	FCB	10270205(090)
4	Salt Creek	FCB, DO	10250017(050)
5	Clarks Creek	FCB	10270101(020)
6	Wildcat Creek	FCB, DO	10270101(060)
7	Vermillion Creek	FCB	10270102(040)
8	Mill Creek (WB Co.)	FCB	10270102(100)
9	Shunganunga Creek	FCB	10270102(130)
10	Delaware River above Perry Lake	FCB	10270103(010,040,050)
11	Grasshopper Creek	FCB	10270103(020)
12	Upper Wakarusa River	FCB, Sed/TSS, Nutr/BOD	10270104(010)
13	Washington Creek	DO	10270104(020)
14	Stranger Creek	FCB	10270104(050,080,100) 10270104(120,130)
15	Baker Wetlands	DO	N/A
16	Kill Creek	FCB	10270104(140)
17	Cedar Creek	FCB	10270104(150)
18	Mill Creek (JO Co.)	FCB	10270104(170)
LAKES			
19	Tuttle Creek Lake	Silt, Pest, E	10270205(044,050,060) 10270205(070,090,100) 10270205(120,140) 10270207(083,090,100)
20	Gardner Lake*	DO, E	10270104(140)
21	Mission Lake	Pest, E	10270103(020)
22	Clinton Lake	E	10270104(010)

*The lake impairment is only related to the contributing area of Gardner Lake.

Key:
DO: Low dissolved oxygen in upper 3 meters of water column over deepest location in water body
E: Eutrophication, biological community impacts and excessive nutrient/organic loading. If applicable, the Eutrophication TMDLs are bundled with pH, aquatic plants, and/or DO impairments. These impairments are all interrelated and effected by nutrient loading.
FCB: Fecal Coliform Bacteria
HUC: U.S. Geologic Survey Hydrologic Unit Code
Nutr/BOD: Nitrogen and Phosphorus/Biochemical Oxygen Demand
Pest: Pesticides
TSS: Total Suspended Solids
Sed: Sediment

All counties within the basin have adopted local sanitary/environmental codes and participate in the Local Environmental Protection Program. Seven public water suppliers were recommended by the United States Environmental Protection Agency (EPA) for participation in the five year atrazine monitoring program, which was implemented in 2003.

Missouri Basin High Priority TMDLs

The Section 303(d) list submitted to and approved by the Environmental Protection Agency in 1998 identifies 36 river segments and 12 lakes in the Missouri Basin as water quality impaired. High priority TMDLs are listed in the table below.

TABLE 2
MISSOURI BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
STREAM SEGMENT			
1	Wolf River	FCB	10240005060
2	S.F. Big Nemaha River	FCB	10240007010 10240007021 10240007030
3	Walnut Creek	FCB	10240008050
LAKES			
4	Pony Creek Lake	E	10240008050

Key:
E: Eutrophication, biological community impacts and excessive nutrient/organic loading
FCB: Fecal Coliform Bacteria
HUC: U.S. Geologic Survey Hydrologic Unit Code

The primary approach to flood management in the basin focuses on flood plain management through community participation in the National Flood Insurance Program and reduction of rural flood damages through construction of watershed dams in organized watershed districts. The basin has 19 communities (cities and counties) participating in the National Flood Insurance Program. One community has been suspended from the program and three communities with identified flood hazard areas do not participate.

Marais des Cygnes Basins High Priority TMDLs

The Section 303(d) list submitted to and approved by the Environmental Protection Agency in 1998, identifies 87 river segments and 13 lakes in the Marais des Cygnes Basin as water quality impaired. The table below provides information on rivers and lakes within the basin that are designated as a high priority for TMDL implementation.

TABLE 1 MARIAS DES CYGNES BASIN HIGH PRIORITY TMDLS			
MAP ID	**WATERBODY**	**IMPAIRMENTS**	**HUC 11 WATERSHEDS**
STREAM SEGMENTS			
1	Hundred and Ten Mile Creek	DO	10290101030
2	Upper Marais des Cygnes River	FCB	10290101040 10290101070
3	One Hundred Forty Two Mile Creek	DO, FCB	10290101010
4	Pottawatomie Creek	DO	10290101050 10290101060
5	Dragoon Creek	DO	10290101030
6	Ottawa Creek and Tauy Creek	DO	10290101070
7	Middle Creek	DO	10290102060
8	Lower Marmaton River	DO	10290104010 10290104020
9	Marmaton River	Nutr/BOD, DO	10290104010 10290104020
LAKES			
10	Pomona Lake	E, Silt	10290101030
11	Hillsdale Lake	E,	10290102010
12	Marais des Cygnes Wildlife Mgt. Area	DO, E, pH, Silt	10290102060 10290102070 10290102080

Key:
DO: Low dissolved oxygen in upper 3 meters of water column over deepest location in water body
E: Eutrophication, biological community impacts and excessive nutrient/organic loading
FCB: Fecal Coliform Bacteria
HUC: U.S. Geologic Survey Hydrologic Unit Code
Nutr/BOD: Nitrogen and Phosphorus/Biochemical Oxygen Demand
pH: A measure of the hydrogen ion concentration.
Silt: Observed siltation and/or chronic turbidity that impacts development of trophic state

In 2003, the Lake Region Resource Conservation and Development Council completed a Watershed Restoration and Protection Strategy (WRAPS) for the basin using funding

from EPA 319 funds through the Kansas Department of Health and Environment. The Lake Region Resource Conservation and Development Council is now seeking funding to implement a comprehensive plan for reducing watershed pollution in the entire Marais des Cygnes basin. The Hillsdale Water Quality Project has worked with conservation districts, communities in the Hillsdale watershed and public water suppliers who use Hillsdale Reservoir to encourage best management practices in the watershed.

Neosho Basin High Priority TMDLs

The protection and restoration of watersheds with impaired water quality and watersheds above public water supply reservoirs, is high priority in the Neosho Basin. The Section 303(d) list submitted to and approved by the Environmental Protection Agency in 1998, identified 69 river segments and 13 lakes in the Neosho Basin as water quality impaired. The table below provides information on rivers and lakes within the basin that are designated a high priority for TMDL implementation.

TABLE 1
NEOSHO BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
	STREAM SEGMENTS		
1	Allen (Dows) Creek	DO	11070201 80
2	Neosho Headwaters	FCB	11070201010
3	Turkey Creek	DO	11070204020
4	Canville Creek	DO	11070205010
5	Cherry Creek	DO	11070205060
6	Labette Creek	DO	11070205040 & 050
7	Eagle Creek	DO	11070201040
8	Spring River	Metals (zinc, lead, copper, cadmium)	11070207160, 170 & 190
9	Shawnee Creek	DO	11070207160
	LAKES		
10	Council Grove Lake	E; Silt	11070201010
11	Marion Lake (Marion Reservoir)	E	11070202010
12	Olpe City Lake	E, Silt	11070201040(030)

E: Eutrophication, biological community impacts and excessive nutrient/organic loading
FCB: Fecal Coliform Bacteria
HUC: U.S. Geologic Survey Hydrologic Unit Code
DO: Dissolved Oxygen lower than 5 ppm in stream
Silt: Observed siltation and/or chronic turbidity that impacts development of trophic state
All the counties in the Neosho Basin, except Chase County, have adopted state approved sanitary/environmental codes, and participate in the Local Environmental Protection Program which helps implement environmental protection strategies of the Kansas Water Plan. Five public water supplies were recommended by the United States Environmental Protection Agency (EPA) for participation in the five year, 2003 atrazine monitoring program. This atrazine risk reduction program includes runoff prevention in watersheds feeding the public water supply. These types of activities can help reduce pollution loading in the watersheds.

Verdigris Basin High Priority TMDLs

The protection and restoration of watersheds with impaired water quality, and those watersheds above public water supply reservoirs, is high priority in the Verdigris Basin. The Section 303(d) list submitted to and approved by EPA in 1998, identifies 48 river segments and 5 lakes in the Verdigris River Basin as water quality impaired. Many of the stream segments, configured in a watershed setting, have a TMDL applied to them as a whole. Fourteen watershed and six lake TMDLs have been developed. These TMDLs were submitted to EPA on June 27, 2002 and have been approved. There is a need for the development of local implementation plans to achieve approved TMDLs in the basin within ten years. Table 1 provides information on rivers and lakes within the basin that are designated as a high priority for TMDL implementation.
KEY:
DO: Dissolved oxygen
FCB: Fecal Coliform Bacteria

TABLE 1
VERDIGRIS BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
1	Upper Fall River (above Fall River Lake)	FCB	11070102010
2	West Creek	DO	11070101020
3	Pumpkin Creek	DO	11070103020
4	Onion Creek	DO	11070103020
5	Chetopa Creek	DO	11070101030
6	Big Hill Creek	DO	11070103010
7	Elk River	DO	11070104010

HUC: U.S. Geologic Survey Hydrologic Unit Code

All counties have adopted state approved sanitary/environmental codes. Land use regulations have been adopted in all counties except for Greenwood, Elk, Chautauqua and Montgomery counties.
Source water assessments are being developed throughout the basin, with 24 complete as of June 2003. Once the results of these assessments are available, the water supplies most vulnerable to contamination can be paired with impaired watersheds to begin a comprehensive program for watershed restoration and protection. A key strategy will be restoration and protection of wetland and riparian areas.

Walnut Basin High Priority TMDLs
The protection and restoration of watersheds with impaired water quality and watersheds above public water supply sources are high priorities in the Walnut Basin. The table below provides information on rivers and lakes within the basin that are designated as a high priority for TMDL implementation.

TABLE 2
WALNUT BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
STREAM SEGMENTS			
1	Walnut River (Upper)	FCB	11030017040
2	Whitewater River	FCB	11030017010 & 020
3	Silver Creek	DO	11060001 & 010
LAKE			
4	El Dorado Lake	E; Silt	11030017030

Key:

DO: Dissolved oxygen
E: Eutrophication, biological community impacts and excessive nutrient/organic loading
FCB: Fecal Coliform Bacteria
HUC: U.S. Geologic Survey Hydrologic Unit Code
Silt: Observed siltation and/or chronic turbidity that impacts development of trophic

In this basin there are two contamination sites for which the state has assumed responsibility. All counties have adopted state approved sanitary/environmental codes and all counties have adopted land use regulations. Thirteen public water suppliers have

conducted source water assessments. All conservation districts in the basin have local nonpoint source pollution management plans.

Lower Arkansas Rivers Basins High Priority TMDLs

The restoration of watersheds with impaired water quality and the protection of watersheds above public water supply reservoirs and ground water sources used for drinking water supplies are high priority in the Lower Arkansas Basin. The Clean Water Act Section 303(d) list, submitted to and approved by EPA in 1998, identifies 129 river segments and 24 lakes in the Lower Arkansas River Basin as water quality impaired. TMDLs have been developed and approved for each parameter causing impairment. Fifty one watersheds and 30 lake TMDLs were approved by EPA in 2000 and are currently in the ten year implementation cycle established by KDHE.

LOWER ARKANSAS BASIN HIGH PRIORITY TMDLS			
MAP ID	**WATERBODY**	**IMPAIRMENTS**	**HUC 11 WATERSHEDS**
STREAM SEGMENTS			
1	Cow Creek	DO, FCB	11030011 010, 020, 030
2	Little Arkansas River	FCB, Nutr/BOD, Sed/TSS	11030012 010, 020, 030, 040, 050
3	Turkey Creek	DO	11030012 040
4	Arkansas River (Below Wichita)	FCB	11030013 010 11030010 020
5	Cowskin Creek	Nutr/BOD, FCB	11030013 010
6	Upper Medicine Lodge River	FCB	11060003 010
7	Bluff Creek	DO, FCB	11060005 040, 050
LAKES			
8	Quivira Big Salt Marsh	E, pH	11030009 040
9	Quivira Little Salt Marsh	E, pH	11030009 020, 030, 040
10	Cheyenne Bottoms	E, DO	11030011 010
11	Newton City Park Lake	E	11030012 040
12	Cheney Lake	E, Silt	11030014 010, 020, 030
13	Pratt County Lake	E	11030015 010
14	Lake Afton	E	11030016 010

Key: Nutr/BOD: Nitrogen and Phosphorus/Biochemical Oxygen Demand

CL: Chloride
DO: Low dissolved oxygen in upper 3 meters of water column over deepest location in water body
E: Eutrophication, biological community impacts and excessive nutrient/organic loading. If applicable, the Eutrophication TMDLs are bundled with pH, aquatic plants, and/or DO impairments. These impairments are all interrelated and effected by nutrient loading.
FCB: Fecal Coliform Bacteria
FLUOR: Fluoride
HUC: U.S. Geologic Survey Hydrologic Unit Code
pH: A measure of the hydrogen ion concentration.
Silt: Observed siltation and/or chronic turbidity that impacts development of trophic state
Sed/TSS: Total Suspended Solids

Cimarron Basin High Priority TMDLs

In this basin there are six contamination sites for which the state has assumed responsibility. Seven counties have adopted state approved sanitary/environmental codes. Fifty public water suppliers have conducted source water assessments. Thirteen conservation districts have local nonpoint source pollution management plans. Total Daily Maximum Loads (TMDLs) were established for two watersheds and five lakes with water quality impairments and submitted to the Environmental Protection Agency by June 30, 2000. Two lakes were identified as high priority for implementation and are listed in Table 1.

TABLE 1
CIMARRON BASIN HIGH PRIORITY TMDLS

WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
Lake Meade	E, DO, pH, AP	11040007 050
Big Basin (St. Jacob's Well) Wildlife Area	E	11040008 020

Key:
AP: Excessive biomass of submersed vascular plants (macrophytes) that is sufficient to interfere with designated uses or that impacts the development of trophic state
DO: Low dissolved oxygen in the upper 3.0 meters of the water column, over the deepest location in the water body
E: Eutrophication, biological community impacts, and excessive nutrient/organic loading

HUC: U.S. Geological Survey hydrological
pH: pH over 8.5 or under 6.5

Upper Arkansas Basin High Priority TMDLs

Several water bodies in the Upper Arkansas Basin are in need of water quality restoration. Implementation activities to achieve Total Maximum Daily Loads should be focused in the high priority watersheds and lake. Sixteen watersheds and six Lake Total Maximum Daily Loads (TMDLs) were established in the Basin for water quality impairments, and submitted to the Environmental Protection Agency in 2000. The table below provides information on rivers and lakes within the basin that are designated as a high priority for TMDL implementation. For the first five years, TMDLs with high priority will have state programs and resources directed at corrective action to bring about improvement in water quality.

TABLE 1
UPPER ARKANSAS BASIN HIGH PRIORITY TMDLS

MAP ID	WATERBODY	IMPAIRMENTS	HUC 11 WATERSHEDS
	STREAM SEGMENTS		
1	Arkansas River below Garden City	FCB	11030001 080 11030003 010
2	Arkansas River (Garden City to Ford)	FCB	11030003 010, 020, 030 11030004 010
3	Arkansas River (Ford to Kinsley)	FCB	11030004 030, 040
4	Arkansas River (Kinsley to Dundee)	FCB	11030004 040, 050
5	Arkansas River Dundee to Great Bend	FCB	11030004 050, 060, 070 11030008 030
6	Pawnee River (Upper) and Buckner Creek	FCB	11030005 030, 040, 050 11030006 010, 020, 030
7	Walnut Creek (North Fork)	FCB	11030007 010, 020
	LAKES		
8	Ford County Lake (bundle TMDL for multi impairments)	E, DO, pH	11030006 020

Key:
DO: Low dissolved oxygen in upper 3 meters of water column over deepest location in lake.
HUC: U.S. Geologic Survey Hydrologic Unit Code

FCB: Fecal Coliform Bacteria
NH3: Total Ammonia
pH: pH over 8.5 or under 6.5
E: Eutrophication, biological community impacts, and excessive nutrient/organic loading

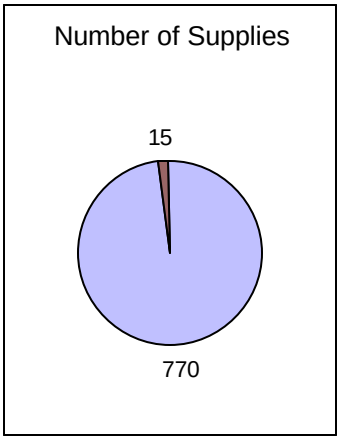
p Completing source water assessments:
This was completed and approved by EPA in April 2004. Source Water Assessment Reports are on the KDHE website at http://www.kdhe.state.ks.us/nps/swap/.

p Developing and implementing source water protection plans:

	Wellhead Protection		Source Water Assessment		Nonpoint Source Watershed Project	
	Number	Population	Number	Population	Number	Population
Registered	93	214,181	103	421,610	15	
Approved	74	165,057	10	17,425		
Adopted	54	73,548	7	13,917		

Communities with adopted SWPP are in various stages of implementation. Multiple agency programs exist that target resources to source water protection areas. Since implementation activities are mostly voluntary, implementation will be a long term commitment with varying degree's of success.

Number of water supplies benefitting from NPS watershed projects:



Long Term Goals Continued
Nonpoint Source Management Plan

2. The next goal is to achieve the Kansas Water Plan 2010 Objectives:

1. Reduce the average concentration of bacteria, biochemical oxygen demand, dissolved solids, metals, nutrients, pesticides, and sediment that adversely affect the water quality of Kansas' lakes and streams.
2. Reduce the average concentration of dissolved solids, metals, nitrates, pesticides and volatile organic chemicals that adversely affect the quality of Kansas' groundwater.
3. Ensure that water quality conditions are maintained at a level equal to or better than year 2000 conditions.

This will be achieved by developing implementation strategies for fecal coliform bacteria, Atrazine, total suspended solids, phosphorus, and nitrogen.

2003 - 2004 Update:
The State of Kansas will not be developing pollutant specific implementation strategies as previously indicated in the NPS Management Plan. Alternatively, Kansas natural resource agencies (KDHE, NRCS, SCC, KDWP, KDA, KWO) are working to institutionalize a comprehensive watershed planning process known as WRAPS (Watershed Restoration and Protection Strategy). The WRAPS process is driven by local stakeholder input and involvement, and is supported by a wide variety of existing agency programs (K-State Extension, KDHE Watershed Management Section/319 grants, State Water Plan programs, SCC/NRCS cost share and technical assistance programs, etc.) The main focus of local WRAPS projects is to implement pollutant specific water quality protection measures in TMDL areas. Final WRAPS documents must include an implementation plan (or strategy) that identifies pollutant specific water quality protection measures, responsible parties, time schedules, estimated costs, and available funding resources. A complete description of the WRAPS process and other supporting programs will be included in future NPS Management Plan revisions.

Long Term Goals Continued
Nonpoint Source Management Plan

3. The third long term goal is that all nonpoint pollutant sources in Kansas implement measures and practices that reduce the discharge of nonpoint pollutants to the maximum extent practicable. This will be achieved by the following:

- reviewing federal development and permitting programs for consistency with the KS NPS Management Plan
- developing and demonstrating the effectiveness of nps control and water quality protection measures
- administering the Kansas NPS Pollution Control Fund
- assuring that on-site wastewater treatment systems are properly designed, installed and maintained
- assuring that riparian areas and wetlands are protected and restored
- cropland has the highest level of residue attainable, livestock production activities have no significant pollution potential
- assuring that Kansas' range and pasture land is managed for sustainable production
- urbanized and developed lands have no significant pollution potential.

2003 - 2004 Update:

- Reviewing federal development and permitting programs for consistency with the KS NPS Management Plan:

Water Quality Certification

The Kansas Department of Health and Environment- Watershed Management Section (KDHE-WMS) is responsible for assuring all nonpoint pollutant sources implement water quality protection measures through a plan of action. This includes issuing letter Section 401 (Clean Water Act) water quality certifications. It conditionally certifies that a proposed permit activity will not violate Kansas Surface Water Quality Standards, for those activities requiring a non-KDHE permit, if a water quality protection plan and certification conditions are implemented. These activities, authorized by the U.S. Army Corps of Engineers (COE) and/or Kansas Department of Agriculture, Division of Water Resources (KDA-DWR), include but are not limited to: dredging, altering a surface water body or its cross section, flood plain fill, wetlands alteration, construction, or any activity having the potential to impact water resources. The conditions of the 401 certification become **conditions** of the COE permit, and are included as **considerations** in the KDA-DWR permit. Water quality certifications are also given for "federal consistency review" to those entities applying for federal funding from non

EPA agencies such as USDA Rural Development, as per an agreement between KDHE and USDA Rural Development (1 completed). The basis of the certification is the development and implementation of water quality protection measures through a plan to address the pollutants associated with the activity. KDHE recognizes the Stormwater Pollution Prevention Plan required by those entities or individuals obtaining an NPDES Construction Stormwater Permit in meeting the water quality protection plan condition. KDHE has also provided a "Water Quality Protection Plan Form" and instructions on its website. Those parties having standard operational procedures (SOP) such as consultants can consider it consistent with the condition as well. A total of **1332** water quality certifications were issued in this report's period of record. **Fifty-two** (52) individual permits were certified and **1280** were issued via the Kansas Water Quality Certification for Section 404 Nationwide Permits (49 different activities): http://www.nwk.usace.army.mil/regulatory/nwp_information/ks_nwp_401.pdf

Accomplishments:
Per the previous annual report, Watershed field coordinators were briefed on inspecting project sites for compliance with the Section 401 Water Quality Certification. The WMS and Bureau of Environment Field Service staff are finalizing a form for inspectors to complete and send to Topeka for review and filing.

Section 401 water quality certifications format has been somewhat revised in the following manner:

1) The applicant is informed the project has the potential to discharge pollution and from which the general activity it would originate.

2) A reference to the Kansas Surface Water Quality Standards, Kansas Surface Water Register with designated uses and classifications, and Total Maximum Daily Loads (TMDLs). This is intended to demonstrate attention required to address specific water quality restoration and protection needs.

3) Categories of activities include the Kansas Surface Water Quality Standard citation pertinent to the impacted water resource.

4) Conditions also inform watershed district applicants watershed restoration and protection will be accomplished through the Watershed Restoration and Protection Strategy (WRAPS) program developed by KDHE and the Kansas Water Office. The WRAPS process and protocol has been approved by the Natural Resources Sub-cabinet. Memorandums of agreement have been obtained by all of the different land and water resource agencies, including EPA and USGS.

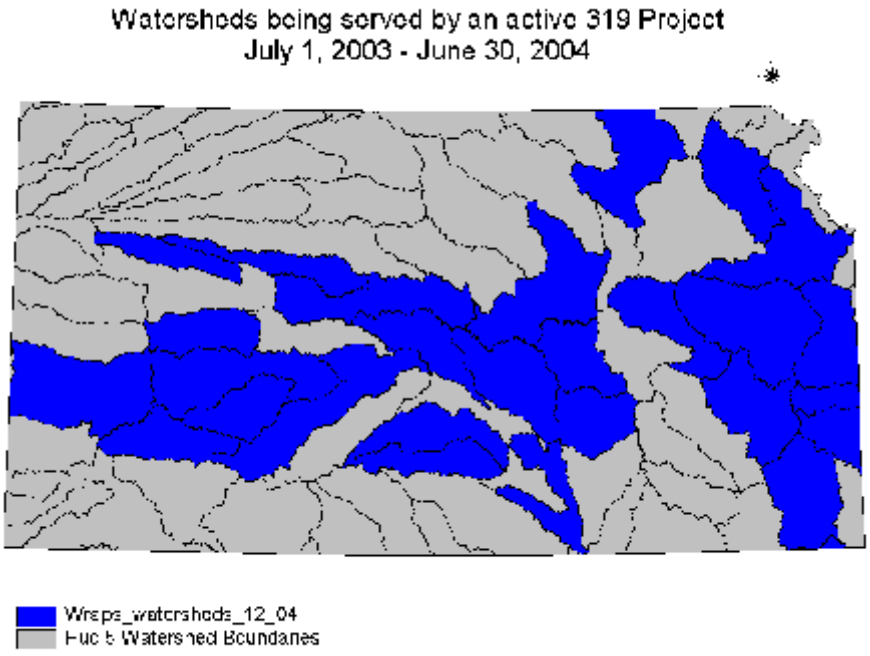
Long Term Goals Continued
Nonpoint Source Management Plan

4. The fourth long term goal is that all Kansas' watersheds have a documented watershed restoration and protection strategy (WRAPS) completed and under implementation. This will be achieved by completing a WRAPS for each of Kansas' 90 HUC 8 watersheds.

2003 - 2004 Update:

In accordance with EPA guidelines (the *Clean Water Action Plan)*, Kansas has identified high priority watersheds within the state in the "Kansas Unified Watershed Assessment FFY 1999". These watersheds were assigned a watershed restoration priority score based on elements defined in the *Clean Water Action Plan*. There are currently seventy-one Category I watersheds, nine Category II watersheds, and twelve Category IV watersheds (No watersheds met Category III definitions). Identification of the high priority watersheds provided guidance on where to focus water quality protection resources so Watershed Restoration and Protection Strategies could be developed.

As outlined in the NPS Pollution Management Plan, Kansas has adopted the goal to complete a Watershed Restoration and Protection Strategy for each of Kansas 90 HUC 8 watersheds. Currently, Kansas has thirty - seven 319 projects working to develop a WRAPS for a total of 28 watersheds. Most of these projects are focusing on HUC 8 Watersheds, with a few focusing on developing a HUC 14 or multi-watershed WRAPS. The map and below shows which watersheds are currently being served by an active 319 project.



The table below shows which watersheds are being served by an active 319 project and includes the corresponding 319 project title and phase of the wraps process.
D=Development
A=Assessment
P=Planning
I=Implementation

Huc 8 Watershed	Status				319 Project
	D	A	P	I	
10270205				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
10270104				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
	D				Developing a WRAPS for the Upper Wakarusa Watershed

	D	A	P		Lake Olathe Watershed Protection Plan - Part 3
10270103	D	A	P		Mission Lake Restoration
10290101				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
	D				Coffey Co. Regional WRAPS
				I	Hillsdale WRAPS Implementation
	D	A	P		Marais Des Cygnes WRAPS
				I	MDC Riparian Initiative Program
				I	Melvern WQP Project Part 3 & 4
10290102				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
				I	Hillsdale WRAPS Implementation
	D	A	P		Marais Des Cygne WRAPS
				I	MDC Riparian Initiative Program
10290103				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
				I	Hillsdale WRAPS Implementation
	D	A	P		Marais Des Cygne WRAPS
10290104				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
				I	Hillsdale WRAPS Implementation
	D	A	P		Marais Des Cygne WRAPS
11070201	D				Coffey Co. Regional WRAPS
	D	A	P		Twin Lakes WRAPS
11070202				I	Marion Co. Reservoir WQP- Part 2
				I	Marion Reservoir WQP- Part2

11070204				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4,**
	D				**Coffey Co. Regional WRAPS**
11070205				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4,**
				I	**Reducing Atrazine Runoff Part 3**
11070206				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4**
11030011				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4,**
	D	**A**	**P**		**Odin Community WRAPS**
11030012				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4**
11030013				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4, Cowskin**
11030014				**I**	**Cheney**
11030015	**D**	**A**	**P**		**Spring Creek-Lake Anthony/Smoots Creek TMDL Implementation**
11030017				**I**	**El Dorado,**
10260005	**D**	**A**	**P**		**Lake Anthony WRAPS**
10260006				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4,**
				I	**Implementing BMP's in the Smoky Hill - Kanopolis Lake Watershed**
		A			**Kanopolis Watershed Assessment Part 1 & 2**
	D		**P**		**Kanopolis Lake - Smoky Hill River WRAPS**
10260007				**I**	**Abatement of Fecal Coliform Bacteria, Part 1,3,4,**
		A			**Kanopolis Watershed Assessment Part 1 & 2**

	D		P		Kanopolis Lake - Smoky Hill River WRAPS
10260008				I	Sand Spring WQP Project
11030001				I	Fecal Coliform Abatement in Southwest Kansas
11030003				I	Fecal Coliform Abatement in Southwest Kansas
11030004				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4,
				I	Fecal Coliform Abatement in Southwest Kansas
11030005				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
11030006				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
11030007				I	Abatement of Fecal Coliform Bacteria, Part 1,3,4
Statewide	D	A	P		Env. Assessment & Critical Areas Identification Part 2, 3
				I	Clean Water Farms Whole Farm Planning - Year 2, 3
				I	Implementing TMDLs Using WQ Financial Analysis & Resource Evaluation (WQFARE)
	D	A	P		Ks Urban Water Quality Restoration and Protection Initiative Part 2
	D	A	P		Ks Urban Water Quality Restoration and Protection planning process Part 3

Long Term Goals Continued
Nonpoint Source Management Plan

5. The fifth long term goal is that Kansas has a high instructional capacity to restore and protect Kansas' water resources from nonpoint source pollutant impacts. This will be achieved by:

- providing financial assistance
- instituting a revolving loan fund
- graduating at least 24 students each year from KELP
- preparing and distributing the report "Progress in Abatement of Nonpoint Source Pollution in Kansas"
- reviewing and updating the management plan
- making effective use of EPA's Grants Reporting Tracking System (GRTS)
- establishing and using an Advisory Committee
- establishing and using a Coordinating Committee
- utilizing the Clean Water Neighbor Pledge
- Clean Water Celebrations
- using technology to administer grants
- maintain and enhance the Kansas Local Environmental Protection Program
- establish and maintaining effective relationships among federal, state, and local government agencies, public and private institutions, non-governmental organizations, businesses, and individuals.

2003 - 2004 Update:

- Providing financial assistance:

The Watershed Management Section administers 319 funding to organizations and agencies that propose NPS pollution abatement projects. 319 projects of this nature were funded this calendar year.

The Watershed Management Section selected 22 new NPS projects for funding this year. This addition brings the total number of active projects to 101. These projects address various nonpoint source categories including information and education, streambank stabilization, soil profiling, and Watershed Restoration and Protection Strategies (WRAPS).

Below is a list of the 22 new 319 projects for July 1, 2003 - June 30, 2004. A complete list of active projects (new and continuing) funded this calendar year is included at the end of this report.

1. Assisting Small Diversified Family Farms Implement TMDLs Through Forage Use Efficiency
2. Conservation District Demonstration & Education Projects
3. Hillsdale Water Quality Restoration & Protection Implementation
4. Kanopolis Lake-Smoky Hill River WRAPS
5. Lake Anthony Watershed Restoration & Protection Strategy
6. Mission Lake Restoration
7. Odin Community Water Quality Restoration & Protection Strategy
8. Rollin Down the River Festival 2003
9. Volunteer Soil & Water Testing to Meet TMDL Goals
10. NPS Education for 4th Level "Wild World of Water" School Year 2003-04
11. Fecal Coliform Abatement in Southwest Kansas
12. Cowskin Creek Water Quality Awareness
13. Marais Des Cygnes Watershed Riparian Initiative Program
14. Coffey County Regional Watershed Restoration & Protection
15. Livestock Pollution Control Web Site
16. Stewart Creek Riparian Stabilization
17. Newhouse Dairy Pollution Control Demonstration
18. Abatement of Fecal Coliform Bacteria, Part 4
19. Melvern Water Quality Project, Part 4
20. Performance Evaluation of Wetlands in NE Kansas, Part 4
21. River Ambassador's Information & Education Survey Project
22. Implementing BMP's in the Smoky Hill-Kanopolis Lake Watershed

p Instituting a revolving loan fund:
No progress at this time.

p Graduating at least 24 students each year from KELP:
One of our program goals outlined in the NPS Management Plan is to increase the capacity to achieve nonpoint source goals. The Kansas Environmental Leadership Program was developed to increase the number of leaders with water quality intelligence from various backgrounds statewide. This year, there were 25 new graduates from KELP (Class 5, 2004). This class brings the total number of graduates up to 133, which exceeds the initial goal of 100 graduates.

KELP Graduates

Robert Beilfuss	Ronald Appletoft	Scott Satterthwaite	Charlene Weiss
Diane Coe	Jessic Baetz	Jeff Sibley	Shari Wilson
Tawnya Ernst	Daniel Baffa	Debra Smith	Derek Zongker
Vernis Flottman	Wayne Bossert	Donn Teske	Joyce Wolf
Lisa French	Ronald Brown	Roger Boyd	Paula Ford
Stan Freyenberger	Mike Christian	Jamison Bear	Doug Musci

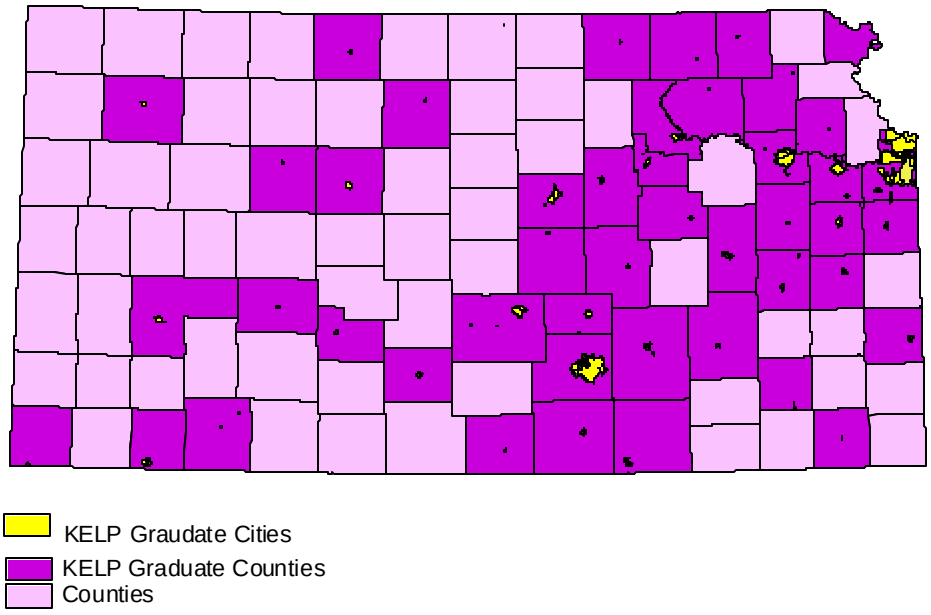
Kate Grover
Irene Hart
Bill Langley
Barbara Lilyhorn
Millie Mangerich
Brian Meier
Kristen Mitchell
Paul Montoia
Robert Schwartz
Thomas Sloan
Shari Stamer
Robert Broweleit
Pat Flynn
Mary Howell
Arnold Ross
Jaime Ziesenis
Tom Wilson
Ken Grotewiel
Gary Larson
Monty Munyon
Mary Lou Ponder
Ronald Allen
Will Boyer
Gale Garber
Carol Hughes
Ann Mayo
Scott Selee
Kay Johnson

David Criswell
Barbara Dallemand
Dirk Durant
Arthur Fink
Robert Frisbie
Ron Graber
Mark Goldsberry
John Gough
Carly Adams
Sandra Koontz
Milton Krainbill
Mark Eisenbarth
Allan Grilliot
Paul Ingle
Daniel Smading
Ronald Osterbuhr
Herschel George
Daniel Howell
Brian Loving
Dave Murphy
Beth Rowlands
Kent Askren
Marilyn Eccles
David Gurss
Jerrold Jost
Katie Miller
Steve Swaffer

Carl Holmes
Carolyn McGinn
Don Snethen
Mary Fund
Tom Bach
Laura McClure
Hank Ernst
Chris Mammoliti
Kurt Bookout
Ron Betzen
Darrel Gale
Susan Erlenwein
Eileen Hack
Tom Meek
Glen Wiltse
Carl Rogers
Richard Basore
Linda Johnson-Buckner
Julie MacLachlan
Jeff Neel
Kerry Wedel
Darcy Basye
Stacie Edgett-Minson
John Heston
Cyndra Kastens
Jennifer Nichols
Luann Watson

Carl Nuzman
Scott Paszkiewicz
Karen Purvis
Christina Schmalzried
Paula Selby
Vaughn Weaver
Bradley Goering
Tim Wagner
Thomas Morey
Leslie Olsen
John Bristor
Eowyn Floyd
John Head
Jim Michael
Eugene Young
Kevin Dobbs
Guy Crabill
Dale Kirkham
Howard Miller
Barbara Oplinger
Mark Wilson
Warren Bell
Jeremy Frazzell
Caroline Hosford
Joe Kerby
Brent Oatney
Kyle Clark

KELP Gradutes Locations to Date



p Preparing and distributing the report "Progress in Abatement of Nonpoint Source Pollution in Kansas":
This is completed on an annual basis.

p Reviewing and updating the management plan:
The Ks Nonpoint Source Management Plan will be updated in 2005.

p Making effective use of EPA's Grants Reporting Tracking System (GRTS):

Throughout the year, continuing emphasis was placed on reporting project results to the EPA through the Grants Reporting and Tracking System (GRTS). Semi-annual reports were to be entered for each active project within 60 days of the end of the semi-annual reporting period ending on March 31, and September 30. In addition load reduction estimates for nitrogen, phosphorous, and sediment were entered into GRTS for projects for the Federal Fiscal Year (FFY) 2002. Load estimates were to be developed from two models provided by the EPA. These models were the STEPL (Spreadsheet Tool for Estimating Pollutant Load and the Region 5 model. To allow for the best estimates using these two models, a position was created

specifically to do modeling for all projects.

This position will also be available to do geolocation using the new EPA WebRIT-WATERS (Web-based Reach Indexing Tool for Watershed Assessment Tracking and Environmental results) system. This interactive mapping tool will allow users to view surface waters in the National Hydrography Dataset (NHD). The EPA intends to use the WebRIT-WATERS system to submit and update data for programs such as Clean Water Act Sections 303(d), 305(b) and 319(h) and the Beaches Environmental Assessment and Coastal Health (BEACH) act. The intent of the EPA is to make this information available to interested parties and the general public to find about water related activities that have or are occurring within their watershed.

As part of the continuing process with GRTS, a representative attended the National GRTS Users Group meeting held annually by the EPA. The purpose of this meeting is to inform the state and EPA regional users of GRTS of changes and improvements to GRTS that have occurred and to suggest and review proposed improvements to the system.

The EPA is in the process of converting the GRTS system from an Lotus Notes based system to an Oracle based system. Both systems will be accessed over the Internet on secure servers housed by EPA.

The change is being made to Oracle to place all of the EPA operating database programs on one language. A Kansas representative was selected to be on the steering committee to provide guidance to the EPA during the conversion and to provide testing of the new system as it is developed.

Kansas has also implemented a local project management system called Kansas Clean Waters (KCW). This system allows for the cooperator to submit ideas for projects in a general format. If the Watershed Management Section staff believe it is a feasible project, a fully developed project implementation plan (PIP) is then developed by the cooperator and submitted through the KCW. The PIP is distributed by the KCW to reviewers both inside and outside of the section, including the regional EPA project officer. Revisions are made and a grant agreement is generated, all within the KCW. Quarterly progress reports and affidavit of expenditures are also submitted through the KCW.

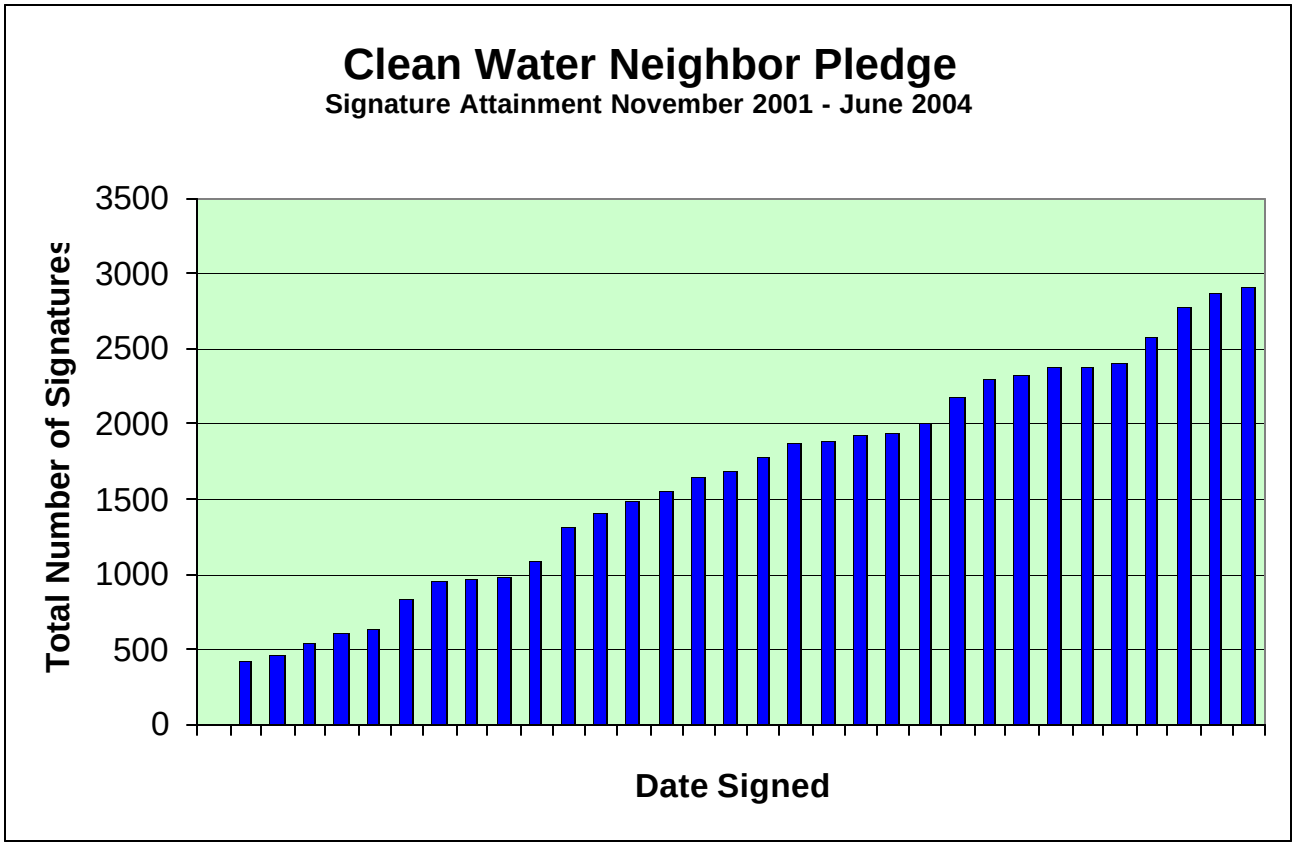
The KCW will allow for electronic processing of documents and provide a centralized storage of project related documents. This will afford access to relevant project data by all members of the staff and provide for more efficient project management.

p Establishing and using an Advisory Committee:
Meet as needed on a project specific basis in addition to every quarter during the NPS Pollution Seminar.

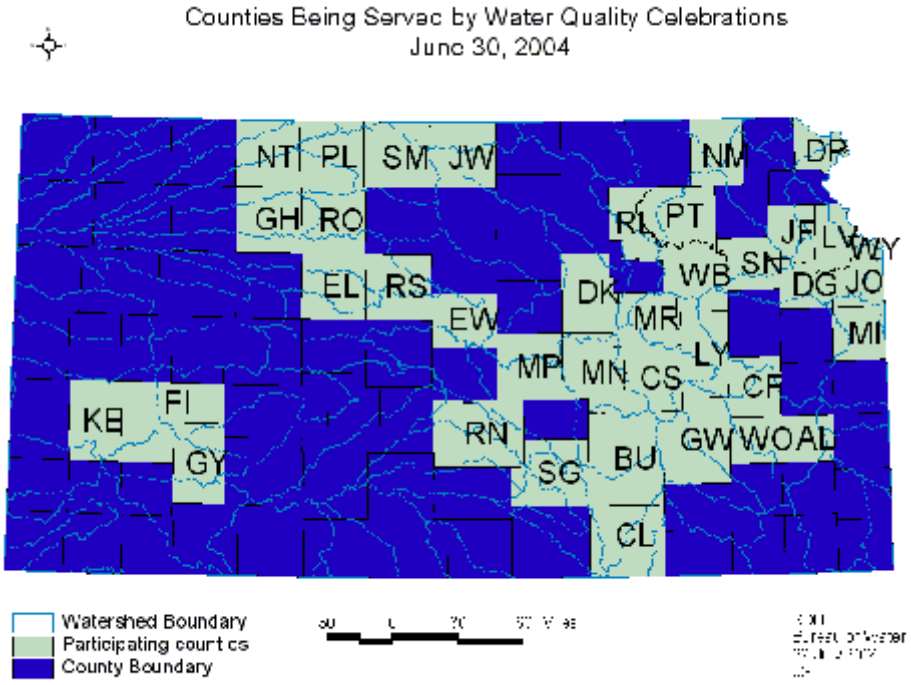
p Establishing and using a Coordinating Committee:
The Coordination Committee is used to review project proposals submitted for Section 319 grant funding. During the spring of 2004, all 319 project proposals were reviewed and ranked by members of the Coordinating Committee. Members of the review committee are listed below:

Andrew Ziegler (USGS)
Daniel Devlin (KSU)
Don Hamera (EPA)
Don Snethen (KDHE)
James Triplett (PSU)
Jim Hays (KDWP)
Margaret Townsend (KWO)
Ray Aslin (Ks State Forest Service)
Dale Lambley (KVHA)
Debra Baker (KWO)
Don Jones (SCC)
James Krueger (NRCS)
Jason Auvil (Kickapoo Indian Nation)
Kerry Wedel (KWO)
Paul Liechti (KBS)
Steve Swaffer (KWO)

p Utilizing the Clean Water Neighbor Pledge:
Goal: Devise a means of securing "pledges to protect" Kansas water quality from individuals, local and state governmental entities, business and industrial organizations. Don Snethen designed a Clean Water Neighbor Pledge sheet for individuals to sign if they were committed to protecting water quality. In addition, a certificate of recognition has been designed to reward participants for their commitment. Approximately 5,000 certificates have been printed in anticipation of receiving 5,000 signatures. For every individual that signs the CWN pledge, they are encouraged to obtain 5 additional signatures for the pledge and they will then receive a Clean Water Neighbor mug. Below is a chart showing the total number of signatures obtained for the Clean Water Neighbor Pledge from November 2001 to June 2004. By June 2004, the Watershed Management Section had obtained 2,902 signatures of the CWN pledge, over halfway to our goal.



pClean Water Celebrations:
As part of the NPS Management Plan Kansas has a goal to have a water quality celebration in each of Kansas' 105 counties. In 2002, KDHE awarded the Kansas Association for Conservation and Environmental Education a 3 year 319 grant to achieve this goal. Prior to the grant, Kansas hosted water celebrations in 16 counties out of a total of 105. Currently, 38 counties are being served by water celebrations. That is over a 50% increase in one calendar year. Below is a map of counties currently beings served by water celebrations.



pUsing technology to administer grants:
In January of 2004 we offered a new online grant application system for projects seeking financial assistance. This new systems (the Kansas Clean Water System) allows for agencies and organizations seeking 319 funding to apply online. Computer Technology Associates, Inc. (CTA) a technology consultant was contracted to develop the online grant system. The work was set to be accomplished in two phases. Phase I was designed to produce a detailed set of specifications and the prototype system. System development and production implementation will occur in Phase II. Both Phase I and Phase II are completed and the system is properly functioning.

pMaintain and enhance the Kansas Local Environmental Protection Program:
Please see the Kansas LEPP Annual Report at the end of this report for an update.

p Establish and maintain effective relationships among federal, state, and local government agencies, public and private institutions, non-governmental organizations, businesses, and individuals:

Annually the Watershed Management Section compiles an extensive e-mail list of individuals that have participated in Kansas nonpoint source events and activities and signed the Clean Water Neighbor Pledge. Notices of upcoming events, grant opportunities and other items of interest are sent to this group on an as needed basis. In addition, nonpoint source advisory committee forums are held on a quarterly basis. These forums are held at various locations throughout Kansas.