

Clean Watersheds Needs Survey 2004: Regional and EPA Program Area Needs

This document supplements the Clean Watersheds Needs Survey (CWNS) 2004 Report to Congress by summarizing federal needs data by various major watershed basins and EPA program areas. EPA and the States have made a concerted effort to gather information on a watershed basis consistent with the basin planning or watershed management concept. The CWNS 2004 built on past efforts to gather and improve geographic information about facilities, including latitude and longitude, as well as information on flow transfers from one facility to another. This approach enables CWNS 2004 data to be used in various analyses. It also allows the data to be integrated with environmental data systems like EnviroFacts, EnviroMapper for Water, and Ask WATERS, as well as water quality modeling systems like EPA's BASINS (Better Assessment Science Integrating Point and Nonpoint Sources).

CWNS Web Site

The CWNS Web site

(<http://www.epa.gov/cwms>) includes the entire contents of the CWNS Report to Congress. It also provides a variety of maps showing needs by various geographic and political boundaries (e.g. watersheds, congressional districts). The site has the capability to compare CWNS information with other environmental information, such as monitoring, impaired waters, and NPDES permit data.

Needs by Watershed

Figure 1 shows the documented needs in the CWNS 2004 according to watershed boundaries at the subregion level for the continental United States (Appendix B lists needs for each subregion). The CWNS 2004 results indicate that most of the needs are in a small number of watersheds: 90 percent of documented needs are in 35 percent of the Nation's watersheds. As expected, these needs are geographically distributed in patterns similar to the State patterns described in the Report to Congress.

The ratio of documented needs to population (i.e., documented need per capita) accounts for differences in population. Within the continental United States, 16 percent of the watersheds shown in Figure 2 have documented per capita needs exceeding \$1,000/person, while 34 percent have documented per capita needs ranging from \$500/person to 1,000/person. The remaining watersheds (50 percent) have documented per capita needs of less than \$500/person.

The number of people served by advanced treatment increased from 7.8 million people in 1972 to 108.5 million people in 2004. Figure 3 shows the proportion of the U.S. population served by advanced treatment or served by facilities that do not discharge to surface waters, including those not served by centralized wastewater treatment. The Great Lakes region, the South Central region, Florida, and portions of the Southwest have the highest proportion of their population served by treatment facilities that provide advanced treatment or by facilities that do not discharge to surface waters.

Watershed

A geographic area in which water, sediments and dissolved materials drain to a common outlet, typically a point on a larger stream, a lake, an underlying aquifer, an estuary or an ocean. A watershed is sometimes referred to as the "drainage basin" of the receiving waterbody.

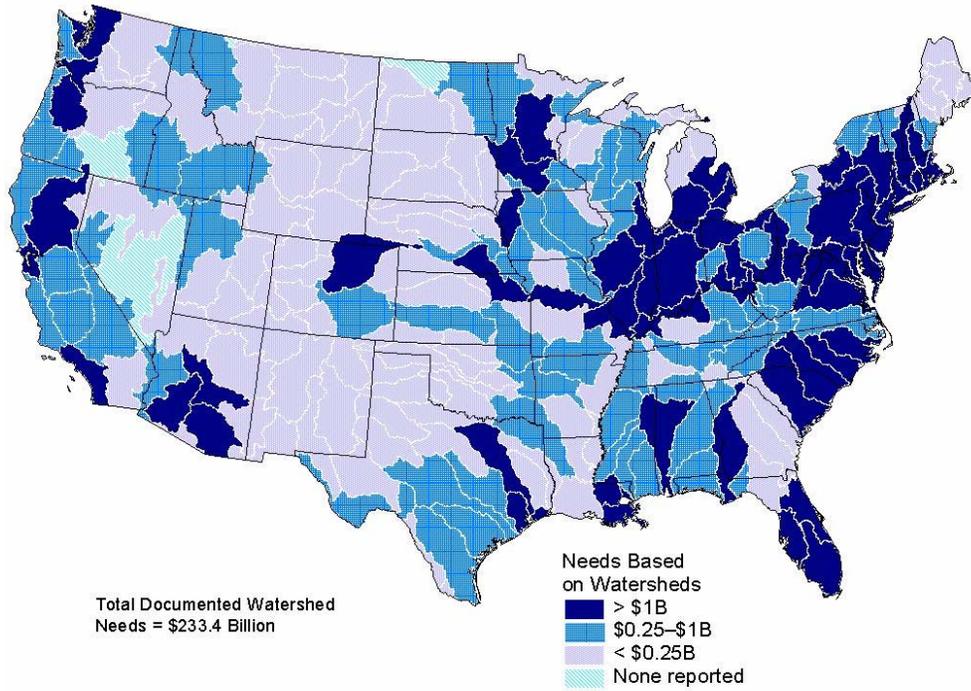


Figure 1. Geographic distribution of total documented needs by 4-digit watershed (January 2004 dollars in billions).

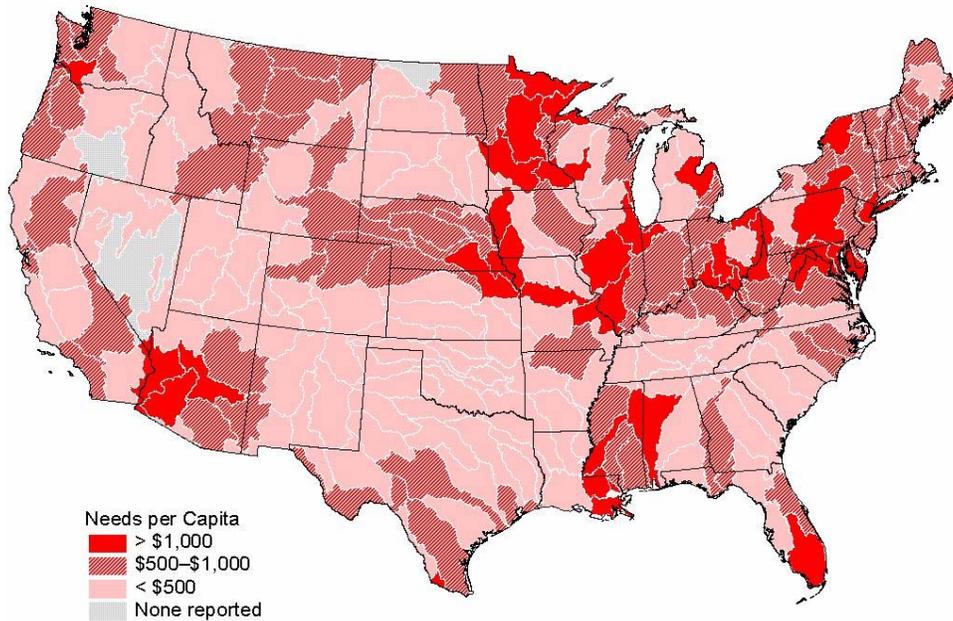


Figure 2. Geographic distribution of total documented needs on a per capita basis by 4-digit watershed (January 2004 dollars).

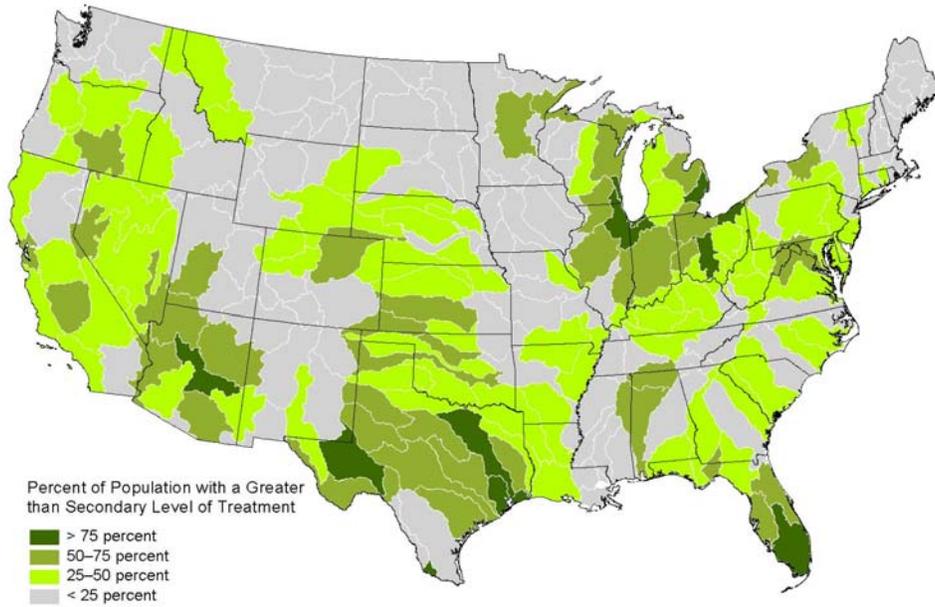


Figure 3. Geographic distribution of the proportion of the population receiving advanced treatment or served by facilities that do not discharge to surface waters by 4-digit watershed.

Coastal versus Inland Needs

Figure 4 shows needs for coastal watersheds.¹ Although coastal watersheds make up only 12.5 percent of the land area in the continental United States (252 million acres of the 2.4 billion acres of land area), the \$118.4 billion in coastal needs account for about 49.1 percent of total national needs. Coastal watersheds account for most of the needs in Categories I, II, III-B, VI and X (Figure 5). The average per capita needs are \$890 and \$668 for coastal and inland populations, respectively.

Coastal Watersheds

Although coastal areas are economically and ecologically productive and diverse, they face increasing pressure to produce a high-quality environment for commerce, industry, tourism and development. Land in coastal watersheds is the most developed in the Nation. It now supports more than 53 percent of the population. The coastal population is expected to grow at a slightly faster pace and account for more people than the rest of the Nation over the next 20 years. Between 1994 and 2015, the coastal population is projected to increase by 28 million people (20 percent), compared to a 22 million (18 percent) increase in inland areas (Culliton 1998).

The *National Coastal Condition Report* (USEPA 2001b) describes environmental conditions in coastal areas using information from 1990 to 2000. The report presents summaries of data from monitoring, assessment, and advisory programs to create a benchmark of coastal conditions from which future progress can be measured. Indicators were calculated for water clarity, dissolved oxygen, coastal wetland loss, eutrophic condition, sediment contamination, benthic index and fish tissue contamination. The CWNS 2004 provides data with a level of detail similar to that of the coastal condition report. Therefore, those indicators can be used in conjunction with CWNS 2004 data to prioritize projects or track progress as needs are addressed.

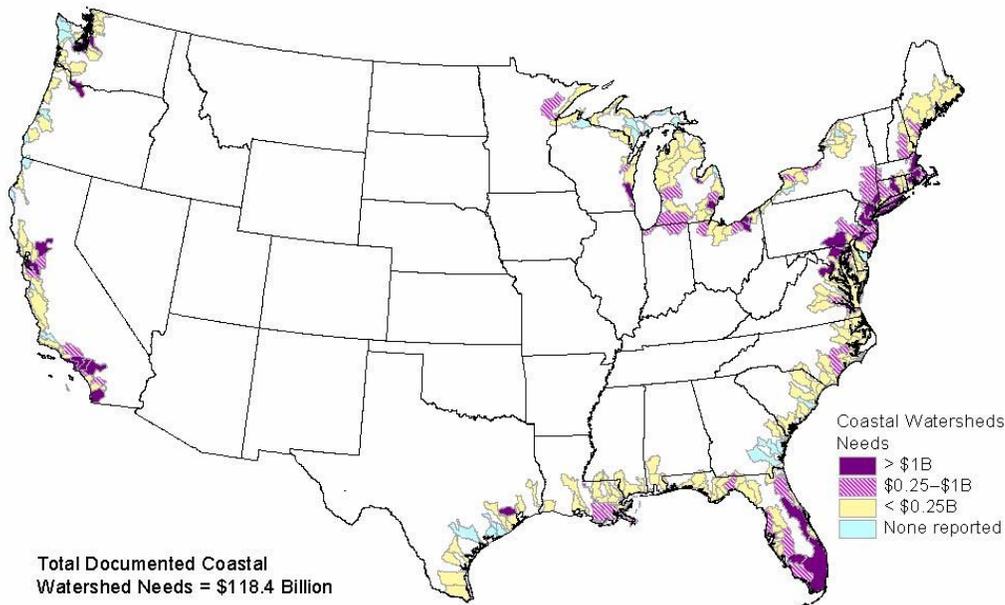


Figure 4. Watersheds in United States classified as coastal by NOAA (January 2004 dollars in billions).

¹ Coastal watersheds are defined by the National Oceanic and Atmospheric Administration (NOAA) using 8-digit watersheds

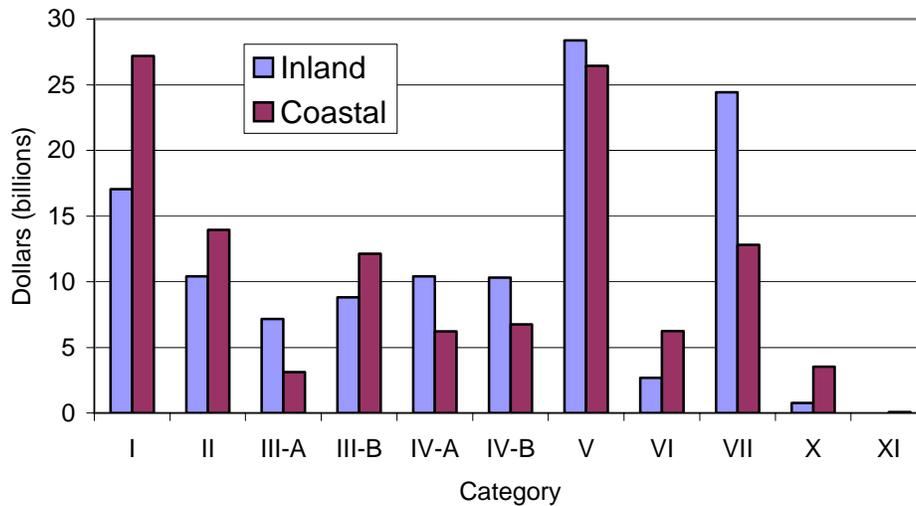


Figure 5. Total documented needs in coastal and inland watersheds (January 2004 dollars in billions).

Figure 6 displays the number of people receiving each of the four levels of wastewater treatment,² distinguished according to location in either coastal or inland watersheds. Less-than-secondary treatment is more prevalent in coastal watersheds (1.8 percent of the total coastal population of 110.4 million receiving treatment) than in inland watersheds (0.01 percent of the total inland population of 109.3 million receiving treatment). The reason for the difference is that the CWA section 301(h) program grants waivers from the act’s secondary treatment requirements to facilities whose discharge to marine waters will not adversely affect the environment.

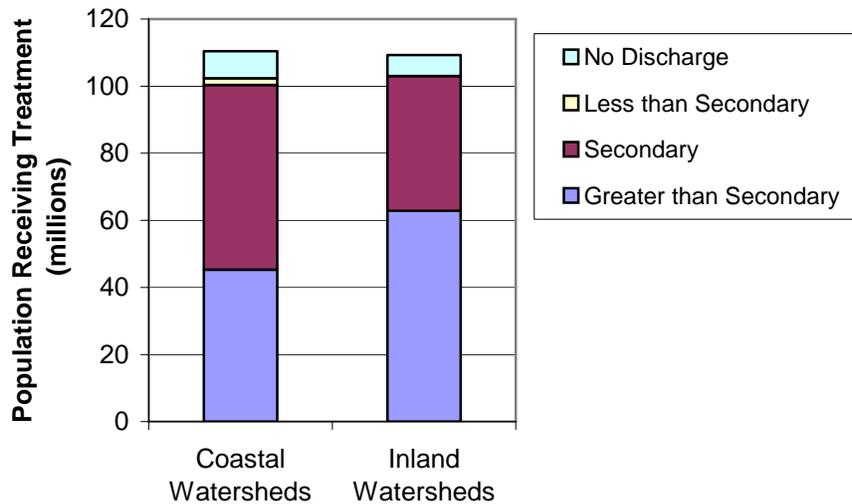


Figure 6. Population receiving various forms of wastewater treatment.

² No discharge refers to facilities that do not discharge effluent to surface waters (e.g., spray irrigation, ground water recharge).

Needs Related to EPA’s Targeted Watersheds Grant Program

The total CWNS 2004 needs reported for facilities in the targeted watersheds during 2003 and 2004 are \$18.3 billion, or 7.6 percent of the national need (Table 1). The land area related to these targeted watersheds is 4.1 percent of the total land area of the Nation. Appendix A, Table A-1, presents the total reported needs for all categories and watersheds.

Figure 7 displays the geographic distribution of the total documented needs by targeted watershed. The largest total needs occur in the Passaic River watershed, which has \$5.62 billion in needs (Table 2). Narragansett Bay, Lower Columbia River, Cape Fear, Raritan River, and Charles/Ipswich Rivers have needs ranging from \$2.16 billion to \$1.23 billion. The remaining watersheds account for \$3.4 billion in needs.

EPA’s Targeted Watersheds Grant Program
 The Targeted Watersheds Grant Program is a relatively new EPA program designed to encourage successful community-based approaches and management techniques to protect and restore the Nation’s waters. The watershed organizations receiving grants exhibit strong partnerships with a wide variety of support, creative socioeconomic approaches to water restoration and protection, and explicit monitoring and environmentally based performance measures. In the program’s first 2 years (2003 and 2004), EPA awarded nearly \$30 million in grants to 34 watershed organizations across the country. Note that the project requirements for funding under this grant program are different from those for inclusion as a CWNS 2004 need. In fact, some CWNS 2004 costs are specifically excluded from being funded through this grant program.

Table 1. Total Documented Needs within Watersheds that Received Targeted Watersheds Grants during 2003 or 2004 (January 2004 Dollars in Billions)

Needs Category		Total Needs	
		\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs			
I	Secondary wastewater treatment	3.9	21.3%
II	Advanced wastewater treatment	1.5	8.2%
III-A	Infiltration/inflow correction	0.6	3.3%
III-B	Sewer replacement/rehabilitation	0.9	4.9%
IV-A	New collector sewers and appurtenances	1.8	9.8%
IV-B	New interceptor sewers and appurtenances	1.2	6.6%
V	Combined sewer overflow correction	5.9	32.2%
VI	Storm water management programs	0.2	1.1%
X	Recycled water distribution	0.1	0.5%
Total Categories I–VI and X		16.1	88.0%
Nonpoint Source Pollution Control			
VII-A	Agriculture (cropland)	0.09	0.5%
VII-B	Agriculture (animals)	0.26	1.4%
VII-C	Silviculture	0.01	0.1%
VII-D	Urban	0.13	0.7%
VII-E	Ground water protection: unknown source	0.25	1.4%
VII-F	Marinas	<0.01	<0.1%
VII-G	Resource extraction	0.02	0.1%
VII-H	Brownfields	0.13	0.7%

Table 1. Total Documented Needs within Watersheds that Received Targeted Watersheds Grants during 2003 or 2004 (January 2004 Dollars in Billions) (continued)

Needs Category	Total Needs	
	\$B	Percent
VII-I Storage tanks	0.04	0.2%
VII-J Sanitary landfills	0.48	2.6%
VII-K Hydromodification	0.60	3.3%
VII-L Individual/decentralized sewage treatment	0.16	0.9%
Total Category VII		2.2 11.2%
Other Categories		
XI Estuary management	0.01	0.1%
Grand Total		18.3

Notes:
 Costs for operation and maintenance are not included.
 See Appendix A, Table A-1, for needs by category and watershed. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

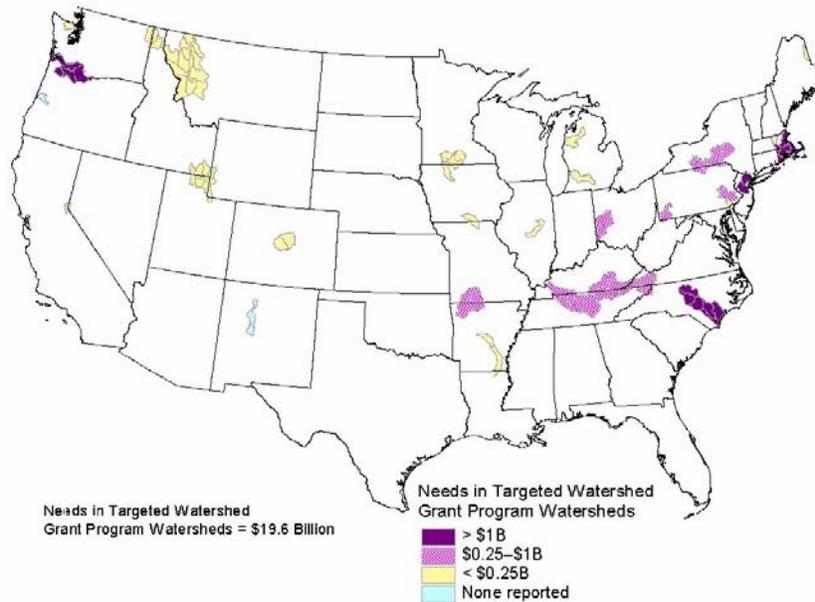


Figure 7. Geographic distribution of the total documented needs by targeted 8-digit watershed (January 2004 dollars in billions).

Table 2. Total Documented Needs Reported by Targeted 8-digit Watershed (January 2004 Dollars in Billions)

Watershed	Total Needs	Watershed	Total Needs
Bayou Bartholomew (AR, LA)	0.04	Manistee River (MI)	0.06
Bear River (UT, ID, WY)	0.07	Meduxnekeag River (ME)	<0.01
Cape Fear (NC)	1.61	Narragansett Bay (MA, RI, CT)	2.16
Charles and Ipswich Rivers (MA) ^a	1.23	Nashua River (MA, NH)	0.06
Christina River (DE)	0.05	Passaic River (NJ, NY)	5.62
Clark Fork-Pend Oreille (ID, MT, WA)	0.24	Raritan River Basin (NJ)	1.49
Cumberland River (KY, TN)	0.67	Rathbun Lake (IO, MO)	0.01

**Table 2. Total Documented Needs Reported by Targeted 8-digit Watershed (January 2004)
Dollars in Billions (continued)**

Watershed	Total Needs	Watershed	Total Needs
Dungeness River (WA)	0.01	Rio Puerco Watershed (NM)	<0.01
Dunkard Creek (PA, WV)	0.39	Sangamon River (IL)	0.15
Fourche Creek (AR)	0.05	Schuylkill River (PA)	0.44
Great Miami River (OH, IN)	0.67	Siuslaw River (OR)	- -
Greater Blue Earth (IA, MN)	0.17	Susquehanna Headwaters (NY, PA)	0.53
Hanalei Bay (HI)	0.09	Upper Mississippi River (IA, MN)	<0.01
Kalamazoo River (MI)	0.04	Upper South Platte (CO)	0.16
Kenai River (AK)	NA	Upper Tennessee River (NC, TN, VA)	0.30
Lake Tahoe (CA, NV)	0.01	Upper White (AR, IA)	0.34
Lower Columbia River (OR, WA)	1.61		

^a The Charles River and Ipswich River occur in the Charles River watershed.

^b NA=not available. Alaska did not participate in CWNS 2004.

Needs Related to EPA's National Estuary Program

As shown in Table 3, the total reported needs for facilities in the 28 designated National Estuaries as of January 1, 2004, are \$65.2 billion, or 27.1 percent of the national need. (Note that the Chesapeake Bay is not designated under the National Estuary Program, and therefore its needs are not included here.) The land area related to these estuaries is 4.0 percent of the total land area of the Nation. Appendix A, Table A-2, presents the total reported needs for all categories and National Estuaries.

Figure 8 and Table 4 present the geographic distribution of the total documented needs by estuary. The largest total needs occur in the New York–New Jersey Harbor Estuary, which has \$25.9 billion in needs. The San Francisco Estuary and Santa Monica Bay have \$6.6 billion and \$5.4 billion in total needs, respectively. Nine other estuaries (Delaware Estuary, Long Island Sound, Galveston Bay, Puget Sound, Lower Columbia River Estuary, Albemarle–Pamlico Sounds, Charlotte Harbor, Narragansett Bay and Massachusetts

The National Estuary Program

Estuaries and the lands surrounding them are places of transition from land to sea and from fresh water to salt water. Although influenced by the tides, estuaries are protected from the full force of ocean waves, winds and storms by the reefs, barrier islands or fingers of land, mud or sand that define an estuary's seaward boundary. The tidal, sheltered waters of estuaries support unique communities of plants and animals that are specially adapted for life at the margin of the sea. Estuarine environments are among the most productive on earth, creating more organic matter each year than comparably sized areas of forest, grassland or agricultural land. Many different habitat types are present in and around estuaries. They include shallow open waters, freshwater and salt marshes, sandy beaches, mud and sand flats, rocky shores, oyster reefs, mangrove forests, river deltas, tidal pools, sea grass and kelp beds, and wooded swamps. The mission of EPA's National Estuary Program (NEP) is to restore and protect America's nationally significant estuaries.

Congress established the National Estuary Program in 1987 to improve the quality of estuaries of national importance through the protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. The program promotes recreational activities, in and on the water, and utilizes additional control of point and nonpoint sources of pollution beyond existing pollution controls. Each designated estuary program establishes a Comprehensive Conservation and Management Plan (CCMP) and convenes a management conference to develop a plan for coordinating the implementation of the CCMP among federal, State and local agencies. The goal of the CCMP is to institutionalize the recommendations made in the plan by identifying the "implementers" and providing a framework for coordinating their efforts. The implementers may include existing agencies and organizations or new entities, as recommended in the CCMP.

Bays) have between \$4.2 billion and \$1.2 billion in needs. The remaining 16 estuaries account for \$4.6 billion in needs.

Table 3. Total Documented Needs Reported within National Estuary Program Boundaries (January 2004 Dollars in Billions)

Needs Category	Total Needs	
	\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs		
I	Secondary wastewater treatment	20.0 30.7%
II	Advanced wastewater treatment	6.1 9.4%
III-A	Infiltration/inflow correction	1.0 1.5%
III-B	Sewer replacement/rehabilitation	6.1 9.4%
IV-A	New collector sewers and appurtenances	3.5 5.4%
IV-B	New interceptor sewers and appurtenances	3.9 6.0%
V	Combined sewer overflow correction	13.5 20.7%
VI	Storm water management programs	3.5 5.4%
X	Recycled water distribution	2.1 3.2%
Total Categories I–VI and X		59.7 91.6%
Nonpoint Source Pollution Control		
VII-A	Agriculture (cropland)	0.03 <0.1%
VII-B	Agriculture (animals)	0.03 <0.1%
VII-C	Silviculture	-- --
VII-D	Urban	0.76 1.2%
VII-E	Ground water protection: unknown source	0.48 0.7%
VII-F	Marinas	0.01 <0.1%
VII-G	Resource extraction	<0.01 <0.1%
VII-H	Brownfields	0.58 0.9%
VII-I	Storage tanks	0.02 <0.1%
VII-J	Sanitary landfills	1.31 2.0%
VII-K	Hydromodification	1.92 2.9%
VII-L	Individual/decentralized sewage treatment	0.35 0.5%
Total Category VII		5.5 8.4%
Other Categories		
XI	Estuary management	0.02 <0.1%
Grand Total		65.2

Notes:

Costs for operation and maintenance are not included.

See Appendix A, Table A-2, for needs by category and estuary. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

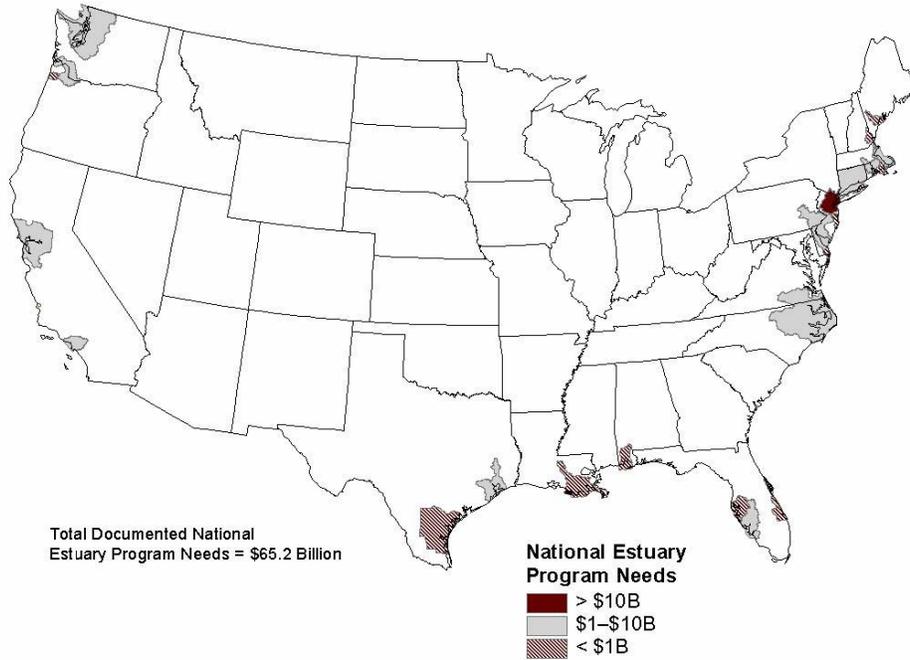


Figure 8. Geographic distribution of the total documented needs by National Estuary Program (January 2004 dollars in billions).

Table 4. Total Documented Needs Reported by Designated Estuaries Under the National Estuary Program (January 2004 Dollars in Billions)

Estuary	Total Needs	Estuary	Total Needs
Albemarle–Pamlico Sounds (VA, NC)	1.74	Massachusetts Bays (MA)	1.23
Barataria–Terrebonne Estuarine Complex (LA)	0.64	Mobile Bay (AL)	0.18
Barnegat Bay (NJ)	0.55	Morro Bay (CA)	0.01
Buzzards Bay (MA)	0.58	Narragansett Bay (MA, RI)	1.38
Casco Bay (ME)	0.33	New Hampshire Estuaries (NH)	0.10
Charlotte Harbor (FL)	1.61	New York–New Jersey Harbor Estuary (NJ, NY)	25.91
Coastal Bend Bays & Estuaries (TX)	0.66	Peconic Estuary (NY)	0.09
Delaware Estuary (DE, MD, NJ, PA)	4.17	Puget Sound (WA)	3.23
Delaware Inland Bays (DE)	0.03	San Francisco Estuary (CA)	6.56
Galveston Bay (TX)	3.53	San Juan Bay (PR)	0.14
Indian River Lagoon (FL)	0.18	Santa Monica Bay (CA)	5.35
Long Island Sound (CT, NY)	3.92	Sarasota Bay (FL)	0.03
Lower Columbia River Estuary (OR, WA)	2.05	Tampa Bay (FL)	0.96
Maryland Coastal Bays (MD)	0.03	Tillamook Bay (OR)	0.04

Needs Related to the Gulf of Mexico Drainage Basin

The total reported needs for facilities in the Gulf of Mexico drainage basin as of January 1, 2004, are \$83.7 billion, or 34.7 percent of the national need (Figure 9 and Table 5). The land area related to these needs is 56.2 percent of the total land area of the Nation. Appendix A, Table A-3, presents the total reported needs for all major river basins, by category, within the Gulf of Mexico drainage basin.

Tables 6a and 6b show the total documented needs by watershed and by State, respectively. The largest total needs occur in the Ohio River Basin and the Upper Mississippi River Basin, with \$21.6 billion and \$25.1 billion in needs, respectively. The Missouri River Basin, the portion of the South Atlantic–Gulf Basin that drains to the Gulf of Mexico, and the Texas–Gulf have total needs ranging from \$7.8 billion to \$10.0 billion. These five river basins account for 88.1 percent of the total needs in the Gulf of Mexico drainage basin.

Gulf of Mexico Drainage Basin

EPA formed the Gulf of Mexico Program in 1988 as a nonregulatory, inclusive partnership to provide a broad geographic focus on the major environmental issues in the Gulf. Hypoxia in the northern Gulf is one of the six major issues in the Gulf. It is caused by an excess of nitrogen and other nutrients delivered from the Mississippi River Basin. The coastal watersheds surrounding the Gulf have a major effect on contamination of recreational and shellfish-growing waters. They contribute human pathogens and cause loss of important habitat, eutrophication of estuaries and near coastal waters, and degraded water and habitat quality. A major impact caused by the introduction of invasive species is attributable to the transport of organisms in ship ballast water.

The Mississippi River Basin is the largest watershed in the United States, encompassing all or part of 33 States. An area of hypoxia (oxygen deficiency) forms annually on the Gulf of Mexico's Texas–Louisiana continental shelf and is virtually devoid of marine life. The hypoxia, caused by excessive nutrients from farms throughout the Mississippi River Basin, has been growing significantly over the years. It is now estimated to encompass about 7,000 square miles, twice the size it was in 1993.

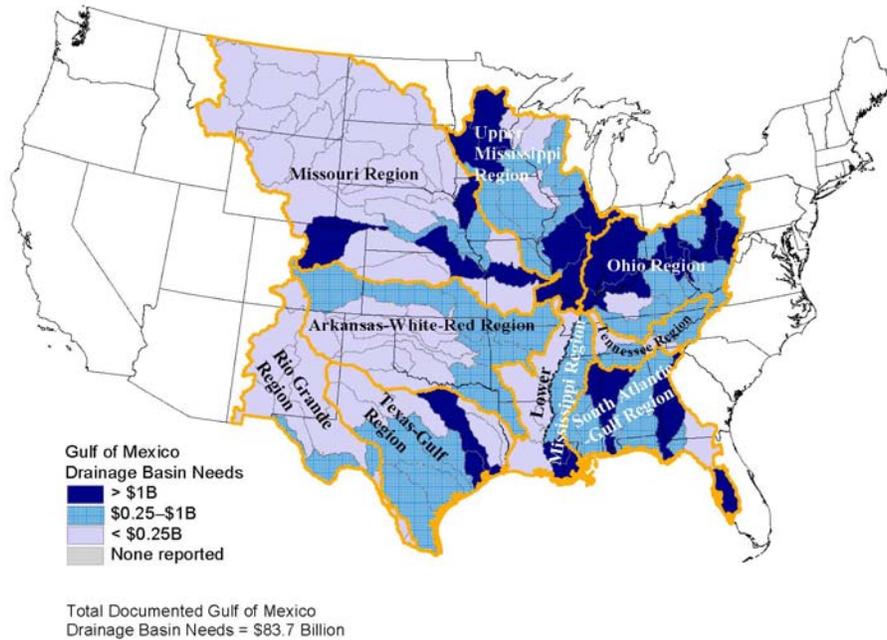


Figure 9. Gulf of Mexico drainage basin needs (January 2004 dollars in billions).

Table 5. Total Documented Needs Reported within the Gulf of Mexico Drainage Basin (January 2004 Dollars in Billions)

Needs Category	Total Needs	
	\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs		
I Secondary wastewater treatment	10.3	12.3%
II Advanced wastewater treatment	5.5	6.6%
III-A Infiltration/inflow correction	7.5	9.0%
III-B Sewer replacement/rehabilitation	7.8	9.3%
IV-A New collector sewers and appurtenances	5.9	7.0%
IV-B New interceptor sewers and appurtenances	6.5	7.8%
V Combined sewer overflow correction	24.7	29.5%
VI Storm water management programs	4.5	5.4%
X Recycled water distribution	0.5	0.6%
Total Categories I-VI and X		73.2 87.5%
Nonpoint Source Pollution Control		
VII-A Agriculture (cropland)	0.86	1.0%
VII-B Agriculture (animals)	0.88	1.1%
VII-C Silviculture	0.08	0.1%
VII-D Urban	1.20	1.4%
VII-E Ground water protection: unknown source	0.79	0.9%
VII-F Marinas	<0.01	<0.1%
VII-G Resource extraction	0.14	0.2%
VII-H Brownfields	0.81	1.0%
VII-I Storage tanks	0.79	0.9%
VII-J Sanitary landfills	0.14	0.2%
VII-K Hydromodification	2.81	3.4%

Table 5. Total Documented Needs Reported within the Gulf of Mexico Drainage Basin (January 2004 Dollars in Billions) (continued)

Needs Category	Total Needs	
	\$B	Percent
VII-L Individual/decentralized sewage treatment	1.91	2.3%
Total Category VII		10.4 12.4%
Other Categories		
XI Estuary management	0.06	0.1%
Grand Total		83.7

Notes:

Costs for operation and maintenance are not included.

See Appendix A, Table A-3, for needs by category and watershed. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

Table 6a. Total Documented Needs Reported by Watershed within the Gulf of Mexico Drainage Basin (January 2004 Dollars in Billions)

Watershed	Total Needs	Watershed	Total Needs
Arkansas-White-Red Rivers	3.2	South Atlantic-Gulf	10.0
Lower Mississippi River	4.9	Tennessee River	1.2
Missouri River	9.2	Texas-Gulf	7.8
Ohio River	21.6	Upper Mississippi River	25.1
Rio Grande	0.7		

Table 6b. Total Documented Needs Reported by State within the Gulf of Mexico Drainage Basin (January 2004 Dollars in Billions)

State	Total Needs	State	Total Needs
Alabama	3.48	North Carolina	0.26
Arkansas	0.87	North Dakota	- -
Colorado	2.13	Nebraska	2.15
Florida	2.89	New Mexico	0.14
Georgia	2.30	New York	0.12
Iowa	1.01	Ohio	8.40
Illinois	13.22	Oklahoma	1.05
Indiana	5.05	Pennsylvania	3.15
Kansas	2.02	South Dakota	0.09
Kentucky	2.84	Tennessee	1.04
Louisiana	4.09	Texas	8.48
Maryland	0.06	Virginia	0.40
Minnesota	5.48	Wisconsin	1.50
Missouri	6.54	West Virginia	2.04
Mississippi	2.43	Wyoming	0.21
Montana	0.36		

Needs Related to the Chesapeake Bay Drainage Basin

The total reported for facilities in the Chesapeake Bay Drainage Basin as of January 1, 2004, are \$20.3 billion, or 8.4 percent of the national need (Figure 10 and Table 7). The land area related to these needs is 2.2 percent of the total land area of the Nation. Appendix A, Table A-4, presents the total reported needs for all categories and watersheds.

Tables 8a and 8b display the total documented needs by watershed and by State, respectively. The largest total needs occur in the Potomac watershed, which has \$6.5 billion in needs. The Upper Chesapeake, Lower Susquehanna and Upper Susquehanna watersheds have needs ranging from \$4.1 billion to \$2.4 billion. Approximately 19 percent of the needs are in the remaining watersheds.

Chesapeake Bay Drainage Basin

The Chesapeake Bay Program is the unique regional partnership that has been directing and conducting the restoration of the Chesapeake Bay since the signing of the historic Chesapeake Bay Agreement of 1983 and the Chesapeake 2000 Agreement. A primary goal of the program is to reduce nitrogen, phosphorus and sediment loads to support living resources throughout the bay's ecosystem.

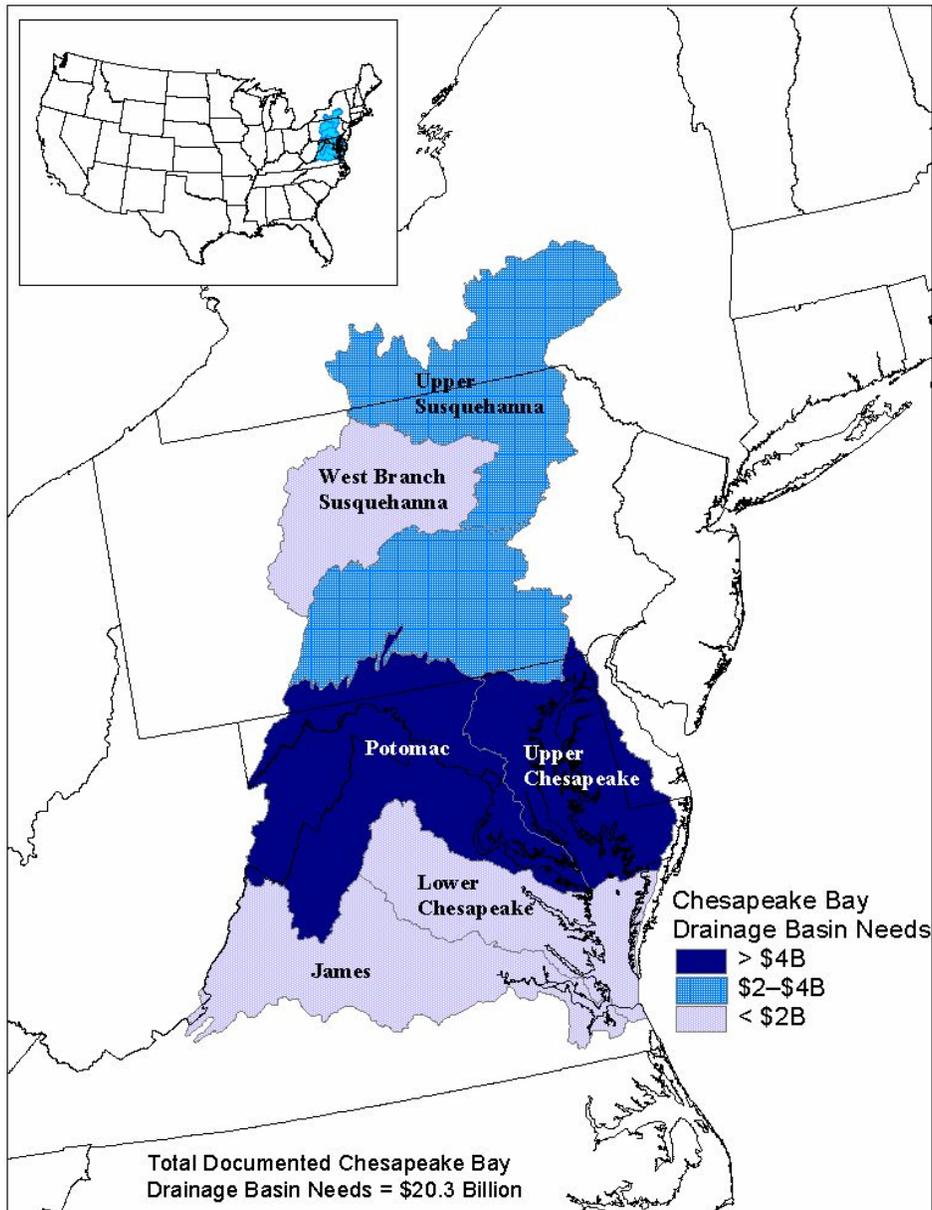


Figure 10. Chesapeake Bay drainage basin needs (January 2004 dollars in billions).

Table 7. Total Documented Needs Reported within the Chesapeake Bay Drainage Basin (January 2004 Dollars in Billions)

Needs Category	Total Needs	
	\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs		
I	Secondary wastewater treatment	1.7 8.4%
II	Advanced wastewater treatment	4.5 22.2%
III-A	Infiltration/inflow correction	0.3 1.5%
III-B	Sewer replacement/rehabilitation	1.8 8.9%
IV-A	New collector sewers and appurtenances	1.3 6.4%
IV-B	New interceptor sewers and appurtenances	1.1 5.4%
V	Combined sewer overflow correction	3.2 15.8%
VI	Storm water management programs	0.4 2.0%
X	Recycled water distribution	<0.01 <0.1%
Total Categories I–VI and X		14.3 70.4%
Nonpoint Source Pollution Control		
VII-A	Agriculture (cropland)	0.25 1.2%
VII-B	Agriculture (animals)	0.32 1.6%
VII-C	Silviculture	-- --
VII-D	Urban	5.05 24.9%
VII-E	Ground water protection: unknown source	-- --
VII-F	Marinas	-- --
VII-G	Resource extraction	<0.01 <0.1%
VII-H	Brownfields	-- --
VII-I	Storage tanks	0.01 <0.1%
VII-J	Sanitary landfills	0.14 0.7%
VII-K	Hydromodification	0.17 0.8%
VII-L	Individual/decentralized sewage treatment	0.01 <0.1%
Total Category VII		6.0 29.6%
Other Categories		
XI	Estuary management	-- --
Grand Total		20.3

Notes:

Costs for operation and maintenance are not included.

See Appendix A, Table A-4, for needs by category and watershed. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

Table 8a. Total Documented Needs Reported by Watershed within the Chesapeake Bay Drainage Basin (January 2004 Dollars in Billions)

Watershed	Total Needs	Watershed	Total Needs
James	1.8	Upper Chesapeake	4.1
Lower Chesapeake	0.6	Upper Susquehanna	2.4
Lower Susquehanna	3.5	West Branch Susquehanna	1.4
Potomac	6.5		

Table 8b. Total Documented Needs Reported by State within the Chesapeake Bay Drainage Basin (January 2004 Dollars in Billions)

State	Total Needs	State	Total Needs
District of Columbia	2.0	Pennsylvania	7.4
Delaware	<0.1	Virginia	4.0
Maryland	6.0	West Virginia	0.5
New York	0.4		

Needs Related to the Great Lakes Drainage Basin

The total reported for facilities in the Great Lakes drainage basin as of January 1, 2004, are \$20.3 billion, or 8.4 percent of the national need (Figure 11 and Table 9). The land area related to these needs is 3.9 percent of the total land area of the Nation. Appendix A, Table A-5, presents the total reported needs for all categories and watersheds.

Tables 10a and 10b present the total documented needs by watershed and State, respectively. About one-half (52.7 percent) of the total needs occur in the St. Clair-Detroit, Southwestern Lake Michigan and Southern Lake Erie watersheds, each of which has needs ranging from \$3 billion to \$4 billion. The Southeastern Lake Michigan, Saginaw and Western Lake Erie watersheds have needs ranging from \$1.09 billion to \$2.08 billion in each watershed. The remaining 20 watersheds account for \$4.52 billion (22.3 percent) of the total need in the Great Lakes drainage basin.

EPA’s Great Lakes Program

The Great Lakes—Superior, Michigan, Huron, Erie and Ontario—form the largest liquid surface fresh water system on Earth. More than 30 million people live in the Great Lakes Basin, and the daily activities of these people, from the water consumed to the waste returned, directly affect the Great Lakes environment.

In May 2004, President Bush signed an Executive Order recognizing the Great Lakes as a national treasure and calling for the creation of a “Regional Collaboration of National Significance” and a Cabinet-level Interagency Task Force.

In December 2004, the Great Lakes Regional Collaboration of National Significance (GLRC) was launched, creating a unique partnership of key members from federal, State and local governments, tribes and other stakeholders for the purpose of developing a strategic action plan (<http://www.epa.gov/glnpo/taskforce/index.html>).

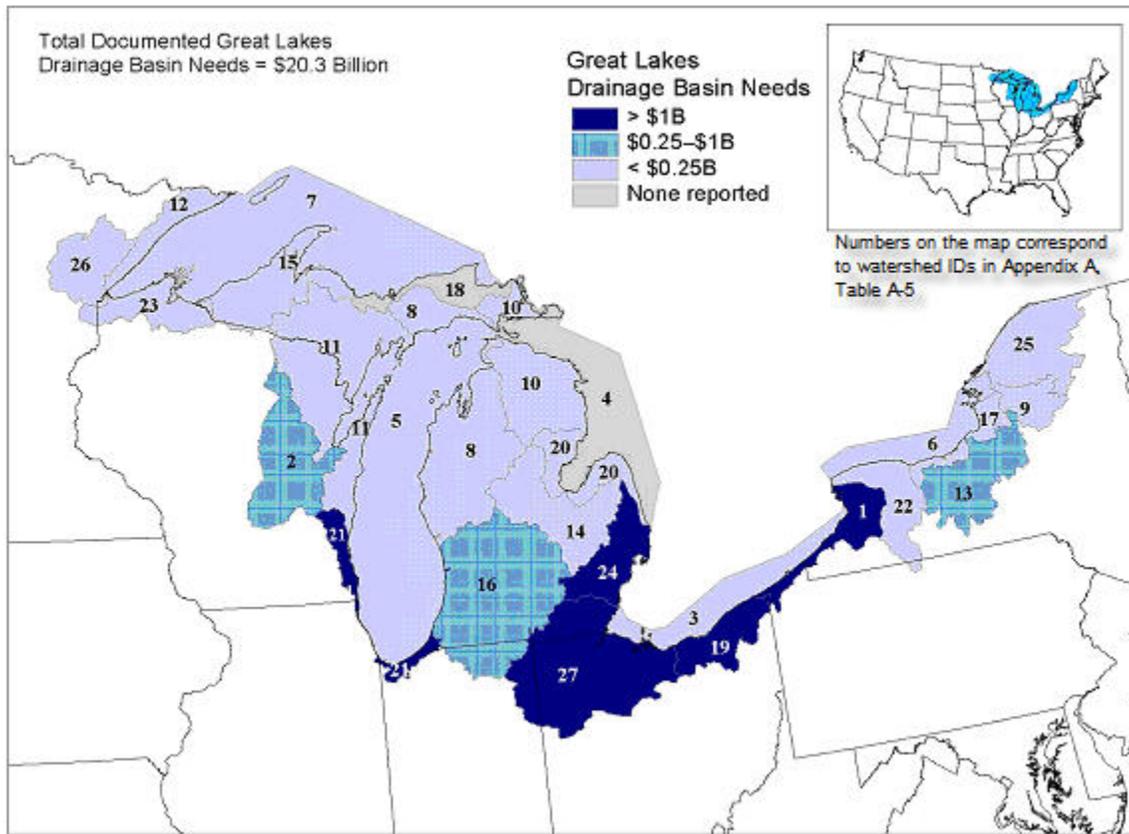


Figure 11. Great Lakes drainage area needs (January 2004 dollars in billions).

Table 9. Total Documented Needs Reported within the Great Lakes Drainage Basin (January 2004 Dollars in Billions)

Needs Category		Total Needs	
		\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs			
I	Secondary wastewater treatment	2.3	11.3%
II	Advanced wastewater treatment	0.4	2.0%
III-A	Infiltration/inflow correction	0.5	2.5%
III-B	Sewer replacement/rehabilitation	1.8	8.9%
IV-A	New collector sewers and appurtenances	0.9	4.4%
IV-B	New interceptor sewers and appurtenances	0.4	2.0%
V	Combined sewer overflow correction	10.6	52.2%
VI	Storm water management programs	0.3	1.5%
X	Recycled water distribution	--	--
Total Categories I–VI and X		17.2	84.7%
Nonpoint Source Pollution Control			
VII-A	Agriculture (cropland)	0.26	1.3%
VII-B	Agriculture (animals)	0.10	0.5%
VII-C	Silviculture	0.04	0.2%
VII-D	Urban	1.03	5.1%
VII-E	Ground water protection: unknown source	0.03	0.1%
VII-F	Marinas	--	--

Table 9. Total Documented Needs Reported within the Great Lakes Drainage Basin (January 2004 Dollars in Billions) (continued)

Needs Category		Total Needs	
		\$B	Percent
VII-G	Resource extraction	<0.01	<0.1%
VII-H	Brownfields	0.15	0.7%
VII-I	Storage tanks	0.56	2.8%
VII-J	Sanitary landfills	0.07	0.3%
VII-K	Hydromodification	0.51	2.5%
VII-L	Individual/decentralized sewage treatment	0.36	1.8%
Total Category VII		3.1	15.3%
Other Categories			
XI	Estuary management	--	--
Grand Total		20.3	

Notes:

Costs for operation and maintenance are not included.

See Appendix A, Table A-5, for needs by category and watershed. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

Table 10a. Total Documented Needs Reported by Watershed within the Great Lakes Drainage Basin (January 2004 Dollars in Billions).

Watershed	Total Needs	Watershed	Total Needs
Eastern Lake Erie	0.85	Southcentral Lake Superior	0.06
Fox	0.68	Southeastern Lake Michigan	1.09
Lake Erie	0.03	Southeastern Lake Ontario	0.29
Lake Huron	<0.01	Southeastern Lake Superior	0.01
Lake Michigan	0.03	Southern Lake Erie	3.06
Lake Ontario	0.02	Southwestern Lake Huron	0.03
Lake Superior	0.02	Southwestern Lake Michigan	3.65
Northeastern Lake Michigan	0.20	Southwestern Lake Ontario	0.23
Northeastern Lake Ontario	0.19	Southwestern Lake Superior	0.03
Northwestern Lake Huron	0.06	St. Clair-Detroit	3.96
Northwestern Lake Michigan	0.25	St. Lawrence	0.26
Northwestern Lake Superior	0.15	St. Louis	0.36
Oswego	0.78	Western Lake Erie	2.08
Saginaw	1.89		

Table 10b. Total Documented Needs Reported by State within the Great Lakes Drainage Basin (January 2004 Dollars in Billions).

State	Total Needs	State	Total Needs
Illinois	0.17	New York	2.58
Indiana	1.59	Ohio	4.54
Michigan	6.99	Pennsylvania	0.04
Minnesota	0.42	Wisconsin	3.89

Needs Related to the Columbia River Basin

The total reported needs for facilities in the Columbia River Basin as of January 1, 2004, are \$4.0 billion, or 1.7 percent of the national need (Figure 12 and Table 11). The land area related to these needs is 7.3 percent of the total land area of the Nation. Appendix A, Table A-7, presents the total reported needs for all categories and watersheds.

Tables 12a and 12b present the total documented needs by watershed and by State, respectively. About two-thirds (68 percent) of the total needs occur in the Lower Columbia and Willamette watersheds, each of which has needs ranging from \$1.3 billion to \$1.5 billion. The remaining 15 watersheds account for \$1.3 billion (32 percent) of the total need in the Columbia River Basin.

Columbia River Basin
 The Columbia River is the fourth-largest river in North America ranked by flow. The dominant water system in the Pacific Northwest, it drains 219,000 square miles in seven western States (Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming) as well as 39,500 square miles in British Columbia. The Columbia Basin became a Regional Priority within EPA’s strategic planning process in 2002 to give greater focus to resolving many water quality issues. Conventional and toxic pollutants significantly affect the once-abundant salmon fisheries and the people who depend on those fish for cultural and economic reasons.

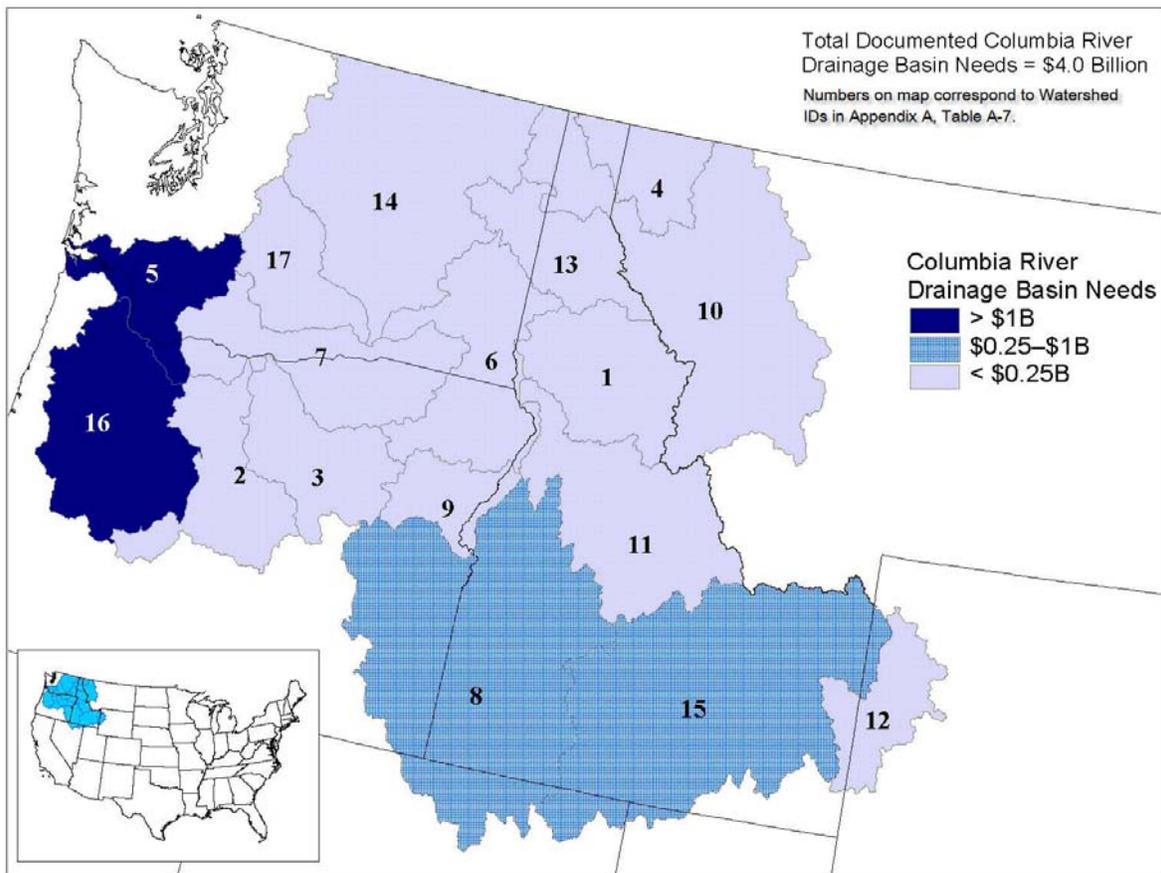


Figure 12. Columbia River drainage basin needs (January 2004 dollars in billions).

Table 11. Total Documented Needs Reported within the Columbia River Basin (January 2004 Dollars in Billions)

Needs Category		Total Needs	
		\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs			
I	Secondary wastewater treatment	1.3	32.5%
II	Advanced wastewater treatment	0.7	17.5%
III-A	Infiltration/inflow correction	0.1	2.5%
III-B	Sewer replacement/rehabilitation	0.5	12.5%
IV-A	New collector sewers and appurtenances	0.1	2.5%
IV-B	New interceptor sewers and appurtenances	0.2	5.0%
V	Combined sewer overflow correction	0.8	20.0%
VI	Storm water management programs	0.1	2.5%
X	Recycled water distribution	<0.1	<0.1%
Total Categories I–VI and X		3.8	95.0%
Nonpoint Source Pollution Control			
VII-A	Agriculture (cropland)	0.066	1.7%
VII-B	Agriculture (animals)	0.026	0.7%
VII-C	Silviculture	0.007	0.2%
VII-D	Urban	0.019	0.5%
VII-E	Ground water protection: unknown source	<0.001	<0.1%
VII-F	Marinas	<0.001	<0.1%
VII-G	Resource extraction	0.001	<0.1%
VII-H	Brownfields	--	--
VII-I	Storage tanks	0.006	0.2%
VII-J	Sanitary landfills	--	--
VII-K	Hydromodification	0.042	1.1%
VII-L	Individual/decentralized sewage treatment	<0.001	<0.1%
Total Category VII		0.2	5.0%
Other Categories			
XI	Estuary management	--	--
Grand Total		4.0	

Notes:

Costs for operation and maintenance are not included.

See Appendix A, Table A-7, for needs by category and watershed. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

Table 12a. Total Documented Needs Reported by Watershed within the Columbia River Basin (January 2004 Dollars in Billions)

Watershed	Total Needs	Watershed	Total Needs
Clearwater	0.016	Pend Oreille	0.236
Deschutes	0.016	Salmon	0.009
John Day	0.005	Snake Headwaters	0.020
Kootenai	0.005	Spokane	0.138
Lower Columbia	1.275	Upper Columbia	0.064
Lower Snake	0.019	Upper Snake	0.275
Middle Columbia	0.036	Willamette	1.458
Middle Snake-Boise	0.263	Yakima	0.170
Middle Snake-Powder	0.005		

Table 12b. Total Documented Needs Reported by State within the Columbia River Basin (January 2004 Dollars in Billions)

State	Total Needs	State	Total Needs
Idaho	0.62	Utah	- -
Montana	0.22	Washington	0.52
Nevada	- -	Wyoming	0.02
Oregon	2.64		

Needs Related to the Border 2012 Area

The total reported needs for U.S. facilities in the Border 2012 area as of January 1, 2004, are \$3.1 billion, or 1.3 percent of the national need (Table 13). The land area related to these needs is 3.0 percent of the total land area of the Nation. Appendix A, Table A-6, presents the total reported needs for all categories and watersheds. Approximately, \$0.2 billion of the \$3.1 billion are associated with small communities. Table 14 displays the total documented needs by State. California, Texas, Arizona and New Mexico’s total needs are \$1.53 billion, \$0.79 billion, \$0.80 billion and \$0.004 billion, respectively.

Border 2012 Program

The U.S.–Mexico Border Program was established to protect the environment and public health in the U.S.–Mexico border region, defined as the area within 100 kilometers of the border (figure 12 shows the U.S. portion of this area). The program’s mission is to protect the environment and public health in the U.S.–Mexico border region, consistent with the principles of sustainable development. The water quality objectives of the program are to increase the number of homes connected to potable water supply and wastewater collection and treatment systems, achieve a majority of water quality standards in shared and transboundary surface waters, meet coastal water quality standards and improve water system efficiencies. Specifically, Mexico’s National Water Commission (CNA) and EPA have provided funding and technical assistance for project planning and infrastructure construction. The International Boundary and Water Commission (IBWC) also has provided assistance and coordination in developing infrastructure.



Figure 13. Border 2012 region (includes all facilities within 100 km of the U.S.–Mexico border).

Table 13. Total Documented Needs Reported within the Border 2012 Area (January 2004 Dollars in Billions)

Needs Category	Total Needs	
	\$B	Percent
Publicly Owned Wastewater Treatment and Conveyance Systems and Storm Water Management Programs		
I	Secondary wastewater treatment	0.34 10.9%
II	Advanced wastewater treatment	0.26 8.3%
III-A	Infiltration/inflow correction	0.07 2.2%
III-B	Sewer replacement/rehabilitation	1.32 42.2%
IV-A	New collector sewers and appurtenances	0.16 5.1%
IV-B	New interceptor sewers and appurtenances	0.27 8.6%
V	Combined sewer overflow correction	-- --
VI	Storm water management programs	0.20 6.4%
X	Recycled water distribution	0.05 1.6%
Total Categories I–VI and X		2.67 85.4%
Nonpoint Source Pollution Control		
VII-A	Agriculture (cropland)	0.004 0.1%
VII-B	Agriculture (animals)	-- --
VII-C	Silviculture	-- --
VII-D	Urban	0.062 2.0%
VII-E	Ground water protection: unknown source	0.005 0.2%

Table 13. Total Documented Needs Reported within the Border 2012 Area (January 2004 Dollars in Billions) (continued)

Needs Category		Total Needs	
		\$B	Percent
VII-F	Marinas	--	--
VII-G	Resource extraction	--	--
VII-H	Brownfields	0.025	0.8%
VII-I	Storage tanks	0.024	0.8%
VII-J	Sanitary landfills	0.082	2.6%
VII-K	Hydromodification	0.050	1.6%
VII-L	Individual/decentralized sewage treatment	0.203	6.5%
Total Category VII		0.455	14.6%
Other Categories			
XI	Estuary management	--	--
Grand Total		3.125	

Notes:

Costs for operation and maintenance are not included

See Appendix A, Table A-6, for needs by category and State. Needs estimates presented in this table might vary slightly from those presented elsewhere because of rounding.

Table 14. Total Documented Needs Reported by State within the Border 2012 Area (January 2004 Dollars in Billions)

State	Total Needs	State	Total Needs
Arizona	0.80	New Mexico	<0.01
California	1.53	Texas	0.79
		Total	3.12

Table A-1 summarizes by Targeted Watershed from 2003 and 2004 the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-1. CWNS 2004 Total Needs within the Targeted Watersheds from 2003 and 2004 (January 2004 Dollars in Millions)

Targeted Watersheds	State(s)	Category of Need											Tot I-V	
		Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X		XI
Bayou Bartholomew	AR, LA	41	0	0	0	0	2	2	0	0	37	0	0	4
Bear River	UT, ID, WY	72	47	17	0	2	1	1	0	0	4	0	0	68
Cape Fear	NC	1,606	43	673	99	82	266	405	0	1	13	24	0	1,568
Charles River and Ipswich River ^a	MA	1,225	348	0	4	25	36	180	632	0	0	0	0	1,225
Christina River	DE, MD, PA	45	3	13	0	0	0	1	21	0	7	0	0	38
Clark Fork-Pend Oreille	ID, MT, WA	236	83	33	9	16	48	42	0	0	5	0	0	231
Cumberland River	KY, TN	673	48	25	63	61	125	67	284	0	0b	0	0	673
Dungeness River	WA	9	0	0	0	0	0	0	9	0	0b	0	0	9
Dunkard Creek	PA, WV	390	33	0	0	9	55	7	243	9	34	0	0	347
Fourche Creek	AR	47	16	1	13	0	9	8	0	0	0	0	0	47
Great Miami River	OH, IN	674	71	30	130	11	170	55	147	0b	60	0	0	614
Greater Blue Earth	IA, MN	166	18	0b	4	4	1	2	0	4	133	0	0	29
Hanalei Bay	HI	86	38	20	0	6	22	0	0	0	0	0	0	86

Kalamazoo River	MI	36	0	0	0	0	0	0	0	0	36	0	0	0
Kenai River	AK	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Tahoe	CA, NV	14	0	1	0	1	0	1	0	0	0	11	0	3
Lower Columbia River	OR, WA	1,611	252	125	11	254	12	24	833	96	4	0	0	1,511
Manistee River	MI	56	0	0	0	0	0	0	30	0	26	0	0	30
Meduxnekeag River	ME	1	0	0	0	1	0	0	0	0	0	0	0	1
Narragansett Bay	MA, RI, CT	2,155	336	99	38	107	380	108	899	5	183	0	0	1,967
Nashua River	MA, NH	59	9	0	0	0	2	0	48	0	0	0	0	59
Passaic River	NJ, NY	5,621	1,589	236	131	218	267	84	2,180	21	861	23	11	4,705
Raritan River Basin	NJ	1,490	660	46	65	70	30	75	78	4	459	3	0	1,024
Rathbun Lake	IA, MO	6	1	1	2	0	0	0	0	0	2	0	0	4
Rio Puerco Watershed	NM	0b	0b	0	0b	0	0	0	0	0	0	0	0	0b
Sangamon River	IL	150	3	2	0	2	4	2	137	0	0b	0	0	150
Schuylkill River	PA	443	147	36	0b	15	78	17	131	7	12	0	0	424
Siuslaw River	OR	0	0	0	0	0	0	0	0	0	0	0	0	0
Susquehanna Headwaters	NY, PA	533	42	55	7	7	82	10	219	0	111	0	0	422
Upper Mississippi River	IA, MN	4	0	1	0b	1	0	0	0	2	0	0	0	2
Upper South Platte	CO	160	13	46	0	24	38	21	0	18	0b	0	0	142
Upper Tennessee River	NC, TN, VA	303	71	0	15	14	174	29	0	0	0	0	0	303
Upper White	AR, IA	336	22	38	18	3	38	32	0	0	185	0	0	151
Total		18,248	3,893	1,498	609	933	1,840	1,173	5,891	167	2,172	61	11	15,837

Targeted Watersheds	State(s)	Category of Need												VII
		VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	
Bayou Bartholomew	AR, LA	33	0	4	0b	0	0	0	0	0	0	0	0	37
Bear River	UT, ID, WY	0b	2	0b	0b	0	0b	0	0	1	1	0b	0	4
Cape Fear	NC	0	0	0	3	0	0b	0	0	0	3	7	0	13
Charles River and Ipswich River ^a	MA	0	0	0	0	0	0	0	0	0	0	0	0	0
Christina River	DE, MD, PA	3	4	0	0b	0	0	0	0	0	0	0b	0	7
Clark Fork-Pend Oreille	ID, MT, WA	0b	1	0b	4	0	0b	0	0	0	0	0b	0	5
Cumberland River	KY, TN	0	0	0	0	0	0b	0	0	0	0	0	0	0b
Dungeness River	WA	0	0b	0	0	0	0	0	0	0	0	0	0b	0b
Dunkard Creek	PA, WV	3	3	0	9	0	0	18	0	0	0	1	0	34
Fourche Creek	AR	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Miami River	OH, IN	5	3	0	3	0	0	0	0	0	0	3	46	60
Greater Blue Earth	IA, MN	14	14	0	0	0	0	0	8	0b	6	20	71	133
Hanalei Bay	HI	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo River	MI	0b	0b	0	8	0	0	0	0	26	0	2	0	36
Kenai River	AK	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Tahoe	CA, NV	0	0	0	0	0	0	0	0	0	0	0	0	0
Lower Columbia River	OR, WA	0	0b	0	4	0	0	0	0	0b	0	0b	0	4
Manistee River	MI	0b	0b	8	1	0	0	0b	0	8	0	9	0	26
Meduxnekeag River	ME	0	0	0	0	0	0	0	0	0	0	0	0	0
Narragansett Bay	MA, RI, CT	0	0	0	2	0	0	0	0	0	119	48	14	183
Nashua River	MA, NH	0	0	0	0	0	0	0	0	0	0	0	0	0
Passaic River	NJ, NY	0b	0	0	55	70	0	0	118	1	243	366	8	861

Raritan River Basin	NJ	0	0	0	22	183	0	0b	3	0	108	131	12	459
Rathbun Lake	IA, MO	1	1	0	0	0	0	0	0	0	0	0	0b	2
Rio Puerco Watershed	NM	0	0	0	0	0	0	0	0	0	0	0	0	0
Sangamon River	IL	0b	0	0	0	0	0	0	0	0	0	0	0	0b
Schuylkill River	PA	4	4	0	1	0	0	0	2	0	0	1	0	12
Siuslaw River	OR	0	0	0	0	0	0	0	0	0	0	0	0	0
Susquehanna Headwaters	NY, PA	26	42	0	20	0	0	0	0	1	0	16	6	111
Upper Mississippi River	IA, MN	0	0	0	0	0	0	0	0	0	0	0	0	0
Upper South Platte	CO	0	0	0	0b	0	0	0	0	0	0	0	0	0b
Upper Tennessee River	NC, TN, VA	0	0	0	0	0	0	0	0	0	0	0	0	0
Upper White	AR, IA	1	183	0b	0	0	0	0	0	0	0	0b	1	185
Total		90	257	12	132	253	0b	18	131	37	480	604	158	2,172

Categories

I Secondary wastewater treatment

II Advanced wastewater treatment

III-A Infiltration/inflow correction

III-B Sewer replacement/rehabilitation

IV-A New collector sewers and appurtenances

IV-B New interceptor sewers and appurtenances

V Combined sewer overflow correction

VI Storm water management programs

X Recycled water distribution

XI Estuary management

VII NPS pollution control

VII-A Agriculture (cropland)

VII-B Agriculture (animals)

VII-C Silviculture

VII-D Urban

VII-E Ground water protection

VII NPS pollution control (continued)

VII-F Marinas

VII-G Resource extraction

VII-H Brownfields

VII-I Storage tanks

VII-J Sanitary landfills

VII-K Hydromodification

VII-L Individual/decentralized sewage treatment

^a The Charles River and Ipswich River are in the Charles watershed.^b Estimate is less than \$0.5 million.

Table A-2 summarizes by National Estuary Program the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-2. CWNS 2004 Total Needs within the National Estuary Program (January 2004 Dollars in Millions)

Estuary Program	State(s)	Category of Need											Tot I-V	
		Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X		XI
Albemarle-Pamlico Sounds	VA, NC	1,740	188	403	144	130	424	399	0	0	33	19	0	1,688
Barataria-Terrebonne Estuarine Complex	LA	637	153	2	119	111	179	73	0	0	0	0	0	637
Barneгат Bay	NJ	547	137	32	11	69	64	8	0	1	212	9	4	321
Buzzards Bay	MA	583	243	2	7	16	55	18	242	0	0	0	0	583
Casco Bay	ME	326	72	0	0a	19	72	20	127	0	16	0	0	310
Charlotte Harbor	FL	1,605	0	612	3	57	517	57	0	41	8	303	7	1,246
Coastal Bend Bays & Estuaries	TX	662	59	26	20	25	34	3	0	446	48	1	0	167
Delaware Estuary	DE, MD, NJ, PA	4,167	451	124	62	158	197	86	2,148	24	893	24	0	3,226
Delaware Inland Bays	DE	32	12	10	0	3	7	0	0	0	0	0	0	32
Galveston Bay	TX	3,527	316	43	109	338	262	79	0	2,378	2	0	0	1,147
Indian River Lagoon	FL	178	0	71	0a	2	24	28	0	35	9	9	0	125
Long Island Sound	CT, NY	3,917	483	867	98	62	246	214	839	0	1,108	0	0	2,809
Lower Columbia River Estuary	OR, WA	2,050	328	364	11	380	13	24	834	96	0a	0	0	1,954
Maryland Coastal Bays	MD	31	10	0	0a	2	9	7	0	0	3	0	0	28
Massachusetts Bays	MA	1,233	351	0	2	21	34	193	632	0	0	0	0	1,233
Mobile Bay	AL	178	3	28	10	102	24	11	0	0	0	0	0	178
Morro Bay	CA	7	0	0	0	0	0	0	0	0	7	0	0	0
Narragansett Bay	MA, RI	1,378	79	86	17	79	250	69	636	5	157	0	0	1,216
New Hampshire Estuaries	NH	98	38	1	6	23		11	14	0	5	0	0	93
New York-New Jersey Harbor Est.	NJ, NY	25,911	12,138	436	246	2,611	408	210	7,216	64	2,545	26	11	23,265
Peconic Estuary	NY	86	8	1	0	1	2	0	0	11	63	0	0	12
Puget Sound	WA	3,230	1,502	5	87	216	91	661	508	129	24	7	0	3,070

San Francisco Estuary	CA	6,563	2,044	798	71	358	75	1,148	255	220	314	1,280	0	4,749
San Juan Bay	PR	141	0	0	0	0	65	76	0	0	0	0	0	141
Santa Monica Bay	CA	5,348	1,402	1,839	0	1,135	429	486	0	8	29	20	0	5,291
Sarasota Bay	FL	34	0	6	4	20	1	0	0	0	0	3	0	31
Tampa Bay	FL	962	0	318	11	147	27	15	0	55	5	384	0a	518
Tillamook Bay	OR	38	25	0	0a	13	0	0	0	0	0	0	0	38
Total		65,209	20,042	6,074	1,038	6,098	3,509	3,896	13,451	3,513	5,481	2,085	22	54,108

Estuary Program	State(s)	Category of Need												
		VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	VII
Albemarle-Pamlico Sounds	VA, NC	0	0a	0	13	0	0a	0	0	0	0	20	0	33
Barataria-Terrebonne Estuarine Complex	LA	0	0	0	0	0	0	0	0	0	0	0	0	0
Barneгат Bay	NJ	0	0	0	10	4	0a	0	0	0	91	105	2	212
Buzzards Bay	MA	0	0	0	0	0	0	0	0	0	0	0	0	0
Casco Bay	ME	0	2	0	1	0	0	0	0	0	0	0	13	16
Charlotte Harbor	FL	0	0	0	4	0	0	0	0	0	0	4	0	8
Coastal Bend Bays & Estuaries	TX	0	0	0	0	0	0	0	0	0	0	0	48	48
Delaware Estuary	DE, MD, NJ, PA	10	12	0	33	99	0a	0	332	0	158	229	20	893
Delaware Inland Bays	DE	0	0	0	0	0	0	0	0	0	0	0	0	0
Galveston Bay	TX	0	0	0	0	0	0	0	0	0	0	0	2	2
Indian River Lagoon	FL	0	0	0	8	0a	0	0	0	0	0	1	0	9
Long Island Sound	CT, NY	7	6	0	499	14	7	0	6	0a	11	330	228	1,108
Lower Columbia River Estuary	OR, WA	0	0a	0	0	0	0	0	0	0a	0	0a	0	0a
Maryland Coastal Bays	MD	0	0	0	0a	0	0	0	0	0	3	0	0	3
Massachusetts Bays	MA	0	0	0	0	0	0	0	0	0	0	0	0	0
Mobile Bay	AL	0	0	0	0	0	0	0	0	0	0	0	0	0
Morro Bay	CA	0	0	0	0	0	0	0	0	0	0	7	0	7
Narragansett Bay	MA, RI	0	0	0	2	0	0	0	0	0	111	30	14	157
New Hampshire Estuaries	NH	0	0	0	0	0	0	0	0	0	5	0	0	5
New York-New Jersey Harbor Est.	NJ, NY	0a	0a	0	171	282	1	0a	240	9	903	920	19	2,545
Peconic Estuary	NY	0	0	0	4	35	0a	0	0	0	24	0a	0	63
Puget Sound	WA	1	3	0	6	0	0	0	0	9	0	3	2	24
San Francisco Estuary	CA	16	3	0	5	35	0	0	0	0	0	250	5	314

San Juan Bay	PR	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Monica Bay	CA	0	0	0	3	9	0	0	0	0	0	17	0	29
Sarasota Bay	FL	0	0	0	0	0	0	0	0	0	0	0	0	0
Tampa Bay	FL	0	0	0	4	0	0	0	0	0	0	1	0	5
Tillamook Bay	OR	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		34	26	0	763	478	8	0a	578	18	1,306	1,917	353	5,481

Categories

I Secondary wastewater treatment

II Advanced wastewater treatment

III-A Infiltration/inflow correction

III-B Sewer replacement/rehabilitation

IV-A New collector sewers and appurtenances

IV-B New interceptor sewers and appurtenances

V Combined sewer overflow correction

VI Storm water management programs

X Recycled water distribution

XI Estuary management

VII NPS pollution control

VII-A Agriculture (cropland)

VII-B Agriculture (animals)

VII-C Silviculture

VII-D Urban

VII-E Ground water protection

VII NPS pollution control (continued)

VII-F Marinas

VII-G Resource extraction

VII-H Brownfields

VII-I Storage tanks

VII-J Sanitary landfills

VII-K Hydromodification

VII-L Individual/decentralized sewage treatment

a Estimate is less than \$0.5 million.

Table A-3 summarizes by watershed within the Gulf of Mexico drainage area the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-3. CWNS 2004 Total Needs within the Gulf of Mexico Drainage Area (January 2004 Dollars in Millions)

Watershed Name	Category of Need											Tot I-V	
	Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X		XI
Arkansas-White-Red Rivers	3,226	694	450	459	321	238	425	0	202	437	0	0	2,587
Lower Mississippi River	4,880	604	175	1,236	490	404	463	0	0	1,508	0	0	3,372
Missouri River	9,221	1,498	1,369	797	484	370	699	1,704	106	2,181	13	0	6,921
Ohio River	21,594	2,373	598	2,411	648	2,428	1,710	9,789	61	1,576	0a	0	19,957
Rio Grande	726	181	101	13	138	69	117	0	0	107	0	0	619
South Atlantic-Gulf	9,963	192	1,994	1,341	2,125	823	299	1,022	501	1,136	474	56	7,796
Tennessee River	1,166	264	37	187	155	338	171	0	0	14	0	0	1,152
Texas-Gulf	7,828	1,275	419	296	912	777	1,058	0	2,825	255	11	0	4,737
Upper Mississippi River	25,089	3,245	325	757	2,484	491	1,581	12,195	820	3,191	0	0	21,078
Total	83,693	10,326	5,468	7,497	7,757	5,938	6,523	24,710	4,515	10,405	498	56	68,219

Watershed Name	Category of Need												VII
	VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	
Arkansas-White-Red Rivers	43	391	0a	2	0	0	0a	0	0	0	0a	1	437
Lower Mississippi River	78	63	10	2	0	0	7	0	0	0	1,326	22	1,508
Missouri River	39	44	3	509	549	0	46	0a	783	63	99	46	2,181
Ohio River	410	42	63	157	1	0a	88	0	0	0a	47	768	1,576
Rio Grande	0	0	0	0	2	0	0	6	0	0	0	99	107
South Atlantic-Gulf	6	133	5	20	238	0	0	0	0	0	679	55	1,136
Tennessee River	0a	1	0a	0a	0	1	0	0	0	0	12	0a	14
Texas-Gulf	5	0	0	0	0	0	0	0	0	0	94	156	255
Upper Mississippi River	276	203	0	512	0a	0	0	800	5	80	550	765	3,191
Total	857	877	81	1,202	790	1	141	806	788	143	2,807	1,912	10,405

Categories

- | | | |
|---|-------------------------------|---|
| I Secondary wastewater treatment | X Recycled water distribution | VII NPS pollution control (continued) |
| II Advanced wastewater treatment | XI Estuary management | VII-F Marinas |
| III-A Infiltration/inflow correction | VII NPS pollution control | VII-G Resource extraction |
| III-B Sewer replacement/rehabilitation | VII-A Agriculture (cropland) | VII-H Brownfields |
| IV-A New collector sewers and appurtenances | VII-B Agriculture (animals) | VII-I Storage tanks |
| IV-B New interceptor sewers and appurtenances | VII-C Silviculture | VII-J Sanitary landfills |
| V Combined sewer overflow correction | VII-D Urban | VII-K Hydromodification |
| VI Storm water management programs | VII-E Ground water protection | VII-L Individual/decentralized sewage treatment |

a Estimate is less than \$0.5 million.

Table A-4 summarizes by watershed within the Chesapeake Bay drainage area the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-4. CWNS 2004 Total Needs within the Chesapeake Bay Drainage Area (January 2004 Dollars in Millions)

Watershed Name	Category of Need												Tot I-V
	Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X	XI	
James	1,808	170	495	35	372	104	125	507	0	0	0	0	1,808
Lower Chesapeake	641	109	205	30	89	101	107	0	0	0	0	0	641
Lower Susquehanna	3,548	80	158	52	69	174	21	436	0	2,558	0	0	990
Potomac	6,470	743	2,368	57	449	340	535	1,457	38	479	4	0	5,949
Upper Chesapeake	4,132	463	1,190	136	797	390	264	283	402	207	0	0	3,523
Upper Susquehanna	2,399	77	68	8	14	151	19	523	0 ^a	1,539	0	0	860
West Branch Susquehanna	1,411	41	40	4	13	88	9	38	0	1,178	0	0	233
Total	20,409	1,683	4,524	322	1,803	1,348	1,080	3,244	440	5,961	4	0	14,004

Watershed Name	Category of Need												
	VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	VII
James	0	0	0	0	0	0	0	0	0	0	0	0	0
Lower Chesapeake	0	0	0	0	0	0	0	0	0	0	0	0	0
Lower Susquehanna	127	177	0	2,233	0	0	0	0	0	0	21	0	2,558
Potomac	36	45	0	339	0	0	0	0	4	41	13	1	479
Upper Chesapeake	0	0	0	31	0	0	0	0	8	94	68	6	207
Upper Susquehanna	59	68	0	1,355	0	0	0	0	1	0	50	6	1,539
West Branch Susquehanna	30	31	0	1,094	0	0	1	0	0	0	22	0	1,178
Total	252	321	0	5,052	0	0	1	0	13	135	174	13	5,961

Categories

I Secondary wastewater treatment	X Recycled water distribution	VII NPS pollution control (continued)
II Advanced wastewater treatment	XI Estuary management	VII-F Marinas
III-A Infiltration/inflow correction	VII NPS pollution control	VII-G Resource extraction
III-B Sewer replacement/rehabilitation	VII-A Agriculture (cropland)	VII-H Brownfields
IV-A New collector sewers and appurtenances	VII-B Agriculture (animals)	VII-I Storage tanks
IV-B New interceptor sewers and appurtenances	VII-C Silviculture	VII-J Sanitary landfills
V Combined sewer overflow correction	VII-D Urban	VII-K Hydromodification
VI Storm water management programs	VII-E Ground water protection	VII-L Individual/decentralized sewage treatment

^a Estimate is less than \$0.5 million.

Table A-5 summarizes by watershed within the Great Lakes drainage area the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-5. CWNS 2004 Total Needs within the Great Lakes Drainage Area (January 2004 Dollars in Millions)

Watershed Name	Figure 11		Category of Need											
	ID	Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X	XI	Tot I-V
Eastern Lake Erie	1	852	145	5	5	83	49	30	505	0	30	0	0	822
Fox	2	681	182	15	17	104	71	32	0	0	260	0	0	421
Lake Erie	3	33	14	1	1	3	12	0a	1	0	1	0	0	32
Lake Huron	4	3	2	0	1	0a	0	0	0	0	0	0	0	3
Lake Michigan	5	27	9	0	0	1	17	0	0	0	0a	0	0	27
Lake Ontario	6	22	2	0	0	8	2	8	0	0	2	0	0	20
Lake Superior	7	19	6	0	1	3	5	1	0	0	3	0	0	16
Northeastern Lake Michigan	8	197	9	0	0	0a	0	0	30	0	158	0	0	39
Northeastern Lake Ontario	9	187	9	0	1	1	25	3	110	0	38	0	0	149
Northwestern Lake Huron	10	64	3	0	0	8	10	0	0	0	43	0	0	21
Northwestern Lake Michigan	11	245	39	3	3	46	39	15	0	17	83	0	0	145
Northwestern Lake Superior	12	147	3	0a	58	11	1	11	0	47	16	0	0	84
Oswego	13	778	129	240	8	50	59	17	165	0a	110	0	0	668
Saginaw	14	1,890	19	0	2	0a	0	0	1,686	0	183	0	0	1,707
Southcentral Lake Superior	15	59	10	0	0	1	5	0	17	0	26	0	0	33
Southeastern Lake Michigan	16	1,086	118	7	9	11	2	0	765	0a	174	0	0	912
Southeastern Lake Ontario	17	292	38	1	0	6	51	9	171	0	16	0	0	276
Southeastern Lake Superior	18	6	0	0	0	0	0	0	0	0	6	0	0	0a
Southern Lake Erie	19	3,057	224	11	103	96	82	55	2,316	3	167	0	0	2,887
Southwestern Lake Huron	20	28	0	0	0	0	0	0	0	0	28	0	0	0a
Southwestern Lake Michigan	21	3,646	297	0	44	1,003	61	189	1,119	149	784	0	0	2,713
Southwestern Lake Ontario	22	226	34	0a	3	10	33	5	125	0	16	0	0	210

Southwestern Lake Superior	23	31	8	1	1	7	12	2	0	0a	0	0	0	31
St. Clair-Detroit	24	3,958	716	33	86	293	258	42	2,189	0	341	0	0	3,617
St. Lawrence	25	257	19	0	0a	10	16	0	167	0	45	0	0	212
St. Louis	26	361	29	10	15	18	1	0a	49	85	154	0	0	122
Western Lake Erie	27	2,076	227	40	118	1	75	30	1,169	0a	416	0	0	1,660
Total		20,228	2,291	367	476	1,774	886	449	10,584	301	3,100	0	0	16,827

Watershed Name	Figure 11 ID	Category of Need												
		VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	VII
Eastern Lake Erie	1	5	0a	0	5	0	0	0	4	0	0	16	0	30
Fox	2	9	16	0	231	0	0	0	0a	0	1	2	1	260
Lake Erie	3	0	0	0	0	0	0	0	1	0	0	0	0	1
Lake Huron	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Michigan	5	0a	0	0	0	0	0	0	0	0	0	0a	0	0a
Lake Ontario	6	2	0	0	0	0	0	0	0	0	0	0	0	2
Lake Superior	7	0	0	0	0	0	0	0	0	0	0	0	3	3
Northeastern Lake Michigan	8	5	1	11	7	0	0	0a	0	60	0	72	2	158
Northeastern Lake Ontario	9	0	1	0	1	0	0	0	0	0	36	0	0	38
Northwestern Lake Huron	10	1	2	0a	7	0	0	0	0	18	0	15	0	43
Northwestern Lake Michigan	11	6	26	0a	26	11	0	0	1	9	0	4	0	83
Northwestern Lake Superior	12	0a	0	0	0	0	0	0	7	0a	0	0a	9	16
Oswego	13	6	28	8	27	3	0	0	7	0a	29	2	0a	110
Saginaw	14	19	1	0	1	0	0	0	0	71	0	91	0	183
Southcentral Lake Superior	15	2	0a	0a	3	0	0	0	0	17	0	3	1	26
Southeastern Lake Michigan	16	1	1	0a	10	0	0	0	0	148	0	5	9	174
Southeastern Lake Ontario	17	1	2	0	1	11	0	0	0	0	0	1	0	16
Southeastern Lake Superior	18	0	0	0	0	0	0	0	0	6	0	0	0	6
Southern Lake Erie	19	0a	1	0	1	0	0	0	0	0	0	72	93	167
Southwestern Lake Huron	20	2	1	0	0a	0	0	0	0	21	0	4	0	28
Southwestern Lake Michigan	21	6	7	0	590	0	0	0	23	0	0	157	1	784
Southwestern Lake Ontario	22	0	5	0	10	0a	0	0	0	0a	0	1	0a	16
Southwestern Lake Superior	23	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Clair-Detroit	24	6	2	0a	80	0	0	0	0	200	0	53	0	341

St. Lawrence	25	0 ^a	1	18	21	0	0	0	0	1	4	0	0	45
St. Louis	26	0	2	0	0	0	0	0	108	1	0	0	43	154
Western Lake Erie	27	193	1	0	5	0	0	0	0	12	0	12	193	416
Total		264	98	37	1,026	25	0	0^a	151	564	70	510	355	3,100

Categories

- | | | |
|---|-------------------------------|---|
| I Secondary wastewater treatment | X Recycled water distribution | VII NPS pollution control (continued) |
| II Advanced wastewater treatment | XI Estuary management | VII-F Marinas |
| III-A Infiltration/inflow correction | VII NPS pollution control | VII-G Resource extraction |
| III-B Sewer replacement/rehabilitation | VII-A Agriculture (cropland) | VII-H Brownfields |
| IV-A New collector sewers and appurtenances | VII-B Agriculture (animals) | VII-I Storage tanks |
| IV-B New interceptor sewers and appurtenances | VII-C Silviculture | VII-J Sanitary landfills |
| V Combined sewer overflow correction | VII-D Urban | VII-K Hydromodification |
| VI Storm water management programs | VII-E Ground water protection | VII-L Individual/decentralized sewage treatment |

^a Estimate is less than \$0.5 million.

Table A-6 summarizes by State within the Border 2012 Program the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-6. CWNS 2004 Total Needs within the Border 2012 Program Area (January 2004 Dollars in Millions)

Watershed Name	Category of Need												Tot I-V
	Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X	XI	
Arizona	797	16	160	46	25	60	111	0	183	196	0 ^a	0	418
California	1,533	193	3	13	1,146	15	45	0	15	52	51	0	1,415
New Mexico	4	1	0	0	0	2	0	0	0	1	0	0	3
Texas	789	127	97	15	146	87	111	0	0	206	0	0	583
Total	3,123	337	260	74	1,317	164	267	0	198	455	51	0	2,419

Watershed Name	Category of Need												
	VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	VII
Arizona	0	0	0	60	5	0	0	24	24	82	0	1	196
California	0	0	0	2	0	0	0	0	0	0	50	0	52
New Mexico	0	0	0	0	0	0	0	1	0	0	0	0	1
Texas	4	0	0	0	0	0	0	0	0	0	0	202	206
Total	4	0	0	62	5	0	0	25	24	82	50	203	455

Categories

I Secondary wastewater treatment

II Advanced wastewater treatment

III-A Infiltration/inflow correction

III-B Sewer replacement/rehabilitation

IV-A New collector sewers and appurtenances

IV-B New interceptor sewers and appurtenances

V Combined sewer overflow correction

VI Storm water management programs

X Recycled water distribution

XI Estuary management

VII NPS pollution control

VII-A Agriculture (cropland)

VII-B Agriculture (animals)

VII-C Silviculture

VII-D Urban

VII-E Ground water protection

VII NPS pollution control (continued)

VII-F Marinas

VII-G Resource extraction

VII-H Brownfields

VII-I Storage tanks

VII-J Sanitary landfills

VII-K Hydromodification

VII-L Individual/decentralized sewage treatment

^a Estimate is less than \$0.5 million.

Table A-7 summarizes by watershed within the Columbia River Basin the CWNS 2004 assessment of total needs for wastewater treatment and conveyance facilities, storm water management programs, NPS pollution control projects, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control category (VII) includes costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. These needs include all planning, design and construction activities that have met the CWNS documentation and data criteria, which include the Clean Water State Revolving Fund (CWSRF) program project funding eligibility rules established under Title VI of the CWA.

Table A-7. CWNS 2004 Total Needs within the Columbia River Basin (January 2004 Dollars in Millions)

Watershed Name	Figure 12 ID	Category of Need												
		Total	I	II	III-A	III-B	IV-A	IV-B	V	VI	VII	X	XI	Tot I-V
Clearwater	1	16	3	0	0a	1	0a	1	0	0	11	0	0	5
Deschutes	2	16	16	0	0	0	0a	0	0	0	0	0	0	16
John Day	3	5	2	0	0	2	1	0	0	0	0	0	0	5
Kootenai	4	5	3	0	0a	0a	2	0	0	0	0a	0	0	5
Lower Columbia	5	1,275	191	7	8	170	8	23	833	35	0a	0	0	1,240
Lower Snake	6	19	6	5	0a	0a	1	0	0	0	3	4	0	12
Middle Columbia	7	36	22	2	6	1	0a	1	0	0	4	0	0	32
Middle Snake-Boise	8	263	94	67	0	19	29	35	0	0	19	0a	0	244
Middle Snake-Powder	9	5	2	0	0	1	0	0	0	0	2	0	0	3
Pend Oreille	10	236	83	33	9	16	48	42	0	0	5	0	0	231
Salmon	11	9	0a	0	0a	1	0a	0	0	0	8	0	0	1
Snake Headwaters	12	20	12	0	0	0	5	1	0	0a	2	0	0	18
Spokane	13	138	82	18	0a	13	5	2	7	2	9	0	0	127
Upper Columbia	14	64	40	0	8	6	1	2	0	4	3	0	0	57
Upper Snake	15	275	90	10	5	12	9	31	0	19	99	0	0	157
Willamette	16	1,458	592	509	9	280	5	2	0	61	0	0	0	1,397
Yakima	17	170	86	7	6	11	4	44	1	9	2	0	0	159
Total		4,010	1,324	658	51	533	118	184	841	130	167	4	0	3,709

Watershed Name	Figure 12 ID	Category of Need												
		VII-A	VII-B	VII-C	VII-D	VII-E	VII-F	VII-G	VII-H	VII-I	VII-J	VII-K	VII-L	VII
Clearwater	1	6	1	3	0a	0	0	0	0	0	0	1	0	11
Deschutes	2	0	0	0	0	0	0	0	0	0	0	0	0	0
John Day	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Kootenai	4	0	0	0a	0a	0	0	0	0	0	0	0	0	0a
Lower Columbia	5	0	0a	0	0	0	0	0	0	0a	0	0a	0	0a
Lower Snake	6	1	1	0a	1	0	0	0	0	0	0	0a	0	3
Middle Columbia	7	0	0	0	4	0	0	0	0	0a	0	0a	0	4

Middle Snake-Boise	8	8	7	2	2	0	0	0	0	0	0	0a	0	19
Middle Snake-Powder	9	2	0a	0	0	0	0	0	0	0	0	0	0	2
Pend Oreille	10	0a	1	0a	4	0	0a	0	0	0	0	0a	0	5
Salmon	11	4	1	0a	0a	0	0	1	0	0	0	2	0	8
Snake Headwaters	12	0a	0a	0	0	0	0	0	0	2	0	0a	0	2
Spokane	13	0a	1	1	3	0	0	0a	0	1	0	3	0a	9
Upper Columbia	14	0a	1	0	0	0a	0	0	0	1	0	1	0a	3
Upper Snake	15	45	13	1	5	0	0	0a	0	0	0	35	0	99
Willamette	16	0	0	0	0	0	0	0	0	0	0	0	0	0
Yakima	17	0a	0a	0	0	0	0	0	0	2	0	0a	0	2
Total		66	26	7	19	0a	0a	1	0	6	0	42	0a	167

Categories

I Secondary wastewater treatment

II Advanced wastewater treatment

III-A Infiltration/inflow correction

III-B Sewer replacement/rehabilitation

IV-A New collector sewers and appurtenances

IV-B New interceptor sewers and appurtenances

V Combined sewer overflow correction

VI Storm water management programs

X Recycled water distribution

XI Estuary management

VII NPS pollution control

VII-A Agriculture (cropland)

VII-B Agriculture (animals)

VII-C Silviculture

VII-D Urban

VII-E Ground water protection

VII NPS pollution control (continued)

VII-F Marinas

VII-G Resource extraction

VII-H Brownfields

VII-I Storage tanks

VII-J Sanitary landfills

VII-K Hydromodification

VII-L Individual/decentralized sewage treatment

a Estimate is less than \$0.5 million.

Table B-1 summarizes the CWNS 2004 assessment of total needs by watershed region, subregion, and accounting unit for wastewater treatment and collection facilities, storm water facilities, NPS pollution control, recycled water distribution and estuary management. The needs represent the capital investment necessary to plan, design, build, replace, or rehabilitate publicly owned wastewater treatment and collection facilities (Categories I through V) and establish and implement storm water management programs (Category VI). The NPS pollution control (Category VII) needs include costs for agriculture, silviculture, urban, ground water protection, marinas, resource extraction, brownfields, storage tanks, sanitary landfills, hydromodification, and individual/decentralized sewage treatment. Recycled water distribution (Category X) includes all costs associated with the conveyance of recycled water (wastewater reuse after removal of waste contributed by humans) and any associated rehabilitation/replacement costs. Category XI includes estuary management costs that cannot be appropriately included in other categories. Needs estimates presented in Table B-1 vary from those presented in the Report to Congress because not all facilities were successfully georeferenced to a watershed.

Arkansas-White-Red Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Arkansas-Keystone	Arkansas-Keystone	7,784
Lower Arkansas	Lower Arkansas-Fourche La Fave	80,838
	Robert S. Kerr Reservoir	673,569
Lower Canadian	Lower Canadian	79,218
	Middle Canadian	787
Lower Cimarron	Lower Cimarron	9,287
Middel Arkansas	Middle Arkansas	387,619
Neosho-Verdigris	Neosho	109,106
	Verdigris	402,349
North Canadian	Lower Beaver	0
	Lower North Canadian	48,108
	Upper Beaver	538
Red Headwaters	North Fork Red	0
	Prairie Dog Town Fork Red	1,063
	Salt Fork Red	741
Red-Sulphur	Big Cypress-Sulphur	37,556
	Red-Little	35,141
	Red-Saline	463,742
Red-Washita	Red-Lake Texoma	51,599
	Red-Pease	2,783
	Washita	20,515
Upper Arkansas	Upper Arkansas	329,008
Upper Canadian	Upper Canadian	4,847
Upper Cimarron	Upper Cimarron	5,900
Upper White	Upper White	496,745
Arkansas-White-Red Region	Sum	3,248,843

California Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Central California Coastal	Central California Coastal	478,024
Klamath-Northern California Coastal	Klamath	16,474
	Northern California Coastal	279,187
North Lahontan	North Lahontan	12,652
Northern Mojave-Mono Lake	Mono-Owens Lakes	1,133
	Northern Mojave	477,876
Sacramento	Lower Sacramento	2,063,128
	Upper Sacramento	37,616
San Francisco Bay	San Francisco Bay	4,067,599
San Joaquin	San Joaquin	952,170
Southern California Coastal	Laguna-San Diego Coastal	1,818,194
	Santa Ana	4,266,846
	Ventura-San Gabriel Coastal	6,163,920
Southern Mojave-Salton Sea	Salton Sea	114,693
	Southern Mojave	0
Tulare-Buena Vista Lakes	Tulare-Buena Vista Lakes	761,169
California Region	Sum	21,510,681

Caribbean Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Caribbean Outlying Areas	Caribbean Outlying Areas	0
Puerto Rico	Puerto Rico	3,637,693
Virgin Islands	Virgin Islands	0
Caribbean Region	Sum	3,637,693

Great Basin Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Bear	Lower Bear	70,706
	Upper Bear	1,290
Black Rock Desert-Humboldt	Black Rock Desert	0
	Humboldt	26,508
Central Lahontan	Carson	38,249
	Truckee	237,642
	Walker	0
Central Nevada Desert Basins	Central Nevada Desert Basins	0
Escalante Desert-Sevier Lake	Escalante Desert-Sevier Lake	48,310
Great Salt Lake	Great Salt Lake	41,956
	Jordan	251,440
	Weber	83,494

Great Basin Region		Sum	799,595
Great Lakes Region			
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total	
Eastern Lake Erie-Lake Erie	Eastern Lake Erie	854,322	
	Lake Erie	31,755	
Northeastern Lake Michigan-Lake Michigan	Lake Michigan	26,964	
	Northeastern Lake Michigan	197,729	
Northeastern Lake Ontario-Lake Ontario-St. Lawrence	Lake Ontario	22,470	
	Northeastern Lake Ontario St. Lawrence	185,724 257,511	
Northwestern Lake Huron	Northwestern Lake Huron	64,965	
Northwestern Lake Michigan	Fox	679,449	
	Northwestern Lake Michigan	245,268	
Southeastern Lake Michigan	Southeastern Lake Michigan	1,086,555	
Southeastern Lake Ontario	Oswego	783,081	
	Southeastern Lake Ontario	292,336	
Southern Lake Erie	Southern Lake Erie	3,058,043	
Southern Lake Superior-Lake Superior	Lake Superior	19,303	
	Southcentral Lake Superior	57,722	
	Southeastern Lake Superior	6,488	
Southwestern Lake Huron-Lake Huron	Lake Huron	3,339	
	Saginaw	1,889,023	
	Southwestern Lake Huron	27,203	
Southwestern Lake Michigan	Southwestern Lake Michigan	3,648,582	
Southwestern Lake Ontario	Southwestern Lake Ontario	227,337	
St. Clair-Detroit	St. Clair-Detroit	3,959,424	
Western Lake Erie	Western Lake Erie	2,079,579	
Western Lake Superior	Northwestern Lake Superior	147,528	
	Southwestern Lake Superior	30,497	
	St. Louis	360,986	
Great Lakes Region		Sum	20,243,183
Hawaii Region			
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total	
Hawaii	Hawaii	17,300	
Kahoolawe	Kahoolawe	0	
Kauai	Kauai	85,862	
Lanai	Lanai	0	
Maui	Maui	150,476	
Molokai	Molokai	0	

Niihau	Niihau	0
Northwestern Hawaiian Islands	Northwestern Hawaiian Islands	0
Oahu	Oahu	1,830,304

Hawaii Region	Sum	2,083,942
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Lower Colorado Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Little Colorado	Little Colorado	189,204
Lower Colorado	Bill Williams	4,127
	Lower Colorado	749,578
Lower Colorado-Lake Mead	Lower Colorado-Lake Mead	171,803
Lower Gila	Lower Gila	12,743
	Lower Gila-Agua Fria	1,508,893
Middle Gila	Middle Gila	462,149
	San Pedro-Willcox	52,584
	Santa Cruz	648,814
Salt	Salt	2,275,077
	Verde	287,447
Sonora	Rio De Bavispe	15,691
	Rio De La Concepcion	0
	Rio Sonoyta	0
Upper Gila	Upper Gila	51,802

Lower Colorado Region	Sum	6,429,912
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Lower Mississippi Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Boeuf-Tensas	Boeuf-Tensas	19,739
Louisiana Coastal	Atchafalaya-Vermilion	119,853
	Calcasieu-Mermentau	88,925
Lower Mississippi	Central Louisiana Coastal	1,080,514
	Lake Pontchartrain	401,054
	Lower Mississippi-New Orleans	656,720
Lower Mississippi-Big Black	Big Black-Homochitto	372,108
	Lower Mississippi-Natchez	6,494
Lower Mississippi-Hatchie	Hatchie-Obion	237,070
	Lower Mississippi-Memphis	137,629
	Lower Mississippi-Lake Maurepas	254,436
Lower Mississippi-Lake Maurepas	Lower Grand	6,329
	Lower Mississippi-Baton Rouge	815,505
	Lower Mississippi-St. Francis	2,133
Lower Mississippi-St. Francis	Lower Arkansas	2,133
	Lower Mississippi-Helena	0
	Lower White	11,598
	St. Francis	53,097

Lower Mississippi-Yazoo	Lower Mississippi-Greenville Yazoo	450 426,220
Lower Red-Ouachita	Lower Ouachita Lower Red Upper Ouachita	167,361 7,097 16,775

Lower Mississippi Region	Sum	4,881,107
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Mid-Atlantic Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Delaware	Lower Delaware	4,347,418
	New Jersey Coastal	1,010,271
	Upper Delaware	1,025,314
Lower Chesapeake	James	1,806,364
	Lower Chesapeake	666,856
Lower Hudson-Long Island	Long Island	15,861,177
	Lower Hudson	12,236,986
Potomac	Potomac	6,472,658
Richelieu	Richelieu	328,660
Susquehanna	Lower Susquehanna	3,548,859
	Upper Susquehanna	2,394,930
	West Branch Susquehanna	1,412,300
Upper Chesapeake	Upper Chesapeake	4,221,652
Upper Hudson	Upper Hudson	2,177,989

Mid-Atlantic Region	Sum	57,511,434
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Missouri Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Big Horn	Big Horn	41,098
Chariton-Grand	Chariton	24,145
	Grand	20,480
Cheyenne	Belle Fourche	24,815
	Cheyenne	7,554
Elkhorn	Elkhorn	122,526
Gasconade-Osage	Gasconade	20,911
	Osage	163,752
James	James	19,607
Kansas	Big Blue	174,087
	Kansas	878,189
Loup	Loup	53,658
Lower Missouri	Lower Missouri	1,013,170
	Lower Missouri-Blackwater	1,688,436
Lower Yellowstone	Lower Yellowstone	13,887
Milk	Milk	23,669

Missouri Headwaters	Missouri Headwaters	65,603
Missouri-Big Sioux	Big Sioux	86,063
	Lewis And Clark Lake	35,485
Missouri-Little Missouri	Lake Sakakawea	0
	Little Missouri	1,035
Missouri-Little Sioux	Missouri-Little Sioux	1,144,131
Missouri-Marias	Marias	18,262
	Upper Missouri	122,173
Missouri-Musselshell	Fort Peck Lake	10,992
	Musselshell	2,342
Missouri-Nishnabotna	Missouri-Nishnabotna	760,127
Missouri-Oahe	Cannonball-Heart-Knife	0
	Grand-Moreau	0
	Lake Oahe	2,662
Missouri-Poplar	Missouri-Poplar	17,939
Missouri-White	Fort Randall Reservoir	1,781
	White	9,106
Niobrara	Niobrara	31,020
North Platte	North Platte	134,297
Platte	Lower Platte	274,925
	Middle Platte	97,681
Powder-Tongue	Powder	27,638
	Tongue	3,063
Republican	Republican	113,812
Saskatchewan	Saskatchewan	0
Smoky Hill	Smoky Hill	34,780
South Platte	South Platte	1,869,216
Upper Yellowstone	Upper Yellowstone	90,447
Missouri Region	Sum	9,244,564

New England Region

Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Androscoggin	Androscoggin	108,212
Connecticut	Lower Connecticut	1,773,987
	Upper Connecticut	108,721
Connecticut Coastal	Connecticut Coastal	2,390,485
Kennebec	Kennebec	110,164
Maine Coastal	Maine Coastal	166,861
Massachusetts-Rhode Island Coastal	Mass.-Rhode Island Coastal	3,382,863
Merrimack	Merrimack	1,028,370
Penobscot	Penobscot	76,237
Saco	Saco	479,604

St. Francois	St. Francois	2,892
St. John	St. John	61,052

New England Region	Sum	9,689,448
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Ohio Region

Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Allegheny	Allegheny	639,937
Big Sandy-Guyandotte	Big Sandy	283,019
	Guyandotte	102,350
Cumberland	Lower Cumberland	531,121
	Upper Cumberland	140,703
Great Miami	Great Miami	848,870
Green	Green	192,613
Kanawha	Kanawha	874,242
Kentucky-Licking	Kentucky	708,851
	Licking	183,077
Lower Ohio	Lower Ohio	768,336
	Lower Ohio-Salt	720,295
Middle Ohio	Middle Ohio-Little Miami	4,827,833
	Middle Ohio-Raccoon	195,570
Monongahela	Monongahela	1,179,493
Muskingum	Muskingum	533,671
Scioto	Scioto	1,973,660
Upper Ohio	Upper Ohio-Beaver	2,806,192
	Upper Ohio-Little Kanawha	384,553
Wabash	Patoka-White	2,487,016
	Wabash	1,235,961

Ohio Region	Sum	21,617,363
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Pacific Northwest Region

Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Kootenai-Pend Oreille-Spokane	Kootenai	6,324
	Pend Oreille	233,393
	Spokane	138,238
Lower Columbia	Lower Columbia	1,278,700
Lower Snake	Clearwater	15,569
	Lower Snake	20,533
	Salmon	10,705
Middle Columbia	Deschutes	16,054
	John Day	4,997
	Middle Columbia	38,599
Middle Snake	Middle Snake-Boise	262,676
	Middle Snake-Powder	5,051

Oregon Closed Basins	Oregon Closed Basins	0
Oregon-Washington Coastal	Northern Oregon Coastal	97,065
	Southern Oregon Coastal	209,596
	Washington Coastal	228,752
Puget Sound	Puget Sound	3,228,827
Upper Columbia	Upper Columbia	65,696
Upper Snake	Snake Headwaters	21,018
	Upper Snake	280,463
Willamette	Willamette	1,456,570
Yakima	Yakima	170,702

Pacific Northwest Region	Sum	7,789,528
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Rio Grande Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Lower Pecos	Lower Pecos	7,847
Lower Rio Grande	Lower Rio Grande	118,420
Rio Grande Closed Basins	Rio Grande Closed Basins	10,026
Rio Grande Headwaters	Rio Grande Headwaters	11,819
Rio Grande-Amistad	Devils	0
	Rio Grande-Amistad	5,503
	Rio Grande-Fort Quitman	444,019
Rio Grande-Elephant Butte	Rio Grande-Elephant Butte	72,995
	Upper Rio Grande	9,125
Rio Grande-Falcon	Rio Grande-Falcon	8,166
Rio Grande-Mimbres	Mimbres	9,629
	Rio Grande-Caballo	1,170
Upper Pecos	Upper Pecos	29,957

Rio Grande Region	Sum	728,676
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Souris-Red-Rainy Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Rainy	Rainy	138,749
Red	Devils Lake-Sheyenne	0
	Lower Red	164,235
	Upper Red	334,045
Souris	Souris	0

Souris-Red-Rainy Region	Sum	637,029
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South Atlantic-Gulf Region		
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Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Alabama	Alabama	88,140
	Coosa-Tallapoosa	241,845

Altamaha-St. Marys	Altamaha	19,139
	St. Marys-Satilla	22,918
Apalachicola	Apalachicola	2,387,005
Cape Fear	Cape Fear	1,620,938
Choctawhatchee-Escambia	Choctawhatchee	107,534
	Escambia	45,849
	Florida Panhandle Coastal	283,945
Chowan-Roanoke	Albemarle-Chowan	261,953
	Roanoke	189,545
Edisto-Santee	Edisto	171,097
	Santee	963,933
Mobile-Tombigbee	Black Warrior-Tombigbee	2,798,251
	Mobile Bay-Tombigbee	212,297
Neuse-Pamlico	Neuse	1,167,299
	Pamlico	298,343
Ochlockonee	Ochlockonee	304,709
Ogeechee-Savannah	Ogeechee	13,384
	Savannah	40,307
Pascagoula	Pascagoula	559,346
Peace-Tampa Bay	Peace	330,165
	Tampa Bay	1,773,132
Pearl	Pearl	688,903
Pee Dee	Lower Pee Dee	417,721
	Upper Pee Dee	711,501
Southern Florida	Kissimmee	128,282
	Southern Florida	16,195,499
St. Johns	East Florida Coastal	823,800
	St. Johns	1,613,406
Suwannee	Aucilla-Waccasassa	39,685
	Suwannee	100,653
South Atlantic-Gulf Region	Sum	34,620,524
Tennessee Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Lower Tennessee	Lower Tennessee	89,255
Middle Tennessee-Elk	Middle Tennessee-Elk	299,159
Middle Tennessee-Hiwassee	Middle Tennessee-Hiwassee	53,232
Upper Tennessee	French Broad-Holston	324,105
	Upper Tennessee	402,930
Tennessee Region	Sum	1,168,681

Texas-Gulf Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Brazos Headwaters	Brazos Headwaters	33,172
Central Texas Coastal	Central Texas Coastal	19,236
	Guadalupe	31,773
	Lavaca	3,453
	San Antonio	388,379
Galveston Bay-San Jacinto	Galveston Bay-Sabine Lake	149,054
	San Jacinto	3,382,088
Lower Brazos	Little	138,628
	Lower Brazos	182,454
Lower Colorado-San Bernard Coastal	Lower Colorado	747,198
	Middle Colorado-Concho	6,581
	Middle Colorado-Llano	110,497
	San Bernard Coastal	5,318
Middle Brazos	Middle Brazos-Bosque	134,624
	Middle Brazos-Clear Fork	25,035
Neches	Neches	70,814
Nueces-Southwestern Texas Coastal	Nueces	138,714
	Southwestern Texas Coastal	722,436
Sabine	Sabine	51,216
Trinity	Lower Trinity	38,156
	Upper Trinity	1,457,234
Upper Colorado	Upper Colorado	14,146
Texas-Gulf Region	Sum	7,850,206
Upper Colorado Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Colorado Headwaters	Colorado Headwaters	170,672
Great Divide-Upper Green	Great Divide Closed Basin	453
	Upper Green	23,301
Gunnison	Gunnison	17,820
Lower Green	Lower Green	12,743
San Juan	Lower San Juan	3,861
	Upper San Juan	50,935
Upper Colorado-Dirty Devil	Upper Colorado-Dirty Devil	4,727
Upper Colorado-Dolores	Upper Colorado-Dolores	6,558
White-Yampa	White-Yampa	11,860
Upper Colorado Region	Sum	302,930

Upper Mississippi Region		
Subregion (4-digit watershed)	Accounting Unit (6-digit watershed)	Total
Chippewa	Chippewa	79,403
Des Moines	Des Moines	424,778
Lower Illinois	Lower Illinois	1,360,542
Minnesota	Minnesota	1,129,398
Mississippi Headwaters	Mississippi Headwaters	380,593
	Upper Mississippi-Crow-Rum	2,869,020
Rock	Rock	798,422
St. Croix	St. Croix	223,284
Upper Illinois	Upper Illinois	11,635,630
Upper Mississippi-Black-Root	Upper Mississippi-Black-Root	978,792
Upper Mississippi-Iowa-Skunk-Wapsipinicon	Iowa	126,251
	Upper Miss.-Skunk-Wapsipinicon	698,796
Upper Mississippi-Kaskaskia-Meramec	Kaskaskia	126,651
	Upper Mississippi-Meramec	3,632,387
Upper Mississippi-Maquoketa-Plum	Upper Mississippi-Maquoketa-Plum	96,093
Upper Mississippi-Salt	Upper Mississippi-Salt	275,025
Wisconsin	Wisconsin	260,457
Upper Mississippi Region	Sum	25,095,522