SURVEY OF USERS OF THE USGS STREAM-GAGING NETWORK IN IOWA, 1996

by Edward E. Fischer

U.S. GEOLOGICAL SURVEY
Open-File Report 96-185

Prepared in cooperation with the

IOWA HIGHWAY RESEARCH BOARD
(IOWA DOT Research Project HR-383)

Iowa City, Iowa

1996

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY
GORDON P. EATON, Director

For additional information
write to:

District Chief
U.S. Geological Survey, WRD
Room 269 Federal Building
400 South Clinton Street
Iowa City, Iowa 52244

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By Edward E. Fischer

ABSTRACT

A survey was sent to over 200 Federal, State, and local agencies that might use streamflow data collected by the U.S. Geological Survey in Iowa. A total of 181 forms were returned and 112 agencies indicated that they use streamflow data. The responses show that streamflow data from the Iowa USGS stream-gaging network, which in 1996 is composed of 117 stations, are used by many agencies for many purposes and that many stations provide streamflow data that fulfill a variety of joint purposes. The median number of respondents per station that use data from the station was 6 and the median number of data-use categories indicated per station was 9. The survey results can be used by agencies that fund the Iowa USGS stream-gaging network to help them decide which stations to continue to support if it becomes necessary to reduce the size of the stream-gaging network.

INTRODUCTION

The U.S. Geological Survey (USGS) stream-gaging network in Iowa has evolved over the last 94 years as a result of many different needs for streamflow data. Because of the varied needs, the gaging stations do not comprise a network in the purest sense. Data collected at one station or group of stations in the network are intended to answer different questions than data collected at other stations. Rather, the network is an amalgam of many individual networks with different purposes and sources of funding. Fortunately, many USGS stations provide data that are useful for purposes other than that for which the station was originally installed (Wahl and Crippen, 1984, p. 1). The joint purposes that many stations consequently fulfill for the many users of streamflow data comprise a complex web of intertwined priorities.

The USGS is the primary Federal agency responsible for the collection of the Nation's streamflow data. The first Federal appropriations to the USGS for collecting streamflow data in Iowa were allocated in 1902. The stream-gaging network at that time comprised 10 stations (Burmeister and Lara, 1984, p. 4). Currently (1996), Federal appropriations to the USGS are applied to the operation and maintenance of 78 of 117 stations that compose the Iowa stream-gaging network. Other Federal, State, and local agencies provide the balance of the funds required to operate the network.

Budget constraints might require reductions in the number of stations in the network in the future. Using each station in the network, therefore, to satisfy as many joint purposes as possible becomes increasingly important. One of the tasks in fulfilling joint purposes is to determine what the various uses of streamflow data are for each station and who uses the data. While the sponsoring agency's purpose for the installation of a station is known, the streamflow data that are collected often are used by other agencies for other purposes. It is impracticable to identify completely all of the uses and users of the data because streamflow data collected by the USGS are in the public domain. It is possible, however, to develop a broad picture of many of the users and for what purposes the data are used.

This report presents the results of a survey that sought to determine who uses Iowa USGS streamflow data and for what purposes the data are used. The results can be used by agencies that fund the stream-gaging network to help them decide which stations to continue to support if it becomes necessary to reduce the size of the network. This report does not suggest which stations to discontinue should it become necessary to reduce the size of the network, it does not consider the minimum size of the network that is required to maintain a specified level of quality for a particular streamflow-data need, nor does it advocate one category of data-use over another.

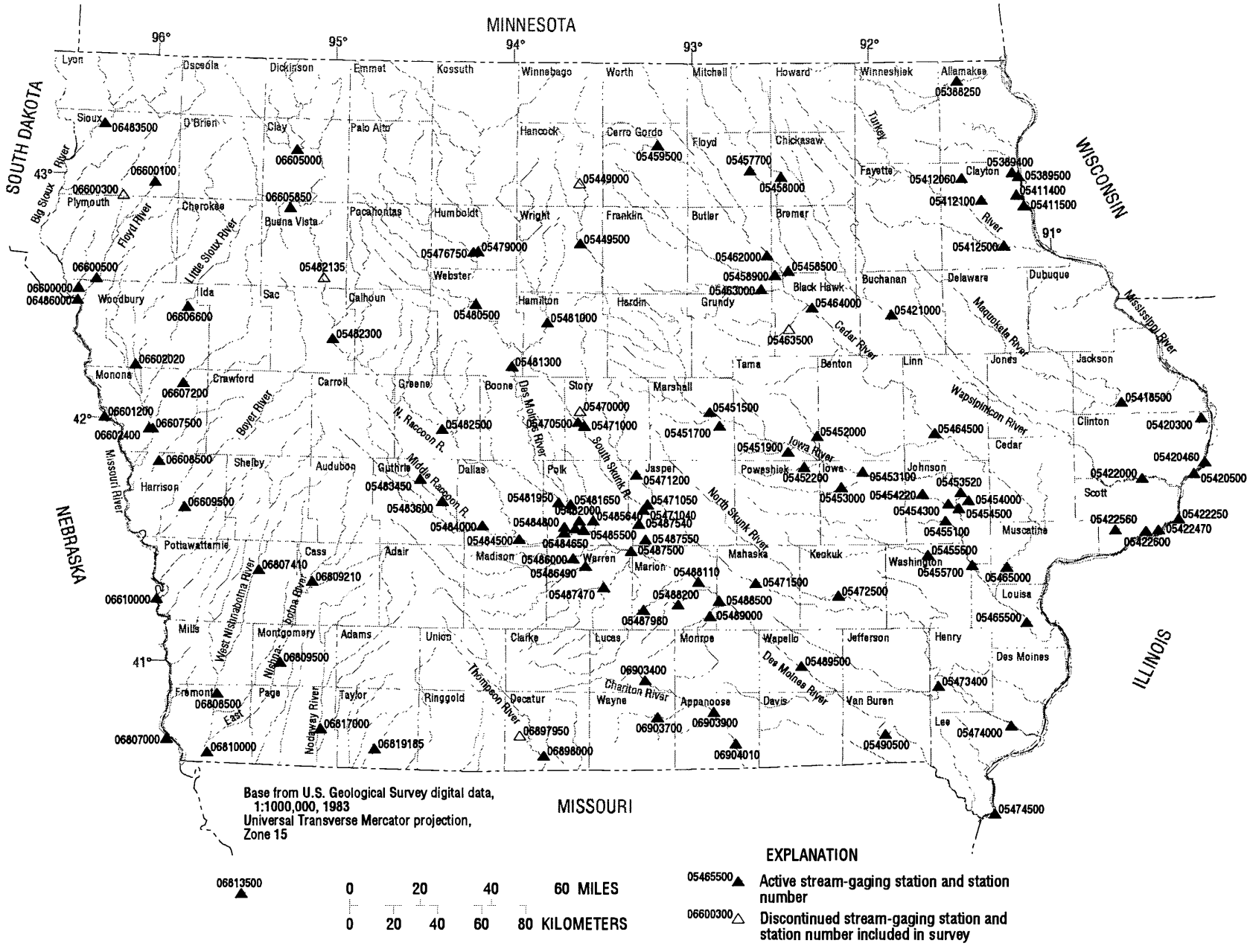

Figure 1. Locations of USGS stream-gaging network stations in Iowa.

IOWA USGS STREAM-GAGING NETWORK

The current (1996) USGS stream-gaging network in Iowa is composed of 117 stations (fig.1), which are funded by 27 different Federal, State, and local agencies. Nearly all of the stations are equipped with satellite and (or) telephone communications links to the data-storage computer. Gaging stations equipped with satellite links generally transfer data to the computer once every 4 hours. The stations equipped only with telephone links transfer data at least once each day. Most of the stations connected by telephone can be queried at any time for the current river stage. Streamflow data from 20 stations in the Iowa USGS network are available on the Internet communications network as soon as the data have been processed by the computer.

Streamflow data are published annually in U.S. Geological Survey Water Resources Data reports. Generally, streamflow data are published as daily mean values, which are the averages of the instantaneous values collected in a 24-hour period. The location, drainage area, length of streamflow record, selected streamflow statistics, and other information about the gaging-station are included with the data. The annual water-data reports also include data such as sediment transport measurements, water-quality measurements, and ground-water levels from selected sites.

STREAM-GAGING NETWORK SURVEY

To develop a broad picture of who uses Iowa USGS streamflow data and for what purposes they use the data, a survey was sent to over 200 Federal, State, county, and municipal agencies that are either known users or possible users. The survey asked the recipients to identify which gaging stations provided data to their organizations and to specify the use or uses of the data. A postage-paid return envelope was included with the survey; the recipients were asked to return the forms regardless of whether they use streamflow data.

A list of the stations in the USGS stream-gaging network was included with the survey. The stations were identified by their USGS station identification number and location (for an explanation of station identification number, see May and others, 1995, p. 25-26). The stations were listed alphabetically by county. So that recipients could answer the survey more easily, each station also was identified with a unique, simplified code derived from the county in which it is located and the number of stations in the county. (The simplified codes are not reproduced in this report.) The list of stations was compiled during Federal Fiscal Year 1995 (which ended September 30, 1995) and included six stations that were discontinued during that fiscal year. Although those six stations are no longer active, responses regarding them are included in this report.

The categories of data-use and the category descriptions that were included in the survey are listed below. The categories were selected based on known streamflow-data uses.

Flood warning -- streamflow data provide information for flood warning and (or) flood forecasting.

Regulatory requirement -- streamflow data fulfill State or Federal regulatory requirements.

Water-quality monitoring -- streamflow data are used for the interpretation of water-quality and (or) sediment data.

Wastewater treatment plant operation -- streamflow data are used in the operation of a wastewater treatment facility.

Reservoir operation -- streamflow data are used in the operation of a reservoir or water-supply facility.

Minimum flow monitoring -- streamflow data are used to monitor minimum streamflows.

Long-term record/trend analyses -- streamflow data are used to monitor hydrologic trends in streamflows and geomorphologic trends in stream channels.

Regional hydrology -- streamflow data are used to develop regional relations between watershed and streamflow characteristics.

Streamflow modeling -- streamflow data are used as input for streamflow models.

Special project -- streamflow data are used for a particular research or water-investigation study.

Public information -- streamflow data are used to provide information to the general public.

Other uses -- streamflow data are used for a need not included in any of the other categories.

The survey was mailed beginning November 1, 1995. Forms initially were sent to the U.S. Army Corps of Engineers (St. Paul, Rock Island, Omaha, and Kansas City Districts), the National Weather Service (Johnston, Iowa; Davenport, Iowa; Valley, Nebraska; and Sioux Falls, South Dakota forecast offices), the Iowa Department of Natural Resources, the Iowa Department of Transportation, each County Engineer in Iowa, and the City Engineer or other public official in each Iowa community that has a population of 5,000 or more. Also, because some counties and municipalities hire consultants to manage their engineering requirements, the survey was sent to the Consulting Engineers Council of Iowa in Des Moines, Iowa, with the request that its management forward copies of the survey to Council members who fulfill the functions of a county or municipal engineer. Survey recipients were asked to forward copies of the survey to other agencies that use streamflow data but might not receive the survey, or to request that the USGS send the survey to such agencies. Several additional forms were mailed in response to these requests. In all, about 210 forms were sent.

SURVEY RESPONSES

A total of 181 forms were returned with 112 of the respondents indicating that they use USGS streamflow data for at least one of the categories shown on the survey. Many respondents made comments about the stream-gaging network. Several respondents requested information concerning available streamflow data and several other respondents requested information about installing stream-gaging stations.

All of the streamflow-data-use categories shown on the survey were not mutually exclusive; that is, more than one category might have been specified for what essentially is a single use of streamflow data. The responses were not screened, however, to determine whether multiple categories were specified for a single use of streamflow data.

The survey responses are presented at the end of this report in four tables. The same information is presented in tables 1–4 with the only difference among them being the criterion used to sort the stations. The number of respondents indicating that they use streamflow data for a particular purpose is listed under each category for each station. Response summaries—the number of respondents that use a station's data, the number of categories that were indicated at least once, and the sum of the categories indicated—are also listed for each station.

In table 1, the stations are listed by county in the same order presented in the station list that was included with the survey.

In table 2, the stations are listed in decreasing order by the number of survey respondents indicating that they use the station's data. The largest number of respondents using a single station's data was 13, which was for data from gaging station 05451500 Iowa River at Marshalltown. The median of the number of respondents per station was 6 and the minimum was 2. A histogram of the number of respondents per station is shown in figure 2.

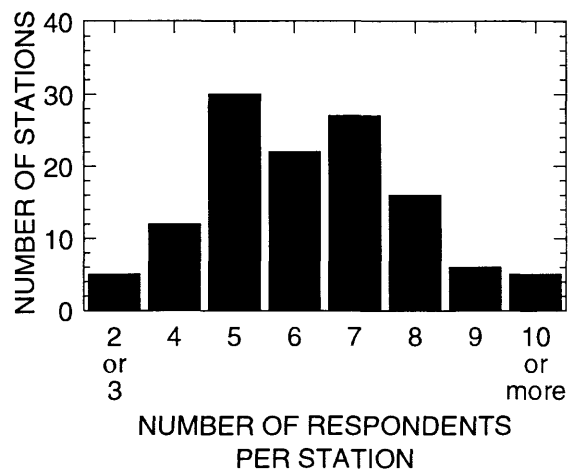

Figure 2. Histogram of number of respondents per station that use streamflow data, Iowa USGS stream-gaging network survey (table 2).

In table 3, the stations are listed in decreasing order by the number of data-use categories that were indicated at least once. Eleven categories were indicated for four stations. The median of the number of categories indicated was 9 and the minimum was 5. A histogram of the number of categories indicated per station is shown in figure 3.

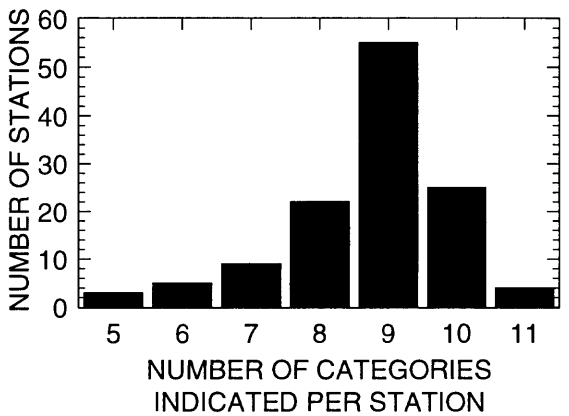

Figure 3. Histogram of number of streamflow-data-use categories indicated per station, Iowa USGS stream-gaging network survey (table 3).

In table 4, the stations are listed in decreasing order by the sum of the categories indicated by the respondents. The largest sum of the categories indicated was 50, which was for gaging station 05451500 Iowa River at Marshalltown. The median of the sum of the categories indicated was 19 and the minimum was 7. A histogram of the sum of the categories indicated is shown in figure 4.

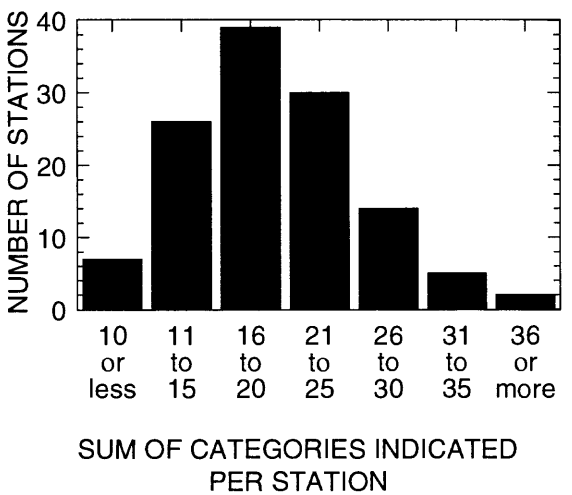

Figure 4. Histogram of sum of streamflow-data-use categories indicated per station, Iowa USGS stream-gaging network survey (table 4).

SUMMARY

A survey was sent to over 200 Federal, State, and local agencies that might use streamflow data collected by the U.S. Geological Survey in Iowa. A total of 181 forms were returned and 112 agencies indicated that they use streamflow data. The responses show that streamflow data from the Iowa USGS stream-gaging network, which in 1996 is composed of 117 stations, are used by many agencies for many purposes and that many stations provide streamflow data that fulfill a variety of joint purposes. The median value of the number of respondents per station that use data from the station was 6 and the median value of the number of data-use categories indicated per station was 9. The comments of some survey respondents suggest that not all agencies that might use streamflow data are aware of the Iowa USGS stream-gaging network.

The results of this survey can be used by agencies that fund the Iowa USGS stream-gaging network to help them decide which stations to continue to support if it becomes necessary to reduce the size of the network. As demands on the State's water resources increase, having a network that satisfies as many joint purposes as possible becomes increasingly important.

REFERENCES

Burmeister, I.L., and Lara, O.G., 1984, Cost-effectiveness of the stream-gaging program in Iowa: U.S. Geological Survey Water-Resources Investigations Report 84-4171, 68 p.

May, J.E., Sneck-Fahrer, D., Gorman, J.G., Goodrich, R.D., Nations, B.K., and Miller, V.E., 1995, Water Resources Data, Iowa, Water Year 1994: U.S. Geological Survey Water-Data Report IA-94-1, 370 p.

Wahl, K.L., and Crippen, J.R., 1984, A pragmatic approach to evaluating a multipurpose stream-gaging network: U.S. Geological Survey Water-Resources Investigations Report 84-4228, 13 p.

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Allamakee County															
05388250 Upper Iowa River near Dorchester	2	0	2	0	1	1	2	2	3	1	4	0	5	9	18
Appanoose County															
06903900 Chariton River near Rathbun	1	1	2	0	2	2	4	2	1	1	1	0	6	10	17
06904010 Chariton River near Moulton	2	0	1	0	1	1	2	2	2	1	3	0	5	9	15
Black Hawk County															
05458900 West Fork Cedar River at Finchford	4	0	2	0	0	1	2	3	2	1	4	0	7	8	19
05463500 Black Hawk Creek at Hudson[1]	5	0	2	0	0	1	2	3	2	1	6	0	8	8	22
05464000 Cedar River at Waterloo	8	0	2	1	0	1	3	3	2	1	8	0	11	9	29
Bremer County															
05458500 Cedar River at Janesville	5	0	2	0	0	1	2	3	3	1	3	0	8	8	20
Buchanan County															
05421000 Wapsipinicon River at Independence	7	0	1	0	0	0	3	4	2	2	5	0	8	7	24
Buena Vista County															
05482135 North Raccoon River near Newell[1]	1	1	0	0	0	2	1	2	1	1	1	0	3	8	10
06605850 Little Sioux River at Linn Grove	3	2	2	0	1	3	3	5	4	1	3	0	7	10	27
Butler County															
05462000 Shell Rock River at Shell Rock	5	1	2	0	0	1	2	4	3	1	4	0	8	9	23
05463000 Beaver Creek at New Hartford	5	1	2	0	0	0	2	4	2	1	5	0	8	8	22
Cass County															
06809210 East Nishnabotna River near Atlantic	4	1	2	0	1	2	6	5	4	1	3	0	9	10	29
Cerro Gordo County															
05459500 Winnebago River at Mason City	2	0	2	0	0	1	2	4	2	1	3	0	6	8	17

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Chickasaw County															
05458000 Little Cedar River near Ionia	4	0	1	0	0	0	1	2	1	1	1	0	6	7	11
Clay County															
06605000 Ocheyedan River near Spencer	3	2	3	1	0	2	3	5	3	2	4	0	7	10	28
Clayton County															
05389400 Bloody Run Creek near Marquette	1	1	1	0	0	0	1	3	2	3	1	0	4	8	13
05389500 Mississippi River at McGregor	4	1	2	0	2	0	2	3	4	2	4	1	6	10	25
05411400 Sny Magill Creek near Clayton	1	1	1	0	0	0	2	3	2	4	1	0	5	8	15
05411500 Mississippi River at Clayton	3	2	2	0	2	0	2	3	2	2	2	0	5	9	20
05412060 Silver Creek near Luana (L-235)	1	1	1	0	0	0	2	3	1	2	1	0	4	8	12
05412100 Roberts Creek above St. Olaf	1	1	2	0	0	0	2	3	2	2	1	0	4	8	14
05412500 Turkey River at Garber	5	1	2	0	1	1	3	5	6	2	6	0	8	10	32
Clinton County															
05420300 Elk River near Almont	1	1	0	0	0	0	0	2	1	1	1	0	2	6	7
05420460 Beaver Slough at 3rd St at Clinton	2	2	2	1	0	1	1	2	1	2	2	0	5	10	16
05420500 Mississippi River at Clinton	4	1	2	0	0	1	3	4	4	1	3	0	6	9	23
05422000 Wapsipinicon River near De Witt	5	1	2	0	0	2	4	5	4	1	3	0	7	9	27
Dallas County															
05484000 South Raccoon River at Redfield	5	0	2	0	1	1	3	3	3	1	3	0	7	9	22
05484500 Raccoon River at Van Meter	5	0	2	0	1	2	3	3	3	1	3	0	7	9	23
Decatur County															
06897950 Elk Creek near Decatur City[1]	1	1	1	0	0	1	1	2	1	1	2	0	3	9	11
06898000 Thompson River at Davis City	2	1	2	0	0	2	4	4	4	1	3	0	6	9	23

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Des Moines County															
05474000 Skunk River at Augusta	4	1	2	0	0	2	5	3	1	1	4	1	7	10	24
Floyd County															
05457700 Cedar River at Charles City (river stage only since October 1995)	7	0	3	0	0	2	2	3	2	1	3	0	10	8	23
Fremont County															
06808500 West Nishnabotna River at Randolph	3	1	2	0	1	2	3	2	2	1	1	0	6	10	18
06810000 Nishnabotna River above Hamburg	2	1	2	0	1	2	3	2	2	2	1	0	6	10	18
Greene County															
05482500 North Raccoon River near Jefferson	4	0	2	0	1	1	3	2	2	1	3	0	6	9	19
Guthrie County															
05483450 Middle Raccoon River near Bayard	2	0	1	0	0	1	1	3	1	1	1	0	5	8	11
05483600 Middle Raccoon River at Panora	4	0	1	0	0	1	1	2	1	1	1	0	5	8	12
Hamilton County															
05481000 Boone River near Webster City	2	0	2	0	1	1	3	2	2	1	3	0	5	9	17
Hancock County															
05449000 East Branch Iowa River near Klemme[1]	1	0	2	0	0	2	3	3	2	1	1	0	5	8	15
Harrison County															
06608500 Soldier River at Pisgah	1	0	1	0	1	2	4	3	4	1	2	0	7	9	19
06609500 Boyer River at Logan,	1	0	2	0	1	2	4	3	4	1	2	0	7	9	20
Henry County															
05473400 Cedar Creek near Oakland Mills	1	1	2	0	0	2	3	4	3	1	1	0	7	9	18

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Humboldt County															
05476750 Des Moines River at Humboldt	3	0	1	0	1	2	2	2	2	1	3	0	4	9	17
05479000 East Fork Des Moines River at Dakota City	2	0	2	0	1	2	3	2	2	1	3	0	5	9	18
Iowa County															
05453000 Big Bear Creek at Ladora	2	0	1	0	1	0	2	3	2	4	2	0	7	8	17
05453100 Iowa River at Marengo	4	0	2	0	1	2	3	3	3	4	4	0	7	9	26
Jackson County															
05418500 Maquoketa River near Maquoketa	3	0	2	0	0	1	3	3	3	1	3	0	5	8	19
Jasper County															
05471040 Squaw Creek near Colfax	2	0	2	0	0	0	3	2	1	3	1	0	5	7	14
05471050 South Skunk River at Colfax	6	1	3	1	0	1	3	4	5	1	3	0	10	10	28
05471200 Indian Creek near Mingo	4	1	1	0	0	0	3	4	2	1	2	0	8	8	18
05487540 Walnut Creek near Prairie City	1	1	3	0	0	1	2	2	1	5	2	0	5	9	18
05487550 Walnut Creek near Vandalia	1	1	3	1	0	1	2	2	1	5	2	0	5	10	19
Johnson County															
05453520 Iowa River below Coralville Dam near Coralville	3	0	1	1	1	1	1	1	3	1	3	0	6	10	16
05454000 Rapid Creek near Iowa City	4	0	0	0	0	0	3	3	0	1	3	0	7	5	14
05454220 Clear Creek near Oxford	6	0	0	0	0	0	1	2	1	1	3	0	7	6	14
05454300 Clear Creek near Coralville	6	0	0	1	2	1	2	5	5	2	4	0	8	9	28
05454500 Iowa River at Iowa City	7	0	2	1	2	3	5	5	3	3	5	0	9	10	36
05455100 Old Mans Creek near Iowa City	0	0	1	0	1	0	2	3	1	1	2	0	5	7	11
Keokuk County															
05472500 North Skunk River near Sigourney	5	1	2	0	1	1	5	6	3	2	4	1	8	11	31

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Lee County															
05474500 Mississippi River at Keokuk	4	0	3	1	0	2	3	2	1	1	3	1	7	10	21
Linn County															
05464500 Cedar River at Cedar Rapids	6	1	3	2	1	3	5	4	2	3	3	0	9	11	33
Louisa County															
05455700 Iowa River near Lone Tree	3	0	2	0	1	2	3	3	1	2	3	0	7	9	20
05465500 Iowa River at Wapello	4	0	2	0	1	1	2	3	2	1	3	0	8	9	19
Lucas County															
06903400 Chariton River near Chariton	2	1	3	0	1	2	2	3	3	1	3	0	7	10	21
Mahaska County															
05471500 South Skunk River near Oskaloosa	6	0	2	0	0	1	4	4	5	1	4	1	9	9	28
05488500 Des Moines River near Tracy	4	0	1	0	1	2	2	4	4	1	3	0	6	9	22
Marion County															
05487980 White Breast Creek near Dallas	2	0	2	0	1	1	2	3	2	1	1	0	5	9	15
05488110 Des Moines River near Pella	3	0	1	0	1	2	1	2	1	1	1	0	4	9	13
05488200 English Creek near Knoxville	2	0	0	0	1	0	0	1	2	1	1	0	3	6	8
05489000 Cedar Creek near Bussey	2	0	1	0	1	1	3	4	2	1	3	0	5	9	18
Marshall County															
05451500 Iowa River at Marshalltown	10	2	2	3	1	3	6	5	6	3	9	0	13	11	50
05451700 Timber Creek near Marshalltown	4	0	2	0	1	2	4	4	3	1	3	0	8	9	24

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Monona County															
06602400 Monona-Harrison Ditch near Turin	2	0	1	0	1	1	5	4	1	1	3	0	7	9	19
06607200 Maple River at Mapleton	2	0	1	0	1	2	4	4	2	1	3	0	6	9	20
06607500 Little Sioux River near Turin	2	0	2	0	1	2	5	4	2	1	3	0	7	9	22
Montgomery County															
06809500 East Nishnabotna River at Red Oak	4	0	2	1	1	2	5	4	4	1	3	0	8	10	27
Muscatine County															
05465000 Cedar River near Conesville	4	0	2	0	1	2	4	4	1	2	3	0	8	9	23
Page County															
06817000 Nodaway River at Clarinda	2	0	3	1	0	2	5	3	4	2	2	0	7	9	24
Plymouth County															
06600500 Floyd River at James	2	0	2	0	1	2	3	4	3	1	3	0	7	9	21
Polk County															
05481650 Des Moines River near Saylorville	3	0	1	0	2	2	2	2	2	1	2	0	5	9	17
05481950 Beaver Creek near Grimes	4	0	2	0	1	1	4	4	2	1	5	0	7	9	24
05482000 Des Moines River at 2nd Ave, Des Moines	2	0	0	0	1	0	0	1	2	1	3	0	4	6	10
05484650 Raccoon River at 63rd Street at Des Moines	3	0	0	0	0	0	0	1	2	1	1	0	5	5	8
05484800 Walnut Creek at Des Moines	5	0	0	0	0	0	1	2	2	1	2	0	6	6	13
05484900 Raccoon River at Fleur Drive, Des Moines	1	0	0	0	0	0	0	1	2	1	2	0	3	5	7
05485500 Des Moines River below Raccoon River at Des Moines	3	0	1	0	1	2	2	3	3	1	3	0	4	9	19
05485640 Fourmile Creek at Des Moines	3	0	1	0	0	1	2	3	2	1	3	0	5	8	16
05487500 Des Moines River near Runnells	1	0	0	0	0	2	0	1	1	1	1	1	4	7	8

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Pottawattamie County															
06807410 West Nishnabotna River at Hancock	4	0	2	0	1	2	4	3	2	1	2	0	8	9	21
Poweshiek County															
05452200 Walnut Creek near Hartwick	2	0	0	0	1	0	1	3	2	2	1	0	6	7	12
Sac County															
05482300 North Raccoon River near Sac City	3	1	2	1	0	2	2	3	2	1	2	0	7	10	19
Scott County															
05422250 Mississippi River at LeClair (river stage only)	4	0	1	0	0	0	3	3	2	1	2	0	7	7	16
05422470 Crow Creek at Bettendorf	1	0	0	0	0	1	2	4	3	1	2	0	6	7	14
05422560 Duck Creek at 110th Ave at Davenport	4	1	1	0	0	1	2	3	3	1	2	0	5	9	18
05422600 Duck Creek at DC Golf Course at Davenport	3	1	1	0	0	1	2	3	3	1	2	0	5	9	17
Sioux County															
06483500 Rock River near Rock Valley	2	1	2	0	0	2	4	5	4	1	3	0	6	9	24
06600100 Floyd River at Alton	1	1	2	0	1	3	3	4	3	1	2	0	6	10	21
06600300 West Branch Floyd River near Struble[1]	1	1	0	0	0	2	2	4	2	1	2	0	4	8	15
Story County															
05470000 South Skunk River near Ames[1]	5	0	3	1	0	2	3	4	5	2	3	0	9	9	28
05470500 Squaw Creek at Ames	5	0	2	1	0	2	2	4	5	2	3	0	8	9	26
05471000 South Skunk River below Squaw Creek near Ames	5	0	4	1	0	2	5	6	6	3	3	0	11	9	35
Tama County															
05451900 Richland Creek near Haven	2	0	1	0	1	1	1	3	2	1	1	0	4	9	13
05452000 Salt Creek near Elberon	2	0	0	0	1	1	1	3	2	2	1	0	5	8	13

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Taylor County															
06819185 East Fork 102 River at Bedford	1	1	3	1	0	2	3	4	4	3	3	0	6	10	25
Van Buren County															
05490500 Des Moines River at Keosauqua	3	0	1	0	1	2	3	4	3	1	3	0	5	9	21
Wapello County															
05489500 Des Moines River at Ottumwa	6	1	2	0	1	2	4	5	5	1	4	0	8	10	31
Warren County															
05486000 North River near Norwalk	3	0	2	0	1	1	4	4	3	1	3	0	6	9	22
05486490 Middle River near Indianola	3	0	2	0	1	1	4	4	3	1	3	0	6	9	22
05487470 South River near Ackworth	3	0	2	0	1	1	4	4	3	1	3	0	6	9	22
Washington County															
05455500 English River at Kalona	3	0	2	0	1	1	4	3	1	2	3	0	7	9	20
Wayne County															
06903700 South Fork Chariton River near Promise City	1	0	0	0	1	0	1	3	3	1	2	0	5	7	12
Webster County															
05480500 Des Moines River at Fort Dodge	6	0	1	2	1	2	2	2	3	2	5	0	7	10	26
05481300 Des Moines River near Stratford	4	0	1	0	1	2	2	3	2	1	3	0	5	9	19
Woodbury County															
06600000 Perry Creek at 38th Street at Sioux City	2	0	0	0	1	1	1	3	3	1	2	0	5	8	14
06602020 West Fork Ditch at Hornick	3	0	0	0	1	1	3	3	2	1	3	0	7	8	17
06606600 Little Sioux River at Correctionville	4	0	2	0	1	2	5	4	3	1	4	0	9	9	26
Wright County															
05449500 Iowa River near Rowan	2	0	1	0	1	2	2	4	3	1	1	0	5	9	17

Table 1. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by county--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
Burt County, Nebraska															
06601200 Missouri River at Decatur, Nebraska	3	0	1	0	1	1	1	1	1	1	2	0	4	9	12
Dakota County, Nebraska															
06486000 Missouri River at Sioux City, Iowa	3	1	2	0	1	2	3	3	3	1	3	0	5	10	22
Douglas County, Nebraska															
06610000 Missouri River at Omaha, Nebraska	3	1	2	1	1	1	4	4	2	2	3	0	6	11	24
Otoe County, Nebraska															
06807000 Missouri River at Nebraska City, Nebraska	2	1	1	0	1	1	2	2	2	1	1	0	4	10	14
Richardson County, Nebraska															
06813500 Missouri River at Rulo, Nebraska	2	1	1	0	2	1	3	2	2	1	3	0	5	10	18

[1]Station discontinued on or before September 30, 1995.

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05451500 Iowa River at Marshalltown, Marshall County	10	2	2	3	1	3	6	5	6	3	9	0	**13**	11	50
05464000 Cedar River at Waterloo, Black Hawk County	8	0	2	1	0	1	3	3	2	1	8	0	**11**	9	29
05471000 South Skunk River below Squaw Creek near Ames, Story County	5	0	4	1	0	2	5	6	6	3	3	0	**11**	9	35
05457700 Cedar River at Charles City, Floyd County (river stage since October 1995)	7	0	3	0	0	2	2	3	2	1	3	0	**10**	8	23
05471050 South Skunk River at Colfax, Jasper County	6	1	3	1	0	1	3	4	5	1	3	0	**10**	10	28
05454500 Iowa River at Iowa City, Johnson County	7	0	2	1	2	3	5	5	3	3	5	0	**9**	10	36
05464500 Cedar River at Cedar Rapids, Linn County	6	1	3	2	1	3	5	4	2	3	3	0	**9**	11	33
05470000 South Skunk River near Ames, Story County[1]	5	0	3	1	0	2	3	4	5	2	3	0	**9**	9	28
05471500 South Skunk River near Oskaloosa, Mahaska County	6	0	2	0	0	1	4	4	5	1	4	1	**9**	9	28
06606600 Little Sioux River at Correctionville, Woodbury County	4	0	2	0	1	2	5	4	3	1	4	0	**9**	9	26
06809210 East Nishnabotna River near Atlantic, Cass County	4	1	2	0	1	2	6	5	4	1	3	0	**9**	10	29
05412500 Turkey River at Garber, Clayton County	5	1	2	0	1	1	3	5	6	2	6	0	**8**	10	32
05421000 Wapsipinicon River at Independence, Buchanan County	7	0	1	0	0	0	3	4	2	2	5	0	**8**	7	24
05451700 Timber Creek near Marshalltown, Marshall County	4	0	2	0	1	2	4	4	3	1	3	0	**8**	9	24
05454300 Clear Creek near Coralville, Johnson County	6	0	0	1	2	1	2	5	5	2	4	0	**8**	9	28
05458500 Cedar River at Janesville, Bremer County	5	0	2	0	0	1	2	3	3	1	3	0	**8**	8	20
05462000 Shell Rock River at Shell Rock, Butler County	5	1	2	0	0	1	2	4	3	1	4	0	**8**	9	23
05463000 Beaver Creek at New Hartford, Butler County	5	1	2	0	0	0	2	4	2	1	5	0	**8**	8	22
05463500 Black Hawk Creek at Hudson, Black Hawk County[1]	5	0	2	0	0	1	2	3	2	1	6	0	**8**	8	22

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05465000 Cedar River near Conesville, Muscatine County	4	0	2	0	1	2	4	4	1	2	3	0	**8**	9	23
05465500 Iowa River at Wapello, Louisa County	4	0	2	0	1	1	2	3	2	1	3	0	**8**	9	19
05470500 Squaw Creek at Ames, Story County	5	0	2	1	0	2	2	4	5	2	3	0	**8**	9	26
05471200 Indian Creek near Mingo, Jasper County	4	1	1	0	0	0	3	4	2	1	2	0	**8**	8	18
05472500 North Skunk River near Sigourney, Keokuk County	5	1	2	0	1	1	5	6	3	2	4	1	**8**	11	31
05489500 Des Moines River at Ottumwa, Wapello County	6	1	2	0	1	2	4	5	5	1	4	0	**8**	10	31
06807410 West Nishnabotna River at Hancock, Pottawattamie County	4	0	2	0	1	2	4	3	2	1	2	0	**8**	9	21
06809500 East Nishnabotna River at Red Oak, Montgomery County	4	0	2	1	1	2	5	4	4	1	3	0	**8**	10	27
05422000 Wapsipinicon River near De Witt, Clinton County	5	1	2	0	0	2	4	5	4	1	3	0	**7**	9	27
05422250 Mississippi River at LeClair, Scott County (river stage only)	4	0	1	0	0	0	3	3	2	1	2	0	**7**	7	16
05453000 Big Bear Creek at Ladora, Iowa County	2	0	1	0	1	0	2	3	2	4	2	0	**7**	8	17
05453100 Iowa River at Marengo, Iowa County	4	0	2	0	1	2	3	3	3	4	4	0	**7**	9	26
05454000 Rapid Creek near Iowa City, Johnson County	4	0	0	0	0	0	3	3	0	1	3	0	**7**	5	14
05454220 Clear Creek near Oxford, Johnson County	6	0	0	0	0	0	1	2	1	1	3	0	**7**	6	14
05455500 English River at Kalona, Washington County	3	0	2	0	1	1	4	3	1	2	3	0	**7**	9	20
05455700 Iowa River near Lone Tree, Louisa County	3	0	2	0	1	2	3	3	1	2	3	0	**7**	9	20
05458900 West Fork Cedar River at Finchford, Black Hawk County	4	0	2	0	0	1	2	3	2	1	4	0	**7**	8	19
05473400 Cedar Creek near Oakland Mills, Henry County	1	1	2	0	0	2	3	4	3	1	1	0	**7**	9	18
05474000 Skunk River at Augusta, Des Moines County	4	1	2	0	0	2	5	3	1	1	4	1	**7**	10	24
05474500 Mississippi River at Keokuk, Lee County	4	0	3	1	0	2	3	2	1	1	3	1	**7**	10	21

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05480500 Des Moines River at Fort Dodge, Webster County	6	0	1	2	1	2	2	2	3	2	5	0	**7**	10	26
05481950 Beaver Creek near Grimes, Polk County	4	0	2	0	1	1	4	4	2	1	5	0	**7**	9	24
05482300 North Raccoon River near Sac City, Sac County	3	1	2	1	0	2	2	3	2	1	2	0	**7**	10	19
05484000 South Raccoon River at Redfield, Dallas County	5	0	2	0	1	1	3	3	3	1	3	0	**7**	9	22
05484500 Raccoon River at Van Meter, Dallas County	5	0	2	0	1	2	3	3	3	1	3	0	**7**	9	23
06600500 Floyd River at James, Plymouth County	2	0	2	0	1	2	3	4	3	1	3	0	**7**	9	21
06602020 West Fork Ditch at Hornick, Woodbury County	3	0	0	0	1	1	3	3	2	1	3	0	**7**	8	17
06602400 Monona-Harrison Ditch near Turin, Monona County	2	0	1	0	1	1	5	4	1	1	3	0	**7**	9	19
06605000 Ocheyedan River near Spencer, Clay County	3	2	3	1	0	2	3	5	3	2	4	0	**7**	10	28
06605850 Little Sioux River at Linn Grove, Buena Vista County	3	2	2	0	1	3	3	5	4	1	3	0	**7**	10	27
06607500 Little Sioux River near Turin, Monona County	2	0	2	0	1	2	5	4	2	1	3	0	**7**	9	22
06608500 Soldier River at Pisgah, Harison County	1	0	1	0	1	2	4	3	4	1	2	0	**7**	9	19
06609500 Boyer River at Logan, Harrison County	1	0	2	0	1	2	4	3	4	1	2	0	**7**	9	20
06817000 Nodaway River at Clarinda, Page County	2	0	3	1	0	2	5	3	4	2	2	0	**7**	9	24
06903400 Chariton River near Chariton, Lucas County	2	1	3	0	1	2	2	3	3	1	3	0	**7**	10	21
05389500 Mississippi River at McGregor, Clayton County	4	1	2	0	2	0	2	3	4	2	4	1	**6**	10	25
05420500 Mississippi River at Clinton, Clinton County	4	1	2	0	0	1	3	4	4	1	3	0	**6**	9	23
05422470 Crow Creek at Bettendorf, Scott County	1	0	0	0	0	1	2	4	3	1	2	0	**6**	7	14
05452200 Walnut Creek near Hartwick, Poweshiek County	2	0	0	0	1	0	1	3	2	2	1	0	**6**	7	12
05453520 Iowa River below Coralville Dam near Coralville, Johnson County	3	0	1	1	1	1	1	1	3	1	3	0	**6**	10	16
05458000 Little Cedar River near Ionia, Chickasaw County	4	0	1	0	0	0	1	2	1	1	1	0	**6**	7	11
05459500 Winnebago River at Mason City, Cerro Gordo County	2	0	2	0	0	1	2	4	2	1	3	0	**6**	8	17

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05482500 North Raccoon River near Jefferson, Greene County	4	0	2	0	1	1	3	2	2	1	3	0	**6**	9	19
05484800 Walnut Creek at Des Moines, Polk County	5	0	0	0	0	0	1	2	2	1	2	0	**6**	6	13
05486000 North River near Norwalk, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	**6**	9	22
05486490 Middle River near Indianola, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	**6**	9	22
05487470 South River near Ackworth, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	**6**	9	22
05488500 Des Moines River near Tracy, Mahaska County	4	0	1	0	1	2	2	4	4	1	3	0	**6**	9	22
06483500 Rock River near Rock Valley, Sioux County	2	1	2	0	0	2	4	5	4	1	3	0	**6**	9	24
06600100 Floyd River at Alton, Sioux County	1	1	2	0	1	3	3	4	3	1	2	0	**6**	10	21
06607200 Maple River at Mapleton, Monona County	2	0	1	0	1	2	4	4	2	1	3	0	**6**	9	20
06610000 Missouri River at Omaha, Douglas County, Nebraska	3	1	2	1	1	1	4	4	2	2	3	0	**6**	11	24
06808500 West Nishnabotna River at Randolph, Fremont County	3	1	2	0	1	2	3	2	2	1	1	0	**6**	10	18
06810000 Nishnabotna River above Hamburg, Fremont County	2	1	2	0	1	2	3	2	2	2	1	0	**6**	10	18
06819185 East Fork 102 River at Bedford, Taylor County	1	1	3	1	0	2	3	4	4	3	3	0	**6**	10	25
06898000 Thompson River at Davis City, Decatur County	2	1	2	0	0	2	4	4	4	1	3	0	**6**	9	23
06903900 Chariton River near Rathbun, Appanoose County	1	1	2	0	2	2	4	2	1	1	1	0	**6**	10	17
05388250 Upper Iowa River near Dorchester, Allamakee County	2	0	2	0	1	1	2	2	3	1	4	0	**5**	9	18
05411400 Sny Magill Creek near Clayton, Clayton County	1	1	1	0	0	0	2	3	2	4	1	0	**5**	8	15
05411500 Mississippi River at Clayton, Clayton County	3	2	2	0	2	0	2	3	2	2	2	0	**5**	9	20
05418500 Maquoketa River near Maquoketa, Jackson County	3	0	2	0	0	1	3	3	3	1	3	0	**5**	8	19

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05420460 Beaver Slough at 3rd St at Clinton, Clinton County	2	2	2	1	0	1	1	2	1	2	2	0	**5**	10	16
05422560 Duck Creek at 110th Ave at Davenport, Scott County	4	1	1	0	0	1	2	3	3	1	2	0	**5**	9	18
05422600 Duck Creek at DC Golf Course at Davenport, Scott County	3	1	1	0	0	1	2	3	3	1	2	0	**5**	9	17
05449000 East Branch Iowa River near Klemme, Hancock County[1]	1	0	2	0	0	2	3	3	2	1	1	0	**5**	8	15
05449500 Iowa River near Rowan, Wright County	2	0	1	0	1	2	2	4	3	1	1	0	**5**	9	17
05452000 Salt Creek near Elberon, Tama County	2	0	0	0	1	1	1	3	2	2	1	0	**5**	8	13
05455100 Old Mans Creek near Iowa City, Johnson County	0	0	1	0	1	0	2	3	1	1	2	0	**5**	7	11
05471040 Squaw Creek near Colfax, Jasper County	2	0	2	0	0	0	3	2	1	3	1	0	**5**	7	14
05479000 East Fork Des Moines River at Dakota City, Humboldt County	2	0	2	0	1	2	3	2	2	1	3	0	**5**	9	18
05481000 Boone River near Webster City, Hamilton County	2	0	2	0	1	1	3	2	2	1	3	0	**5**	9	17
05481300 Des Moines River near Stratford, Webster County	4	0	1	0	1	2	2	3	2	1	3	0	**5**	9	19
05481650 Des Moines River near Saylorville, Polk County	3	0	1	0	2	2	2	2	2	1	2	0	**5**	9	17
05483450 Middle Raccoon River near Bayard, Guthrie County	2	0	1	0	0	1	1	3	1	1	1	0	**5**	8	11
05483600 Middle Raccoon River at Panora, Guthrie County	4	0	1	0	0	1	1	2	1	1	1	0	**5**	8	12
05484650 Raccoon River at 63rd Street at Des Moines, Polk County	3	0	0	0	0	0	0	1	2	1	1	0	**5**	5	8
05485640 Fourmile Creek at Des Moines, Polk County	3	0	1	0	0	1	2	3	2	1	3	0	**5**	8	16
05487540 Walnut Creek near Prairie City, Jasper County	1	1	3	0	0	1	2	2	1	5	2	0	**5**	9	18
05487550 Walnut Creek near Vandalia, Jasper County	1	1	3	1	0	1	2	2	1	5	2	0	**5**	10	19
05487980 White Breast Creek near Dallas, Marion County	2	0	2	0	1	1	2	3	2	1	1	0	**5**	9	15

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05489000 Cedar Creek near Bussey, Marion County	2	0	1	0	1	1	3	4	2	1	3	0	**5**	9	18
05490500 Des Moines River at Keosauqua, Van Buren County	3	0	1	0	1	2	3	4	3	1	3	0	**5**	9	21
06486000 Missouri River at Sioux City, Dakota County, Nebraska	3	1	2	0	1	2	3	3	3	1	3	0	**5**	10	22
06600000 Perry Creek at 38th Street, Woodbury County	2	0	0	0	1	1	1	3	3	1	2	0	**5**	8	14
06813500 Missouri River at Rulo, Richardson County, Nebraska	2	1	1	0	2	1	3	2	2	1	3	0	**5**	10	18
06903700 South Fork Chariton River near Promise City, Wayne County	1	0	0	0	1	0	1	3	3	1	2	0	**5**	7	12
06904010 Chariton River near Moulton, Appanoose County	2	0	1	0	1	1	2	2	2	1	3	0	**5**	9	15
05389400 Bloody Run Creek near Marquette, Clayton County	1	1	1	0	0	0	1	3	2	3	1	0	**4**	8	13
05412060 Silver Creek near Luana (L-235), Clayton County	1	1	1	0	0	0	2	3	1	2	1	0	**4**	8	12
05412100 Roberts Creek above St. Olaf, Clayton County	1	1	2	0	0	0	2	3	2	2	1	0	**4**	8	14
05451900 Richland Creek near Haven, Tama County	2	0	1	0	1	1	1	3	2	1	1	0	**4**	9	13
05476750 Des Moines River at Humboldt, Humboldt County	3	0	1	0	1	2	2	2	2	1	3	0	**4**	9	17
05482000 Des Moines River at 2nd Ave, Des Moines, Polk County	2	0	0	0	1	0	0	1	2	1	3	0	**4**	6	10
05485500 Des Moines River below Raccoon River at Des Moines, Polk County	3	0	1	0	1	2	2	3	3	1	3	0	**4**	9	19
05487500 Des Moines River near Runnells, Polk County	1	0	0	0	0	2	0	1	1	1	1	1	**4**	7	8
05488110 Des Moines River near Pella, Marion County	3	0	1	0	1	2	1	2	1	1	1	0	**4**	9	13
06600300 West Branch Floyd River near Struble, Sioux County[1]	1	1	0	0	0	2	2	4	2	1	2	0	**4**	8	15

Table 2. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of respondents--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06601200 Missouri River at Decatur, Burt County, Nebraska	3	0	1	0	1	1	1	1	1	1	2	0	**4**	9	12
06807000 Missouri River at Nebraska City, Otoe County, Nebraska	2	1	1	0	1	1	2	2	2	1	1	0	**4**	10	14
05482135 North Raccoon River near Newell, Buena Vista County[1]	1	1	0	0	0	2	1	2	1	1	1	0	**3**	8	10
05484900 Raccoon River at Fleur Drive, Des Moines, Polk County	1	0	0	0	0	0	0	1	2	1	2	0	**3**	5	7
05488200 English Creek near Knoxville, Marion County	2	0	0	0	1	0	0	1	2	1	1	0	**3**	6	8
06897950 Elk Creek near Decatur City, Decatur County[1]	1	1	1	0	0	1	1	2	1	1	2	0	**3**	9	11
05420300 Elk River near Almont, Clinton County	1	1	0	0	0	0	0	2	1	1	1	0	**2**	6	7

[1]Station discontinued on or before September 30, 1995.

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05451500 Iowa River at Marshalltown, Marshall County	10	2	2	3	1	3	6	5	6	3	9	0	13	**11**	50
05464500 Cedar River at Cedar Rapids, Linn County	6	1	3	2	1	3	5	4	2	3	3	0	9	**11**	33
05472500 North Skunk River near Sigourney, Keokuk County	5	1	2	0	1	1	5	6	3	2	4	1	8	**11**	31
06610000 Missouri River at Omaha, Douglas County, Nebraska	3	1	2	1	1	1	4	4	2	2	3	0	6	**11**	24
05389500 Mississippi River at McGregor, Clayton County	4	1	2	0	2	0	2	3	4	2	4	1	6	**10**	25
05412500 Turkey River at Garber, Clayton County	5	1	2	0	1	1	3	5	6	2	6	0	8	**10**	32
05420460 Beaver Slough at 3rd St at Clinton, Clinton County	2	2	2	1	0	1	1	2	1	2	2	0	5	**10**	16
05453520 Iowa River below Coralville Dam near Coralville, Johnson County	3	0	1	1	1	1	1	1	3	1	3	0	6	**10**	16
05454500 Iowa River at Iowa City, Johnson County	7	0	2	1	2	3	5	5	3	3	5	0	9	**10**	36
05471050 South Skunk River at Colfax, Jasper County	6	1	3	1	0	1	3	4	5	1	3	0	10	**10**	28
05474000 Skunk River at Augusta, Des Moines County	4	1	2	0	0	2	5	3	1	1	4	1	7	**10**	24
05474500 Mississippi River at Keokuk, Lee County	4	0	3	1	0	2	3	2	1	1	3	1	7	**10**	21
05480500 Des Moines River at Fort Dodge, Webster County	6	0	1	2	1	2	2	2	3	2	5	0	7	**10**	26
05482300 North Raccoon River near Sac City, Sac County	3	1	2	1	0	2	2	3	2	1	2	0	7	**10**	19
05487550 Walnut Creek near Vandalia, Jasper County	1	1	3	1	0	1	2	2	1	5	2	0	5	**10**	19
05489500 Des Moines River at Ottumwa, Wapello County	6	1	2	0	1	2	4	5	5	1	4	0	8	**10**	31
06486000 Missouri River at Sioux City, Dakota County, Nebraska	3	1	2	0	1	2	3	3	3	1	3	0	5	**10**	22
06600100 Floyd River at Alton, Sioux County	1	1	2	0	1	3	3	4	3	1	2	0	6	**10**	21
06605000 Ocheyedan River near Spencer, Clay County	3	2	3	1	0	2	3	5	3	2	4	0	7	**10**	28

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06605850 Little Sioux River at Linn Grove, Buena Vista County	3	2	2	0	1	3	3	5	4	1	3	0	7	**10**	27
06807000 Missouri River at Nebraska City, Otoe County, Nebraska	2	1	1	0	1	1	2	2	2	1	1	0	4	**10**	14
06808500 West Nishnabotna River at Randolph, Fremont County	3	1	2	0	1	2	3	2	2	1	1	0	6	**10**	18
06809210 East Nishnabotna River near Atlantic, Cass County	4	1	2	0	1	2	6	5	4	1	3	0	9	**10**	29
06809500 East Nishnabotna River at Red Oak, Montgomery County	4	0	2	1	1	2	5	4	4	1	3	0	8	**10**	27
06810000 Nishnabotna River above Hamburg, Fremont County	2	1	2	0	1	2	3	2	2	2	1	0	6	**10**	18
06813500 Missouri River at Rulo, Richardson County, Nebraska	2	1	1	0	2	1	3	2	2	1	3	0	5	**10**	18
06819185 East Fork 102 River at Bedford, Taylor County	1	1	3	1	0	2	3	4	4	3	3	0	6	**10**	25
06903400 Chariton River near Chariton, Lucas County	2	1	3	0	1	2	2	3	3	1	3	0	7	**10**	21
06903900 Chariton River near Rathbun, Appanoose County	1	1	2	0	2	2	4	2	1	1	1	0	6	**10**	17
05388250 Upper Iowa River near Dorchester, Allamakee County	2	0	2	0	1	1	2	2	3	1	4	0	5	**9**	18
05411500 Mississippi River at Clayton, Clayton County	3	2	2	0	2	0	2	3	2	2	2	0	5	**9**	20
05420500 Mississippi River at Clinton, Clinton County	4	1	2	0	0	1	3	4	4	1	3	0	6	**9**	23
05422000 Wapsipinicon River near De Witt, Clinton County	5	1	2	0	0	2	4	5	4	1	3	0	7	**9**	27
05422560 Duck Creek at 110th Ave at Davenport, Scott County	4	1	1	0	0	1	2	3	3	1	2	0	5	**9**	18
05422600 Duck Creek at DC Golf Course at Davenport, Scott County	3	1	1	0	0	1	2	3	3	1	2	0	5	**9**	17
05449500 Iowa River near Rowan, Wright County	2	0	1	0	1	2	2	4	3	1	1	0	5	**9**	17

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05451700 Timber Creek near Marshalltown, Marshall County	4	0	2	0	1	2	4	4	3	1	3	0	8	**9**	24
05451900 Richland Creek near Haven, Tama County	2	0	1	0	1	1	1	3	2	1	1	0	4	**9**	13
05453100 Iowa River at Marengo, Iowa County	4	0	2	0	1	2	3	3	3	4	4	0	7	**9**	26
05454300 Clear Creek near Coralville, Johnson County	6	0	0	1	2	1	2	5	5	2	4	0	8	**9**	28
05455500 English River at Kalona, Washington County	3	0	2	0	1	1	4	3	1	2	3	0	7	**9**	20
05455700 Iowa River near Lone Tree, Louisa County	3	0	2	0	1	2	3	3	1	2	3	0	7	**9**	20
05462000 Shell Rock River at Shell Rock, Butler County	5	1	2	0	0	1	2	4	3	1	4	0	8	**9**	23
05464000 Cedar River at Waterloo, Black Hawk County	8	0	2	1	0	1	3	3	2	1	8	0	11	**9**	29
05465000 Cedar River near Conesville, Muscatine County	4	0	2	0	1	2	4	4	1	2	3	0	8	**9**	23
05465500 Iowa River at Wapello, Louisa County	4	0	2	0	1	1	2	3	2	1	3	0	8	**9**	19
05470000 South Skunk River near Ames, Story County[1]	5	0	3	1	0	2	3	4	5	2	3	0	9	**9**	28
05470500 Squaw Creek at Ames, Story County	5	0	2	1	0	2	2	4	5	2	3	0	8	**9**	26
05471000 South Skunk River below Squaw Creek near Ames, Story County	5	0	4	1	0	2	5	6	6	3	3	0	11	**9**	35
05471500 South Skunk River near Oskaloosa, Mahaska County	6	0	2	0	0	1	4	4	5	1	4	1	9	**9**	28
05473400 Cedar Creek near Oakland Mills, Henry County	1	1	2	0	0	2	3	4	3	1	1	0	7	**9**	18
05476750 Des Moines River at Humboldt, Humboldt County	3	0	1	0	1	2	2	2	2	1	3	0	4	**9**	17
05479000 East Fork Des Moines River at Dakota City, Humboldt County	2	0	2	0	1	2	3	2	2	1	3	0	5	**9**	18
05481000 Boone River near Webster City, Hamilton County	2	0	2	0	1	1	3	2	2	1	3	0	5	**9**	17
05481300 Des Moines River near Stratford, Webster County	4	0	1	0	1	2	2	3	2	1	3	0	5	**9**	19
05481650 Des Moines River near Saylorville, Polk County	3	0	1	0	2	2	2	2	2	1	2	0	5	**9**	17

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05481950 Beaver Creek near Grimes, Polk County	4	0	2	0	1	1	4	4	2	1	5	0	7	**9**	24
05482500 North Raccoon River near Jefferson, Greene County	4	0	2	0	1	1	3	2	2	1	3	0	6	**9**	19
05484000 South Raccoon River at Redfield, Dallas County	5	0	2	0	1	1	3	3	3	1	3	0	7	**9**	22
05484500 Raccoon River at Van Meter, Dallas County	5	0	2	0	1	2	3	3	3	1	3	0	7	**9**	23
05485500 Des Moines River below Raccoon River at Des Moines, Polk County	3	0	1	0	1	2	2	3	3	1	3	0	4	**9**	19
05486000 North River near Norwalk, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	**9**	22
05486490 Middle River near Indianola, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	**9**	22
05487470 South River near Ackworth, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	**9**	22
05487540 Walnut Creek near Prairie City, Jasper County	1	1	3	0	0	1	2	2	1	5	2	0	5	**9**	18
05487980 White Breast Creek near Dallas, Marion County	2	0	2	0	1	1	2	3	2	1	1	0	5	**9**	15
05488110 Des Moines River near Pella, Marion County	3	0	1	0	1	2	1	2	1	1	1	0	4	**9**	13
05488500 Des Moines River near Tracy, Mahaska County	4	0	1	0	1	2	2	4	4	1	3	0	6	**9**	22
05489000 Cedar Creek near Bussey, Marion County	2	0	1	0	1	1	3	4	2	1	3	0	5	**9**	18
05490500 Des Moines River at Keosauqua, Van Buren County	3	0	1	0	1	2	3	4	3	1	3	0	5	**9**	21
06483500 Rock River near Rock Valley, Sioux County	2	1	2	0	0	2	4	5	4	1	3	0	6	**9**	24
06600500 Floyd River at James, Plymouth County	2	0	2	0	1	2	3	4	3	1	3	0	7	**9**	21
06601200 Missouri River at Decatur, Burt County, Nebraska	3	0	1	0	1	1	1	1	1	1	2	0	4	**9**	12
06602400 Monona-Harrison Ditch near Turin, Monona County	2	0	1	0	1	1	5	4	1	1	3	0	7	**9**	19
06606600 Little Sioux River at Correctionville, Woodbury County	4	0	2	0	1	2	5	4	3	1	4	0	9	**9**	26

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06607200 Maple River at Mapleton, Monona County	2	0	1	0	1	2	4	4	2	1	3	0	6	**9**	20
06607500 Little Sioux River near Turin, Monona County	2	0	2	0	1	2	5	4	2	1	3	0	7	**9**	22
06608500 Soldier River at Pisgah, Harison County	1	0	1	0	1	2	4	3	4	1	2	0	7	**9**	19
06609500 Boyer River at Logan, Harrison County	1	0	2	0	1	2	4	3	4	1	2	0	7	**9**	20
06807410 West Nishnabotna River at Hancock, Pottawattamie County	4	0	2	0	1	2	4	3	2	1	2	0	8	**9**	21
06817000 Nodaway River at Clarinda, Page County	2	0	3	1	0	2	5	3	4	2	2	0	7	**9**	24
06897950 Elk Creek near Decatur City, Decatur County[1]	1	1	1	0	0	1	1	2	1	1	2	0	3	**9**	11
06898000 Thompson River at Davis City, Decatur County	2	1	2	0	0	2	4	4	4	1	3	0	6	**9**	23
06904010 Chariton River near Moulton, Appanoose County	2	0	1	0	1	1	2	2	2	1	3	0	5	**9**	15
05389400 Bloody Run Creek near Marquette, Clayton County	1	1	1	0	0	0	1	3	2	3	1	0	4	**8**	13
05411400 Sny Magill Creek near Clayton, Clayton County	1	1	1	0	0	0	2	3	2	4	1	0	5	**8**	15
05412060 Silver Creek near Luana (L-235), Clayton County	1	1	1	0	0	0	2	3	1	2	1	0	4	**8**	12
05412100 Roberts Creek above St. Olaf, Clayton County	1	1	2	0	0	0	2	3	2	2	1	0	4	**8**	14
05418500 Maquoketa River near Maquoketa, Jackson County	3	0	2	0	0	1	3	3	3	1	3	0	5	**8**	19
05449000 East Branch Iowa River near Klemme, Hancock County[1]	1	0	2	0	0	2	3	3	2	1	1	0	5	**8**	15
05452000 Salt Creek near Elberon, Tama County	2	0	0	0	1	1	1	3	2	2	1	0	5	**8**	13
05453000 Big Bear Creek at Ladora, Iowa County	2	0	1	0	1	0	2	3	2	4	2	0	7	**8**	17
05457700 Cedar River at Charles City, Floyd County (river stage only since October 1995)	7	0	3	0	0	2	2	3	2	1	3	0	10	**8**	23
05458500 Cedar River at Janesville, Bremer County	5	0	2	0	0	1	2	3	3	1	3	0	8	**8**	20

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05458900 West Fork Cedar River at Finchford, Black Hawk County	4	0	2	0	0	1	2	3	2	1	4	0	7	**8**	19
05459500 Winnebago River at Mason City, Cerro Gordo County	2	0	2	0	0	1	2	4	2	1	3	0	6	**8**	17
05463000 Beaver Creek at New Hartford, Butler County	5	1	2	0	0	0	2	4	2	1	5	0	8	**8**	22
05463500 Black Hawk Creek at Hudson, Black Hawk County[1]	5	0	2	0	0	1	2	3	2	1	6	0	8	**8**	22
05471200 Indian Creek near Mingo, Jasper County	4	1	1	0	0	0	3	4	2	1	2	0	8	**8**	18
05482135 North Raccoon River near Newell, Buena Vista County[1]	1	1	0	0	0	2	1	2	1	1	1	0	3	**8**	10
05483450 Middle Raccoon River near Bayard, Guthrie County	2	0	1	0	0	1	1	3	1	1	1	0	5	**8**	11
05483600 Middle Raccoon River at Panora, Guthrie County	4	0	1	0	0	1	1	2	1	1	1	0	5	**8**	12
05485640 Fourmile Creek at Des Moines, Polk County	3	0	1	0	0	1	2	3	2	1	3	0	5	**8**	16
06600000 Perry Creek at 38th Street, Woodbury County	2	0	0	0	1	1	1	3	3	1	2	0	5	**8**	14
06600300 West Branch Floyd River near Struble, Sioux County[1]	1	1	0	0	0	2	2	4	2	1	2	0	4	**8**	15
06602020 West Fork Ditch at Hornick, Woodbury County	3	0	0	0	1	1	3	3	2	1	3	0	7	**8**	17
05421000 Wapsipinicon River at Independence, Buchanan County	7	0	1	0	0	0	3	4	2	2	5	0	8	**7**	24
05422250 Mississippi River at LeClair, Scott County (river stage only)	4	0	1	0	0	0	3	3	2	1	2	0	7	**7**	16
05422470 Crow Creek at Bettendorf, Scott County	1	0	0	0	0	1	2	4	3	1	2	0	6	**7**	14
05452200 Walnut Creek near Hartwick, Poweshiek County	2	0	0	0	1	0	1	3	2	2	1	0	6	**7**	12
05455100 Old Mans Creek near Iowa City, Johnson County	0	0	1	0	1	0	2	3	1	1	2	0	5	**7**	11
05458000 Little Cedar River near Ionia, Chickasaw County	4	0	1	0	0	0	1	2	1	1	1	0	6	**7**	11

Table 3. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by number of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05471040 Squaw Creek near Colfax, Jasper County	2	0	2	0	0	0	3	2	1	3	1	0	5	**7**	14
05487500 Des Moines River near Runnells, Polk County	1	0	0	0	0	2	0	1	1	1	1	1	4	**7**	8
06903700 South Fork Chariton River near Promise City, Wayne County	1	0	0	0	1	0	1	3	3	1	2	0	5	**7**	12
05420300 Elk River near Almont, Clinton County	1	1	0	0	0	0	0	2	1	1	1	0	2	**6**	7
05454220 Clear Creek near Oxford, Johnson County	6	0	0	0	0	0	1	2	1	1	3	0	7	**6**	14
05482000 Des Moines River at 2nd Ave, Des Moines, Polk County	2	0	0	0	1	0	0	1	2	1	3	0	4	**6**	10
05484800 Walnut Creek at Des Moines, Polk County	5	0	0	0	0	0	1	2	2	1	2	0	6	**6**	13
05488200 English Creek near Knoxville, Marion County	2	0	0	0	1	0	0	1	2	1	1	0	3	**6**	8
05454000 Rapid Creek near Iowa City, Johnson County	4	0	0	0	0	0	3	3	0	1	3	0	7	**5**	14
05484650 Raccoon River at 63rd Street at Des Moines, Polk County	3	0	0	0	0	0	0	1	2	1	1	0	5	**5**	8
05484900 Raccoon River at Fleur Drive, Des Moines, Polk County	1	0	0	0	0	0	0	1	2	1	2	0	3	**5**	7

[1]Station discontinued on or before September 30, 1995.

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05451500 Iowa River at Marshalltown, Marshall County	10	2	2	3	1	3	6	5	6	3	9	0	13	11	**50**
05454500 Iowa River at Iowa City, Johnson County	7	0	2	1	2	3	5	5	3	3	5	0	9	10	**36**
05471000 South Skunk River below Squaw Creek near Ames, Story County	5	0	4	1	0	2	5	6	6	3	3	0	11	9	**35**
05464500 Cedar River at Cedar Rapids, Linn County	6	1	3	2	1	3	5	4	2	3	3	0	9	11	**33**
05412500 Turkey River at Garber, Clayton County	5	1	2	0	1	1	3	5	6	2	6	0	8	10	**32**
05472500 North Skunk River near Sigourney, Keokuk County	5	1	2	0	1	1	5	6	3	2	4	1	8	11	**31**
05489500 Des Moines River at Ottumwa, Wapello County	6	1	2	0	1	2	4	5	5	1	4	0	8	10	**31**
05464000 Cedar River at Waterloo, Black Hawk County	8	0	2	1	0	1	3	3	2	1	8	0	11	9	**29**
06809210 East Nishnabotna River near Atlantic, Cass County	4	1	2	0	1	2	6	5	4	1	3	0	9	10	**29**
05454300 Clear Creek near Coralville, Johnson County	6	0	0	1	2	1	2	5	5	2	4	0	8	9	**28**
05471050 South Skunk River at Colfax, Jasper County	6	1	3	1	0	1	3	4	5	1	3	0	10	10	**28**
05470000 South Skunk River near Ames, Story County[1]	5	0	3	1	0	2	3	4	5	2	3	0	9	9	**28**
05471500 South Skunk River near Oskaloosa, Mahaska County	6	0	2	0	0	1	4	4	5	1	4	1	9	9	**28**
06605000 Ocheyedan River near Spencer, Clay County	3	2	3	1	0	2	3	5	3	2	4	0	7	10	**28**
05422000 Wapsipinicon River near De Witt, Clinton County	5	1	2	0	0	2	4	5	4	1	3	0	7	9	**27**
06605850 Little Sioux River at Linn Grove, Buena Vista County	3	2	2	0	1	3	3	5	4	1	3	0	7	10	**27**
06809500 East Nishnabotna River at Red Oak, Montgomery County	4	0	2	1	1	2	5	4	4	1	3	0	8	10	**27**
05453100 Iowa River at Marengo, Iowa County	4	0	2	0	1	2	3	3	3	4	4	0	7	9	**26**
05470500 Squaw Creek at Ames, Story County	5	0	2	1	0	2	2	4	5	2	3	0	8	9	**26**
05480500 Des Moines River at Fort Dodge, Webster County	6	0	1	2	1	2	2	2	3	2	5	0	7	10	**26**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06606600 Little Sioux River at Correctionville, Woodbury County	4	0	2	0	1	2	5	4	3	1	4	0	9	9	**26**
05389500 Mississippi River at McGregor, Clayton County	4	1	2	0	2	0	2	3	4	2	4	1	6	10	**25**
06819185 East Fork 102 River at Bedford, Taylor County	1	1	3	1	0	2	3	4	4	3	3	0	6	10	**25**
05421000 Wapsipinicon River at Independence, Buchanan County	7	0	1	0	0	0	3	4	2	2	5	0	8	7	**24**
05451700 Timber Creek near Marshalltown, Marshall County	4	0	2	0	1	2	4	4	3	1	3	0	8	9	**24**
05474000 Skunk River at Augusta, Des Moines County	4	1	2	0	0	2	5	3	1	1	4	1	7	10	**24**
05481950 Beaver Creek near Grimes, Polk County	4	0	2	0	1	1	4	4	2	1	5	0	7	9	**24**
06483500 Rock River near Rock Valley, Sioux County	2	1	2	0	0	2	4	5	4	1	3	0	6	9	**24**
06610000 Missouri River at Omaha, Douglas County, Nebraska	3	1	2	1	1	1	4	4	2	2	3	0	6	11	**24**
06817000 Nodaway River at Clarinda, Page County	2	0	3	1	0	2	5	3	4	2	2	0	7	9	**24**
05420500 Mississippi River at Clinton, Clinton County	4	1	2	0	0	1	3	4	4	1	3	0	6	9	**23**
05457700 Cedar River at Charles City, Floyd County (river stage only since October 1995)	7	0	3	0	0	2	2	3	2	1	3	0	10	8	**23**
05462000 Shell Rock River at Shell Rock, Butler County	5	1	2	0	0	1	2	4	3	1	4	0	8	9	**23**
05465000 Cedar River near Conesville, Muscatine County	4	0	2	0	1	2	4	4	1	2	3	0	8	9	**23**
05484500 Raccoon River at Van Meter, Dallas County	5	0	2	0	1	2	3	3	3	1	3	0	7	9	**23**
06898000 Thompson River at Davis City, Decatur County	2	1	2	0	0	2	4	4	4	1	3	0	6	9	**23**
05463000 Beaver Creek at New Hartford, Butler County	5	1	2	0	0	0	2	4	2	1	5	0	8	8	**22**
05463500 Black Hawk Creek at Hudson, Black Hawk County[1]	5	0	2	0	0	1	2	3	2	1	6	0	8	8	**22**
05484000 South Raccoon River at Redfield, Dallas County	5	0	2	0	1	1	3	3	3	1	3	0	7	9	**22**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05486000 North River near Norwalk, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	9	**22**
05486490 Middle River near Indianola, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	9	**22**
05487470 South River near Ackworth, Warren County	3	0	2	0	1	1	4	4	3	1	3	0	6	9	**22**
05488500 Des Moines River near Tracy, Mahaska County	4	0	1	0	1	2	2	4	4	1	3	0	6	9	**22**
06486000 Missouri River at Sioux City, Dakota County, Nebraska	3	1	2	0	1	2	3	3	3	1	3	0	5	10	**22**
06607500 Little Sioux River near Turin, Monona County	2	0	2	0	1	2	5	4	2	1	3	0	7	9	**22**
05474500 Mississippi River at Keokuk, Lee County	4	0	3	1	0	2	3	2	1	1	3	1	7	10	**21**
05490500 Des Moines River at Keosauqua, Van Buren County	3	0	1	0	1	2	3	4	3	1	3	0	5	9	**21**
06600100 Floyd River at Alton, Sioux County	1	1	2	0	1	3	3	4	3	1	2	0	6	10	**21**
06600500 Floyd River at James, Plymouth County	2	0	2	0	1	2	3	4	3	1	3	0	7	9	**21**
06807410 West Nishnabotna River at Hancock, Pottawattamie County	4	0	2	0	1	2	4	3	2	1	2	0	8	9	**21**
06903400 Chariton River near Chariton, Lucas County	2	1	3	0	1	2	2	3	3	1	3	0	7	10	**21**
05411500 Mississippi River at Clayton, Clayton County	3	2	2	0	2	0	2	3	2	2	2	0	5	9	**20**
05455500 English River at Kalona, Washington County	3	0	2	0	1	1	4	3	1	2	3	0	7	9	**20**
05455700 Iowa River near Lone Tree, Louisa County	3	0	2	0	1	2	3	3	1	2	3	0	7	9	**20**
05458500 Cedar River at Janesville, Bremer County	5	0	2	0	0	1	2	3	3	1	3	0	8	8	**20**
06607200 Maple River at Mapleton, Monona County	2	0	1	0	1	2	4	4	2	1	3	0	6	9	**20**
06609500 Boyer River at Logan, Harrison County	1	0	2	0	1	2	4	3	4	1	2	0	7	9	**20**
05418500 Maquoketa River near Maquoketa, Jackson County	3	0	2	0	0	1	3	3	3	1	3	0	5	8	**19**
05458900 West Fork Cedar River at Finchford, Black Hawk County	4	0	2	0	0	1	2	3	2	1	4	0	7	8	**19**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05465500 Iowa River at Wapello, Louisa County	4	0	2	0	1	1	2	3	2	1	3	0	8	9	**19**
05481300 Des Moines River near Stratford, Webster County	4	0	1	0	1	2	2	3	2	1	3	0	5	9	**19**
05482300 North Raccoon River near Sac City, Sac County	3	1	2	1	0	2	2	3	2	1	2	0	7	10	**19**
05482500 North Raccoon River near Jefferson, Greene County	4	0	2	0	1	1	3	2	2	1	3	0	6	9	**19**
05485500 Des Moines River below Raccoon River at Des Moines, Polk County	3	0	1	0	1	2	2	3	3	1	3	0	4	9	**19**
05487550 Walnut Creek near Vandalia, Jasper County	1	1	3	1	0	1	2	2	1	5	2	0	5	10	**19**
06602400 Monona-Harrison Ditch near Turin, Monona County	2	0	1	0	1	1	5	4	1	1	3	0	7	9	**19**
06608500 Soldier River at Pisgah, Harison County	1	0	1	0	1	2	4	3	4	1	2	0	7	9	**19**
05388250 Upper Iowa River near Dorchester, Allamakee County	2	0	2	0	1	1	2	2	3	1	4	0	5	9	**18**
05422560 Duck Creek at 110th Ave at Davenport, Scott County	4	1	1	0	0	1	2	3	3	1	2	0	5	9	**18**
05471200 Indian Creek near Mingo, Jasper County	4	1	1	0	0	0	3	4	2	1	2	0	8	8	**18**
05473400 Cedar Creek near Oakland Mills, Henry County	1	1	2	0	0	2	3	4	3	1	1	0	7	9	**18**
05479000 East Fork Des Moines River at Dakota City, Humboldt County	2	0	2	0	1	2	3	2	2	1	3	0	5	9	**18**
05487540 Walnut Creek near Prairie City, Jasper County	1	1	3	0	0	1	2	2	1	5	2	0	5	9	**18**
05489000 Cedar Creek near Bussey, Marion County	2	0	1	0	1	1	3	4	2	1	3	0	5	9	**18**
06808500 West Nishnabotna River at Randolph, Fremont County	3	1	2	0	1	2	3	2	2	1	1	0	6	10	**18**
06810000 Nishnabotna River above Hamburg, Fremont County	2	1	2	0	1	2	3	2	2	2	1	0	6	10	**18**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06813500 Missouri River at Rulo, Richardson County, Nebraska	2	1	1	0	2	1	3	2	2	1	3	0	5	10	**18**
05422600 Duck Creek at DC Golf Course at Davenport, Scott County	3	1	1	0	0	1	2	3	3	1	2	0	5	9	**17**
05449500 Iowa River near Rowan, Wright County	2	0	1	0	1	2	2	4	3	1	1	0	5	9	**17**
05453000 Big Bear Creek at Ladora, Iowa County	2	0	1	0	1	0	2	3	2	4	2	0	7	8	**17**
05459500 Winnebago River at Mason City, Cerro Gordo County	2	0	2	0	0	1	2	4	2	1	3	0	6	8	**17**
05476750 Des Moines River at Humboldt, Humboldt County	3	0	1	0	1	2	2	2	2	1	3	0	4	9	**17**
05481000 Boone River near Webster City, Hamilton County	2	0	2	0	1	1	3	2	2	1	3	0	5	9	**17**
05481650 Des Moines River near Saylorville, Polk County	3	0	1	0	2	2	2	2	2	1	2	0	5	9	**17**
06602020 West Fork Ditch at Hornick, Woodbury County	3	0	0	0	1	1	3	3	2	1	3	0	7	8	**17**
06903900 Chariton River near Rathbun, Appanoose County	1	1	2	0	2	2	4	2	1	1	1	0	6	10	**17**
05420460 Beaver Slough at 3rd St at Clinton, Clinton County	2	2	2	1	0	1	1	2	1	2	2	0	5	10	**16**
05422250 Mississippi River at LeClair, Scott County (river stage only)	4	0	1	0	0	0	3	3	2	1	2	0	7	7	**16**
05453520 Iowa River below Coralville Dam near Coralville, Johnson County	3	0	1	1	1	1	1	1	3	1	3	0	6	10	**16**
05485640 Fourmile Creek at Des Moines, Polk County	3	0	1	0	0	1	2	3	2	1	3	0	5	8	**16**
05411400 Sny Magill Creek near Clayton, Clayton County	1	1	1	0	0	0	2	3	2	4	1	0	5	8	**15**
05449000 East Branch Iowa River near Klemme, Hancock County[1]	1	0	2	0	0	2	3	3	2	1	1	0	5	8	**15**
05487980 White Breast Creek near Dallas, Marion County	2	0	2	0	1	1	2	3	2	1	1	0	5	9	**15**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
06600300 West Branch Floyd River near Struble, Sioux County[1]	1	1	0	0	0	2	2	4	2	1	2	0	4	8	**15**
06904010 Chariton River near Moulton, Appanoose County	2	0	1	0	1	1	2	2	2	1	3	0	5	9	**15**
05412100 Roberts Creek above St. Olaf, Clayton County	1	1	2	0	0	0	2	3	2	2	1	0	4	8	**14**
05422470 Crow Creek at Bettendorf, Scott County	1	0	0	0	0	1	2	4	3	1	2	0	6	7	**14**
05454000 Rapid Creek near Iowa City, Johnson County	4	0	0	0	0	0	3	3	0	1	3	0	7	5	**14**
05454220 Clear Creek near Oxford, Johnson County	6	0	0	0	0	0	1	2	1	1	3	0	7	6	**14**
05471040 Squaw Creek near Colfax, Jasper County	2	0	2	0	0	0	3	2	1	3	1	0	5	7	**14**
06600000 Perry Creek at 38th Street, Woodbury County	2	0	0	0	1	1	1	3	3	1	2	0	5	8	**14**
06807000 Missouri River at Nebraska City, Otoe County, Nebraska	2	1	1	0	1	1	2	2	2	1	1	0	4	10	**14**
05389400 Bloody Run Creek near Marquette, Clayton County	1	1	1	0	0	0	1	3	2	3	1	0	4	8	**13**
05451900 Richland Creek near Haven, Tama County	2	0	1	0	1	1	1	3	2	1	1	0	4	9	**13**
05452000 Salt Creek near Elberon, Tama County	2	0	0	0	1	1	1	3	2	2	1	0	5	8	**13**
05484800 Walnut Creek at Des Moines, Polk County	5	0	0	0	0	0	1	2	2	1	2	0	6	6	**13**
05488110 Des Moines River near Pella, Marion County	3	0	1	0	1	2	1	2	1	1	1	0	4	9	**13**
05412060 Silver Creek near Luana (L-235), Clayton County	1	1	1	0	0	0	2	3	1	2	1	0	4	8	**12**
05452200 Walnut Creek near Hartwick, Poweshiek County	2	0	0	0	1	0	1	3	2	2	1	0	6	7	**12**
05483600 Middle Raccoon River at Panora, Guthrie County	4	0	1	0	0	1	1	2	1	1	1	0	5	8	**12**
06601200 Missouri River at Decatur, Burt County, Nebraska	3	0	1	0	1	1	1	1	1	1	2	0	4	9	**12**
06903700 South Fork Chariton River near Promise City, Wayne County	1	0	0	0	1	0	1	3	3	1	2	0	5	7	**12**
05455100 Old Mans Creek near Iowa City, Johnson County	0	0	1	0	1	0	2	3	1	1	2	0	5	7	**11**

Table 4. Tabulation of responses to the Iowa USGS stream-gaging network survey with stations listed by sum of streamflow-data-use categories indicated--Continued

Stream-gaging station number and location	Data-use categories												Summaries		
	Flood warning	Regulatory requirement	Water quality monitoring	Wastewater treatment plant operation	Reservoir operation	Minimum flow monitoring	Long-term record/ trend analyses	Regional hydrology	Streamflow modeling	Special project	Public information	Other uses	Number of respondents	Number of categories indicated	Sum of categories indicated
05458000 Little Cedar River near Ionia, Chickasaw County	4	0	1	0	0	0	1	2	1	1	1	0	6	7	**11**
05483450 Middle Raccoon River near Bayard, Guthrie County	2	0	1	0	0	1	1	3	1	1	1	0	5	8	**11**
06897950 Elk Creek near Decatur City, Decatur County[1]	1	1	1	0	0	1	1	2	1	1	2	0	3	9	**11**
05482000 Des Moines River at 2nd Ave, Des Moines, Polk County	2	0	0	0	1	0	0	1	2	1	3	0	4	6	**10**
05482135 North Raccoon River near Newell, Buena Vista County[1]	1	1	0	0	0	2	1	2	1	1	1	0	3	8	**10**
05484650 Raccoon River at 63rd Street at Des Moines, Polk County	3	0	0	0	0	0	0	1	2	1	1	0	5	5	**8**
05487500 Des Moines River near Runnells, Polk County	1	0	0	0	0	2	0	1	1	1	1	1	4	7	**8**
05488200 English Creek near Knoxville, Marion County	2	0	0	0	1	0	0	1	2	1	1	0	3	6	**8**
05420300 Elk River near Almont, Clinton County	1	1	0	0	0	0	0	2	1	1	1	0	2	6	**7**
05484900 Raccoon River at Fleur Drive, Des Moines, Polk County	1	0	0	0	0	0	0	1	2	1	2	0	3	5	**7**

[1]Station discontinued on or before September 30, 1995.

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