Appendix D – The 1999 Verbal Survey of Cooperators

1. Verbal Survey Questionnaire
2. Results of Verbal Survey

TASK FORCE TO REVIEW THE COOPERATIVE WATER PROGRAM

Verbal Cooperator Survey

A. General Introductory Questions

1. What is the primary role of your organization (for example, regulatory, water management, scientific, etc.)?

2. What is your position in the organization and how does it relate to the USGS Federal-State Cooperative Water Program (Coop Program)?

3. Has your organization participated in the Coop Program for more than 5-years?

4. What is your organization's current level of financial participation? How has it changed over time?

5. What types of programs/projects are you involved in with the USGS under the Coop Program?

6. Does your organization foresee a change in the programs/projects it requests of the Coop Program in the future? Do you see the need increasing or decreasing?

B. **Mission -** Historically, the Coop Program has been designed to develop hydrologic data and technical analysis needed to assist in meeting the USGS mission of continuously assessing the Nation's water resources, and to provide technical assistance to State, tribal, and local water management agencies in seeking solutions to water-resource issues of national concern through a matched funding arrangement.

7. Explain how the Coop Program assists your organization in accomplishing its activities, goals, and responsibilities?

8. Is cost sharing a necessary element in your organization's participation in a cooperative agreement with the USGS? Please explain.

9. What is the minimum USGS cost share acceptable to your organization?

10. Explain whether your coop program is meeting your needs in the areas of ground-water and surface-water quality, quantity, and use data, and analytical tools, etc.?

C. Prioritization - In Fiscal Year 1997, the Congress appropriated $64.5 million for the Coop Program. State and local agencies provided an equal amount of matching funds plus an additional $28.5 million of unmatched funding.

11. Is there adequate funding in the Coop Program to meet your short and long term needs? If no, please explain the needs that are not being met.

12. Do you have any suggestions for the appropriate level of funding for the Coop Program?

13. What is the proper balance between routine long-term data collection and interpretive studies?

14. How do changes in the Coop Program, such as losing long-term data collection stations, affect the mission of your organization?

15. How does your organization involve other parties in your Coop Program activity to improve study results and lower costs?

D. Conduct of Work - Nearly all of the work performed in the Coop Program is done by USGS scientists and technicians. This arrangement is designed to enhance quality control, provide national consistency in data collection and methods of analysis, and provide a stable core of experienced water scientists nationwide.

16. If appropriate USGS quality assurance were made available, would your organization be able to and/or want to perform the data collection portion of a coop project? Please explain.

17. How do you believe the quality and credibility of the Coop Program would be impacted if data collection and analysis were not performed entirely by the USGS staff?

18. Why does your organization use the USGS for assistance rather than other sources (for example, consulting firms, academia, etc.)?

19. What does the USGS offer through the Coop Program that you cannot obtain elsewhere?

20. What is your opinion of the Coop Program contracting out parts or all of the work you have asked them to perform?

E. Products - The products developed in the Coop Program need to be useful to cooperators and other users. These users include representatives of governments, the scientific community, the private sector, and the general public. The products also fulfill national needs by building long term national data bases, augmenting activities in other USGS programs, and providing a national picture of water resources through synthesis of information from individual projects across the country. In addition, the Coop Program advances the development and application of new approaches and methodologies relevant to water resources issues.

21. Is the Coop Program using the appropriate, applicable, and most cost effective level of technology to satisfy your needs?

22. What suggestions do you have for the Coop Program to improve approaches, methods, and technologies to enhance the usability and effectiveness of products?

23. Is the Coop Program conscious of and sensitive to the needs of the cooperator in areas such as:
    a) types of data collected,
    b) documentation of data,
    c) timeliness of products,
    d) value of products, and
    e) other?

24. Do you have timely access to the data you need?

25. In what form will you want Coop Project output delivered in the future?

F. General Closing Question

26. Do you have any recommendations for improving or changing the Coop Program?

2/2/99

TASK FORCE TO REVIEW THE COOPERATIVE WATER PROGRAM

Results of the Verbal Survey of Cooperator

A. General Introductory Questions

1. What is the primary role of your organization (i.e., regulatory, water management, scientific, etc.)?

Cooperator-1	Water Resources Department; water management, regulatory; Water Provider
Cooperator-2	Water Resources Department (WRD) & Department of Environmental Quality (DEQ); water management and water quality management, respectively
Cooperator-3	County Natural Resources Division; provides irrigation water; water planning at the county level; flood control and warning
Cooperator-4	Scientific; primarily geologic and mineral resource information agency in State government
Cooperator-5	Water supply and sewer utility with surface water reservoir.
Cooperator-6	Regulatory state water management agency.
Cooperator – 7	Water planning and management, small regulatory function with regard to county flood-hazard programs.
Cooperator – 8	Regulatory
Cooperator – 9	Regulatory and water management.
Cooperator – 10	Scientific/Geology
Cooperator – 11	Regulatory/Water Management (City/County)
Cooperator – 12	Regulatory
Cooperator – 13	Regulatory (State Agency)
Cooperator – 14	Water resource management and water quantity regulatory agency of state government.
Cooperator – 15	Regulatory.
Cooperator – 16	Planning, monitoring of water resource condition and evaluation.
Cooperator – 17	We have water treatment plants and distribute treated and raw water supplies for irrigation, municipal, and industrial water purposes.
Cooperator – 18	Department of Water Resources. Responsible for the administration of water management and planning activities.
Cooperator – 19	Established for flood control. Owns dams. Recently involved in ground water monitoring in accordance with a “regional plan”. Entity established in 1915.
Cooperator – 20	State water resources management & water quality management.
Cooperator – 21	Agency for abatement of water pollution. Has regulatory, river management responsibility. Applied science is also part of activities.
Cooperator – 22	We are responsible for water management – particularly from the supply point of view.
Cooperator – 23	Water supplier
Cooperator – 24	Regulatory
Cooperator – 25	Water planning, water management and scientific (and interpretive studies)
Cooperator – 26	Regulatory
Cooperator – 27	The primary role is Scientific

Cooperator – 28	For the _____ River its regulatory and water management to the extent that reservoir levels are water management. They have one rather large reservoir that has had some scientific studies over the years, but they are few and far between, and they are done through either the State Health Department or the Department of Environmental Conservation. The involvement that the district has is largely in kind support.
Cooperator – 29	The Department of Environmental Protection is responsible for maintaining and delivering the drinking water supply for approximately ____ million people in _____ City and those upstate communities that tap into this system. We enforce regulations and perform scientific research in our watersheds that assist us in our water management decisions.
Cooperator – 30	Technical Assistance to landowners on natural resource concerns and conservation practices.
Cooperator – 31	Power production & reservoir operation
Cooperator – 32	Water Improvement District is a public water provider serving _____ customers in the metropolitan area and is concerned about meeting safe-yield goals through effective water management
Cooperator – 33	Municipal Water District was organized in 1954. The District includes an area of about 328 square miles. The District contracted with the State to annually supplemental water resources. The District is obligated under a stipulated judgment to maintain the safe yield of the area.
Cooperator – 34	My organization is engaged in water management.
Cooperator – 35	This office is responsible for regulating construction in the floodway, water allocation, statewide flood control planning, and other associated water resource issues .

2. **What is your position in the organization and how does it relate to the USGS Federal-State Cooperative Water Program (Coop Program)?**

Cooperator-1	4 interviewees: 1 hydrographer, 2 hydrogeologists (prepresenting 2 separate coop projects), 1 administrator (Field and Technical Services Div.)
Cooperator-2	Chief Tech. Svc's. Bur., Hydrogeologist, Hydrologist, Manager of GW Monitoring Section, NPS Monitoring Coordinator
Cooperator-3	Division Manager—Manages Coop agreements; Hydrologist—Assists Coop program with data collection
Cooperator-4	Director; AGC has 3 cooperative water programs with USGS
Cooperator - 5	Water Services Engineer; Assistant Director. Working level coordinator and agency-level cooperator with USGS.
Cooperator – 6	Chief of Surface Water Section; Branch, Office Chief (relationships to GS same as (1) above)
Cooperator – 7	Head of Division of Water Planning. I would be responsible for signing coop agreements.
Cooperator – 8	Head of the organization. I sign the cooperative agreements.
Cooperator – 9	Cabinet-level director. Supervisor of individuals who sign cooperative agreements, but I did, in the past, negotiate agreements with the USGS.
Cooperator – 10	As head of an organization that has cooperative agreements with the USGS, I negotiate the scope of work and sign the agreements.
Cooperator – 11	Branch Manager, Technical Services, Air and Water. Has been contact and project manager for COOP program for many years
Cooperator – 12	Middle Management; I have managed many coop contracts over the years.
Cooperator – 14	Director, Division of Water, Department of Natural Resources; Assistant Director, Division of Water, Department of Natural resources (Manages the Coop Program for the State Agency)

Cooperator – 15	Chief of Planning - Main Cooperator.
Cooperator – 16	Administrator of the Office's USGS stream gaging and research/data contracts. Use gaging information often and get priority water research and data studies State Water Plan funded.
Cooperator –17	Assistant Manager responsible for portions of the Project which have been constructed and are operational. Also have responsibilities for engineering (O&M and engineering support), finances and budget, and human resources.
Cooperator – 18	Administer contracts/coordinate with GS on cooperative program work
Cooperator – 19	General engineering program management; General engineering program management; Project execution; Ground water project execution.
Cooperator – 20	General program management; coop project management.
Cooperator – 21	Deputy Executive Director, general oversight of all Technical Programs including USGS cooperative projects; Water Quality Monitoring & Assessment Program Manager; Project Manager of Coop Projects. Also manages other technical initiatives that, in part, have included coop efforts.
Cooperator – 22	I am the Superintendent of Production and Pumping for the city. I am in charge of water supply and treatment for all the areas the city furnishes water to. We use USGS data to monitor water elevations both ground and surface. We also use USGS data for quality monitoring.
Cooperator – 23	Chief Operating Officer; Have responsibility for the contract
Cooperator – 24	Division Director, Water Utilities Division. Provides oversight and guidance on Joint Funding Agreement
Cooperator – 25	Deputy Executive Administrator
Cooperator – 26	Division Director, Water Utilities Division. Provides oversight and guidance on Joint Funding Agreement.
Cooperator – 27	Director
Cooperator – 28	The District's Chief Engineer sets the scope of work on an annual basis and the budget to be approved by an appointed board; the board oversees the District. At DEC, the manager of the USGS contract connects to the various divisions and other departments that are part of the agreement and has responsibility for administering that coordinated effort. A third person is primarily involved in water quality needs and is somewhat focused on groundwater.
Cooperator – 29	I am the Section Chief of Project Management and Budget for Drinking Water Quality. My Division of Drinking Water Quality has had several contracts with the USGS through the years, several of which are on going at this time, and involve cost sharing between our two agencies. I serve as Contract Administrator for these contracts.
Cooperator – 30	District Administrator responsible to coordinate with the USGS on a gage monitoring program.
Cooperator – 31	Power Manager-supervisor of all GS Coop activities, primarily FERC related and 100% cooperator funding.
Cooperator – 32	My position is District Hydrologist. I am the District's project manager for the Aquifer Storage Change Monitoring Project with the USGS. Also, the District's designated technical representative for other USGS Cooperative projects of interest within the Active Management Area.
Cooperator – 33	I am the Assistant General Manager and Assistant Chief Engineer for the District. I participate in implementation of the projects the Board of Directors advocates for the District.
Cooperator – 34	I am the Assistant General Manager in this organization. My primary responsibility is for water resources planning and management functions. I also manage the cooperative programs with USGS.

Cooperator – 35 My position is Division Manager of the Division of Planning. This Division administers the Federal-State Cooperative program for the Office of Water Resources.

Cooperator – 36 Watershed Monitoring Coordinator; Resource Protection Manager - Contract with USGS to do surface water quality study.

3. Has your organization participated in the Coop Program for more than 5-years?

Cooperator – 1 Yes

Cooperator – 2 Yes

Cooperator – 3 Yes

Cooperator – 4 Longest standing State agency with Coop Programs over 40 years

Cooperator – 5 Since 1990

Cooperator – 6 Since 1956+/-

Cooperator – 7 No, but we would like to do so, and we do use USGS data collected through the Coop Program but funded by others.

Cooperator – 8 Yes, since about 1905.

Cooperator – 9 Yes

Cooperator – 10 Yes, for decades.

Cooperator – 11 Yes (More than 24 years and probably from at least 1966.

Cooperator – 12 Yes

Cooperator – 13 Yes

Cooperator – 14 Yes, we have participated for approximately 50 years.

Cooperator – 15 Yes

Cooperator – 16 Yes. We have been a cooperator since 1895.

Cooperator – 17 We have been an active participant for a long-time; much longer than 5 years.

Cooperator – 18 Our Department has been involved with the Coop Program for about 34 years.

Cooperator – 19 Yes. Have participated beginning in 1931.

Cooperator – 20 Yes (many years of coop program participation)

Cooperator – 22 We have participated in some form of cooperator program with the USGS since 1940. I, personally, have been involved with the USGS cooperator program since 1990.

Cooperator – 23 8 years

Cooperator – 24 No. (Entered into on March 5, 1998)

Cooperator – 25 For at least 50 years.

Cooperator – 27 Maryland has been with the Coop Program since 1945Cooperator – 26 No. (Entered into on March 5, 1998.

Cooperator – 28 The District has a long history of involvement dating to their formation in 1919, and there was probably some association of the same interested parties before. The District is unique in the State, as the downstream beneficiaries of their activities pay heir cost for operations. There is no state or federal money involved. Another part of the organization is pretty sure that they have been involved for seventy years or more.

Cooperator – 29 Yes

Cooperator – 30 No - 3 or 4 years.

Cooperator – 31 Yes 25+

Cooperator – 32 The District has only participated in the USGS Cooperative Program, since the project began in September 1995. The District became a public water provider in October 1992 and became active in long-term water resources management in November 1993.

Cooperator – 33 The District first contracted with the USGS in the cooperative program some time in the late 1960's or early 1970's. The District has contracted in the

cooperative program every year since then for numerous surface water and groundwater data collection programs as well as numerous special studies.

Cooperator – 34 Yes

Cooperator – 35 Yes, the Office of Water Resources has maintained a strong cooperative gaging and studies program with the USGS for several decade

Cooperator –36 Yes

4. What is your organizations current level of financial participation? How has it changed over time?

Cooperator – 1 $400,000; $367,000 matched, balance unmatched.
Increased significantly beginning approx. 10 years ago.

Cooperator – 2 WRD: $697,000; State $100,000

Cooperator – 3 $90,000. Program is steady with time, often not keeping up with inflation.

Cooperator – 4 Stream gaging $38,300; Water Quality $31,855; Ground Water $54,456; Decreasing over time

Cooperator – 5 $200,000 Stable at present.

Cooperator – 6 $487,730. Has increased but now stable

Cooperator – 7 Zero, but we hope to get $8,000 for fiscal year 2000.

Cooperator – 8 A total of about $316,000 per year, of which about half is passed through from other organizations, including the mining industry, local governments, tribes, and the Federal Water Master). The total amount fluctuates.

Cooperator – 9 Roughly $500,000 to $1,000,000 per year, but variable.

Cooperator – 10 $5,000 per year, and steady for several years, but down from prior to 1988.

Cooperator – 11 Currently $97,154; Amount has been fairly steady, increasing slowly due to inflation, with occasional spikes when special projects were done

Cooperator – 12 It ranges between $200,000 and $300,000 annually. It has remained steady over time.

Cooperator – 13 About $245,000 split between two departments. Amount has occasionally increased substantially to accommodate special studies

Cooperator – 14 $900,000 currently. In 1991, it was $680,000. In 2001, it is anticipated to rise to $950,000. In 1991, only $80,000 was unmatched. $283,000 is currently unmatched.

Cooperator – 15 $175,000. Diminished over time.

Cooperator – 16 Total $500,000. Has generally declined over time.

Cooperator – 17 Approximately $40-45,000. We also have a portion that goes unmatched, but I am not real sure what that level is. Our level of participation has remained steady for several years now. We sometimes have the GS install gauges for us during the year as an expense to us. But before the new year begins, we discuss our upcoming year's needs with GS under the COOP Program and include those gauges installed during the mid-year as part of the upcoming cost share program. So over time, I guess, there is a gradual increase in our program participation.

Cooperator – 18 Our level of participation in the Coop Program has been $600 - $800K for last few years and in the same types services. The amount/quantity of work has been decreasing, however because of inflation.

Cooperator – 19 Current program cash match approximately $50k. Has not changed dramatically. Program is continuous in nature, but has eroded due to increased program costs without commensurate additional USGS match funds.

Cooperator – 20 Current fiscal year: $170k cash match plus $69k in-kind.
Changes have been plus & minus, driven by availability of state funding.

Cooperator – 21 Current level $80k. Changed our time – last year (calendar year 98) $35k. Recent previous project ± $30k.

Cooperator – 22 The City participates at a level of around $500,000.00 annually. That includes a demonstration project and another project in a Reservoir Watershed. The USGS participates with us at about a 50% partnership.

Cooperator – 23 $85,000 Steady last 3 years

Cooperator – 24 The Water Utilities Division joint funding agreement with the USGS is 2.25 million with a match by USGS of $250,000.

Cooperator – 25 We are participating on the Data side only now. The level of participation is $500K from the Coop Program and $800K from the state. The state found that interpretive studies could be more efficiently and more cheaply contracted out to the private sector and no longer looks to the Survey for participation in this area.

Cooperator – 26 The Water Utilities Division joint funding agreement with the USGS is $2.25 million with a match by USGS of $250.000.

Cooperator – 27 FY 98 $597,000, FY 99 $441,000. The level changes year to year, with the big change 3 to 4 years ago.

Cooperator – 28 When state made gage reductions, the district did pick-up some of the critical stations in their area of interest in the watershed area. They currently have a total project value of $120,000 which they pay $64,000 in cash and evaluated services.

Cooperator – 29 The following contracts are ongoing:
Project 1: State cost: $3,806,127; USGS cost: $1,703,514;
Contract Term: July 1, 1995-June 30, 2001

Project 2
State cost: $2,779,1132; USGS cost: $186,404;
Contract Term: July 1, 1994-June 30, 2000

Operation and Maintenance of Hydrologic Gages
State cost: $735,812; USGS Cost: 0
Contract Term: September 3, 1998-September 2, 1999
Since 1992 the another Division has had larger contracts with USGS than before that time.

Cooperator – 30 Approximately $2500/year----no change

Cooperator – 31 18,990 in Coop Program, $60K total----very steady

Cooperator – 32 Year 1 50% USGS-$53,500, 50% State Grant (DWR) - $53,500
Year 2 25% USGS-$15,000, 50% District - $30,000, 25% Municipal - $15,000
Year 3 33% USGS - $15,000, 33% District - $15,000, 33% Municipal- $15,000

Cooperator – 33 The District's financial participation for recent years is tabulated below. Generally, the District's contribution to the cooperative program has increased over time.

Fiscal Year	Total Cost	USGS Funds	State Funds
1998-1999	$1,087,450	$351,400	$736,050
1997-1998	$1,066,915	$344,225	$722,690
1996-1997	$1,289,950	$399,610	$890,340
1995-1996	$ 669,815	$270,225	$399,590
1994-1995	$ 593,850	$283,825	$310,025
1993-1994	$ 683,300	$249,250	$434.050

Cooperator – 34 Current level of financial participation is $600,000 + per year. It has increased from roughly $50,000 to this level since 1990

Cooperator – 35 The state presently funds $285,000 toward stream gaging in the state. Additional funds are provided for studies, currently approximately $65,000. Funding for the Cooperative Program has remained the same for the past several years with no growth.

Cooperator – 36 $85,000 (cooperator share), steady

5. What types of programs/projects are you involved in with the USGS under the Coop Program?

Cooperator – 1 Surface water gaging; ground water interpretive studies

Cooperator – 2 WRD: $215,000—GW Quality Mostly basic data collection, WRD has coop'ed in $482,000—GW Supplies interpretive studies in the past. DEQ: SW Quality; principally data collection program.

Cooperator – 3 Mostly stream gaging and 2 or 3 water quality monitoring stations. SW quality study with GS & BLM

Cooperator – 4 See #4

Cooperator – 5 Primarily surface water data (quantity and quality) collection.

Cooperator – 6 Mostly surface water stream gages. 25% interpretive studies

Cooperator – 7 We particularly need the data from the annual and five-year water-use surveys.

Cooperator – 8 Stream gages, ground-water level measurements, and interpretive studies.

Cooperator – 9 Stream gages, ground-water level measurements, and interpretive studies

Cooperator – 10 Mostly collecting data, particularly chemical compositions of ground waters. We have focused on what appear to be emerging issues rather than routine analyses.

Cooperator – 11 Data collection, reports and technical services and isotope modeling. Salt water Intrusion monitoring is done about every 5 years. Next year, an Aquifer Storage and Recovery (ASR) feasibility project is contemplated. In the past we also obtained a data report which has been discontinued but which we are now reinstating.

Cooperator – 12 Data collection and investigative reports

Cooperator – 13 Salt water intrusion monitoring, ground water level monitoring. Streamflow measurements with Acoustic Velocity Meters in two canals. At present there are no interpretive studies

Cooperator – 14 Stream gage network (01), Ground water network (02); Previously had large interpretive studies funding, but no interpretive studies are being funded now.

Cooperator – 15 Hydrologic support of water quality studies.

Cooperator – 16 Gages, partial gages, channel migration, sediment studies. Data collection and specialized research studies.

Cooperator – 17 All streamgaging. We had the GS complete a sediment transport study for us a few years ago, but I don't know if we had that completed through the COOP Program.

Cooperator – 18 Our Department's primary interest is in surface and ground water monitoring and ground water quality data collection. We do very little Coop work related to interpretive studies.

Cooperator – 19 Continuous program is stream gauges. In this case, we maintains gauges ourselves with data sent to GS. QA/QC is to GS standards. GS visits/audits. Twenty-two gauges are maintained with coop funds. Total of 46 gauges in overall system. Also has ground water wells. GS does sampling and lab analysis. Recently completed multi-year study to characterize ground water

near in a region as well as understand ground water budget and uses. MODFLOW was used.

Cooperator – 20 Stream gauging; match funding of a basin coordinator (USGS staff) for states' watershed management approach (TMDL's is important component).

Cooperator – 21 Currently doing monitoring (high volume Dioxin sampling) and river flow management (acoustic Doppler). Historically projects involved cross-section river water quality sampling (for QC/QA) routine nutrient sampling and laboratory services.

Cooperator – 22 See above response.

Cooperator – 23 Water quality monitoring, special project of water quality modeling and sedimentation measurements in water supply lake

Cooperator –24 Source Water Assessment and Protection Program development consisting of several tasks: Development of computer software which will be used by our staff to perform source water assessments for all public surface-and ground-water supplies in the state; conduct surface water susceptibility assessments according to general project workplan; conduct surface water runoff determinations according to general project workplan. These determinations will complement the approach for assessing the degree of susceptibility of public surface-water supplies to contamination; and, conduct groundwater susceptibility assessments according to general project workplan.

Cooperator – 25 Long-term data collection from stream-, lake- and well gages.

Cooperator – 26 Source Water Assessment and Protection Program development consisting of several tasks: Development of computer software which will be used by our staff to perform source water assessments for all public surface-and ground-water supplies in the state; conduct surface water susceptibility assessments according to general project workplan; conduct surface water runoff determinations according to general project workplan. These determinations will complement the approach for assessing the degree of susceptibility of public surface-water supplies to contamination; and, conduct groundwater susceptibility assessments according to general project workplan.

Cooperator – 27 Ground water assessment, basic data collection, stream gage networks, water quality studies and well water levels. The state and USGS are cooperating in the same project with good cooperation with each staff. In some cases the state has the lead and in other cases the USGS has the lead. The state has developed their own geology staff, because of the transfer policy of USGS. The state wants long term experience with in the geology projects in the state.

Cooperator – 28 The District has stage/discharge sites for a number of stream locations and make daily decisions on how to manage the reservoir system with that data.

Cooperator – 29 Under our two current cooperative contracts, work is on-going in the following areas: The contract covers the following:

- Nitrogen Movement in Soils Project (Nitrogen Enhancement)--This work is an enhancement of an existing effort in which temporal data is being assessed for the effects of logging on nutrient flux in the mountains and will provide additional scope of sampling and monitoring information that will lead to better understanding of hydrologically sensitive areas.

- Extension of the _____ Watershed Study--USGS will continue stream flow gaging at one location and discharge related sampling for chemical analysis at selected locations upstream of the stream flow gaging site. The project will be directly linked with an atmospheric deposition study in a sub-basin within the watershed.

- The hydrological monitoring contract covers the following:

a) Ground Water Monitoring Network--The USGS collected water quality samples at 5 randomly distributed wells within each of the 16 designated groundwater areas throughout the Watershed. Based on the results of the water quality analyses, one of the five wells in each area was chosen as an index site and water level instrumentation was installed at that site. The USGS is continuing to collect water quality data at the index sites.

b) Headwater Gage Construction--Headwater streamflow gages were constructed at 44 sites at a rate of approximately 9 sites per year for fiscal years 1996-2000. Eight of the gages are located in the headwaters of the watershed as had been determined by a previously completed USGS GIS analysis. The remaining 36 gages will be located at headwater sites within another watersheds as proposed by the city.

c) The following types of data will be collected:

1. 51 stream flow sites
   i. 7 reservoir outflow sites
   ii. 8 headwater gages
   iii. 36 headwater gages
2. 15 goundwater observation wells
3. 30 water quality sites
   i. 7 reservoir outflow sites
   ii. 8 headwater sites
   iii. 15 groundwater sites

In the third on-going contract, Operation and Maintenance of Gages, a match from USGS is not part of this contract, although we believe it should be. This contract required USGS to operate and maintain a network of 51 streamflow gages that they installed under contract with the city. The gages measure streamflow at sites in the watershed, both East and West of the main river. The operation and Maintenance of the gages involves retrieving the data, insuring the integrity of the data, preparing the data for use, and preparing data reports.

Cooperator – 30 Operation and Maintenance of a river gage

Cooperator – 31 All gaging operations

Cooperator – 32 Natural recharge investigation of the basin. Long-term monitoring of aquifer storage changes using gravity methods at stations along and across the Wash and basin periphery. Information will be used to access contribution of natural recharge on water budget, impacts from groundwater withdrawals and identify favorable and non-favorable areas of stream recharge. This cooperative project has been a joint effort with the USGS and the two water providers in the lower basin.

Cooperator – 33 The District is involved in Surface Water data collection programs including flow and quality, ground water level monitoring programs, groundwater water quality monitoring programs and various special studies. The special studies have included mapping, subsidence, ground water quality studies, ground water basin modeling.

Cooperator – 34 Basic data program (Stream gaging, ground water level and quality monitoring), groundwater basin modeling, water quality and age-dating to determine source and movement, water quality problem assessment (nitrate source and movement modeling), subsidence quantification and monitoring, mapping of surface geology, assessment, mapping and monitoring of riparian habitation extent, viability and sources of water supply, development of

ground water monitoring systems (nested wells), ground water contour mapping, ground water quality mapping.

Cooperator – 35 Stream gaging, regional regression equations, runoff parameters, n-values, trends, etc.

Cooperator – 36 Water quality study in the _____Watershed, principally data collection

6. Does your organization foresee a change in the programs/projects it requests of the Coop Program in the future? Do you see the need increasing or decreasing?

Cooperator – 1 Would like to see increases in Surface Gaging. Would like to see increased effort in ground water interpretive studies—currently not keeping up with emerging issues, esp. gw/sw interrelationships Would like to see increased water chemistry emphasis
HOWEVER, cannot see necessary increases in budget to fund same.

Cooperator – 2 Maintenance

Cooperator – 3 May have to reduce the number of SW gaging stations due to funding cuts.

Cooperator – 4

Cooperator – 5 Policy changes within the USGS will cause a decrease in data collected
Expect to do background WQ characterization in areas of sewer overflows/ water quality modeling in future.

Cooperator – 6 Stable at present. Don't foresee change up or down

Cooperator – 7 We see the need increasing, because there is more demand for better water-use data.

Cooperator – 8 We see the need for more studies increasing, particularly with regard to the impact of mining a major river. State funding is likely to be about the same.

Cooperator – 9 We see an increasing need.

Cooperator – 10 We do not anticipate major changes. Needs are increasing, but funding is level. We are losing ground with inflation.

Cooperator – 11 Expect a general gradual increase. However several new initiatives are contemplated by City Government which could benefit from COOP program. These include: Water supply investigations based on Water Management District declaration of area as a Critical Water Supply Area; Aquifer storage; City is currently seeking $60,000 in funds to match available COOP funds for this project.

Cooperator – 12 No, I don't see many changes in the future. However, the need may increase.

Cooperator – 13 Yes. I foresee increases in surface water monitoring.

Cooperator – 14 May need to discontinue more gages to have enough money to keep network funded. The increasing cost of program has caused this agency of state government to cut its own travel budgets and related activities to fund the gaging network. Decreasing.

Cooperator – 15 Maybe slight increase.

Cooperator – 16 I think we need more gages. Also more flood forecasting. We will move somewhat in the direction of data collection for evaluation and monitoring purposes and similarly with special studies.

Cooperator – 17 I don't foresee any significant changes in the future. As I said earlier, our level of participation has seen a gradual increase in our need for more streamgaging services. I do believe that trend will continue. From time to time we have GS install and monitor short-term stations (3-5 years) for us so that we can do some correlation studies, and that increases the need for GS services for a short period.

Cooperator – 18 We see a greater need for data collection, especially in ground water monitoring and water quality to assist us in providing definitive answers to surface water, ground water, and water quality interactions. We have about

	$100K in the program that goes unmatched, however state funding is decreasing and our requirements for more data are increasing.
Cooperator – 19	Recently received a USEPA grant to develop river index, GS being used as a consultant to the project. As this is specific project, does not represent a program shift. Regarding needs increasing/decreasing; Needs roughly constant. Problem is erosion of program due to inflation against constant levels of funding.
Cooperator – 20	Want to investigate low flows in streams (via spot measurements) to gain better database & understanding) Need is unmet (paucity of current data) due to lack of state funding plus other agency cutbacks (eg. Corps of Engineers)
Cooperator – 21	Currently requests are project specific & thus difficult to predict; particularly interested in flow measurement.
Cooperator – 22	After the demonstration project in the ____ Beds is complete, we will move into the regular phase of the project. During that time, I think our need for USGS Coop Program partnership will increase.
Cooperator – 23	Yes, will study the results of studies and make adjustment (may include organics). Possibly decrease or change studies.
Cooperator – 24	Possible expansion of project and funding to include sampling, data gathering, etc. We foresee an increasing need for such coop programs.
Cooperator – 25	We see the level of participation remaining about the same, and if anything, the Coop participation decreasing with time as more gaging stations are taken out of the program. The Texas legislature has approved a large budget increase for the our agency to fund these types of water projects.
Cooperator – 26	Possible expansion of project and funding to include sampling, data gathering, etc. We foresee an increasing need for such coop programs.
Cooperator – 27	The State foresees a problem in the future when in some cases there may be a conflict between state and nation objects. There should be more effort to provide matching money. USGS is subject to specific objectives of the Coop Program and may not be able to match the state needs. There must be a match between science and data collection needs. In our state, the state staff may do more of the work and the water quality lab do more of the water quality analysis. There is no need to move toward small specific project; the need is for area wide efforts. The state would like to see more integrated projects, with a combination of staffs doing the work.
Cooperator – 28	The state agency is trying to infuse a little more money into the USGS agreement for necessary program improvements. Their first priority would be to add some critical groundwater monitoring wells. After that they would upgrade their surface water network, that has many stations that are fairly old and not very modern. They also are in the process of developing a program that they expect to cost about $300,000 to do primary aquifer mapping. They also indicated that there were some changes occurring with other cooperators in the State, and mentioned one County as one that is experiencing change.
Cooperator – 29	We see a need to maintain our current programs. Research projects may decrease in the future.
Cooperator – 31	Possibility of increased gaging if funds are available.
Cooperator – 31	No
Cooperator – 32	The District would like to see a change in the local development of other Cooperative projects that have regional benefit to all water users. For example, the Subsidence Study focused on the needs of one large water provider, yet geographically encompassed many other smaller water providers, however; those water providers were not involved in the development or financing of the project. These water providers are projected to experience future water level declines and possible subsidence.

Technically, the project benefits the water provider with the largest water supply problems, but from a regional water management perspective ignores the needs of the other water providers.

Cooperator – 33 The district is interested in continued and increasing participation with the USGS. Reactivation of abandoned surface water stations and additional surface water monitoring stations would be helpful to the District for water resource management. The District also has need for additional groundwater management investigations. Further, the USGS should expand its programs to include climatologic data accumulation.

Cooperator – 35 The Office of Water Resources is only one agency under the State Department of Natural Resources. The DNR has needs for greatly expanded data collection efforts, but remains unfunded to obtain the data. Current budget levels are likely to continue for a number of years, keeping our requests similar to past requests, even though a greater need exists.

Cooperator - 36 Some increase. Would like to explore whether down cutting and surface erosion are factors in water quality.

B. Mission - Historically, the Coop Program has been designed to develop hydrologic data and technical analysis needed to assist in meeting the USGS mission of continuously assessing the Nation's water resources, and to provide technical assistance to state, tribal, and local water management agencies in seeking solutions to water-resource issues of national concern through a matched funding arrangement.

7. Explain how the Coop Program assists your organization in accomplishing its activities, goals, and responsibilities?

Cooperator – 1 Surface Water: Data collection; 1. All data are made available regardless of funding source or state of origin. GS is very cooperative in disseminating data. 2. Data used in water availability analyses, in water management, in water allocation. Ground Water: Data interpretation; 1. Expands agency expertise in evaluating ground water resources. 2. Provides improved understanding of resource enabling better management, allocation and development decisions. 3. Provides basis for improved protection for senior water rights. Training: Access to national training facility and other USGS programs enhances agency staff competence. Credibility: Independence of GS interpretive studies provides credible support for agency management decisions.

Cooperator – 2 DEQ: Surface water gaging and water quality data collection WRD: Provides long term data for interpretive studies and for water management. Characterizes statewide GW quality and quality trends—worked well because GS has lab and trained staff and could help develop QA/QC procedures. Through time participation in coop program has been cyclical: As GS is more interested in data collection, participation grows; as GS is more interested in interpretive studies, participation wanes. GS provide defensibility, warranty, continuity.

Cooperator – 3 Provides raw data for: flood warning, Fulfillment of permit and license conditions water distribution, site investigations.

Cooperator – 4 Provides baseline data of the water resources of the state that aids in research projects, environmental issues, et

Cooperator – 5 USGS provides data to enable watershed management.

Cooperator – 6 Real time data for managing water withdrawals under state law.

Cooperator – 7 NOT APPLICABLE.

Cooperator – 8	USGS studies provide us with credible estimates of perennial yield from ground-water basins. These estimates hold up well in court.
Cooperator – 9	The scientific analysis of perennial yields from ground-water basins is particularly useful. The USGS studies have high credibility in court.
Cooperator – 10	The USGS has provided useful ground-water quality data and ground-water level data. We have two prime examples of these data aiding major efforts by us, in studying radon hazards and land subsidence due to ground-water withdrawal.
Cooperator – 11	Allows us to obtain necessary data without adding staff (the City is under pressure to reduce staff). Provides us with added technical expertise, which the City does not have. The COOP program adds credibility. It improves our professional capability through association, networking and synergism. Opportunity for on the job and formal training
Cooperator – 12	The coop program collects essential data and conducts important, water related interpretative studies for the Department.
Cooperator – 13	The COOP assists us in data collection, database management, in making data available to the public, providing technical expertise, including serving on committees, giving technical support as well as hydrologic interpretations and technical data and opinions.
Cooperator – 14	Baseline data collection and verification. The program provides valuable date used for water planning and flood hydraulics studies.
Cooperator – 15	Provides flow data to supplement water quality analysis for TMDL development.
Cooperator – 16	Keep track of the state water quantity planning in areas where quantity and quality problems arise.
Cooperator – 17	From an independent standpoint, the COOP Program provides us with streamflow information so that we can get the right flows, to right place, at the right time. With water administrative responsibilities that the District has in cooperation with the State Engineer's Office, this is vital information we use every day.
Cooperator – 18	Our Department relies on GS for data collection. GS also participates on Techincal Advisory Committees led by our Department. They offer to us advice and guidance on our special studies.
Cooperator – 19	Data from gauges used to maintain rating curves; thus flood forecasting. Stage forecasting important to decisions by sewer collection system managers to shut off overflow points to keep river from surcharging (by-passing raw sewage). Ground water data gives long term trends. Information from coop program essential to our mission.
Cooperator – 20	Program is crucial to ability of agency to carry out responsibilities. Data establishes 7Q10 flow, calculates return frequency for floods & droughts. These and other uses of data are core to the agency's mission.
Cooperator – 21	Provide field monitoring resources (people & technologies) not available otherwise
Cooperator – 22	The main thing the USGS provides for us is impartial science. I can't stress that enough.
Cooperator – 23	Develop baseline water quality data for trend analysis, special programs, etc.
Cooperator – 24	Working with the USGS has provided our program with both the technical expertise and solid science needed to develop technically defensible assessments of all public water supplies in the state. We have been given the opportunity to evaluate all possible technical approaches for assessing susceptibility and to recommend technically defensible alternatives that could be accomplished statewide with the best available data within the time frame outlined in the plan.

Cooperator – 25 Long term surface water and aquifer gaging is extremely important in assessing the water resources of the State and potential interbasin transfers that may be required in the future. Interpretive studies will be bid out to the Survey as well as the private sector.

Cooperator – 26 Working with the USGS has provided our program with both the technical expertise and solid science needed to develop technically defensible assessments of all public water supplies in the State. We have been given the opportunity to evaluate all possible technical approaches for assessing susceptibility and to recommend technically defensible alternatives that could be accomplished statewide with the best available data within the timeframe outlines in the plan.

Cooperator - 27 The USGS provide expertise in modeling and model development a specific model. They also provide expertise in the analysis of the data collected and water quality problems.

Cooperator – 28 The District finds the cooperative program to be essential to their daily operation. It provides Critical information that they use to make day to day decisions.

Cooperator – 29 The enhancement of the USGS gage network has provided critical data for use in water quality models (a Filtration Avoidance Deliverable) and provided information to assist in the interpretation of water quality data collected by the department. Other Coop interpretive projects have provided information for the department to better evaluate proposed projects in these areas.

Cooperator –30 Provides vital river flow data used in planning and managing water conservation programs.

Cooperator – 31 Meeting FERC requirements and to collect additional water resources data

Cooperator – 32 Personally, I do not believe the Coop Program is not as locally effective as it should be in accomplishing its mission. Water management and institutions in the area have drastically changed in the last 5 years. Three new public water providers have emerged in response to interest for public management of water supplies in growing urban areas. Additionally, private water providers in the area just south of here have organized together to assess water management options. The majority of Cooperative projects started more than five years ago were solely for one public water. Future cooperative projects that have regional goals need to be inclusive and discussed in an open process for all beneficiaries.

Cooperator – 33 Data accumulated and studies performed by USGS are used by the District to insure compliance with various judgments and insure adequate long term water supplies to the residents within the District. The groundwater models presently under study through the cooperative program should assist the District in managing water supplies to prevent hazardous conditions of liquefaction.

Cooperator – 34 Basic data (stream gage information, well levels and water quality) are fundamental to management of ground and surface water resources. This data is routinely used to monitor overdraft conditions and perform basic hydrologic inventory. USGS stream gage data in particular is essential to implementing specific features of a court judgment affecting basin management. The special studies underway or completed are needed to clarify the manner in which the ground and surface water system interrelate and to characterize the ground water basins in general. The basins are complex and much remains to be determined. This was acknowledged by the referenced court judgment. Therefore, data developed by the USGS could be fundamental to future modification and implementation of the court judgment physical solution and resolution of several controversial issues.

Cooperator – 35 We rely upon collected data, historical and real-time, to manage the water resources of the state. Long term record is needed to determine accurate estimates of flow and frequency, trends, and regional changes. Real-time data is needed to assess high and low flow problems, recreational needs, and to help quantify water quality issues.

Cooperator – 36 Identification and management of contaminant sources.

8. Is cost sharing a necessary element in your organization's participation in a cooperative agreement with the USGS? Please explain.

Cooperator – 1 Absolutely; couldn't afford studies w/o GS cost participation

Cooperator – 3 Partly: necessary in investigations. However, permit driven work must be done whether there is a cost share or not. GS adds integrity and credibility the county might not have.

Cooperator – 4 Cost sharing is very important. In-kind service on projects is also important, but USGS-WRD doesn't recognize it in the Cooperative program.

Cooperator – 5 Would prefer to work with USGS in spite of any cost share reduction but might have to consider cuts in work done.

Cooperator – 6 Yes, it will be.

Cooperator – 8 Yes, but only for some studies.

Cooperator – 9 No

Cooperator – 10 Yes

Cooperator – 11 Total absence of cost share would probably result in a serious reconsideration of the program, including possible reduction or elimination. Some reduction in cost share could probably be acceptable. At present there is some unmatched portion of the program and this has not caused any flack. Cooperator – 12It is not always necessary. However, the fact that the federal government shares the cost is very important in the final decision as to whether the projects are funded.

Cooperator – 13 Yes. If we had to pay the full cost for the program we would seriously consider doing it ourselves.

Cooperator – 14 Yes, it is typically very important. If the agency had funds available, they might be willing to pay full cost – if USGS would do the study the way the state wanted it done.

Cooperator – 15 Absolutely. It provides enhanced direction in ongoing studies.

Cooperator – 16 Yes. Our level of participation with USGS in cooperative agreements would likely decrease significantly if USGS didn't cost share.

Cooperator – 17 Cost sharing is a necessary in order for us to get the coverage we need to monitor and administer water. Without the Program we would have to drop some stations and without that data, we would be inviting more argument/uncertainty and would be hampering our ability to operate the project effectively.

Cooperator – 18 Yes. Without cost-sharing our data collection needs would be too expensive for us to go it alone.

Cooperator – 19 Yes. Couldn't afford otherwise. Without cost sharing, would not have benefit of GS expertise and cooperative problem solving.

Cooperator – 20 Program is crucial to ability of agency to carry out responsibilities. Data establishes 7Q10 flow, calculates return frequency for floods & droughts. These and other uses of data are core to the agency's mission.

Cooperator – 21 On the basis of 50/50 answer is yes. Without such cost share ratio, more cost effective for us to go elsewhere or do in-house.

Cooperator – 22 The cost share is necessary. If we had to supply the entire financial backing for the project, the City wouldn't look at doing it. For example, the _____ project would be greatly scaled down. We wouldn't be looking at the pure science end of the project so much as the bare minimum necessary to meet our political needs.

Cooperator – 23 Yes, USGS cost would have to compete with others. Would requests proposals on projects.

Cooperator – 24 Yes, cost sharing provides us with the opportunity to do more for less money. This provides a "win-win" situation for both parties.

Cooperator – 25 Cost sharing is an important element of participation, but the quality of service provided by the Survey is equally important.

Cooperator – 26 Yes, cost sharing provides us with the opportunity to do more for less money. This provides a "win-win" situation for both parties.

Cooperator – 27 YES, in MD it is hard to obtain all the funds needed to do the entire job. Matching funds allow the state money to go farther.

Cooperator – 28 The District feels that the answer is yes and no. It is critical data, and if the USGS Coop Program stopped or reduced its effort the district would have to figure out how to continue the work. They see a lot of negatives. The cost would be a small problem compared to the credibility issues that they would face if they were the sole provider of information

D.E.C says that it is essential that coop support stay at 50/50. If they had a reduction, they would probably have to reduce expectations for groundwater mapping and other activities that are currently planned and considered to be very important. There is no interest in State government in substituting a State program for the current cooperative program.

Cooperator – 29 Yes, cost sharing is important to our agency. It keeps the cost of the overall project down and allows us to do more of the research that is helpful in understanding our watershed systems, which assists us in making water management decisions.

Cooperator – 30 Yes - district is currently putting 10% of its budget (operating) into this gage.

Cooperator – 31 Not if the data is necessary

Cooperator – 32 Cost sharing is the standard for which the District uses for any regional investigation that benefits multiple entities. The district believes the federal and State government have a duty and societal role in financially contributing to the better scientific understanding of regional water resource issues.

Cooperator – 33 The District would be delighted if the USGS would "match funds" on all the programs the District desires to cooperate with the USGS.

Cooperator – 34 Cost sharing is fundamental. The USGS programs are a significant budget line item each year. The cost sharing component allows managers to demonstrate significant value from the dollars that are allocated to the programs.

Cooperator – 35 Yes, to continue funding the USGS for stream gaging and water resource studies, a cost sharing arrangement is necessary with the USGS to make it financially beneficial. Only if the USGS were willing to fund a study or gage by themselves would cost sharing not be required. The administrative costs of the USGS make it necessary for them to pay these costs and a portion of the program cost to make it worthwhile for us to participate.

Cooperator – 36 No. Need and want access to expertise.

9. What is the minimum USGS cost share acceptable to your organization?

Cooperator – 1 50/50. Arguments against greater cooperator share:

	-becomes less of a truly cooperative effort -becomes more attractive to do in-house -already go beyond 50/50 by supplying direct effort -Requiring greater than 50% from cooperator would cause cooperator to explore cost use of consultants. Cost share should go the other way—federal share should increase to reflect extent to which federal government controls the watersheds.
Cooperator – 2	50:50 because of flat budgets, and because assessments against coop dollars are used to fund activities/programs not of interest to the cooperators.
Cooperator – 3	50:50, A greater share of the total costs would result in county backing out of some or all of the work because of flat funding at the county level.
Cooperator – 4	50-50
Cooperator – 5	Would not like to see 50-50 reduced but would probably use USGS if it were zero federal share.
Cooperator – 6	Would have to cut somewhere if GS funding reduced.
Cooperator – 7	50%
Cooperator – 8	0% when funds are passed through from other organizations.
Cooperator – 9	We prefer 50:50, but we can go with less, as low as 0%.
Cooperator – 10	50%. We are required by State Law to not put more than 50% of the money we have in one category into cooperative agreements with the USGS. Somewhat in jest, because most of the land in the state is managed by the federal government, and because the Coop Program matches on a 50:50 basis on projects on non-federal land in many other states, we feel that a good match for us should be 93.5:6.5, wherein the state is matching 50:50 on the non-federal portion, and the federal government (USGS plus other agencies) is covering 93.5% of the total cost.
Cooperator – 11	I would estimate about 30% COOP match to be the minimum, but the size of the program would depend on the amount of cost share. Reduction in USGS cost share would most likely result in reduction in the program.
Cooperator – 12	I am not sure.
Cooperator – 13	At present the ratio COOP/Agency is about 40/60 and this is acceptable but beginning to be too costly. The ratio has gradually changed from 50/50 due to the fact that the COOP costs have increased while COOP dollars have remained the same.
Cooperator – 14	50/50 is appropriate, but could accept 60/40 if given more control on end results.
Cooperator – 15	50%
Cooperator – 16	Unknown. It would depend upon the specific data collection program and research study.
Cooperator – 17	50/50 cost share works good for us. Any more participation by a cooperator would seem to create a perception that the information may be biased toward those cooperators that contribute more. The GS to us offers an independent and unbiased source of data that other groups, particularly outsiders looking in, accept and acknowledge as good information.
Cooperator – 18	We are at a 50-50 cost share right now for the most part. We do have a portion that goes unmatched as stated above. It is difficult for me to say what is the minimum USGS share we could go because there is the issue of how competent/competitive we could be to GS.
Cooperator – 19	If much lower than 50/50 would question benefit. This is an economic issue.
Cooperator – 20	50/50 is minimum.
Cooperator – 21	60/40 split would be borderline at best.
Cooperator – 22	Below a 60/40 share, we would have to greatly re-think whether it would be a cooperator on projects or not.

Cooperator – 23 50-50

Cooperator – 24 There is no minimum cost share. However, the larger the match or share, the greater and more encompassing the project can be for both agencies.

Cooperator – 25 No funding at all would be acceptable to the board as more money is made available by the state legislature.

Cooperator – 26 There is no minimum cost share. However, the larger the match or share, the greater and more encompassing the project can be for both agencies.

Cooperator – 27 50%

Cooperator – 28 Covered in #8.

Cooperator – 29 This is flexible, depending upon the project. If a project has great national interest, we would expect to have a significant part of this project paid for by the Federal government. Generally, we believe the cost share should be 50/50.

Cooperator – 30 50%

Cooperator – 31 Doubt they would drop the gages even in 0%

Cooperator – 32 The District has had limited experience with the USGS Cooperative program, but we believe the maximum Federal contribution should be 75% and the minimum contribution should be 25%

Cooperator – 33 The District prefers the 50% cost share, "matched funds arrangement" that prevailed in past years. The District has agreed to different cost sharing agreements when the data or study is of vital interest to the District. The District has also purchased and supplied instrumentation equipment for installation in USGS facilities.

Cooperator – 34 50/50 is preferred, 60/40 (agency/USGS) is acceptable for the final mix within a cooperative program containing several components.

Cooperator – 35 The USGS should continue to fund a minimum of 50% of the total program cost.

Cooperator – 36 Could bear 100% of cost

10. Explain whether your coop program is meeting your needs in the areas of groundwater and surface-water quality, quantity, and use data, and analytical tools, etc.?

Cooperator – 1 Water Surface Water: Good Stuff: Meeting needs adequately, timely.
Improvements needed: Want funding maintained for gaging—esp. for long term index stations
Value of data is reduced as time goes on because calibrations are stretched out in time to reduce costs.
Data collection suffers in favor of interpretive work
Ground water: Good Stuff:Generally working well because of cooperators contribution of unmatched staff to the projects. Data readily shared
Improvements Needed: Technology transfer needs improvement
Finished product needs to be available on cooperators computer.
GW use data program highly generalized, not sophisticated, information not very useable.
GW Site Inventory not adequately maintained, not easily usable, not efficiently updated
Scope of work needs better definition in agreements.

Cooperator – 2 Meets needs OK. However, due to the phenomenon of flat budgets and rising costs, periodically some long term SW gages are dropped. There is some disappointment that long-term gages aren't ranked as highly as others that are used for management or flood frequency determination and are terminated as a result. Very satisfied with interpretive studies.

Cooperator – 3	50:50, A greater share of the total costs would result in county backing out of some or all of the work because of flat funding at the county level.
Cooperator – 4	Policy changes on how money is used and USGS cost increases are causing a reduction in baseline data.
Cooperator – 5	Very satisfied with USGS science and professional reputation. Needs well met.
Cooperator – 6	Yes
Cooperator – 7	We need better water-use data.
Cooperator – 8	Yes. We use the water quantity data frequently in court.
Cooperator – 9	Yes. We would be lost without the USGS.
Cooperator – 10	It is meeting our ground-water quality data needs nicely
Cooperator – 11	Yes. The COOP program has met our needs in the areas in which assistance was requested.
Cooperator – 12	Yes barely- However, additional funds are needed.
Cooperator – 13	The COOP program is used for a limited set of needs and meets the needs in these areas. If more COOP funds were available, the program could be used in other areas of need.
Cooperator – 14	It is meeting only the basic data collection needs (gages and observation wells). Water use data is gathered by the state agency, but compiled into USGS Water Use reports.
Cooperator – 15	Yes, but cost is constraining use of program.
Cooperator – 16	The USGS is well tooled to keep tract of water quantity and it is the same nationwide. They have done an excellent job in basin studies that do not terminate at state line.
Cooperator – 17	The District is very satisfied with the service the GS provides to us. Again our need is for streamgaging and surface water measurements, so our view is a narrow one. We have are own water quality capability (labs at the treatment plants), so we don't need that service. And water use information for billing purposes is something we collect routinely in our daily course of business since we are wholesale distributor to customers.
Cooperator – 18	We feel that GS is doing the best they can afford to do to get the data to us. Of course we would like to see more and better gw data come to us for the money, but we feel good about how much is being accomplished with the budget and the care that is taken to watch expenditures.
Cooperator – 19	Yes
Cooperator – 20	Not entirely, but this is due to limitations in resources for the program. What GS does they do well.
Cooperator – 20	For most part, uses USGS for water quantity (vs water quality) data.
Cooperator – 21	Projects are producing what we need (sp. Surface water quality, quality & analytical tools). No use of program for groundwater & water use.
Cooperator – 22	We have an EPA-certified laboratory. It is also certified by the USGS. As a result, we cooperate with the USGS in splitting analysis of samples.
Cooperator – 23	Yes, program is meeting needs.
Cooperator – 24	Yes, this project is meeting all of our needs in all areas. Without the assistance of the USGS we simply would not have had the staff or financial resources to complete this work by the Congressionally mandated deadline. We would also not have the solid science built into the program that needs to be there to be accepted by the public.
Cooperator - 25	The Coop program is meeting the long-term needs of the board but there is a concern over the decommissioning of some of the stream gaging stations.
Cooperator – 26	Without the assistance of the USGS, we simply would not have had the staff or financial resources to complete this work by the Congressionally mandated

	deadline. We would also not have the solid science built into the program that needs to be there to be accepted by the public
Cooperator – 27	The Coop Program is basically meeting their needs. Perhaps there should be more flexibility in how the matching funds are obtained. The state would like more work in model development effort. The state feels they can obtain the basic data but need the USGS expertise to develop and calibrate the models in the state. The state is developing a stream gaging strategy, which should provide a better idea of what is needed and where the gages are needed. This effort is not complete at this time. The state believes every station is important, but is working toward funding from other local funding sources.
Cooperator – 28	The District is a surface water quantity program using some interpretive tools. They feel their needs are very well met by the cooperative program. D.E.C. feels that needs are generally met, and when they are not being met is a function of them not having the money to use the tools and not the availability of tools. D.E.C. did comment with regard to the TMDL that they understood that an adjacent state was actually using USGS to generate the permit criteria. At this point, D.E.C. does not intent to use USGS in that way.
Cooperator – 29	USGS is doing an excellent job in meeting our needs. It would be helpful, however, if data and reports could be available in a more timely fashion. In addition, more information on nutrient levels, including analyzing at lower detection limits, may be desirable.
Cooperator – 30	Yes - provides necessary flow data as well as water quality
Cooperator – 31	Currently doing a good job at meeting needs
Cooperator – 32	See #7. The District has been satisfied with its joint Cooperative Project with the USGS and the Town. The District believes basic data collection work is needed in the northwest and southern of our area. These areas are experiencing rapid urban growth rates and are expected to have future subsidence problems from past USGS modeling predictions. The USGS needs to have annual outreach efforts to inform local water providers on existing Cooperative Projects, such as at workshops or at a regular Groundwater Users Advisory Council meeting. Annual outreach meetings should also be used as the first phase for public input on potential new cooperative projects.
Cooperator – 33	The District has been working with the USGS for many years because the USGS has been willing to supply adequate information or enter into investigative studies under a cooperative agreement to develop the information/tools needed by the District to manage water supplies within its territory.
Cooperator – 34	The basic data programs have met our needs generally, although it is sometimes difficult to acquire the data once collected. We do perceive concerted effort to enhance our capability to acquire the basic data as needed and find the staff responsive to our requests within their capability (i.e. within the limitations of releasing peer reviewed or approved data or analyses). The reports produced to date have done a good job of addressing the scope of the issue being studied. The USGS staff has done a good job of identifying the tools that should be developed and the analyses that need to be performed to address our issues. The problem has been timely delivery of analyses and tools as specified in cooperator program agreement letters. In that respect the USGS has failed about 60% of the time. Additionally, we perceive this trend to be worsening.
Cooperator – 35	The State EPA is responsible for the water quality issues, but currently the State EPA does not cooperate with the USGS on data collection. Adequate

data is being collected to handle existing water resources issues. Expanded needs are developing as new programs, like Smart Growth, begin to gain momentum.

Cooperator –36 Program is meeting cooperator's needs, except that they have not been able to begin the long range erosion study based on water quality data. (Cooperator did not specify if the fault was theirs for not having the funding for the study, or GS's)

C. Prioritization - In Fiscal Year 1997, the Congress appropriated $66.2 million dollars for the Coop Program. State and local agencies provided an equal amount of matching funds plus an additional $33 million dollars of unmatched funding.

11. Is there adequate funding in the Coop Program to meet your short and long term needs? If no, please explain the needs that are not being met.

Cooperator – 1 Ground Water:Federal funding seems adequate, Inadequate funding to match direct effort
Surface Water: Inadequate: losing stations through time

Cooperator – 2 WRD: Short-term, maybe. Long-term, no. There is a need for basic data collection, but emphasis on interpretive studies will cause funding shortfall for data collection.
DEQ: Long-term outlook poor. Flat budget plus cost creep means reduced data collection at a time when need for data is increasing.

Cooperator – 3 Currently adequate. Always able to meet basic needs, GS always cooperates. On large scale projects may have to wait a year for the GS to schedule their part of the funding.

Cooperator – 4 No, USGS-WRD does not have enough money to match projected state match

Cooperator – 5 Funding has been adequate.

Cooperator – 6 Yes, but would like 50-50 cost sharing on all sites

Cooperator – 7 No. There needs to be more federal money available.

Cooperator – 8 Congress should appropriate more for the Coop Program.

Cooperator – 9 No. There should be more. We could do more with the USGS if there were more funding to be matched 50:50.

Cooperator – 10 Yes

Cooperator – 11 No. Coop dollars have not increased to keep up with inflation. Currently the COOP program does not fully match available City/County dollars. In the future there are several planned or prospective programs which could be candidates for COOP projects if additional funds were available. These include: Environmental Land Acquisition; American River Heritage Initiative; Pollution prevention (private initiative); EPA EMPACT grant for air, surface water and ground water monitoring (including an ecotourism center).

Cooperator – 12 No. Inflation drives the cost of projects upward. The cost of inflation is not being met

Cooperator – 13 No. We would like to see a coordinated ground water level monitoring program across three southeastern counties by the USGS so that consistency can be maintained. We would also like to have the data analyzed by the USGS and ground water level contour maps produced annually, as was the case in the past.

Cooperator – 14 No, the agency has not been able to get significant new dollars and has been forced to reduce its own internal spending to maintain the gaging program. There were 140 stream gaging stations in 1984, and only 112 stations today. The increasing cost of the gaging network has eliminated funds for interpretive studies.

Cooperator – 15 No, funds are unbalanced in terms of match, none for new initiatives.

Cooperator – 16 We could likely use more funds. Specific amount is unknown at this time. We need to more carefully consider our new joint emphasis in planning, monitoring and evaluation.

Cooperator – 17 Because there is a portion of the Program we have with GS that goes unmatched, I would have to respond that an increase in GS matching participation would be appreciated. We are able to meet most of our needs with the present funding levels. So if GS was to increase funding levels in response to inflation and the increase cost of doing business, we would be satisfied.

Cooperator – 18 Right now, we have more needs than we have funding for. Again we have unmatched funds in the Coop Program and if GS had more matching dollars we would be able to do more. GW data and water quality information, especially long-term stations for analyzing trends is important to us.

Cooperator – 19 Over past few years GS match has remained constant while program costs have increased. Thus, some gauging stations reconfigured from continuous to "peak" analyses. This is a need that has been sacrificed.

Cooperator – 20 No, but in the State's case it's a matter of availability of local match dollars. There is a critical need for more stream flow data and stations to look at an entire range of flows, particularly the "low flow" network.

Cooperator – 21 For us to participate, need to maintain 50/50 at minimum.

Cooperator – 22 The _____ project is a perfect example. After the demonstration phase of the project is done, the USGS needs to continue its participation. If the USGS isn't able to take part in this program as a cooperator, it will be scaled back greatly. It's possible the scale-back would be such that the project would no longer meet the broad-based needs of science, just the needs of the city.

Cooperator – 23 Yes

Cooperator – 24 No, additional funding should be provided. Should we have had additional matching funds, we could have developed a larger data base to conduct more comprehensive statewide assessments.

Cooperator – 25 The Coop program is meeting the long-term needs of the board but there is a concern over the decommissioning of some of the stream gaging stations.

Cooperator – 26 No. additional funding should be provided. Should we have had additional matching funds, we could have developed a larger data base to conduct more comprehensive statewide assessments.

Cooperator – 27 The present funding is adequate for basic data collection activities, there needs to be more money from the state and local sources.

Cooperator – 28 No response

Cooperator – 29 Our basic needs are being met; however we would prefer a greater match on the part of the Federal government, as mentioned earlier.

Cooperator – 30 Yes

Cooperator – 31 Yes

Cooperator – 32 The District does not know what the Coop Program budget is annually to make a determination if it is adequate to meet the our short and long-term needs. This information has never been provided to the District.

Cooperator – 33 No there is not adequate funding in the Cooperative Program to meet short term or long term needs. The District has funded greater than the 50% share, "matching funds" on many occasions to preserve the records of various surface water sites. The district also pays a larger share on numerous groundwater data acquisition programs and special studies to insure that the USGS will be the agency performing the work.

Cooperator – 34 There is not sufficient funding, from our perspective. Since our program with USGS has been accelerated (beginning in 1991), we have observed an

	increase in the contribution in funding from our agency to offset increases in overhead costs charged by USGS (in excess of the CPI changes) to fund funding shortfalls within the USGS. At the same time, we have observed a reduction in the staff available for some functions. In other words, we have had to fund significantly more of the costs that had been funded by the USGS, and experienced a reduction in the ability of USGS personnel to respond (i.e. paying more and getting less). It is our perception that it is compounded by a thinly stretched staff trying to meet the needs of too many cooperator programs given the staff available and the structure of the USGS programs.
Cooperator – 35	Short term needs are being met. Long term needs are not well identified, but likely will grow significantly.
Cooperator – 36	Long term: Short term: OK, especially if they are able to put together their planned turbidity project. No, Concerned about anticipated Cooperative Program budget reductions.

12. Do you have any suggestions for the appropriate level of funding for the Coop Program?

Cooperator – 1	Need adequate funding for data collection so data collection doesn't have to compete with interpretive studies for dollars. Need budget increase to allow match for all cooperator dollars: -All water projects have a federal interest -Without Federal participation in the costs, the GS is less of a cooperator and more of a consultant.
Cooperator – 2	Idaho is mostly federally owned. Each state's share of Coop dollars should be proportional to the Federal interest in each state, whether that is gaged by Federal ownership or some other criteria. The share of Coop dollars going to each state should not be based on the degree of aggressiveness of the District Chief. There should be dollars put into the Coop program by users of the information, e.g. Weather Service and Forest Service. States pay for development of the data and those users benefit at state expense.
Cooperator – 3	No
Cooperator – 4	50-50
Cooperator – 5	No, want to keep 50-50
Cooperator – 6	No
Cooperator – 7	Increase the federal match, because much of Nevada is land managed by the federal government.
Cooperator – 8	No.
Cooperator – 9	NOT ADDRESSED.
Cooperator – 10	It seems about right to us.
Cooperator – 11	No. Overall it does not appear that COOP funds will be adequate in the future to match the available funds.
Cooperator – 12	Because the state does not have enough funds to finance all of the necessary projects a possible way to assist the state would be for the USGS to contribute 60%, instead of 50% to the coop program.
Cooperator – 13	To start, I would like to see the COOP match brought up to 50/50.
Cooperator – 14	50/50; The USGS needs to find federal dollars to match unmatched funds.
Cooperator – 15	Base of $80M for gages and boxline-ongoing studies. Supplement of $20M to address short term or arising issues.
Cooperator – 16	Coop funding needs to increase at least to the extent of matching inflation to stop the decline in coop data collection and special studies.
Cooperator – 17	I don't have any idea. I don't keep close to the national outlook.

Cooperator – 18	I can not speak on a national perspective, but I do find the GS's most recent public announcement about a $20M decrease in Coop funding to be quite disturbing.
Cooperator – 19	50/50 match is good (equal commitment).
Cooperator – 20	A lot more than is available at present. At peak funding Cooperator - 20 had 2x stations they now have, and that wasn't adequate.
Cooperator – 21	Both types of work important. However, USGS mission to "continually assess the nations water resources" is mandate for continuous (uninterrupted) long term data collection. USGS relied on in this regard. State funding too volatile to do this.
Cooperator – 22	I would really like to see sufficient funding placed in the program to allow the USGS to assume 80% of the cost of any cooperator projects.
Cooperator – 23	The current level is adequate.
Cooperator – 24	No. Preferably a 50-50 match.
Cooperator – 26	No. Preferably a 50/50 match.
Cooperator – 27	MD would like to see more funds available from congress for basic data collection. There should be a better public relation effort by USGS and the other cooperators. It may help for USGS to develop a strong coop support groups base and stop playing games with the funding bases. MD finds that determining the funding base from year to year is hard. It would be helpful to know what the base will be and how help the local support groups could provide.
Cooperator – 28	The District would say that the answer is yes. They do have some unmatched dollars and would certainly advocate for 50/50 sharing. D.E.C. lacks funds on their side. D.E.C. has a concern about what is going on with the Cooperative Program at the Federal level in 1999, and the likelihood that there would be less matching money than expected.
Cooperator – 29	We believe it should be 50/50, as stated earlier, particularly when the work being performed under a contract is beneficial to other s in the nation. It is worth noting that the work performed using Safe Drinking Water Act funds provide a 50/50 match between the local government entity and the US EPA.
Cooperator – 30	No
Cooperator – 31	No
Cooperator – 32	See #11.
Cooperator – 33	USGS should be funded at levels which allow the USGS to actually match funds furnished by cooperators.
Cooperator – 34	We are not familiar enough with your internal structures to make such a specific recommendation. However, the USGS needs to strike a balance between the commitment to cooperative programs and the funding for staff to meet those commitments. In other words, the utility of the USGS to the Cooperator is diminishing with the reduced ability to respond in a timely manner and provide the product specified in the Cooperator's program letter. The Cooperator has to view the USGS as they would a consultant. If the product cannot be delivered, the service is questionable. For basic data collection a minimum 50% match is appropriate because the data will benefit a greater populace than the Cooperator. Special Studies should be considered for a greater % contribution by the cooperator, but only if the product can be delivered timely.
Cooperator – 35	The USGS and other federal agencies should supply enough resources to measure and assess the water resource issues of significance and priority to the federal government. This is not currently being met in our state, particularly in the area of water quality.

Cooperator – 36 Would like to see a modest increase to assure their turbidity study can be funded.

13. What is the proper balance between routine long-term data collection and interpretive studies?

Cooperator –1 Balance should be cooperator driven, not GS driven. Need re-emphasis on data collection, but not at expense of interpretive studies.
-basic data necessary in future to do interpretive studies
-Need to reduce overhead to make more data collection feasible.

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Cooperator – 2 Data collection should be higher priority than interpretive studies, perhaps 60:30 with 10% going toward research and technology advancement. Proposed projects must compete for funding within regions. Given today's priorities, interpretive studies compete more successfully for funding which sacrifices basic data collection. Need to retain basic data collection.

Cooperator – 3 Not an issue with the county. However, the county sees where good long term data are necessary to do interpretive work. Public respects real data. Therefore, data collection should be higher priority. Data programs should be kept in times of flat budgets. In times of flat budgets the 50:50 ratio might be changed to a larger proportionate share for the cooperator for interpretive studies in order to save the data collection.

Cooperator – 4 More interpretive studies could be accomplished on in-kind service

Cooperator – 5 No opinion

Cooperator – 6 60% data 40% studies

Cooperator – 7 Both need to be done. It is hard to say what a ratio of the two should be.

Cooperator – 8 This is hard to say. Data are necessary to draw the conclusions from interpretive studies of perennial yield.

Cooperator – 9 This is hard to say. Because credibility of the data is important to credibility of the interpretations, both are important.

Cooperator – 10 We mostly need the USGS for long-term data collection and maintenance of the data. Scientists on our staff participate in the interpretation of the data. It is important, however, that a certain level of data interpretation be part of the quality assurance and quality control of the data itself. It is often only through looking at trends in data (over time or related to the geology and history of the area) that one is able to figure out whether the data are good.

Cooperator – 11 A balance of 50/50 appears appropriate but would depend on the circumstances. The balance has fluctuated in the past. In the future we anticipate that data collection needs could increase based on a current study by the _____District evaluating the ground water network.

Cooperator – 12 About 50-50

Cooperator – 13 For us the COOP is 100% data collection. We would like to see some interpretation of the data and ground water contour maps produced as they were in the past.

Cooperator – 14 The state has done only minimal interpretive studies in the past few years because dollars have been used to maintain gaging program. USGS mindset on how studies are to be done limits state's interest.

Cooperator – 15 2/3 - 1/3 (data and study)

Cooperator – 16 Long term quantity and quality information on both surface and groundwater is important. Perhaps 70% data and 30% special studies.

Cooperator – 17 From our perspective, it is long-term data collection we are interested in. It is the independent nature of data and studies that should be emphasized in the COOP Program. We currently use our staff and contractors to do most of our

	studies, and that sometimes presents a problem for us in that those who scrutinize the way we operate the project often argue that the results are biased towards us. But from where we sit, streamflow data collection is much more valuable to us as far as being unbiased information than the studies we do internally.
Cooperator – 18	Our need is for data collection and dissemination. We can best serve our own needs from within our Department for special studies.
Cooperator – 19	Long term data collection needs to be on high end (70/30). There are other sources of funding for interpretive work (federal) but not for stream gauging. However, data is needed in order to do interpretive work.
Cooperator – 20	Wish to see 60-75% of programs in data collection. Consultants capable of doing interpretive work. Problem is data collection not “sexy”.
Cooperator – 21	Compromises ability to do long trend field assessment & ability to interpret our water quality monitoring data. We rely on USGS for flow data. Long-term data collection means long term uninterrupted collection. If there is going to be interruptions, may as well not do at all (ie, data set becomes not useful). If lost NASQAN sites, for the state to pick up, would need to use same procedures. Can the state afford this?
Cooperator – 22	Our opinion is there is currently a good balance between the two. Cooperator - 23 75% data collection.
Cooperator – 23	Uncertain. However, it would seem that each is dependent upon the other.
Cooperator - 26	90 - 95% long-term data collection would be the appropriate balance in the Coop Program for the Board. The Board outsources all interpretive studies and has been in the long-term data collection business for over 50 years.
Cooperator – 26	Uncertain. However, it would seem that each is dependent upon the other.
Cooperator – 27	There should be more money available for obtaining and maintaining long term data collections sites, both surface and ground water.
Cooperator – 28	The District has no plans for interpretive studies. They do basic data collection, and use the data immediately; it is of less interest to them the next day. If there were new reservoirs proposed, which is not likely, the expectation is that there would be a need for some interpretative studies. D.E.C. says that their current program has evolved to a 1/3 basic data, 2/3 interpretative, and that they think it ought to be about 50/50. They have plans to increase the basic data, not back to where it was, but in that direction, and if that happens it would bring the current budget close to 50/50.
Cooperator – 29	Both are necessary; however, I'm not sure what the appropriate ratio should be.
Cooperator – 30	No knowledge
Cooperator – 31	Focus should be on data collection
Cooperator – 32	The District believes that initial funding for long-term data collection and interpretive studies should be 50/50. Regional data on natural recharge, groundwater, surface waters flows and quality are insufficient. Interpretive studies may be easier by directing a higher percentage of the cooperative funds to basic data collection. Regional data collection should require a small local match (20 to 25 percent), while interpretive regional studies would require a larger match (50 to 75 percent). See #8, #9, and 1#4.
Cooperator – 33	"Balance" is not a consideration. Long-term data collection is a necessity. USGS must continue to accumulate water resource data to support current and future interpretive studies.
Cooperator – 34	Data collection necessarily precedes interpretive studies of any significance. Basic data collection and quality assurance is of paramount consideration in a cooperator program, and must be maintained as the principal component. The value of the interpretive studies by the USGS is the proper use of that data,

and the character of the interpretive studies can help define the need for additional basic data. There is a significant overlap in the development of new basic data gathering and interpretive techniques that are driven by creativity stemming from interpretive studies to address specific technical problems. This symbiosis is what will, in my opinion, keep the USGS moving forward. One of the key elements of staff development for your organization should be the further development of meaning relationships between personnel involved in the basic data programs and those doing interpretive work. A better understanding of the mission and the evolution of better data collection will inevitably result. For an organization starting a relationship with the USGS, the basic data collection effort should be close to 100% but someone familiar with the potential issues to be addressed should be incorporated to the basic data network design. A mature relationship (dependent on funding) would probably see basic data to interpretive study relationships of about 25% basic data/interpretive work.

Cooperator – 35 Long-term data collection should always remain a priority. Without this information, interpretive studies are constrained by inadequate data. Some interpretive studies are needed to measure the benefits of the long-term data collection effort.

Cooperator – 36 Increase interpretive studies without cutting back on basic data collection

14. How do changes in the Coop Program, such as loosing long-term data collection stations, affect the mission of your organization ?

Cooperator – 1 Decreases water management ability in time of population growth. Increases reliance on statistical simulations rather than real data. Reduces defensibility of management decisions.

Cooperator – 2 We would lose data continuity and perhaps the whole SW quality program, because we're not prepared to do it. May have to develop ability in-house to do the project; or may have to contract the work out.

Cooperator – 3 County would have to reduce the amount of data collected or reduce the quality of data collected. The focus of the County's effort would have to be on fulfilling permit conditions that require monitoring. The County's water management, planning and flood forecasting would be based on an inferior data set.

Cooperator – 4 Lose of data. Added expense to re-install at a later date

Cooperator – 5 Would find way to collect data in absence of USGS being able to do it.

Cooperator – 6 Very adversely

Cooperator – 7 Water-use data tend not to be as consistent (in terms of documentation of assumptions from year to year) as some of the other data, such as stage and flow rates from stream gages.

Cooperator – 8 It hurts, and it forces us to look for other cooperators to help cover costs.

Cooperator – 9 These cause problems, because it is difficult to make good decisions with incomplete information.

Cooperator – 10 It helps us to relate our state results directly to results in other states.

Cooperator – 11 There has been some elimination of streamflow stations in the area and this has affected data availability.

Cooperator – 12 Changes such as loosing long-term data collection stations have meant that the Department cannot meet its long-term mission.

Cooperator – 13 Stations discontinued by the USGS need to be picked up by local or regional agencies. The data are still needed for modeling and other purposes to address the many problems in our area.

Cooperator – 14 Loss of gages inhibits flood hydraulics studies.

Cooperator – 15 Loss of a station is loss of information to relate water quality to flow onditions, especially TMDL.

Cooperator – 16 There is a gap in data base that cannot be replaced. It cripples our ability to monitor resource conditions and make decisions based on facts.

Cooperator – 17 If we were to lose stations, we would have a very definite problem in managing and administering water in our district. A lack of streamgaging would severely hamper the State Engineer's ability to monitor and administer water also.

Cooperator – 18 We have a continual dialogue with GS on this issue. We have tried to emphasize how important long-term data is to the type of work we have responsibility for. Decreases in streamflows attributed to ground water development, as an example, can not be thoroughly examined without long-term information.

Cooperator – 19 Stations & network we now have is vital. Any loss of a station would have to be picked up by the District. Less data means more risk.

Cooperator – 20 Losses in coop program (losses in data) makes agency very vulnerable to challenges to regulatory decisions. There is more uncertainty in decisions & risk of bad decisions.

Cooperator – 21 Currently using USGS for Dioxin sampling & private lab for analysis. We feel this lowers cost & improves study results. Understanding is USGS doesn't have capability to analyze high volume samples.

Cooperator – 22 This is a very important area. The City has identified those data collection stations that are critical to it, and are supporting them in partnership with USGS.

Cooperator – 23 Will not affect our mission

Cooperator – 24 Loosing long-term data collection stations would drastically affect our program. This valuable and historical data is critical to conducting assessments on all surface-and groundwater supplies throughout the state. Factoring historical data into our program is critical in conducting a defensible and comprehensive assessment of the water supply.

Cooperator – 25 Losing long-term water level data impacts the mission of the Board in important ways - especially if the drought conditions in the state continue. Issues are measurement of baseflow, sole source aquifer usage, water level mandated under court orders from the Endagered Species Act, etc.

Cooperator – 26 Losing long-term data collection stations would drastically affect our program. This valuable and historical data is critical to conducting assessments on all surface-and groundwater supplies throughout the State. Factoring historical data into our program is critical in conducting a defensible and comprehensive assessment of the water supply.

Cooperator – 27 The change in the Coop program can cause a loss of long-term data collection sites.

Cooperator – 28 The District is an operating entity with a clear mission. If long term data stations are lost they would have to pick them up because they can not operate without that information. If the Cooperative program, either through other cooperators or through the District, diminished support would have to come from District funds.

D.E.C. is quite concerned about having long-term stations so that they can do trend analysis which is a big part of their watershed management planning. They do get a lot of noise from flood prone areas when stations are lost, and there is some pressure to reinstate stations on two large rivers.

Cooperator – 29 Consistent long term data collection is necessary in order to examine trends in water quality and quantity.

Cooperator – 30 Long term data is necessary to show trends and to help in establishing instream base flow goals.

Cooperator – 31 Would probably not allow the gages to be lost.

Cooperator – 32 Past Federal funding decisions has caused the elimination of too many long-term data collection stations. Restoration of Federal funding for basic data collection is needed and a Federal/State responsibility. The responsibility should not be passed wholly into the locals, but the locals' financial contribution should be minimal. Basic data collection by the USGS benefits all private, local, and State entities. It reduces duplication of costs, provides standardization, centralizes data and eliminates interjurisdictional issues.

Cooperator – 33 Changes in the Cooperative program seriously affect the mission of the District. As noted earlier, the District has undertaken a larger share of numerous stations in order to preserve the long-term record.

Cooperator – 34 The loss of long-term data collection stations would fundamentally affect the mission of our organization. Without this data, we cannot effectively characterize the success or failure of our management programs.

Cooperator – 35 Long-term data collection stations are necessary to maintain the integrity of the data collection program. These long-term stations help to assess the impacts of watershed changes over time, the importance of additional gages, and the ability to manage the water resources of the state. Loss of these stations diminish the credibility of other short-record stations by not providing a regional long-term record for qualitative and quantitative assessment.

Cooperator – 36 Cooperator would substitute their own funding to maintain program.

15. How does your organization involve other parties in your Coop Program activity to improve study results and lower costs?

Cooperator – 1 Stop issuing permits, “Launder” non-GS federal funds to attract federal cooperators; Position ourself as a central authority to do the work of defining project scope, work plans, and contract conditions. Position ourself as a central information disseminator.

Cooperator – 2 Threats: data will be discontinued without the party’s financial participation. Condition permits to require monitoring. Highlight the shared mutual need.

Cooperator – 3 Threats of loss of stations. Forest Svc., BLM, and the state exchange stations to maximize efficiency. Those agencies also assist each other with site installation and in establishing priorities when gages must be dropped. However, in general users of the data (e.g. consultants, academia, environmental groups) do not pay their share of the costs.

Cooperator – 4 State agencies work together in selecting sites and placing priorities on data collection

Cooperator – 5 No.

Cooperator – 6 Don’t know of any but there are other state agency cooperators.

Cooperator – 7 So far we do not, but we are benefiting from Coop projects funded by other state and local agencies.

Cooperator – 8 We have encouraged local governments and others to participate.

Cooperator – 9 We contact local governments and utilities to assist, as needed and as appropriate

Cooperator – 10 We have engaged local governments, other federal agencies, and other state agencies in some projects with the USGS.

Cooperator – 11 An adjacent city has partnered with the us in some COOP programs. Some other governmental units also have COOP. However, coordination on COOP programs could be better. Lack of coordination is due mainly to not having the time to do it. There are some opportunities with local universities and public

works agencies. The current Year 2020 planning process should offer opportunities for better coordination and partnering on COOP programs.

Cooperator – 12 In order to lower cost, the Department encourages other government encourages entities to participate in funding coop projects.

Cooperator – 13 We have worked with the a water management district to share the costs of monitoring in the county.

Cooperator – 14 The "Transfer Program" is currently passing $112,000 per year to USGS. There has been little done to include these outside funding sources involved in details of program.

Cooperator – 15 Interact with other agencies on overall network, share in cost support. Studies are unilateral efforts.

Cooperator – 16 We don't do much of this and probably should consider this approach. We do coordinate with other affected agencies that also rely on data or studies.

Cooperator – 17 We coordinate with the State Engineer's Office. There are some gauges that are cost-shared 3-ways. I don't recall that we ever approached others about cost-sharing in some gauges. That may take more time and cost us more money to find others.

Cooperator – 18 Water Districts understand the importance of streamflow data and ground water monitoring, so some districts provide us with funding to cooperate with the GS. This type of arrangement is working fine and if the need exists, we ask for districts to participate on a case-by-case basis if their service area included.

Cooperator – 19 Yes. Area ground water study involved about 30 local cooperators. Our agency brokered this. Our agency has also served as pass-thru for local cooperators that were not government entities.

Cooperator – 20 Our agency has not brought in local partners. GS office had brokered multiple local coop partnerships.

Cooperator – 21 Currently using USGS for Dioxin sampling & private lab for analysis. We feel this lowers cost & improves study results. Understanding is USGS doesn't have capability to analyze high volume samples. Answer is project dependent. Current projects we believe must rely on USGS personnel. However, can be and have been earlier projects when we would desire to do the work.

Cooperator – 22 The city does some of that, now. For example, we involve another federal agency on the _____ demonstration project.

Cooperator – 23 Other parties not involved.

Cooperator – 24 It is critical we involve as many non-governmental organizations, local communities, as well as other state and Federal agencies in our program. We have done so through the creation of a public forum and technical advisory committee. Doing this has provided us information and data we would not have normally known about. Through this partnership process, data sharing decreases our costs as well as providing our partners with data they may not have had access to.

Cooperator – 25 The Board outsources all of its interpretive studies.

Cooperator – 26 It is critical we involve as many non-governmental organizations, local communities, as well as other state and federal agencies in our program. We have done so through the creation of a public forum and technical advisory committee. Doing this has provided us information and data we would not have normally known about. Through this partnership process, data sharing decreases our costs as well as providing our partners with data they may not have had access to.

Cooperator – 27 Our state agency works closely with local agencies to obtain additional funding sources and in kind work. They will coordinate the local in kind work contribution from the local sources.

Cooperator – 28 For the District all the funds come from the downstream beneficiaries; there are no other parties involved.

For D.E.C. it is a little more complicated. The cost of the program is distributed over a number of projects with nearly full participation of these other parties with to the federal program. Some parties use the data extensively; but have been very reluctant to contribute to the cost.

Cooperator – 29 No response

Cooperator – 30 The District partners with the USFS, Department of Ecology and USGS in operating this gage.

Cooperator – 31 Non involved

Cooperator – 32 See answers to #4, #5, #7, and #8.

Cooperator – 33 Several other water districts contribute portions of the our District's contract costs in the Cooperative Program with the USGS. The District provides a cost breakdown to the other agencies each year, the other agencies pay the District in accordance with previously agreed distribution of the costs. This lowers the USGS administrative costs by avoiding multiple contracts/billing activities.

Cooperator – 34 We routinely share data from our cooperator program with other entities, and request their analytical results, if any. We frequently involve USGS personnel in public meetings to provide their technical expertise and to allow them to understand the issues so that they can help us develop the data and technology needed to address the issue. We try to coordinate these programs with others to take advantage of their efforts in concert with our programs (i.e. coordinate new well locations, seek water quality, water production and well level data from them to augment our programs, etc.). We also involve our consultants in data gathering efforts to offset USGS personnel costs.

Cooperator – 35 Cooperator - 35 has for a number of years sponsored Cooperator meetings to share ideas, to trade gaging responsibilities, to debate water resource issues, and to mediate conflict.

Cooperator –36 No longer involve other parties. As they have run into financial difficulties and dropped out, cooperator has picked up their share

D. Conduct of Work - Nearly all of the work performed in the Coop Program is done by USGS scientists and technicians. This arrangement is designed to enhance quality control, provide national consistency in data collection and methods of analysis, and provide a stable core of experienced water scientists nationwide.

16. If appropriate USGS quality assurance were made available, would your organization be able to and/or want to perform the data collection portion of a coop project? Please explain.

Cooperator – 1 Yes, already do that in both data collection and analysis. This materially aids in getting the product we contracted for and in understanding that product.

Cooperator – 2 We do some data collection now. We prefer not to do additional data collection—GS is better equipped, and state legislature is unwilling to adding staff necessary for us to take on that function.

Cooperator – 3 Could become able to do it (have done it in the past) and would want to if doing so could be used as match for the federal dollars.

Cooperator – 4	Yes, we already complies with many USGS standards
Cooperator – 5	Have assisted USGS in the past. Would probably prefer to do in-house if USGS capabilities reduced.
Cooperator – 6	Would rather leave with USGS.
Cooperator – 7	NOT ADDRESSED.
Cooperator – 8	Yes. This would be no problem, if we have the people.
Cooperator – 9	Maybe, but we are not likely to get funding for the strictly scientific studies that fit the USGS mission.
Cooperator – 10	Yes. We have chemical analytical capabilities, but they are limited and designed mostly for research rather than production-level work.
Cooperator – 11	Currently would not want to, or be able to, due to manpower constraints. However would be open to the concept and would be willing to do it if resources were available.
Cooperator – 12	Yes, we would be able. However, we would not always want to because some projects are political. Under these conditions, we prefer to have the USGS collect the data because of its reputation for being neutral.
Cooperator – 13	The USGS often uses specialized equipment and techniques for some monitoring and this would make it difficult for our agency to do. In other cases where the equipment or technology is not a factor, it could be more costly to take these programs over if the cost of data management and overhead are included.
Cooperator – 14	Would consider contracting out such work to others. Water use data currently collected by state agency.
Cooperator – 15	Interact with other agencies on overall network, share in cost support. Studies are unilateral efforts.
Cooperator – 16	We have made low flow, temperature and conductance measurements in the past. We would be willing to consider such an option. However, staff and equipment limitations would have to be provided.
Cooperator – 17	Yes. The District would in a position to assist the GS. We visit many of the stations on a daily basis and we can perform operation, maintenance, and repair if needed. Our engineers in the office are very capable and would be able download and reduce data for analysis.
Cooperator – 18	We are doing some of that already, but we question why it so important that GS do high-level quality assurance on some data collection work. We are very careful in the manner we collect data such as ground water levels and they adding a cost to review what we have collected does not seem like a value-added activity. We understand that GS brings a great deal of credibility to the data, but for some data it does not seem necessary. We have internal checks of the data we collect which identifies inconsistent data and we are careful in what we do, so having GS add another layer of assurance seems redundant.
Cooperator – 19	We are currently doing this (see question #5).
Cooperator – 20	Not for stream gauging. Not certain we could afford to do QA/QC. We don't have staff expertise for continuous gauging.
Cooperator – 21	Currently using USGS for Dioxin sampling & private lab for analysis. We feel this lowers cost & improves study results. Understanding is USGS doesn't have capability to analyze high volume samples.
Cooperator – 22	We do some of that now. Our lab participates in the _____ project by actually doing the ground water levels. The USGS then uses our data, collected to their specification, to generate maps and circles.
Cooperator – 23	Would prefer USGS to handle the entire project.
Cooperator – 24	No. We simply do not have the resources to perform the data collection. However, we would be happy to share what data collection we have done with

the USGS. It is imperative that the work continue to be provided by USGS scientists and technicians. It provides quality control and consistency in data collection and methods of analysis that are so very important.

Cooperator – 25 The Board would be concerned about data quality but would entertain the idea of outsourcing the data collection function, rather than performing in-house.

Cooperator – 26 No. We simply do not have the resources to perform the data collection. However, we would be happy to share what data collection we have done with the USGS. It is imperative that the work continue to be provided by USGS scientists and technicians. It provides quality control and consistency in data collection and methods of analysis that are so very important.

Cooperator – 27 The state would do the QA for ground water collection projects.

Cooperator – 28 The District feels that they do a fair amount of the field work now as they visit stations regularly, read gages, and change tapes. They do a lot of things that USGS usually does. They worry about credibility if there were changes that resulted in the QA being done by USGS and the regular work being done by the District. Downstream people would tend to be less assured of the credibility of the information and its unbiased nature. They feel the biggest problem with a shared program would be to present convincing arguments that the quality is there and that the data is complete and unbiased.

D.E.C. says that they have recently started to seriously consider the development of an increased involvement by their staff in an effort to manage the program cost. That would probably mean that some of the basic collection activities would be assumed by existing field staff. Credibility is a major concern here also.

Cooperator – 29 No, We do not have the staff to perform these duties. It is very difficult to get additional staff approved to the Division's current headcount.

Cooperator – 30 Yes, if adequate training were provided.

Cooperator – 31 Prefer not to--rather have GS do the work

Cooperator – 32 The District has insufficient staff and expertise to complete data collection on natural recharge, and for surface water flows and quality inside and outside of its service area. Liability issues would also be a concern for the District on accessing private property.

Groundwater levels at District wells and some non-District wells are measured annually by District personnel. This information is annually transferred to the water company for the region's annual static water level report. Additionally, district staff collect drinking water compliance samples at its wells and allows outside research entities (the university) to collect samples, such as isotopes. Water quality samples could be possibly collected by District staff at District wells on the behalf of the USGS, but samples would have to be analyzed by the USGS. Actual sampling by District personnel would be dependent upon District work commitments and sampling equipment required.

Cooperator – 33 We would not be able to perform all of the data collection portion for most projects. We do assist with data we have available.

Cooperator – 34 We are willing, and have the relationship to some extent currently. USGS personnel have trained our staff to measure wells from USGS installed monitoring sites to control costs and maintain in-house expertise. Data gathered is sent to USGS for quality control and data input. We periodically have USGS personnel check our monitoring sites and methodology in the field to maintain quality. This has been a positive influence on our organization and controlled cost significantly.

Cooperator – 35 It remains the responsibility of the USGS and other federal agencies to measure and assess the water resources which are of significance to the federal government. Water resources which are of local and state interests only do provide incentives for non-federal data collection, however, a standard and routine method of data collection can only be maintained when one agency is responsible for data collection. Our agency supports continuation of the USGS as the primary data collection agency for federal and state interests.

Cooperator – 36 Yes

17. How do you believe the quality and credibility of the Coop Program would be impacted if data collection and analysis were not performed entirely by the USGS staff?

Cooperator – 1 Quality and credibility may improve--some cooperator staff are very capable and proficient and have first hand knowledge of gage peculiarities and project sites. As long as quality controls can be assured, cost becomes the defining issue as to who should do the work. Need to establish trust through communication.

Cooperator – 2 Some concern for quality control if consultants are used. WRD staff believe GS would be concerned about data quality and whether to include the data in GS's data bases. GS is perceived as neutral.

Cooperator – 3 Use of county staff would not cause a problem. Use of academics and consultants would be acceptable if there were adequate quality control procedures were followed.

Cooperator – 4 No. Some state agencies have professional staffs that can work under USGS standards.

Cooperator – 5 No. Belief USGS could probably oversee to assure quality.

Cooperator – 6 Yes

Cooperator – 7 NOT ADDRESSED.

Cooperator – 8 No problem. In fact, we would like to see more involvement of researchers and M.S. and Ph.D. candidates (who's labor is cheap) from the University and Community College System in the interpretive studies.

Cooperator – 9 No problem, if the USGS maintains oversight, but we would not necessarily encourage the USGS to do this.

Cooperator – 10 No problem. Cost would probably drop, but the USGS or we would need to maintain quality assurance. We currently use outside labs for a number of analyses, and we check the quality of the data.

Cooperator – 11 Would defer to the judgement of the USGS. However would not want objectiveness and quality brought into question.

Cooperator – 12 The potential for lost credibility would exist.

Cooperator – 13 Some water quality parameters need special sampling techniques and private consultants may not give good results. An example is the state ambient water quality program where the data showed high variability between laboratories. The solution was to funnel most of the analyses to the state laboratory. Regular meetings and training did help some with the private laboratories but this was costly

Cooperator – 14 Would consider contracting out such work to others. Water use data currently collected by state agency.

Cooperator – 15 Fine, as long as QA/QC were followed.

Cooperator – 16 With careful training and instruction, it should not make a difference. It would depend upon the extent that standard data quality assurance procedures are followed. However, we do believe data collection (i.e. gages) that are

	used for interstate river compact administration should be USGS to maintain unbiased results.
Cooperator – 17	There is a long-standing reputation and solid performance of GS in stream flow data collection and production. It is the perception of independence that GS brings to this information that is very important.
Cooperator – 18	We are structured to do some of the things GS is doing and are OK with doing it. We have said in our discussions with GS that there are different levels of quality assurance needed with the types of data being collected. Not everything needs to be at a high level of credibility and we have suggested that standards need to created which takes into account how the date will be used.
Cooperator – 19	Data not compromised in our program. Important to have continuing contact & audit of field procedures.
Cooperator – 20	Depends on who does work. For gauging, the program would suffer (at least from perception standpoint). Would introduce bias concern. Consultants would eventually have conflict of interest or be accused thereof.
Cooperator – 21	So long as QA/QC procedures in place and proper oversight. We don't believe it matters to our agency. We will stand by the results.
Cooperator – 22	It may not impact or undermine the work per se, but I believe it would undermine the perception of quality associated with USGS performed work.
Cooperator – 23	Could be acceptable, provided USGS has oversight.
Cooperator – 24	Credibility would be totally lost. There would also be a decrease in quality assurance/quality control as well as consistency in analysis methodology. The perception would be that this work was being done by too many groups and that there was no consistency in the data or analysts.
Cooperator - 25	The quality assurance of the long-term data is a critical component of the Program, so outsourced data collection could be disputed if contested in court.
Cooperator – 26	Credibility would be totally lost. There would also be a decrease in quality assurance/quality control as well as consistency in analysis methodology. The perception would be that this work was being done by too many groups and that there was no consistency in the data or analysts.
Cooperator – 27	Already does part of the work in some cases.
Cooperator – 28	No Response
Cooperator – 29	We do not have the in-house expertise to install, operate, and maintain a large network of stream discharge stations nor do we have the staff to collect all of the data or perform the data analysis that USGS performs for us.
Cooperator – 30	Unknown
Cooperator – 31	Possibility would exist
Cooperator – 32	It would depend on the task and the entity's staff qualifications. For example, a flood control distict would most likely not have staff with experience to complete variably saturated groundwater modeling.
Cooperator – 33	Credibility would be reduced due to fact that USGS is only agency viewed as being impartial, i.e., will call things as they are, not just to match the view of the cooperator.
Cooperator – 34	It may lead to "chain of custody" problems, but could be used in less critical, time-sensitive study programs. I would proceed cautiously with the application of this program so that the integrity of the data and/or analysis is not questioned.
Cooperator – 35	Data would not be consistent, equipment maintenance would not remain up to standards, availability of data could no longer be assured, and the value of the data would diminish.
Cooperator – 36	Credibility is the issue, want the peer review that is entailed in the coop program.

18. Why does your organization use the USGS for assistance rather than other sources (e.g., consulting firms, academia, etc.)?

Cooperator – 1	Unbiased; Matching dollars; Institutional memory; More flexible than private sector (we can evolve a project with the GS); Uniform and high standards for data collection and analysis; Results are defensible; Comfortable with staff, staff are local, staff can be contacted immediately; Can bounce ideas around without it costing dollars and without having to guard responses; Access to national research personnel; Avoids academia's use of projects as learning exercises, and academia's positioning project work behind teaching in priority
Cooperator – 2	GS infrastructure is already in place; replacing GS would produce chaos. Cautious about grad students and consultants because they come and go—would lose continuity. Administration of contracts is easier with GS Have more flexibility with the GS. Concerned about quality control if consultants are used. In spite of these considerations, WRD is considering using other sources.
Cooperator – 3	Consistent quality; Objectivity; General acceptance by environmental groups, FERC and the public. Dollar for dollar expect better value from the GS.
Cooperator – 4	Cooperative efforts with 3 divisions of the USGS (Water, Geologic and Mapping)
Cooperator – 5	USGS is recognized expert in water data collection. Don't know of any consultants with comparable capability.
Cooperator – 6	Experience, expertise, & cost-effective.
Cooperator – 7	NOT ADDRESSED.
Cooperator – 8	The USGS has credibility before the judicial system. Consultants, no matter how good they are, do not have the same level of credibility. The USGS will lose its credibility if it follows a political agenda from Washington, D.C.
Cooperator – 9	The USGS has credibility that the consultants, particularly ones working for developers, do not.
Cooperator – 10	We have some legislative funds set aside for cooperation with the USGS. With these, we select work that we think the USGS can do better than other organizations or consultants.
Cooperator – 11	Credibility, quality.
Cooperator – 12	The USGS has a reputation for producing good quality products that are unbiased.
Cooperator – 13	Historical continuity, availability of technical expertise, access to top scientists from across the nation, data and investigations accepted by all parties as unbiased.
Cooperator – 14	Since program is pretty much all gages and wells now, there is no current alternative available.
Cooperator – 15	Areas of expertise.
Cooperator – 16	Nation-wide monitoring system for surface water flow. Also they have up-to-date instrumentation.
Cooperator – 17	If a water user organization were to take the measurements, the view from others would be that the data is not credible and unbiased. GS has highly skilled people and they have been doing measurements for years. Consultants come and go. Academia would use grad students to accomplish the work, and they too would not be reliable.
Cooperator – 18	Primarily because of the expert staff and quality data at competitive rates.
Cooperator – 19	Quality of data, products, credibility, on leading edge of techniques and equipment, unbiased.

Cooperator – 20	USGS is essentially a “sole source” as no one else can do some of their services. 50/50 match and unbiased nature also important. Also, GS has been & will be there for the long run
Cooperator – 21	Cost effective with 50/50 share. Reputation & credibility important. It is good to maintain relationships.
Cooperator – 22	The impartiality of the USGS is the reason we don’t use others to provide the same services. We do utilize consultant,, but they work as true partners with us and with USGS on projects. The projects just wouldn’t have the same impact without USGS participation.
Cooperator – 23	It has been cost effective to use USGS. They have also helped with education efforts.
Cooperator – 24	CREDIBILITY!!! We also get "more bang for the buck" financially.
Cooperator – 25	The Board does use other sources.
Cooperator – 26	CREDIBILITY!!! We also get "more bang for the buck" financially.
Cooperator – 27	Because of long history of cooperative effort that already that exist. They have problems involve academia because of the publication requirements. USGS is more responsive to their needs than the academia.
Cooperator – 28	There really are not any other choices for the District. They occasionally get involved with academia and consulting firms but it is a very rare event. Credibility is seen as the most important aspect of their program. D.E.C. frequently mentioned the need to have a calm neutral third party with a "mantle of neutrality." If they had to reduce their programming they would take the less controversial stuff into their operation and leave the hot stuff with USGS to maintain credibility. Regarding consultants there are concerns that data maybe massaged or certain critical data points excluded.
Cooperator – 29	USGS has more than one hundred years of national experience in collecting and analyzing streamflow and water quality data. The quality of the data is assured by reviews from the surface-water, water quality, and ground water specialists on staff. USGS is well respected for the integrity of their data and the quality of their work. Consulting firms often do not have the expertise required to perform the work that USGS does; in addition, the costs of consulting contracts would likely be more expensive than those with USGS, since consulting firms are for profit and USGS is a governmental not-for-profit entity. Academia often does not have the expertise that USGS provides.
Cooperator – 30	Established, long term data and results.
Cooperator – 31	Expertise in streamgaging and curve development
Cooperator – 32	See responses in B
Cooperator – 33	Very long term relationship with the USGS has provided many reports over the years which all agencies in the area are willing to accept as credible and done impartially.
Cooperator – 34	The USGS has the technical breadth to provide the resources required for just about any of the programs we might undertake, and has experience with real world applications needed to keep a study focused. With academia, the focus is sometimes lost and inexperienced persons can sometimes be involved in the work. Consultants are expensive and generally tend to rely on the data and analyses prepared by entities like USGS in preparation of their work, and their motivation is sometimes questioned.
Cooperator – 35	To sustain historical significance to the record, for consistency and accuracy, and reliability of the record. Only when these qualities of the record are unavailable through the USGS should other sources be used. One data source makes information management more productive and useful to water resource manages.

Cooperator – 36 Cost share; Expertise; Objectivity in the interpretive studies.

19. What does the USGS offer through the Coop Program that you cannot obtain elsewhere?

Cooperator – 1 See response to #18
Cooperator – 2 Nothing; WRD staff do good technical work and WRD doesn't have much problem with credibility. However, there are some pluses associated with the GS: Continuity, Expertise, Ease of contracting, Data are all available in one place, Consistency of training that provides some assurance of quality
Cooperator – 3 Highest expertise for least cost.
Cooperator – 4 Cooperative efforts with 3 divisions of the USGS (Water, Geologic and Mapping)
Cooperator – 5 Highest quality science and reputation for professionalism and impartiality.
Cooperator – 6 See answer to #18
Cooperator – 7 The USGS has maintained great credibility, which is particularly important in questions of perennial yield.
Cooperator – 8 Credibility.
Cooperator – 9 Credibility.
Cooperator – 10 Linkage to national databases and nationally consistent quality assurance procedures.
Cooperator – 11 Technical capability, quality, unbiasedness.
Cooperator – 12 Again, it is a combination of good quality that are unbiased.
Cooperator – 13 See above. In one case farmers would only agree to a water quality study if it were done by the USGS.
Cooperator – 14 Very little. "Old habits are hard to break."
Cooperator – 15 Ready access to expertise across nation, exposure to new ideas, a flexible work force to attack new problems.
Cooperator – 16 Good equipment, good instruments, good data quality assurance and availability on a consistent basis.
Cooperator – 17 Longevity and independence source of credible data.
Cooperator – 18 Credibility, quality, and continued support.
Cooperator – 19 Long record of experience, technical advice, and research.
Cooperator – 20 Level of expertise; nationwide credibility; unbiased work; agency has "been there".
Cooperator – 21 Stay abreast and employ latest field technologies. Also, see #18.
Cooperator – 22 Cost share is a major issue! Also, the intellectual impartiality of USGS is important. A consultant may give you the answer they think you want to hear. I also find it very helpful that the USGS also publishes reports and sends them through a peer review process.
Cooperator – 23 Expertise available in the organization. Available nationwide if not in District.
Cooperator – 24 Credibility, historical knowledge and expertise, solid science and reputation.
Cooperator – 25 The realtime, on-line water level data. The Board believes even this service could be privatized.
Cooperator – 26 Credibility, historical knowledge and expertise, solid science, and reputation
Cooperator – 27 Nationwide expertise in ground water model development and the stream gage modeling and training school for his staff as the needs and opportunity presents itself.
Cooperator – 28 The District feels that there is a great deal of credibility associated with doing work with USGS. Quality Control can be obtained elsewhere, but they are not sure that there is another entity that can provide the credibility. Public access

to and the availability of the quality assurance information with the data encourages a wide range of users.

The D.E.C. has the same response, but adds that with interstate compact they are a headwaters state with serious issues of interstate relations. The USGS Cooperative Program provides the necessary data and quality has never been an issue with the agency. Hydrological data collection, i.e., stream gage networks, on the scale that we need them cannot be obtained elsewhere.

Cooperator – 30 Long term stability

Cooperator – 31 Access to GEOS

Cooperator – 32 See responses in B.

Cooperator – 33 Expertise of the individuals involved in the program and the reputation of the USGS for accuracy and reliability. Credibility and impartiality.

Cooperator – 34 A pool of talent to address a multitude of technical issues important to our organization, generally through a single manager within the organization; and the expertise and staffing for the development and maintenance of data collection programs crucial to our mission.

Cooperator – 35 The capacity and expertise to operate a state-wide data collection and assessment program, consistency of data across the state and nation, public access to information in near real-time, and a unified effort by many organizations to support one data collection effort.

Cooperator – 36 Expertise, especially in gaging; neutrality

20. What is your opinion of the Coop Program contracting out parts or all of the work you have asked them to perform?

Cooperator – 1 Cooperator will be happy to be the contractor, collect the federal dollars, and do the work. Can't be cost effective to pay GS overhead and Contractor overhead. Cooperator likely can do the job cheaper without the GS if the work is to be contracted out to other than the cooperator.
If quality can be assured and a cost advantage can be realized, OK.
Easier to conceive of contracting out data collection than interpretation.
Concerns:
Cannot have as intimate oversight of work if done by consultant.
Won't know the product as well if done by consultant.
Difficult to defend consultant's work when it is applied to resource management decisions.
Data may not be as available
Quality may suffer, or be perceived to be inferior.
Many interpretive projects are difficult to precisely define until part way into the project. If contracted to a consultant, cooperator may lose flexibility to develop scope of work as project develops. (This is part of what makes the projects "cooperative".)
Lose flexibility to evolve a work plan.
Lose credibility with regulated public who have seen consultant be an advocate in the past.
Lose all the advantages itemized Question 18.

Cooperator – 2 Concerned that the contract might be managed by a contract officer rather than a technical person capable of critical evaluation of the product. It would be acceptable for GS to sub-contract pieces if the work is well supervised and a cost saving could be realized. Concerned with quality control if contractors/consultants are used. Cooperator currently contracts observation

	well measurement at 45% of GS's costs. Cooperator currently contracts gaging at 4 SW sites, for less than GS's costs, but needs supervision by someone with historical knowledge of the gage and appropriate standards. Cooperator build more program through contractors.
Cooperator – 3	County would seek to be recipient of such contract.
Cooperator – 4	Contracting out is a bad decision. Quality Control problems.
Cooperator – 5	If it had to be contracted utility would probably want to contract directly with service provider.
Cooperator – 6	Not in favor.
Cooperator – 7	NOT ADDRESSED.
Cooperator – 8	O.K.
Cooperator – 9	No problem, as long as the USGS maintains oversight and quality control
Cooperator – 10	No problem, as long as the USGS oversees quality control. In fact, I would encourage contracting for any routine, production-line type of work. Also, when it comes to research projects and interpretive studies, the USGS should engage the best and brightest individuals they can find, within reasonable costs. The USGS doesn't always have the best and brightest people on their staff; it is appropriate for the USGS to hire or collaborate with the experts, be they consultants, scientists from cooperating agencies, or university professors and their graduate students, for many of the research projects and interpretive studies. Nonetheless, the USGS should have its own experts oversee the projects to maintain quality control.
Cooperator – 11	Could potentially affect the quality and perception of unbiasedness. For example, I have seen poor work by local certified laboratories. Would prefer the USGS to do the work.
Cooperator – 12	It would potentially affect the "unbiasedness" which the USGS currently has.
Cooperator – 13	Some aspects of the work can be contracted, such as well drilling. In one case the our laboratory was used by the USGS rather than their laboratory, indicating their confidence in and willingness to use other resources.
Cooperator – 14	This would be fine if it were cheaper.
Cooperator – 15	We could contract out just the same for less. We want USGS to do the work, not out-source it.
Cooperator – 16	Some work would be ok. Possibly could use previous USGS employees. It is important to maintain the usual USGS data quality assurance procedures. Depends on nature of project and whether the needed expertise and credibility of USGS.
Cooperator – 17	We have not really tried to pursue this. GS could probably hire others to do the work but it would strongly be encouraged by us that GS provide oversight in what parts others are accomplishing. And providing oversight may be just as costly as doing all the work themselves.
Cooperator – 18	If GS would provide tight controls over a contractor, we would not have a real concern. Contracting-out is definitely an option if we could convince GS of establishing criteria/levels of oversight and review for different types of work.
Cooperator – 19	If GS had control and QA/QC assurances would be OK with them.
Cooperator – 20	If GS contracted work, then why not go directly to contractor (and save money by cutting out GS as the middle man!).
Cooperator – 21	Would have concerns regarding cost. We might as well go directly to third party itself. This presumes the QA/QC would be protected.
Cooperator – 22	I really don't like that idea. I believe the USGS remains impartial and sets standards based upon science. If this stuff were contracted out, it would go to the "low bidder."
Cooperator – 23	With sufficient oversight would be acceptable.

Cooperator – 24 We joined in partnership with the USGS for their work, not that of others. Contracting out small routine, simple tasks is fine, but not critical or major components.

Cooperator – 25 The Board would feel that it had lost a degree of control over the project and that the Board could effectively contract the work directly with the subcontractor.

Cooperator – 26 We joined in partnership with the USGS for their work, not that of others. Contracting out small routine, simple tasks is fine, but not critical or major components.

Cooperator – 27 NOWAY. We believe that outside groups have a higher overhead.

Cooperator – 28 Both prefer this not be done.

Cooperator – 29 Department 1 - We are opposed to this. When we contract with USGS, we are contracting to receive a certain level of expertise, which often cannot be supplied by any other entity.
Department 2 - OK as long as quality control is maintained and data collection is not compromised.

Cooperator – 30 OK as long as quality control is maintained and data collection is not compromised.

Cooperator – 31 No Problem as long as QA/QC is maintained and it might work better with their expertise providing oversight rather than the cooperator doing it.

Cooperator – 32 See answer to #14

Cooperator – 33 The District would be very concerned about the USGS "contracting out parts of all of the work." The District participates in the USGS cooperative program because the reputation of the USGS that any work they complete is accurate and reliable. Contracting work out of the USGS would leave the District concerned about the quality of all completed work.

Cooperator – 34 This could work, but only if the USGS is able to fully support and accredit the work performed and delivered, and if there is a specific advantage to the cooperator. The advantage should be reduced cost and timely product delivery. Should such a program result in shoddy or questionable work product, the USGS may suffer irrecoverably. Private consultants are sometimes questioned to their motivation or methods. The USGS is generally perceived as a scientific body available to assist organizations such as ours with data needs and resolution of technically complicated problems and issues. If this perception is altered through sub-contracting of work, it could be very limiting to the utility of the work done by the USGS. Basic data collection, because it provides the most reasonable opportunity for quality control, may also offer the best opportunity for this approach.

Cooperator – 35 Acceptable if it provides the same quality and standard of service provided by the USGS and if it serves the interests of the public.

Cooperator – 36 May be OK as long as GS doesn't contract out the project design or QA/QC and consultants can fund keeping up with, or creating, state-of-the-art technology.
-Cooperator skeptical that contractor can be objective at developing project design for financial reasons.
-Cooperator concerned that consultant apt to plan and do what he knows rather than what needs to be done.
-Cooperator not interested in paying consultant to do the work AND paying GS to develop technology.

D. Products - The products developed in the Coop Program need to be useful to cooperators and other users. These users include representatives of governments, the scientific community, the private sector, and the general public. The products also

fulfill national needs by building long term national data bases, augmenting activities in other USGS programs, and providing a national picture of water resources through synthesis of information from individual projects across the country. In addition, the Coop Program advances the development and application of new approaches and methodologies relevant to water resources issues.

21. Is the Coop Program using the appropriate, applicable, and most cost effective level of technology to satisfy your needs?

Cooperator – 1	Yes, now that cooperator works with GS staff on project. In SW gaging, real time data are expensive, but that cost and effort is appropriate. It is sometimes the case that the level of technology chosen is more dependent upon who is available to do the work than on what is appropriate to the task.
Cooperator – 2	Ground water work: On Target; but would like to see GPS be used as a standard practice in site-inventory work. Surface water data base: On Target, but data bases need maintenance and clean up to be more useful.
Cooperator – 3	Satisfied; OK level of sophistication.
Cooperator – 4	Technology is fine. Overhead cost is hurting the program
Cooperator – 5	Yes
Cooperator – 6	Yes
Cooperator – 7	NOT ADDRESSED.
Cooperator – 8	We're not convinced that the new, stream gages with telemetry are necessarily better technology than the old instruments. We are disappointed that some of these gages still are down for as much as 10 days. However, access to real-time data is a plus.
Cooperator – 9	We have always been envious of the USGS's having the latest computer technology, whereas our office isn't able to keep up. More than once, in the middle of a three- to five-year study, everything was put on hold while a new computer system came on line at the USGS, thereby delaying the report.
Cooperator – 10	Yes
Cooperator – 11	In general, yes, but have had some frustration in not seeing ground water data on the Internet. Also would like to have electronic link to the USGS data.
Cooperator – 12	Appropriate – yes; Applicable – yes; Cost effective - probably not; the USGS is expensive.
Cooperator – 13	I don't really know but I assume so. Sometimes the sophisticated equipment and technique is necessary, for example in sampling for trace organics to avoid false positives and give accurate quantification. One cannot predict the use of the data in the future, and therefore the extra effort may prove useful in the long term. One specific COOP monitoring project using Acoustic Velocity Meters has been criticized by some as being overdone and it was suggested that the number of instruments installed could be reduced, thus saving about $100,000. We have not yet been able to make a proper evaluation to arrive at a decision on this issue.
Cooperator – 14	Yes, with the exception of "most cost effective".
Cooperator – 15	Yes
Cooperator – 16	Yes
Cooperator – 17	I have always assumed they were using the latest technologies that best fit the job they were performing. There is one case we have where we are measuring flows with an acoustic flow meter on the outlet of one of our dams. And just 100 yards downstream, the GS is measuring flow with a continuous stage recorder. That particular measurement seems redundant and not cost effective.

Cooperator – 18 Yes, they seem to be doing a good job of that.

Cooperator – 19 Yes, but have been frustrated with inflexibility of GS (ie. deviation from GS standards to reflect customer needs).

Cooperator – 20 Yes. GS good at staying on technology cutting edge.

Cooperator – 21 Certainly appropriate & applicable. Cost effectiveness of technology is reasonable.

Cooperator – 22 The USGS and the cooperator work that out, in my opinion. When the USGS brings me a project, I negotiate with them as to what should be included and what shouldn't. And, that varies greatly according to the percentage of match they pitch to me.

Cooperator – 23 Yes

Cooperator – 24 Yes, absolutely

Cooperator - 25 There is concern at the Board that the same service can be procured more cheaply from the private sector.

Cooperator – 26 Yes, absolutely.

Cooperator – 27 Basically yes

Cooperator – 28 The Regulating District is a stream gaging activity that feels the Cooperative Program is very much up to date. For the last 10 years or so they, have had an annual review meeting with the District Office which has been an excellent opportunity for them to learn about newly available technologies and to continue to keep their program current.

D.E.C. feels that the Cooperative Program is using appropriate, applicable and cost effective technologies and if there is a problem it is that they lack the funds to take advantage of these technologies.

Cooperator – 29 Yes

Cooperator – 30 Unsure

Cooperator – 31 Yes

Cooperator – 32 Yes, I believe the program is using appropriate technology, such as GIS, GPS, e-mail, and gravity instruments. Yes. The USGS keeps up with leading edge technological changes without venturing into "bleeding edge" technology which could provide unreliable data.

Cooperator – 35 We have led the nation in technological advances used to collect and display gage record.

Cooperator – 36 Generally right on the mark. Questions whether costs associated with higher tech approach are warranted.

22. What suggestions do you have for the Coop Program to improve approaches, methods, and technologies to enhance the usability and effectiveness of products?

Cooperator – 1 Involve the cooperator in the project to assist in day-to-day work and ad hoc decisions.

Cooperator – 2 Improve GW Site Inventory—Its hard to use. Make more data more available to the general public. Make data, reports, technology user friendly. Look at new stream gaging technologies and varying levels of quality control. Make reports available in PDF format beginning with the most recent reports and working backward through the entire GS library. Find a way to include data from other sources than GS in GS data bases.
Improve the timeliness of access to data—should not have to wait for associated reports to be peer reviewed.

Cooperator – 3 None

Cooperator – 5 None

Cooperator – 6 None

Cooperator – 7	Improve documentation and data collection on water use.
Cooperator – 8	Not addressed.
Cooperator – 9	Make sure the products are not delayed when new technologies are introduced.
Cooperator – 10	Making more data accessible on the Web is a good direction for the USGS to go. The USGS Water Resources Division has little geological expertise and should acquire more geological framework information for many projects. Some of the younger hydrologists and hydrogeologists with the USGS lack field experience.
Cooperator – 11	Would like to see more consistent attendance of USGS representative at our monthly Technical Advisory Committee meetings.
Cooperator – 12	Possibly have the USGS increase its contribution from 50% to 60%.
Cooperator – 13	More finished work products available on the Internet
Cooperator – 14	Studies could be more practically oriented. Make reports more understandable to the general public.
Cooperator – 15	Continue use of internet and fact sheets to display information. Maintain access to provisional data.
Cooperator – 16	On technical studies, a fast turn around of information gathered and the final report. A well-written draft report would be acceptable for early use by our office.
Cooperator – 17	With respect to streamgaging activities we have with GS, there would be more meaning to the stream flow records if additional interpretive information were included with the data set. It appears to us that the focus is only on collecting the data, providing the analysis and quality control, and publishing the information but we think some interpretation/narrative would be appropriate especially in the case where gauges are in series on a particular stream. How the stream is impacted by accretions/depletions between the gauges would add more meaning.
Cooperator – 18	Our interest is in data collection, so we would like GS to define criteria for different levels of quality control. We look to them for being experts in data collection, so we would hope they stay-a-tune to state-of-the-art equipment for measurement and recording for cost-efficiency sake. When we did use GS for interpretive studies, we remember them taking forever and a day to get a report out.
Cooperator – 19	Stream gauge wise, they're right on.
Cooperator – 20	No suggestions; however, use of internet has been big plus. Use of electronics very good.
Cooperator – 21	USGS appears bound to do analysis; if they collect samples. Couldn't this be done elsewhere more cost effectively? Note that USGS's analytical methods can be different than USEPA's. This can be problematic.
Cooperator – 22	I really don't have any suggestions regarding this.
Cooperator – 23	USGS should be open to change due to new technology, etc.
Cooperator – 24	None
Cooperator - 25	Timeliness of reports and access to even preliminary data has been a major concern of the Board over the years.
Cooperator – 26	None
Cooperator – 27	Continue to improve the timeliness of the products
Cooperator – 28	The Districts response is that USGS, in their estimation, is on top of all of these important issues. They are confident that improvement is ongoing. The D.E.C. feels the Cooperative Program helps them stay up with private and academic developments in terms of technologies and methods. A meeting of

their various divisions and other partners on the USGS agreements is scheduled soon, and will provide more information on where any specific Program area feels that the technologies are not up to date.

Cooperator – 29 As previously stated, data and reports need to be available in a more timely fashion. We find the fact sheet format very useful for sharing information with non-technical staff and the public. These should be a part of every project.

Cooperator – 30 None

Cooperator – 31 Nothing at present. Internet access has been a great improvement.

Cooperator – 32 Outreach presentations are needed with water users and the public.

Cooperator – 33 Allow qualified cooperators to participate in drafting and review process in special studies. This is already done on some projects but should be expanded to all reports/products.

Cooperator – 35 Real-time data collection offers improved opportunities to monitor and maintain a data collection network. Service routes can be streamlined, or adjusted to meet immediate needs, and to provide assurances of data availability.

Cooperator –36 Decrease time necessary to release reports; however, cooperator appreciates the QA/QC and peer review and realizes they take time. Timeliness seems to be improving

23. Is the Coop Program conscious of and sensitive to the needs of the cooperator in areas such as:

Cooperator – 1

a) types of data collected, Yes, if cooperator has time / ability to participate in project.
b) documentation of data, ’’ ’’ ’’ ’’ ’’ ’’
c) timeliness of products, ’’ ’’ ’’ ’’ ’’ ’’
d) value of products, and ’’ ’’ ’’ ’’ ’’ ’’
e) other?

Cooperator – 2

a) types of data collected, Data collection is a compromise between what the cooperator wants and the federal interest. (But that’s not all bad; the GS provides a valuable perspective. However, more flexibility would be appreciated.
b) documentation of data, Some difficulty getting documentation from the GS lab, e.g. can’t get holding time for samples. GPS data not used in Site Inventory.
c) timeliness of products, GW and SW data collection OK. Reports slow (makes cooperator reluctant to use GS for interpretive study. Speed up analysis time and the peer review.
d) value of products, and GS can be too scientific, not practical enough. GS seems to struggle in its understanding of water management and allocation issues of the cooperator. Connection of the coop product to management options must be obvious. Attitude of the District Chief seems to make a difference.
e) other?

Cooperator – 3

a) types of data collected, Yes, because it is done jointly
b) documentation of data,
c) timeliness of products, Late reports
d) value of products, and
e) other?

Cooperator – 4

a) types of data collected, yes
b) documentation of data, yes

c) timeliness of products, fair
d) value of products, and no
e) other?

Cooperator – 5 Very responsive to needs. USGS meets with Board whenever requested.

Cooperator – 6 Yes on all points.

Cooperator – 7

a) types of data collected, - Yes.
b) documentation of data, - The water-use data need to be better documented. There are wide variations, from year to year, and from agency to agency, particularly in terms of agricultural use. Better documentation needs to be given on how the estimates are made.
c) timeliness of products, - We would prefer to have annual water-use data, rather than wait for a five-year report.
d) value of products, and - Yes.
e) other?

Cooperator – 8

a) types of data collected, - Yes.
b) timeliness of products, - Timeliness is poor. This and cost are our biggest complaints.
d) value of products, - Yes.
e) other? - Cost is high. Some states have pulled out of the stream gaging program because costs have risen so high that it is cheaper for the state to do it themselves. Nevada hasn't done this yet, in part because we don't have many satellite offices within the state.

Cooperator – 9

a) types of data collected, - Yes.
b) documentation of data, - There have been a few problems here , but nothing serious.
c) timeliness of products, - This is a constant problem. No matter what we do, we can't seem to light a fire under the USGS to get products out on time. Their review process seems to be way too long. Sometimes final reports take years to come out. The USGS seems immune to criticism.
d) value of products, - Yes.
e) other?

Cooperator – 10

a) types of data collected, - Yes
b) documentation of data, - Yes
c) timeliness of products, - Mostly, but there have been problems on some project.
d) value of products, - Yes
e) other? - Cost is reasonable for the quality of data we receive.

Reports should be reviewed externally, by experts outside the USGS. Also, press releases should be reviewed externally. There is sometimes an appearance that the USGS is magnifying a problem, so that they can get additional funding. They also occasionally and inappropriately interject policy recommendations.

It is good to see scientists and engineers from cooperating agencies as co-authors on USGS reports.

Cooperator – 11 Yes in a), b), and d). With respect to c), this is a big weak area.

Cooperator – 12

a) yes
b) yes
c) Sometimes slow regarding the delivery of final project reports
d) yes

Cooperator – 13 Yes, but this depends on good feedback, and working closely with the COOP project manager to ensure that our needs are met.

Cooperator – 14

a) types of data collected, (Yes, USGS has been very helpful when special measurements are needed.)
b) documentation of data, (Yes, generally.)
c) timeliness of products, (Yes, for gaging data; no, for many of past interpretive studies.)
d) value of products, and (No, this is of continuing concern.)
e) other?

Cooperator – 15

a) types of data collected, - Yes.
b) documentation of data, - Yes.
c) timeliness of products, - Better.
d) value of products, and - Yes.
e) other? - Tend to downplay accepted tried-and-true data for new techniques.

Cooperator – 16

a) types of data collected, - Yes.
b) documentation of data, - Yes.
c) timeliness of products, - Sometimes not on final report.
d) value of products, - Yes.
e) other?

Cooperator – 17 The thing that comes to mind here is: 1) telemetry data is available very quickly but is only on the internet for 14 days before it is lost. We suggest the data be on the internet for a longer period of time, 2) for data which is collected at continuous, "strip" recording devices, that data is not available for up to a period of 18 months; can access to this data be sooner?

Cooperator – 18 We have a good working relationship with GS. They are very sincere in their efforts to work with us. They listen attentively to our suggestions and our needs. And they provide us with interim progress reports as well as data when it becomes available.

Cooperator – 19

a) OK
b) Since we do documentation to GS standards, no problem.
c) Stream gauge data very timely. On ground water work timelines have been a problem us
d) has deadlines while USGS is locked into their protocols.

Cooperator – 20

a) Yes, have had annual meetings to discuss needs.
b) OK, but have had problems with interpretations of data (ie, timelines).
c) Is a problem, but seems to be driven by national policy/procedures vs. local constraints. On other hand, GS has attempted to be creative to minimize this (ex. open file reports). All in all, not bad.
d) OK.
Have found that $$'s speak. GS needs to keep their clients happy.

Cooperator – 21

a) Not to the extent USGS is inflexible in types of data collected and associated methodologies (ex. Cross-sectional sampling).
b) No problems.
c) No problems based on our recent experience.
d) No problems.
e) Not particularly sensitive to financial limitations of cooperation & identification of cost effective approaches for individual project tasks.

Cooperator – 22 Yes, across the board. For example, right now, we're using less water out of the _____ Beds than we were in 1943. The USGS makes that measurement data available over the Internet and provides very helpful displays for meetings. Again, it's because the science of the situation is neutral.

Cooperator – 23

a) types of data collected, yes
b) documentation of data, yes
c) timeliness of products, taking too long to complete reports
d) value of products, and yes
e) other?

Cooperator – 24 Yes, very sensitive to the quality and types of data collected, documentation of all data, the timeliness of all projects, and open to suggestions of various approaches to consider.

Cooperator – 25 The Board would say yes to all of the above, and has seen that the WRD has made major improvements in the area of timeliness of reports, especially with the near real-time access to data online.

Cooperator – 26 Yes, very sensitive to the quality and types of data collected, documentation of all data, the timeliness of all projects, and open to suggestions of various approaches to consider.

Cooperator – 27

a) types of data collected, yes
b) documentation of data, yes
c) timeliness of products, yes
d) value of products, yes
e) other? We would like to see a fixed cost for various parts of the program this would prevent the USGS from over running the completion data and hence the cost. We believe that with fixed cost of the project USGS would work to produce the product on time and within costs. There would be some encouragement for USGS to complete the project under costs. Fixed cost would prevent the USGS from taking on too many projects and help the USGS to sharpen their pencil on cost estimates. USGS should tailor their report to meet the needs of their cooperator and not always use a standard USGS format.

Cooperator – 28 The District feels that their annual meeting with the UsGS goes a long way towards improving the sensitivity and understanding of needs and issues. They think that the documentation of data is excellent, and that the timeliness problem has vanished with the new information systems. There is concern about the site averaging costs appreciate. There is a concern they are subsidizing other sites. There would be interest in a more direct relationship between the cost of the work and the local value of the work.

D.E.C comments that the review process is tedious. They are very happy with flood control with regard to all five categories and will explore whether other divisions have any problems regarding these issues.

Cooperator – 29

a) types of data collected, yes
b) documentation of data, yes
c) timeliness of products, This could be improved.
d) value of products yes

Cooperator – 30

a) types of data collected ok
b) documentation of data
c) timelinesss of products, great

Cooperator – 31

a) types of data collected, yes
b) documentation of data, yes
c) timeliness of products, yes
d) value of products, yes

Cooperator - 32

a) yes
b) yes
c) Project management not always efficient on meeting deadlines and updates
d) Yes
e) No other comment

Cooperator – 33 Yes to a through d. No other needs which are not being met come to mind.

Cooperator – 35

a) types of data collected, yes
b) documentation of data, yes
c) timeliness of products, mostly
d) value of products, and mostly
e) other The USGS is not sensitive to cooperator interests in changing gage operation protocol. It may not be necessary to service a gage today if the missing record is easily compiled, but it would be valuable to service the gage if an event were in progress.

Cooperator – 36

a) types of data collected, yes
b) documentation of data, recently yes; earlier work not well documented
c) timeliness of products, See response to #22, recent performance improving
d) value of products, and definitely

Cooperator – 37

a) types of data collected, Not always. An example (NWQA project in _____) was given in which the USGS ignored data available from other sources.
b) documentation of data, USGS use of proprietary data can be a problem.
c) timeliness of products, Timeliness is always a problem. I am aware of one report from 1983 that is still not published; the author has now retired. I also know of a modeling report that was started in 1978 but published in 1996. Most reports are a year or two behind schedule. Part of the problem is that every project seems to be underfunded.

24. Do you have timely access to the data you need?

Cooperator – 1 Yes, because cooperator is a part of the project.
Cooperator – 2 Sometimes; SW gage data readily available.
GW level data readily available.
When associated with interpretive reports, data are slow in being made available.
Cooperator – 3 Yes
Cooperator – 4 Ok
Cooperator – 5 Yes. Access via WEB page very effective
Cooperator – 6 Yes.
Cooperator – 7 Not addressed.
Cooperator – 8 Yes
Cooperator – 9 Yes
Cooperator – 10 Yes, but we haven't pressed very hard.

Cooperator – 11	Yes and no. Able to get preliminary data but use restricted. Published data sometimes not available in a timely manner to be used for decision making
Cooperator – 12	Most of the time the access of data is satisfactory.
Cooperator – 13	Yes. There is one case I know of where the scientist who used the data did not feel that it met his needs for modeling.
Cooperator – 14	Yes, internet availability of stream gaging network data has been a major improvement!
Cooperator – 15	Yes
Cooperator – 16	Yes
Cooperator – 17	See comment to #23.
Cooperator – 18	By and large, yes.
Cooperator – 19	Yes
Cooperator – 20	Yes
Cooperator - 21	Yes. Has improved tremendously in recent years.
Cooperator – 22	Yes – I think Internet access is great!
Cooperator – 23	Yes, get preliminary report
Cooperator - 24	Yes
Cooperator –25	This has been a major issue in the past for the Board but has improved with time.
Cooperator – 26	Yes
Cooperator – 27	Yes
Cooperator – 28	The District says yes. The D.E.C. says yes especially for flood data. Groundwater data has been slow at times, but is not bad and is being improved.
Cooperator – 29	Not always. The water quality data has taken several months before we receive preliminary results. Provisional stream discharge data can usually be accessed quickly, but it is often a year before the data are no longer considered provisional. While provisional data are adequate for operational decisions and can be used in preliminary data analysis. We are reluctant to use provisional data in reports.
Cooperator – 30	Would be better if they could get real time data via the internet
Cooperator – 31	With internet access there has been a huge improvement. Prior release of provisional data was a problem, but not any more.
Cooperator – 32	Yes, both hardcopy and electronic
Cooperator – 33	Generally, the data we need from the USGS is provided in a very timely manner. The surface water data is provided monthly. Water level data is provided as needed.
Cooperator – 35	Yes, WEB access has made access near real-time and accessable to the public.
Cooperator – 36	Yes, have real time data available on gages

25. In what form will you want Coop Project output delivered in the future?

Cooperator – 1	Needs to be accessible by the public. Electronic format.
Cooperator – 2	Electronic and in mainstream, up-to-date formats. Timely.
Cooperator – 3	Electronic format is good, but still want an official paper document.
Cooperator – 5	Internet good for data.
Cooperator – 6	Paper/electronic
Cooperator – 7	Not addressed.
Cooperator – 8	We see our needs for digital data rising.
Cooperator – 9	I still prefer paper reports, but some of our younger staff prefer digital products.
Cooperator – 10	Paper copy and electronically for now.
Cooperator – 11	Electronically, compatible with City equipment. CD ROM OK.

Cooperator – 12 Produce data in an electronic format that is easily transferable among agencies. Internet access and CDs are examples

Cooperator – 13 We would like to see more information on the Internet, in GIS format using ARCVIEW

Cooperator – 14 If interpretive studies were being done now, agency would like products to be more understandable to the general public.

Cooperator – 15 Data , interpretative analysis and results via fact sheets.

Cooperator – 16 No changes. Would be concerned if USGS went totally to electronic products because they may not meet all long term needs. In many cases a published hard copy report should be available.

Cooperator – 17 Without a doubt, use of the internet is highly recommended. Electronic, spreadsheet format is very useful to us.

Cooperator – 18 Electronic delivery is a convenient means to get the data to us.

Cooperator – 19 Electronics are good.

Cooperator – 20 Enhanced use of electronics good, but computers fail. Best not to totally abandon hard copy.

Cooperator – 21 Electronics are desirable.

Cooperator – 22 The form may be in both electronic and paper, but please don't do away with the paper copies.

Cooperator – 23 CD format

Cooperator – 24 This would vary by what the project was.

Cooperator – 25 The Board wants digital output of the longterm data collection function.

Cooperator – 26 This would very by what the project was

Cooperator – 27 The report should meet the Coop needs and not a stand format. Water Supply paper format is not always needed.

Cooperator – 28 The District uses CD and WEB access as their primary form. They have limited need for paper copies.

D.E.C. prefers electronic delivery, especially for mapping, but for most of their Coop Program.

Cooperator – 29 Data should be delivered in digital format. Reports should be delivered as hard copy and in a digital format.

Cooperator – 30 No change

Cooperator – 31 Internet data delivery works very well

Cooperator – 32 No suggested changes.

Cooperator – 33 Electronic format is required in some instances and is very acceptable to the District for almost all work. Paper copies of the complete work must also be provided.

Cooperator – 35 ??

Cooperator – 36 Gaging is available on internet now.
Would like to see emphasis on GIS format for GW & SW data and reports using Arc Info & Arc View

F. General Closing Question

26. Do you have any recommendations for improving or changing the Coop Program?

Cooperator – 1 Involve the cooperator in the day-to-day conduct of interpretive studies.
Involve the cooperator in QA/QC development.
Data collection sometimes done by individuals as such a low pay grade, that they find other work and move on resulting in a loss of institutional memory.
Consultants may be able to provide better long consistency and knowledge.
Need better interaction amongst the cooperators within the district. Create cooperators advisory panel to meet periodically to identify and address issues.

	Need sharing of expertise between districts to get the best mix of talent for individual projects.
	GS needs to be constantly aware of, and sensitive to, the issues behind the projects, the cooperator's needs and how the product will be used.
	When surface stations need to be dropped, convene a meeting of cooperators to decide which gages to drop and to determine if someone else can pick up the expenses of the targeted stations so as to keep them operative.
Cooperator – 2	Don't move away from basic data collection.
	Assure District Chiefs are interested in cooperator's mission.
	Make the effort to understand the needs of the cooperator—be practical.
	Be creative in working with cooperator to maximize efficiency.
	Gaging costs seem to increase disproportionately. Need to control gaging costs and not use gage revenue to fund other activities or programs.
	Coop program is generally good, but it needs an annual evaluation with the cooperator.
	Cooperator should periodically accompany GS personnel during field data collection as a check on quality.
Cooperator – 3	Overall, coop program is a good one. Would like a closer working relationship with GS staff.
Cooperator – 4	Coop Program minimum of 50-50. All coop money to go for data collection. In-kind services allowed by state in coop program. More coordinated project between state and federal employees
Cooperator – 5	Time to get final reports too long.
Cooperator – 6	None.
Cooperator – 7	Improve the accuracy of water-use data.
Cooperator – 8	Develop more cooperative agreements with multiple parties, to help share the costs. One wonders why three different federal agencies are engaged in more or less the same activity. For example, the National Resources Conservation Service (Dept. of Agriculture) collects data on snow pack; the National Weather Service (NOAA) predicts stream runoff; and the USGS collects data from stream gages. It seems that there should be better coordination among the federal agencies.
Cooperator – 9	Be more timely and more cost conscious.
Cooperator – 10	Minimize competition with the private sector, universities, and state agencies.
	Putting more data on the Web is a good idea, but there need to be ways of telling whether and when these data have been corrected.
	It would be good to have cooperators involved in setting USGS priorities for areas to work. It would be difficult to engage all cooperators, but perhaps a board of three or four, perhaps even recent retirees, could be formed to provide some external input into setting priorities. It appears that the USGS is playing funding games, wherein the USGS requires 100% from the cooperator if it thinks the cooperator really needs the project done, regardless of whether the project would otherwise be appropriate for federal matching funds.
	Individual USGS state district offices should work more collaboratively with one another on projects that cross state lines.
	The USGS mission should be changed to allow items that are not "in the national interest." This would allow the USGS to work more on projects of local interest. However, many projects of local interest also are in the national interest, including a commitment to long-term databases (stream gaging and water quality).

Cooperator – 11	Several years ago when the US Congress was looking into eliminating the USGS we wrote a letter of support. There is need to give the Congress and public a clear understanding of the mission of the COOP program and how it complements state and local agencies. The background statement about the legislation of the USGS makes it appear antiquated, need to have good communication with politicians and decision makers, stressing the uniqueness of the COOP program in meeting local needs. Perhaps some good pamphlets are needed. There is also need for better coordination between federal, State and local monitoring programs. As an example, EPA has been promoting the EMAP program for surface and ground water monitoring, while the state has been pursuing the Ambient Monitoring Program. The local Water Management District has opted out of the State program. I would like to see less duplication and more coordination.
Cooperator – 12	Overall, I believe that the USGS should increase its contribution to the coop program.
Cooperator – 13	No
Cooperator – 14	Provide accurate data on real cost of gaging network.; Greater match dollars; Project proposals need to better reflect cooperator needs instead of USGS interests; Federal fiscal year does not match state's, thus creating accounting nightmares; USGS needs to be able to "market" themselves better.
Cooperator – 15	Rebalance the internal USGS dollar allocations to bring it up to $80-100 million level, adhere to the 50% match policy.
Cooperator – 16	No
Cooperator – 17	Our working relationship with GS through the COOP Program has been very successful. The work they do is very professional and we appreciate their concern for quality. Stream gauging and data collection is very necessary to our needs and other water managers/administrators, so it is our hope the GS emphasizes this activity more heavily in the future. We are also appreciative of their efforts to offer us advice and guidance and to share their experiences on similar investigations the District is conducting. They are very cooperative us with, and very often without a cost to us on this type of request.
Cooperator – 18	Looking for ways to reduce costs while keeping in mind the data needs of the cooperator. Again we have a good working relationship with GS and we hope it lasts. The public announcement is disturbing to us, that is reducing matching funds does not equate to no difference in the program in our minds as the announcement says. This all seems like smoke and mirrors to us.
Cooperator – 19	Overall we are happy with flood control and stream gauging. Have had problems with inflexibility in ground water interpretive work.
Cooperator – 20	GS has a dreadful public relations program! Hurts them. GS needs to institutionalize a core network of gauges (ie, do not drop!)
Cooperator – 21	Wondering if there is a better way to inform cooperators of available dollars. Now it seems to be network based. (Ex. District offices can issue annual letter announcing availability of cooperative dollars).
Cooperator – 22	Yes, more money involved in the program, and available to be matched by cooperators. A 50/50 split is okay. A 60/40 split, with USGS taking the 60 would be even better. I always remember that "Science isn't cheap."
Cooperator – 23	Completing reports in a timely manner; There should be "in progress reviews" of projects. Perhaps on a quarterly basis
Cooperator – 24	Provide additional matching funds and keeping up the excellent quality of work being completed.

Cooperator – 25 The Board is concerned about the decreases in funding for the Coop program and that possibly the State may not be able to replace the lost budget, especially for the long term data collection function.

Cooperator – 26 Provide additional matching funds and keeping up the excellent quality of work being completed.

Cooperator – 27 No

Cooperator – 28 The River Regulating District, _____ is very happy with the relationship. He feels there is always room for improvement but feels that USGS is on tract. He has a very good working relationship with the USGS. He has some concerns about the future of sites that are important to him that may end up being discussed for discontinuance, and feels a couple of sites may need to be added to his network, more to help the weather service produce more reliable flood forecasts than for his program. If two or three new stations are needed, he would question why a new station has to be so expensive; why it can not be it's actual cost.

The D.E.C. feels that they have an excellent working relationship with the State office of the USGS and having that office in the state is important to them. Looking over the last 20 years or so, one significant change is access to USGS training facilities, which have been very important. They feel they learned a great deal of what they do from your training staff, and that there would be benefit to doing more of that sort of training.

Cooperator – 29 Quicker delivery of final products (including reports and data) and having a 50/50 match on most contract projects.

Cooperator – 30 No

Cooperator – 31 Maintain their focus

Cooperator – 32 See 6, 7, 8, 10, 13, 14, 22, and 23

Cooperator – 33 Expand the cooperative program to include climatic data, reactivate gages, and more studies.

Cooperator – 35 The Coop Program, while maintaining national data collection and delivery standards, needs to be flexible to accommodate cooperator needs and requests. Decisions on operating costs, particularly cooperator costs, need to be made jointly, not unilaterally. Cooperators feel that footing 50% of the costs should include the opportunity to help with 50% of the decision making with that program.

Cooperator – 36 Timeliness