

# The Colorado Satellite-Linked Water Resources Monitoring System



Annual Status Report  
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13<sup>th</sup> Edition

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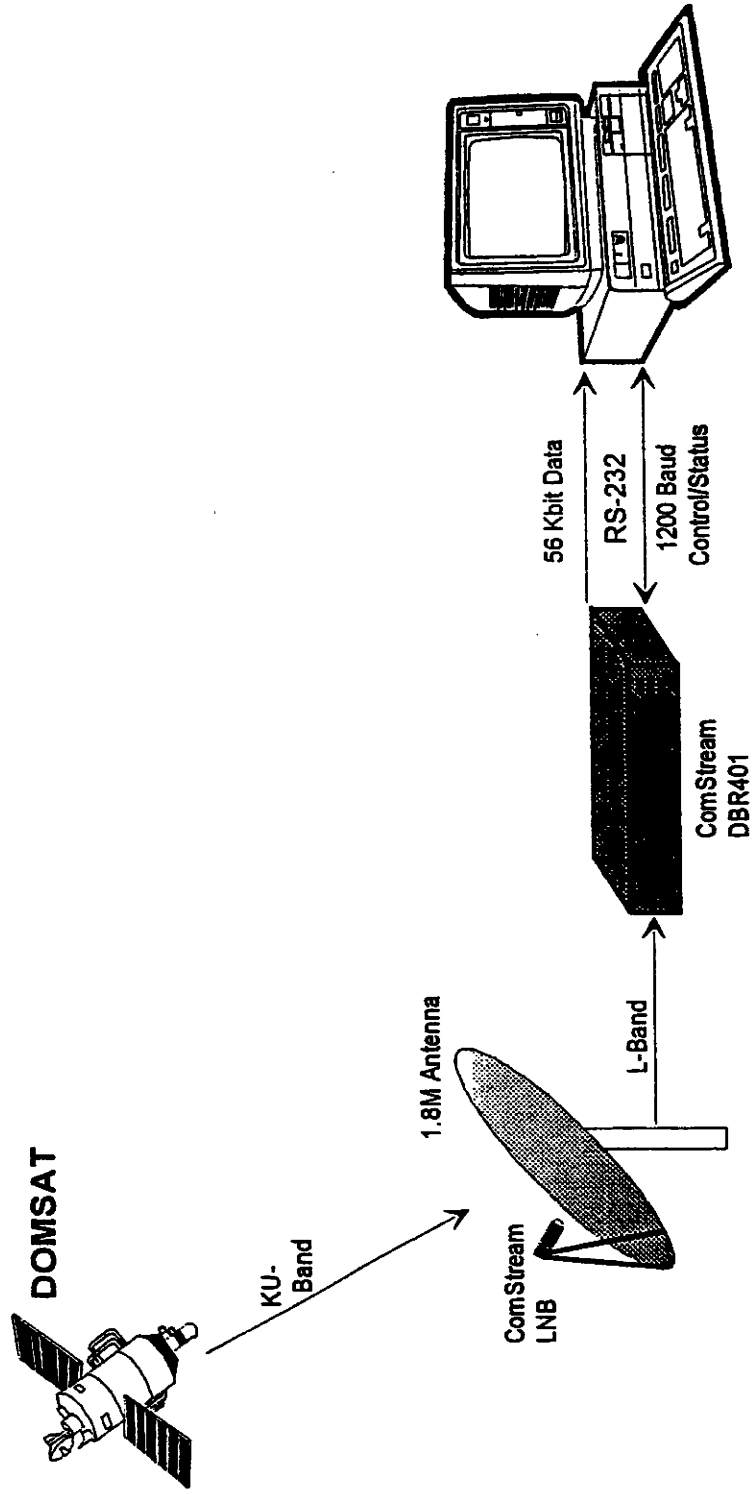
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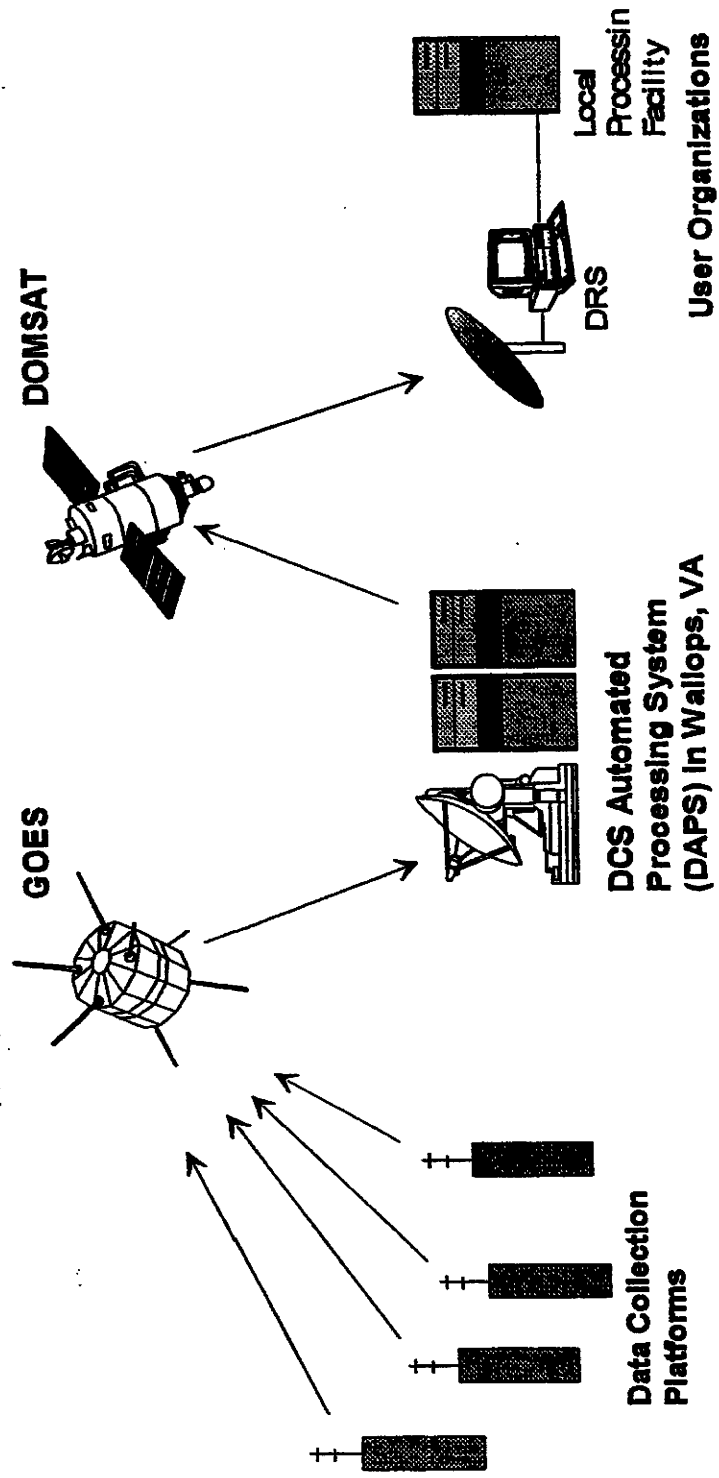
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# *DOMSAT Receive Station (DRS)*



# *NOAA Sponsored Data Collection System (DCS)*



## **INTRODUCTION**

The satellite-linked monitoring system (SMS) provides the Division of Water Resources, other state and federal entities, the water user community, and the public, with access to real-time stream-flow data from gaging stations across the State of Colorado. The SMS consists of 4 subsystems which combine to collect, process, store, and distribute products such as station discharge and reservoir elevation to clients which include water commissioners, state and federal agencies, municipalities, water users and the general public. Key to the system is a Data Collection Platform, (DCP) which is a computer placed at a remote stream gage site. The DCP also contains a radio transmitter, which sends all the collected data to a central computer for processing and dissemination. These data and software systems provide for more effective water rights administration, water resource management, computerized hydrologic records development, and flood warning.

The State Engineer's Office (SEO) began operating the SMS in 1985. The Colorado Water Resources and Power Development Authority provided initial funding for this project pursuant to Section 37-95-107(5), C.R.S. (1983), by enactment of Senate Joint Resolution No. 20. This system has become one of the most important and integral tools for the administration and management of Colorado's water resources, not only for the Division of Water Resources, but for the entire water user community.

Initially, the State of Colorado operated 150 remote gauging stations linked to the SMS. The Water Resources and Power Development Authority funded an additional expansion of forty stations and an upgrade to the central computer system in 1991. Through that expansion and additional stations funded by various cooperating entities, the Division of Water Resources now operates 328 data collection platforms linked to the SMS. Federal agencies, water conservancy districts, municipalities, and private entities own other stations in Colorado and neighboring states. The Division collects and uses the data from 288 of these stations operated by others.

The Colorado satellite-linked water resource monitoring system received national merit awards in 1985 and 1986. The National Society of Professional Engineers selected the system as one of ten outstanding national engineering achievements for 1985. The Council of State Governments selected the system as one of the eight top innovative programs instituted by state government in the nation for 1986.

The Satellite Monitoring System provides the primary input data for the Colorado Decision Support Systems (CDSS) administration tool (CWRAT). The CDSS was developed by the Division of Water Resources and the Colorado Water Conservation Board. The administration tool allows Water Commissioners and DWR engineers to more effectively administer and manage the Colorado River and its tributaries. CDSS is fully implemented on the Western Slope and South Platte River basin. Through the RGDSS, this administration tool is 75% implemented in the upper Rio Grande basin.

The Colorado Water Conservation Board's construction fund continued to pay for the replacement of old Data Collection Platforms. A total of \$120,000 was obtained for FY 99-00. Most of these funds were used to replace fifteen satellite installations with new electronic equipment annually. The rest of the funding is for a gaging station renovation program.

## **I. PROGRAM DESCRIPTION**

The Satellite Monitoring System (SMS) allows the Division of Water Resources to collect, process, store, and distribute many kinds of environmental data transmitted from remote locations. The data set of interest to the Division is the water level at rivers, streams, diversion structures, and reservoirs. The SMS converts these raw water level values into several "products" of use to various "clients". The "products" range from raw data passed on to other computer systems to the official Hydrographic Records of mean daily stream flows. Our "clients" include Division of Water Resources personnel and other water users wanting real-time administrative data, computer systems performing other analyses, and the varied user community of state and federal agencies, municipalities, canal companies, attorneys, and consulting engineers needing access to real-time and historic stream flow data.

### **A. System Configuration**

The Satellite Monitoring System consists of four primary sub-systems: 1) the remote station data measurement, collection, and transmission hardware; 2) the satellite communication links and transmission receive hardware; 3) the computer hardware and software systems; and 4) the computer communication hardware and software

The remote equipment at remote stream, diversion, or reservoir gauging stations includes the on-site sensors, the Data Collection Platform (DCP) and radio transmitter electronics, the power supply, and the radio antenna. The sensor may be either a float operating in a stilling well hydraulically connected to the stream or reservoir, a manometer or other type of pressure transducer, or a direct discharge meter. Often a temperature sensor and other meteorological sensors are also present. The DCP is a programmable device that collects, processes, and stores data from up to 16 sensors. It also controls the timing of the radio transmissions. Most sites are powered by 12-volt batteries re-charged by solar panels. If available, 120 volt AC power converted to 12 volt DC current for some sites. An environmentally secure enclosure protects the equipment from extreme weather and unauthorized access.

The communications link for data transmissions from the DCPs is a Geostationary Orbital Environmental Satellite (GOES). This is a federal satellite operated by the National Oceanic and Atmospheric Administration-National Environmental Satellite, Data, and Information Service (NOAA-NESDIS). The GOES satellite is in an equatorial, geostationary orbit 22,500 miles in space. The Division of Water Resources originally installed a Direct Readout Ground Station (DRGS) to receive this data directly from the GOES satellite. NOAA receives all transmissions at a facility at Wallops Island, Virginia then re-transmits the data over one channel to a domestic communications satellite visible from all of North America. This satellite (DOMSAT) broadcasts back to earth with much more power than the GOES system. The more powerful signal allows us to use a much smaller antenna (1.8 meters) and much simpler electronics. Since the DOMSAT multiplexes all data on one channel we can receive data from any remote site without additional electronics. The DRGS is still available as a backup system. NOAA does not charge for these services.

The DCP's collect data measurements at 15-minute, 30-minute, or 60-minute intervals as needed. In most cases they store 8-hours of data and transmit at 4-hour intervals in the standard transmission mode. This provides replicate data in case of a missed transmission. When the DCP's detect that stream flow conditions exceed programmed levels, they transmit random messages, providing real-time alarm warnings.

The main computer is a Dell Server running NT and SQL Server. This system gathers data from the DOMSAT receive system running on a PC. Real-time software automatically processes, converts, and stores the incoming data. The conversion calculations use the most up-to-date hydrographic shifts, as determined by actual measurements, to reflect changes in the stream channel characteristics. The system processes meteorological information in a similar manner. Every morning the system reads the previous

day's data and calculates mean values, minimums, maximums, and other statistics, placing the results in a separate data base. To preserve the integrity of the data, we do not edit the original real-time data. A DWR developed system extracts a subset of the original data for editing and hydrologic record development. The DWR hydrographers also use this system to manually enter and edit stations not included in the GOES-linked system. Only authorized users can edit the data. Other programs allow users to access data and to control the system. The central computer hardware is located in the Centennial Building at the Office of the State Engineer.

We support several methods of communications access and data dissemination. Using a PC and a modem, users anywhere in the world can access our system. In 1995 the DWR installed newer (28,800 baud) modems. This provides our users with a better level of service through much higher data transfer rates. Many users now connect to the system through the Internet, the "Information Superhighway". This technology also connects the SMS to other independent systems.

The Division operates a system called WATERTALK that lets users retrieve up-to-date stream flow information from key gauging stations throughout the state by using a touch-tone telephone. WATERTALK uses a computer generated voice synthesizer. This system is very popular with both the public and the Division water commissioners. The telephone number for WATERTALK is 303-831-7135. Originally we dedicated 4 telephone lines to this program. Presently there are six telephone lines available to this program. The last page of this report shows the current list of stations available on WATERTALK.

Another method used to provide stream flow data from the satellite stream flow monitoring system to the public is posting hydrographs to our home page on the internet (<http://www.dwr.state.co.us>). The hydrograph displays the last ten days of dayfile data graphically. Approximately three hundred stations are plotted every 15 minutes giving users of World Wide Web a good snap shot of water conditions throughout the state.

## **B. System Operations**

During FY 99-00 the SMS computer system was converted from the VAX, used since 1992, to the servers now used. New software was purchased and installed to operate the DOMSAT receive site. The process of changing computer systems on a "real-time" operation such as the SMS was not seamless. Many disruptions of the system occurred between December 1999 and the summer of 2000. Some of the products relied upon by the system's users have changed considerably and some were still not back to past levels of performance by the end of this FY. This conversion will continue throughout FY 00-01. By the summer of 2001, it is expected that the SMS will have returned to the level of performance the users came to expect. The use of the internet to display and disseminate data will have replaced the old VAX downloads.

One of the most important technical aspects of the Satellite Monitoring program is to assure the highest possible rate of data capture and system availability. In years past, problems inherent in the GOES system and our DRGS prevented us from receiving 100% of DCP transmissions. NOAA launched new satellites in 1994, 1996 and 1997. There are now two operational GOES satellites and one 'parked' in orbit as a backup. One of the satellites handles transmissions from the western half of the nation and one handles the eastern US. In conjunction with the DOMSAT system, the availability of three satellites has improved the overall reliability of the DCP/satellite link.

Occasionally, local power outages at the Division's Denver office have created short-term gaps in data reception and the availability of the system to users. In 1995 we purchased and installed uninterruptible power supplies for all the computer systems involved in data collection, data processing, and communications. While these power supplies will not keep the systems operating for more than 20 minutes, 90% of the power outages we have experienced over 10 years have been less than 10 minutes in duration.

This helps increase the availability and reliability of the Satellite Monitoring System. Our data reception is now better than 98%.

Maintaining data base integrity is an important operations goal. Real-time data are of no value unless the data are accurate. We expend considerable effort to ensure that the remote hardware and sensors remain in calibration. Other entities operate nearly 46% of the stations in the state's monitoring network. They generally are not using the data to make real-time decisions. This difference in the use of data makes our efforts to keep the equipment calibrated more difficult. Those entities more concerned with historic data do not have the sense of immediacy as the DWR with its interest in water administration. Over time, improved communication has alleviated this problem.

Typically, hydrographers visit stations at two to four week intervals. They make on-site flow measurements and any necessary adjustments to the equipment. The system compares in-coming data to allowable data ranges for each station and flags outside of range data accordingly. The software that calculates mean values and other statistics does not use these flagged values. Each day the computer reports the number of "data quality" flags for each station.

The system diagnostic report helps in monitoring the operation of the remote data collection hardware. This computer generated report tabulates the transmission characteristics and a data base analysis for each station for the previous day. The report lists the number of received, scheduled, and missed transmissions, any message length errors, transmission time errors, errors in transmission quality including power (EIRP) and frequency, any deficiency in remote power supplies, and the number of missing values and parity errors for each station. We can detect remote equipment operating problems before they produce fatal errors.

The Division of Water Resources is responsible for system maintenance. Field personnel from each Division received training from Division of Water Resources personnel in the operation and maintenance of the system hardware. Training is directed at system diagnostics, hardware calibration, and basic repairs. Each Division is supplied with a minimum of two sets of replacement hardware. If a component malfunctions and cannot be repaired in the field, it is replaced and sent to our repair facility in Denver. If we cannot repair it, it is then returned to the manufacturer for repair.

We are using monies obtained from the Colorado Water Conservation Board's construction fund to renovate gauging stations and replace 15 DCPs per year. Many of the DCPs in the field are approaching fifteen years of use, and are nearing the end of their useful life. \$120,000 was obtained for these purposes in fiscal year 99-00. This office is still developing a source of funds for these purposes on an on-going basis.

Communications with NOAA-NESDIS, other GOES users, and the Colorado user community is essential. NOAA-NESDIS coordinates the activities of the national GOES user group. Meetings are held three times a year to discuss GOES operations, future system improvements, system utility, and to facilitate communications between users. These meetings have proven to be beneficial.

The SMS is managed by the Chief of the Hydrographic Branch. His responsibilities include overall management of the program, integration of the SMS into the hydrographic program of the DWR, maintaining communications with the user community, interagency and intra-agency coordination, user fee development, budget management and program direction. Working under the Hydrographic Branch Chief is a Telecommunications Electronics Specialist. The duties of this staff member include the operation of a triage repair shop. Repair and preventative maintenance of the electronic equipment used in the SMS is done by this person. Also, support for southwestern Colorado's preventative maintenance and repair is provided by the Division Engineer's Office for Water Division Three. One-third of an FTE is employed in Alamosa for this purpose. The State Engineer and an Assistant State Engineer provide overall guidance



and direction. The hydrographic staffs of each of the seven Division offices provide systems operation and maintenance support.

The monitoring system operates with the assistance of an additional full-time employee, an Information Technology Professional III. The Information Technology Professional III's responsibilities include the coordination of daily operations, network development, system enhancement, control and management of system access by the user community, software modification, and ADP training.

### **C. System Software**

The Satellite Monitoring System software package consists of a series of programs that provide for data reception, data processing, data conversions, data archiving, and data retrieval in various formats. Software tools are also provided for system diagnostics.

System users can access the real-time daily data and calculated means, minimums, and maximums through the Dayfile and Archive programs. Division of Water Resources personnel controls the setup and maintenance of individual stations and the overall system through various other programs.

The Division has internally developed additional systems to supplement the basic satellite software. The record system was created to facilitate the development of hydrologic records. It uses the real-time data to produce the official hydrographic stream flow record for the Division of Water Resources. Editing is done on a separate working file duplicated from the original database. In this fashion, the integrity of the real-time data is maintained. This is necessary since administrative decisions are based on the evaluation of real-time data.

## **II. SYSTEM APPLICATION**

### **A. Water Rights Administration**

The primary utility of the Colorado satellite-linked monitoring system is for water rights administration. The availability of real-time data from a network of key gauging stations in each major river basin in Colorado provides an overview of the hydrologic conditions of the basin that was previously not available. By evaluating real-time data for upstream stations, downstream flow conditions can typically be predicted 24 to 48 hours in advance. This becomes an essential planning tool in the hands of the Division Engineers and Water Commissioners. The "river call" can be adjusted more precisely to satisfy as many water rights as possible. Access to real-time data makes it possible to adjust the "river call" to match dynamic hydrologic conditions. If additional water supplies are available, more junior rights can be satisfied. On the other hand, if water supplies decrease, then water use can be curtailed to protect senior rights.

The administration of water rights in Colorado is becoming increasingly more complex due to increased demands, implementation of augmentation plans, water exchanges, transmountain diversions, and minimum stream flow requirements. For example, the number of water rights increased by 23% from 1982 to 1988, from 102,028 to 124,994. This increase in the number of water rights has continued to the present. Water rights transfers approved by the water courts are becoming increasingly complex. This is especially evident where agricultural water rights are transferred to municipal use.

There is considerable interest in monitoring transmountain diversions, both by western slope water users and the eastern slope entities diverting the water. Transmountain diversion water is administered under different laws than water originating in the basin. In general, this water may be claimed for reuse by the diverter until it is totally consumed. Forty transmountain diversions are monitored by the system.

Water exchanges between water users are becoming increasingly frequent. These exchanges can provide for more effective utilization of available water resources in high demand river basins, but can be difficult to administer. The satellite-linked monitoring system has proven to be an integral component in monitoring and accounting of these exchanges.

Many municipalities and major irrigation companies have reservoir storage rights. Generally, these entities can call for release of stored water on demand. The Division Engineer must be able to delineate the natural flow from the storage release while in the stream. He then must track the release and ensure that the proper delivery is made. The system has demonstrated to be effective in this area.

The utility of the system in the administration of interstate compacts is an especially important application. The State Engineer has the responsibility to deliver defined amounts of water under the terms of the various interstate compacts, but not to over-deliver and deprive Colorado of its entitlement. Fifteen stations incorporated in the statewide monitoring network are utilized for the effective administration of these interstate compacts.

The majority of the large, senior water rights in Colorado belong to irrigation companies. These rights are often the calling right in the administration of a water district. The direct diversion rights exercised can affect significantly the hydrology of the river. Twenty-one major irrigation diversions are monitored by the system.

Water rights have been acquired by federal and state agencies to guarantee minimum stream flow for both the recreational and fisheries benefits. The availability of real-time data is essential in ensuring that these minimum stream flows are maintained.

## **B. Hydrologic Records Development**

The new stream flow record program, designed to replace the old program run on the VAX, was not completed by the end of FY 99-00. An interim spreadsheet was used for records for this water year. Development of this program will continue through FY 00-01.

Specialized software programs provide for the processing of raw hydrologic data on a real-time basis. Conversions such as stage-discharge relationships and shift applications are performed on a real-time basis as the data transmissions are received. Mean daily values are computed automatically each day for the previous day. Data values that fall outside of user defined normal or expected ranges are flagged appropriately. Flagged data values are not utilized in computing mean daily values. Missing values can be added and invalid data values corrected by the respective hydrographer for that station using data editing functions. The computer carries out computations alleviating the chance for human error.

Data can be retrieved and displayed in various formats including the standardized U. S. Geological Survey-Water Resources Division annual report format adopted by the Colorado Division of Water Resources for publication purposes. An advantage of real-time hydrologic data collection is in being able to monitor the station for on-going valid data collection. If a sensor or recorder fails, the hydrographer is immediately aware of the problem and can take corrective action before losing a significant amount of data.

It is essential to understand that real-time records can be different from the final record for a given station. This can be the result of editing raw data values because of sensor calibration errors, sensor malfunctions, analog-to-digital conversion errors, or parity errors. The entering of more current rating tables and shifts can modify discharge conversions. Corrections to the data are sometimes necessary to compensate for hydrologic effects such as icing. Human error can also result in invalid data. The final

record for those gauging stations operated by non-state entities, such as the U. S. Geological Survey-Water Resources Division, is the responsibility of that entity. Modifications to the real-time records for these stations are accepted by the state of Colorado.

### **C. Water Resources Accounting**

Currently, the satellite-linked monitoring system is being utilized for accounting for the Colorado River Decision Support System (CRDSS), the Colorado-Big Thompson Project, the Dolores Project, and the Fryingpan-Arkansas Project Winter Water Storage. The ability to input real-time data into these accounting programs allows for current and on-going tabulations. Since the computations are performed on a computer, the accuracy is increased significantly.

### **D. Dam Safety**

Dam safety monitoring has developed in recent years into a major issue. Numerous on-site parameters are of interest to the State Engineer in assessing stability of a dam. At this time, the system monitors more than forty reservoirs in Colorado. Currently, the parameters monitored are limited to inflow, outflow, and stage elevation. These data do, however, provide a basis for evaluating current operating conditions as compared to specific operating instructions. The installation and operation of additional sensor types could provide essential data on internal hydraulic pressure, vertical and horizontal movement, and seepage rates.

## **III. OPERATING BUDGET**

The Colorado Satellite-linked Water Resources Monitoring System is funded from three sources:  
1. General Fund Appropriation. 2. Cash Fees collected. 3. Colorado Water Conservation Board Construction Fund Allocation.

A breakdown of these expenses by source for FY00 is as follows:

**FY99-00  
EXPENSES**

1. General Fund Expenses	
Personnel	69872
Repair & Maintenance Parts	79441
Repair Services	20250
Safety Equipment	14011
Telecommunications	19638
Computer (VAX) Maintenance	2496
Computer Hardware	25549
Out-of-State Travel	3400
Annual Training Meeting	5750
<b>TOTAL</b>	<b><u>\$240407</u></b>
2. Cash Fund Expenses	
Travel Expenses for Maintenance	11034
Telecommunications	9924
Hydrographic Equipment	1485
Miscellaneous Expenses for Contract Record Work	4171
Indirect Charges for EDO	4931
Indirect Charges for Capitol Complex Lease	2266
<b>TOTAL</b>	<b><u>\$33811</u></b>
3. CWCB Construction Fund Expenses	
Construction Expense – Division One	7104
Construction Expense – Division Two	5234
Construction Expense – Division Three	4728
Construction Expense – Division Five	765
Construction Expense – Miscellaneous	1833
Satellite Monitoring Replacement Equipment	89551
Hydrographic Equipment	10785
<b>TOTAL</b>	<b><u>\$120000</u></b>

# STATIONS OPERATED BY THE STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

### **DIVISION I SOUTH PLATTE RIVER BASIN**

1.	ALVA B. ADAMS TUNNEL AT EAST PORTAL NEAR ESTES PARK	DWR
2.	BEAVER CREEK ABOVE BEAVER CREEK RESERVOIR	DWR
3.	BIG DRY CREEK AT MOUTH NEAR FORT LUPTON	DWR
4.	BIG THOMPSON RIVER ABOVE LAKE ESTES	DWR
5.	BIG THOMPSON RIVER AT HILLSBOURH DIVERSION	DWR
6.	BIG THOMPSON RIVER AT MOUTH NEAR LA SALLE	DWR
7.	BIG THOMPSON RIVER AT MOUTH OF CANYON NEAR DRAKE	DWR
8.	BIG THOMPSON RIVER BELOW LAKE ESTES	DWR
9.	BIJOU CANAL @ 20 FT PARSHALL FLUME	DWR
10.	BOREAS PASS DITCH AT BOREAS PASS	DWR
11.	BOULDER CREEK FEEDER CANAL NEAR LYONS	DWR
12.	BOULDER CREEK NEAR ORODELL	DWR
13.	BOULDER-LARIMER BYPASS NEAR BERTHOUD	DWR
14.	BOULDER-LARIMER DITCH NEAR BERTHOUD	DWR
15.	BUCKHORN CREEK NEAR MASONVILLE	DWR
16.	BURLINGTON-WELLINGTON CANAL	DWR
17.	CACHE LA POUDDRE AT CANYON MOUTH NEAR FORT COLLINS	DWR
18.	CACHE LA POUDDRE NEAR GREELEY	DWR
19.	CACHE LA POUDDRE RIVER BELOW NEW CACHE	DWR
20.	CANAL # 3 @ 12 FT PARSHALL FLUME NEAR GREELEY	DWR
21.	CHARLES HANSEN FEEDER CANAL BELOW BIG THOMPSON SIPHON	DWR
22.	CHARLES HANSEN FEEDER CANAL WASTEWAY TO BIG THOMPSON	DWR
23.	CHEESMAN RESERVOIR	DWR
24.	COAL CREEK NEAR PLAINVIEW	DWR
25.	DILLE TUNNEL NEAR DRAKE	DWR
26.	EVANS #2 DITCH	DWR
27.	FISH CREEK NEAR ESTES PARK	DWR
28.	FORT MORGAN CANAL NEAR WIGGINS @ 20 FT PARSHALL FLUME	DWR
29.	FULTON DITCH AT HEADGATE NEAR THORNTON	DWR
30.	GRAND RIVER DITCH AT LA POUDDRE PASS @ 10 FT PARSHALL FLUME	DWR
31.	GREELEY LOVELAND BYPASS AT LOVELAND	DWR
32.	GREELEY LOVELAND DIVERSION AT LOVELAND	DWR
33.	HARMONY NO. 1 DITCH NEAR CROOK @ 20 FT PARSHALL FLUME	DWR
34.	HOOSIER PASS TUNNEL AT MONTGOMERY RESERVOIR NEAR ALMA	DWR
35.	LA POUDDRE PASS CREEK BELOW LONG DRAW RESERVIOR	DWR
36.	LARAMIE POUDDRE TUNNEL @ 10 FT PARSHALL FLUME	DWR
37.	LARAMIE RIVER NEAR GLENDEVEY	DWR
38.	LARIMER AND WELD IRRIGATION COMPANY @ 30 FT PARSHALL FLUME	DWR
39.	LARIMER COUNTY #2 @ 12 FT PARSHALL FLUME	DWR
40.	LEFT HAND DIVERSION NEAR WARD	DWR
41.	LITTLE DRY CREEK NEAR GREENWOOD VILLAGE	DWR
42.	LITTLE THOMPSON RIVER AT CANYON MOUTH NEAR BERTHOUD	DWR
43.	LOWER PLATTE AND BEAVER CANAL @ 20 FT PARSHALL FLUME	DWR
44.	MARY'S LAKE AT ESTES PARK	DWR
45.	METRO SEWER EFFLUENT AT DENVER	DWR
46.	MICHIGAN DITCH AT CAMERON PASS	DWR
47.	MIDDLE BOULDER CREEK AT NEDERLAND	DWR
48.	MIDDLE SAINT VRAIN AT PEACEFUL VALLEY	DWR
49.	MOFFAT WATER TUNNEL AT EAST PORTAL	DWR
50.	NEW CACHE LA POUDDRE CANAL @25' NEAR TIMNATH	DWR
51.	NEW MERCER @ 10 FOOT PARSHALL FLUME NEAR LAPORTE	DWR
52.	NORTH FORK BIG THOMPSON RIVER AT DRAKE	DWR
53.	NORTH FORK SOUTH PLATTE RIVER AT BAILEY	DWR

# STATIONS OPERATED BY THE STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

### **DIVISION II ARKANSAS RIVER BASIN**

11.	ARKANSAS RIVER NEAR ROCKY FORD	DWR
12.	ARKANSAS RIVER NEAR WELLSVILLE	DWR
13.	BEAVER CREEK NEAR PORTLAND	DWR
14.	BRETT GRAY RESERVOIR AT SMITH RANCH NEAR RUSH	DWR
15.	BUSK-IVANHOE TUNNEL	DWR
16.	CATLIN CANAL AT CATLIN DAM NEAR FOWLER	DWR
17.	CHALK CREEK AT NATHROP	DWR
18.	CHARLES H. BOUSTEAD TUNNEL	DWR
19.	CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR	DWR
20.	CLEAR CREEK BELOW CLEAR CREEK RESERVOIR	DWR
21.	CLEAR CREEK RESERVOIR	DWR
22.	COLORADO CANAL AT MILE 3.8 NEAR BOONE	DWR
23.	COLUMBINE DITCH NEAR FREMONT PASS	DWR
24.	CONSOLIDATED DITCH NEAR RIVERDALE	DWR
25.	COTTONWOOD CREEK NEAR BUENA VISTA	DWR
26.	CROOKED ARROYO NEAR SWINK	DWR
27.	CUCHARAS RESERVOIR	DWR
28.	CUCHARAS RIVER AT BOYD RANCH NEAR LA VETA	DWR
29.	CUCHARAS RIVER BELOW CUCHARAS RESERVOIR	DWR
30.	CUCHARAS RIVER NEAR LA VETA	DWR
31.	DOUGLAS CREEK AT SMITH RANCH (OUTFLOW)	DWR
32.	DOUGLAS RESERVOIR AT SMITH RANCH NEAR RUSH	DWR
33.	DOUGLAS RESERVOIR AT SMITH RANCH NEAR RUSH (OUTFLOW)	DWR
34.	EWING DITCH AT TENNESSEE PASS	DWR
35.	EXCELSIOR DITCH NEAR BAXTER	DWR
36.	FORT LYON CANAL	DWR
37.	FORT LYON STORAGE CANAL	DWR
38.	FOUNTAIN CREEK AT MOUTH PUEBLO	DWR
39.	GRAPE CREEK NEAR WESTCLIFFE	DWR
40.	HOLBROOK CANAL AT MILE 3.4 NEAR ROCKY FORD	DWR
41.	HOMESTAKE TUNNEL	DWR
42.	HORSE CREEK AT HIGHWAY 194	DWR
43.	HUERFANO RIVER BELOW HUERFANO VALLEY DAM NEAR UNDERCLIFFE	DWR
44.	HUERFANO RIVER NEAR REDWING	DWR
45.	HUERFANO-CUCHARAS DITCH	DWR
46.	JOHN MARTIN RESERVOIR AT CADDOA	DWR
47.	KICKING BIRD CANAL	DWR
48.	LAKE CREEK BELOW TWIN LAKES RESERVOIR	DWR
49.	LAKE FORK CREEK ABOVE TURQUOISE	DWR
50.	LAKE FORK CREEK BELOW SUGAR LOAF DAM NEAR LEADVILLE	DWR
51.	LAKE HENRY RESERVOIR (OUTFLOW)	DWR
52.	LAMAR CANAL	DWR
53.	LARKSPUR DITCH AT MARSHALL PASS	DWR
54.	LUNING ARROYO NEAR MODEL	DWR
55.	NINEMILE CANAL AT NINEMILE DAM NEAR HIGBEE	DWR
56.	OXFORD FARMERS DITCH COMPANY	DWR
57.	PUEBLO RESERVOIR NEAR PUEBLO	DWR
58.	PUEBLO WATER WORKS DIVERSION	DWR
59.	PURGATOIRE RIVER AT NINEMILE DAM NEAR HIGBEE	DWR
60.	ROCKY FORD HIGHLINE CANAL AT MILE 4.9 NEAR BOONE	DWR
61.	ROCKY FORD RETURN FOR AURORA	DWR
62.	SOUTH ARKANSAS RIVER NEAR SALIDA	DWR
63.	TWIN LAKES	DWR
64.	WURTZ DITCH NEAR TENNESSEE PASS	DWR

# STATIONS OPERATED BY THE STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

### **DIVISION II ARKANSAS RIVER BASIN CONTINUED**

65. WURTZ EXTENSION DWR

### **DIVISION III RIO GRANDE RIVER BASIN**

1.	ALAMOSA RIVER ABOVE TERRACE RESERVOIR	DWR
2.	ALAMOSA RIVER ABOVE WIGHTMAN FORK NEAR JASPER	DWR
3.	ALAMOSA RIVER BELOW CASTLEMAN GULCH NEAR JASPER	DWR
4.	ALAMOSA RIVER BELOW TERRACE RESERVOIR	DWR
5.	BEAVER CREEK BELOW BEAVER CREEK RESERVOIR	DWR
6.	BEAVER RESERVOIR	DWR
7.	CARNERO CREEK NEAR LA GARITA	DWR
8.	CENTENNIAL CANAL NEAR MONTE VISTA	DWR
9.	CHERRY CREEK NEAR CRESTONE	DWR
10.	CLOSED BASIN PROJECT CANAL NEAR ALAMOSA	DWR
11.	CONEJOS RIVER BELOW PLATORO RESERVOIR	DWR
12.	CONEJOS RIVER NEAR CONEJOS	DWR
13.	CONEJOS RIVER NEAR MOGOTE	DWR
14.	CONTINENTAL RESERVOIR NEAR CREEDE	DWR
15.	COSTILLA DITCH NEAR ALAMOSA	DWR
16.	COTTON CREEK NEAR MINERAL HOT SPRINGS	DWR
17.	COTTONWOOD CREEK NEAR CRESTONE	DWR
18.	DEADMAN CREEK NEAR CRESTONE	DWR
19.	DON LA FONT DITCH NO. 2 AT PIEDRA PASS	DWR
20.	EMPIRE CANAL NEAR MONTE VISTA	DWR
21.	EXCELSIOR CANAL NEAR RIO GRANDE-ALAMOSA COUNTY LINE	DWR
22.	FARMERS UNION CANAL NEAR DEL NORTE	DWR
23.	GARNER CREEK NEAR VILLA GROVE	DWR
24.	KERBER CREEK NEAR VILLA GROVE	DWR
25.	LA GARITA CREEK NEAR LA GARITA	DWR
26.	LAJARA CREEK AT GALLEGOS RANCH NEAR CAPULIN	DWR
27.	LOS PINOS RIVER NEAR ORTIZ	DWR
28.	MAJOR CREEK NEAR VILLA GROVE	DWR
29.	MANASSA DITCH NEAR CONEJOS	DWR
30.	MEDANO CREEK AT GREAT SAND DUNES NATIONAL MONUMENT	DWR
31.	MONTE VISTA CANAL NEAR MONTE VISTA	DWR
32.	MOUNTAIN HOME RESERVOIR	DWR
33.	MOUNTAIN HOME RESERVOIR (OUTFLOW)	DWR
34.	NORTH BRANCH CONEJOS RIVER NEAR CONEJOS	DWR
35.	NORTH CHANNEL CONEJOS RIVER NEAR LA SAUSES	DWR
36.	NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR	DWR
37.	NORTON DRAIN NEAR LA SAUSES	DWR
38.	PINE RIVER WEMINUCHE PASS DITCH AT WEMINUCHE PASS	DWR
39.	PINOS CREEK NEAR DEL NORTE	DWR
40.	PLATORO RESERVOIR	DWR
41.	PRAIRIE DITCH NEAR SEVEN-MILE PLAZA	DWR
42.	RIO GRANDE CANAL NEAR DEL NORTE	DWR
43.	RIO GRANDE RESERVOIR NEAR CREEDE	DWR
44.	RIO GRANDE RIVER ABOVE TRINCHERA CREEK NEAR LA SAUSES	DWR
45.	RIO GRANDE RIVER AT ALAMOSA	DWR
46.	RIO GRANDE RIVER AT MONTE VISTA	DWR
47.	RIO GRANDE RIVER AT RIO GRANDE-ALAMOSA COUNTY LINE	DWR
48.	RIO GRANDE RIVER AT THIRTY MILE BRIDGE NEAR CREEDE	DWR
49.	RIO GRANDE RIVER AT WAGON WHEEL GAP	DWR

# STATIONS OPERATED BY THE STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

### **DIVISION III RIO GRANDE RIVER BASIN CONTINUED**

50.	RIO GRANDE RIVER NEAR CERRO, NM.	DWR
51.	RIO GRANDE RIVER NEAR DEL NORTE	DWR
52.	RIO GRANDE RIVER NEAR LOBATOS	DWR
53.	RITO ALTO CREEK NEAR CRESTONE	DWR
54.	ROMERO DITCH NEAR CONEJOS	DWR
55.	SAGUACHE CREEK NEAR SAGUACHE	DWR
56.	SAN ANTONIO RIVER AT ORTIZ	DWR
57.	SAN ANTONIO RIVER NEAR MANASSA	DWR
58.	SAN ISABEL CREEK NEAR CRESTONE	DWR
59.	SAN LUIS VALLEY CANAL NEAR RIO GRANDE-ALAMOSA COUNTY LINE	DWR
60.	SAND CREEK AT GREAT SAND DUNES NATIONAL MONUMENT	DWR
61.	SANGRE DE CRISTO CREEK NEAR FORT GARLAND	DWR
62.	SOUTH CHANNEL CONEJOS RIVER NEAR LA SAUSES	DWR
63.	SOUTH CHANNEL NORTON DRAIN DITCH NEAR LA SAUSES	DWR
64.	SOUTH CRESTONE CREEK NEAR CRESTONE	DWR
65.	SOUTH FORK RIO GRANDE RIVER AT SOUTH FORK	DWR
66.	SPANISH CREEK NEAR CRESTONE	DWR
67.	TABOR DITCH AT SPRING CREEK PASS	DWR
68.	TARBELL DITCH NEAR COCHETOPA PASS	DWR
69.	TERRACE RESERVOIR IN CONEJOS COUNTY	DWR
70.	TRINCHERA CREEK ABOVE MOUNTAIN HOME RESERVOIR	DWR
71.	TRINCHERA CREEK ABOVE TURNER'S RANCH	DWR
72.	TRINCHERA CREEK BELOW SMITH RESERVOIR	DWR
73.	UTE CREEK NEAR FORT GARLAND	DWR
74.	WEMINUCHE PASS DITCH AT WEMINUCHE PASS	DWR
75.	WIGHTMAN FORK AT MOUTH NEAR JASPER	DWR
76.	WIGHTMAN FORK BELOW CROPSY CREEK AT SUMMITVILLE	DWR
77.	WILLIAM'S CREEK-SQUAW PASS DITCH AT SQUAW PASS	DWR
78.	WILLOW CREEK AT CRESTONE	DWR

### **DIVISION IV GUNNISON RIVER BASIN**

1.	ABC LATERAL	DWR
2.	BIG DITCH ON SURFACE CREEK AT CEDAREGE	DWR
3.	FAIRVIEW INLET OFF THE SOUTH CANAL NEAR MONTROSE	DWR
4.	GUNNISON RIVER BELOW REDLANDS DIVERSION DAM	DWR
5.	HIGHLINE DITCH ON LEROUX CREEK NEAR LAZEAR	DWR
6.	KANNAH CREEK AT JUNIATA ENLARGED DIVERSION	DWR
7.	MUDDY CREEK ABOVE PAONIA RESERVOIR	DWR
8.	MUDDY CREEK BELOW PAONIA RESERVOIR	DWR
9.	REDLANDS CANAL NEAR GRAND JUNCTION	DWR
10.	SOUTH CANAL NEAR MONTROSE	DWR
11.	SURFACE CREEK AT CEDAREGE	DWR
12.	SURFACE CREEK NEAR CEDAREGE	DWR
13.	TAYLOR PARK RESERVOIR	DWR
14.	TROUT LAKE (LEVEL & ALARM)	DWR
15.	TROUT LAKE (OUTFLOW)	DWR
16.	UNCOMPAHGRE RIVER NEAR OLATHE	DWR

### **DIVISION V COLORADO RIVER BASIN**

1.	ALSBURY RESERVOIR	DWR
2.	ALSBURY RESERVOIR (OUTFLOW)	DWR
3.	BIG CREEK AT UPPER STATION NEAR COLLBRAN	DWR



# STATIONS OPERATED BY THE STATE OF COLORADO

## OFFICE OF THE STATE ENGINEER

### **DIVISION V COLORADO RIVER BASIN CONTINUED**

4.	BLUE RIVER AT HIGHWAY 9 BRIDGE BELOW BRECKENRIDGE	DWR
5.	COLORADO RIVER BELOW LAKE GRANBY	DWR
6.	COTTONWOOD PIPELINE BELOW BONHAM & COTTONWOOD RESERVIOR	DWR
7.	DILLON RESERVOIR	DWR
8.	FRYING PAN RIVER AT MEREDITH	DWR
9.	FRYINGPAN RIVER NEAR THOMASVILLE	DWR
10.	GOVERMENT HIGHLINE CANAL	DWR
11.	GRANBY RESERVOIR	DWR
12.	GRAND VALLEY CANAL	DWR
13.	GRASS VALLEY CANAL	DWR
14.	GREEN MOUNTAIN RESERVOIR	DWR
15.	HOMESTAKE RESERVOIR (OUTFLOW)	DWR
16.	ORCHARD MESA IRRIGATION DISTRICT ABOVE PALISADE	DWR
17.	OWENS CREEK	DWR
18.	RIFLE CREEK BELOW RIFLE GAP RESERVOIR	DWR
19.	RIFLE GAP RESERVOIR	DWR
20.	ROARING FORK RIVER BELOW MAROON CREEK NEAR ASPEN	DWR
21.	ROCKY FORK CREEK NEAR MEREDITH	DWR
22.	SHADOW MOUNTAIN RESERVOIR	DWR
23.	SNAKE RIVER AT KEYSTONE SKI AREA	DWR
24.	SNOWMASS CREEK	DWR
25.	THOMPSON CREEK NEAR CARBONDALE	DWR
26.	WILLIAM'S FORK RESERVOIR	DWR
27.	WILLOW CREEK BELOW WILLOW CREEK RESERVOIR	DWR
28.	WILLOW CREEK PUMP CANAL	DWR
29.	WILLOW CREEK RESERVOIR	DWR

### **DIVISION VI WHITE AND YAMPA RIVER BASIN**

1.	ILLINOIS RIVER NEAR RAND	DWR
2.	LAKE CATAMOUNT SPILLWAY	DWR
3.	MICHIGAN RIVER NEAR MEADOW CREEK RESERVOIR	DWR
4.	PEARL LAKE	DWR
5.	WILLOW CREEK BELOW STEAMBOAT LAKE	DWR
6.	YAMCOLO RESERVOIR ABOVE YAMPA	DWR

### **DIVISION VII DOLORES AND SAN JUAN RIVER BASINS**

1.	ANIMAS RIVER NEAR HOWARDSVILLE	DWR
2.	AZOTEA OUTLET TUNNEL NEAR CHAMA, NM	DWR
3.	BLANCO DIVERSION NEAR PAGOSA SPRINGS	DWR
4.	CASCADE CANAL ABOVE CASCADE RESERVOIR	DWR
5.	CASCADE RESERVOIR	DWR
6.	CHERRY CREEK AT THE MOUTH NEAR RED MESA	DWR
7.	DOLORES RIVER BELOW MCPHEE RESERVOIR	DWR
8.	DOLORES TUNNEL OUTLET NEAR DOLORES	DWR
9.	DOVE CREEK CANAL BELOW GREAT CUT DIKE	DWR
10.	DURANGO CITY PIPELINE	DWR
11.	ELBERT CREEK ABOVE CASCADE RESERVOIR	DWR
12.	ELBERT CREEK BELOW CASCADE RESERVOIR	DWR
13.	ENTERPRISE DITCH AT THE COLORADO-NEW MEXICO STATELINE	DWR
14.	FLORIDA CANAL	DWR
15.	FLORIDA FARMERS CANAL	DWR
16.	FLORIDA RIVER ABOVE LEMON RESERVOIR NEAR DURANGO	DWR

**STATIONS OPERATED BY THE STATE OF COLORADO**

**OFFICE OF THE STATE ENGINEER**

**DIVISION VII DOLORES AND SAN JUAN RIVER BASINS CONTINUED**

17.	FLORIDA RIVER AT BONDAD	DWR
18.	FLORIDA RIVER BELOW FLORIDA FARMERS DITCH NEAR DURANGO	DWR
19.	FLORIDA RIVER BELOW LEMON RESERVOIR	DWR
20.	HAY GULCH ABOVE RED MESA WARD RESERVOIR	DWR
21.	JACKSON GULCH RESERVOIR INLET CANAL	DWR
22.	LA PLATA AND CHERRY CREEK DITCH NEAR HESPERUS	DWR
23.	LA PLATA RIVER AT HESPERUS	DWR
24.	LA PLATA RIVER AT THE COLORADO-NEW MEXICO STATELINE	DWR
25.	LA PLATA RIVER NEAR FARMINGTON, NM.	DWR
26.	LITTLE NAVAJO RIVER BELOW LITTLE OSO DIVERSION DITCH	DWR
27.	LITTLE OSO DIVERSION NEAR CHROMO	DWR
28.	LONE PINE CANAL BELOW GREAT CUT DIKE NEAR DOLORES	DWR
29.	LONG HOLLOW AT THE MOUTH NEAR RED MESA	DWR
30.	MANCOS RIVER NEAR MANCOS	DWR
31.	NAVAJO RIVER AT BANDED PEAK RANCH NEAR CHROMO	DWR
32.	NAVAJO RIVER BELOW OSO DIVERSION DAM NEAR CHROMO	DWR
33.	OSO DIVERSION NEAR CHROMO, CO.	DWR
34.	PINE RIDGE DITCH NEAR HESPERUS	DWR
35.	PINE RIVER BELOW VALLECITO RESERVOIR NEAR BAYFIELD	DWR
36.	PIONEER DITCH AT THE COLORADO-NEW MEXICO STATELINE	DWR
37.	RIO BLANCO AT THE MOUTH NEAR TRUJILLO	DWR
38.	RIO BLANCO BELOW BLANCO DIVERSION DAM NEAR PAGOSA	DWR
39.	ROCKY FORD CANAL #2 ABOVE TOTTEN RESERVOIR NEAR CORTE	DWR
40.	TOWAOC CANAL (EAST/WEST METER READOUTS)	DWR
41.	TOWAOC CANAL WEST CHANNEL	DWR
42.	U LATERAL CANAL BELOW GREAT CUT DIKE NEAR DOLORES	DWR

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION I    SOUTH PLATTE RIVER BASIN**

1.	AURORA HOMESTAKE PIPELINE TO SPINNEY RESERVOIR	AURO
2.	BEAR CREEK ABOVE EVERGREEN	USGS
3.	BEAR CREEK AT KITTREDGE (PRECIP)	COE
4.	BEAR CREEK AT MORRISON	COE
5.	BEAR CREEK AT SHERIDAN	COE
6.	BEAR CREEK RESERVOIR	COE
7.	BEAR CREEK RESERVOIR (OUTFLOW)	COE
8.	BIG THOMPSON RIVER AT LOVELAND	USGS
9.	BOULDER CREEK AT NORTH 75TH STREET NEAR BOULDER	USGS
10.	BOULDER CREEK SUPPLY CANAL TO BOULDER CREEK NEAR BOULDER	NCWCD
11.	BUFFALO CREEK AT MOUTH AT BUFFALO CREEK	USGS
12.	CACHE LA POUFRE RIVER AT FORT COLLINS	USGS
13.	CHATFIELD RESERVOIR	COE
14.	CHERRY CREEK AT FRANKTOWN	USGS
15.	CHERRY CREEK AT PARKER (PRECIP)	COE
16.	CHERRY CREEK NEAR PARKER, CO	USGS
17.	CHERRY CREEK RESERVOIR	COE
18.	CLEAR CREEK AT BLACKHAWK	COE
19.	CLEAR CREEK AT DERBY	COE
20.	CLEAR CREEK AT GEORGETOWN (PRECIP)	COE
21.	CLEAR CREEK AT GOLDEN	USGS
22.	CLEAR CREEK NEAR LAWSON	USGS
23.	DIXON FLUME ON HOLLTHUSEN GULCH	AURO
24.	FOUR MILE AT HIGH CREEK	AURO
25.	FOUR MILE CREEK NEAR HARTSEL	AURO
26.	FRENCH CREEK ABOVE CONFLUENCE WITH MICHIGAN CREEK	AURO
27.	GENEVA CREEK AT GRANT	USGS
28.	HANSEN FEEDER CANAL LOVELAND TURNOUT	NCWCD
29.	HANSEN SUPPLY CANAL TO CACHE LA POUFRE RIVER NEAR FORT COLLINS	NCWCD
30.	HORSETOOTH RESERVOIR	NCWCD
31.	HORSETOOTH RESERVOIR (OUTFLOW)	NCWCD
32.	JEFFERSON CREEK BELOW SYNDER CREEK	AURO
33.	JEFFERSON CREEK NEAR JEFFERSON	AURO
34.	MICHIGAN CREEK ABOVE JEFFERSON	AURO
35.	MIDDLE FORK SOUTH PLATTE ABOVE MONTGOMERY RESERVOIR NEAR ALMA	COSP
36.	MIDDLE FORK SOUTH PLATTE AT PRINCE	AURO
37.	MIDDLE FORK SOUTH PLATTE AT SANTA MARIA	AURO
38.	MIDDLE FORK SOUTH PLATTE BELOW MONTGOMERY RESERVOIR NEAR ALMA	COSP
39.	N.W.S. CACHE LA POUFRE RIVER AT FORT COLLINS	NWS
40.	NORTH FORK CACHE LA POUFRE BELOW HALLIGAN RESERVOIR	USGS
41.	NORTH FORK SOUTH PLATTE RIVER AT GRANT	COE
42.	OHLER GULCH NEAR JEFFERSON	AURO
43.	PLUM CREEK AT LARKSPUR (PRECIP)	COE
44.	PLUM CREEK NEAR LOUVIERS	USGS
45.	PLUM CREEK NEAR SEDALIA	USGS
46.	PRECIP AT SPRING CREEK@LONG SCRAGGY RANCH	USGS
47.	PRECIPITATION AT BUFFALO CREEK AT MORRISON CREEK	USGS
48.	PRECIPITATION AT CONIFER	COE
49.	ROCK CREEK ABOVE CONFLUENCE WITH TARRYALL CREEK	AURO
50.	SAINT VRAIN CREEK NEAR LONGMONT	USGS
51.	SAINT VRAIN SUPPLY CANAL NEAR LYONS	NCWCD
52.	SCHATTINGER FLUME ABOVE CONFLUENCE WITH MICHIGAN CREEK	AURO
53.	SOUTH CLEAR CREEK ABOVE LEAVENWORTH CREEK	USGS

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION I SOUTH PLATTE RIVER BASIN CONTINUED**

54.	SOUTH CLEAR CREEK ABOVE LEAVENWORTH CREEK RESERVOIR	USGS
55.	SOUTH CLEAR CREEK ABOVE NAYLOR NEAR GEORGETOWN	USGS
56.	SOUTH FORK OF SOUTH PLATTE ABOVE ANTERO	AURO
57.	SOUTH PLATTE RIVER ABOVE ELEVENMILE RESERVOIR	COE
58.	SOUTH PLATTE RIVER ABOVE SPINNEY RESERVOIR	AURO
59.	SOUTH PLATTE RIVER AT DENVER	COE
60.	SOUTH PLATTE RIVER AT ENGLEWOOD	USGS
61.	SOUTH PLATTE RIVER AT HENDERSON	COE
62.	SOUTH PLATTE RIVER AT SOUTH PLATTE	COE
63.	SOUTH PLATTE RIVER BELOW CHEESMAN RESERVOIR	COE
64.	SOUTH PLATTE RIVER BELOW UNION AVE, AT ENGLEWOOD	USGS
65.	SOUTH PLATTE RIVER NEAR ROSCOE, NB.	USGS
66.	SPRING BRANCH ABOVE CONFLUENCE WITH MIDDLE FORK S. PLATTE RIVER	AURO
67.	SPRING CREEK ABOVE MOUTH NEAR SOUTH PLATTE	USGS
68.	TARRYALL CREEK AT BORDEN DITCH	AURO
69.	TARRYALL CREEK AT UPPER STATION NEAR COMO	AURO
70.	TARRYALL CREEK BELOW PARK GULCH NEAR COMO	USGS
71.	TROUT CREEK NEAR GARO	AURO

**DIVISION II ARKANSAS RIVER BASIN**

1.	APISHAPA RIVER NEAR FOWLER	USGS
2.	ARKANSAS RIVER AT GARDEN CITY KANSAS	USGS
3.	ARKANSAS RIVER AT LAMAR	USGS
4.	ARKANSAS RIVER AT LAS ANIMAS	USGS
5.	ARKANSAS RIVER AT MOFFAT STREET AT PUEBLO	USGS
6.	ARKANSAS RIVER AT PARKDALE	USGS
7.	ARKANSAS RIVER AT SYRACUSE, KS	USGS
8.	ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR	USGS
9.	ARKANSAS RIVER NEAR AVONDALE	USGS
10.	ARKANSAS RIVER NEAR COOLIDGE, KS	USGS
11.	ARKANSAS RIVER NEAR GRANADA	USGS
12.	ARKANSAS RIVER NEAR NATHROP	USGS
13.	BEAVER CREEK ABOVE HIGHWAY 115 NEAR PENROSE	USGS
14.	BEAVER CREEK ABOVE UPPER BEAVER CEMETARY NEAR PENROSE	USGS
15.	BIG SANDY CREEK NEAR LAMAR	USGS
16.	BOB CREEK AT COLORADO CANAL	COSP
17.	FOUNTAIN CREEK AT COLORADO SPRINGS	USGS
18.	FOUNTAIN CREEK AT PUEBLO	USGS
19.	FOUNTAIN CREEK AT SECURITY	USGS
20.	FOUNTAIN CREEK NEAR FOUNTAIN	USGS
21.	FOUNTAIN CREEK NEAR PINON	USGS
22.	FOURMILE CREEK NEAR CANON CITY	USGS
23.	FRONTIER DITCH, KS	USGS
24.	GRANEROS CREEK NEAR RYE	USGS
25.	GREENHORN CREEK NEAR RYE	USGS
26.	HUERFANO RIVER NEAR BOONE	USGS
27.	LAKE CREEK ABOVE TWIN LAKES RESERVOIR	COSP
28.	LAKE HENRY RESERVOIR (CONTENT)	COSP
29.	LEADVILLE 2SW	NWS
30.	MEREDITH RESERVOIR (CONTENT)	COSP
31.	MEREDITH RESERVOIR (INFLOW NEAR ORDWAY)	COSP
32.	MEREDITH RESERVOIR (OUTFLOW)	COSP
33.	MONUMENT CREEK AT PIKEVIEW	USGS

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION II ARKANSAS RIVER BASIN CONTINUED**

34.	PURGATOIRE RIVER AT MADRID	USGS
35.	PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS	USGS
36.	PURGATOIRE RIVER AT TRINIDAD	COE
37.	PURGATOIRE RIVER BELOW TRINIDAD LAKE	USGS
38.	PURGATOIRE RIVER NEAR LAS ANIMAS	USGS
39.	PURGATOIRE RIVER NEAR THATCHER	USGS
40.	ROCKY FORD DITCH NEAR MANZANOLA	AURO
41.	ROSEMONT RESERVOIR NEAR PUEBLO	COSP
42.	SAINT CHARLES RIVER AT VINELAND	USGS
43.	SUGAR CITY FLUME SUGAR CITY	COSP
44.	TELLER RESERVOIR NEAR STONE CITY	USGS
45.	TIMPAS CREEK AT MOUTH NEAR SWINK, CO.	USGS
46.	TWO BUTTE CREEK NEAR HOLLY, CO.	USGS
47.	WILD HORSE CREEK ABOVE HOLLY	USGS

**DIVISION III RIO GRANDE RIVER BASIN**

1	ABIQUIU RESERVOIR, NM	COE
2	CASIAS CREEK NEAR COSTILLA, NM	USGS
3	COSTILLA C NR GARCIA, COLO.	USGS
4	COSTILLA CREEK NEAR COSTILLA NM	USGS
5	COCHITI LAKE, NM	COE
6	COSTILLA CREEK ABOVE COSTILLA DAM, NM	USGS
7	COSTILLA CREEK BELOW COSTILLA DAM, NM	USGS
8	COSTILLA RESERVOIR NEAR COSTILLA NM	USGS
10	GALISTEO CREEK BELOW GALISTEO DAM NM.	COE
11	GALISTEO CREEK BELOW GALISTEO DAM, NM	COE
12	JEMEZ RIVER BELOW JEMEZ DAM NM	COE
13	JEMEZ CANYON RESERVOIR, NM	COE
14	JEMEZ RIVER NEAR JEMEZ NM.	COE
15.	LOWER WILLOW CREEK ABOVE HERON, NM.	NMEX
16	RIO CHAMA ABOVE ABIQUIU DAM	COE
17	RIO CHAMA BELOW ABIQUIU DAM	COE
18	RIO CHAMA BELOW EL VADO, NM	NMEX
19	RIO CHAMA NEAR CHAMITA NM	COE
20	RIO CHAMA NEAR LA PUENTA, NM	NMEX
21	RIO GRANDE AT EMBUDO NM	COE
22	RIO GRANDE AT OTAWI BRIDGE NR SAN ILDEFONSO NM	COE
23	RIO GRANDE BELOW CABALLO RESERVOIR NM	NMEX
24	RIO GRANDE BELOW COCHITI SILE COCHITI CANALNM	COE
25	RIO GRANDE BELOW ELEPHANT BUTTE RESERVOIR NM	NMEX
26	RIO GRANDE BELOW OLD FORT QUITMAN TX.	NMEX
28	RIO GRANDE RESERVIOR WEATHER STATION	NWS
29	RIO GRANDE RIVER AT ALBUQUERQUE NM	COE
30	RIO GRANDE FLOODWAY AT SAN ACACIA, NM	NMEX
31	SAN MARCIAL CONVEYANCE CHANNEL ON RIO GRANDE, NM	NMEX
32	SAN MARCIAL FLOODWAY ON RIO GRANDE, NM	NMEX
33	SANTISTEVAN CREEK NEAR COSTILLA, NM	USGS

**DIVISION IV GUNNISON RIVER BASIN**

1	BLUE MESA RESERVOIR, GUNNISON COUNTY, COLO.	NWS
2	CIMARRON RIVER NEAR CIMARRON	USGS
3	COCHETOPA CREEK BELOW ROCK CREEK NR PARLIN, CO.	USGS

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION IV GUNNISON RIVER BASIN CONTINUED**

4.	DOLORIS RIVER NEAR BEDROCK	USGS
5	DOLORIS RIVER AT BEDROCK, CO.	NWS
6	EAST RIVER AT ALMONT CO.	NWS
7	EAST RIVER BELOW CEMENT CREEK	USGS
8	GUNNISON RIVER AT DELTA, CO.	USGS
9	GUNNISON RIVER BELOW GUNNISON TUNNEL	USGS
10	GUNNISON RIVER NEAR GRAND JUNCTION, CO.	USGS
11	GUNNISON RIVER NEAR GUNNISON, CO.	USGS
12	LAKE FORK AT GATEVIEW, COLORADO.	USGS
13	NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO.	NWS
14	NORTH FORK OF GUNNISON BELOW LEROUX CR DELTA COU	USGS
15	OHIO CREEK ABOVE MOUTH NEAR GUNNISON, COLO.	USGS
16	PAONIA RESERVOIR NR BARDINE, CO	USGS
17	RIDGWAY RESERVOIR, OURAY COUNTY	USGS
18	SAN MIGUEL RIVER AT BROOKS BRIDGE NEAR NUCLA CO	USGS
19	SAN MIGUEL RIVER AT URIVAN CO MONTROSE COUNTY	USGS
20	SAN MIGUEL RIVER NEAR PLACERVILLE, CO.	NWS
21	SARGENTS, CO (CLIMATOLOGICAL)	NWS
22	SILVERJACK RESERVOIR NR CIMARRON, CO	USGS
23	SLATE RIVER NEAR CRESTED BUTTE	USGS
24	TAYLOR PARK RESERVOIR, GUNNISON COUNTY, COLO	NWS
25	TAYLOR RIVER AT ALMONT, CO.	NWS
26	TAYLOR RIVER AT TAYLOR PARK, CO.	USGS
27	TOMICHI CREEK AT GUNNISON, CO.	USGS
28	UNCOMPAHGRE RIVER AT COLONA, CO.	USGS
29	UNCOMPAHGRE RIVER AT DELTA, CO.	USGS
30	UNCOMPAHGRE RIVER NEAR RIDGWAY	USGS
31	UNCOMPAHGRE RIVER BELOW RIDGWAY RESERVOIR, CO	USGS

**DIVISION V COLORADO RIVER BASIN**

1	BEAVER CREEK AT AVON	USGS
2	BLUE RIVER BELOW DILLON RESERVOIR	USGS
3	BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR	USGS
4	BLUE RIVER NEAR DILLON, CO.	USGS
5	BRECKENRIDGE 5S (CLIMATOLOGICAL)	NWS
6	CHAPMAN CONTROL HOUSE	BOR
7	COLO RIVER BELOW GRAND VALLEY DIVERSION NEAR PALISADE	USGS
8	COLORADO RIVER ABOVE WINDY GAP	NCWCD
9	COLORADO RIVER AT K BARGER DITCH NEAR KREMMLING	NCWCD
10	COLORADO RIVER BELOW GLENWOOD SPRINGS	USGS
11	COLORADO RIVER BELOW WINDY GAP AT CHIMNEY ROCK	NCWCD
12	COLORADO RIVER NEAR CAMEO	USGS
13	COLORADO RIVER NEAR COLORADO-UTAH STATE LINE	USGS
14	COLORADO RIVER NEAR DOTSERO	USGS
15	COLORADO RIVER NEAR GRANBY	USGS
16	COLORADO RIVER NEAR KREMMLING	USGS
17	COLORADO RIVER NEAR PARSHALL BELOW W.F. CONFLUENCE	NCWCD
18	CROSS CREEK NEAR MINTURN	USGS
19	CRYSTAL RIVER ABOVE AVALANCHE CREEK NEAR REDSTONE	USGS
20	DILLON 1E (CLIMATOLOGICAL)	NWS
21	EAGLE RIVER AT RED CLIFF, CO.	USGS
22	EAGLE RIVER BELOW GYPSUM	USGS
23	EAGLE RIVER BELOW WASTE WATER TREATMENT PLANT	USGS

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION V COLORADO RIVER BASIN CONTINUED**

24	EAGLE RIVER NEAR MINTURN, CO	USGS
25	EAST RIFLE CREEK ABOVE RIFLE GAP RESERVOIR	BOR
26	FRASER RIVER AT WINTER PARK	USGS
27	FRASER RIVER NEAR GRANDBY	NCWCD
28	FRENCH GULCH AT BRECKENRIDGE	USGS
29	FRYINGPAN RIVER NEAR RUEDI	USGS
30	GORE CREEK AT MOUTH, NEAR MINTURN, CO.	USGS
31	GRAND LAKE (CLIMATOLOGICAL)	NWS
32	HOMESTAKE CREEK AT GOLD PARK, CO.	USGS
33	HOMESTAKE RESERVOIR	COSP
34	HOOSIER PASS TUNNEL AT INLET (NORTH PORTAL)	COSP
35	HUNTER CREEK NEAR ASPEN	USGS
36	LAKE CREEK NEAR EDWARDS	USGS
37	LINCOLN CREEK BELOW GRIZZLY RESERVOIR NEAR ASPEN	BOR
38	MEREDITH (CLIMATOLOGICAL)	NWS
39	MORMON CONTROL HOUSE	BOR
40	MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING	USGS
41	MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING	USGS
42	PINEY RIVER NEAR STATE BRIDGE	USGS
43	PLATEAU CREEK NEAR CAMEO	USGS
44	REED WASH NEAR MACK	USGS
45	ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN	USGS
46	ROARING FORK RIVER ABOVE LOST MAN CREEK NEAR ASPEN	BOR
47	ROARING FORK RIVER AT GLENWOOD SPRINGS	USGS
48	ROARING FORK RIVER NEAR ASPEN	USGS
49	ROARING FORK RIVER NEAR EMMA	USGS
50	RUEDI RESERVOIR NEAR BASALT	NWS
51	RUEDI RESERVOIR PIEZIOMETERS	BOR
52	TENMILE CREEK BELOW NORTH TENMILE CREEK AT FRISCO	USGS
53	TROUBLESOME CREEK NEAR KREMMLING	NCWCD
54	UPPER BLUE RESERVOIR NEAR BRECKENRIDGE	COSP
55	WEST DIVIDE CREEK NEAR RAVEN	USGS
56	WEST RIFLE CREEK ABOVE RIFLE GAP RESERVOIR	BOR
57	WILLIAM'S FORK BELOW WILLIAMS FORK RESERVOIR	USGS
58	WINTER PARK (CLIMATOLOGICAL)	NWS
59	WOLFORD MOUNTAIN RESERVOIR	USGS

**DIVISION VI WHITE AND YAMPA RIVER BASINS**

1	ELK RIVER AT CLARK	USGS
2	ELK RIVER NEAR MILNER	USGS
3	ELKHEAD CREEK ABOVE LONG GULCH	USGS
4	ELKHEAD CREEK BELOW MAYNARD GULCH	USGS
5	FISH CREEK AT UPPER STATION NEAR STEAMBOAT SPRINGS	USGS
6	GREEN RIVER NEAR JENSEN, UT	USGS
7	LITTLE SNAKE RIVER NEAR LILY	USGS
8	NORTH FORK WHITE RIVER AT BUFORD	USGS
9	NORTH PLATTE RIVER NEAR NORTHGATE	USGS
10	PICEANCE CREEK BELOW RYAN GULCH	USGS
11	SLATER FORK NEAR SLATER	USGS
12	WHITE RIVER ABOVE COAL CREEK	USGS
13	WHITE RIVER BELOW BOISE CREEK NEAR RANGELY	USGS
14	WHITE RIVER BELOW MEEKER	USGS
15	WHITE RIVER NEAR MEEKER	USGS

**STATIONS OPERATED BY OTHER ENTITIES**  
**AND**  
**MONITORED BY THE DIVISION OF WATER RESOURCES**

**DIVISION VI WHITE AND YAMPA RIVER BASINS CONTINUED**

16	WILLIAMS FORK AT MOUTH, NEAR HAMILTON, CO.	USGS
17	YAMPA RIVER ABOVE LITTLE SNAKE RIVER NEAR MAYBELL	USGS
18	YAMPA RIVER ABOVE STAGECOACH RESERVOIR	USGS
19	YAMPA RIVER AT DEERLODGE PARK	USGS
20	YAMPA RIVER AT STEAMBOAT SPRINGS	USGS
21	YAMPA RIVER BELOW CRAIG	USGS
22	YAMPA RIVER BELOW STAGECOACH RESERVOIR	USGS
23	YAMPA RIVER NEAR MAYBELL	USGS
24	YELLOW CREEK NEAR WHITE RIVER	USGS

**DIVISION VII DOLORES AND SAN JUAN RIVER BASINS**

1	ANIMAS RIVER AT DURANGO	USGS
2	ANIMAS RIVER BELOW SILVERTON	USGS
3	ANIMAS RIVER NEAR CEDAR HILL, NM	USGS
4	DOLORES RIVER AT DOLORES	USGS
5	DOLORES RIVER BELOW RICO	USGS
6	DOLORES RIVER NEAR SLICKROCK	USGS
7	EAST FORK SAN JUAN RIVER ABOVE SAND CREEK	USGS
8	HERON RESERVOIR ON WILLOW CREEK	NMEX
9	LEMON RESERVOIR NEAR DURANGO	USGS
10	LOS PINOS RIVER AT LA BOCA	USGS
11	LOST CANYON CREEK NEAR DOLORES	USGS
12	MANCOS RIVER NEAR TOWAOC	USGS
13	MCELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ	USGS
14	MCELMO CREEK NEAR COLORADO-UTAH STATE LINE	USGS
15	MINERAL CREEK AT SILVERTON	USGS
16	MUD CREEK AT STATE HIGHWAY 32 NEAR CORTEZ	USGS
17	PIEDRA RIVER NEAR ARBOLES	USGS
18	SAN JUAN RIVER AT FARMINGTON, NM	USGS
19	SAN JUAN RIVER AT PAGOSA SPRINGS	USGS
20	SAN JUAN RIVER NEAR CARRACAS	USGS
21	SPRING CREEK AT LA BOCA	USGS
22	VALLECITO CREEK NEAR BAYFIELD	USGS
23	VALLECITO RESERVOIR	USGS



## V. WATERTALK LIST

### DIVISION ONE

1	ADAMS TUNNEL
2	BEAR CREEK AT MORRISON
3	BEAR CREEK RESERVOIR
4	BEAR CREEK AT SHERIDAN
5	BIG THOMPSON AT MOUTH NEAR LASALLE
6	SOUTH BOULDER CR. BELOW GROSS RES.
7	SOUTH BOULDER CR. NEAR ELDORADO SPRINGS
8	BOULDER CREEK AT BOULDER
9	BOULDER CREEK NEAR ORODELL
10	BIG THOMPSON RIVER ABOVE LAKE ESTES
11	BIG THOMPSON RIVER BELOW LAKE ESTES
12	NO. FORK, BIG THOMPSON RIVER, NEAR DRAKE
13	BIG THOMPSON RIVER, AT MOUTH OF CANYON
14	BURLINGTON CANAL
15	CHATFIELD RESERVOIR
16	CHEESMAN RESERVOIR
17	CHERRY CREEK RESERVOIR
18	CACHE LA POUDE RIVER, AT FORT COLLINS
19	CACHE LA POUDE AT CANY. MOUTH, FT. COLLINS
20	CACHE LA POUDE NEAR GREELEY
21	CLEAR CREEK AT DERBY
22	CLEAR CREEK NEAR GOLDEN
23	CLEAR CREEK NEAR LAWSON
24	FOUR MILE CREEK, NEAR HARTSEL
25	FOUR MILE CREEK, AT HIGH CREEK
26	GRAND RIVER DITCH
27	HANSEN FEEDER CANAL WASTE WAY
28	HOOSIER PASS TUNNEL
29	JEFFERSON CREEK, NEAR JEFFERSON
30	LARAMIE POUDE TUNNEL
31	LOWER LATHAM CANAL
32	MICHIGAN CREEK, ABOVE JEFFERSON
33	METRO SEWER EFFLUENT, AT DENVER
34	MIDDLE FORK, AT PRINCE
35	MIDDLE FORK, AT SANTA MARIA
36	MOFFAT TUNNEL
37	OHLER GULCH, NEAR JEFFERSON
38	OLYMPUS TUNNEL
39	SOUTH PLATTE RIVER, NEAR BALZAC
40	SO. PLATTE RIVER, BELOW CHEESMAN RESERVOIR
41	SOUTH PLATTE RIVER, AT DENVER
42	NORTH FORK, OF THE SO. PLATTE RIVER, AT GRANT
43	PLATTE RIVER, ABOVE ELEVENMILE RESERVOIR
44	SOUTH PLATTE RIVER, AT HENDERSON
45	SO. PLATTE RIVER, AT JULSBURG, LEFT CHANNEL
46	SO. PLATTE RIVER, AT JULSBURG, RIGHT CHANNEL
47	SOUTH PLATTE RIVER, NEAR KERSEY
48	SOUTH PLATTE RIVER, AT FORT LUPTON
49	SOUTH PLATTE RIVER, ABOVE SPINNEY RESERVOIR
50	SOUTH PLATTE RIVER, AT SOUTH PLATTE
51	SOUTH PLATTE RIVER, BELOW STRONTIA SPRINGS
52	SOUTH PLATTE RIVER, AT WATERTON
53	SOUTH PLATTE RIVER, NEAR WELDONA
54	RIVERSIDE CANAL
55	ROBERTS TUNNEL
56	SOUTH FORK PLATTE RIVER, ABOVE ANTERO RES
57	NORTH STERLING CANAL
58	SAINT VRAIN CREEK AT LYONS
59	SAINT VRAIN CREEK AT MOUTH
60	TARRYALL CREEK, AT US 285, NEAR COMO
61	UNION DITCH, NEAR GILCREST
62	PLATTE RIVER, AT UNION AVENUE
63	SOUTH PLATTE RIVER, BELOW ANTERO RESERVOIR
64	FORT MORGAN CANAL HEAD GATE NEAR WIGGINS
65	STERLING NUMBER 1 DITCH
66	SO. SAINT VRAIN CREEK NEAR WARD COLORADO
67	NORTH SAINT VRAIN CREEK NEAR ALLENS PARK
68	SO. PLATTE RIVER BELOW CHATFIELD RESERVOIR

69	SAND CREEK NEAR COLO.-WYOMING STATE LINE
70	BOREAS PASS
71	BUTTON ROCK RESERVOIR
72	BUCK HORN CREEK NEAR MASONVILLE
73	LARAMIE RIVER NEAR GLENDEVY, COLORADO
74	COAL CREEK NEAR PLAINVIEW
75	HARMONY NUMBER 1 D. AT HEADGATE NR. CROOK
76	PAWNEE DITCH AT HEADGATE NEAR MESSEX
77	WILSON SUPPLY DITCH NEAR EATON RESERVOIR
78	PLATTE RIVER NEAR LAKE GEORGE
79	NORTH FORK OF THE SO. PLATTE RIVER AT BAILEY
80	JEFFERSON CREEK BELOW SNYDER CREEK
81	ROCK CR. AT CONFLUENCE OF TARRYALL CREEK
82	TARRYALL CREEK AT BORDEN DITCH
83	GREELEY LOVELAND DIVERSION DAM
84	BOULDER CREEK AT NORTH 75TH STREET
85	LITTLE DRY CREEK NEAR GREENWOOD VILLAGE
86	NEW CACHE LA POUDE CANAL AT 25 NR. TIMNATH
87	CACHE LA POUDE RIV. BE. 25 FOOT NEAR TIMNATH
88	OLYMPUS DAM AT ESTES PARK
89	MARY'S LAKE NEAR ESTES PARK
90	LARIMER AND WELD IRRIGATION DITCH
91	CACHE LA POUDE RIV. BELOW LARIMER AND WELD
92	WESTERN MUTUAL DITCH A.K.A. HEWES COOK
93	EVANS #2 DITCH
94	MIDDLE BOULDER CREEK AT NEDERLAND
95	SOUTH PLATTE RIVER AT FORT MORGAN
96	LEFT HAND DIVERSION NEAR WARD COLORADO
97	SO. BOULDER CR. AB. GROSS RESERVOIR, AT PINE
98	BIJOU CANAL
99	RALSTON CREEK, ABOVE RALSTON RESERVOIR
100	SOUTH PLATTE RIVER CHANNEL 1
101	LOWER PLATTE AND BEAVER CANAL
102	TOWN OF LYONS DIVERSION
103	CANAL NUMBER 3
104	VIDLER TUNNEL NEAR ARGENTINE PASS, CO.
105	MIDDLE ST VRAIN AT PEACEFUL VALLEY, CO.
106	CHERRY CREEK NEAR PARKER, CO.
107	DILLE TUNNEL NEAR DRAKE, CO.
108	LITTLE THOMPSON AT CY. MOUTH NR. BERTHOUD,
109	BOULDER LARIMER DITCH
110	NO. FORK CACHE LA POUDE BE. HALLIGAN RES.
111	SO. BOULDER CR. DIVERSION NEAR ELDORADO SP
112	FULTON DITCH
113	BIG DRY CREEK NEAR FORT LUPTON
114	BIG THOMPSON RIV. AT HILLSBOROUGH DIVERSION
115	TROUT CREEK NEAR GARO
116	DIXON FLUME ON HOLLTHUSEN GULCH
117	FRENCH CREEK ABOVE MICHIGAN CREEK
118	MIDDLE FORK SO. PLATTE BE. MONTGOMERY RES.
119	SCHATTINGER FLUME ABOVE MICHIGAN CREEK
120	SPRING BRANCH ABOVE MIDDLE FORK SO. PLATTE
121	HANSEN FEEDER CAN. BE. BIG THOMPSON SIPHON
122	USBR POWER PLANT AT BIG THOMPSON RIVER
123	HANSEN SUPPLY CAN. TO CACHE LA POUDE RIVER
124	SAINT VRAIN SUPPLY CANAL AT LYONS
125	BOULDER CREEK FEEDER CANAL AT LYONS
126	MID. FORK SO. PLATTE RIV. AB. MONTGOMERY RES.
127	BOULDER LARIMER DITCH BY PASS
128	BOULDER CREEK SUPPLY CAN. TO BOULDER CR.
129	NEW MERCER DITCH
130	LARIMER COUNTY NUMBER 2

### DIVISION TWO

1	AMITY CANAL
2	ARKANSAS RIVER, NEAR AVONDALE
3	ARKANSAS RIVER, AT CATLIN DAM, NEAR FOWLER
4	ARKANSAS RIVER, NEAR COOLIDGE, KANSAS
5	ARKANSAS RIVER, AT GRANADA
6	ARKANSAS RIVER, BELOW JOHN MARTIN RESERVOIR
7	ARKANSAS RIVER, AT LA JUNTA
8	ARKANSAS RIVER, AT LAS ANIMAS
9	ARKANSAS RIVER, NEAR NEPESTA

10 ARKANSAS RIVER, AT PORTLAND  
 11 ARKANSAS RIVER, ABOVE PUEBLO  
 12 ARKANSAS RIVER, NEAR WELLSVILLE  
 13 BOB CREEK, AT CANAL  
 14 CHARLES H BOUSTEAD TUNNEL  
 15 BUSK IVANHOE TUNNEL  
 16 CROOKED ARROYO, NEAR SWINK  
 17 CATLIN CANAL, AT CATLIN DAM, NEAR FOWLER  
 18 CHEYENNE CREEK, NEAR KANSAS STATELINE  
 19 COLORADO CANAL, AT MILE 3.8, NEAR BOONE  
 20 COLUMBINE DITCH  
 21 EWING DITCH  
 22 FORT LYON STORAGE CANAL  
 23 FORT LYON CANAL  
 24 FOUNTAIN CREEK NEAR PINION  
 25 FRONTIER DITCH, KANSAS  
 26 LAKE HENRY RESERVOIR, CONTENT AND OUTFLOW  
 27 HOLBROOK CANAL AT MILE 3.4, NEAR ROCKY FORD  
 28 HOMESTAKE TUNNEL  
 29 HORSE CREEK AT HIGHWAY 194  
 30 JOHN MARTIN RESERVOIR, AT CADDOA  
 31 KICKING BIRD CANAL  
 32 LAKE CREEK BELOW TWIN LAKES  
 33 LAMAR CANAL  
 34 LARKSPUR DITCH, AT MARSHALL PASS  
 35 LAKE FORK CREEK, BELOW SUGARLOAF  
 36 LAKE FORK CREEK, ABOVE TURQUOISE RESERVOIR  
 37 MERRIDITH RESERVOIR INFLOW, NEAR ORDWAY  
 38 MERRIDITH RESERVOIR CONTENT AND OUTFLOW  
 39 OXFORD FARMERS DITCH COMPANY  
 40 PUEBLO RESERVOIR, NEAR PUEBLO  
 41 PUEBLO WATER WORKS DIVERSION  
 42 PURGATORIE RIVER, BELOW TRINIDAD RESERVOIR  
 43 PURGATORIE RIVER, NEAR LAS ANIMAS  
 44 PURGATORIE RIVER, AT MADRID  
 45 PURGATORIE RIVER, AT NINE MILE DAM, NR. HIGBEE  
 46 PURGATORIE RIVER, NEAR THATCHER  
 47 ROCKY FORD HIGHLINE CAN., MILE 4.9, NEAR BOONE  
 48 TIMPAS CREEK, NEAR ROCKY FORD  
 49 TWIN LAKES TUNNEL  
 50 WURTZ DITCH NEAR TENNESSEE PASS  
 51 DISCONTINUED  
 52 CUCHARAS RIVER BELOW CUCHARAS RES.  
 53 CUCHARAS RESERVOIR  
 54 DISCONTINUED  
 55 FOUNTAIN CREEK AT COLORADO SPRINGS  
 56 FOUNTAIN CREEK NEAR SECURITY  
 57 FOUNTAIN CREEK NEAR FOUNTAIN  
 58 FOUNTAIN CREEK AT PUEBLO  
 59 ARKANSAS RIVER NEAR NATHROP  
 60 ARKANSAS RIVER NEAR PARK DALE  
 61 LAKE CREEK ABOVE TWIN LAKES  
 62 FOUNTAIN CREEK AT MOUTH  
 63 COTTON WOOD CREEK NEAR BUENA VISTA  
 64 ARKANSAS RIVER AT CANYON CITY  
 65 ARKANSAS RIVER AT GRANITE  
 66 DISCONTINUED, ARKANSAS RIVER AT BUENA VISTA  
 67 ARKANSAS RIVER AT SALIDA  
 68 HUERFANO RIVER AT BADITO, NEAR WALSENBURG  
 69 ARKANSAS RIVER AT NATHROP.  
 70 GRAPE CREEK NEAR WEST CLIFF  
 71 CHALK CREEK AT MOUTH NEAR NATHROP  
 72 SOUTH ARKANSAS RIVER AT SALIDA, CO

**DIVISION THREE**

1 ALAMOSA CREEK, ABOVE TERRACE RESERVOIR  
 2 CLOSED BASIN PROJECT CANAL, NEAR ALAMOSA  
 3 CONEJOS RIVER, NEAR MOGOTE  
 4 CONEJOS RIVER, BELOW PLATORO RESERVOIR  
 5 CONTINENTAL RESERVOIR, NEAR CREEDE  
 6 LA JARA CREEK, AT GALLEGOS RANCH  
 7 LOS PINOS RIVER, NEAR ORTIZ  
 8 NORTH CHANNEL CONEJOS RIVER, NEAR LASAUSES  
 9 PLATORO RESERVOIR

10 RIO GRANDE RIVER, AT ALAMOSA  
 11 RIO GRANDE CANAL, NEAR DEL NORTE  
 12 RIO GRANDE, NEAR DEL NORTE  
 13 RIO GRANDE, NEAR LOBATOS  
 14 RIO GRANDE, AT THIRTY MILE BRIDGE  
 15 RIO GRANDE, AT MONTE VISTA  
 16 RIO GRANDE RESERVOIR  
 17 SOUTH FORK, RIO GRANDE RIVER, AT SOUTH FORK  
 18 RIO GRANDE RIVER, ABOVE TRINCHERA CREEK  
 19 SAGUACHE CREEK, NEAR SAGUACHE  
 20 SAN ANTONIO RIVER, AT ORTIZ  
 21 SO. CHANNEL, CONEJOS RIVER, NEAR LASAUSES  
 22 TABOR DITCH AT SPRING CREEK PASS  
 23 TERRACE RESERVOIR  
 24 MOUNTAIN HOME RESERVOIR  
 25 TRINCHERA CREEK, ABOVE TURNERS RANCH  
 26 UTE CREEK, NEAR FORT GARLAND  
 27 BEAVER RESERVOIR  
 28 NO. CLEAR CREEK BE. CONTINENTAL RESERVOIR  
 29 SAND CR. AT GREAT SAND DUNES NTL MNMT, CO  
 30 ALAMOSA CREEK BELOW TERRACE RESERVOIR  
 31 NORTON DRAIN DITCH NEAR LASAUSES  
 32 PINOS CREEK NEAR DEL NORTE  
 33 RIO GRANDE R. AT RIO GRANDE-ALAMOSA CTY LINE  
 34 SANGRE DE CRISTO CREEK NEAR FORT GARLAND  
 35 SAN ANTONIO RIVER NEAR MANASSA  
 36 TRINCHERA CREEK BELOW SMITH RESERVOIR.  
 37 MEDANO CR. AT GREAT SAND DUNES NATNL. MNMT  
 38 TARBELL DITCH NEAR COCHETOPA PASS  
 39 PINE RI. WEMINUCHE PASS D. AT WEMINUCHE PASS  
 40 LA GARITA CREEK NEAR LA GARITA  
 41 GARNER CREEK NEAR VILLA GROVE  
 42 MAJOR CREEK NEAR VILLA GROVE  
 43 COTTONWOOD CREEK NEAR CRESTONE  
 44 SOUTH CRESTONE CREEK NEAR CRESTONE  
 45 DEADMAN CREEK NEAR CRESTONE.

**DIVISION FOUR**

1 BLUE MESA RESERVOIR, GUNNISON COUNTY  
 2 CIMARRON RIVER, NEAR CIMARRON, GUNNISON  
 3 DALLAS CREEK, NEAR RIDGEWAY, OURAY COUNTY  
 4 DOLORES RIVER, NR BEDROCK, MONTROSE COUNTY  
 5 EAST RIVER, AT ALMONT  
 6 GUNNISON RIVER, BELOW E. PORTAL, GUNNISON R.  
 7 GUNNISON RIVER, AT DELTA, DELTA COUNTY  
 8 GUNNISON RIVER, NEAR GRAND JUNCTION  
 9 GUNNISON RIVER, NEAR GUNNISON COUNTY  
 10 MUDDY CREEK, ABOVE PAONIA RES. GUNNISON  
 11 MUDDY CREEK, BELOW PAONIA RES., GUNNISON  
 12 NORTH FORK, OF THE GUNNISON RIVER, SOMERSET  
 13 PAONIA RESERVOIR, NEAR BARDINE  
 14 REDLANDS CANAL, NEAR GRAND JUNCTION  
 15 RIDGWAY RESERVOIR, NEAR RIDGWAY, OURAY  
 16 KANNAH CREEK NEAR JUNIATA ENLARGEMENT  
 17 SAN MIGUEL RIVER, NEAR PLACERVILLE  
 18 SILVER JACK RESERVOIR, NEAR CIMARRON  
 19 SO. CANAL, NEAR MONTROSE, MONTROSE COUNTY  
 20 SURFACE CREEK, AT CEDAREEDGE  
 21 SURFACE CR., NEAR CEDAREEDGE, DELTA COUNTY  
 22 TAYLOR RIVER, AT ALMONT  
 23 TAYLOR PARK RESERVOIR, GUNNISON COUNTY  
 24 TROUT LAKE RESERVOIR, SAN MIGUEL COUNTY  
 25 TROUT LAKE RESERVOIR, OUT FLOW  
 26 UNCOMPAGRE RIVER, AT COLONA, MONTROSE  
 27 UNCOMPAGRE RIVER, BEL. RIDGEWAY RESERVOIR  
 28 UNCOMPAGRE RIV., NEAR RIDGEWAY, OURAY CTY  
 29 UNCOMPAGRE RIV. NR OLATHE, OURAY COUNTY  
 30 TOMICHI CREEK NEAR GUNNISON  
 31 LAKE FORK AT GATEVIEW, COLORADO  
 32 GUNNISON RIV. BELOW REDLANDS DIVERSION DAM  
 33 UNCOMPAGRE RIVER AT DELTA  
 34 EAST RIVER BELOW CEMENT CREEK  
 35 COCHETOPA CREEK NEAR PARLIN  
 36 SAN MIGUEL RIVER AT BROOKS BRIDGE

- 37 SLATE RIVER NEAR CRESTED BUTTE
- 38 SAN MIGUEL R. AT URAVAN, CO MONTROSE COUNTY
- 39 HIGHLINE DITCH ON LEROUX CREEK NR LAZEAR CO.
- 40 DISCONTINUED

**DIVISION FIVE**

- 1 BLUE RIVER, BELOW DILLON, SUMMIT COUNTY
- 2 BLUE RIVER, BELOW GREEN MTN RES., SUMMIT
- 3 COLORADO RIVER, NEAR CAMEO
- 4 COLORADO RIVER, NEAR DOTSERO, EAGLE COUNTY
- 5 COLORADO RIVER, BEL. GRANBY RES., GRAND CTY
- 6 COLORADO RIVER, BELOW GLENWOOD SPRINGS
- 7 COLORADO RIVER, NEAR KREMMLING
- 8 COLORADO RIVER, NEAR GRANBY, GRAND COUNTY
- 9 DISCONTINUED
- 10 COLORADO RIVER, NR COLORADO UTAH STATE LINE
- 11 DISCONTINUED, CROOKED CREEK, AT TABERNASH
- 12 CRYSTAL RIV., AB. AVALANCHE CREEK, REDSTONE
- 13 DILLON RESERVOIR, SUMMIT COUNTY
- 14 EAGLE RIVER, BELOW GYPSUM, EAGLE COUNTY
- 15 EAGLE RIVER, AT RED CLIFF
- 16 FRASER RIVER, NEAR WINDY GAP
- 17 FRYINGPAN RIVER, NEAR RUEDI, EAGLE COUNTY
- 18 FRYINGPAN RIVER, NR THOMASVILLE, PITKIN COUNT
- 19 GOVERNMENT HIGHLINE CANAL
- 20 GRANBY RESERVOIR
- 21 GRAND VALLEY CANAL
- 22 GREEN MOUNTAIN RESERVOIR, SUMMIT COUNTY
- 23 GRASS VALLEY CANAL
- 24 DISCONTINUED
- 25 LINCOLN CREEK, BELOW GRIZZLY RESERVOIR
- 26 PINEY RIVER, NEAR STATE BRIDGE
- 27 PLATEAU CREEK, NEAR CAMEO
- 28 DISCONTINUED, RANCH CREEK, ABOVE TABERNASH
- 29 RIFLE GAP, BELOW GAP RESERVOIR
- 30 ROARING FORK RIVER, NEAR ASPEN
- 31 ROARING FORK RIVER, BELOW MAROON CREEK
- 32 ROARING FORK RIVER, AT GLENWOOD SPRINGS
- 33 ROARING FORK RIVER, ABOVE LOST MAN CREEK
- 34 RUEDI RESERVOIR, NEAR BASALT
- 35 SHADOW MOUNTAIN RESERVOIR, GRAND COUNTY
- 36 DISCONTINUED
- 37 DISCONTINUED
- 38 DISCONTINUED
- 39 DISCONTINUED
- 40 WILLOW CREEK PUMP CANAL, GRAND COUNTY
- 41 WILLIAMS FORK, BEL. WILLIAMS FK RES. GRAND CTY
- 42 WILLOW CREEK RESERVOIR, GRAND COUNTY
- 43 WILLOW CREEK, BEL. WILLOW CREEK RESERVOIR
- 44 WILLIAMS FORK RESERVOIR
- 45 COLORADO RIVER NEAR PALISADE
- 46 COLORADO R. AT K. BARGER DITCH NR KREMMLING
- 47 MUDDY CREEK ABOVE ANTELOPE CREEK
- 48 MUDDY CREEK NEAR KREMMLING
- 49 RIFLE GAP RESERVOIR
- 50 COLORADO RIVER AT CHIMNEY ROCK
- 51 COLORADO RIVER BELOW WINDY GAP
- 52 COLORADO RIVER AT PARSHALL
- 53 TROUBLESOME CREEK NEAR KREMMLING
- 54 BLUE RIVER AT FARMERS CORNER, BE. SWAN RIVER
- 55 ORCHARD MESA IRRIGATION DIST. ABOVE PALISADE
- 56 TENMILE CR. BE. NORTH TENMILE CREEK AT FRISCO
- 57 GORE CREEK AT MOUTH NEAR MINTURN
- 58 BLUE R. AT HI-WAY 9 BRIDGE BELOW BRECKENRIDG
- 59 EAGLE RIVER AT AVON, CO.
- 60 EAST ELK CR. AB. BOILER CREEK NR NEW CASTLE
- 61 COTTONWOOD PL B. BONHAM AND CTTNWD RES.
- 62 WEST DIVIDE CREEK NEAR RAVEN, CO.

**DIVISION SIX**

- 1 YAMPA RIVER BELOW CRAIG
- 2 ELK RIVER NEAR MILNER
- 3 YAMPA RIVER AT STEAMBOAT SPRINGS

- 4 ILLINOIS RIVER NEAR RAND
- 5 LITTLE SNAKE RIVER, NEAR DIXON, WYOMING
- 6 LITTLE SNAKE RIVER, NEAR LILY
- 7 ELK HEAD CREEK ABOVE LONG GULCH
- 8 DISCONTINUED, MICHIGAN CREEK, NEAR GOULD
- 9 NORTH PLATTE RIVER, NEAR NORTH GATE
- 10 ELK HEAD CREEK BELOW MAYNARD GULCH
- 11 WHITE RIVER, NEAR MEEKER
- 12 YAMPA RIVER, NEAR MAYBELL
- 13 YAMPA RIVER, BELOW STAGE COACH RESERVOIR
- 14 YAMPA RIVER, ABOVE STAGE COACH RESERVOIR
- 15 YAMCOLO RESERVOIR
- 16 NORTH FORK OF THE WHITE RIVER AT BUFORD
- 17 WILLOW CREEK, BELOW STEAMBOAT LAKE
- 18 WHITE RIVER BELOW BOISE CREEK
- 19 SOUTH FORK OF THE WHITE RIVER AT BUFORD
- 20 PEARL LAKE.
- 21 DISCONTINUED, STEAM BOAT LAKE
- 22 LITTLE SNAKE RIVER NEAR SLATER, CO.

**DIVISION SEVEN**

- 1 ANIMAS RIVER, NEAR CEDAR HILL, NEW MEXICO
- 2 ANIMAS RIVER, AT DURANGO
- 3 AZOTEA OUTLET TUNNEL, CHAMA, NEW MEXICO
- 4 CHERRY CREEK, AT MOUTH NEAR RED MESA
- 5 DOLORES RIVER, BELOW MCPHEE RESERVOIR
- 6 DOLORES RIV., AT DOLORES, MONTEZUMA COUNTY
- 7 DOLORES RIVER, NEAR RICO
- 8 DOLORES TUNNEL OUTLET, NEAR DOLORES
- 9 FLORIDA RIV., ABOVE LEMON RES., NEAR DURANGO
- 10 FLORIDA RIVER, BELOW LEMON RESERVOIR
- 11 LA PLATA RIVER, AT HESPERUS, LA PLATA COUNTY
- 12 LA PLATA RIV., AT COLORADO NEW MEXICO LINE
- 13 LONG HOLLOW, AT THE MOUTH, NEAR RED MESA
- 14 LOST CANYON CR., DOLORES, MONTEZUMA COUNTY
- 15 LA PLATA AND CHERRY CREEK D., NEAR HESPERUS
- 16 MANCOS RIVER, NEAR MANCOS
- 17 LONE PINE CAN., AT GREAT CUT DIKE, NR DOLORES
- 18 NAVAJO RIVER, BE. OSO DIVERSION DAM, CHROMO
- 19 PINE RIVER, BELOW VALLECITO RES., BAYFIELD
- 20 RIO BLANCO, BE. BLANCO DIVERSION DAM, PAGOSA
- 21 SAN JUAN RIVER, AT FARMINGTON, NEW MEXICO
- 22 SAN JUAN RIVER, AT PAGOSA SPRINGS
- 23 VALLECITO RESERVOIR
- 24 RIO BLANCO DIVERSION, NEAR PAGOSA SPRINGS
- 25 OSO DIVERSION NEAR CHROMO
- 26 PIONEER DITCH AT STATE LINE
- 27 ENTERPRISE DITCH AT STATE LINE
- 28 HAY GULCH ABOVE RED MESA WARD RESERVOIR
- 29 U CANAL BELOW GREAT CUT DIKE, CO.
- 30 VALLECITO CREEK NEAR BAYFIELD
- 31 FLORIDA CANAL
- 32 PINE RIDGE DITCH NEAR HESPERUS
- 33 JACKSON GULCH RESERVOIR, INLET CANAL
- 34 NAVAJO RIVER AT BANDED PEAKS RANCH
- 35 FLORIDA FARMERS CANAL
- 36 FLORIDA CANAL
- 37 FLORIDA RIVER AT BONDAD

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