# AGGREGATION OF MINNESOTA WATER-USE DATA AND TRANSFER OF DATA TO THE NATIONAL WATER-USE DATA SYSTEM: PROCEDURES AND PROGRAMS

By L. C. Trotta

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U.S. GEOLOGICAL SURVEY

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MINNESOTA DEPARTMENT OF NATURAL RESOURCES

and the MINNESOTA STATE PLANNING AGENCY


St. Paul, Minnesota

1988

DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY

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# AGGREGATION OF MINNESOTA WATER-USE DATA AND TRANSFER OF DATA TO THE NATIONAL WATER-USE DATA SYSTEM: PROCEDURES AND PROGRAMS

By L. C. Trotta

## ABSTRACT

The Minnesota Water-Use Data System stores data on the quantity of water withdrawals from ground-water and surface-water sources and discharge quantities reported annually for sites in Minnesota. To transfer these data into the U.S. Geological Survey's National Water-Use Data System properly, certain procedures must be followed. Uniform data categorization and entry allows comparison of water use from State to State. The data in the National Water-Use Data System are aggregated by county and by watershed (hydrologic unit). This report documents the data aggregation and transfer process as developed by the Minnesota Departent of Natural Resources, the Minnesota State Planning Agency/Planning Information Center, and the U.S. Geological Survey as part of the National Water-Use Information Program.

## INTRODUCTION

### Background

The National Water-Use Information Program of the U.S. Geological Survey is a Federal-State cooperative program designed to collect, store, and disseminate water-use information both nationally and locally. The program was begun in 1978 to meet the need for a single source of uniform information on water use. The U.S. Geological Survey, Minnesota District, has been entering water-use data collected into a computerized data based called the National Water-Use Data System (NWUDS) since 1979. The data in NWUDS are aggregated by county and by watershed (hydrologic unit). Uniform data categorization and entry allows comparison of water use from State to State.

The Minnesota Water-Use Data System (MWUDS) stores data on the quantity of withdrawals from ground-water and surface-water sources and discharge quantities reported annually for sites in Minnesota. It further classifies this data for aggregation and trend analysis. The U.S. Geological Survey assisted the Minnesota Department of Natural Resources (MDNR) and the Land Management Information Center (now the Planning Information Center) in developing MWUDS in order to assure standardized State input to the National Water-Use Information Program.

## Purpose and Scope

This report describes how the MWUDS operates and how water-use data are aggregated and transferred to the NWUDS. This description of procedures supplements documentation written in 1984 by the Minnesota Land Management Information Center (now the Planning Information Center). This report supplies information about data processing not described elsewhere that might allow comparison of the MWUDS to another state water-use data system. Documentation here consists of a description of the how state and national data bases interface and an ordered set of procedures to aggregate and transfer data. Details of these procedures (including current hardware) will later be included in a U.S. Geological Survey procedures manual. Operations documentation for data-processing personnel will be incorporated into the procedures manual. Program documentation is being carried on separately from this report. User aids for the submission of data and management aids explaining applicability are not included here but represent worthy future goals for both Federal and State cooperating agencies.

## Acknowledgments

The discussion of interface development is, for the most part, provided by Susanne Maeder of the Minnesota State Planning Agency/Planning Information Center (MSPA/PIC). Understanding of the aggregation procedures was developed as a result of training provided by Gina Miller of the MDNR, Division of Waters.

# DESCRIPTION AND INTERFACE OF THE MINNESOTA AND NATIONAL WATER-USE DATA SYSTEMS

In Minnesota, an interface between data bases was developed by utilizing and improving existing locally devised programs for the aggregation and computer transfer of data from MWUDS data bases to the U.S. Geological Survey's NWUDS data base.

The MWUDS is based on the water-use records of the MDNR. The MDNR is charged with managing the appropriation of waters of the State (Minnesota Statutes, 105.41), and requires appropriation permits of all users appropriating more than 10,000 gallons per day or 1 million gallons per year. This permit authority essentially covers all but domestic users.

The development of MWUDS was a combined effort of MDNR, the MSPA/PIC, and the U.S. Geological Survey. Funding was provided, in part, by the U.S. Geological Survey as part of the National Water-Use Information Program. PIC was involved in data-base development. The MWUDS system is housed on both the Prime 850 minicomputer[1] at PIC and on the IBM-PC microcomputer at MDNR, and uses the INFO data-base-management system developed by Henco, Inc., of Waltham, Massachusetts. The MDNR maintains the MWUDS system as part of its ongoing water-management responsibilities.

The MWUDS is made up of six separate data bases which coincide with the six MDNR administrative regions (fig. 1). The data bases, SWDNR1 through SWDNR6, each contain water-use data for the counties within the respective region. Each of the regional data bases has the same design, and contains six main files with information on location, use type, resource used, and volume appropriated. Data items in MWUDS are described in Appendix A (Water-Use Data Base Description) of "Development of a Water-Use Data System in Minnesota" (Horn, 1986). Further information on MWUDS (locally called the State Water-Use Data System) is provided in the "State Water-Use Data System (SWUDS) System Documentation," (Land Management Information Center, 1984).

The NWUDS is housed on a computer at U.S. Geological Survey national headquarters in Reston, Virginia. NWUDS contains the following categories of water-use data:

| | |
|---|---|
| agriculture/livesotck | water supply |
| commercial | sewage treatment |
| domestic | power-fossil |
| industrial | power-nuclear |
| irrigation | power-hydro |
| mining | power-geothermal |

PIC developed computer programs to collect and combine individual permit data and arrange it in acceptable NWUDS entry format for each of the first nine of these categories. Because there are only two nuclear plants in the State, this information is generated manually by the U.S. Geological Survey. Currently, hydropower appropriations are not adequately represented on the State Water-Use Data System. In 1980, the U.S. Geological Survey aggregated hydropower data manually, using data obtained from the Minnesota Department of Energy and Economic Development. There is no geothermal water use in Minnesota.

Data-aggregation formats follow the U.S. Geological Survey requirements as specified in Appendix A. The final output form for transmission to the NWUDS is as shown in figure 2. PIC developed computer programs to collect and combine annual water use by county and by watershed (hydrologic unit).

The hydrologic-unit aggregation program is similar to the county aggregation program in form. Although each county's data is located entirely in one of the six regional data bases, data from an individual hydrologic unit may be located in more than one of the data bases because hydrologic units do not follow county or administrative-region boundaries. Therefore, the job programs described in Appendix B accumulate each county's information from just one of the regional data bases, but accumulate hydrologic-unit totals across data-base lines. The hydrologic-unit job programs must access each of the six regional data bases sequentially and accumulate data into the appropriate hydrologic unit.

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[1] Use of trade names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

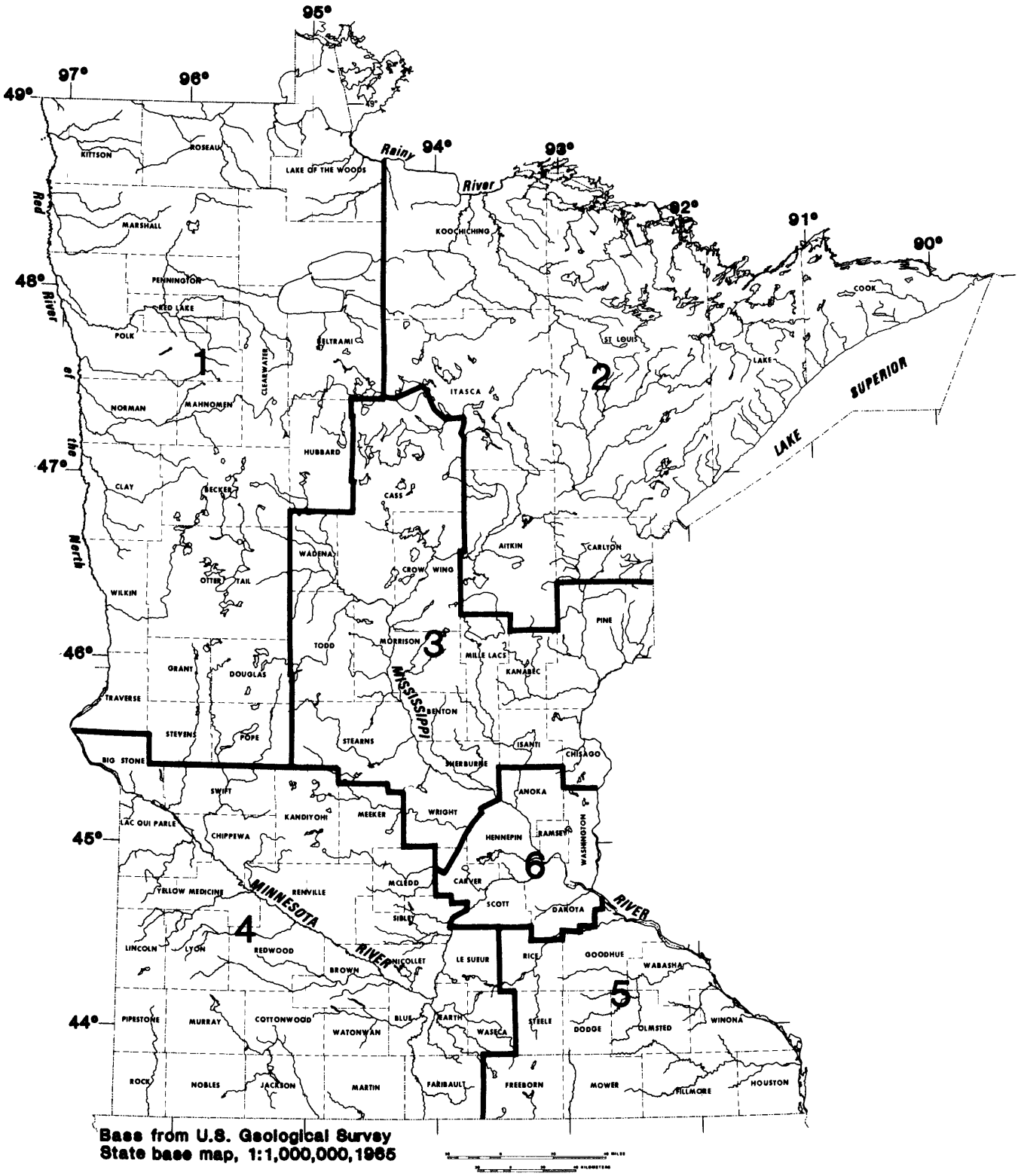



Figure 1.--Minnesota Department of Natural Resources Administrative Regions.

## AGGREGATION AND TRANSFER PROCEDURES

The aggregation procedures described herein are an overview of the hierarchy of operations that now make it possible to bring disparate individual water-use-report data in the MWUDS into proper format for submission to the U.S. Geological Survey, Minnesota District. Although the U.S. Geological Survey water-use representative assisted with these procedures for training purposes in 1985, the procedures usually are excuted by MDNR personnel. Data files and aggregation programs for transfer of MWUDS data to NWUDS are described in the "United States Geological Survey National Water-Use Data System (NWUDS) Watershed and County Aggregation Report, Procedures for 1981, 1982, and 1983 Water-Use Data," included here as Appendix B.

Specific hardware and software to execute the aggregation and transfer procedures are not given in this report in an attempt to keep the description of procedures generic. With changes in either hardware or software, new procedures may be required in the future.

Aggregation procedures may commence whenever all permit-report data for a given year has been entered into MWUDS (usually in the fall of the year following the year of data). To begin, the year of MWUDS data in computer storage is verified by checking ground-water and surface-water totals against previously compiled totals region by region. Discrepancies are compared to changes in number of inventory points for justification or corrective action. Using INFO commands, necessary corrections are made by matching permit numbers and removing duplicates. When verification is finished, INFO datafiles are prepared for each county and later for each hydrologic unit. Each of the six regional MDNR water-use data bases are then accessed and the aggregation programs appropriate to each data file are run. This fills the data files with water-use totals. Consecutively run programs convert the units to million gallons per day and add information required by NWUDS format such as the Federal identification numbers for State and county (see Appendix A). A status sheet is updated to keep track of which data files have had all aggregational programs run. When the county data aggregations have been completed, output files are checked for possible program errors. Program changes or cosmetic modifications to output files may be made at this point. If no program changes are necessary, aggregated data are loaded on diskettes, backups are made, and the data diskettes are delivered to the U.S. Geological Survey water-use representative in the Minnesota District office. The process is then repeated for hydrologic-unit (watershed) data aggregations.

Once the MWUDS data have been aggregated, the job of the water-use representative is to be sure the data pass NWUDS edit routines and then to update the proper NWUDS data base. At present (1986), update involves electronic file transfer on the Minnesota District's Prime 750 minicomputer.

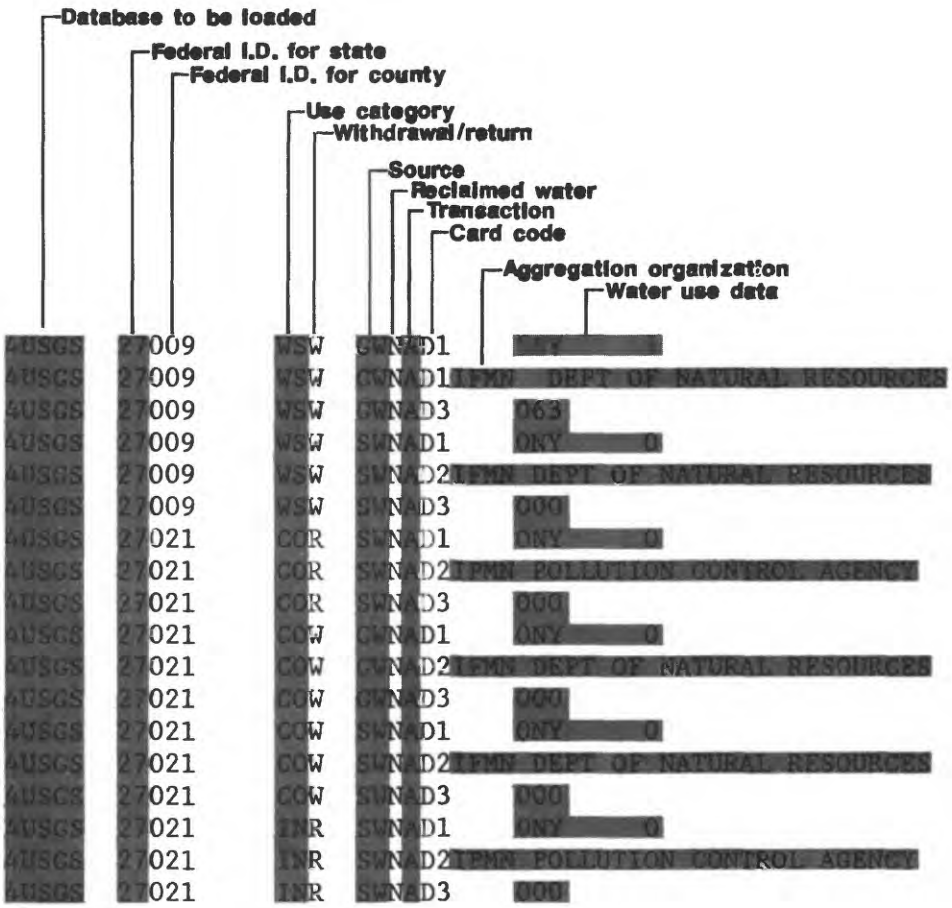



Figure 2.--*Example of Final Output Form*

## REFERENCES

Horn, M. A., 1986, Development of a Water-Use System in Minnesota: U.S. Geological Survey Water-Resources Investigations Report 85-4306, 59 p.

Minnesota Land Management Information Center, 1984, State Water-Use Data System (SWUDS) System Documentation: Minnesota State Planning Agency, St. Paul, 42 p.

# APPENDIX A

# U.S. GEOLOGICAL SURVEY FORMAT REQUIREMENTS

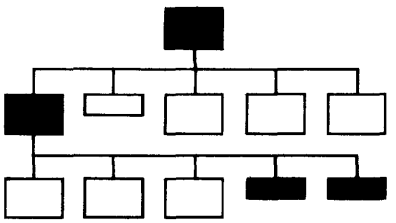
YEAR: _____

DATE: _____

RECORDED BY: _____

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

NATIONAL WATER-USE DATA SYSTEM
AGGREGATED DATA BASE



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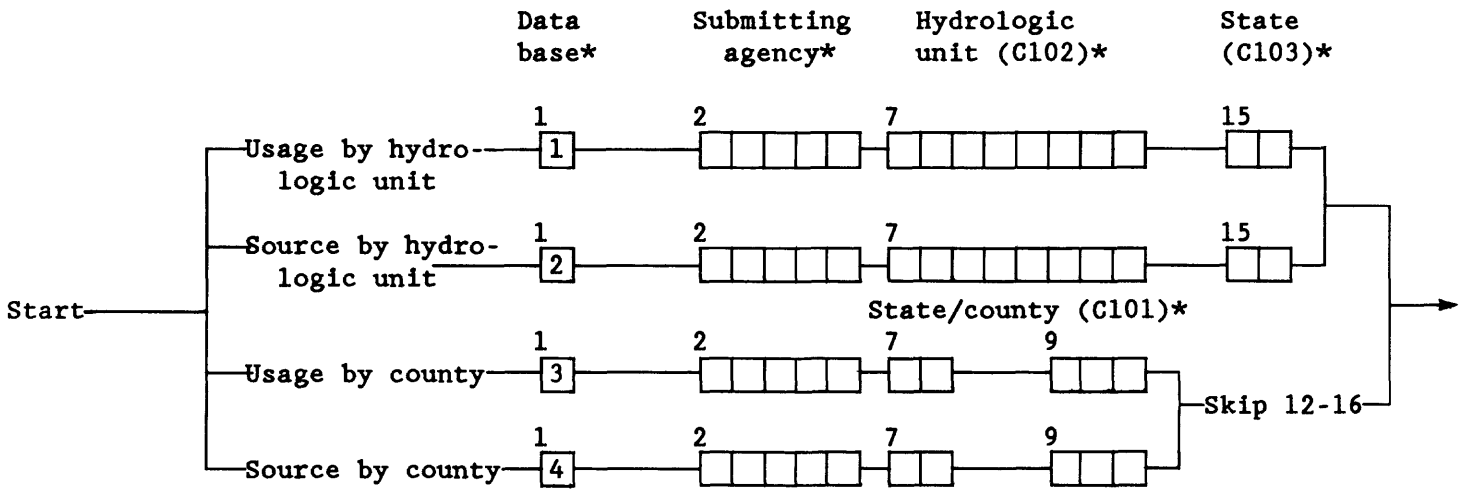
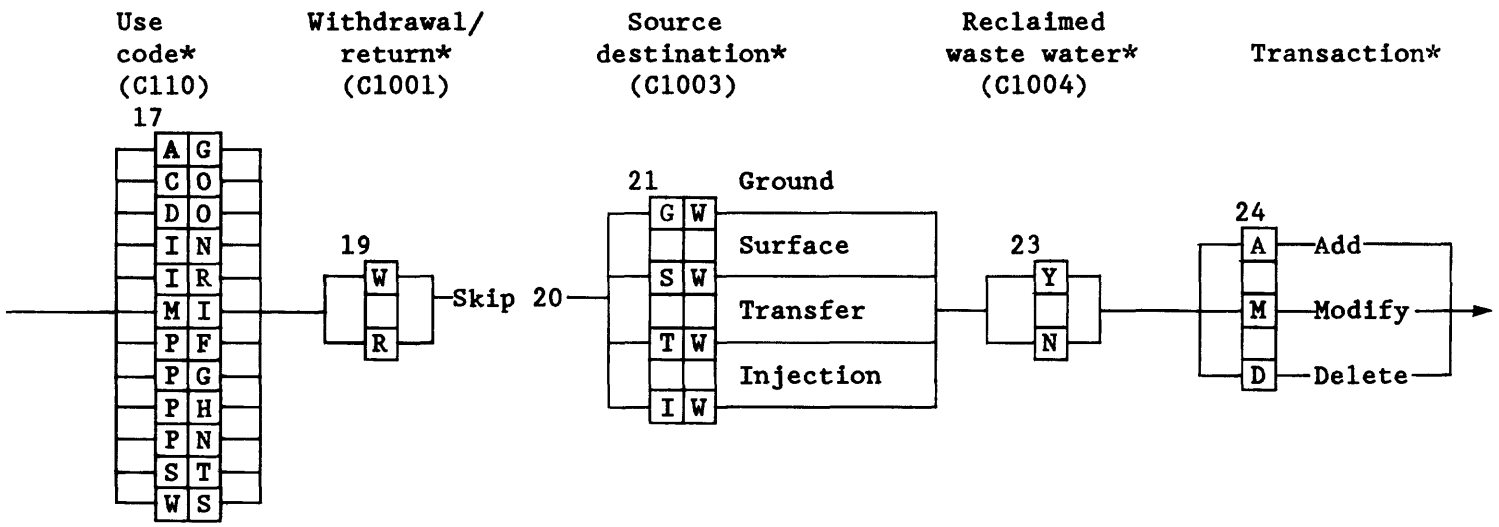
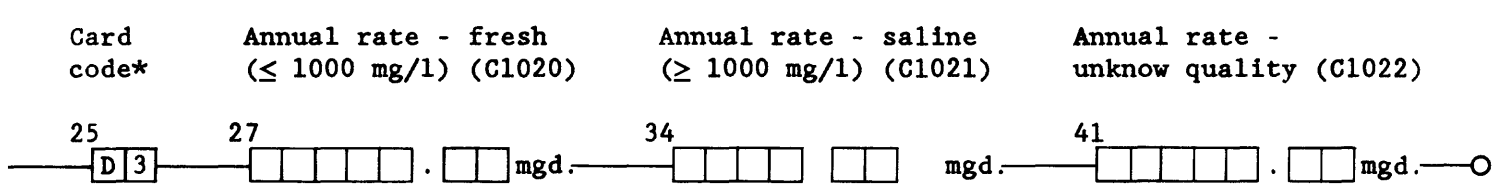
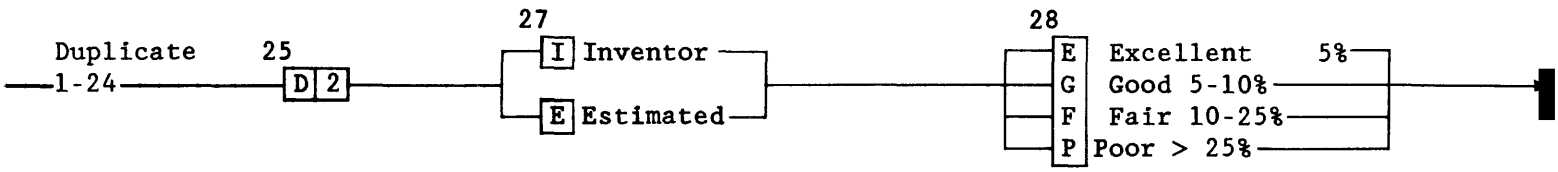
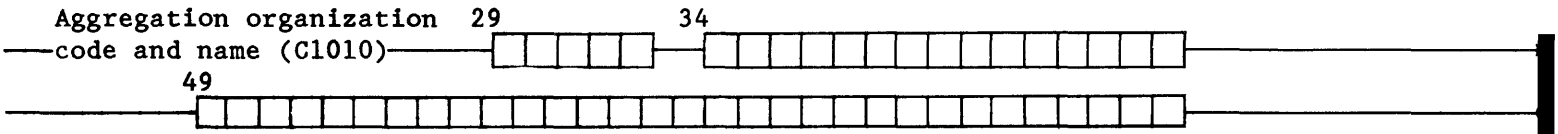


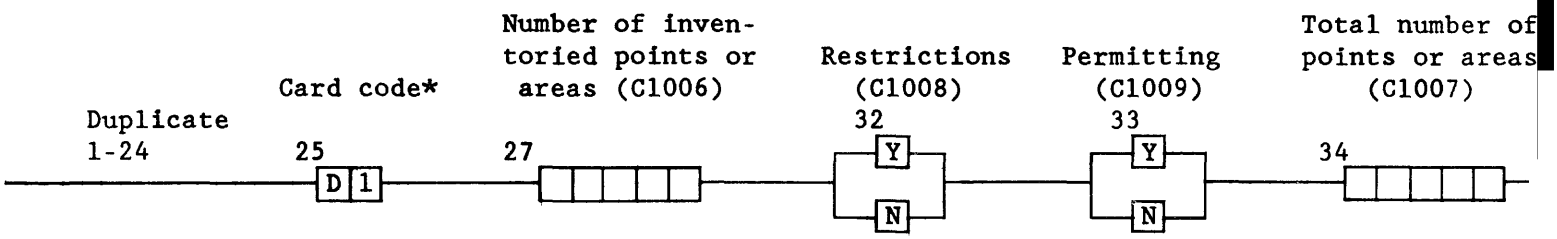





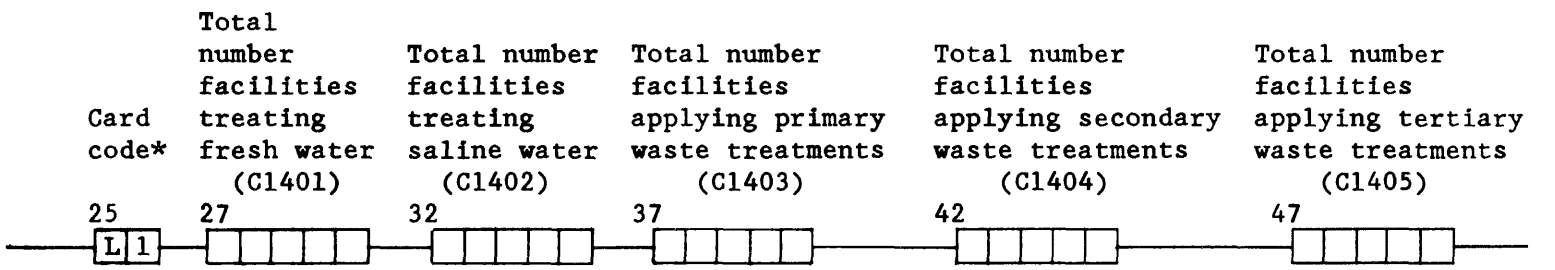




AGGREGATION INFORMATION (continued)

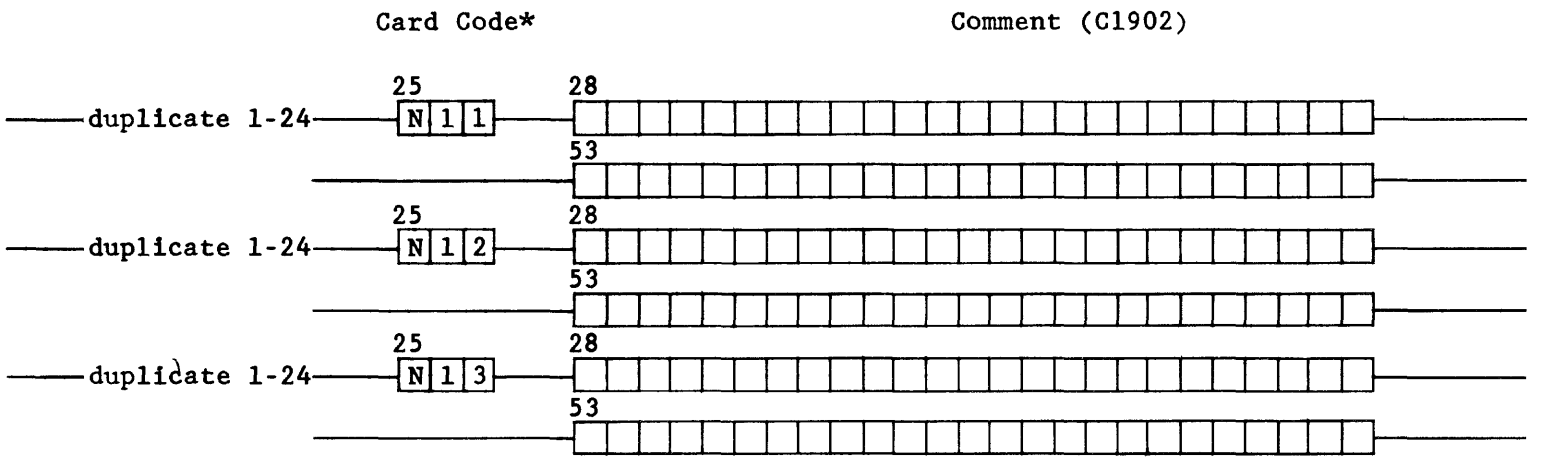



FACILITIES TREATING WATER

(Duplicate columns 1-24)

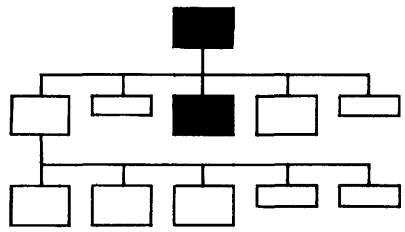



SPECIFIC COMMENTS The comments on the N1 cards apply to the data reported about the specific withdrawals or return information identified by the data on the front of this form.



U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

NATIONAL WATER-USE DATA SYSTEM
AGGREGATED DATA BASE

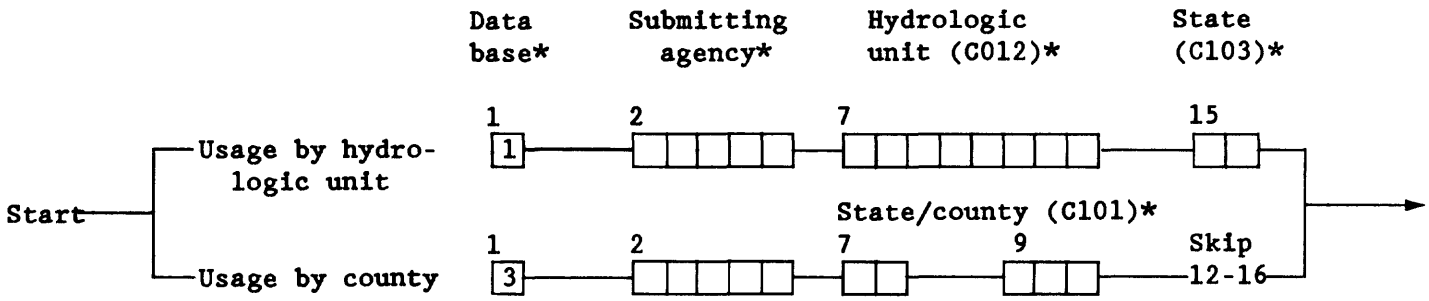


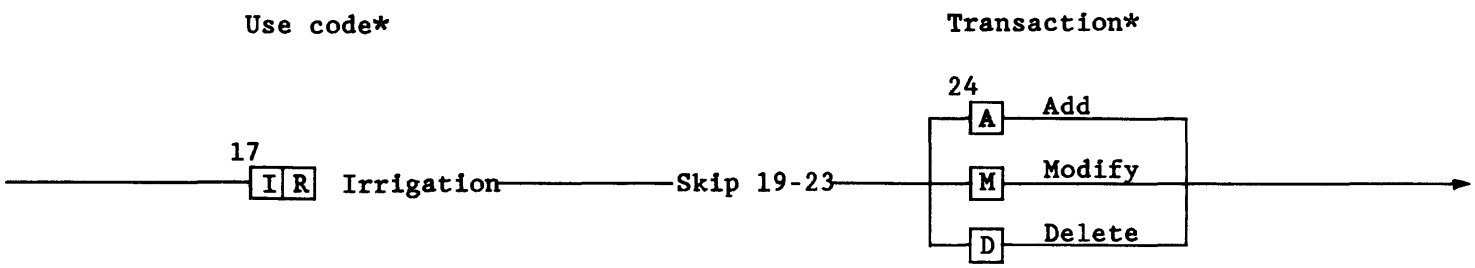
YEAR: _____

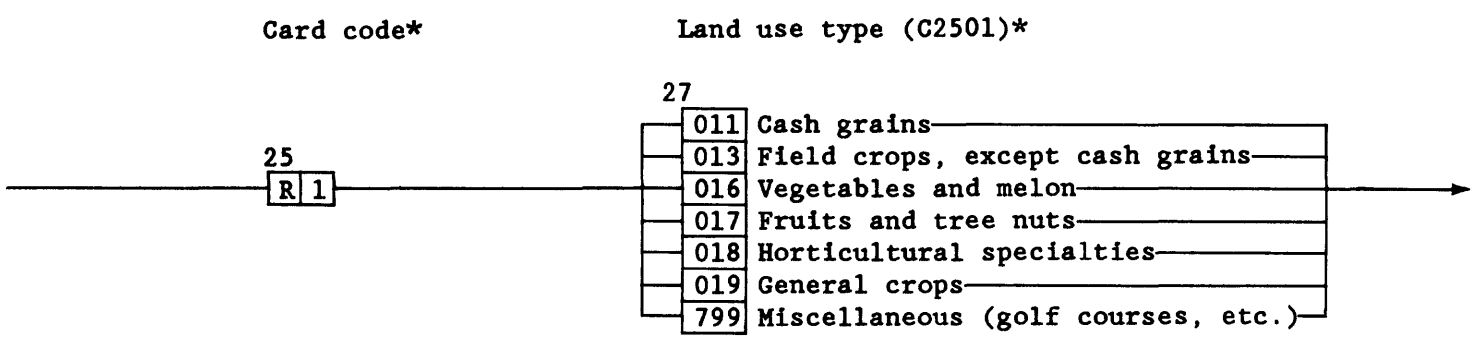
DATE: _____

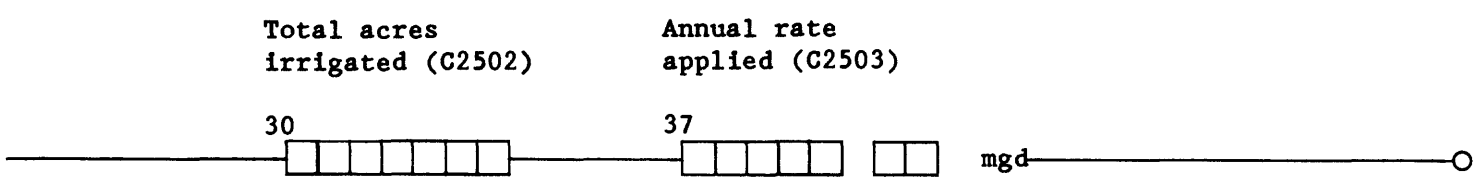
RECORDED BY: _____

## L A N D  U S E  A N D  I R R I G A T I O N  D A T A  F O R M

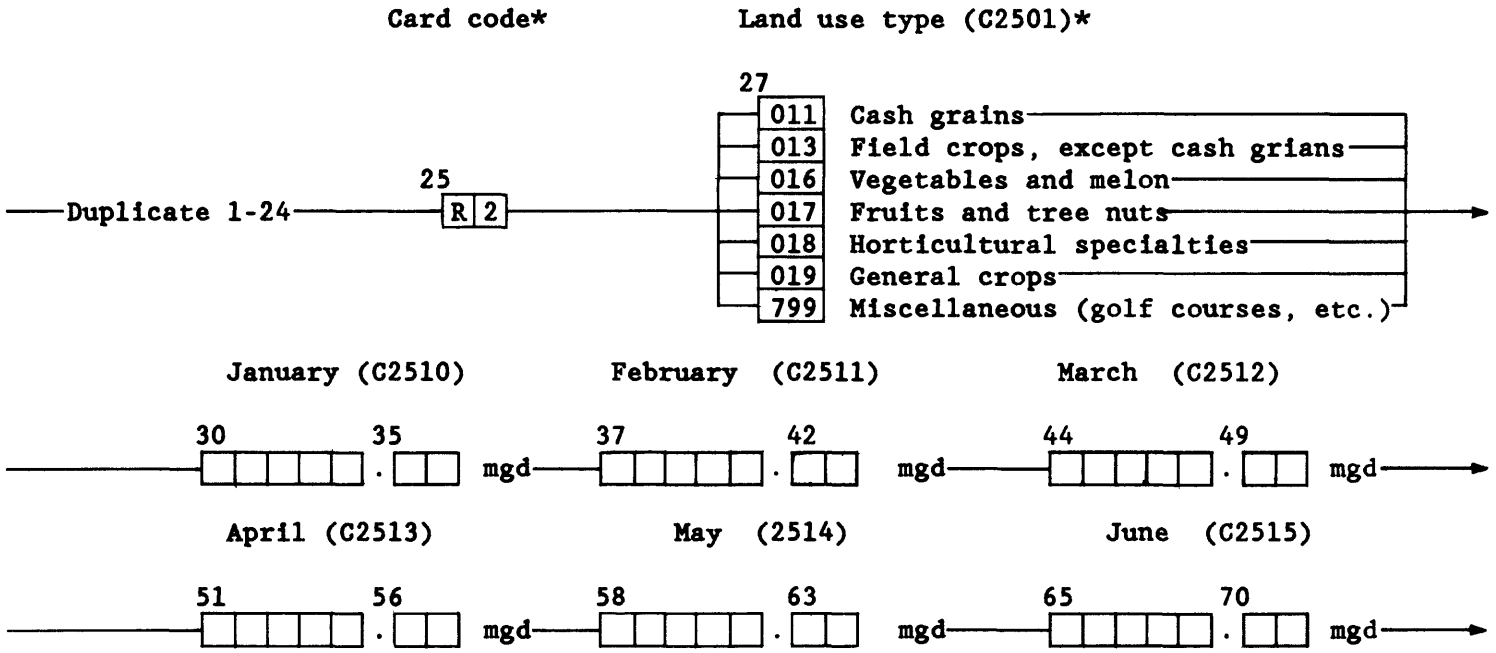


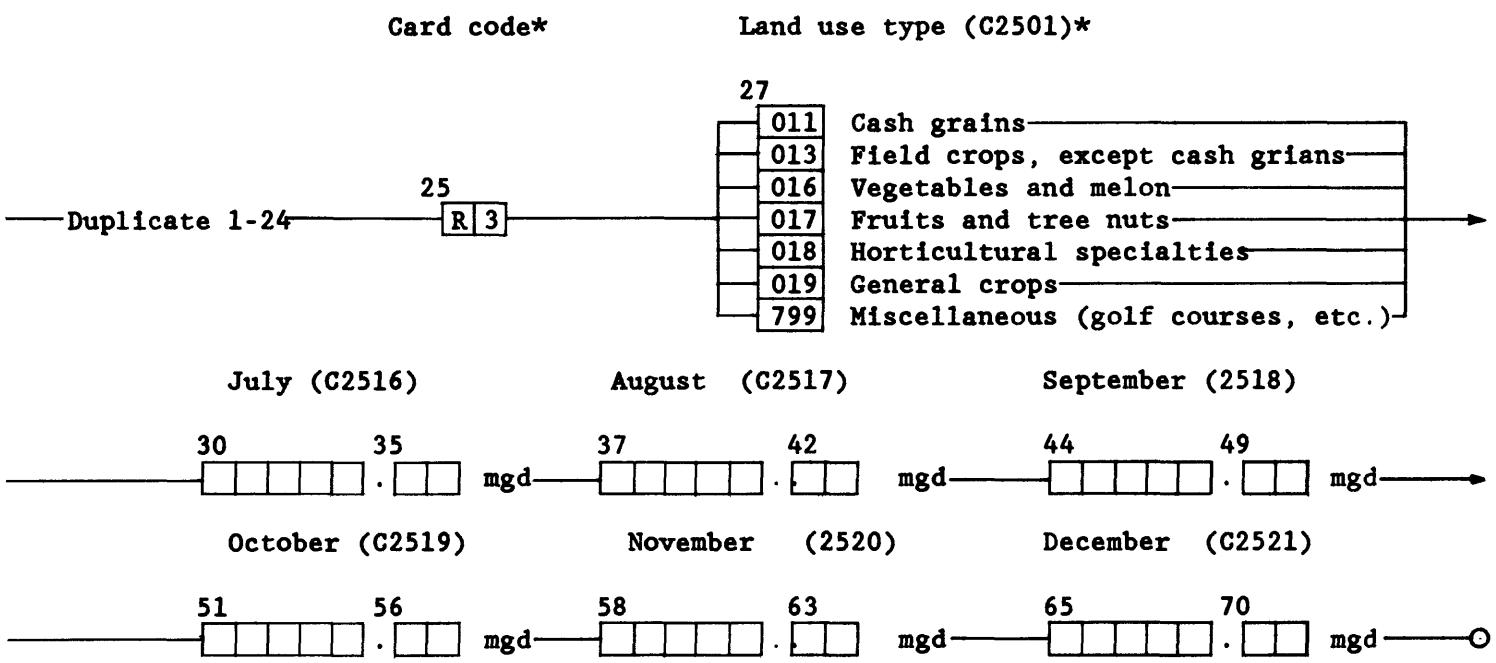



MONTHLY IRRIGATION RATES




MONTHLY IRRIGATION RATES (continued)



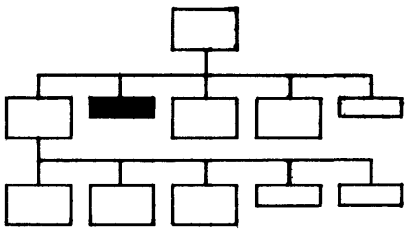
YEAR: _____

DATE: _____

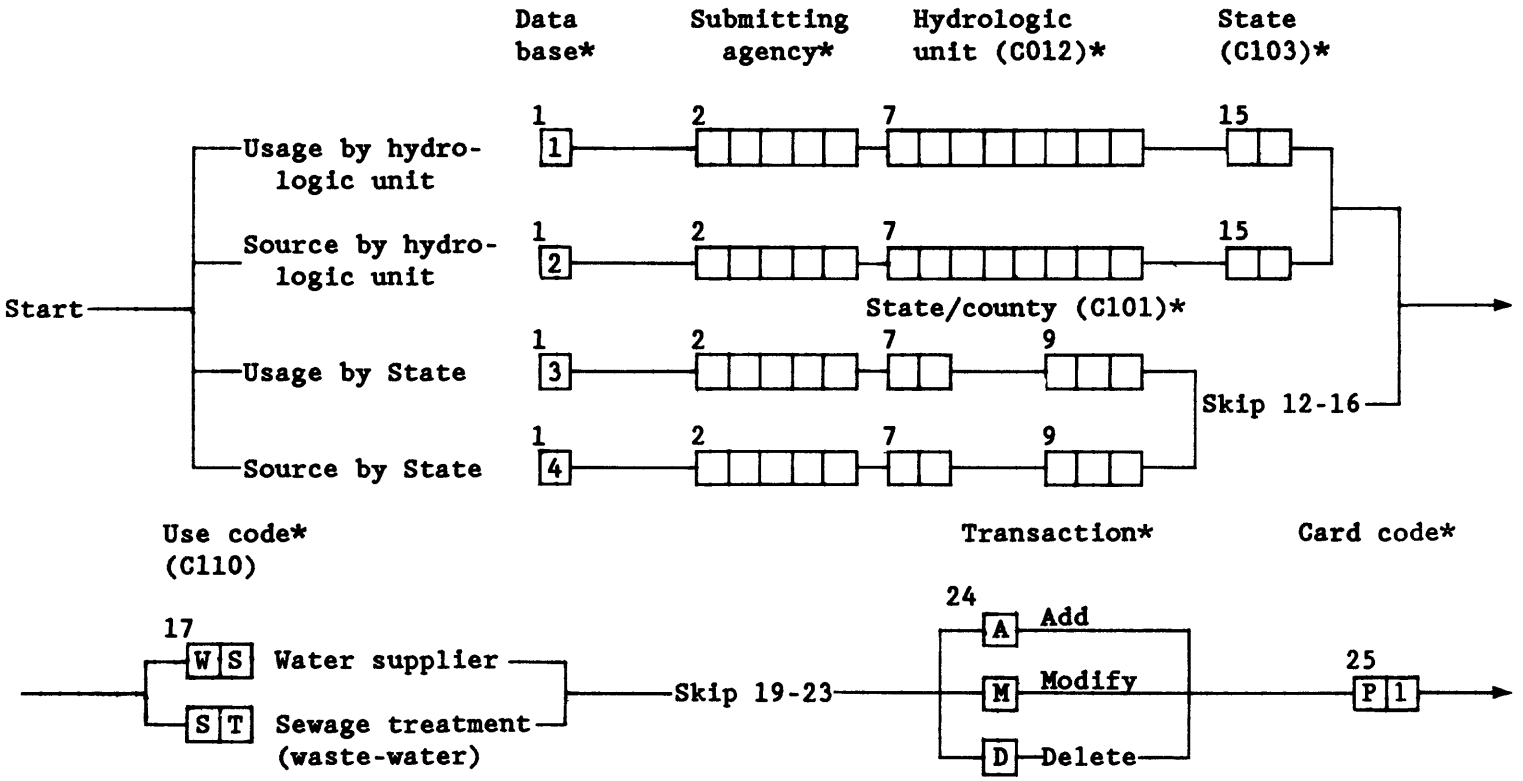
RECORDED BY: _____

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

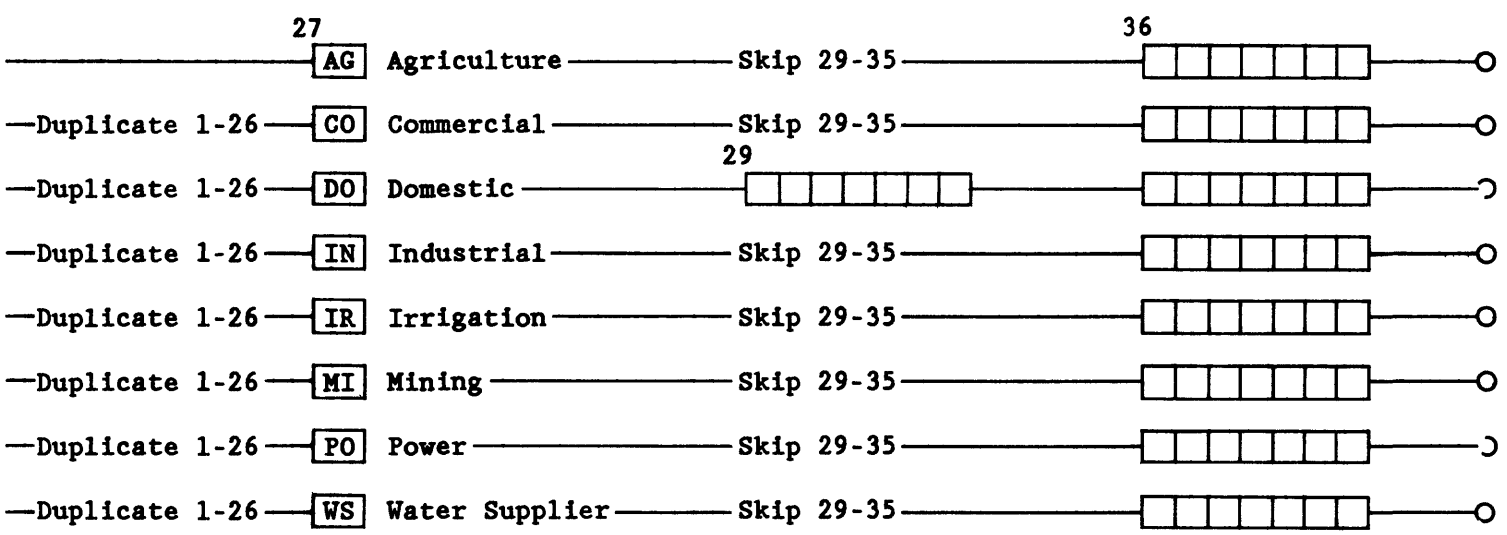
NATIONAL WATER-USE DATA SYSTEM
AGGREGATED DATA BASE



## WATER SUPPLIER/SEWAGE TREATMENT DATA FORM




Keypunching instructions: Omit cards which do not contain population data (C2002, C2003)



# APPENDIX B

## WATERSHED AND COUNTY AGGREGATION REPORT

## PROCEDURES FOR 1981, 1982, AND 1983 WATER-USE DATA

# U.S. GEOLOGICAL SURVEY
# NATIONAL WATER-USE DATA SYSTEM
# WATERSHED AND COUNTY WATER-USE AGGREGATION PROCEDURES FOR 1981, 1982, AND 1983 DATA

## INTRODUCTION

The following documentation refers to changes and modifications to the U.S. Geological Survey (USGS), National Water-Use Data System (NWUDS) Aggregation Programs. The aggregation programs for 1980 water-use data were developed by the Land Management Information Center (LMIC). Refer to the file NWUDSS.DOCUMENTATION for procedures and programs used to generate 1980 aggregation reports.

Water-use aggregation programs for report years 1981, 1982, 1983 were run on an IBM PC-XT using PC-INFO software developed by Henco. Three data files from the Minnesota Department of Natural Resources (MDNR), State Water-Use Data System (SWUDS) were downloaded using "Kermit" transfer utility to the PC. The regional datafiles transferred to the PC include:

COMMON.FILE - contains specific use type, and resource information required for the aggregation reports.

REPORTED.PUMPAGE - contains the annual volumes of water appropriated and discharged.

WATER.USE.PERM - contains the permitted acreage and permitted appropriation volume for each MDNR permit holder. This data is required for running the irrigation aggregation programs.

Listed below are use-type datafiles created to store annual water-use data:

| County datafiles | SWUDS use codes | Watershed datafiles |
|---|---|---|
| MUNICIPAL | use codes 10 - 16 | WSW |
| MUNNIES | use code 11 | WMU |
| WATERWORKS | use codes 10, 12-16 | WAW |
| COMMERCIAL | use codes 30-35 | WCO |
| INDUSTRY | use codes 41, 42, 46, 47, 48 | WIN |
| MINING | use codes 62, 63, 64, 43, 44 | WMI |

| County datafiles | SWUDS use codes | Watershed datafiles |
|---|---|---|
| FOSSIL | use codes 20,22,23 24,25 | WPF |
| IRRIGATION | use code 96 | WIR |
| IRRIGATION2 | use codes 80-90 | WIR2 |
| IRRIGATION.COMB | use codes 80-96 | WIRC |
| DOMESTIC | county population census data | |
| SEWAGE | use code 45 | WST |

Note - Use codes 45 and 10-16 are used in the sewage aggregation programs to calculate annual discharge volumes for public water-supply facilities.

Specific use types are identified below under each use-type datafile:

MUNICIPAL - a) municipalities (SWUDS use code 11)
WSW b) trailer courts (SWUDS use code 12)
c) small housing units (SWUDS use code 12)
d) commercial and institutional (use code 13)
e) cooperative waterworks (SWUDS use code 14)
f) fire protection (SWUDS use code 15)
g) state parks, waysides, highway rest areas (SWUDS use code 16)

MUNNIES - incorporates water-use totals for municipalites only SWUDS
WMU (use code 11). This datafile was created to run 1981 - 1983 and future year aggregations to be used by the MDNR.

WATERWORKS - incorporates water-use totals for other public water-supply
WAW facilities not including municipalities. Generates totals for SWUDS use codes 10, 12, 13, 14, 15, 16. This datafile was created for MDNR use.

Note: MUNNIES data + WATERWORKS data combined equals the data incorporated in the MUNICIPAL datafile.

COMMERCIAL - a) air conditioning commercial buildings
WCO (SWUDS use code 31)
b) air conditioning schools, hospitals
(SWUDS use code 32)
c) heat pumps (SWUDS use code 33)
d) coolant pumps (SWUDS use code 34)
e) district heating (SWUDS use code 35)

INDUSTRIAL - a) food and livestock (agricultural processing)
WIN (SWUDS use code 41)
b) paper/pulp (SWUDS use code 42)
c) petroleum - chemical processing
(SWUDS use code 46)
d) metal processing (SWUDS use code 47)
e) non-metallic products (rubber, plastic)
(SWUDS use code 48)

MINING - a) mine dewatering (SWUDS use code 62)
WMI b) quarry dewatering (SWUDS use code 63)
c) sand/gravel pit dewatering
(SWUDS use code 64)
d) mining processing (SWUDS use code 43)
e) sand and gravel washing (SWUDS use code 44)

FOSSIL - a) steam power cooling (SWUDS use codes 22,
WPF 23, 24)
b) steam power - other than cooling
(SWUDS use code 25)

IRRIGATION2 - a) crop irrigation (SWUDS use code 90)
WIR2 b) non-crop (golf course, landscaping)
(SWUDS use codes 80-86)

IRRIGATION - a) wildrice (SWUDS use code 96)
WIR

IRRIGATION.COMB - a) crop irrigation (SWUDS use code 90)
WIRC b) non-crop (SWUDS use codes 80-86)
c) wildrice (SWUDS use code 96)

DOMESTIC - a) county population data for 1981, 1982, and 1983 was used to calculate rural-domestic water use based on municipal population values taken from the SWUDS. No program to generate rural-domestic use by watershed unit was written. The USGS was responsible for developing a program or method for this water-use information.

## DATAFILE DEFINITIONS

Data item names follow this basic structure:

| Use code | | Withdrawal/ return | Source |
|---|---|---|---|
| DO - Domestic<br>IN - Industry<br>IR - Irrigation<br>MI - Mining<br>PF - Fossil<br>ST - Sewage<br>WS - Municipal<br>CO - Commerical<br>MU - Munnies<br>WA - Waterworks | +<br>+ | W - Withdrawal<br>R - Return | GW - Groundwater<br>SW - Surface Water |

Example: Data items for the municipal datafile are listed below.

WSW.GWNAD3 - total ground water withdrawal (reported and estimated)
WSW.GWNAD2 - agency source for ground water withdrawal (MDNR)
WSW.GWNAD1 - total reported ground water source points (number of ground water installations)
WSW.GWNY - total reported and estimated ground water source points
WSW.SWNAD3 - total surface water withdrawal (reported and estimated)
WSW.SWNAD2 - agency source for surface water withdrawal data (MDNR)
WSW.GWNAD1 - total reported surface water source points
WSW.SWNY - total reported and estimated surface water source points
WSW.GWRV - total reported ground water withdrawal
WSW.SWRV - total reported surface water withdrawal
WSW.GWEI - total ground water estimated source points
WSW.SWEI - total surface water estimated source points

Note: Municipal discharge values are calculated and incorporated under the sewage treatment data item STR.SWNAD3. All discharge volumes and number of dischargers are entered as an estimate.

## PROGRAM CHANGES

Programs to aggregate data on the above use-type categories all follow the same general format (see page B-4). Modifications to the 1980 NWUDS Programs are as follows:

1) MDNR appropriators who did not report their annual water use or who were not required to report (due to termination or they reported water use from another installation under the same permit) were not included in the number of source withdrawal points. They were incorporated in the 1980 aggregation reports. The command in each program to eliminate non-appropriation source points reads as follows:

   RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7

2) Three new data items were defined to separate estimated water use from reported water use (both SW & GW) and estimated installations from reported installations.

   The new data items are:

   INW.GWRV - INDUSTRIAL (identified by the first 2 characters) ground water reported volume

   INW.GWEV - INDUSTRIAL estimated volume

   INW.GWEI - INDUSTRIAL estimated installations (estimated withdrawal source points)

3) Use Code 44 (sand and gravel washing) was incorporated into the MINING program. The 1980 INDUSTRIAL aggregation program included use code 44.

4) The PG.MINING program now incorporates use codes 43, 44, 62, 63, and 64. The PG.MINING program for 1980 water use only included use code 43 (taconite mining and processing).

5) Four new datafiles were created, MUNNIES and WATERWORKS for county aggregations and WMU and WAW for watershed aggregations. The MDNR felt it necessary for in-house analysis of water use to separate municipal water appropriation from other public supply facilities. These data aggregations are supplied for NWUDS requirements in the municipal datafile.

6) In the program PG.MUNNIES, population served, as well as service connections within a municipality, are calculated for surface-water users and ground-water users separately. However, NWUDS requires one combined ground and surface water total for each of these data fields (data items; POP.SERVE and SERVICE.CONN).

## IBM-PC DATABASE STRUCTURE

Three SWUDS datafiles for each region were transferred from the Prime to the IBM-PC. Datafile definitions, and the actual data were transferred separately (using kermit transfer utility). This procedure was preferred over the INFOSYS\XFER transfer utility which transfers the data and the datafile definition simultaneously and loads one record at a time onto the PC using the COMINPUT COMMAND (very slow process!). Therefore, data was transferred in a compressed file format, and empty datafile definitions were transferred in a separate file transfer process.

The 1980 NWUDS programs, and datafile definitions were transferred from the prime to the PC using the INFOSYS\XFER transfer utility. This transfer utility downloads everything which resides on the specified directory pathname. Therefore, all programs and datafiles were transferred in one application. If KERMIT had been used, each program and datafile would have to be named for the transfer process.

For county aggregations, 18 regional databases were created on the IBM-PC (6 regions times 3 years pumpage data). The databases are listed below:

| Region | Year | Database (user-name) |
|---|---|---|
| 1 | 81 | NW1 |
| 1 | 82 | N12 |
| 1 | 83 | N13 |
| 2 | 81 | NUD |
| 2 | 82 | NU2 |
| 2 | 83 | N23 |
| 3 | 81 | NW3 |
| 3 | 82 | N32 |
| 3 | 83 | N33 |
| 4 | 81 | NW4 |
| 4 | 82 | N42 |
| 4 | 83 | N43 |
| 5 | 81 | NW5 |
| 5 | 82 | N52 |
| 5 | 83 | N53 |
| 6 | 81 | NW6 |
| 6 | 82 | N62 |
| 6 | 83 | N63 |

Three statewide county aggregation databases were stored on diskettes to consolidate regional water-use data. The database names are:

C81 - contains 1981 county water-use totals by use type.
C82 - contains 1982 county water-use totals by use type.
C83 - contains 1983 county water-use totals by use type.

An INFO database is created on the PC at the 'ENTER USER-NAME>' prompt, an asterisk (*) followed by a three-digit alphanumeric code creates a new database. All internal file names can be referenced to the user-name.

Once a regional database has been created, and the NWUDS programs and datafile definitions loaded, subsequent regional databases created can copy all required programs and datafile definitions from the initial database by using the following command:

ENTER COMMAND> TAKE FROM USER-NAME * (copies everything associated with that user-name)

Programs, which have been copied from one INFO user to another using the TAKE command, must be modified to reflect the correct year, and output filename.

For watershed aggregations three statewide databases were created:

| Year | Database (user-name) |
|---|---|
| 1981 | WTS |
| 1982 | W82 |
| 1983 | W83 |

Statewide databases were developed rather than regional databases because watershed boundaries do cross county boundaries (each county is located entirely in one of the MDNR's six regional databases).

Although water-use volumes by watershed unit were aggregated statewide, the irrigation program PG.WIR, and PG.WIR2 cannot accumulate totals in their respective statewide datafiles because these programs calculate estimated water use and acres irrigated based on county permitted values. Refer to the program execution section for running watershed irrigation programs.

To load county or watershed numbers into each specific use-type datafile definition, two DOS files were created:

WAT.SAM - contains 81 major watershed numbers, and the associated USGS watershed number

CTY.SAM - contains the 87 county numbers

Note : The DOS files must have the suffix of ".SAM " to access the DOS file in a sequential manner. (compressed mode)

Example: enter command> SEL MUNICIPAL

0 records selected

enter command> GET CTY.SAM COPY

87 records selected

## Program Execution

The 1981 county database information on floppy diskettes for each region contain the data for the COMMON.FILE, WATER.USE.PERM, and REPORTED.PUMPAGE datafiles. Because of the time involved in restoring and backing up files on the IBM PC-XT, and to enable statewide watershed aggregation reports to be run, these SWUDS datafiles were externaled when running 1982 and 1983 county aggregations, as well as, 1981, 1982, and 1983 watershed aggregation programs. Refer to the PC-INFO users manual for procedures in externaling INFO datafiles.

The DOS file names which created the external associations to the specific regional datafiles are listed below:

| Region | Datafile | DOS file name (info internal name) |
|---|---|---|
| 1 | COMMON.FILE | NW1000.DAT |
| 1 | WATER.USE.PERM | NW1001.DAT |
| 1 | REPORTED.PUMPAGE | NW1002.DAT |
| 2 | COMMON.FILE | NUD034.DAT |
| 2 | WATER.USE.PERM | NUD035.DAT |
| 2 | REPORTED.PUMPAGE | NUD033.DAT |
| 3 | COMMON.FILE | NW3000.DAT |
| 3 | WATER.USE.PERM | NW3001.DAT |
| 3 | REPORTED.PUMPAGE | NW3002.DAT |
| 4 | COMMON.FILE | NW4000.DAT |
| 4 | WATER.USE.PERM | NW4001.DAT |
| 4 | REPORTED.PUMPAGE | NW4002.DAT |

| Region | Datafile | DOS file name (info internal name) |
|---|---|---|
| 5 | COMMON.FILE | NW5000.DAT |
| 5 | WATER.USE.PERM | NW5002.DAT |
| 5 | REPORTED.PUMPAGE | NW5001.DAT |
| 6 | COMMON.FILE | NW6000.DAT |
| 6 | WATER.USE.PERM | NW6002.DAT |
| 6 | REPORTED.PUMPAGE | NW6001.DAT |

**Executing Statewide Watershed Programs**

When executing the statewide watershed programs, a batch job procedure was developed. One statewide datafile is associated with each USE CATEGORY (11 use-type datafiles for each year).

The DOS batch file job directs PC-INFO to begin an INFO session by reading the INFO user name and subsequent INFO commands from a COMINPUT file. The first record in the COMINPUT file must be the INFO user-name. Refer to the IBM-DOS manual to create a batch file.

EXAMPLE:

```
DOS BATCH FILENAME:    RUN.BAT (all batch files must have
                               the file extension .BAT)
  BATCH COMMANDS   :   ECHO OFF
                   :   ECHO PLACE INFO KEY-DISK IN UNIT A
                   :   PAUSE
   COMINPUT FILE   :   INFO USER.E2
                   :   INFO USER.82
                   :   INFO USER.E3
                   :   INFO USER.83
```

The watershed aggregation programs can be run on two regions by executing the above batch job "RUN". An example of the program sequence is illustrated below:

```
       COMINPUT FILE NAME : USER E2
            INFO USER-NAME: W82
  SUBSEQUENT INFO COMMANDS: SEL COMMON.FILE
                            EXTERNAL
                            NW5000.DAT
                            SEL COMMON.FILE
                            SEL WATER.USE.PERM
                            EXTERNAL
                            NW5002.DAT
                            SEL WATER.USE.PERM
                            SEL REPORTED.PUMPAGE
                            EXTERNAL
                            NW5001.DAT
                            SEL REPORTED.PUMPAGE
     returns to DOS level: Q STOP

        COMINPUT FILENAME : USER.82
            INFO USER-NAME: W82
 Subsequent INFO commands : COMO 0. BATCH
                            COMPILE NWUDS.BATCH
                            RUN NWUDS.BATCH
                            COMO END
                            Q STOP

        COMINPUT FILENAME : USER.E3
            INFO USER-NAME: W83
 Subsequent INFO commands : SEL COMMON.FILE
                            EXTERNAL
                            Y
                            NW1000.DAT
                            SEL COMMON.FILE
                            SEL WATER.USE.PERM
                            EXTERNAL
                            Y
                            NW1001.DAT
                            SEL WATER.USE.PERM
                            SEL REPORTED.PUMPAGE
                            EXTERNAL
                            Y
                            NW1002.DAT
                            SEL REPORTED.PUMPAGE
                            Q STOP
        COMINPUT FILENAME : USER.83
           INFO USER-NAME : W83
 Subsequent INFO commands : COMO R.BATCH
                            COMPILE NWUDS.BATCH
                            RUN NWUDS.BATCH
                            COMO END
                            Q STOP
```

## Executing Watershed Irrigation Programs

The irrigation programs PG.WIR, and PG.WIR2 should be executed in the following sequence because watershed boundaries cross regional boundaries. The program PG.WIRC should not be executed until regional watershed totals have been integrated into the statewide datafiles.

1) Run programs on regions 1 & 5 (PG.WIR,PG.WIR2)
2) SEL the irrigation datafiles (WIR, WIR2)
3) RES for IRW.GWNY GT 0 or IRW.SWNY GT 0
4) Save and compress the selected records into two ".SAM" files
5) Record the filenames to reload data into the appropriate irrigation datafiles.
6) ASE
7) PURGE all records
8) GET WAT.SAM COPY
9) CALC WATSHD.UNIT = WATSH.UNIT (for watershed units less than 10, the leading zero is read as a blank)
10) Run programs on regions 2 & 4
11) Follow steps 2 - 9
12) Run programs on region 6
13) Follow steps 2 - 9
14) Run programs on region 3
15) For the watershed units which exist in more than one region, the data item values must be aggregated to get a statewide total
16) Run PG.IRR.COMBINE

## NWUDS AGGREATION PROGRAMS

### PG._____ Programs

These programs calculate the county and watershed water use totals by specific use type. (Appendix A)

| County aggregation programs | Watershed aggregation programs |
|---|---|
| PG.MUNICIPAL | PG.WSW |
| PG.MUNNIES | PG.WMU |
| PG.COMMERCIAL | PG.WCO |
| PG.INDUSTRY | PG.WIN |
| PG.MINING | PG.WMI |
| PG.FOSSIL | PG.WPF |
| PG.WAWO | PG.WAW |
| PG.SEWAGE | PG.WST |
| PG.IRR.RICE | PG.WIR |
| PG.IRR.NORICE | PG.WIR2 |
| PG.IRR.COMBINE | PG.WIRC |
| PG.DOMESTIC | |

Note: 1. Program PG.MUNNIES must be run prior to PG.MUNICIPAL

2. Programs PG.IRR.RICE and PG.IRR.NORICE must be run prior to PG.IRR.COMBINE.

See section program execution for procedures to follow when executing watershed irrigation programs.

The two nuclear power plant facilities in the state were incorporated into the fossil fuel aggregation reports. Permit number 661172 (NSP Monticello Plant), and permit number 690172 (NSP Prairie Island Plant) are entered as use code 26 in the SWUDS. Permit number 670083 (NSP Monticello Plant) is a groundwater permit for industrial purposes, and permit number 690171 is a groundwater permit for the Prairie Island Nuclear Plant for commercial water use within the plant.

## PG.FINAL_____ Programs

These formatting programs calculate the year, calculate the federal county ID number from the State County number, converts annual totals from MGY to MGD (divides by 365 or 366), and adds the name of the data source agency. There are seven PG.FINAL_____ programs for each use catergory for county and watershed totals.

| County aggregation programs | Watershed aggregation programs |
|---|---|
| PG.FINAL.MUNICIPAL | PG.FINAL.WSW |
| PG.FINAL.COMMERCIAL | PG.FINAL.WCO |
| PG.FINAL.INDUSTRY | PG.FINAL.WIN |
| PG.FINAL.SEWAGE | PG.FINAL.WST |
| PG.FINAL.MINING | PG.FINAL.WMI |
| PG.FINAL.FOSSIL | PG.FINAL.PFW |
| PG.FINAL.IRRIGATION | PG.FINAL.WIR |

Example:

Program name: PG.FINAL.IRRIGATION

```
10000 PROGRAM SECTION ONE
10001 SEL IRRIGATION.COMB
20000 PROGRAM SECTION TWO
20001 CALC YEAR = 83
20002 CALC FEDID = (COUNTY * 2) - 1
20003 CALC IRW.GWAND3 = ALL.WAT.G / 365
20004 CALC IRW.SWNAD3 = ALL.WAT.S / 365
20005 CALC IRR.SWNAD3 = (ALL.WAT.R * 0.33) / 365
20006 MOVE 'IFMN DEPT OF NATURAL RESOURCES' TO IRW.GWNAD2
20007 MOVE 'IFMN DEPT OF NATURAL RESOURCES' TO IRW.SWNAD2
20008 MOVE 'EPU S GEOLOGICAL SURVEY' TO IRR.SWNAD2
30000 PROGRAM SECTION THREE
```

## PG.REPORT_____ Programs

These are the last sequence of programs to be run for the county or watershed aggregation reports. This formatting program creates an output file, which is the final output format for submission to the NWUDS in Reston, Virginia. The output-file name has the following format: NWREG380.COM which indicates the region, year and use type.

| County aggregation program | Watershed aggregation program |
|---|---|
| PG.REPORT.MUNICIPAL | PG.REPORT.WSW |
| PG.REPORT.COMMERCIAL | PG.REPORT.WCO |
| PG.REPORT.INDUSTRY | PG.REPORT.WIN |
| PG.REPORT.MINING | PG.REPORT.WMI |
| PG.REPORT.FOSSIL | PG.REPORT.WPF |
| PG.REPORT.SEWAGE | PG.REPORT.WST |
| PG.REPORT.IRRIGATION | PG.REPORT.WIR |

Example:

Program name: PG.REPORT.MUNICIPAL

```
10001 SEL MUNICIPAL
10002 RES FOR F1 CN ' '
10003 MOVE '0' TO F1
10004 ASEL
10005 RES FOR F2 CN ' '
10006 MOVE '0' TO F2
10007 ASE
10008 OUTPUT=NWREG683.MUN INIT
20000 PROGRAM SECTION TWO
20001 PRINT 1T,'4USGS 27',F1-3,5X,'WSW
        GWNAD3',28T,WG3.INTEGER,32T,WG3.DECIMAL
20002 PRINT 1T,'4USGS 27',F1-3,5X,'WSW
        GWNAD2',WSW,GWNAD2
20003 PRINT 1T,'4USGS 27',F1-3,5X,'WSW
        GWNAD1',WSW.GWNAD1,'NY',WSW.GWNY
20004 PRINT 1T,'4USGS 27',F1-3,5X,'WSW
        SWNAD3',28T,WS3.INTEGER,32T,WS3.DECIMAL
20005 PRINT 1T,'4USGS 27',F1-3,5X,'WSW
        SWNAD2',WSW.SWNAD2
20006 PRINT IT,'4USGS 27',F1-3,5X,'WSW
        SWNAD1',WSW.SWNAD1,'NY',WSW.SWNY
20007 PRINT IT,'4USGS 27',F1-3,5X,'WS
        APIDO',POP.SERVE,36T,SERVICE.CONN
30000 PROGRAM SECTION THREE
```

## NWUDS.BATCH Program

This is the master program to run the NWUDS aggregation programs. The INFO RUN PROGRAM with LINK option allows up to 50 programs to be executed in a consecutive order. With the LINK option, INFO cannot encounter a 'END'statement within a named program or INFO cancels the LINK request and returns control to the calling program.

FOR COUNTY AGGREGATION:

Program name: NWUDS.BATCH

```
10001 DIS $TIME
10002 RUN PG.MUNNIES LINK
10003 RUN PG.MUNICIPAL LINK
10004 RUN PG.COMMERCIAL LINK
10005 RUN PG.INDUSTRY LINK
10006 RUN PG.MINING LINK
10007 RUN PG.FOSSIL LINK
10008 RUN PG.WAWO LINK
10009 RUN PG.SEWAGE LINK
10010 RUN PG.IRR.RICE LINK
10011 RUN PG.IRR.NORICE LINK
10012 RUN PG.IRR.COMBINE LINK
10013 RUN PG.FINAL.MUNICIPAL LINK
10014 RUN PG.FINAL COMMERCIAL LINK
10015 RUN PG.FINAL.INDUSTRY LINK
10016 RUN PG.FINAL.MINING LINK
10017 RUN PG.FINAL.FOSSIL LINK
10018 RUN PG.FINAL.SEWAGE LINK
10019 RUN PG.FINAL.IRRIGATION LINK
10020 RUN PG.REPORT.MUNICIPAL LINK
10021 RUN PG.REPORT.COMMERCIAL LINK
10022 RUN PG.REPORT.INDUSTRY LINK
10024 RUN PG.REPORT.FOSSIL LINK
10025 RUN PG.REPORT.SEWAGE LINK
10026 RUN PG.REPORT.IRRIGATION LINK
10027 DIS $TIME
10028 Q STOP
```

## COUNTY AGGREGATION DATAFILES

The datafile structure, as of September 5, 1985, for each of the county aggregation datafiles is shown on the following pages. For each of the items in the datafiles the following characteristics are given:

COL--The starting column for the item.
ITEM NAME--The name of the item.
WDTH--The width of the item in the file.
OPUT--The number of spaces needed to display or print the item values.
TYP--The item type:
- C--Character; the letters of the alphabet, punctuation, and numbers that are not numeric values.
- I--Integer; numbers without decimal places.
- N--Numeric; numbers that can have decimal places.
- D--Date; month, day, and year.

N.Dec--The number of decimal places if the item is numeric.
ALTERNATE NAME--An alternate name to be used for the item if one exists.

Redefined items are used to change the datafile templates to fit changing data needs. A redefined item can specify a combination of adjacent items or a subset of an item or items. The characteristics for the redefined items follow the characteristics for the items.

DATAFILE NAME: MUNICIPAL

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | WSW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | WSW.GWNAD2 | 40 | 40 | C | - | |
| 58 | WSW.GWNAD1 | 5 | 5 | I | - | |
| 63 | WSW.GWNY | 5 | 5 | I | - | |
| 68 | WSW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | WSW.SWNAD2 | 40 | 40 | C | - | |
| 118 | WSW.SWNAD1 | 5 | 5 | I | - | |
| 123 | WSW.SWNY | 5 | 5 | I | - | |
| 128 | WSW.GWRV | 10 | 10 | N | 2 | |
| 138 | WSW.GWEV | 10 | 10 | N | 2 | |
| 148 | WSW.GWEI | 5 | 5 | I | - | |
| 153 | WSW.SWRV | 10 | 10 | N | 2 | |
| 163 | WSW.SWEV | 10 | 10 | N | 2 | |
| 173 | WSW.SWEI | 5 | 5 | I | - | |
| 178 | WSW.POP | 7 | 7 | I | - | |
| 185 | WSW.CONNECTIONS | 7 | 7 | I | - | |
| 192 | DUMMYO | 100 | 100 | C | - | |
| 292 | SERVICE.CONN | 7 | 7 | I | - | |
| 299 | POP.SERVE | 7 | 7 | I | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: MUNNIES

24 ITEMS: STARTING IN POSITION 1

| COL | ITEMS NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | MUW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | MUW.GWNAD2 | 40 | 40 | C | - | |
| 58 | MUW.GWNAD1 | 5 | 5 | I | - | |
| 63 | MUW.GWNY | 5 | 5 | I | - | |
| 68 | MUW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | MUW.SWNAD1 | 40 | 40 | C | - | |
| 118 | MUW.SWNDA1 | 5 | 5 | I | - | |
| 123 | MUW.SWNY | 5 | 5 | I | - | |
| 128 | MUW.GWRY | 10 | 10 | N | 2 | |
| 138 | MUW.GWEV | 10 | 10 | N | 2 | |
| 148 | MUW.GWEI | 5 | 5 | I | - | |
| 153 | MUW.SWRV | 10 | 10 | N | 2 | |
| 163 | MUW.SWEV | 10 | 10 | N | 2 | |
| 173 | MUW.SEWI | 5 | 5 | I | - | |
| 178 | MUW.POP.GW | 7 | 7 | I | - | |
| 185 | MUW.POP.SW | 7 | 7 | I | - | |
| 192 | MUW.CONNEC.GW | 7 | 7 | I | - | |
| 199 | MUW.CONNEC.SW | 7 | 7 | I | - | |
| 206 | DUMMYO | 50 | 50 | C | - | |
| 256 | SERVICE.CONN | 7 | 7 | I | - | |
| 263 | POP.SERVE | 7 | 7 | I | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: WATERWORKS

18 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | WAW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | WAW.GWNAD2 | 40 | 40 | C | - | |
| 58 | WAW.GWNAD1 | 5 | 5 | I | - | |
| 63 | WAW.GWNY | 5 | 5 | I | - | |
| 68 | WAW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | WAW.SWNAD2 | 40 | 40 | C | - | |
| 118 | WAW.SWNAD1 | 5 | 5 | I | - | |
| 123 | WAW.SWNY | 5 | 5 | I | - | |
| 128 | WAW.GWRV | 10 | 10 | N | 2 | |
| 138 | WAW.GWEV | 10 | 10 | N | 2 | |
| 148 | WAW.GWEI | 5 | 5 | I | - | |
| 153 | WAW.SWRV | 10 | 10 | N | 2 | |
| 163 | WAW.SWEV | 10 | 10 | N | 2 | |
| 173 | DUMMYO | 50 | 50 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | FI | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: COMMERCIAL

22 ITEMS: STARTING IN POSITION 1

| COL | ITEMS NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | COW.GWNAD3 | 7 | 7 | N | 2 | |
| 15 | COW.GWNAD2 | 40 | 40 | C | - | |
| 55 | COW.GWNAD1 | 5 | 5 | I | - | |
| 60 | COW.GWNY | 5 | 5 | I | - | |
| 65 | COW.SWNAD3 | 7 | 7 | N | 2 | |
| 72 | COW.SWNAD2 | 40 | 40 | C | - | |
| 112 | COW.SWNAD1 | 5 | 5 | I | - | |
| 117 | COW.SWNY | 5 | 5 | I | - | |
| 122 | COR.SWNAD3 | 7 | 7 | N | 2 | |
| 129 | COR.SWNAD2 | 40 | 40 | C | - | |
| 169 | COR.SWNAD1 | 5 | 5 | I | - | |
| 174 | COR.SWNY | 5 | 5 | I | - | |
| 179 | COW.GWRV | 10 | 10 | N | 2 | |
| 189 | COW.GWEV | 10 | 10 | N | 2 | |
| 199 | COW.GWEI | 5 | 5 | I | - | |
| 204 | COW.SWRV | 10 | 10 | N | 2 | |
| 214 | COW.SWEV | 10 | 10 | N | 2 | |
| 224 | COW.SWEI | 5 | 5 | I | - | |
| 229 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 8 | WG3.INTEGER | 4 | 4 | C | - | |
| 13 | WG3.DECIMAL | 2 | 2 | C | - | |
| 65 | WS3.INTEGER | 4 | 4 | C | - | |
| 70 | WS3.DECIMAL | 2 | 2 | C | - | |
| 122 | RS3.INTEGER | 4 | 4 | C | - | |
| 127 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 5 | 5 | C | - | |

DATAFILE NAME: INDUSTRY

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | INW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | INW.GWNAD2 | 40 | 40 | C | - | |
| 58 | INW.GWNAD1 | 5 | 5 | I | - | |
| 63 | INW.GWNY | 5 | 5 | I | - | |
| 68 | INW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | INW.SWNAD2 | 40 | 40 | C | - | |
| 118 | INW.SWNAD1 | 5 | 5 | I | - | |
| 123 | INW.SWNY | 5 | 5 | I | - | |
| 128 | INR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | INR.SWNAD2 | 40 | 40 | C | - | |
| 178 | INR.SWNAD1 | 5 | 5 | I | - | |
| 183 | INR.SWNY | 5 | 5 | I | - | |
| 188 | INW.GWRV | 10 | 10 | N | 2 | |
| 198 | INW.GWEV | 10 | 10 | N | 2 | |
| 208 | INW.GWEI | 5 | 5 | I | - | |
| 213 | INW.SWRV | 10 | 10 | N | 2 | |
| 223 | INW.SWEV | 10 | 10 | N | 2 | |
| 233 | INW.SWEI | 5 | 5 | I | - | |
| 238 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 5 | 5 | I | - | |

DATAFILE NAME: MINING

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | 1 | - | |
| 3 | FEDID | 3 | 3 | 1 | - | |
| 6 | YEAR | 2 | 2 | 1 | - | |
| 8 | MIW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | MIW.GWNAD2 | 40 | 40 | C | - | |
| 58 | MIW.GWNAD1 | 5 | 5 | I | - | |
| 63 | MIW.GWNY | 5 | 5 | I | - | |
| 68 | MIW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | MIW.SWNAD2 | 40 | 40 | C | - | |
| 118 | MIW.SWNAD1 | 5 | 5 | I | - | |
| 123 | MIW.SWNY | 5 | 5 | I | - | |
| 128 | MIR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | MIR.SWNAD2 | 40 | 40 | C | - | |
| 178 | MIR.SWNAD1 | 5 | 5 | I | - | |
| 183 | MIR.SWNY | 5 | 5 | I | - | |
| 188 | MIW.GWRV | 10 | 10 | N | 2 | |
| 198 | MIW.GWEV | 10 | 10 | N | 2 | |
| 208 | MIW.GWEI | 5 | 5 | I | - | |
| 213 | MIW.SWRV | 10 | 10 | N | 2 | |
| 223 | MIW.SWEV | 10 | 10 | N | 2 | |
| 233 | MIW.SWEI | 5 | 5 | I | - | |
| 238 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 5 | 5 | C | - | |

DATAFILE NAME: FOSSIL

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | PFW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | PFW.GWNAD2 | 40 | 40 | C | - | |
| 58 | PFW.GWNAD1 | 5 | 5 | I | - | |
| 63 | PFW.GWNY | 5 | 5 | I | - | |
| 68 | PFW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | PFW.SWNAD2 | 40 | 40 | C | - | |
| 118 | PFW.SWNAD1 | 5 | 5 | I | - | |
| 123 | PFW.SWNY | 5 | 5 | I | - | |
| 128 | PFR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | PFR.SWNAD2 | 40 | 40 | C | - | |
| 178 | PFR.SWNAD1 | 5 | 5 | I | - | |
| 183 | PFR.SWNY | 5 | 5 | I | - | |
| 188 | PFW.GWRV | 10 | 10 | N | 2 | |
| 198 | PFW.GWEV | 10 | 10 | N | 2 | |
| 208 | PFW.GWEI | 5 | 5 | I | - | |
| 213 | PFW.SWRV | 10 | 10 | N | 2 | |
| 223 | PFW.SWEV | 10 | 10 | N | 2 | |
| 233 | PFW.SWEI | 5 | 5 | I | - | |
| 238 | DUMMY0 | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 5 | 5 | C | - | |

DATAFILE NAME: SEWAGE

24 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | STW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | STW.GWNAD2 | 40 | 40 | C | - | |
| 58 | STW.GWNAD1 | 5 | 5 | I | - | |
| 63 | STW.GWNY | 5 | 5 | I | - | |
| 68 | STW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | STW.SWNAD2 | 40 | 40 | C | - | |
| 118 | STW.SWNAD1 | 5 | 5 | I | - | |
| 123 | STW.SWNY | 5 | 5 | I | - | |
| 128 | STR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | STR.SWNAD2 | 40 | 40 | C | - | |
| 178 | STR.SWNAD1 | 5 | 5 | I | - | |
| 183 | STR.SWNY | 5 | 5 | I | - | |
| 188 | STW.GWRV | 10 | 10 | N | 2 | |
| 198 | STW.GWEV | 10 | 10 | N | 2 | |
| 208 | STW.GWEI | 5 | 5 | I | - | |
| 213 | STW.SWRV | 10 | 10 | N | 2 | |
| 223 | STW.SWEV | 10 | 10 | N | 2 | |
| 233 | STW.SWEI | 5 | 5 | I | - | |
| 238 | POP.SERVE | 7 | 7 | I | - | |
| 245 | SERVICE.CONN | 7 | 7 | I | - | |
| 252 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: IRRIGATION

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 58 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 63 | IRW.GWNY | 5 | 5 | I | - | |
| 68 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 118 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 123 | IRW.SWNY | 5 | 5 | I | - | |
| 128 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 178 | CO.ACRE.S | 6 | 6 | I | - | |
| 184 | CO.ACRE.G | 6 | 6 | I | - | |
| 190 | REP.ACRE.S | 6 | 6 | I | - | |
| 196 | REP.ACRE.G | 6 | 6 | I | - | |
| 202 | PERM.ACRE.S | 6 | 6 | I | - | |
| 208 | PERM.ACRE.G | 6 | 6 | I | - | |
| 214 | PCNT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 220 | PCNT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 226 | EST.ACRE.S | 6 | 6 | I | - | |
| 232 | EST.ACRE.G | 6 | 6 | I | - | |
| 238 | REP.WAT.S | 10 | 10 | N | 2 | |
| 248 | REP.WAT.G | 10 | 10 | N | 2 | |
| 258 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 268 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 278 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 288 | EST.WAT.S | 10 | 10 | N | 2 | |
| 298 | EST.WAT.G | 10 | 10 | N | 2 | |
| 308 | ALL.ACRE.S | 6 | 6 | I | - | |
| 314 | ALL.ACRE.G | 6 | 6 | I | - | |
| 320 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 330 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 340 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 350 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 356 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 362 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | FI | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: IRRIGATION2

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 58 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 63 | IRW.GWNY | 5 | 5 | I | - | |
| 68 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 118 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 123 | IRW.SWNY | 5 | 5 | I | - | |
| 128 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 178 | CO.ACRE.S | 6 | 6 | I | - | |
| 184 | CO.ACRE.G | 6 | 6 | I | - | |
| 190 | REP.ACRE.S | 6 | 6 | I | - | |
| 196 | REP.ACRE.G | 6 | 6 | I | - | |
| 202 | PERM.ACRE.S | 6 | 6 | I | - | |
| 208 | PER.ACRE.G | 6 | 6 | I | - | |
| 214 | PCNT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 220 | PCNT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 226 | EST.ACRE.S | 6 | 6 | I | - | |
| 232 | EST.ACRE.G | 6 | 6 | I | - | |
| 238 | REP.WAT.S | 10 | 10 | N | 2 | |
| 248 | REP.WAT.G | 10 | 10 | N | 2 | |
| 258 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 268 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 278 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 288 | EST.WAT.S | 10 | 10 | N | 2 | |
| 298 | EST.WAT.G | 10 | 10 | N | 2 | |
| 308 | ALL.ACRE.S | 6 | 6 | I | - | |
| 314 | ALL.ACRE.G | 6 | 6 | I | - | |
| 320 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 330 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 340 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 350 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 356 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 362 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEM ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: IRRIGATION.COMB

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 18 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 58 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 63 | IRW.GWNY | 5 | 5 | I | - | |
| 68 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 78 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 118 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 123 | IRW.SWNY | 5 | 5 | I | - | |
| 128 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 138 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 178 | CO.ACRE.S | 6 | 6 | I | - | |
| 184 | CO.ACRE.G | 6 | 6 | I | - | |
| 190 | REP.ACRE.S | 6 | 6 | I | - | |
| 196 | REP.ACRE.G | 6 | 6 | I | - | |
| 202 | PERM.ACRE.S | 6 | 6 | I | - | |
| 208 | PERM.ACRE.G | 6 | 6 | I | - | |
| 214 | PONT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 220 | PONT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 226 | EST.ACRE.S | 6 | 6 | I | - | |
| 232 | EST.ACRE.G | 6 | 6 | I | - | |
| 238 | REP.WAT.S | 10 | 10 | N | 2 | |
| 248 | REP.WAT.G | 10 | 10 | N | 2 | |
| 258 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 268 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 278 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 288 | EST.WAT.S | 10 | 10 | N | 2 | |
| 298 | EST.WAT.G | 10 | 10 | N | 2 | |
| 308 | ALL.ACRE.S | 6 | 6 | I | - | |
| 314 | ALL.ACRE.G | 6 | 6 | I | - | |
| 320 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 330 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 340 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 350 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 356 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 362 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |
| 131 | RS3.INTEGER | 4 | 4 | C | - | |
| 136 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: DOMESTIC

10 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | COUNTY | 2 | 2 | I | - | |
| 3 | FEDID | 3 | 3 | I | - | |
| 6 | YEAR | 2 | 2 | I | - | |
| 8 | TOT.POP | 7 | 7 | I | - | |
| 15 | POP.SERVE | 7 | 7 | I | - | |
| 22 | DOW.GWNAD3 | 10 | 10 | N | 2 | |
| 32 | DOW.GWNAD2 | 40 | 40 | C | - | |
| 72 | DOW.GWNAD1 | 5 | 5 | I | - | |
| 77 | DOW.GWNY | 5 | 5 | I | - | |
| 82 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 25 | WG3.INTEGER | 4 | 4 | C | - | |
| 30 | WG3.DECIMAL | 2 | 2 | C | - | |
| 1 | ID | 5 | 5 | I | - | |

## COUNTY AGGREGATION PROGRAMS

The programs used as of September 5, 1985, to aggregate data by county are on the following pages.

PROGRAM NAME: PG.MUNICIPAL

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NUM1 = 83
10003 SEL REPORTED.PUMPAGE
10004 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10005 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10006 REL WATER.USE.PERM 2 BY PERMIT# WITH ORDERED
10007 REL MUNICIPAL 3 BY $1COUNTY WITH ORDERED
20000 PROGRAM SELECTION 2
20001 IF REP.YR EQ $NUM1
20002    IF $1USE.CODE GE 10 AND $1USE.CODE LE 16
20003       IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005           CALC $3WSW.GWRV = $3WSW.GWRV + AN.VOL.APPROP
20006           CALC $3WSW.GWNAD1 = $3WSW.GWNAD1 + 1
20007       ELSE
20008            CALC $3WSW.GWEV = $3WSW.GWEV + AN.VOL.APPROP
20009            CALC $3WSW.GWEI = $3WSW.GWEI + 1
20010       ENDIF
20011     ELSE
20012      IF MEAS.ACC NE 5
20013           CALC $3WSW.SWRV = $3WSW.SWRV + AN.VOL.APPROP
20014           CALC $3WSW.SWNAD1 = $3WSW.SWNAD1 + 1
20015      ELSE
20016        CALC $3WSW.SWEV = $3WSW.SWEV + AN.VOL.APPROP
20017        CALC $3WSW.SWEI = $3WSW.SWEI + 1
20018         ENDIF
20019     ENDIF
20020  ENDIF
30000  PROGRAM SECTION 3
30001  SEL MUNICIPAL
30002  CALC WSW.GWNAD3 = WSW.GWRV + WSW.GWEV
30003  CALC WSW.GWNY = WSW.GWNAD1 + WSW.GWEI
30004  CALC WSW.SWNAD3 = WSW.SWRV + WSW.SWEV
30005  CALC WSW.SWNY = WSW.SWNAD1 + WSW.SWEI
40000  PROGRAM SECTION
50000  PROGRAM SECTION
```

PROGRAM NAME: PG.MUNNIES

```
10000  PROGRAM SECTION ONE
10002 FO $NUM1,2,I
10002 CALC $NUM1 = 83
10003 SEL REPORTED.PUMPAGE
10004 RES FOE MEAS.ACC LT 6 OR MEAS.ACC GT 7
10005 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10006 REL WATER.USE.PERM 2 BY PERMIT# WITH ORDERED
10007 REL MUNNIES 3 BY $1COUNTY WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE EQ 11
20003        IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005            CALC $3MUW.GWRV = $3MUW.GWRV + AN.VOL.APPROP
20006            CALC $3MUW.GWNAD1 = $3MUW.GWNAD1 + 1
20007            ELSE
20008            CALC $3MUW.GWEV = $3MUW.GWEV + AN.VOL.APPROP
20009            CALC $3MUW.GWEI = $3MUW.GWEI + 1
20010            ENDIF
20011        ELSE
20012            IF MEAS.ACC NE 5
20013            CALC $3MUW.SWRV = $3MUW.SWRV + AN.VOL.APPROP
20014            CALC $3MUW.SWNAD1 = $3MUW.SWNAD1 + 1
20015            ELSE
20016               CALC $3MUW.SWEV = $3MUW.SWEV + AN.VOL.APPROP
20017               CALC $3MUW.SWEI = $3MUW.SWEI + 1
20018            ENDIF
20019        ENDIF
20020    ENDIF
20021 ENDIF
30000 PROGRAM SECTION 3
30001 SEL MUNNIES
30002 CALC MUW.GWNAD3 = MUW.GWRV + MUW.GWEV
30003 CALC MUW.GWNY = MUW.GWNAD1 + MUW.GWEI
30004 CALC MUW.SWNAD3 = MUW.SWEV + MUW.SWEV
30005 CALC MUW.SWNY = MUW.SWNAD1 + MUW.SWEI
40000 PROGRAM SECTION 4
50000 PROGRAM SECTION 5
50001 FO $NUM1,6,I
50002 SEL REPORTED.PUMPAGE
50003 RES FOR REP.YR EQ 83
50004 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
50005 CALC $NM = 1
50006 REL COMMON.FILE 1 BY PERMIT# ORDERED
50007 REL MUNNIES 2 BY $1COUNTY ORDERED
50008 REL MUNICIPAL 3 BY $2COUNTY ORDERED
50009 REL WATER.USE.PERM 4 BY PERMIT# ORDERED
50010 CALC $NUM1 = 0
60000 PROGRAM SECTION 6
60001   IF ( $NUM1 = PERMIT# )
60002     CALC REP.YR = 38
60003   ELSE
60004     CALC $NUM1 = PERMIT#
```

```
60005    ENDIF
60006      IF REP.YR EQ 83
60007        IF $2COUNTY EQ $1COUNTY
60008          IF $1USE.CODE GE 10 AND $1USE.CODE LE 16
60009            IF $1RESOURCE.CODE CN '1'
60010            CALC $2MUW.POP.GW = $2MUW.CONNEC.GW +
                   $4SERVICE.CONN
60012           ELSE
60013            CALC $2MUW.POP.SW = $2MUW.POP.SW + $4POP.SERVE
60014            CALC $2MUW.CONNEC.SW = $2MUW.CONNEC.SW +
                   $4SERVICE.CONN
60015            ENDIF
60016               CALC $3SERVICE.CONN = $2MUW.CONNEC.GW +
                      $2MUW.CONNEC.SW
60017               CALC $3POP.SERVE = $2MUW.POP.GW + $2MUW.POP.SW
60018          ENDIF
60019        ENDIF
60020      ENDIF
70000 PROGRAM SECTION
70001 SEL REPORTED.PUMPAGE
70002 RES FOR REP.YR EQ 38
70003 CALC REP.YR = 83
```

PROGRAM NAME: PG.WAWO

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NUM1 = 83
10003 SEL REPORTED.PUMPAGE
10004 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10005 REL COMMON.FILE 1 BY PERMINST# ORDERED
10006 REL WATERWORKS 3 BY $1COUNTY ORDERED
20000 PROGRAM SECTION TWO
20001 IF REP.YR EQ $NUM1
20002 IF $1USE.CODE EQ 10 OR $1USE.CODE GE 12 AND
        $1USE.CODE LE 16
20003     IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005        CALC $3WAW.GWRV = $3WAW.GWRV + AN.VOL.APPROP
20006        CALC $3WAW.GWNAD1 = $3WAW.GWNAD1 + 1
20007         ELSE
20008        CALC $3WAW.GWEV = $3WAW.GWEV + AN.VOL.APPROP
20009        CALC $3WAW.GWEI = $3WAW.GWEI + 1
20010       ENDIF
20011     ELSE
20012       IF MEAS.ACC NE 5
20013        CALC $3WAW.SWRV = $3WAW.SWRV + AN.VOL.APPROP
20014        CALC $3WAW.SWNAD1 = $3WAW.SWNAD1 + 1
20015         ELSE
20016        CALC $3WAW.SWEV = $3WAW.SWEV + AN.VOL.APPROP
20017        CALC $3WAW.SWEI = $3WAW.SWEI + 1
20018       ENDIF
20019     ENDIF
20020   ENDIF
20021 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WATERWORKS
30002 CALC WAW.GWNAD3 = WAW.GWRV + WAW.GWEV
30003 CALC WAW.GWNY = WAW.GWNAD1 + WAW.GWEI
30004 CALC WAW.SWNAD3 = WAW.SWRV + WAW.SWEV
30005 CALC WAW.SWNY = WAW.SWNAD1 + WAW.SWEI
40000 PROGRAM SECTION
50000 PROGRAM SECTION
```

PROGRAM NAME: PG.COMMERCIAL

```
10000  PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL COMMERCIAL 2 BY $1COUNTY  WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE GE 30 AND $1USE.CODE LT 40
20003     IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2COW.GWRV = $2COW.GWRV + AN.VOL.APPROP
20006       CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20007       CALC $COW.GWNAD1 = $COW.GWNAD1 + 1
20008       ELSE
20009           CALC $2COW.GWEV = $2COW.GWEV + AN.VOL.APPROP
20010           CALC $2COW.GWEI = $2COW.GWEI + 1
20011           CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20012         ENDIF
20013         IF AN.DISCH NE 0
20014           CALC $2COR.SWNAD1 = $2COR.SWNAD1 + 1
20015           CALC $2COR.SWNY = $2COR.SWNY + 1
20016          ENDIF
20017      ELSE
20018      IF MEAS.ACC NE 5
20019        CALC $2COW.SWRV = $2COW.SWRV + AN.VOL.APPROP
20020        CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20021        CALC $2COW.SWNAD1 = $2COW.SWNAD1 + 1
20022      ELSE
20023            CALC $2COW.SWEV = $2COW.SWEV + AN.VOL.APPROP
20024            CALC $2COW.SWEI = $2COW.SWEI + 1
20025          ENDIF
20026          IF AN.DISCH NE 0
20027            CALC $2COR.SWNAD1 = $2COR.SWNAD1 +1
20028            CALC $2COR.SWNY = $2COR.SWNY + 1
20029          ENDIF
20030      ENDIF
20031    ENDIF
20032  ENDIF
30000  PROGRAM SECTION THREE
30001 SEL COMMERCIAL
30002 CALC COW.GWNAD3 = COW.GWRV + COW.GWEV
30003 CALC COW.GWNY = COW.GWNAD1 + COW.GWEI
30004 CALC COW.SWNAD3 = COW.SWRV + COW.SWEV
30005 CALC COW.SWNY = COW.SWNAD1 + COW.SWEI
```

PROGRAM NAME: PG. INDUSTRY

```
10000   PROGRAM SECTION ONE
10001  CALC $NUM40 = 83
10002  CALC $NM = 1
10003  SEL COMMON.FILE
10004  SEL REPORTED.PUMPAGE
10005  RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006  REL COMMON.FILE 1 BY TERMINST# WITH ORDERED
10007  REL INDUSTRY 2 BY $1COUNTY WITH ORDERED
20000  PROGRAM SECTION 2
20001  IF REP.YR EQ $NUM40
20002   IF $1USE.CODE GE 40 AND $1USE.CODE LE 42 OR $1USE.CODE
          GE 46 AND $1USE.
CODE LE 48
20003     IF $1RESOURCE.CODE EQ '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2INW.GWRV = $2INW.GWRV + AN.VOL.APPROP
20006       CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20007       CALC $2INW.GWNAD1 = $2INW.GWNAD1 + 1
20008         ELSE
20009           CALC $2INW.GWEV = $2INW.GWEV + AN.VOL.APPROP
20010           CALC $2INW.GWEI = $2INW.GWEI + 1
20011           CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20012       ENDIF
20013         IF AN.DISCH NE 0
20014           CALC $2INR.SWNAD1 = $2INR.SWNAD1 + 1
20015           CALC $2INR.SWNY = $2INR.SWNY + 1
20016         ENDIF
20017     ELSE
20018      IF MEAS.ACC NE 5
20019       CALC $2INW.SWRV = $2INW.SWRV + AN.VOL.APPROP
20020       CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20021       CALC $2INW.SWNAD1 = $2INW.SWNAD1 + 1
20022      ELSE
20023           CALC $2INW.SWEV = $2INW.SWEV + AN.VOL.APPROP
20024           CALC $2INW.SWEI = $2INW.SWEI + 1
20025           CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20026    ENDIF
20027        IF AN.DISCH NE 0
20028          CALC $2INR.SWNAD1 = $2INR.SWNAD1 + 1
20029          CALC $2INR.SWNY = $2INR.SWNY + 1
20030         ENDIF
20031     ENDIF
20032   ENDIF
20033 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL INDUSTRY
30002 CALC INW.GWNAD3 = INW.GWRV + INW.GWEV
30003 CALC INW.GWNY = INW.GWNAD1 + INW.GWEI
30004 CALC INW.SWNAD3 = INW.SWRV + INW.SWEI
30005 CALC INW.SWNY = INW.SWNAD1 + INW.SWEI
```

```
PROGR M NAME:  PG.MINING

10000  PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL MINING 2 BY $1COUNTY WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE GE 43 AND $1USE.CODE LT 45 OR
          $1USE.CODE GE 62 AND $1USE.
CODE LE 64
20003       IF $1RESOURCE.CODE CN 'J'
20004        IF MEAS.ACC NE 5
20005          CALC $2MIW.GWRV = $2MIW.GWRV + AN.VOL.APPROP
20006          CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20007          CALC $2MIW.GWNAD1 = $2MIW.GWNAD1 + 1
20008        ELSE
20009             CALC $2MIW.GWEV = $2MIW.GWEV + AN.VOL.APPROP
20010             CALC $2MIW.GWEI = $2MIW.GWEI + 1
20011             CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20012           ENDIF
20013           IF AN.DISCH NE 0
20014             CALC $2MIR.SWNAD1 = $2MIR.SWNAD1 + 1
20015             CALC $2MIR.SWNY = $2MIR.SWNY + 1
20016           ENDIF
20017       ELSE
20018       IF MEAS.ACC NE 5
20019         CALC $2MIW.SWRV = $2MIW.SWRV + AN.VOL.APPROP
20020         CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20021         CALC $2MIW.SWNAD1 = $2MIW.SWNAD1 + 1
20022        ELSE
20023             CALC $2MIW.SWEV = $2MIW.SWEV + AN.VOL.APPROP
20024             CALC $2MIW.SWEI = $2MIW.SEWI + 1
20025             CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20026           ENDIF
20027           IF AN.DISCH NE 0
20028             CALC $2MIR.SWNAD1 = $2MIR.SWNAD1 + 1
20029             CALC $2MIR.SWNY = $2MIR.SWNY + 1
20030           ENDIF
20031       ENDIF
20032     ENDIF
20033  ENDIF
30000 PROGRAM SECTION THREE
30001 SEL MINING
30002 CALC MIW.GWNAD3 = MIW.GWRV + MIW.GWEV
30003 CALC MIW.GWNY = MIW.GWNAD1 + MIW.GWEI
30004 CALC MIW.SWNAD3 = MIW.SWRV + MIW.SWEV
30005 CALC MIW.SWNY = MIW.SWNAD1 + MIW.SWEI
```

PROGRAM NAME: PG.FOSSIL

```
10000 PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL FOSSIL 2 BY $1COUNTY WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE EQ 20 OR $1USE.CODE GE 22 AND
          $1USE.CODE LT 30
20003     IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2PFW.GWRV = $2PFW.GWRV + AN.VOL.APPROP
20006       CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20007       CALC $2PFW.GWNAD1 = $2PFW.GWNAD1 + 1
20008       ELSE
20009           CALC $2PFW.GWEV = $2PFW.GWEV + AN.VOL.APPROP
20010           CALC $2PFW.GWEI = $2PFW.GWEI + 1
20011           CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20012         ENDIF
20013         IF AN.DISCH NE 0
20014           CALC $2PFR.SWNAD1 = $2PFR.SWNAD1 + 1
20015           CALC $2PFR.SWNY = $2PFR.SWNY + 1
20016         ENDIF
20017     ELSE
20018    IF MEAS.ACC NE 5
20019       CALC $2PFW.SWRV = $2PFW.SWRV + AN.VOL.APPROP
20020       CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20021       CALC $2PFW.SWNAD1 = $2PFW.SWNAD1 + 1
20022     ELSE
20023           CALC $2PFW.SWEV = $2PFW.SWEV + AN.VOL.APPROP
20024           CALC $2PFW.SWEI = $2PFW.SWEI + 1
20025           CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20026         ENDIF
20027         IF AN.DISCH NE 0
20028           CALC $2PFR.SWNAD1 = $2PFR.SWNAD1 + 1
20029           CALC $2PFR.SWNY = $2PFR.SWNY + 1
20030         ENDIF
20031     ENDIF
20032   ENDIF
20033 ENDIF
30000 PROGRAM SECTION ONE
30001 SEL FOSSIL
30002 CALC PFW.GWNAD3 = PFW.GWRV + PFW.GWEV
30003 CALC PFW.GWNY = PFW.GWNAD1 + PFW.GWEI
30004 CALC PFW.SWNAD3 = PFW.SWRV + PFW.SWEV
30005 CALC PFW.SWNY = PFW.SWNAD1 + PFW.SWEI
```

PROGRAM NAME: PG.SEWAGE

```
10000 PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL SEWAGE 2 BY $1COUNTY WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR = $NUM1
20002    IF $1USE.CODE EQ 45 OR ( $1USE.CODE GE 10 AND
           $1USE.CODE LT 20 )
20003      IF AN.DISCH NE 0
20004         CALC $2STR.SWNAD3 = $2STR.SWNAD3 + AN.DISCH
20005         CALC $2STR.SWNY = $2STR.SWNY + 1
20006      ENDIF
20007     ENDIF
20008       IF $1USE.CODE EQ 45
20009         IF $1RESOURCE.CODE CN '1'
20010           IF MEAS.ACC NE 5
20011           CALC $2STW.GWRV = $2STW.GWRV + AN.VOL.APPROP
20012           CALC $2STW.GWNAD1 = $2STW.GWNAD1 + 1
20013           ELSE
20014           CALC $2STW.GWEV = $2STW.GWEV + AN.VOL.APPROP
20015           CALC $2STW.GWEI = $2STW.GWEI + 1
20016           ENDIF
20017          ELSE
20018            IF MEAS.ACC NE 5
20019              CALC $2STW.SWRV = $2STW.SWRV + AN.VOL.APPROP
20020              CALC $2STW.SWNAD1 = $2STW.SWNAD1 + 1
20021            ELSE
20022             CALC $2STW.SWEV = $2STW.SWEV + AN.VOL.APPROP
20023             CALC $2STW.SWEI = $2STW.SWEI + 1
20024             ENDIF
20025       ENDIF
20026    ENDIF
20027 ENDIF
30000 PROGRAM SECTION 3
30001 SEL SEWAGE
30002 CALC STW.GWNAD3 = STW.GWRV + STW.GWEV
30003 CALC STW.GWNY = STW.GWNAD1 + STW.GWEI
30004 CALC STW.SWNAD3 = STW.SWRV + STW.SWEV
30005 CALC STW.SWNY = STW.SWNAD1 + STW.SWEI
```

PROGRAM NAME: PG.IRR.RICE

```
10000 PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 FOR $NUM1,2,I
10003 FOR $NUM3,6,I
10004 CALC $NUM1 = 83
10005 CALC $NM = 1
10006 SEL WATER.USE.PERM
10007 RES FOR TERM.YEAR EQ 0 OR TERM.YEAR GT 83
10008 REL COMMON.FILE 1 BY PERMIT# ORDERED
10010 RES FOR $1USE.CODE EQ 96
20000 PROGRAM SECTION 2
20001          IF $1RESOURCE.CODE CN '1'
20002              CALC $2CO.ACRE.G = $2CO.ACRE.G + TOT.ACRE
20003             CALC $2IRW.GWNY = $2IRW.GWNY + 1
20004          ELSE
20005             CALC $2IRW.SWNY = $2IRW.SWNY + 1
20006             CALC $2CO.ACRE.S = $2CO.ACRE.S + TOT.ACRE
20007          ENDIF
30000 PROGRAM SECTION 3
30001 SEL WATER.USE.PERM
30002 REL COMMON.FILE 1 BY PERMIT# ORDERED
30003 REL REPORTED.PUMPAGE 2 BY PERMIT# ORDERED
30004 REL IRRIGATION 3 BY $1COUNTY ORDERED
30005 RES FOR $1USE.CODE EQ 96
40000 PROGRAM SECTION 4
40001   IF $2CROP.ACRE1 NE 0 AND $REP.YR EQ 83
40002    IF $1RESOURCE.CODE CN '1'
40003       CALC $3PERM.ACRE.G = $3PERM.ACRE.G + TOT.ACRE
40004       CALC $3IRW.GWNAD1 = $3IRW.GWNAD1 + 1
40005    ELSE
40006       CALC $3PERM.ACRE.S = $3PERM.ACRE.S + TOT.ACRE
40007       CALC $3IRW.SWNAD1 = $3IRW.SWNAD1 + 1
40008    ENDIF
40009    ELSE
40010    NEXT 2
40011 ENDIF
50000 PROGRAM SECTION 5
50001 SEL REPORTED.PUMPAGE
50002 RES FOR REP.YR EQ 83
50003 REL COMMON.FILE 1 BY PERMINST# ORDERED
50004 REL IRRIGATION 2 BY $1COUNTY ORDERED
50005 RES FOR CROP.ACRE1 GT 0
50006 RES FOR $1USE.CODE EQ 96
60000 PROGRAM SECTION 4
60001          IF $1RESOURCE.CODE CN '1'
60002             CALC $2REP.ACRE.G = $2REP.ACRE.G + CROP.ACRE1 +
                    CROP.ACRE2 + CROP.ACRE3
60003             IF $2PERM.ACRE.G GT 0
60004                CALC $2PCNT.IRR.ACRE.G = $2REP.ACRE.G /
                       $2PERM.ACRE.G
60005             ENDIF
```

```
60006             CALC $2EST.ACRE.G = $2PCNT.IRR.ACRE.G *
                    ( $2CO.ACRE.G - $2PER M.ACRE.G)
60007             CALC $2REP.WAT.G = $2REP.WAT.G + AN.VOL.APPROP
60008             IF $2REP.ACRE.G GT 0
60009                CALC $2GAL.ACRE.G = $2REP.WAT.G / $2REP.ACRE.G
60010             ENDIF
60011             CALC $2EST.WAT.G = $2EST.ACRE.G * $2GAL.ACRE.G
60012             CALC $2ALL.ACRE.G = $2EST.ACRE.G + $2REP.ACRE.G
60013             CALC $2ALL.WAT.G = $2EST.WAT.G + $2REP.WAT.G
60014          ELSE
60015             CALC $2REP.ACRE.S = $2REP.ACRE.S + CROP.ACRE1 +
                    CROP.ACRE2 + CROP.ACRE3
60016             IF $2PERM.ACRE.S GT 0
60017                CALC $2PCNT.IRR.ACRE.S = $2REP.ACRE.S /
                      $2PERM.ACRE.S
60018             ENDIF
60019             CALC $2EST.ACRE.S = $2PCNT.IRR.ACRE.S *
                    ( $2CO.ACRE.S - $2PER M.ACRE.S )
60020             CALC $2REP.WAT.S = $2REP.WAT.S + AN.VOL.APPROP
60021             IF $2REP.ACRE.S GT 0
60022                CALC $2GAL.ACRE.S = $2REP.WAT.S /
                      $2REP.ACRE.S
60023             ENDIF
60024             CALC $2EST.WAT.S = $2EST.ACRE.S * $2GAL.ACRE.S
60025             CALC $2ALL.ACRE.S = $2EST.ACRE.S + $2REP.ACRE.S
60026             CALC $2ALL.WAT.S = $2EST.WAT.S + $2REP.WAT.S
60027          ENDIF
70000  PROGRAM SECTION 7
```

PROGRAM NAME: PG.IRR.NORICE

```
10000  PROGRAM SECTION ONE
10001     FORMAT $NUM1,1,I
10002     FORMAT $NUM2,6,I
10003     FORMAT $NUM3,6,I
10004     CALC $NM = 1
10005     SEL WATER.USE.PERM
10006 RES FOR TERM.YEAR EQ 0 OR TERM.YEAR GT 83
10007     REL COMMON.FILE 1 BY PERMIT# ORDERED
10008     REL IRRIGATION2 2 BY $1COUNTY WITH ORDERED
10009     RES FOR $1USE.CODE GE 80
10010     RES FOR $1USE.CODE LT 96
20000 PROGRAM SECTION 2
20001     IF $1RESOURCE.CODE ON '1'
20002        CALC $2CO.ACRE.G = $2CO.ACRE.G + TOT.ACRE
20003        CALC $2IRW.GWNY = $2IRW.GWNY + 1
20004     ELSE
20005        CALC $2IRW.SWNY = $2IRW.SWNY + 1
20006        CALC $2CO.ACRE.S = $2CO.ACRE.S + TOT.ACRE
20007     ENDIF
30000 PROGRAM SECTION 3
30001     SEL WATER.USE.PERM
30002     REL COMMON.FILE 1 BY PERMIT# ORDERED
30003     REL REPORTED.PUMPAGE 2 BY PERMIT# ORDERED
30004     REL IRRIGATION2 3 BY $1COUNTY ORDERED
30005     RES FOR $1USE.CODE GE 80
30006     RES FOR $1USE.CODE LT 96
40000 PROGRAM SECTION 4
40001     IF $2REP.YR EQ 83
40002        IF $2CROP.ACRE1 NE 0
40003           IF $1RESOURCE.CODE ON '1'
40004              CALC $3PERM.ACRE.G = $3PERM.ACRE.G + TOT.ACRE
40005              CALC $3IRW.GWNAD1 = $3IRW.GWNAD1 + 1
40006           ELSE
40007              CALC $3PERM.ACRE.S = $3PERM.ACRE.S + TOT.ACRE
40008              CALC $3IRW.SWNAD1 = $3IRW.SWNAD1 + 1
40009           ENDIF
40010        ENDIF
40011     ELSE
40012        NEXT 2
40013     ENDIF
50000 PROGRAM SECTION 5
50001     SEL REPORTED.PUMPAGE
50002     RES FOR REP.YR EQ 83
50003     REL COMMON.FILE 1 BY PERMINST# ORDERED
50004     REL IRRIGATION2 2 BY $1COUNTY ORDERED
50005     RES FOR CROP.ACRE1 GT 0
50006     RES FOR $1USE.CODE GE 80
50007     RES FOR $1USE.CODE LT 96
60000 PROGRAM SECTION 6
60001     IF $1RESOURCE.CODE ON '1'
```

```
60002        CALC #2REP.ACRE.G = $2REP.ACRE.G + CROP.ACRE1 +
               CROP.ACRE2 + CROP.ACRE3
60003        IF $2PERM.ACRE.G GT 0
60004           CALC $2PCNT.IRR.ACRE.G = $2REP.ACRE.G /
                  $2PERM.ACRE.G
60005        ENDIF
60006        CALC $2EST.ACRE.G = $2PCNT.IRR.ACRE.G *
               ( $2CO.ACRE.G - $2PERM ACRE.G)
60007        CALC $2REP.WAT.G = $2REP.WAT.G + AN.VOL.APPROP
60008        IF $2REP.ACRE.G GT 0
60009           CALC $2GAL.ACRE.G = $2REP.WAT.G / $2REP.ACRE.G
60010        ENDIF
60011        CALC $2EST.WAT.G = $2EST.ACRE.G * $2GAL.ACRE.G
60012        CALC $2ALL.ACRE.G = $2EST.ACRE.G + $2REP.ACRE.G
60013        CALC $2ALL.WAT.G = $2EST.WAT.G + $2REP.WAT.G
60014     ELSE
60015        CALC $2REP.ACRE.S = $2REP.ACRE.S + CROP.ACRE1 +
               CROP.ACRE2 + CROP.ACRE3
60016        IF $2PERM.ACRE.S GT 0
60017           CAL $2PCNT.IRR.ACRE.S = $2REP.ACRE.S /
                  $2PERM.ACRE.S
60018        ENDIF
60019        CALC $2EST.ACRE.S = $2PCNT.IRR.ACRE.S *
               ( $2CO.ACRE.S - $2PERM ACRE.S )
60020        CALC $2REP.WAT.S = $2REP.WAT.S + AN.VOL.APPROP
60021        IF $2REP.ACRE.S GT 0
60022           CALC $2GAL.ACRE.S = $2REP.WAT.S / $2REP.ACRE.S
60023        ENDIF
60024        CALC $2EST.WAT.S = $2EST.ACRE.S * $2GAL.ACRE.S
60025        CALC $2ALL.ACRE.S = $2EST.ACRE.S + $2REP.ACRE.S
60026        CALC $2ALL.WAT.S = $2EST.WAT.S + $REP.WAT.S
60027     ENDIF
70000 PROGRAM SECTION 7
```

PROGRAM NAME: PG.IRR.COMBINE

```
10000  PROGRAM SECTION ONE
10001 SEL IRRIGATION.COMB
10002 REL IRRIGATION BY COUNTY ORDERED
10003 REL IRRIGATION2 2 BY COUNTY ORDERED
20000 PROGRAM SECTION 2
20001 CALC CO.ACRE.S = $1CO.ACRE.S + $2CO.ACRE.S
20002 CALC CO.ACRE.G = $1CO.ACRE.G + $2CO.ACRE.G
20003 CALC REP.ACRE.S = $1REP.ACRE.S + $2REP.ACRE.S
20004 CALC REP.ACRE.G + $1REP.ACRE.G + $2REP.ACRE.G
20005 CALC PERM.ACRE.S + $1PERM.ACRE.S + $2PERM.ACRE.S
20006 CALC PERM.ACRE.G = $1PERM.ACRE.G + $2PERM.ACRE.G
20007 CALC PCNT.IRR.ACRE.S = REP.ACRE.S / PERM.ACRE.S
20008 CALC PCNT.IRR.ACRE.G = REP.ACRE.G / PERM.ACRE.G
20009 CALC EST.ACRE.S = PCNT.IRR.ACRE.S * ( CO.ACRE.S -
        PERM.ACRE.S )
20010 CALC EST.ACRE.G = PCNT.IRR.ACRE.G * ( CO.ACRE.G -
        PERM.ACRE.G )
20011 CALC REP.WAT.S = $1REP.WAT.S + $2REP.WAT.S
20012 CALC REP.WAT.G = $1REP.WAT.G + $2REP.WAT.G
20013 CALC GAL.ACRE.S = REP.WAT.S / REP.ACRE.S
20014 CALC GAL.ACRE.G = REP.WAT.G / REP.ACRE.G
20015 CALC EST.WAT.S = EST.ACRE.S * GAL.ACRE.S
20016 CALC EST.WAT.G = EST.ACRE.G * GAL.ACRE.G
20017 CALC ALL.ACRE.S = EST.ACRE.S + REP.ACRE.S
20018 CALC ALL.ACRE.G = EST.ACRE.G + REP.ACRE.G
20019 CALC ALL.WAT.S = EST.WAT.S + REP.WAT.S
20020 CALC ALL.WAT.G = EST.WAT.G + REP.WAT.G
20021 CALC IN.ACRE.RICE = ( ( $1GAL.ACRE.S + $1GAL.ACRE.G ) /
        0.326 ) * 12
20022 CALC IN.ACRE.NORICE = ( ( $2GAL.ACRE.S + $2GAL.ACRE.G ) /
        0.326 ) * 12
20023 CALC ALL.WAT.R = $1ALL.WAT.S + $1ALL.WAT.G
20024 MOVE $11RW.GWNAD2 TO IRW.GWNAD2
20025 MOVE $11RW.SWNAD2 TO IRW.SWNAD2
20026 MOVE $11RR.SWNAD2 TO IRR.SWNAD2
20027 CALC IRW.GWNAD1 = $1IRR.GWNAD1 + $2IRW.GWNAD1
20028 CALC IRW.SWNAD1 = $1IRW.SWNAD1 + $2IRW.SWNAD1
20029 CALC IRW.GWNAD3 = $1IRW.GWNAD3 + $2IRW.GWNAD3
20030 CALC IRW.SWNAD3 = $1IRW.SWNAD3 + $2IRW.SWNAD3
20031 CALC IRW.GWNY = $1IRW.GWNY + $2IRW.GWNY
20032 CALC IRW.SWNY = $1IRW.SWNY + $2IRW.SWNY
30000  PROGRAM SECTION ONE
```

PROGRAM NAME: PG.DOMESTIC

```
10000  PROGRAM SECTION ONE
10001 SEL WATER.USE.PERM
10002 RES FOR TERM.YEAR EQ 0 OR TERM.YEAR GT 81
10003 REL COMMON.FILE BY PERMIT# ORDERED
10004 RES FOR $1USE.CODE EQ 11
10005 REL DOMESTIC 2 BY $1COUNTY ORDERED
20000 PROGRAM SECTION TWO
20001 IF $2COUNTY EQ $1COUNTY
20002    CALC $2POP.SERVE = $2POP.SERVE + POP.SERVE
20003 ENDIF
30000 PROGRAM SECTION THREE
30001 END
```

PROGRAM NAME: PG.FINAL.DOMESTIC

```
10000  PROGRAM SECTION ONE
10001 SEL DOMESTIC
20000 PROGRAM SECTION TWO
20001 CALC YEAR = 81
20002 CALC FEDID = ( COUNTY * 2 ) - 1
20003 CALC DOW.GWNAD3 = ( ( TOT.POP - POP.SERVE ) * 88 /
        1000000 )
20004 MOVE 'EPU S GEOLOGICAL SURVEY' TO DOW.GWNAD2
30000 PROGRAM SECTION THREE
30001 END
```

PROGRAM NAME: PG.REPORT.DOMESTIC

```
10000  PROGRAM SECTION ONE
10001 SEL DOMESTIC
10002 RES FOR F1 CN ' '
10003 MOVE '0' TO F1
10004 ASEL
10005 RES FOR F2 CN ' '
10006 MOVE '0' TO F2
10007 ASEL
10008 OUTPUT R.DOMESTIC.81 INIT
20000 PROGRAM SECTION TWO
20001 PRINT 1T,'4USGS 27',F1-3,5X,'DOW GWNAD3',28T,WG3.
        INTEGER,32T,WG3.DECIMAL
20002 PRINT 1T,'4USGS 27',F1-3,5X,'DOW GWNAD2',DOW.GWNAD2
20003 PRINT 1T,'4USGS 27',F1-3,5X,'DOW GWNAD1',DOW.GWNAD1,
        'NY',DOW.GWNY
20004 PRINT 1T,'4USGS 27',F1-3,5X,'DO     AP1DO',POP.SERVE
30000 PROGRAM SECTION THREE
30001 END
```

## WATERSHED AGGREGATION DATAFILES

The datafile structure, as of September 5, 1985, for each of the watershed aggregation datafiles is shown on the following pages. For each of the items in the datafiles the following characteristics are given:

COL--The starting column for the item.
ITEM NAME--The name of the item.
WDTH--The width of the item in the file.
OPUT--The number of spaces needed to display or print the item values.
TYP--The item type:
- C--Character; the letters of the alphabet, punctuation, and numbers that are not numberic values.
- I--Integer; numbers without decimal places.
- N--Numeric; numbers that can have decimal places.
- D--Date; month, day, and year.

N.Dec--The number of decimal places if the item is numeric.
ALTERNATE NAME--An alternate name to be used for the item if one exists.

Redefined items are used to change the datafile templates to fit changing data needs. A redefined item can specify a combination of adjacent items or a subset of an item or items. The characteristics for the redefined items follow the characteristics for the items.

DATAFILE NAME: WSW

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | WSW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | WSW.GWNAD2 | 40 | 40 | C | - | |
| 63 | WSW.GWNAD1 | 5 | 5 | I | - | |
| 68 | WSW.GWNY | 5 | 5 | I | - | |
| 73 | WSW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | WSW.SWNAD2 | 40 | 40 | C | - | |
| 123 | WSW.SWNAD1 | 5 | 5 | I | - | |
| 128 | WSW.SWNY | 5 | 5 | I | - | |
| 133 | WSW.GWRV | 10 | 10 | N | 2 | |
| 143 | WSW.GWEV | 10 | 10 | N | 2 | |
| 153 | WSW.GWEI | 5 | 5 | I | - | |
| 158 | WSW.SWRV | 10 | 10 | N | 2 | |
| 168 | WSW.SWEV | 10 | 10 | N | 2 | |
| 178 | WSW.SWEI | 5 | 5 | I | - | |
| 183 | WSW.POP | 7 | 7 | I | - | |
| 190 | WSW.CONNECTIONS | 7 | 7 | I | - | |
| 197 | DUMMYO | 100 | 100 | C | - | |
| 297 | SERVICE.CONN | 7 | 7 | I | - | |
| 304 | POP.SERVE | 7 | 7 | I | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 10 | 10 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: WMU

24 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | MUW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | MUW.GWNAD2 | 40 | 40 | C | - | |
| 63 | MUW.GWNAD1 | 5 | 5 | 1 | - | |
| 68 | MUW.GWNY | 5 | 5 | I | - | |
| 73 | MUW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | MUW.SWNAD2 | 40 | 40 | C | - | |
| 123 | MUW.SWNAD1 | 5 | 5 | I | - | |
| 128 | MUW.SWNY | 5 | 5 | I | - | |
| 133 | MUW.GWRV | 10 | 10 | N | 2 | |
| 143 | MWU.GWEV | 10 | 10 | N | 2 | |
| 153 | MUW.GWEI | 5 | 5 | I | - | |
| 158 | MUW.SWRV | 10 | 10 | N | 2 | |
| 168 | MUW.SWEV | 10 | 10 | N | 2 | |
| 178 | MUW.SWEI | 5 | 5 | I | - | |
| 183 | MUW.POP.GW | 7 | 7 | I | - | |
| 190 | MUW.POP.SW | 7 | 7 | I | - | |
| 197 | MUW.CONNEC.GW | 7 | 7 | I | - | |
| 204 | MUW.CONNEC.SW | 7 | 7 | I | - | |
| 211 | DUMMYO | 50 | 50 | C | - | |
| 261 | SERVICE.CONN | 7 | 7 | I | - | |
| 268 | POP.SERVE | 7 | 7 | I | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: WAW

18 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | WAW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | WAW.GWNAD2 | 40 | 40 | C | - | |
| 63 | WAW.GWNAD1 | 5 | 5 | I | - | |
| 68 | WAW.GWNY | 5 | 5 | I | - | |
| 73 | WAW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | WAW.SWNAD2 | 40 | 40 | C | - | |
| 123 | WAW.SWNAD1 | 5 | 5 | I | - | |
| 128 | WAW.SWNY | 5 | 5 | I | - | |
| 133 | WAW.GWRV | 10 | 10 | N | 2 | |
| 143 | WAW.GWEV | 10 | 10 | N | 2 | |
| 153 | WAW.GWEI | 5 | 5 | I | - | |
| 158 | WAW.SWRV | 10 | 10 | N | 2 | |
| 168 | WAW.SWEV | 10 | 10 | N | 2 | |
| 178 | WAW.SWEI | 5 | 5 | I | - | |
| 183 | DUMMYO | 50 | 50 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 5 | 5 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 11 | WG3.INTEGER | 4 | 4 | C | - | |
| 16 | WG3.DECIMAL | 2 | 2 | C | - | |
| 71 | WS3.INTEGER | 4 | 4 | C | - | |
| 76 | WS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: WCO

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | COW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | COW.GWNAD2 | 40 | 40 | C | - | |
| 63 | COW.GWNAD1 | 5 | 5 | I | - | |
| 68 | COW.GWNY | 5 | 5 | I | - | |
| 73 | COW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | COW.SWNAD2 | 40 | 40 | C | - | |
| 123 | COW.SWNAD1 | 5 | 5 | I | - | |
| 128 | COW.SWNY | 5 | 5 | I | - | |
| 133 | COR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | COR.SWNAD2 | 40 | 40 | C | - | |
| 183 | COR.SWNAD1 | 5 | 5 | I | - | |
| 188 | COR.SWNY | 5 | 5 | I | - | |
| 193 | COW.GWRV | 10 | 10 | N | 2 | |
| 203 | COW.GWEV | 10 | 10 | N | 2 | |
| 213 | COW.GWEI | 5 | 5 | I | - | |
| 218 | COW.SWRV | 10 | 10 | N | 2 | |
| 228 | COW.SWEV | 10 | 10 | N | 2 | |
| 238 | COW.SWEI | 5 | 5 | I | - | |
| 243 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | WI-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | W1 | 1 | 1 | C | - | |
| 1 | W1-2 | 2 | 2 | C | - | |
| 1 | ID | 10 | 10 | I | - | |

DATAFILE NAME: WIN

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | INW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | INW.GWNAD2 | 40 | 40 | C | - | |
| 63 | INW.GWNAD1 | 5 | 5 | I | - | |
| 68 | INW.GWNY | 5 | 5 | I | - | |
| 73 | INW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | INW.SWNAD2 | 40 | 40 | C | - | |
| 123 | INW.SWNAD1 | 5 | 5 | I | - | |
| 128 | INW.SWNY | 5 | 5 | I | - | |
| 133 | INR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | INR.SWNAD2 | 40 | 40 | C | - | |
| 183 | INR.SWNAD1 | 5 | 5 | I | - | |
| 188 | INR.SWNY | 5 | 5 | I | - | |
| 193 | INW.GWRV | 10 | 10 | N | 2 | |
| 203 | INW.GWEV | 10 | 10 | N | 2 | |
| 213 | INW.GWEI | 5 | 5 | I | - | |
| 218 | INW.SWRV | 10 | 10 | N | 2 | |
| 228 | INW.SWEV | 10 | 10 | N | 2 | |
| 238 | INW.SWEI | 5 | 5 | I | - | |
| 243 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 10 | 10 | I | - | |

DATAFILE NAME: WMI

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | MIW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | MIW.GWNAD2 | 40 | 40 | C | - | |
| 63 | MIW.GWNAD1 | 5 | 5 | I | - | |
| 68 | MIW.GWNY | 5 | 5 | I | - | |
| 73 | MIW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | MIW.SWNAD2 | 40 | 40 | C | - | |
| 123 | MIW.SWNAD1 | 5 | 5 | I | - | |
| 128 | MIW.SWNY | 5 | 5 | I | - | |
| 133 | MIR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | MIR.SWNAD2 | 40 | 40 | C | - | |
| 183 | MIR.SWNAD1 | 5 | 5 | I | - | |
| 188 | MIR.SWNY | 5 | 5 | I | - | |
| 193 | MIW.GWRV | 10 | 10 | N | 2 | |
| 203 | MIW.GWEV | 10 | 10 | N | 2 | |
| 213 | MIW.GWEI | 5 | 5 | I | - | |
| 218 | MIW.SWRV | 10 | 10 | N | 2 | |
| 228 | MIW.SWEV | 10 | 10 | N | 2 | |
| 238 | MIW.SWEI | 5 | 5 | I | - | |
| 243 | DUMMYO | 100 | 100 | C | - | |
| | ** REFEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WGS.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | ID | 10 | 10 | I | - | |

DATAFILE NAME: WPF

22 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | PFW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | PFW.GWNAD2 | 40 | 40 | C | - | |
| 63 | PFW.GWNAD1 | 5 | 5 | I | - | |
| 68 | PFW.GWNY | 5 | 5 | I | | |
| 73 | PFW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | PFW.SWNAD2 | 40 | 40 | C | - | |
| 123 | PFW.SWNAD1 | 5 | 5 | I | - | |
| 128 | PFW.SWNY | 5 | 5 | I | - | |
| 133 | PFR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | PFR.SWNAD2 | 40 | 40 | C | - | |
| 183 | PFR.SWNAD1 | 5 | 5 | I | - | |
| 188 | PFR.SWNY | 5 | 5 | I | - | |
| 193 | PFW.GWRV | 10 | 10 | N | 2 | |
| 203 | PFW.GWEV | 10 | 10 | N | 2 | |
| 213 | PFW.GWEI | 5 | 5 | I | - | |
| 218 | PFW.SWRV | 10 | 10 | N | 2 | |
| 228 | PFW.SWEV | 10 | 10 | N | 2 | |
| 238 | PFW.SWEI | 5 | 5 | I | - | |
| 243 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WG3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 1 | W1 | 1 | 1 | C | - | |
| 1 | W1-2 | 2 | 2 | C | - | |
| 1 | ID | 10 | 10 | I | - | |

DATAFILE NAME: WST

24 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | STW.SWNAD3 | 10 | 10 | N | 2 | |
| 23 | STW.GWNAD2 | 40 | 40 | C | - | |
| 63 | STW.GWNAD1 | 5 | 5 | I | - | |
| 68 | STW.GWNY | 5 | 5 | I | - | |
| 73 | STW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | STW.SWNAD2 | 40 | 40 | C | - | |
| 123 | STW.SWNAD1 | 5 | 5 | I | - | |
| 128 | STW.SWNY | 5 | 5 | I | - | |
| 133 | STR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | STR.SWNAD2 | 40 | 40 | C | - | |
| 183 | STR.SWNAD1 | 5 | 5 | I | - | |
| 188 | STR.SWNY | 5 | 5 | I | - | |
| 193 | STW.GWRV | 10 | 10 | N | 2 | |
| 203 | STW.GWEV | 10 | 10 | N | 2 | |
| 213 | STW.GWEI | 5 | 5 | I | - | |
| 218 | STW.SWRV | 10 | 10 | N | 2 | |
| 228 | STW.SWEV | 10 | 10 | N | 2 | |
| 238 | STW.SWEI | 5 | 5 | I | - | |
| 243 | POP.SERVE | 7 | 7 | I | - | |
| 250 | SERVICE.CONN | 7 | 7 | I | - | |
| 257 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 10 | 10 | 1 | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |

DATAFILE NAME: WIR

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 63 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 68 | IRW.GWNY | 5 | 5 | I | - | |
| 73 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 123 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 128 | IRW.SWNY | 5 | 5 | I | - | |
| 133 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 183 | CO.ACRE.S | 6 | 6 | I | - | |
| 189 | CO.ACRE.G | 6 | 6 | I | - | |
| 195 | REP.ACRE.S | 6 | 6 | I | - | |
| 201 | REP.ACRE.G | 6 | 6 | I | - | |
| 207 | PERM.ACRE.S | 6 | 6 | I | - | |
| 213 | PERM.ACRE.G | 6 | 6 | I | - | |
| 219 | PCNT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 225 | PCNT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 231 | EST.ACRE.S | 6 | 6 | I | - | |
| 237 | EST.ACRE.G | 6 | 6 | I | - | |
| 243 | REP.WAT.S | 10 | 10 | N | 2 | |
| 253 | REP.WAT.G | 10 | 10 | N | 2 | |
| 263 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 273 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 283 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 293 | EST.WAT.S | 10 | 10 | N | 2 | |
| 303 | EST.WAT.G | 10 | 10 | N | 2 | |
| 313 | ALL.ACRE.S | 6 | 6 | I | - | |
| 319 | ALL.ACRE.G | 6 | 6 | I | - | |
| 325 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 335 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 345 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 355 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 361 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 367 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 10 | 10 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: WIR2

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 63 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 68 | IRW.GWNY | 5 | 5 | I | - | |
| 73 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 123 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 128 | IRW.SWNY | 5 | 5 | I | - | |
| 133 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 183 | CO.ACRE.S | 6 | 6 | I | - | |
| 189 | CO.ACRE.G | 6 | 6 | I | - | |
| 195 | REP.ACRE.S | 6 | 6 | I | - | |
| 201 | REP.ACRE.G | 6 | 6 | I | - | |
| 207 | PERM.ACRE.S | 6 | 6 | I | - | |
| 213 | PERM.ACRE.G | 6 | 6 | I | - | |
| 219 | PCNT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 225 | PCNT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 231 | EST.ACRE.S | 6 | 6 | I | - | |
| 237 | EST.ACRE.G | 6 | 6 | I | - | |
| 243 | REP.WAT.S | 10 | 10 | N | 2 | |
| 253 | REP.WAT.G | 10 | 10 | N | 2 | |
| 263 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 273 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 283 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 293 | EST.WAT.S | 10 | 10 | N | 2 | |
| 303 | EST.WAT.G | 10 | 10 | N | 2 | |
| 313 | ALL.ACRE.S | 6 | 6 | I | - | |
| 319 | ALL.ACRE.G | 6 | 6 | I | - | |
| 325 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 335 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 345 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 355 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 361 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 367 | DUMMYO | 100 | 100 | C | - | |
| | ** REDEFINED ITEMS ** | | | | | |
| 1 | ID | 10 | 10 | 1 | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 141 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

DATAFILE NAME: WIRC

38 ITEMS: STARTING IN POSITION 1

| COL | ITEM NAME | WDTH | OPUT | TYP | N.DEC | ALTERNATE NAME |
|---|---|---|---|---|---|---|
| 1 | WATSHD.UNIT | 2 | 2 | I | - | |
| 3 | FEDID | 8 | 8 | I | - | |
| 11 | YEAR | 2 | 2 | I | - | |
| 13 | IRW.GWNAD3 | 10 | 10 | N | 2 | |
| 23 | IRW.GWNAD2 | 40 | 40 | C | - | |
| 63 | IRW.GWNAD1 | 5 | 5 | I | - | |
| 68 | IRW.GWNY | 5 | 5 | I | - | |
| 73 | IRW.SWNAD3 | 10 | 10 | N | 2 | |
| 83 | IRW.SWNAD2 | 40 | 40 | C | - | |
| 123 | IRW.SWNAD1 | 5 | 5 | I | - | |
| 128 | IRW.SWNY | 5 | 5 | I | - | |
| 133 | IRR.SWNAD3 | 10 | 10 | N | 2 | |
| 143 | IRR.SWNAD2 | 40 | 40 | C | - | |
| 183 | CO.ACRE.S | 6 | 6 | I | - | |
| 189 | COACRE.G | 6 | 6 | I | - | |
| 195 | REP.ACRE.S | 6 | 6 | I | - | |
| 201 | REP.ACRE.G | 6 | 6 | I | - | |
| 207 | PERM.ACRE.S | 6 | 6 | I | - | |
| 213 | PERM.ACRE.G | 6 | 6 | I | - | |
| 219 | PCNT.IRR.ACRE.S | 6 | 6 | N | 2 | |
| 225 | PCNT.IRR.ACRE.G | 6 | 6 | N | 2 | |
| 231 | EST.ACRE.S | 6 | 6 | I | - | |
| 237 | EST.ACRE.G | 6 | 6 | I | - | |
| 243 | REP.WAT.S | 10 | 10 | N | 2 | |
| 253 | REP.WAT.G. | 10 | 10 | N | 2 | |
| 263 | GAL.ACRE.S | 10 | 10 | N | 2 | |
| 273 | GAL.ACRE.G | 10 | 10 | N | 2 | |
| 283 | GAL.ACRE.R | 10 | 10 | N | 2 | |
| 293 | EST.WAT.S | 10 | 10 | N | 2 | |
| 303 | EST.WAT.G | 10 | 10 | N | 2 | |
| 313 | ALL.ACRE.S | 6 | 6 | I | - | |
| 319 | ALL.ACRE.G | 6 | 6 | I | - | |
| 325 | ALL.WAT.S | 10 | 10 | N | 2 | |
| 335 | ALL.WAT.G | 10 | 10 | N | 2 | |
| 345 | ALL.WAT.R | 10 | 10 | N | 2 | |
| 355 | IN.ACRE.NORICE | 6 | 6 | N | 2 | |
| 361 | IN.ACRE.RICE | 6 | 6 | N | 2 | |
| 367 | DUMMYO | 100 | 100 | C | - | |
| | **REDEFINED ITEMS ** | | | | | |
| 1 | ID | 10 | 10 | I | - | |
| 3 | F1 | 1 | 1 | C | - | |
| 3 | W1-8 | 8 | 8 | C | - | |
| 4 | F2 | 1 | 1 | C | - | |
| 5 | F3 | 1 | 1 | C | - | |
| 3 | F1-3 | 3 | 3 | C | - | |
| 16 | WG3.INTEGER | 4 | 4 | C | - | |
| 21 | WG3.DECIMAL | 2 | 2 | C | - | |
| 76 | WS3.INTEGER | 4 | 4 | C | - | |
| 81 | WS3.DECIMAL | 2 | 2 | C | - | |
| 136 | RS3.INTEGER | 4 | 4 | C | - | |
| 131 | RS3.DECIMAL | 2 | 2 | C | - | |
| 6 | DATA | 273 | 200 | C | - | |

## WATERSHED AGGREGATION PROGRAMS

The programs used, as of September 5, 1985, to aggregate data by watershed are on the following pages.

PROGRAM NAME: PG.WSW

```
10000  PROGRAM SECTION ONE
10001  FO $NUM1,2,I
10002  CALC $NUM1 = 83
10003  COMO O.WSW
10004  SEL REPORTED.PUMPAGE
10005  RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006  REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007  REL WATER.USE.PERM 2 BY PERMIT# WITH ORDERED
10008  REL WSW 3 BY $1WATSHD.UNIT
20000  PROGRAM SECTION 2
20001  IF REP.YR EQ $NUM1
20002     IF $1USE.CODE GE 10 and $1USE.CODE LE 16
20003         IF $1RESOURCE.CODE ON '1'
20004         IF MEAS.ACC NE 5
20005             CALC $3WSW.GWRV = $3WSW.GWRV + AN.VOL.APPROP
20006             CALC $3WSW.GWNAD1 = $3WSW.GWNAD1 + 1
20007          ELSE
20008                CALC $3WSW.GWEV = $3WSW.GWEV +
                        AN.VOL.APPROP
20009                 CALC $3WSW.GWEI = $3WSW.GWEI + 1
20010          ENDIF
20011       ELSE
20012        IF MEAS.ACC NE 5
20013             CALC $3WSW.SWRV = $WSW.SWRV + AN.VOL.APPROP
20014             CALC $3WSW.SWNAD1 = $3WSW.SWNAD1 + 1
20015          ELSE
20016            CALC $3WSW.SWEV = $3WSW.SWEV + AN.VOL.APPROP
20017            CALC $3WSW.SWEI = $3WSW.SWEI + 1
20018             ENDIF
20019         ENDIF
20020     ENDIF
20021  ENDIF
30000  PROGRAM SECTION 3
30001  SEL WSW
30002  CALC WSW.GWNAD3 = WSW.GWRV + WSW.GWEV
30003  CALC WSW.GWNY = WSW.GWNAD1 + WSW.GWEI
30004  CALC WSW.SWNAD3 = WSW.SWRV + WSW.SWEV
30005  CALC WSW.SWNY = WSW.SWNAD1 + WSW.SWEI
40000  PROGRAM SECTION
50000  PROGRAM SECTION
50001  COMO END
```

PROGRAM NAME: PG.WMU

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NUM1 = 83
10003 COMO O.WMU
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL WATER.USE.PERM 2 BY PERMIT# WITH ORDERED
10008 REL WMU 3 BY $1WATSHD.UNIT WITH ORDERED
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF #1USE.CODE EQ 11
20003        IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005            CALC $3MUW.GWRV = $3MUW.GWRV + AN.VOL.APPROP
20006            CALC $3MUW.GWNAD1 = $3MUW.GWNAD1 + 1
20007            ELSE
20008            CALC $3MUW.GWEV = $3MUW.GWEV + AN.VOL.APPROP
20009            CALC $3MUW.GWEI = $3MUW.GWEI + 1
20010            ENDIF
20011       ELSE
20012            IF MEAS.ACC NE 5
20013            CALC $3MUW.SWRV = $3MUW.SWRV + AN.VOL.APPROP
20014            CALC $3MUW.SWNADI = $3MUW.SWNAD1 + 1
20015           ELSE
20016              CALC $3MUW.SWEV = $3MUW.SWEV + AN.VOL.APPROP
20017              CALC $3MUW.SWEI = $3MUW.SWEI + 1
20018            ENDIF
20019        ENDIF
20020    ENDIF
20021 ENDIF
30000 PROGRAM SECTION 3
30001 SEL WMU
30002 CALC MUW.GWNAD3 = MUW.GWRV + MUW.GWEV
30003 CALC MUW.GWNY = MUW.GWNAD1 + MUW.GWEI
30004 CALC MUW.SWNAD3 = MUW.SWRV + MUW.SWEV
30005 CALC MUW.SWNY = MUW.SWNAD1 + MUW.SWEI
40000 PROGRAM SECTION 4
50000 PROGRAM SECTION 5
50001 FO $NUM1,6,I
50002 SEL REPORTED.PUMPAGE
50003 RES FOR REP.YR EQ 83
50004 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
50005 CALC $NM = 1
50006 REL COMMON.FILE 1 BY PERMIT# ORDERED
50007 REL WMU 2 BY $1WATSHD.UNIT ORDERED
50008 REL WSW 3 BY $2WATSHD.UNIT ORDERED
50009 REL WATER.USE.PERM 4 BY PERMIT# ORDERED
50010 CALC $NUM1 = o
60000 PROGRAM SECTION 6
60001   IF ( $NUM1 = PERMIT# )
60002     CALC  REP.YR = 38
```

```
60003   ELSE
60004     CALC $NUM1 + PERMIT#
60005   ENDIF
60006     IF REP.YR EQ 83
60007       IF $2WATSHD.UNIT EQ $1WATSHD.UNIT
60008         IF $1USE.CODE GE 10 AND $1USE.CODE LE 16
60009           IF $1RESOURCE.CODE CN '1'
60010           CALC $2MUW.POP.GW = $2MUW.POP.GW + $4POP.SERVE
60011           CALC $2MUW.CONNEC.GW = $2MUW.CONNEC.GW +
                  $4SERVICE.CONN
60012         ELSE
60013          CALC $2MUW.POP.SW = $2MUW.POP.SW + $4POP.SERVE
60014          CALC $2MUW.CONNEC.SW = $2MUW.CONNEC.SW +
                 $4SERVICE.CONN
60015          ENDIF
60016             CALC $3SERVICE.CONN = $2MUW.CONNEC.GW =
                    $2MUW.CONNEC.SW
60017             CALC $3POP.SERV = $2MUW.POP.GW + $2MUW.POP.SW
60018        ENDIF
60019      ENDIF
60020    ENDIF
70000 PROGRAM SECTION
70001 SEL REPORTED.PUMPAGE
70002 RES FOR REP.YR EQ 38
70003 CALC REP.YR = 83
70004 COMO END
```

PROGRAM NAME: PG.WAW

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NUM1 = 83
10003 COMO O.WAW
10004 SEL REPORTED. PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# ORDERED
10007 REL WAW 3 BY $1WATSHD.UNIT ORDERED
20000 PROGRAM SECTION TWO
20001 IF REP.YR EQ 4NUM1
20002 IF $1USE.CODE EQ 10 OR $1USE.CODE GE 12 AND
        $1USE.CODE LE 16
20003     IF $1RESOURCE.CODE ON '1'
20004       IF MEAS.ACC NO 5
20005        CALC $3WAW.GWRV = $3WAW.GWRV + AN.VOL.APPROP
20006        CALC $3WAW.GWNAD1 = $3WAW.GWNAD1 + 1
20007         ELSE
20008        CALC $3WAW.GWEV = $3WAW.GWEV + AN.VOL.APPROP
20009        CALC $3WAW.GWEI + $3WAW.GWEI + 1
20010       ENDIF
20011     ELSE
20012       IF MEAS.ACC NE5
20013        CALC $3WAW.SWRV = $3WAW.SWRV + AN.VOL.APPROP
20014        CALC $3WAW.SWNAD1 = $3WAW.SWNAD1 + 1
20015         ELSE
20016        CALC $3WAW.SWEV = $3WAW.SWEV + AN.VOL.APPROP
20017        CALC $3WAW.SWEI = $3WAW.SWEI + 1
20018       ENDIF
20019     ENDIF
20020   ENDIF
20021 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WAW
30002 CALC WAW.GWNAD3 = WAW.GWRV + WAW.GWEV
30003 CALC WAW.GWNY = WAW.GWNAD1 + WAW.GWEI
30004 CALC WAW.SWNAD3 = WAW.SWRV + WAW.SWEV
30005 CALC WAW.SWNY = WAW.SWNAD1 + WAW.SWEI
40000 PROGRAM SECTION
50000 PROGRAM SECTION
50001 COMO END
```

PROGRAM NAME: PG.WCO

```
10000  PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I  REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 COMO O.WCO
10005 SEL REPORTED.PUMPAGE
10006 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10007 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10008 REL WCO 2 BY $1WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE GE 30 AND $1USE.CODE LT 40
20003     IF $1RESOURCE.CODE CN '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2COW.GWRV = $2COW.GWRV + AN.VOL.APPROP
20006       CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20007       CALC $2COW.GWNAD1 = $2COW.GWNAD1 + 1
20008       ELSE
20009           CALC $2COW.GWEV = $2COW.GWEV + AN.VOL.APPROP
20010           CALC $2COW.GWEI = $2COW.GWEI + 1
20011           CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20012         ENDIF
20013         IF AN.DISCH NE O
20014           CALC $2COR.SWNAD1 = $2COR.SWNAD1 + 1
20015           CALC $2COR.SWNY = $2COR.SWNY + 1
20016         ENDIF
20017     ELSE
20018     IF MEAS.ACC NE 5
20019       CALC $2COW.SWRV = $2COW.SWRV + AN.VOL.APPROP
20020       CALC $2COR.SWNAD3 = $2COR.SWNAD3 + AN.DISCH
20021       CALC $2COW.SWNAD1 = $2COW.SWNAD1 + 1
20022     ELSE
20023           CALC $2COW.SWEV = $2COW.SWEV + AN.VOL.APPROP
20024           CALC $2COW.SWFI = $2COW.SWEI + 1
20025         ENDIF
20026         IF AN.DISCH NE O
20027           CALC $2COR.SWNAD1 = $2COR.SWNAD1 + 1
20028           CALC $2COR.SWNY = $2COR.SWNY + 1
20029         ENDIF
20029     ENDIF
20031   ENDIF
20032 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WCO
30002 CALC COW.GWNAD3 = COW.GWRV + COW.GWEV
30003 CALC COW.GWNY = COW.GWNAD1 + COW.GWEI
30004 CALC COW.SWNAD3 = COW.SWRV + COW.SWEV
30005 CALC COW.SWNY = COW.SWNAD1 + COW.SWEI
30006 COMO END
```

PROGRAM NAME: PG.WIN

```
10000  PROGRAM SECTION ONE
10001 CALC $NUM40 = 83
10002 CALC $NM = 1
10003 COMO O.WIN
10004 SEL REPORTED.PUMPAGE
10005 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10006 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10007 REL WIN 2 BY $1WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM40
20002   IF $1USE.CODE GE 40 AND $1USE.CODE LE 42 OR
          $1USE.CODE GE 46 $1USE.CODE LE 48
20003     IF $1RESOURCE.CODE ON '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2INW.GWRV = $2INW.GWRV + AN.VOL.APPROP
20006       CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20007       CALC $2INW.GWNAD1 = $2INW.GWNAD1 + 1
20008         ELSE
20009           CALC $2INW.GWEV = $2INW.GWEV + AN.VOL.APPROP
20010           CALC $2INW.GWEI = $2INW.GWEI + 1
20011           CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20012       ENDIF
20013         IF AN.DISCH NE O
20014           CALC $2INR.SWNAD1 = $2INR.SWNAD1 + 1
20015           CALC $2INR.SWNY = $2INR.SWNY + 1
20016         ENDIF
20017     ELSE
20018      IF MEAS.ACC NE5
20019       CALC $2INW.SWRV = $2INW.SWRV + AN.VOL.APPROP
20020       CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20021       CALC $2INW.SWNAD1 = $2INW.SWNAD1 + 1
20022      ELSE
20023           CALC $2INW.SWEV = $2INW.SWEV + AN.VOL.APPROP
20024           CALC $2INW.SWEI = $2INW.SWEI + 1
20025           CALC $2INR.SWNAD3 = $2INR.SWNAD3 + AN.DISCH
20026     ENDIF
20027         IF AN.DISCH NE O
20028           CALC $2INR.SWNAD1 = $2INR.SWNAD1 + 1
20029           CALC $2INR.SWNY = $INR.SWNY + 1
20030         ENDIF
20031     ENDIF
20032   ENDIF
20033 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WIN
30002 CALC INW.GWNAD3 = INW.GWRV + INW.GWEV
30003 CALC INW.GWNY = INW.GWNAD1 + INW.GWEI
30004 CALC INW.SWNAD3 = INW.SWRV + INW.SWEV
30005 CALC INW.SWNY = INW.SWNAD1 + INW.SWEI
30006 COMO END
```

PROGRAM NAME: PG.WMI

```
10000  PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I  REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 COMO O.WMI
10005 SEL REPORTED.PUMPAGE
10006 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10007 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10008 REL WMI 2 BY $1WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002  IF $1USE.CODE GE 43 AND $1USE.CODE LT 45 OR
         $1USE.CODE GE 62 AND $1USE.CODE LE 64
20003    IF $1RESOURCE.CODE ON '1'
20004     IF MEAS.ACC NE 5
20005      CALC $2MIW.GWRV = $2MIW.GWRV + AN.VOL.APPROP
20006      CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20007      CALC $2MIW.GWNAD1 = $2MIW.GWNAD1 + 1
20008     ELSE
20009          CALC $2MIW.GWEV = $2MIW.GWEV + AN.VOL.APPROP
20010          CALC $2MIW.GWEI = $2MIW.GWEI + 1
20011          CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20012        ENDIF
20013        IF AN.DISCH NE O
20014          CALC $2MIR.SWNAD1 = $2MIR.SWNAD1 + 1
20015          CALC $2MIR.SWNY = $2MIR.SWNY + 1
20016        ENDIF
20017    ELSE
20018    IF MEAS.ACC NE 5
20019      CALC $2MIW.SWRV = $2MIW.SWRV + AN.VOL.APPROP
20020      CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20021      CALC $2MIW.SWNAD1 = $2MIW.SWNAD1 + 1
20022     ELSE
20023          CALC $2MIW.SWEV = $2MIW.SWEV + AN.VOL.APPROP
20024          CALC $2MIW.SWEI = $2MIW.SWEI + 1
20025          CALC $2MIR.SWNAD3 = $2MIR.SWNAD3 + AN.DISCH
20026        ENDIF
20027        IF AN.DISCH NE O
20028          CALC $2MIR.SWNAD1 = $2MIR.SWNAD1 + 1
20029          CALC $2MIR.SWNY = $2MIR.SWNY + 1
20030        ENDIF
20031    ENDIF
20032  ENDIF
20033 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WMI
30002 CALC MIW.GWNAD3 = MIW.GWRV + MIW.GWEV
30003 CALC MIW.GWNY = MIW.GWNAD1 + MIW.GWEI
30004 CALC MIW.SWNAD3 = MIW.SWRV + MIW SWEV
30005 CALC MIW.SWNY = MIW.SWNAD1 + MIW.SWEI
30006 COMO END
```

PROGRAM NAME: PG.WPF

```
10000  PROGRAM SECTION ONE
10001 FORMAT $NUM1,2,I  REP.YR
10002 CALC $NM = 1
10003 CALC $NUM1 = 83
10004 COMO O.WPF
10005 SEL REPORTED.PUMPAGE
10006 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10007 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10008 REL WPF 2 Y $1WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 IF REP.YR EQ $NUM1
20002   IF $1USE.CODE EQ 20 OR $1USE.CODE GE 22 AND
          $1USE.CODE LT 30
20003     IF $1RESOURCE.CODE ON '1'
20004       IF MEAS.ACC NE 5
20005       CALC $2PFW.GWRV = $2PFW.GWRV + AN.VOL.APPROP
20006       CALC $2PER.SWNAD3 = $2PER.SWNAD3 + AN.DISCH
20007       CALC $2PFW.GWNAD1 = $2PFW.GWNAD1 + 1
20008       ELSE
20009           CALC $2PFW.GWEV = $2PFW.GWEV + AN.VOL.APPROP
20010           CALC $2PFW.GWEI = $2PFW.GWEI + 1
20011           CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20012         ENDIF
20013         IF AN.DISCH NE O
20014           CALC $2PFR.SWNAD1 = $2PFR.SWNAD1 + 1
20015           CALC $2PFR.SWNY = $2PFR.SWNY + 1
20016         ENDIF
20017     ELSE
20018     IF MEAS.ACC NE 5
20019       CALC $2PFW.SWRV = $2PFW.SWRV + AN.VOL.APPROP
20020       CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20021       CALC $2PFW.SWNAD1 = $2PFW.SWNAD1 + 1
20022     ELSE
20023           CALC $2PFW.SWEV = $2PFW.SWEV + AN.VOL.APPROP
20024           CALC $2PFW.SWEI = $2PFW.SWEI + 1
20025           CALC $2PFR.SWNAD3 = $2PFR.SWNAD3 + AN.DISCH
20026         ENDIF
20027         IF AN.DISCH NE O
20028           CALC $2PFR.SWNAD1 = $2PFR.SWNAD1 + 1
20029           CALC $2PFR.SWNY = $2PFR.SWNY + 1
20030         ENDIF
20031     ENDIF
20032   ENDIF
20033 ENDIF
30000 PROGRAM SECTION THREE
30001 SEL WPF
30002 CALC PFW.GWNAD3 = PFW.GWRV + PFW.GWEV
30003 CALC PFW.GWNY = PFW.GWNAD1 + PFW.GWEI
30004 CALC PFW.SWNAD3 = PFW.SWRV + PFW.SWEV
30005 CALC PFW.SWNY = PFW.SWNAD1 + PFW.SWEI
30006 COMO END
```

PROGRAM NAME: PG.WST

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 CALC $NM = 1
10003 COMO O.WST
10004 CALC $NUM1 = 83
10005 SEL REPORTED.PUMPAGE
10006 RES FOR MEAS.ACC LT 6 OR MEAS.ACC GT 7
10007 REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
10008 REL WST 2 BY $1WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 IF REP.YR = $NUM1
20002    IF $1USE.CODE EQ 45 OR ( $1USE.CODE GE 10 AND
           $1USE.CODE LT 20 )
20003      IF AN.DISCH NE O
20004         CALC $2STR.SWNAD3 = $2STR.SWNAD3 + AN.DISCH
20005         CALC $WSTR.SWNY = $2STR.SWNY + 1
20006      ENDIF
20007     ENDIF
20008       IF $1USE.CODE EQ 45
20009         IF $1RESOURCE.CODE CN '1'
20010           IF MEAS.ACC NE 5
20011           CALC $2STW.GWRV = $2STW.GWRV + AN.VOL.APPROP
20012           CALC $2STW.GWNAD1 = $2STW.GWNAD1 + 1
20013           ELSE
20014           CALC $2STW.GWEV = $2STW.GWEV + AN.VOL.APPROP
20015           CALC $2STW.GWEI = $2STW.GWEI + 1
20016           ENDIF
20017          ELSE
20018            IF MEAS.ACC NE 5
20019              CALC $2STW.SWRV = $2STW.SWRV + AN.VOL.APPROP
20020              CALC $2STW.SWNAD1 = $2STW.SWNAD1 + 1
20021            ELSE
20022             CALC $2STW.SWEV = $2STW.SWEV + AN.VOL.APPROP
20023             CALC $2STW.SWEI = $2STW.SWEI + 1
20024             ENDIF
20025        ENDIF
20026     ENDIF
20027 ENDIF
30000 PROGRAM SECTION 3
30001 SEL WST
30002 CALC STW.GWNAD3 = STW.GWRV + STW.GWEV
30003 CALC STW.GWNY = STW.GWNAD1 + STW.GWEI
30004 CALC STW.SWNAD3 = STW.SWRV + STW.SWEV
30005 CALC STW.SWNY = STW.SWNAD1 + STW.SWEI
30006 COMO END
```

PROGRAM NAME: PG.WIR

```
10000  PROGRAM SECTION ONE
10001 FO $NUM1,2,I
10002 FOR $NUM2,6,I
10003 FOR $NUM3,6,I
10004 CALC $NUM1 = 83
10005 CALC $NM = 1
10006 COMO O.WIR
10007 SEL WATER.USE.PERM
10008 RES FOR TERM.YEAR EQ O OR TERM.YEAR GT 83
10009 REL COMMON,FILE 1 BY PERMIT# ORDERED
10010 REL WIR 2 BY $1WATSHD.UNIT
10011 RES FOR $1USE.CODE EQ 96
20000 PROGRAM SECTION 2
20001          IF $1RESOURCE.CODE CN '1'
20001              CALC $2CO.ACRE.G = $2CO.ACRE.G + TOT.ACRE
20003             CALC $2IRW.GWNY = $2IRW.GWNY + 1
20004          ELSE
20005             CALC $21RW.SWNY = $2IRW.SWNY + 1
20006             CALC $2CO.ACRE.S = $2CO.ACRE.S + TOT.ACRE
20007          ENDIF
30000 PROGRAM SECTION 3
30001 SEL WATER.USE.PERM
30002 REL COMMON.FILE 1 BY PERMIT# ORDERED
30003 REL REPORTED.PUMPAGE 2 BY PERMIT# ORDERED
30004 REL WIR 3 BY $1WATSHD.UNIT
30005 RES FOR $1USE.CODE EQ 96
40000 PROGRAN SECTION 4
40001   IF $2CROP.ACRE1 NE O AND $2REP.YR EQ 83
40002    IF $1RESOURCE.CODE CN '1'
40003    CALC $3PERM.ACRE.G = $3PERM.ACRE.G + TOT.ACRE
40004    CALC $3IRW.GWNAD1 = $3IRW.GWNAD1 + 1
40005   ELSE
40006    CALC $3PERM.ACRE.S = $3PERM.ACRE.S + TOT.ACRE
40007    CALC $3IRW.SWNAD1 = $31RW.SWNAD1 + 1
40008   ENDIF
40009   ELSE
40010   NEXT 2
40011 ENDIF
50000 PROGRAM SECTION 5
50001 SEL REPORTED.PUMPAGE
50002 RES FOR REP.YR EQ 83
50003 REL COMMON.FILE 1 BY PERMINST# ORDERED
50004 REL WIR 2 BY $1WATSHD.UNIT
50005 RES FOR CROP.ACRE1 GT O
50006 RES FOR $1USE.CODE EQ 96
60000 PROGRAM SECTION 4
60001          IF $1RESOURCE.CODE CN '1'
60002              CALC $2REP.ACRE.G = $2REP.ACRE.G +
                     CROP.ACRE1 + CROP.ACRE2 + CROP.ACRE3
60003              IF $2PERM.ACRE.G GT O
60004                 CALC $2PCNT.IRR.ACRE.G = $2REP.ACRE.G /
                        $2PERM.ACRE.G
60005              ENDIF
60006              CALC $2EST.ACRE.G = $2PCNT.IRR.ACRE.G *
```

```
                    ( $2CO.ACRE.G - $2PERM.ACRE.G )
60007               CALC $2REP.WAT.G = $2REP.WAT.G +
                      AN.VOL.APPROP
60008               IF $2REP.ACRE.G GT 0
60009                  CALC $2GAL.ACRE.G = $2REP.WAT.G /
                         $2REP.ACRE.G
60010               ENDIF
60011               CALC $2EST.WAT.G = $2EST.ACRE.G *
                      $2GAL.ACRE.G
60012               CALC $2ALL.ACRE.G = $2EST.ACRE.G +
                      $2REP.ACRE.G
60013               CALC $2ALL.WAT.G = $2EST.WAT.G + $2REP.WAT.G
60014            ELSE
60015               CALC $2REP.ACRE.S = $2REP.ARE.S. +
                      CROP.ACRE1 + CROP.ACRE2 + CROP.ACRE3
60016               IF $2PERM.ACRE.S GT 0
60017                  CALC $2PCNT.IRR.ACRE.S = $2REP.ACRE.S /
                         $2PERM.ACRE.S
60018               ENDIF
60019               CALC $2EST.ACRE.S = $2PONT.IRR.ACRE.S *
                      ( $2CO.ACRE.S - $2PERM.ACRE.S )
60020               CALC $2REP.WAT.S = $2REP.WAT.S +
                      AN.VOL.APPROP
60021               IF $2REP.ACRE.S GT 0
60022                  CALC $2GAL.ACRE.S = $2REP.WAT.S /
                         $2REP.ACRE.S
60023               ENDIF
60024               CALC $2EST.WAT.S = $2EST.ACRE.S *
                      $2GAL.ACRE.S
60025               CALC $2ALL.ACRE.S = $2EST.ACRE.S +
                      $2REP.ACRE.S
60026               CALC $2ALL.WAT.S = $2EST.WAT.S + $2REP.WAT.S
60027            ENDIF
70000    PROGRAM SECTION 7
70001    COMO END
```

PROGRAM NAME: PG.WIR2

```
10000  PROGRAM SECTION ONE
10001     FORMAT $NUM1,2,I
10002     FORMAT $NUM2,6,I
10003     FORMAT $NUM3,6,I
10004     CALC $NM = 1
10005 COMO O.WI2
10006     SEL WATER.USE.PERM
10007 RES FOR TERM.YEAR EQ 0 OR TERM.YEAR GT 83
10008     REL COMMON.FILE 1 BY PERMIT# WITH ORDERED
10009     REL WIR2 2 BY $1WATSHD.UNIT
10010     RES FOR $1USE.CODE GE 80
10011     RES FOR $1USE.CODE LT 96
20000 PROGRAM SECTION 2
20001     IF $1RESOURCE.CODE CN '1'
20002        CALC $2CO.ACRE.G = $2CO.ACRE.G + TOT.ACRE
20003        CALC $2IRW.GWNY = $2IRW.GWNY + 1
20004     ELSE
20005        CALC $21RW.SWNY = $2IRW.SWNY + 1
20006        CALC $2CO.ACRE.S = $2CO.ACRE.S + TOT.ACRE
20007     ENDIF
30000 PROGRAM SECTION 3
30001     SEL WATER.USE.PERM
30002     REL COMMON.FILE 1 BY PERMIT# WITH ORDERED
30003     REL REPORTED.PUMPAGE 2 BY PERMIT# WITH ORDERED
30004     REL WIR2 3 BY $1WATSHD.UNIT
30005     RES FOR $1USE.CODE GE 80
30006     RES FOR $1USE.CODE LT 96
40000 PROGRAM SECTION 4
40001     IF $2REP.YR EQ 83
40002        IF $2CROP.ACRE1 NE 0
40003           IF $1RESOURCE.CODE CN '1'
40004              CALC $3PERM.ACRE.G = $3PERM.ACRE.G + TOT.ACRE
40005              CALC $3IRW.GWNAD1 = $3IRW.GWNAD1 + 1
40006           ELSE
40007              CALC $3PERM.ACRE.S = $3PERM.ACRE.S + TOT.ACRE
40008              CALC $3IRW.SWNAD1 = $3IRW.SWNAD1 + 1
40009           ENDIF
40010        ENDIF
40011     ELSE
40012        NEXT 2
40013     ENDIF
50000 PROGRAM SECTION 5
50001     SEL REPORTED.PUMPAGE
50002     RES FOR REP.YR EQ 83
50003     REL COMMON.FILE 1 BY PERMINST# WITH ORDERED
50004     REL WIR2 2 BY $1WATSHD.UNIT
50005     RES FOR CROP.ACRE1 GT 0
50006     RES FOR $1USE.CODE GE 80
50007     RES FOR $1USE.CODE LT 96
60000 PROGRAM SECTION 6
60001     IF $1RESOURCE.CODE CN '1'
60002        CALC $2REP.ACRE.G = $2REP.ACRE.G + CROP.ACRE1 +
             CROP.ACRE2 + CROP.ACRE3
60003        IF $2PERM.ACRE.G GT 0
```

```
60004          CALC $2PCNT.IRR.ACRE.G = $2REP.ACRE.G /
                 $PERM.ACRE.G
60005        ENDIF
60006        CALC $2EST.ACRE.G = $2PCNT.IRR.ACRE.G *
               ( $2CO.ACRE.G - $2PERM.ACRE
60007        CALC $2REP.WAT.G = $2REP.WAT.G + AN.VOL.APPROP
60008        IF $2REP.ACRE.G GT 0
60009           CALC $2GAL.ACRE.G = $2REP.WAT.G / $2REP.ACRE.G
60010        ENDIF
60011        CALC $2EST.WAT.G = $2EST.ACRE.G *$2GAL.ACRE.G
60012        CALC $2ALL.ACRE.G = $2EST.ACRE.G. + $2REP.ACRE.G
60013        CALC $2ALL.WAT.G = $2EST.WAT.G + $2REP.WAT.G
60014     ELSE
60015        CALC $2REP.ACRE.S = $2REP.ACRE.S + CROP.ACRE1 +
               CROP.ACRE2 + CROP.ACRE3
60016        IF $2PERM.ACRE.S GT 0
60017           CALC $2PCNT.IRR.ACRE.S = $2REP.ACRE.S /
                  $2PERM.ACRE.S
60018        ENDIF
60019        CALC $2EST.ACRE.S = $2PCNT.IRR.ACRE.S *
               ( $2CO.ACRE.S - $2PERM.ACRE
60020        CALC $2REP.WAT.S = $2REP.WAT.S + AN.VOL.APPROP
60021        IF $2REP.ACRE.S GT 0
60022           CALC $2GAL.ACRE.S = $2REP.WAT.S / $2REP.ACRE.S
60023        ENDIF
60024        CALC $2EST.WAT.S = $2EST.ACRE.S * $2GAL.ACRE.S
60025        CALC $2ALL.ACRE.S = $2EST.ACRE.S + $2REP.ACRE.S
60026        CALC $2ALL.WAT.S = $2EST.WAT.S + $2REP.WAT.S
60027     ENDIF
70000 PROGRAM SECTION 7
70001 COMO END
```

PROGRAM NAME: PG.WIRC

```
10000  PROGRAM SECTION ONE
10001 SEL WIRC
10002 REL WIR BY WATSHD.UNIT
10003 REL WIR2 2 BY WATSHD.UNIT
20000 PROGRAM SECTION 2
20001 CALC CO.ACRE.S = $1CO.ACRE.S + $2CO.ACRE.S
20002 CALC CO.ACRE.G = $1CO.ACRE.G + $2CO.ACRE.G
20003 CALC REP.ACRE.S = $1REP.ACRE.S + $2REP.ACRE.S
20004 CALC REP.ACRE.G = $1REP.ACRE.G + $2REP.ACRE.G
20005 CALC PERM.ACRE.S = $1PERM.ACRE.S + $2PERM.ACRE.S
20006 CALC PERM.ACRE.G = $1PERM.ACRE.G + $2PERM.ACRE.G
20007 CALC PCNT.IRR.ACRE.S + REP.ACRE.S / PERM.ACRE.S
20008 CALC PCNT.IRR.ACRE.G = REP.ACRE.G / PERM.ACRE.G
20009 CALC EST.ACRE.S = PCNT.IRR.ACRE.S *
        ( CO.ACRE.S - PERM.ACRE.S )
20010 CALC EST.ACRE.G = PCNT.IRR.ACRE.G *
        ( CO.ACRE.G - PERM.ACRE.G )
20011 CALC REP.WAT.S = $1REP.WAT.S + $2REP.WAT.S
20012 CALC REP.WAT.G = $1REP.WAT.G + $2REP.WAT.G
20013 CALC GAL.ACRE.S + REP.WAT.S / REP.ACRE.S
20014 CALC GAL.ACRE.G = REP.WAT.G / REP.ACRE.G
20015 CALC EST.WAT.S = EST.ACRE.S * GAL.ACRE.S
20016 CALC EST.WAT.G = EST.ACRE.G + REP.ACRE.G
20017 CALC ALL.ACRE.S = EST.ACRE.S + REP.ACRE.S
20018 CALC ALL.ACRE.G = EST.ACRE.G + REP.ACRE.G

20019 CALC ALL.WAT.S = EST.WAT.S + REP.WAT.S
20020 CALC ALL.WAT.G = EST.WAT.G + REP.WAT.G
20021 CALC IN.ACRE.RICE = ( ( $1GAL.ACRE.S + $1GAL.ACRE.G )
        / 0.326 ) * 12
20022 CALC IN.ACRE.NORICE = ( ( $2GAL.ACRE.S + $2GAL.ACRE.G )
        / 0.326 ) * 12
20023 CALC ALL.WAT.R = $1ALL.WAT.S + $1ALL.WAT.G
20024 MOVE $1IRW.GWNAD2 TO IRW.GWNAD2
20025 MOVE $1IRW.GWNAD2 TO IRW.SWNAD2
20026 MOVE $1IRR.SWNAD2 TO IRR.SWNAD2
20027 CALC IRW.GWNAD1 = $1IRW.GWNAD1 + $2IRW.GWNAD1
20028 CALC IRW.SWNAD1 = $1IRW.SWNAD1 + $2IRW.SWNAD1
20029 CALC IRW.GWNAD3 = $1IRW.GWNAD3 + $2IRW.GWNAD3
20030 CALC IRW.SWNAD3 = $1IRW.SWNAD3 + $2IRW.SWNAD3
20031 CALC IRW.GWNY = $1IRW.GWNY + $2IRW.GWNY
20032 CALC IRW.SWNY = $1IRW.SWNY + $2IRW.SWNY
30000  PROGRAM SECTION ONE
```