



U. S. ENVIRONMENTAL PROTECTION AGENCY  
ROCKY MOUNTAIN — PRAIRIE REGION  
REGION VIII

# WATER AND AIR QUALITY TRENDS IN REGION VIII (1978 DATA)

Data Analysis Branch Surveillance and Analysis Division

Denver, Colorado

October 1979

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(1978 DATA)

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## ABSTRACT

Water and air quality trends and status for the calendar year 1978 were determined for the six states in Region VIII. These states include Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming. Data resident in EPA national data banks (STORET, SAROAD) were analyzed.

Statistical tests which detect significant differences between two populations were utilized to show trends in both air and water quality. The status and severity of stream pollutants were determined by relating parameter concentrations to Water Quality Indicator (WQI) values on a numerical scale from 0 to 100. The status and severity of air pollutants reported continues to be a direct measure of air quality standard and alert level exceedences.

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SECTION I

## INTRODUCTION

Air and water quality monitoring activities have increased substantially in Region VIII over the past few years both in scope and frequency. These increases are due to public demand for accurate information about harmful pollutants in the environment and to the passage of Federal Legislation, namely, The Clean Air Act Amendments (1979) and the Federal Water Pollution Control Act of 1972 (Public Law 92-500). To fulfill the requirements of these legislative mandates State agencies have planned and developed extensive monitoring networks which have generated a mass of environmental quality data.

The purpose of this report is to present useful analytical summaries for Region VIII of the Environmental Protection Agency utilizing environmental quality data resident in the STORET (water) and SAROAD (air) data storage and retrieval systems. This report does not attempt to classify or precisely determine air and water quality or to analyze detailed cause and effect relationships. It attempts, rather, to impart a sense of status and trend (i.e. improvement, degradation, etc.), by observing air and water quality measurements not only for current severity but also for changes over successive time periods.

## SUMMARY AND CONCLUSIONS

### Water Quality

Trend analyses (1975-1977 vs. 1978) of all pertinent water quality data available in the STORET system for Region VIII indicates that 128 of 546 stations processed experienced significant changes (improvement or degradation) for at least one parameter group. Of those stations which exhibited significant trends and which were also found to have concentrations generally considered at critical levels during 1975, 1976, and 1977, 13 were found to have improved and 42 were found to have degraded.

The changes in quality that could be mostly attributed to the affects of man, as indicated by the stations where high fecal coliform bacteria concentrations are present, were observed at the stations listed below:

#### Significant Degradation

South Platte R at 60th Ave., Denver, CO  
South Platte R at 88th Ave., Denver, CO  
Colorado R nr Loma, CO  
Arkansas R nr Coolidge, KS  
Tongue R at WY-MT state line  
Red River of the North nr Perley, MN  
French Cr nr Custer, SD  
White R nr Ouray, UT  
San Juan R nr Bluff, UT

#### Significant Improvement

Yellowstone R at Huntley, MT  
N Platte R blw Casper, WY

For the non-point sources of pollution, where total dissolved solids concentrations have been determined to be at critical levels, degradation occurred at 7 stations in the region and improvements were noted at 3 stations. Four of these occurrences were at stations on the Arkansas and South Platte Rivers in Colorado. Also, significant quality degradation was detected for the suspended sediments parameter at 9 stations on the larger tributaries of the Missouri River in Montana.

The section of this report entitled "Regional Summary" discusses in more detail the findings with regard to specific pollutant groups.

## ANALYTICAL PROCEDURES - WATER

Water quality data (1975-1978) for 546 active monitoring stations in each of the six States of Region VIII were retrieved from STORET (EPA's computerized water quality data base) and screened through computerized trending techniques. Forty-six STORET water quality parameters which fall in the general categories of temperature, dissolved oxygen, pH, bacteria, trophic potential, dissolved solids, suspended solids, aesthetics, and inorganic toxicants were selected for this trend study and were analyzed in a two step process. First, to describe pollution severity, a water quality indicator (WQI) was computed for each observation of each parameter at all active stations and averaged on a monthly basis. The WQI may vary from zero to one hundred. A WQI less than 20 represents generally acceptable quality. The range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature. Wherever color coded maps are used in this report, the color blue, yellow, and red represent the respective range. Secondly, to determine pollution trends, the 15th, 50th (median) and 85th percentile values for two time periods were compared for each parameter with sufficient data. A standard statistical test, requiring at least six observations for a parameter in each time period was used to test for a significant difference between the two time periods. Significant changes in the 50th percentile measurements are generally indicative of overall changes in concentrations, while significant changes in the 85th percentile measurement (15th percentile for dissolved oxygen) are generally indicative of changes during critical periods. The criteria for determining improvement or degradation is described in a later table.

### Severity Analysis

Water quality indicators (WQI's) were computed in order to assess the relative severity of a pollutant group at a given monitoring station. Each parameter concentration was graphically converted to a WQI and averaged on a monthly basis. This technique attempts to relate the concentration of various water quality parameters to a common numerical scale and is accomplished through the use of several "severity curves." These curves which relate concentration to WQI values were developed by the staff of EPA's Region X and exhibit the same general family characteristics and shape of the traditional curves which were developed for use with the original National Sanitation Foundation (NSF) Water Quality Index. Severity curves used for this analysis appear in the appendix.

### Trend Analysis

The statistical test ("The Median Test," Practical Non-Parametric Statistics, W.J. Conover, John Wiley & Sons, Inc., New York, 1971, pages 167-172.) that was used to analyze water quality trends is a non-parametric technique for testing the hypothesis that random samples from two or more populations have the same median. The test is a special application of a chi-square contingency table test with fixed marginal totals. The same test can be used against other percentiles than the 50th but the discussion here describes only the median.

Given k populations each with a random sample of size  $n_i$ ,  $i=1,2,\dots,k$ , a test statistic can be constructed to test the hypothesis:

$H_0$ : all k populations have the same median.

$H_A$ : at least two populations have different medians.

The test statistic is computed from the  $2 \times k$  contingency table:

| Sample  | 1        | 2        | 3        | . . . k        | Total |
|---------|----------|----------|----------|----------------|-------|
| Median* | $0_{11}$ | $0_{12}$ | $0_{13}$ | . . . $0_{1k}$ | a     |
| Median* | $0_{21}$ | $0_{22}$ | $0_{23}$ | . . . $0_{2k}$ | b     |
| Total   | $n_1$    | $n_2$    | $n_3$    | . . . $n_k$    | N     |

$$T = \frac{N^2}{ab} \sum_{i=1}^c \frac{\left(0_{1i} - \frac{n_i a}{N}\right)^2}{n_i}$$

\* Refers to overall median of the combined samples.

The test for the statistic assumes:

The samples are random.

The samples are independent of each other.

The measurement scale is ordinal.

If all populations have the same median, they have the same probability of an observation exceeding the median.

A large sample approximation is used to approximate  $T$ . The critical region of approximate size  $\alpha$  corresponds to values of  $T$  greater than  $\chi^2_{1-\alpha}$  the  $(1-\alpha)$  quantile of a chi-square random variable with  $k-1$  degrees of freedom. If  $T$  exceeds  $\chi^2_{1-\alpha}$  reject  $H_0$ ; otherwise accept  $H_0$ . The author notes that the approximation may not be satisfactory if more than 20% of the  $n_i$  are less than 10, or if any of the  $n_i$  are less than 2. It further qualifies this rule of thumb for larger numbers of samples  $k$ .

The test was applied to each pollutant parameter at every station in the Region not only for the median but also the 15th, and 85th percentiles. Data observed during the years 1975 through 1977 comprise one test population and data from the year 1978 made up the other population. Each sample was required to have at least six observations. This technique made it possible to detect statistically significant differences between the two time periods.

The following procedures were used to determine if the observed significant differences represented an improvement or a degradation:

Examine the 15th and 50th percentile for dissolved oxygen - for all other parameters examine the 85th and 50th percentile.

If a significant difference between two time periods for either of the percentile statistics exists and both percentile statistics decrease from the first time period to the second, designate this as improvement. (For oxygen this is a degradation).

If a significant difference between two time periods for either of the percentile statistics exists and both percentile statistics increase from the first time period to the second, designate this as degradation. (For dissolved oxygen this is an improvement).

It was assumed that the samples were random and independent of one another. Given that these data are time series data, taken at irregular intervals, affected by seasonal cycles, etc., certain modifications of this technique might be advisable in future applications.

SECTION II  
REGIONAL WATER QUALITY SUMMARY



## REGIONAL OVERVIEW OF WATER QUALITY

### A Summary of Parameter Groups at or Approaching Critical Levels

The color coded regional map displays that appear in this section generally describe problem areas identified through computer analysis of each parameter group. After all pertinent 1978 data resident in the national STORET data bank were screened they were converted to water quality indicator (WQI) values. WQI's range from 0 to 100 where a value of 20 represents parameter concentrations equivalent to the water quality standard or criteria and a value of 60 indicates concentrations at some level of severe impairment. In the graphic representations stations where WQI levels are between 45 and 60 appear as yellow dots and levels greater than 60 appear as red dots. The regional maps showing severity are generated from the Table of Critical Stations and Parameters in the section titled, "State Reports." The section on state reports also contains tables of Station and Parameter Group Coverage for each state. It should be recognized that even though problems may exist in areas where insufficient data were collected, no problem condition was reported. Since few occurrences of a critical nature were noted for temperature, dissolved oxygen, and pH, no maps are presented to describe these groups.

### Fecal Coliform Bacteria

The map on the facing sheet illustrates the general locations of the water quality monitoring stations contained in the Table of Critical Stations and Parameters.

Below are listed the most critical stations in the region. Fecal coliform bacteria WQI values for the States of Montana and Utah were based on USGS data only.

|                                         | <u>Avg. WQI</u> |
|-----------------------------------------|-----------------|
| 1. Whitewood Cr at Pluma, SD            | 100             |
| 2. Whitewood Cr nr Deadwood, SD         | 100             |
| 3. Cache La Poudre R nr Greeley, CO     | 57              |
| 4. Red River of the North at Fargo, ND  | 49              |
| 5. S Platte R at Henderson, CO          | 47              |
| 6. St Vrain Cr blw Longmont, CO         | 46              |
| 7. Whitewood Cr nr Whitewood, SD        | 44              |
| 8. Fountain Cr blw Colorado Springs, CO | 43              |



## Nitrogen

It is generally apparent from reviewing the Table of Critical Stations and Parameters that stations having fecal coliform problems also have nitrogen problems. The table also suggests that nitrogen problems are more pronounced during low streamflow conditions.

Below are the stations that had the highest WQI values for nitrogen in the region:

|                                         | <u>Avg. WQI</u> |
|-----------------------------------------|-----------------|
| 1. Fountain Cr blw Colorado Springs, CO | 63              |
| 2. Cache La Poudre nr Greeley, CO       | 62              |
| 3. S Platte R at 60th Ave., Denver, CO  | 59              |
| 4. Belle Fourche R nr Sturgis, SD       | 53              |
| 5. Big Thompson R at Mouth, CO          | 50              |
| 6. Little Thompson R nr Millikin, CO    | 49              |

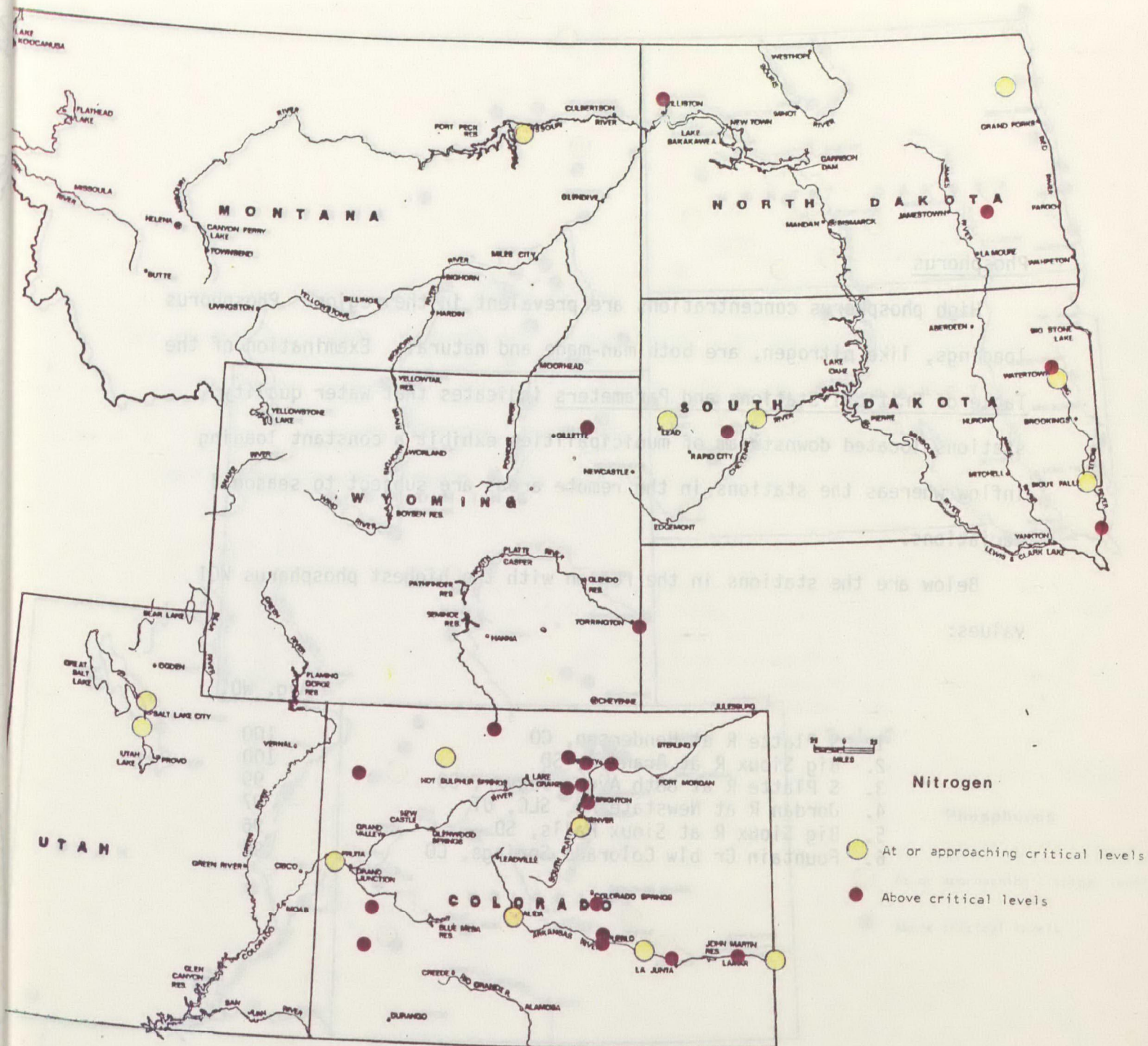


Figure 2. Stations where WQI values for Nitrogen approached or exceeded critical levels for at least one month during 1978.

### Phosphorus

High phosphorus concentrations are prevalent in the region. Phosphorus loadings, like nitrogen, are both man-made and natural. Examination of the Table of Critical Stations and Parameters indicates that water quality stations located downstream of municipalities exhibit a constant loading inflow whereas the stations in the remote areas are subject to seasonal variations.

Below are the stations in the region with the highest phosphorus WQI values:

|                                         | <u>Avg. WQI</u> |
|-----------------------------------------|-----------------|
| 1. S Platte R at Henderson, CO          | 100             |
| 2. Big Sioux R at Brandon, SD           | 100             |
| 3. S Platte R at 88th Ave., Denver, CO  | 99              |
| 4. Jordan R at Newstate Rd, SLC, UT     | 97              |
| 5. Big Sioux R at Sioux Falls, SD       | 96              |
| 6. Fountain Cr blw Colorado Springs, CO | 95              |



### Total Dissolved Solids (TDS)

High TDS concentrations are prevalent in the lower elevations of Region VIII where surface geologic formations are sedimentary. Hydrology affects the contribution of TDS to surface waters in the form of variable precipitation and the attendant surface-ground water interrelationships.

Stations having the highest TDS WQI values in the region are as follows:

|                                      | <u>Avg. WQI</u> |
|--------------------------------------|-----------------|
| 1. Mizpah Cr at Olive, MT            | 92              |
| 2. E Fork Armells Cr nr Colstrip, MT | 84              |
| 3. Salt Cr nr Sussex, WY             | 84              |
| 4. Arkansas R at Lamar, CO           | 83              |
| 5. Malad R nr Plymouth, UT           | 79              |
| 6. Arkansas R nr Coolidge, KS        | 79              |



### Suspended Sediment

Characteristically, the locations with high concentrations of suspended sediments are also those locations where high total dissolved solids concentrations occur. The Table of Critical Stations and Parameters illustrates that high suspended solids occur during high streamflow conditions and high TDS concentrations generally occur during low streamflow conditions.

The stations in the region that exhibited the highest WQI values for suspended sediments are:

|                                       | <u>WQI</u> |
|---------------------------------------|------------|
| 1. Powder R at Arvada, WY             | 100        |
| 2. White R nr Oacoma, SD              | 93         |
| 3. Belle Fourche R nr Elm Springs, SD | 91         |
| 4. Little Missouri R nr Watford, ND   | 89         |
| 5. Powder R at Moorhead, MT           | 87         |
| 6. Missouri R nr Culbertson, MT       | 83         |



### Trace Elements

During 1978, a few trace element concentrations exceeding criteria were detected in the region. Those stations where the highest WQI values were determined are as follows:

|                                      | <u>WQI</u>                      |
|--------------------------------------|---------------------------------|
| Uncompahgre River at Ridgway, CO     | (Cu= 78)                        |
| Fountain Creek at Pueblo, CO         | (Cd=100)                        |
| Clear Creek above Golden, CO         | (Pb= 78)                        |
| Redwater River at Vida, MT           | (As=100)                        |
| Red River at Emerson, Manitoba       | (CN=100)                        |
| Little Missouri River nr Watford, ND | (Cu=100,<br>Cr= 68,<br>Zn= 65 ) |
| Heart River at Mandan, ND            | (CN=100)                        |

Extremely high concentrations of cyanide as indicated by a WQI value of near 100 were predominate in the Red River of the North in North Dakota and Canada. Refer to the Table of Critical Stations and Parameters in the section entitled "State Reports."

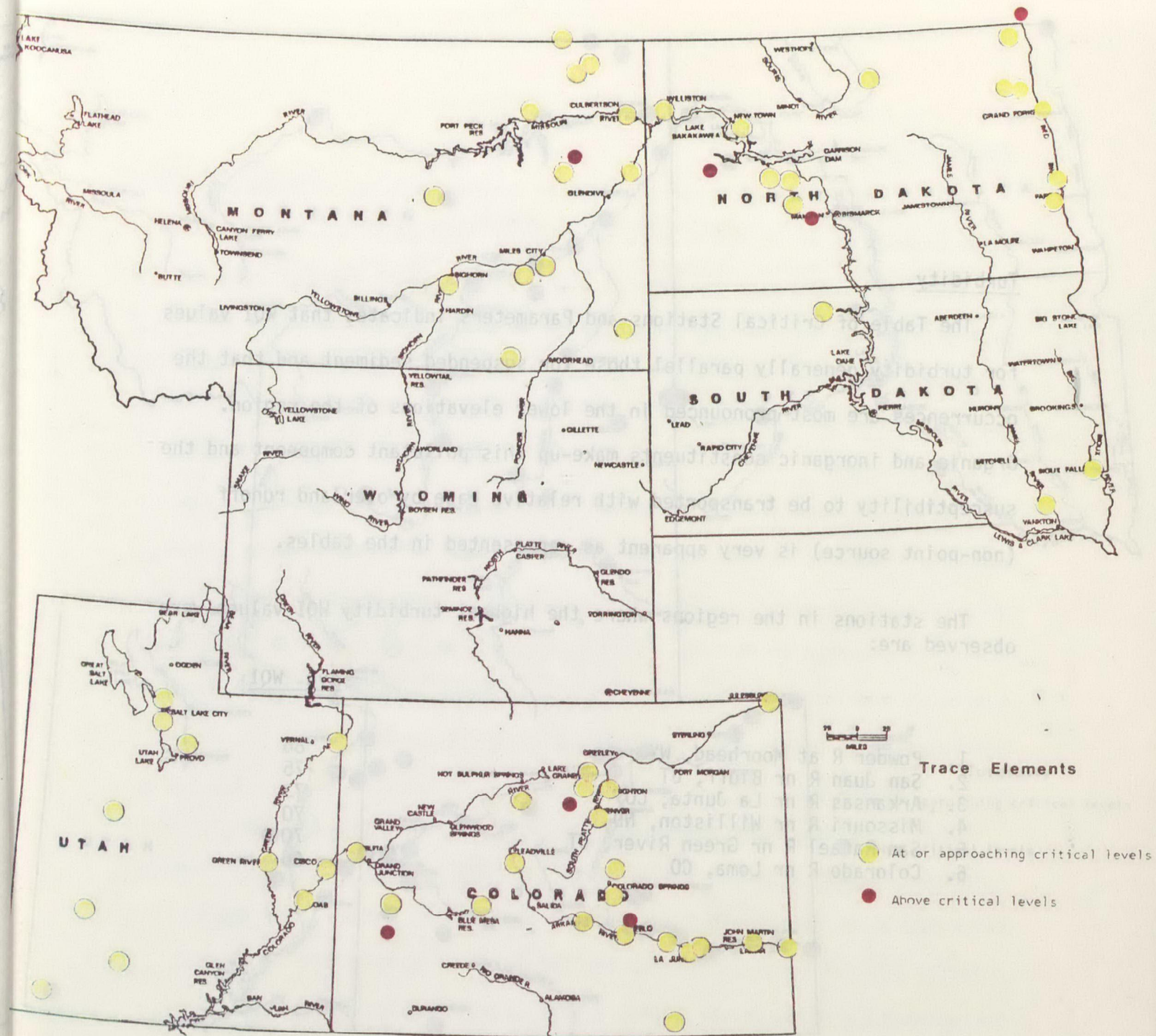


Figure 6. Stations where WQI values for Trace Elements exceeded criteria levels during 1978.

### Turbidity

The Table of Critical Stations and Parameters indicates that WQI values for turbidity generally parallel those for suspended sediment and that the occurrences are most pronounced in the lower elevations of the region. Organic and inorganic constituents make-up this pollutant component and the susceptibility to be transported with relative ease by overland runoff (non-point source) is very apparent as represented in the tables.

The stations in the regions where the highest turbidity WQI values were observed are:

|                                    | <u>Avg. WQI</u> |
|------------------------------------|-----------------|
| 1. Powder R at Moorhead, WY        | 86              |
| 2. San Juan R nr Bluff, UT         | 75              |
| 3. Arkansas R nr La Junta, CO      | 73              |
| 4. Missouri R nr Williston, ND     | 70              |
| 5. San Rafael R nr Green River, UT | 70              |
| 6. Colorado R nr Loma, CO          | 66              |



### Temperature

Only a few scattered occurrences where temperatures were found to be in minor exceedence of standards were observed. These occurrences were all in the months of June, July and August; eight were in South Dakota, three were in Utah and one was in Wyoming. One station on the South Platte River at Julesburg, Colorado, exhibited a WQI value during the month of July that approached the critical level.

### Dissolved Oxygen

The 88th Avenue station at Denver, Colorado, exhibited WQI values that exceeded standards as well as some that were above critical levels. There were three other minor exceedences in Colorado. Seven minor exceedences of standards occurred in Montana. Critical levels were observed for the winter months at stations along the Souris River in North Dakota, the James River in North and South Dakota and the Big Sioux River in South Dakota.

### pH

Minor exceedences of standards were noted for the upper Arkansas River in Colorado presumably during the start of the runoff in April. The Big Thompson River had a WQI approaching the critical zone during the month of January. A critical WQI value was calculated for the month of June at the Verendrye, North Dakota station on the Souris River. Levels approached a critical concentration on the Cheyenne River near Plainview, South Dakota during October. Minor exceedences of standards were found for the Shoshone River below Buffalo Bill Reservoir in Wyoming during the period August through October.

### Un-ionized Ammonia

Water Quality Indicator values for un-ionized ammonia were determined at each station where the STORET parameters, total ammonia ( $\text{NH}_3\text{-N}$ ), temperature and pH were observed for the same water sample. The calculation procedure is described in William T. Willingham's 1976 report, "Ammonia Toxicity."

The following stations exhibited ammonia concentrations at or near critical levels for at least 3 months of the year in 1978:

|                                                | <u>Avg. WQI</u> |
|------------------------------------------------|-----------------|
| 1. South Platte River at Henderson, CO         | 36              |
| 2. South Platte River at 88th Ave., Denver, CO | 46              |
| 3. Fountain Creek blw Colorado Springs, CO     | 32              |
| 4. San Miguel at Confluence Dolores R, CO      | 43              |
| 5. Big Sioux at North Cliff Avenue, SD         | 33              |

The Souris River near Westhope and near Verendrye exhibited exceptionally high WQI values in the months of June and July, 60 and 70 respectively.

Ammonia standards violations occurred at numerous other stations especially near urban communities. The findings will be the subject of a latter report.

### Trophic Status

Nitrate and phosphate data are collected at numerous sites in this region but no definitive standards or criteria have been found generally acceptable or been adopted for them. The most notable adverse effect of these compounds (other than deleterious effects, caused by resultant nitrites when nitrates are chemically reduced) occurs when they are mutually present and provide a nutrient support for trophic conditions.

An attempt was made to determine trophic potential wherever nitrates and phosphates were observed in a common water sample. The analytical procedure involved (1) finding the ratio of nitrogen to phosphorus -- if the ratio were greater than 12 a phosphorus limited condition was assumed -- for a ratio less than 12 a nitrogen limited condition was assumed, (2) comparing the WQI of the limiting parameter to a harmonic function of the combined phosphate and nitrate WQI and reporting the smaller of these two values as the WQI for the corresponding trophic potential.

$$\frac{2 (\text{phosphate WQI}) (\text{nitrate WQI})}{\text{phosphate WQI} + \text{nitrate WQI}} \text{ vs. } \begin{matrix} \text{phosphate WQI (P-limited)} \\ \text{nitrate WQI (N-limited)} \end{matrix}$$

High trophic potentials occurred most frequently on the South Platte between Denver and Julesburg, on the Arkansas River between Pueblo and La Junta, the Jordan River between Bluffdale Road and New State Road, the Souris River near Verendrye, the Red River between Fargo and Grand Forks, and the Big Sioux River at several stations between Watertown and Richland, South Dakota.

| <u>STORET Parameter</u>           | <u>STORET Number</u> | <u>Criteria/Std.</u> | <u>Group</u> |
|-----------------------------------|----------------------|----------------------|--------------|
| Temperature °C                    | 10                   | 29°C                 | Temp.        |
| Temperature °F                    | 11                   | 29°C                 |              |
| D.O.                              | 300                  | 5 mg/l               | DO           |
| pH                                | 400                  | 6.5-8.5              | pH           |
| Fecal Coliform                    | 31616                | 200                  | Fecal Coli.  |
| "                                 | 31615                | 200                  |              |
| "                                 | 31625                | 200                  |              |
| Total Coliform                    | 31501                | 1000                 | Total Coli.  |
| "                                 | 31505                | 1000                 |              |
| NO <sub>2</sub> & NO <sub>3</sub> | 630                  | 0.6 mg/l             |              |
| NO <sub>3</sub> - N               | 620                  | "                    |              |
| Nitrate                           | 71850                | "                    | Trophic      |
| Nitrate                           | 71851                | "                    |              |
| Total Phosphate                   | 665                  | .05 mg/l             |              |
| Total Phosphate                   | 666                  | "                    |              |
| Ortho Phosphate                   | 70507                | "                    |              |
| Ortho Phosphate                   | 660                  | .09 mg/l             |              |
| Dis. O.-Phos.                     | 671                  | .03 mg/l             |              |
| Turbidity                         | 70                   | 25                   | Aesthetic    |
| Turbidity                         | 76                   | 25                   |              |
| Oil & Grease                      | 550                  | 2                    |              |
| Dissolved Solids                  | 70300                | 500 mg/l             | Dis. Solids  |
| "                                 | 515                  | "                    |              |
| "                                 | 70301                | "                    |              |
| Conductivity                      | 95                   | 750 µmho             | Susp. Solids |
| Suspended Solids                  | 530                  | 25 mg/l              |              |
| "                                 | 70299                | "                    |              |
| "                                 | 80154                | "                    | Metals       |
| Arsenic Dis.                      | 1000                 | 50 µg/l              |              |
| " Total                           | 1002                 | 50 µg/l              |              |
| Cadmium Dis.                      | 1025                 | 3 "                  |              |
| Cadmium Total                     | 1027                 | 3 "                  |              |
| Chromium Dis.                     | 1030                 | 50 "                 |              |
| " Total                           | 1034                 | 50 "                 |              |
| Copper Dis.                       | 1040                 | 20 "                 |              |
| " Total                           | 1042                 | 20 "                 |              |
| Lead Dis.                         | 1049                 | 30 "                 |              |
| " Total                           | 1051                 | 30 "                 |              |
| Zinc Dis.                         | 1090                 | 80 "                 |              |
| " Total                           | 1092                 | 80 "                 |              |
| Mercury Dis.                      | 71890                | 0.5 "                |              |
| " Total                           | 71900                | 0.5 "                |              |
| Cyanide                           | 720                  | .02 mg/l             | Inorg. Tox.  |
| Un-ionized NH <sub>3</sub>        | 619                  | .02 "                |              |
| "                                 | 608                  | .02 "                |              |
| "                                 | 610                  | .02 "                |              |

STORET Parameters and Pollutant Groups Analyzed  
in the TREND REPORT



SECTION III  
STATE WATER QUALITY REPORTS



## STATE WATER QUALITY REPORTS

This section is comprised of four major tables. The table, Ranking of Critical Water Quality Stations by Pollutant Group is a summary of stations where the highest WQI values were noted.

The table, Station and Parameter Group Coverage lists the active water quality monitoring stations in the state and a count of the number of data observations for each parameter group present in the STORET data system for the year 1978.

The Table of Critical Stations and Parameters utilizes the WQI calculation procedure to determine and display monthly standard exceedences by pollutant group and station location. This table of pollution severity also provides the average yearly WQI calculation for critical stations and a ranking factor for each station and parameter group. A ranking of 1 defines the station at the highest critical level in the State. This table reports on 1978 data only.

The Water Quality Trend Table lists stations where parameter groups exhibited significant changes over time as determined by statistical tests. This table shows quality improvement or degradation in each parameter group and points out those groups which are at or approaching critical levels. Data for 1975, 1976 and 1977 were trended against data for 1978 in determining this table.

## Colorado

Table 1. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Dissolved Oxygen</u>                   | <u>WQI*</u> |
|-------------------------------------------|-------------|
| 1. S Platte R at 88th Ave., Denver        | 41          |
| <u>Fecal Coliform Bacteria</u>            |             |
| 1. Cache La Poudre nr Greeley             | 57          |
| 2. S Platte R at Henderson                | 47          |
| 3. St Vrain Cr blw Longmont               | 46          |
| 4. Fountain Cr blw Colorado Springs       | 43          |
| 5. S Platte R at 88th Ave., Denver        | 40          |
| 6. Little Thompson R nr Milliken          | 39          |
| <u>Nitrogen</u>                           |             |
| 1. Fountain Cr blw Colorado Springs       | 63          |
| 2. Cache La Poudre nr Greeley             | 62          |
| 3. S Platte R at 60th Ave., Denver        | 59          |
| 4. Big Thompson R at Mouth                | 50          |
| 5. Little Thompson R nr Milliken          | 40          |
| <u>Phosphorus</u>                         |             |
| 1. S Platte R at 88th Ave., Denver        | 93          |
| 2. S Platte R at Henderson                | 100         |
| 3. Fountain Cr blw Colorado Springs       | 95          |
| 4. S Platte R at 60th Ave., Denver        | 85          |
| 5. Boulder Cr at Boulder-Weld County line | 80          |
| <u>Turbidity</u>                          |             |
| 1. Arkansas R nr La Junta                 | 73          |
| 2. Colorado R nr Loma                     | 66          |
| 3. Gunnison R nr Grand Junction           | 57          |
| 4. Arkansas R at Las Animas               | 51          |
| 5. Uncompahgre R at Delta                 | 53          |
| <u>Total Dissolved Solids</u>             |             |
| 1. Arkansas R at Lamar                    | 83          |
| 2. Arkansas R nr Coolidge, KS             | 79          |
| 3. Arkansas R blw John Martin Reservoir   | 67          |
| 4. Dolores R abv San Miguel R             | 67          |
| 5. Arkansas R at Las Animas               | 62          |
| 6. Little Thompson R nr Milliken          | 55          |

Colorado

Table 1 (continued)

Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Suspended Sediment</u>         | <u>WQI*</u> |
|-----------------------------------|-------------|
| 1. Colorado R nr CO-UT state line | 68          |
| 2. Little Snake R nr Lily         | 68          |
| 3. Arkansas R nr La Junta         | 66          |
| 4. White R nr Watson, UT          | 64          |

Trace Elements

|                           |        |
|---------------------------|--------|
| 1. Fountain Cr at Pueblo  | Cu=100 |
| 2. Clear Cr abv Golden    | Pb= 78 |
| 3. Uncompahgre R at Delta | Cu= 78 |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature.

Table 2. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                                  |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SSSP<br>SOLID | NH3 | METALS |
|------------------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 21C00BRC                                 | 001109   |      |    |    |               |     |      |      |              |               |     |        |
| SO PLAT SO FRK CHEFSMAN RPS OUTL         |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00BRC                                 | 001112   |      |    |    |               |     |      |      |              |               |     |        |
| SO PLAT SO FRK ARV CORN CR OF N FRK      |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00BRC                                 | 001202   |      |    |    |               |     |      |      |              |               |     |        |
| SO PLAT N FRK BLW RAILRY CROSSING        |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C0L001                                 | 000025   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER NEAR TOWN OF SOUTH PL |          | 5    | 5  | 5  | 5             | 5   | 4    | 5    | 9            | 4             | 5   | 17     |
| 21C00BRC                                 | 001301   |      |    |    |               |     |      |      |              |               |     |        |
| SO PLAT AT INTAKE STRUCTURE              |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C0L001                                 | 000024   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE ABOVE LITTLETON             |          | 16   | 16 | 16 | 16            | 14  | 10   | 16   | 30           | 16            | 15  | 45     |
| 21C00HDP                                 | 1513     |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE R AT POWLES AVENUE          |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00HDP                                 | 1091     |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE R AT PARTMOUTH AVE          |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00HDP                                 | 0699     |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE R AT ALAMEDA AVENUE         |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00HDP                                 | 0305     |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE R @ 19TH ST BRIDGE          |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00HDP                                 | 0001     |      |    |    |               |     |      |      |              |               |     |        |
| SO PLATTE R @ FRANKLIN ST BRIDGE         |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C00MTR                                 | 000002   |      |    |    |               |     |      |      |              |               |     |        |
| S PLATTE @ 60TH AVE MDSDD NO.1           |          | 1    | 1  | 99 | 199           | 1   | 2 &  | 1    | 1            |               | 1   |        |
| 21C00MTR                                 | 000004   |      |    |    |               |     |      |      |              |               |     |        |
| S PLATTE @ 88TH AVE MDSDD NO.1           |          | 1    | 1  | 1  | 1             | 1   | 2JM  | 1    | 1            |               | 1   |        |
| 21C00MTR                                 | 000010   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE @ 124TH                     |          | 8    | 8  | 8  | 8             | 7   | 15   | 8    | 7            |               | 14  |        |
| 21C0L001                                 | 000023   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE AT HENDERSON                |          | 16   | 16 | 16 | 15            | 14  | 10   | 18   | 31           | 18            | 15  | 56     |
| 112WRD                                   | 06720500 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER AT HENDERSON,         |          | 11   |    |    |               |     |      |      |              |               |     |        |
| 21C0L001                                 | 000022   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE NEAR KERSEY                 |          | 15   | 15 | 15 | 15            | 11  | 8    | 16   | 31           | 14            | 14  | 39     |
| 112WRD                                   | 06754000 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER NEAR KERSEY,          |          | 21   | 15 | 18 |               |     | 35   |      | 36           |               |     |        |
| 112WRD                                   | 06758500 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER NEAR WELDONA,         |          | 74   | 16 | 19 |               |     | 31   |      | 36           | 57            |     |        |
| 112WRD                                   | 06760000 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER AT BALZAC, CO         |          |      |    |    |               |     |      |      |              |               |     |        |
| 21C0L001                                 | 000128   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE BELOW STERLING              |          | 5    | 5  | 5  | 4             | 4   | 3    | 5    | 11           | 5             | 4   | 21     |
| 21C0L001                                 | 000020   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE R (IN KENTASKA) NEAR JULESB |          | 5    | 5  | 5  | 4             | 6   | 3    | 6    | 11           | 6             | 4   | 21     |
| 112WRD                                   | 06764000 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER AT JULESBURG,         |          | 12   | 36 | 12 | 12            | 12  | 24   | 12   | 36           | 10            | 12  | 56     |
| 112WRD                                   | 06764200 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER NEAR JULESBURG        |          |      |    |    |               |     |      |      |              |               |     |        |
| 1110MET                                  | 070092   |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH PLATTE RIVER AT JULESBURG          |          |      |    |    |               |     |      |      |              |               |     |        |

Table 2 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                       |                         | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|-------------------------------|-------------------------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 112WRD                        | 09019000                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | BELOW LAKE GRANBY       | 5    |    |    |               |     |      |      | 5            |               |     |        |
| 112WRD                        | 09034500                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | AT HOT SULPHUR SP       | 13   | 12 | 12 |               |     | 28   |      | 26           |               |     |        |
| 21COL001                      | 000045                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR HOT SULFUR SPRINGS | 4    | 4  | 2  | 3             | 3   | 2    | 4    | 8            | 3             | 4   | 14     |
| 112WRD                        | 09070500                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR DOTSERO, CO.       | 5    | 4  | 4  |               |     | 12   |      | 10           |               |     |        |
| 21COL001                      | 000046                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR DOTSERO            | 12   | 11 | 9  | 13            | 10  | 10   | 13   | 25           | 12            | 12  | 41     |
| 112WRD                        | 09071100                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR CLEMMWOOD SPR      | 11   | 11 | 11 |               |     | 25   |      | 22           |               |     |        |
| 21COL001                      | 000047                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | AT NEW CASTLE           | 11   | 11 | 8  | 12            | 10  | 9    | 12   | 23           | 11            | 11  | 30     |
| 112WRD                        | 09095500                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR CAMEN, CO.         | 11   | 10 | 11 |               |     | 26   |      | 22           |               |     |        |
| 21COL001                      | 000048                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR CAMEN              | 3    | 3  | 2  | 3             | 3   | 2    | 3    | 6            | 3             | 2   | 8      |
| 21COL001                      | 000049                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR FRUITA             | 4    | 4  | 2  | 3             | 4   | 1    | 4    | 8            | 4             | 3   | 14     |
| 21COL001                      | 000050                  |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR IOWA               | 13   | 13 | 9  | 11            | 11  | 10   | 13   | 26           | 12            | 12  | 48     |
| 112WRD                        | 09163500                |      |    |    |               |     |      |      |              |               |     |        |
| COLORADO RIVER                | NEAR COLORADO-UTA       |      |    |    |               |     |      |      |              | 12            |     |        |
| 21COL001                      | 000009                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS R.                   | BELOW LEADVILLE, CO     | 4    | 4  | 2  | 4             | 3   | 2    | 4    | 8            | 4             | 3   | 15     |
| 21COL001                      | 000008                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR SALIDA             |      |    |    |               |     |      |      |              |               |     |        |
| 21COL001                      | 000007                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR CANON CITY         | 6    | 6  | 6  | 4             | 5   | 3    | 6    | 11           | 6             | 4   | 28     |
| 112WRD                        | 07096000                |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | AT CANON CITY, CO       | 8    |    |    |               |     |      |      |              |               |     |        |
| 112WRD                        | 07099200                |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR PORTLAND, CO       | 12   | 10 | 11 |               |     | 21   |      | 24           | 22            |     |        |
| 112WRD                        | 07099400                |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | ABOVE PUEBLO, CO.       | 8    |    |    |               |     |      |      |              |               |     |        |
| 21COL001                      | 000006                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR PUEBLO             | 5    | 6  | 5  | 6             | 5   | 4    | 5    | 12           | 5             | 6   | 24     |
| 113WRD                        | 070995                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR PUEBLO, COLO       |      |    |    |               |     |      |      |              |               |     |        |
| 21COL001                      | 000005                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR NEPESTA            | 21   | 21 | 20 | 22            | 17  | 13   | 20   | 41           | 18            | 19  | 53     |
| 21COL001                      | 000090                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS AT CATLIN CANAL HDGT |                         | 4    | 4  | 4  | 4             | 4   | 2    | 3    | 8            | 4             | 4   | 15     |
| 21COL001                      | 000004                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR LA JUNTA           | 20   | 20 | 20 | 18            | 16  | 12   | 18   | 40           | 18            | 17  | 48     |
| 112WRD                        | 07122000                |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | NEAR LA JUNTA, CO       |      |    |    |               |     |      |      |              |               |     |        |
| 21COL001                      | 000003                  |      |    |    |               |     |      |      |              |               |     |        |
| ARKANSAS RIVER                | AT LAS ANIMAS           | 6    | 6  | 6  | 5             | 4   | 3    | 6    | 12           | 7             | 4   | 27     |

Table 2 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                              |          | TEMP | DO | PH | FECAI,<br>COLI | NTI | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | PH3 | METALS |
|--------------------------------------|----------|------|----|----|----------------|-----|------|------|--------------|---------------|-----|--------|
| 112-20                               | 07130500 |      |    |    |                |     |      |      |              |               |     |        |
| ARKANSAS RIVER BELOW JOHN MARTIN     |          | 11   | 9  | 11 |                |     | 22   |      | 22           |               |     |        |
| 112-20                               | 07133000 |      |    |    |                |     |      |      |              |               |     |        |
| ARKANSAS RIVER AT LAMAR, CO.         |          | 15   |    |    |                |     |      |      | 15           |               |     |        |
| 21001001                             | 000002   |      |    |    |                |     |      |      |              |               |     |        |
| ARKANSAS RIVER AT LAMAR, COLO        |          | 6    | 6  | 6  | 5              | 5   | 3    | 5    | 12           | 7             | 4   | 24     |
| 21001001                             | 000001   |      |    |    |                |     |      |      |              |               |     |        |
| ARKANSAS RIVER NEAR COOLIDGE, KANSAS |          | 23   | 24 | 23 | 23             | 17  | 15   | 19   | 38           | 19            | 14  | 49     |
| 21000500                             | CRD003   |      |    |    |                |     |      |      |              |               |     |        |
| RIO GRANDE RBY CONE W WILLOW CK      |          |      |    |    |                |     |      |      |              |               |     |        |
| 21000500                             | CRD004   |      |    |    |                |     |      |      |              |               |     |        |
| RIO GRANDE AT BRG NEAR WASSON RN     |          |      |    |    |                |     |      |      |              |               |     |        |
| 21001001                             | 000019   |      |    |    |                |     |      |      |              |               |     |        |
| RIO GRANDE AT MANASSA                |          | 6    | 6  | 6  | 7              | 4   | 2    | 5    | 10           | 5             | 5   | 23     |
| 21001001                             | 000018   |      |    |    |                |     |      |      |              |               |     |        |
| RIO GRANDE EAST OF MANASSA           |          | 10   | 10 | 10 | 10             | 7   | 4    | 8    | 15           | 8             | 9   | 34     |
| 112-20                               | 08251500 |      |    |    |                |     |      |      |              |               |     |        |
| RIO GRANDE NEAR LORATOS, CO.         |          | 29   | 9  | 11 | 7              | 11  | 22   | 15   | 33           | 12            | 11  | 56     |
| 21001001                             | 000037   |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE BELOW COWDREY           |          | 3    | 3  | 1  | 2              | 3   | 1    | 3    | 6            | 3             | 1   | 13     |
| 112-20                               | 06620000 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE RIVER NEAR NORTHGAT     |          | 22   | 12 | 7  | 11             | 12  | 12   | 12   | 27           |               |     |        |
| 21001001                             | 000112   |      |    |    |                |     |      |      |              |               |     |        |
| CONchos RIVER NEAR HAGOTE            |          | 6    | 6  | 6  | 6              | 6   | 3    | 6    | 11           | 5             | 6   | 28     |
| 112-20                               | 06747500 |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE RIVER NEAR RUSTI      |          |      |    |    |                |     |      |      |              |               |     |        |
| 112-20                               | 06752000 |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE R A MO OF CN, NR      |          | 26   | 12 | 12 |                |     | 39   |      | 23           |               | 12  |        |
| 112-20                               | 06752260 |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE RIVER AT FORT CO      |          | 12   | 11 | 12 |                |     | 39   |      | 24           |               | 12  |        |
| 21001001                             | 000026   |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE ABOVE FT COLLINS      |          | 4    | 4  | 4  | 4              | 3   | 3    | 3    | 6            | 4             | 3   | 17     |
| 21001001                             | 000126   |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE NEAR FT. COLLINS      |          | 17   | 17 | 17 | 17             | 15  | 11   | 15   | 35           | 17            | 17  | 45     |
| 112-20                               | 06752500 |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE RIVER NEAR GREELE     |          | 12   | 10 | 12 |                |     | 23   |      | 25           |               |     |        |
| 21001001                             | 000027   |      |    |    |                |     |      |      |              |               |     |        |
| CACHE LA POUDE NEAR GREELEY          |          | 15   | 15 | 15 | 15             | 13  | 8    | 16   | 31           | 15            | 15  | 39     |
| 112-20                               | 06733000 |      |    |    |                |     |      |      |              |               |     |        |
| RIO THOMPSON RIVER AT ESTES PARK     |          | 19   |    |    |                |     |      |      |              |               |     |        |
| 112-20                               | 06734900 |      |    |    |                |     |      |      |              |               |     |        |
| OLYMPUS TUNNEL AT LAKE ESTES, CO     |          | 11   | 11 | 11 | 10             | 11  | 36   |      | 33           |               | 11  |        |
| 112-20                               | 06736700 |      |    |    |                |     |      |      |              |               |     |        |
| RIO THOMPSON P ABOVE DILLE TUNNE     |          | 12   | 12 | 12 | 12             |     |      |      | 12           |               |     |        |
| 112-20                               | 06744000 |      |    |    |                |     |      |      |              |               |     |        |
| RIO THOMPSON RIVER AT MOUTH, NEA     |          | 23   | 11 | 12 |                |     | 23   |      | 24           |               |     |        |
| 21001001                             | 000028   |      |    |    |                |     |      |      |              |               |     |        |
| RIO THOMPSON NEAR MOUTH              |          | 17   | 17 | 17 | 17             | 15  | 11   | 17   | 34           | 17            | 17  | 50     |
| 21001001                             | 000124   |      |    |    |                |     |      |      |              |               |     |        |
| LITTLE THOMPSON NEAR WILLIKEN        |          | 17   | 17 | 17 | 16             | 14  | 11   | 17   | 34           | 16            | 17  | 41     |

Table 2 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                             |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|-------------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 21COL001                            | 000114   |      |    |    |               |     |      |      |              |               |     |        |
| RIG THOMPSON NEAR LOVELAND          |          | 4    | 4  | 4  | 3             | 4   | 2    | 4    | 5            | 3             | 3   | 17     |
| 21COL001                            | 000123   |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE THOMPSON NEAR BERTHOOD       |          | 4    | 4  | 4  | 4             | 4   | 2    | 4    | 8            | 4             | 4   | 17     |
| 21COL001                            | 000125   |      |    |    |               |     |      |      |              |               |     |        |
| RIG THOMPSON RIVER BELOW ESTES PARK |          | 3    | 3  | 3  | 3             | 3   | 2    | 3    | 6            | 3             | 3   | 13     |
| 21COL001                            | 000031   |      |    |    |               |     |      |      |              |               |     |        |
| ST VRAIN BELOW LONGMONT             |          | 17   | 17 | 17 | 17            | 16  | 10   | 16   | 34           | 17            | 17  | 47     |
| 21COL001                            | 000033   |      |    |    |               |     |      |      |              |               |     |        |
| BOULDER CR. AT BLDR WELD CO LINE    |          | 17   | 17 | 17 | 17            | 15  | 10   | 17   | 34           | 16            | 16  | 47     |
| 21COL001                            | 000030   |      |    |    |               |     |      |      |              |               |     |        |
| ST VRAIN AT WELD BOULDER CO LINE    |          |      |    |    |               |     |      |      |              |               |     |        |
| 1124RD                              | 06722000 |      |    |    |               |     |      |      |              |               |     |        |
| N ST. VRAIN CREEK AT LONGMONT DA    |          | 9    | 9  | 9  |               |     | 16   |      | 17           |               |     |        |
| 1124RD                              | 06723400 |      |    |    |               |     |      |      |              |               |     |        |
| SOUTH ST. VRAIN CREEK ABOVE LYON    |          | 8    | 8  | 8  |               |     | 16   |      | 16           |               |     |        |
| 1124RD                              | 06731000 |      |    |    |               |     |      |      |              |               |     |        |
| ST. VRAIN CREEK AT MOUTH, NEAR P    |          | 15   | 11 | 12 |               |     | 23   |      | 24           |               |     |        |
| 21COL001                            | 000035   |      |    |    |               |     |      |      |              |               |     |        |
| CLEAR CREEK ABOVE GOLDEN            |          | 13   | 13 | 13 | 13            | 12  | 9    | 15   | 25           | 15            | 12  | 41     |
| 21COL001                            | 000089   |      |    |    |               |     |      |      |              |               |     |        |
| CLEAR CREEK AT WHEAT RIDGE, COLO    |          | 15   | 15 | 15 | 15            | 11  | 10   | 16   | 30           | 15            | 14  | 37     |
| 21COL001                            | 000016   |      |    |    |               |     |      |      |              |               |     |        |
| FOUNTAIN CREEK BELOW COLORADO SP    |          | 20   | 20 | 20 | 17            | 14  | 11   | 18   | 39           | 18            | 16  | 53     |
| 21COL001                            | 000015   |      |    |    |               |     |      |      |              |               |     |        |
| FOUNTAIN CREEK AT PUERLO            |          | 4    | 5  | 5  | 6             | 6   | 3    | 4    | 12           | 6             | 6   | 27     |
| 21COL001                            | 000017   |      |    |    |               |     |      |      |              |               |     |        |
| FOUNTAIN CREEK NEAR HANITON         |          | 5    | 6  | 6  | 5             | 5   | 3    | 6    | 11           | 6             | 4   | 26     |
| 21COL001                            | 000052   |      |    |    |               |     |      |      |              |               |     |        |
| EAGLE RIVER AT GYPSUM               |          | 12   | 12 | 9  | 13            | 11  | 10   | 12   | 25           | 12            | 12  | 34     |
| 21COL001                            | 000076   |      |    |    |               |     |      |      |              |               |     |        |
| EAGLE RIVER AT TOWN OF EDWARDS      |          | 11   | 10 | 7  | 11            | 9   | 9    | 12   | 23           | 11            | 11  | 30     |
| 21COL001                            | 000083   |      |    |    |               |     |      |      |              |               |     |        |
| HUMESTAKE CRK & HORNSILVER CMPGR    |          | 3    | 3  | 1  | 3             | 3   | 1    | 3    | 4            | 3             | 2   | 13     |
| 21COL001                            | 000053   |      |    |    |               |     |      |      |              |               |     |        |
| ROARING FORK AT MOUTH               |          | 13   | 13 | 10 | 14            | 11  | 10   | 14   | 28           | 13            | 13  | 39     |
| 21COL001                            | 000054   |      |    |    |               |     |      |      |              |               |     |        |
| GUNNISON SOUTHEAST OF GRD JUNCT     |          | 11   | 11 | 8  | 12            | 9   | 9    | 12   | 24           | 11            | 11  | 36     |
| 21COL001                            | 000056   |      |    |    |               |     |      |      |              |               |     |        |
| GUNNISON RIVER NEAR DELTA           |          | 4    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 4   | 15     |
| 21COL001                            | 000057   |      |    |    |               |     |      |      |              |               |     |        |
| GUNNISON RIVER WEST OF GUNNISON     |          | 5    | 5  | 5  | 5             | 4   | 2    | 5    | 10           | 5             | 4   | 15     |
| 21COL001                            | 000100   |      |    |    |               |     |      |      |              |               |     |        |
| N FK OF GUNNISON BELOW HOTCHKISS    |          | 3    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 4   | 16     |
| 1124RD                              | 09152500 |      |    |    |               |     |      |      |              |               |     |        |
| GUNNISON RIVER NEAR GRAND JUNCTI    |          | 12   | 11 | 12 | 10            | 11  | 25   | 12   | 35           | 10            | 11  | 54     |
| 21COL001                            | 000055   |      |    |    |               |     |      |      |              |               |     |        |
| UNCOMPAHGRE RIVER AT DELTA          |          | 13   | 13 | 9  | 11            | 10  | 9    | 13   | 25           | 12            | 12  | 46     |
| 21COL001                            | 000079   |      |    |    |               |     |      |      |              |               |     |        |
| UNCOMPAHGRE RIVER AT RIDGWAY        |          | 5    | 5  | 5  | 5             | 5   | 2    | 5    | 9            | 5             | 4   | 22     |

Table 2 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                                                    | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | THUR | DIS<br>SOLID | SUSP<br>SOLID | LEAD | NETALS |
|------------------------------------------------------------|------|----|----|---------------|-----|------|------|--------------|---------------|------|--------|
| 21COL001 000061<br>DOLORES RIVER AT GATEWAY                | 3    | 3  | 1  | 3             | 3   | 1    | 3    | 5            | 3             | 2    | 7      |
| 21COL001 000062<br>DOLORES RIVER NEAR JUNCTION OF DOLORES  | 4    | 4  | 4  | 5             | 5   | 2    | 4    | 9            | 5             | 5    | 24     |
| 21COL001 000064<br>DOLORES RIVER ABOVE CONFLUENCE WITH SAN | 11   | 10 | 11 | 11            | 7   | 6    | 10   | 18           | 9             | 8    | 36     |
| 21COL001 000064<br>SAN MIGUEL AT CONFL WITH DOLORES        | 9    | 8  | 9  | 9             | 9   | 4    | 9    | 15           | 9             | 8    | 26     |
| 21COL001 000101<br>SAN MIGUEL NEAR HORNWOOD                | 4    | 3  | 4  | 4             | 4   | 1    | 4    | 8            | 5             | 2    | 17     |
| 112WRD 09177000<br>SAN MIGUEL RIVER AT URAPAN, CO.         | 16   | 14 | 16 | 5             | 13  | 18   | 13   | 37           | 11            | 13   |        |
| 112WRD 09177100<br>SAN MIGUEL RIVER BELOW URAPAN, C        | 14   | 14 | 14 | 4             | 13  | 13   | 13   | 33           | 11            | 13   |        |
| 112WRD 09304200<br>WHITE RIVER ABOVE COAL CREEK, NE        | 9    |    |    |               |     |      |      | 9            |               |      |        |
| 112WRD 09304800<br>WHITE RIVER BELOW WEEKER, CO.           | 12   | 12 | 12 |               | 12  | 12   |      | 22           | 12            | 12   | 28     |
| 112WRD 09306300<br>WHITE RIVER ABOVE RANGELY, CO.          | 12   | 12 | 12 |               | 12  | 12   |      | 24           | 32            | 12   | 28     |
| 112WRD 09306500<br>WHITE R NR WATSON UT                    | 18   | 6  | 2  |               | 4   | 14   | 4    | 21           | 10            | 4    | 14     |
| 21COL001 000043<br>WHITE RIVER AT WEEKER                   | 4    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 4    | 15     |
| 21COL001 000044<br>WHITE RIVER AT RANGELY                  | 4    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 3    | 15     |
| 21COL001 000117<br>WHITE RIVER BELOW PICEANCE CRK.         | 4    | 4  | 2  | 4             | 3   | 2    | 4    | 8            | 4             | 4    | 15     |
| 21COL001 000038<br>YAMPA RIVER AT EILNER                   | 6    | 6  | 4  | 5             | 4   | 3    | 5    | 10           | 5             | 4    | 21     |
| 21COL001 000039<br>YAMPA RIVER NEAR MAYBELL                | 4    | 4  | 2  | 3             | 4   | 2    | 4    | 8            | 4             | 4    | 11     |
| 21COL001 000040<br>YAMPA BELOW LITTLE SNAKE RIVER          | 4    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 4    | 15     |
| 21COL001 000041<br>LITTLE SNAKE ABOVE LILY                 | 4    | 4  | 2  | 4             | 4   | 2    | 4    | 8            | 4             | 4    | 14     |
| 21COL001 000088<br>YAMPA ABOVE OAK CREEK CONFLUENCE        | 4    | 4  | 2  | 3             | 4   | 2    | 4    | 7            | 4             | 3    | 15     |
| 112WRD 09251000<br>YAMPA RIVER NEAR MAYBELL, CO.           | 12   | 9  | 12 | 7             | 12  | 24   | 12   | 35           | 6             | 12   | 40     |
| 112WRD 09260000<br>LITTLE SNAKE RIVER NEAR LILY, CO        | 12   | 8  | 12 | 7             | 12  | 24   | 12   | 35           | 61            | 12   | 42     |
| 21COL001 000063<br>SAN JUAN RIVER NEAR STATE LINE          | 4    | 4  | 4  | 4             | 4   | 2    | 4    | 8            | 4             | 4    | 20     |
| 21COL001 000068<br>SAN JUAN ABOVE PAVAJIO RESERVOIR        | 5    | 4  | 5  | 3             | 4   | 2    | 4    | 10           | 5             | 4    | 24     |
| 21COL001 000119<br>SAN JUAN RIVER BELOW PAGOSA             | 5    | 5  | 5  | 4             | 6   | 3    | 5    | 10           | 5             | 4    | 22     |
| 21COL001 000069<br>PIEDRA RIVER NE OF ARROYOS, COLO        | 6    | 5  | 6  | 5             | 4   | 2    | 3    | 10           | 5             | 4    | 23     |

Table 2 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Colorado

| STATION                                  |           | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | PH3 | METALS |
|------------------------------------------|-----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 112+90                                   | 09347200  |      |    |    |               |     |      |      |              |               |     |        |
| MIDDLE FORK PIEDRA RIVER NR PAGO         | 21C01.001 |      |    |    |               |     |      |      |              |               |     |        |
|                                          | 000067    |      |    |    |               |     |      |      |              |               |     |        |
| LOS PINOS RIVER NEAR LAROCA              | 21C01.001 | 5    | 3  | 4  | 5             | 4   | 2    | 3    | 8            | 4             | 4   | 19     |
|                                          | 000066    |      |    |    |               |     |      |      |              |               |     |        |
| ANIHAS RIVER NEAR BONDAD, COLO.          | 21C01.001 | 5    | 4  | 5  | 5             | 6   | 2    | 6    | 11           | 7             | 4   | 22     |
|                                          | 000081    |      |    |    |               |     |      |      |              |               |     |        |
| ANIHAS RIVER ABOVE DURANGO               | 21C01.001 | 5    | 5  | 5  | 5             | 5   | 4    | 4    | 9            | 4             | 5   | 21     |
|                                          | 000082    |      |    |    |               |     |      |      |              |               |     |        |
| ANIHAS RIVER NEAR SILVERTON              | 21C01.001 | 5    | 5  | 5  | 5             | 5   | 4    | 4    | 8            | 4             | 5   | 20     |
|                                          | 000065    |      |    |    |               |     |      |      |              |               |     |        |
| LA PLATA R NORTH OF LA PLATA             | 21C01.001 | 4    | 3  | 4  | 4             | 5   | 1    | 5    | 10           | 6             | 3   | 15     |
|                                          | 000104    |      |    |    |               |     |      |      |              |               |     |        |
| LA PLATA RIVER AT HIGHWAY 160            | 21C01.001 | 4    | 4  | 4  | 4             | 5   | 1    | 5    | 10           | 6             | 3   | 16     |
|                                          | 000064    |      |    |    |               |     |      |      |              |               |     |        |
| MANCOS RIVER 3 MILES NORTH OF STATE LINE | 21C01.001 | 4    | 4  | 4  | 4             | 4   | 2    | 5    | 8            | 4             | 5   | 23     |
|                                          | 000103    |      |    |    |               |     |      |      |              |               |     |        |
| MANCOS RIVER AT MANCOS                   |           | 6    | 6  | 6  | 6             | 6   | 2    | 6    | 12           | 6             | 6   | 24     |

Table 3 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG. |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Temperature</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| S Platte R at Julesburg          |     |     |     |     |     |     | ○   |     |     |     |     |     |            |      |
| <u>Dissolved Oxygen (DO)</u>     |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| S Platte R at 88th Ave., Denver  | ●   | X   | X   | X   | X   | -   | X   | ●   | -   | -   | -   | -   | 41         |      |
| S Platte R at 124th Ave., Denver | -   | -   | -   | -   | -   | -   | -   | X   | -   | -   | -   | -   |            |      |
| Uncompahgre R at Delta           |     |     |     | ○   |     |     |     |     |     |     |     |     |            |      |
| Little Snake R nr Lily           |     |     |     | X   |     |     |     |     |     |     |     |     |            |      |
| <u>pH</u>                        |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Arkansas R nr Canon City         |     | X   |     | X   |     |     |     |     |     |     |     |     |            |      |
| Arkansas R nr Portland           |     |     |     | X   |     |     |     |     |     |     |     |     |            |      |
| Arkansas R nr Nepesta            |     |     |     |     |     | X   |     |     |     |     |     |     |            |      |
| Arkansas R at Catlin Canal       |     |     |     | X   |     |     |     |     |     |     |     |     |            |      |
| Rio Grande R nr Manassa          |     |     |     | X   |     |     |     |     |     |     |     |     |            |      |
| Big Thompson R nr Mouth          | ○   |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Animas R nr Silverton            |     | ○   |     |     |     |     |     |     |     |     |     |     |            |      |
| <u>Fecal Coliform Bacteria</u>   |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| S Platte R at 60th Ave., Denver  |     |     |     |     | ○   | -   | ○   | ●   | -   | -   | -   | -   | 36         |      |
| S Platte R at 88th Ave., Denver  | ○   |     |     | ○   |     | -   | ○   |     | -   | -   | -   | -   | 40         | 5    |
| S Platte R at Henderson          |     | ●   |     | -   | -   |     | ●   | ●   | ●   |     |     |     | 47         | 2    |
| S Platte R at Kersey             |     |     |     | -   | -   |     | -   |     | ●   |     | -   |     | 36         |      |
| S Platte R blw Sterling          | -   | -   |     | -   | -   | ○   | -   | -   | -   |     | -   | -   |            |      |
| Colorado R nr Fruita             | -   |     | -   | ○   | -   | -   | -   | -   | -   |     | -   | -   |            |      |
| Colorado R nr Loma               |     | -   | -   | ●   |     | -   | -   |     |     |     |     |     | 30         |      |
| Arkansas R nr Nepesta            |     | -   | -   | ○   | ●   |     |     |     |     |     |     |     | 20         |      |
| Arkansas R nr La Junta           |     |     |     |     | ●   | ○   | ○   |     | -   |     |     |     | 31         |      |
| Arkansas R at Las Animas         | -   |     | -   | -   | ●   | -   | ●   | -   | -   | -   | -   |     |            |      |
| Arkansas R nr Coolidge, KS       |     |     |     | ●   | ●   |     |     |     |     |     |     |     | 22         |      |
| Cache La Poudre nr Ft. Collins   |     |     |     | -   | -   |     | ●   |     |     |     |     |     | 26         |      |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 3. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                                  | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Fecal Coliform Bacteria Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cache La Poudre nr Greeley               | ●   |     |     | -   | -   | ●   |     | -   | ●   | ●   | ●   | -   | 57         | 1   |
| Big Thompson R blw Estes Park            | -   | -   | -   | -   | -   | ○   | -   | -   | -   | -   | -   | -   |            |     |
| Big Thompson R nr Mouth                  |     |     |     | -   | -   | ○   | ○   | ○   | ○   |     |     |     | 37         |     |
| Little Thompson R nr Milliken            | -   |     |     | -   | -   | ○   | ○   | ○   | ○   |     |     |     | 39         | 6   |
| St Vrain Cr blw Longmont                 |     |     | -   | -   |     |     | ○   |     | ○   | ●   | ●   |     | 46         | 3   |
| Boulder Cr at Bldr-Weld Cos              |     |     | -   | -   |     | ○   |     |     |     |     |     |     | 33         |     |
| Clear Cr at Wheat Ridge                  |     |     |     |     |     |     | ○   |     |     |     |     |     | 21         |     |
| Fountain Cr blw Colorado Springs         | ●   |     |     |     | ○   | ●   |     | -   | ●   |     |     |     | 43         | 4   |
| Fountain Cr at Pueblo                    |     |     |     |     |     |     |     |     |     |     |     | ●   | 19         |     |
| Gunnison R nr Delta                      | ●   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Uncompahgre R at Delta                   |     |     |     |     |     |     |     |     |     | ○   |     |     | 27         |     |
| Dolores R abv San Miguel R               |     |     |     |     |     |     |     | ●   |     | ●   |     |     | 22         |     |
| Little Snake R nr Lily                   |     |     |     |     |     |     |     | ○   |     |     |     |     | 18         |     |
| San Juan R blw Pagosa Springs            | ●   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Animas R nr Silverton                    |     |     |     |     |     |     |     | ●   |     |     |     |     |            |     |
| <u>Nitrate</u>                           |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| S Platte R abv Littleton                 |     | ○   | ○   | -   | -   |     |     |     |     |     |     |     | 23         |     |
| S Platte R at 60th Ave., Denver          | ●   | ●   | ●   | ○   | ●   |     |     | ○   |     |     |     |     | 59         | 3   |
| S Platte R at Henderson                  | ●   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| S Platte R nr Kersey                     |     |     |     |     |     |     | ●   |     | ○   | ●   | ○   |     |            |     |
| Colorado R nr Loma                       |     |     |     | ○   |     |     |     |     |     |     |     |     | 17         |     |
| Arkansas R nr Salida                     | ○   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Arkansas R nr Pueblo                     |     |     |     |     |     |     |     | ●   |     |     |     |     | 39         |     |
| Arkansas R nr Nepesta                    | ○   |     |     |     |     |     |     |     |     |     |     |     | 29         |     |
| Arkansas R nr La Junta                   |     | ●   |     | ●   |     |     |     |     |     |     |     |     | 43         | 6   |
| Arkansas R at Lamar                      |     |     |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Arkansas R nr Coolidge, KS               |     |     |     |     |     |     |     |     | ○   |     |     |     | 22         |     |
| N Platte R blw Cowdrey                   |     | ●   |     |     |     |     |     |     |     |     |     |     |            |     |
| Cache La Poudre nr Ft. Collins           | ●   | ●   |     |     |     |     |     |     |     | ●   | ●   | -   | 48         |     |
| Cache La Poudre nr Greeley               |     | ●   | ●   | -   | -   |     | ○   | -   | ○   | ○   | ●   | -   | 62         | 2   |

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- Insufficient data

Table 3. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG. |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Nitrate Continued</u>         |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Big Thompson R at Mouth          | ●   | ●   | -   | -   |     | ●   |     |     |     | ○   | -   |     | 50         | 4    |
| Little Thompson R nr Milliken    | ●   | ●   | ●   | -   | -   |     |     |     |     | ○   | -   |     | 49         | 5    |
| St Vrain Cr blw Longmont         | ●   | ●   | -   | -   |     | ○   |     |     |     |     |     | -   | 42         |      |
| Boulder Cr at Bldr-Weld Cos      | ○   |     | -   | -   |     |     |     |     |     | ●   |     | -   | 31         |      |
| Fountain Cr blw Colorado Springs |     | ●   |     |     | ○   | ●   |     | ●   | -   | ●   | ●   | ●   | 63         | 1    |
| Fountain Cr at Pueblo            | -   | ○   | -   | ●   | -   | ●   | -   | ●   | -   | ○   | -   | ○   |            |      |
| Uncompahgre R at Delta           |     | ●   | -   | ○   | ●   |     |     |     |     |     |     |     | 47         |      |
| San Miguel R at Mouth            | ●   | ●   |     |     |     |     |     |     |     |     |     |     | 29         |      |
| Yampa R at Milner                |     | ○   |     |     |     |     |     |     |     |     |     |     |            |      |
| Yampa R nr Maybell               |     |     |     |     |     |     |     |     |     | ●   |     |     |            |      |
| <u>Phosphorus</u>                |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| S Platte R at 60th Ave., Denver  | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 85         | 4    |
| S Platte R at 88th Ave., Denver  | ●   | ●   | ●   | ●   | ●   | -   | ●   | ●   | -   | -   | -   | -   | 99         | 1    |
| S Platte R " 124th Ave., Denver  | -   | -   | -   | -   | -   | -   | -   | ●   | -   | -   | -   | -   |            |      |
| S Platte R at Henderson          | -   | -   | -   | -   | -   | -   | ●   | -   | ●   | ●   | ●   | -   | 100        | 2    |
| S Platte R nr Kersey             | -   | -   | -   | -   | -   | ○   | ○   | -   | -   | ●   | ●   | -   | 71         |      |
| Colorado R nr Loma               |     |     |     | ○   |     |     |     |     |     |     |     |     | 16         |      |
| Arkansas R nr Nepesta            |     |     |     |     |     |     |     |     |     | ○   | ○   |     | 42         |      |
| Cache La Poudre nr Ft. Collins   |     |     |     |     |     | ●   | ○   |     |     | ●   |     |     | 51         |      |
| Cache La Poudre nr Greeley       |     |     |     |     |     | ○   |     |     |     | ●   | ●   |     | 62         |      |
| Big Thompson R nr Mouth          |     |     |     |     |     |     |     |     |     | ○   | ○   |     | 34         |      |
| St Vrain Cr blw Longmont         |     |     |     |     |     |     |     |     | ○   | ●   | ●   |     | 55         |      |
| Boulder Cr at Bldr-Weld Cos      |     |     |     |     |     | ●   | ●   | ●   | ●   | ●   |     |     | 80         | 5    |
| Clear Cr at Wheat Ridge          |     |     |     |     |     |     |     |     | ●   | ○   | ●   |     | 53         |      |
| Fountain Cr blw Colorado Springs |     |     |     | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 95         | 3    |
| Fountain Cr at Pueblo            |     |     |     |     |     |     |     |     |     |     | ○   |     | 33         |      |
| Gunnison R nr Grand Jct          |     |     | ○   |     |     |     |     |     |     |     |     |     | 17         |      |
| San Miguel R at Uravan           |     |     | ●   |     | ○   |     |     |     |     |     |     |     | 14         |      |
| San Miguel R blw Uravan          |     |     |     |     | ○   |     |     |     |     |     |     |     | 14         |      |

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Table 3. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | PKG |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Phosphorus Continued</u>      |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| White R blw Meeker               |     |     |     | ○   |     |     |     |     |     |     |     |     | 15         |     |
| White R abv Rangely              |     | ●   | ●   |     |     |     |     |     |     |     |     |     | 27         |     |
| Yampa R nr Maybell               |     | ●   | ●   |     |     |     |     |     |     |     |     |     | 23         |     |
| Little Snake R nr Lily           |     | ●   | ○   | ●   |     |     |     |     | ○   |     |     |     | 40         |     |
| <u>Turbidity</u>                 |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| S Platte R nr Kersey             |     |     |     |     |     | ●   |     |     |     |     |     |     | 25         |     |
| S Platte R blw Sterling          |     |     |     |     |     | ●   |     |     |     |     |     |     |            |     |
| St Platte R nr Julesburg         |     |     | ●   |     |     | ●   |     |     |     |     |     |     | 35         |     |
| Colorado R nr Dotsero            |     |     |     | ○   |     |     |     |     |     |     |     |     | 15         |     |
| Colorado R at New Castle         |     |     |     |     | ●   |     |     |     |     |     |     |     | 19         |     |
| Colorado R nr Cameo              |     |     |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Colorado R nr Fruita             |     | ●   |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Colorado R nr Loma               |     | ●   | -   | ●   | ●   | ●   |     |     | ●   |     | -   |     | 66         | 2   |
| Arkansas R nr Canon City         |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Arkansas R nr Nepesta            | ○   |     |     |     | ●   | -   | ●   | ●   |     |     |     |     | 43         |     |
| Arkansas R nr La Junta           | ○   | ●   | ●   |     | ●   | ●   | ●   | ●   | ●   | -   | ●   |     | 73         | 1   |
| Arkansas R at Las Animas         | -   | ●   | -   |     | -   | ●   | -   | ●   | -   |     | -   |     | 51         | 4   |
| Arkansas R at Lamar              | -   | ●   | -   |     | -   | ●   | -   | -   |     |     |     |     | 41         |     |
| Arkansas R nr Coolidge, KS       |     |     |     |     | ●   | ●   | ●   | -   | ○   |     |     |     | 44         |     |
| Cache La Poudre R nr Greeley     |     |     |     |     |     | ●   |     |     |     |     |     |     | 19         |     |
| Big Thompson R nr Loveland       |     |     |     |     |     | ●   |     |     |     |     |     |     |            |     |
| Big Thompson R nr Mouth          |     |     |     |     |     |     | ●   | ○   |     |     |     |     | 30         |     |
| Little Thompson R nr Milliken    |     |     |     |     |     | ○   | ●   | ●   |     |     |     |     | 35         |     |
| St Vrain Cr blw Longmont         |     |     |     |     |     | ●   | ●   | ○   |     |     |     |     | 34         |     |
| Boulder Cr at Bldr-Weld Cos      |     | ●   |     |     |     |     |     |     |     |     |     |     | 25         |     |
| Fountain Cr blw Colorado Springs |     |     |     |     | ●   |     |     |     |     |     |     |     | 23         |     |
| Fountain Cr at Pueblo            |     |     |     |     |     |     |     |     |     |     | ●   |     | 37         |     |
| Fountain Cr nr Manitou           |     |     |     |     |     |     |     | ●   |     |     |     |     | 28         |     |
| Eagle R at Gypsum                |     |     |     |     |     | ○   |     |     |     |     |     |     | 16         |     |
| Roaring Fork R at Mouth          |     |     |     |     |     | ●   |     |     |     |     |     |     | 17         |     |

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Table 3. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                             | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG. |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Turbidity Continued</u>          |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Gunnison R nr Delta                 |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| Gunnison R nr Grand Jct             |     |     |     | ●   | ●   | ●   |     |     | ○   | ○   |     |     | 57         | 3    |
| N Fork Gunnison blw Hotchkiss       |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| Uncompahgre R at Ridgway            |     |     |     |     | ●   |     |     |     |     |     |     |     |            |      |
| Uncompahgre R at Delta              |     |     |     | ●   | ●   |     |     |     |     | ●   |     |     | 53         |      |
| Dolores R at Gateway                |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| Dolores R abv San Miguel            | ○   | ●   |     | ●   | ●   | -   |     | -   |     |     |     | -   | 41         |      |
| San Miguel R nr Norwood             |     |     |     |     | ●   |     |     |     |     |     |     |     |            |      |
| San Miguel R at Uravan              |     |     |     | ●   |     | ●   |     |     |     |     |     |     | 22         |      |
| San Miguel R blw Uravan             |     |     |     | ○   | ○   | ○   |     |     |     |     |     |     | 20         |      |
| San Miguel R at Mouth               |     |     |     | ●   | ●   |     |     |     |     |     |     |     | 32         |      |
| White R blw Piceance Cr             |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| White R at Rangely                  |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| White R nr Watson, UT               |     |     |     | ●   |     |     | ●   |     |     |     |     |     |            |      |
| Yampa R nr Maybell                  |     |     |     | ●   |     |     |     |     |     |     |     |     | 20         |      |
| Yampa R abv Lily                    |     | ●   |     | ●   |     |     |     |     |     |     |     |     |            |      |
| Yampa R blw Little Snake R          |     |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| Little Snake R nr Lily              |     |     | ●   | ●   | ●   | ●   |     |     |     |     |     |     | 50         |      |
| San Juan R abv Navajo Res.          |     |     |     | ○   |     |     |     |     |     |     |     |     |            |      |
| San Juan R nr state line            | -   | ●   | -   | -   | -   | ●   | -   | ●   | -   | -   | -   | -   |            |      |
| Animas R nr Bondad                  |     |     |     |     |     | ●   |     |     |     |     |     |     |            |      |
| La Plata R nr La Plata              |     |     |     | ●   |     | ●   |     |     |     |     |     |     |            |      |
| Mancos R nr CO-UT line              |     |     |     | ●   |     | ●   |     |     |     |     |     |     |            |      |
|                                     |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| <u>Total Dissolved Solids (TDS)</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| S Platte R nr Kersey                |     |     |     |     |     | ●   |     |     |     |     |     |     |            |      |
| S Platte R nr Weldona               |     |     |     |     |     |     |     |     |     |     | ○   |     | 40         |      |
| S Platte R blw Sterling             |     |     | ○   |     |     |     |     | ○   |     | ○   |     |     |            |      |
| St Platte R nr Julesburg            | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | 50         |      |
| Arkansas R nr La Junta              |     |     |     | ●   |     |     |     |     | ○   |     | ○   |     | 39         |      |
|                                     |     |     |     |     |     |     |     |     |     |     |     |     |            |      |

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| STATION                                 | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|-----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Total Dissolved Solids Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Arkansas R at Las Animas                |     | ●   |     | ●   |     |     |     |     |     | ●   |     | ●   | 62         | 5   |
| Arkansas R blw John Martin              | ●   | ●   | ●   | ●   | ●   |     |     | ●   | ●   | ●   | ●   |     | 67         | 3   |
| Arkansas R at Lamar                     | ●   |     | ●   | ●   | ●   |     |     | ●   | ●   |     |     |     | 83         | 1   |
| Arkansas R nr Coolidge, KS              | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 79         | 2   |
| Cache La Poudre nr Ft. Collins          |     |     |     |     |     |     |     |     | ○   | ○   | ○   |     |            |     |
| Big Thompson R nr Mouth                 | ○   | ○   | ○   | ○   | ○   |     |     |     | ○   |     | ○   | ○   | 47         |     |
| Little Thompson R nr Berthoud           |     | ○   |     |     |     |     |     |     |     | ○   |     |     |            |     |
| Little Thompson R nr Milliken           | ●   | ●   | ●   |     |     |     |     |     |     | ●   | ●   |     | 55         | 6   |
| St Vrain Cr at Mouth                    |     |     |     |     |     |     |     |     |     | ○   |     |     | 31         |     |
| Fountain Cr nr Pueblo                   |     |     |     | ○   |     | ○   |     | ○   |     | ○   |     |     | 49         |     |
| Uncompahgre R at Delta                  | ○   | ●   |     |     | ●   |     |     |     |     | ○   | ○   |     | 52         |     |
| Dolores R abv San Miguel R              | ●   | ●   |     |     |     |     | ●   | ●   |     | ●   | ●   |     | 67         | 4   |
| Dolores R at Gateway                    |     | ○   |     |     |     |     |     |     |     | ●   |     |     |            |     |
| San Miguel R blw Uravan                 |     |     |     |     |     |     |     |     | ○   |     |     |     | 29         |     |
| San Miguel R at Mouth                   |     |     |     |     |     |     |     |     |     | ○   |     |     | 31         |     |
| Mancos R nr CO-NM line                  |     |     |     |     |     |     |     |     |     | ○   |     |     |            |     |
| <u>Suspended Sediment</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| S Platte R nr Weldona                   |     |     |     |     | ●   | ●   |     |     |     |     |     |     | 39         |     |
| S Platte R at Julesburg                 |     |     | ●   |     |     | ●   |     |     |     |     |     | ○   | 35         |     |
| Colorado R at Loma                      |     |     |     | ●   |     | ●   |     |     | ○   |     |     |     | 44         |     |
| Colorado R nr CO-UT Line                | ●   |     | ●   | ●   | ●   | ●   | ●   | ○   | ●   |     | ○   |     | 68         | 1   |
| Arkansas R at Canon City                |     |     |     |     |     |     | ○   |     |     |     |     |     |            |     |
| Arkansas R nr Portland                  |     |     |     |     | ●   | ●   | ●   | ●   |     |     |     |     | 31         |     |
| Arkansas R at Nepesta                   |     |     |     |     |     |     | ●   |     |     |     |     |     | 26         |     |
| Arkansas R nr La Junta                  |     | ●   | ●   |     |     | ●   | ●   | ●   | ●   |     |     |     | 66         | 3   |
| Arkansas R at Las Animas                |     | ●   |     |     |     | ●   |     | ●   |     |     |     |     | 47         |     |
| Arkansas R at Lamar                     |     | ●   |     |     |     |     |     |     |     |     |     |     | 33         |     |
| Arkansas R nr Coolidge, KS              |     |     |     |     |     | ●   | ●   |     |     |     |     |     | 32         |     |
| Cache La Poudre R nr Greeley            |     |     |     |     |     | ●   |     |     |     |     |     |     | 17         |     |
| Big Thompson R nr Mouth                 |     |     |     |     |     | ○   | ●   | ○   |     |     |     |     | 27         |     |

X Minor exceedance of standards (for Temperature, DO, and pH only)

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Table 3 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

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| STATION                          | JAN | FEB      | MAR | APR      | MAY | JUN      | JUL | AUG      | SEP | OCT      | NOV      | DEC       | AVG<br>WQI | RKG |
|----------------------------------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|----------|-----------|------------|-----|
| Trace Metals                     |     |          |     |          |     |          |     |          |     |          |          |           |            |     |
| S Platte R abv Littleton         |     |          |     |          |     | CN<br>20 |     |          |     |          |          |           |            |     |
| S Platte R at Henderson          |     | CN<br>28 |     |          |     |          |     | CN<br>29 |     | CN<br>21 |          |           |            |     |
| S Platte R nr Julesburg          |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Colorado R nr Loma               |     |          |     |          |     |          |     | Zn<br>31 |     |          |          |           |            |     |
| Arkansas R blw Leadville         |     | Zn<br>32 |     | Zn<br>27 |     |          |     |          |     | Zn<br>31 |          |           |            |     |
| Arkansas R nr Canon City         |     |          |     |          |     | Cd<br>51 |     |          |     |          |          |           |            |     |
|                                  |     |          |     |          |     | Zn<br>33 |     |          |     |          |          |           |            |     |
| Arkansas R nr Pueblo             |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Arkansas R nr Nepesta            |     |          |     |          |     |          |     |          |     |          | CN<br>42 |           |            |     |
| Arkansas R nr La Junta           |     |          |     |          |     | Cu<br>30 |     |          |     |          |          |           |            |     |
| Arkansas R at Las Animas         |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Arkansas R at Lamar              |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Arkansas R nr Coolidge, KS       |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Conejos R nr Magote              |     |          |     | CN<br>47 |     |          |     |          |     |          |          |           |            |     |
| Big Thompson R nr Loveland       |     |          |     |          |     | Zn<br>27 |     |          |     |          |          |           |            |     |
| Clear Cr abv Golden              |     | Pb<br>78 |     |          |     |          |     |          |     |          |          |           |            |     |
| Fountain Cr nr Manitou           |     |          |     |          |     |          |     | Pb<br>56 |     | CN<br>20 |          | CN<br>20  |            |     |
| Fountain Cr blw Colorado Springs |     |          |     | CN<br>25 |     | CN<br>22 |     |          |     | CN<br>21 |          | CN<br>22  |            |     |
| Fountain Cr at Pueblo            |     | Zn<br>20 |     |          |     |          |     |          |     |          |          | Cd<br>100 |            |     |
| Eagle R at Edwards               |     |          |     | Zn<br>33 |     |          |     |          |     |          |          |           |            |     |
| Gunnison R nr Delta              |     |          |     |          |     |          |     |          |     | CN<br>22 |          |           |            |     |
| Gunnison R nr Gunnison           |     |          |     |          |     |          |     |          |     |          | CN<br>20 |           |            |     |
| Uncompahgre R at Ridgway         |     |          |     |          |     | Cu<br>78 |     |          |     |          |          |           |            |     |
|                                  |     |          |     |          |     | Pb<br>33 |     |          |     |          |          |           |            |     |
|                                  |     |          |     |          |     | Zn<br>21 |     |          |     |          |          |           |            |     |
| Uncompahgre R at Delta           |     |          |     |          |     |          |     |          |     | CN<br>20 |          |           |            |     |



Table 5. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Phosphorus</u>         |                               | <u>WQI*</u> |
|---------------------------|-------------------------------|-------------|
| 1.                        | Powder R at Moorhead          | 58          |
| 2.                        | Milk R at Nashua              | 36          |
| 3.                        | Pumpkin Cr nr Miles City      | 35          |
| 4.                        | Yellowstone R nr Terry        | 31          |
| <u>Turbidity</u>          |                               |             |
| 1.                        | Powder R at Moorhead          | 86          |
| 2.                        | Rosebud Cr at Mouth           | 61          |
| 3.                        | Pumpkin Cr nr Miles City      | 59          |
| 4.                        | Rosebud Cr nr Colstrip        | 58          |
| 5.                        | Yellowstone R nr Terry        | 54          |
| <u>Dissolved Solids</u>   |                               |             |
| 1.                        | Mizpah Cr at Olive            | 92          |
| 2.                        | E Fork Armells Cr nr Colstrip | 84          |
| 3.                        | Pumpkin Cr nr Loesch          | 78          |
| 4.                        | Armells Cr nr Forsyth         | 71          |
| 5.                        | Redwater R at Circle          | 65          |
| 6.                        | Hanging Woman Cr nr Birney    | 59          |
| <u>Suspended Sediment</u> |                               |             |
| 1.                        | Powder R at Moorhead          | 87          |
| 2.                        | Missouri R nr Culbertson      | 83          |
| 3.                        | Musselshell R at Mosby        | 72          |
| 4.                        | Tongue R at Miles City        | 66          |
| 5.                        | Prairie Elk Cr nr Oswego      | 63          |
| 6.                        | Milk R at Nashua              | 62          |
| <u>Trace Elements</u>     |                               |             |
| 1.                        | Redwater R at Vida            | As=100      |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature.

Table 6. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Montana

| STATION                          |          | TEMP | DO | PH | FECAI<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 112WRD                           | 06054500 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT TOSTON, MT.    |          | 37   | 37 | 37 | 12            | 12  | 24   | 12   | 61           | 8             | 12  | 56     |
| 214THDWD                         | 304110   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI R. NE. TOWNSEND MT      |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06090800 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT FORT BENTON, M |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06109500 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT VIRGELLE, MT.  |          | 36   | 36 | 36 | 12            | 12  | 24   | 12   | 60           | 9             | 12  | 55     |
| 121MRRCF                         | 293007   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI R NEAR ZORTMAN          |          | 4    |    | 4  |               | 5   | 5    | 3    | 3            | 3             | 5   | 8      |
| 121MRRCF                         | 293003   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER @ FT PECK         |          | 4    |    | 4  |               |     | 1    |      |              |               | 3   | 4      |
| 112WRD                           | 06132000 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER BELOW FORT PECK D |          | 36   | 36 | 36 | 12            | 12  | 23   | 12   | 58           | 7             | 12  | 56     |
| 112WRD                           | 06177000 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER NEAR WOLF POINT,  |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06185500 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER NEAR CULBERTSON,  |          | 36   | 35 | 36 | 11            | 12  | 24   | 12   | 60           | 6             | 12  | 70     |
| 112WRD                           | 06191500 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT CORWIN SPR  |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06192500 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER NEAR LIVINGSTO |          | 11   |    | 12 |               |     | 30   |      | 21           |               |     |        |
| 112WRD                           | 06214050 |      |    |    |               |     |      |      |              |               |     |        |
| CLARKS FORK YELLOWSTONE RIVER NE |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06214100 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER NEAR LAUREL, M |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06214500 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT BILLINGS MT |          | 42   | 37 | 37 | 11            | 12  | 24   | 12   | 62           | 13            | 12  | 56     |
| 112WRD                           | 06217500 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT HUNTLEY, MT |          | 24   | 24 | 24 | 24            | 24  | 24   | 24   | 60           | 33            | 24  | 14     |
| 112WRD                           | 06218000 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT CUSTER, MT. |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06294840 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT MYERS, MT.  |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06295000 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT FORSYTH, MT |          | 26   | 12 | 12 | 12            | 12  | 12   | 9    | 24           | 20            | 12  | 14     |
| 112WRD                           | 06296120 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER NEAR MILES CIT |          | 25   | 25 | 25 | 24            | 25  | 25   | 25   | 61           | 34            | 25  | 14     |
| 112WRD                           | 06326530 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER NEAR TERRY, MT |          | 14   | 14 | 14 |               | 14  | 14   | 11   | 28           | 11            | 14  | 14     |
| 121MRRCF                         | 293000   |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE R NEAR SIDNEY        |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06329500 |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER NEAR SIDNEY, M |          | 62   | 47 | 47 | 22            | 24  | 35   | 31   | 82           | 47            | 23  | 70     |
| 1110NET                          | 290055   |      |    |    |               |     |      |      |              |               |     |        |
| YELLOWSTONE RIVER AT SIDNEY      |          | 42   |    | 41 |               |     |      |      | 34           |               |     |        |
| 112WRD                           | 06287000 |      |    |    |               |     |      |      |              |               |     |        |
| RHORN RIVER NEAR ST. XAVIER, M   |          | 12   |    | 12 |               |     | 30   |      | 22           |               |     |        |
| 112WRD                           | 06288500 |      |    |    |               |     |      |      |              |               |     |        |
| RHORN RIVER NEAR HARDIN, MT.     |          |      |    |    |               |     |      |      |              |               |     |        |

Table 6 (continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Montana

| STATION                          |          | TEMP | DO | PH | FECAL<br>COLI | MTT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 1110MET                          | 290104   |      |    |    |               |     |      |      |              |               |     |        |
| RIG HORN RIVER AT HARDIN         |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06294700 |      |    |    |               |     |      |      |              |               |     |        |
| RICHMON RIVER AT RICHMON, MT.    |          | 37   | 37 | 37 | 12            | 13  | 26   | 13   | 63           | 10            | 13  | 70     |
| 112WRD                           | 12323800 |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK NEAR GALEN, MT.       |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 12324200 |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK AT DEEP LODGE, MT.    |          |      |    |    |               |     |      |      |              |               |     |        |
| 1119C050                         | 293005   |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK ABOVE MISSOULA        |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 12340500 |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK ABOVE MISSOULA, MT.   |          |      |    |    |               |     |      |      |              |               |     |        |
| 1119C050                         | 293003   |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK NEAR ALBERTON MONTANA |          |      |    |    |               |     |      |      |              |               |     |        |
| 1119C050                         | 293002   |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK AT PLAINS MONTANA     |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 12389000 |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK NEAR PLAINS, MT.      |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 12391000 |      |    |    |               |     |      |      |              |               |     |        |
| CLARK FORK AT THOMPSON FALLS, MT |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06374500 |      |    |    |               |     |      |      |              |               |     |        |
| POWDER RIVER AT MOORHEAD, MT.    |          | 17   | 12 | 14 |               | 14  | 16   | 9    | 30           | 10            | 14  |        |
| 112WRD                           | 06308160 |      |    |    |               |     |      |      |              |               |     |        |
| PUMPKIN CREEK NEAR LOESCH, MT.   |          | 9    | 9  | 9  |               | 9   | 9    | 8    | 18           | 8             | 9   | 14     |
| 112WRD                           | 06308170 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE PUMPKIN CREEK NEAR VOLBOR |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06308190 |      |    |    |               |     |      |      |              |               |     |        |
| PUMPKIN CREEK NEAR VOLBOR, MT.   |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06308400 |      |    |    |               |     |      |      |              |               |     |        |
| PUMPKIN CREEK NEAR MILES CITY MT |          | 12   | 10 | 12 |               | 13  | 14   | 8    | 25           | 8             | 12  | 21     |
| 112WRD                           | 06376050 |      |    |    |               |     |      |      |              |               |     |        |
| WIZPAH CREEK AT OLIVE, MT.       |          | 10   | 8  | 10 |               | 10  | 12   | 6    | 22           | 6             | 10  | 18     |
| 112WRD                           | 06326200 |      |    |    |               |     |      |      |              |               |     |        |
| WIZPAH CREEK NEAR VOLBOR, MT.    |          | 2    |    | 2  |               | 2   | 4    |      | 6            |               | 2   |        |
| 112WRD                           | 06329200 |      |    |    |               |     |      |      |              |               |     |        |
| BURNS CREEK NEAR SAVAGE, MT.     |          | 12   | 12 | 12 |               | 12  | 12   | 9    | 24           | 9             | 12  | 49     |
| 112WRD                           | 06178000 |      |    |    |               |     |      |      |              |               |     |        |
| POPLAR RIVER AT INTERNATIONAL RD |          | 11   | 11 | 11 | 7             | 11  | 33   | 11   | 22           | 7             | 11  | 49     |
| 112WRD                           | 06178150 |      |    |    |               |     |      |      |              |               |     |        |
| POPLAR RIVER NEAR SCORBY         |          | 11   | 11 | 11 | 6             | 11  | 33   | 11   | 22           | 6             | 11  | 49     |
| 112WRD                           | 06179000 |      |    |    |               |     |      |      |              |               |     |        |
| EAST FORK POPLAR RIVER NEAR SCOR |          | 11   | 11 | 11 | 6             | 11  | 33   | 11   | 22           | 7             | 11  | 49     |
| 112WRD                           | 06179200 |      |    |    |               |     |      |      |              |               |     |        |
| POPLAR RIVER ABOVE WEST FORK NEA |          | 11   | 11 | 11 | 8             | 11  | 33   | 11   | 22           | 7             | 11  | 49     |
| 112WRD                           | 06179500 |      |    |    |               |     |      |      |              |               |     |        |
| WEST FORK POPLAR RIVER AT INTERN |          | 9    | 8  | 8  | 3             | 9   | 25   | 9    | 18           | 5             | 9   | 49     |
| 112WRD                           | 06180200 |      |    |    |               |     |      |      |              |               |     |        |
| WEST FORK POPLAR RIVER NEAR FOUR |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 12355500 |      |    |    |               |     |      |      |              |               |     |        |
| N F PLATHEAD RIVER NEAR COLUMBIA |          | 12   | 8  | 8  | 8             | 8   | 16   | 8    | 24           | 10            | 16  | 42     |

Table 6 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Montana

| STATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TEMP | DO | PH | FECAL |    | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|----|-------|----|-----|------|------|--------------|---------------|-----|--------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |    |    | COLI  |    |     |      |      |              |               |     |        |
| 112WRD 12302855<br>FISHER RIVER NEAR LIBBY, MT.<br>112WRD 12303400<br>ROSS CREEK NEAR TROY MT<br>112WRD 12303430<br>STANLEY CREEK NEAR TROY MT<br>112WRD 12303490<br>LAKE CREEK NEAR TROY MT<br>112WRD 06016000<br>BEAVERHEAD RIVER AT BARRETS, MT<br>112WRD 06018500<br>BEAVERHEAD RIVER NEAR TAIN BRIDG<br>112WRD 06088300<br>MUDDY CREEK NEAR VAUGHN, MT.<br>112WRD 06088500<br>MUDDY CREEK AT VAUGHN, MT.<br>112WRD 06080900<br>SUN RIVER PI DIVERSION DAM, NEAR<br>112WRD 06089000<br>SUN RIVER NEAR VAUGHN, MT.<br>112WRD 06130500<br>MUSSELSHELL RIVER AT MOSBY, MT.<br>112WRD 06172310<br>MILK RIVER AT TAMPCO, MT.<br>112WRD 06174500<br>MILK RIVER AT HANNA, MT.<br>112WRD 06154400<br>PEOPLES CREEK NEAR HAYS, MT.<br>112WRD 06175540<br>PRAIRIE FLK CREEK NEAR OSAGE MT<br>112WRD 06177500<br>REDWATER RIVER AT CIRCLE, MT.<br>112WRD 06177825<br>REDWATER RIVER NEAR VIDA, MT.<br>112WRD 06137570<br>ROCKLOPER CREEK NEAR ROCKY BOY MT<br>112WRD 06217750<br>FLY CREEK AT POMPEYS PILLAR, MT.<br>112WRD 06288200<br>BEAUVAIS CREEK NEAR ST. YAVIER,<br>112WRD 06294000<br>LITTLE BIGHORN RIVER NEAR HARDIN<br>112WRD 06294940<br>SARPY CREEK NEAR HYSHAM, MT.<br>112WRD 06294980<br>EAST FORK ARMELLS CREEK NEAR COB<br>112WRD 06294991<br>WEST FORK ARMELLS CREEK NEAR FOR<br>112WRD 06294995<br>ARMELLS CREEK NEAR FORSYTH, MT. |      |    |    |       |    |     |      |      |              |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3    | 3  | 3  |       |    | 3   | 4    | 3    | 6            | 3             | 3   | 42     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3    | 3  | 3  |       |    | 3   | 4    | 3    | 6            | 3             | 3   | 42     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3    | 3  | 3  |       |    | 3   | 4    | 3    | 6            | 3             | 3   | 42     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9    |    | 9  |       |    |     | 25   |      | 18           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11   |    | 11 |       |    |     | 27   |      | 21           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15   |    | 12 |       |    |     | 30   |      | 22           | 3             |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15   |    | 12 |       |    |     | 30   |      | 22           | 3             |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9    |    | 9  |       |    |     | 23   |      | 16           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12   |    | 12 |       |    |     | 28   |      | 22           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 37   | 37 | 37 | 13    | 12 | 24  | 12   | 61   | 9            | 12            | 56  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 36   | 36 | 36 | 12    | 12 | 24  | 12   | 60   | 9            | 12            | 56  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11   | 11 | 11 |       | 11 | 11  | 8    | 20   | 8            | 11            | 28  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11   | 11 | 11 |       | 11 | 11  | 8    | 21   | 8            | 11            | 28  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10   | 10 | 10 |       | 9  | 10  | 7    | 20   | 7            | 9             | 49  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10   | 10 | 10 | 10    | 10 | 10  | 9    | 20   | 9            | 10            | 42  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12   |    | 12 |       |    |     | 32   |      | 23           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7    | 7  | 7  | 7     | 7  | 7   |      | 21   | 7            |               | 7   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12   |    | 11 |       |    |     | 30   |      | 20           |               |     |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10   | 8  | 10 |       | 10 | 12  | 6    | 22   | 6            | 10            | 27  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8    | 8  | 8  |       | 8  | 8   | 6    | 16   | 6            | 8             | 21  |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11   | 9  | 11 |       | 11 | 13  | 7    | 24   | 7            | 11            | 18  |        |

Table 6 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for 1978 - Montana

| STATION                           |          | TEMP | DO | PH | FECAL<br>COLI | NTT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|-----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 112WRD                            | 06295250 |      |    |    |               |     |      |      |              |               |     |        |
| ROSEBUD CREEK NEAR COLSTRIP, MT.  |          | 9    | 9  | 9  |               | 8   | 8    | 7    | 17           | 7             | 8   | 28     |
| 112WRD                            | 06295400 |      |    |    |               |     |      |      |              |               |     |        |
| ROSEBUD CREEK ABOVE PONY CREEK,   |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 06295500 |      |    |    |               |     |      |      |              |               |     |        |
| ROSEBUD CREEK NEAR ROSEBUD, MT.   |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 06296003 |      |    |    |               |     |      |      |              |               |     |        |
| ROSEBUD CREEK AT MOUTH, NEAR ROS  |          | 11   | 9  | 11 |               | 11  | 13   | 7    | 24           | 7             | 11  | 25     |
| 112WRD                            | 06306300 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER AT STATE LINE NR DE  |          | 14   | 11 | 13 | 12            | 25  | 14   | 12   | 28           | 12            | 13  | 28     |
| 112WRD                            | 06307500 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER AT TONGUE R DAM, NE  |          | 11   | 9  | 11 |               | 11  | 13   | 7    | 24           | 7             | 11  | 37     |
| 112WRD                            | 06307600 |      |    |    |               |     |      |      |              |               |     |        |
| HANGING WOMAN CREEK NEAR BIRNEY,  |          | 9    | 9  | 9  |               | 9   | 9    | 7    | 18           | 7             | 9   | 14     |
| 112WRD                            | 06307610 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER BL. HANGING WOMAN C. |          | 12   | 12 | 12 |               | 12  | 12   | 9    | 24           | 9             | 12  | 14     |
| 112WRD                            | 06307830 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE R BL. BRANDENBERG BRIDGE,  |          | 11   | 9  | 9  |               | 9   | 9    | 7    | 17           | 12            | 9   | 21     |
| 112WRD                            | 06308500 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER AT MILES CITY, MT.   |          | 39   | 36 | 36 | 12            | 13  | 26   | 13   | 62           | 11            | 13  | 70     |
| 112WRD                            | 06307740 |      |    |    |               |     |      |      |              |               |     |        |
| OTTER CREEK AT ASHLAND, MT.       |          | 9    | 9  | 9  |               | 9   | 9    | 7    | 18           | 7             | 9   | 14     |

Table 7 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQT | RKG |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Dissolved Oxygen</u>        |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Pumpkin Cr nr Loesch           |     |     |     |     |     |     |     | X   |     |     |     | X   |            |     |
| Pumpkin Cr nr Miles City       |     |     |     |     |     |     | X   |     |     |     |     |     |            |     |
| Mizpah Cr at Olive             |     |     |     |     |     |     | X   | X   |     |     |     | X   |            |     |
| W FK Poplar R at Intl Bdry     |     |     |     |     |     |     | X   |     |     |     |     |     |            |     |
|                                |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| <u>Fecal Coliform Bacteria</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Yellowstone R at Huntley       |     |     |     |     |     |     |     |     | ●   | ○   | ○   |     | 30         |     |
| Yellowstone R at Forsyth       |     |     |     |     |     |     |     |     | ○   |     |     |     | 15         |     |
| Musselshell R at Mosby         |     |     |     |     |     | ○   |     |     |     |     |     |     | 14         |     |
| Milk R at Nashua               |     |     |     | ○   |     |     |     |     |     |     |     |     | 16         |     |
| Boxelder Cr nr Rocky Boy       |     | ○   |     |     |     |     |     |     |     |     |     |     | 17         |     |
| Beauvais Cr nr St. Xavier      |     |     |     |     |     |     |     |     | ○   |     |     |     | 21         |     |
| Tongue R at WY-MT line         |     |     |     |     | ○   |     |     |     |     |     |     |     | 20         |     |
| Tongue R at Miles City         |     |     |     |     |     | ○   |     |     |     |     |     |     | 11         |     |
|                                |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| <u>Phosphorus</u>              |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R at Virgelle         |     |     | ●   |     |     |     |     |     |     |     |     |     | 20         |     |
| Missouri R nr Culbertson       |     |     | ●   | ○   |     |     |     |     | ●   |     |     |     | 28         |     |
| Yellowstone R at Forsyth       |     |     |     | ○   |     |     |     |     |     |     |     |     | 15         |     |
| Yellowstone R nr Miles City    |     |     |     |     | ○   |     |     |     |     |     |     |     | 20         |     |
| Yellowstone R nr Terry         |     | ●   |     | ●   | ○   | ●   |     |     |     |     |     |     | 31         | 4   |
| Yellowstone R nr Sidney        |     | ●   |     | ●   | ○   |     |     |     |     |     |     |     | 29         |     |
| Big Horn at Big Horn           |     |     |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Powder R at Moorhead           |     | ●   |     | ●   | ●   | ●   | ●   |     |     |     |     |     | 58         | 1   |
| Pumpkin Cr nr Miles City       |     | ●   |     |     |     |     | ●   |     | ○   |     |     |     | 35         | 3   |
| W FK Poplar R at Intl Bdry     |     | ○   |     |     |     |     |     |     |     |     |     |     |            |     |
| Musselshell R at Mosby         |     | ●   |     | ○   | ●   |     |     |     | ●   |     |     |     | 33         |     |
| Milk R at Nashua               |     | ●   | ○   |     |     |     |     |     | ●   |     |     |     | 36         | 2   |
| Prairie Elk Cr nr Oswego       |     | ●   |     | ●   |     |     |     |     | ●   |     |     |     | 33         |     |
| Redwater R at Circle           |     | ●   |     |     |     |     |     |     |     |     |     |     | 12         |     |
| Boxelder Cr nr Rocky Boy       |     | ○   |     |     |     |     |     |     |     |     |     |     | 23         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 7 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                     | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQT | RKG |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Phosphorus Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Redwater R nr Vida          |     |     | ○   |     |     |     |     |     |     |     |     |     | 12         |     |
| Beauvais Cr nr St. Xavier   |     |     |     |     |     |     |     |     | ●   |     |     |     |            |     |
| Armells Cr nr Forsyth       |     |     | ○   |     |     |     |     |     |     |     |     |     | 16         |     |
| Rosebud Cr nr Colstrip      |     |     | ○   |     | ●   |     |     |     |     |     |     |     | 31         |     |
| Rosebud Cr at Mouth         |     |     | ●   | ○   | ●   |     |     |     |     |     |     |     | 32         |     |
| Tongue R at Miles City      |     |     | ●   |     | ●   |     |     |     | ●   |     |     |     | 27         |     |
| Otter Cr at Ashland         |     |     | ●   |     |     |     |     |     |     |     |     |     | 19         |     |
|                             |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| <u>Turbidity</u>            |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R at Virgelle      |     |     | ●   |     |     |     |     |     |     |     |     |     | 31         |     |
| Missouri R nr Culbertson    |     |     |     | ●   | ●   | ○   |     |     |     |     |     |     | 37         |     |
| Yellowstone R at Billings   |     |     | ○   |     | ○   |     |     |     |     |     |     |     | 17         |     |
| Yellowstone R at Huntley    |     |     |     |     |     |     |     |     | ○   |     |     |     | 16         |     |
| Yellowstone R at Forsyth    |     |     | ●   | ○   | ●   |     |     |     |     |     |     |     | 33         |     |
| Yellowstone R nr Miles City |     |     |     |     | ●   |     |     |     |     |     |     |     | 20         |     |
| Yellowstone R nr Terry      |     |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     |     | 54         | 5   |
| Yellowstone R nr Sidney     |     |     | ●   | ●   | ●   | ●   | ○   |     | ○   |     |     |     | 44         |     |
| Big Horn R at Big Horn      |     |     | ●   |     | ●   | ○   |     |     |     |     |     |     | 30         |     |
| Powder R at Moorehead       | ●   |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     |     | 86         | 1   |
| Pumpkin Cr nr Miles City    |     |     | ●   |     |     |     | ●   |     | ●   |     |     |     | 59         | 3   |
| Poplar R nr Scobey          |     |     |     |     |     |     |     |     | ●   |     |     |     | 15         |     |
| W FK Poplar R at Intl Bdry  |     |     | ●   |     |     |     |     |     |     |     |     |     | 10         |     |
| Musselshell R at Mosby      |     |     | ●   | ○   | ●   | ●   | ●   |     | ●   |     |     |     | 47         |     |
| Milk R at Nashau            |     |     | ●   | ●   | ●   |     | ○   |     | ●   |     |     |     | 43         |     |
| Prairie Elk Cr nr Oswego    |     |     | ●   |     | ●   |     |     |     | ●   |     |     |     | 51         | 6   |
| Redwater R at Circle        |     |     | ●   |     |     |     |     |     |     |     |     |     | 21         |     |
| Redwater R nr Vida          |     |     | ●   |     |     |     |     |     |     |     |     |     | 29         |     |
| Sarpy Cr nr Hysham          |     |     | ○   |     |     |     |     |     |     |     |     |     | 31         |     |
| Armells Cr nr Forsyth       |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 44         |     |
| Rosebud Cr nr Colstrip      |     |     | ○   | ●   | ●   | ○   |     |     |     |     |     |     | 58         | 4   |
|                             |     |     |     |     |     |     |     |     |     |     |     |     |            |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

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Table 7 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                             | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Turbidity Continued</u>          |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Rosebud Cr abv Pony Cr.             |     |     |     | ●   | ●   | ●   | ●   |     |     |     |     |     |            |     |
| Rosebud Cr nr Rosebud               |     | ○   |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     |            |     |
| Rosebud Cr at Mouth                 |     |     | ●   | ●   | ●   |     |     |     |     |     |     |     | 61         | 2   |
| Hanging Woman Cr nr Birney          |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 26         |     |
| Tongue R blw Hanging Woman Cr       |     |     |     |     |     | ○   |     |     |     |     |     |     | 18         |     |
| Tongue R blw Brandenburg Br         |     |     |     |     | ●   | ●   |     |     |     |     |     |     | 35         |     |
| Tongue R at Miles City              |     |     | ●   | ●   | ●   |     |     |     |     |     |     |     | 47         |     |
| Otter Cr at Ashland                 |     |     | ●   |     | ○   |     |     |     |     |     |     |     | 34         |     |
|                                     |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| <u>Total Dissolved Solids (TDS)</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Powder R at Moorhead                | ○   | ○   |     | ○   |     |     |     | ○   | ○   | ○   |     | ○   | 43         |     |
| Pumpkin Cr nr Loesch                |     |     |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     | ●   | 78         | 3   |
| Pumpkin Cr nr Miles City            |     |     |     |     |     |     |     |     | ○   |     |     |     | 43         |     |
| Mizpah Cr at Olive                  |     |     |     | ●   | ●   | ●   | ●   | ●   | ●   |     | ●   | ●   | 92         | 1   |
| Mizpah Cr nr Volborg                |     |     |     |     |     |     |     | ○   |     | ●   |     |     |            |     |
| Burns Cr nr Sage                    |     |     |     |     | ○   |     |     |     |     |     |     |     | 36         |     |
| E FK Poplar R nr Scobey             | ○   |     |     |     |     |     |     |     |     |     |     |     | 33         |     |
| Poplar R above W Fork               | ○   |     |     |     |     |     |     |     |     |     |     |     | 31         |     |
| Muddy Cr nr Vaughn                  |     |     |     | ○   |     |     |     |     |     |     |     |     | 27         |     |
| Musselshell R at Mosby              | ●   | ●   |     | ○   |     |     |     |     | ○   | ○   | ○   | ○   | 45         |     |
| Milk R at Nashua                    | ○   |     |     |     |     |     |     |     |     |     |     |     | 27         |     |
| Prairie Elk Cr nr Oswego            |     |     |     |     | ○   |     |     |     | ○   |     | ○   | ○   | 44         |     |
| Redwater R at Circle                | ●   |     |     | ●   | ●   |     |     | ●   | ●   | ●   | ●   | ●   | 65         | 5   |
| Redwater R nr Vida                  |     |     |     | ○   | ○   | ●   |     | ○   | ○   | ●   | ●   | ●   | 53         |     |
| Fly Cr at Pomeys Pillar             | ●   | ○   | ●   | ●   | ○   | ●   |     |     | ○   |     |     |     | 52         |     |
| Sarpy Cr nr Hysham                  |     | ○   |     | ●   | ○   | ●   |     |     |     | ○   |     | ○   | 56         |     |
| E FK Armells Cr nr Colstrip         |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     | ●   |     | ●   | 84         | 2   |
| W FK Armells Cr nr Forsyth          |     |     |     | ●   | ○   | ●   |     |     | ●   | ●   |     | ●   |            |     |
| Hanging Woman Cr nr Birney          |     | ○   |     | ●   | ○   | ●   |     |     | ●   |     | ●   | ●   | 59         | 6   |
| Armells Cr nr Forsyth               |     |     |     |     |     |     | ●   |     | ●   |     |     |     | 71         | 4   |
| Otter Cr at Ashland                 |     | ●   |     | ●   |     | ●   |     |     | ○   | ●   |     | ●   | 53         |     |
| Beavals Cr at St. Xavier            |     | ○   |     |     |     |     |     |     |     |     |     |     | 35         |     |

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Table 7 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                      | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Suspended Sediment</u>    |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R at Toston         |     | ○   | ○   |     |     |     |     |     |     |     |     |     | 23         |     |
| Missouri R at Virgelle       |     |     | ●   |     |     |     |     |     |     |     |     |     | 29         |     |
| Missouri R blw Fort Peck Dam |     |     | ●   |     |     |     |     |     |     |     |     |     | 19         |     |
| Missouri R nr Culbertson     |     |     |     | ●   | ●   | ●   | ○   | ●   | ●   |     |     |     | 83         | 2   |
| Yellowstone R at Billings    |     |     |     |     | ●   |     |     |     |     |     |     |     | 32         |     |
| Yellowstone R at Forsyth     |     |     | ●   |     | ●   | ●   |     |     | ○   |     |     |     | 44         |     |
| Yellowstone R nr Miles City  |     |     |     |     |     | ●   |     |     |     |     |     |     | 22         |     |
| Yellowstone R nr Terry       |     |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     |     | 59         |     |
| Yellowstone R nr Sidney      |     |     | ●   | ○   | ●   | ●   | ○   |     | ○   |     |     |     | 41         |     |
| Big Horn R at Big Horn       |     |     | ●   | ○   | ●   | ●   | ●   |     |     |     |     |     | 48         |     |
| Powder R at Moorhead         | ●   |     | ●   | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     | 87         | 1   |
| Pumpkin Cr nr Miles City     |     |     | ●   |     |     |     | ●   |     | ●   |     |     |     | 58         |     |
| Muddy Cr nr Vaughn           |     |     | ●   |     |     |     | ●   |     |     |     |     |     |            |     |
| Musselshell R at Mosby       |     |     | ●   | ○   | ●   | ●   | ●   | ○   | ●   |     |     |     | 72         | 3   |
| Milk R at Nashau             |     |     | ●   | ●   | ●   |     |     |     | ●   |     |     |     | 62         | 6   |
| Prairie Elk Cr nr Oswego     | ○   |     | ●   |     | ●   |     |     |     | ●   |     |     |     | 63         | 5   |
| Redwater R at Circle         |     |     | ●   |     |     |     |     |     |     |     |     |     | 40         |     |
| Redwater R nr Vida           |     |     | ●   |     |     |     |     |     |     |     |     |     | 41         |     |
| Beauvais Cr nr St. Xavier    |     | ●   | ○   |     |     | ●   |     |     | ●   |     |     |     | 57         |     |
| Saroy Cr nr Hysham           |     |     | ○   |     |     |     |     |     |     |     |     |     | 34         |     |
| Armells Cr nr Forsyth        |     |     | ○   |     | ●   | ●   |     |     |     |     |     |     | 49         |     |
| Rosebud Cr nr Colstrip       |     |     | ○   | ●   | ●   | ●   |     |     |     |     |     |     | 59         |     |
| Rosebud Cr at Mouth          |     |     | ●   | ●   | ●   | ○   |     |     |     |     |     |     | 62         |     |
| Hanging Woman Cr nr Birney   |     |     |     |     | ○   | ○   |     |     |     |     |     |     | 25         |     |
| Tongue R blw Brandenburg     |     |     | ○   |     | ●   | ●   |     |     |     |     |     |     | 45         |     |
| Tongue R at Miles City       |     |     | ●   | ○   | ●   | ●   |     |     | ●   |     |     |     | 66         | 4   |
| Otter Cr at Ashland          |     |     | ○   |     | ○   |     |     |     |     |     |     |     | 38         |     |
| <u>Nitrate</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Prairie Elk Cr nr Oswego     |     |     |     |     | ○   |     |     |     |     |     |     |     |            |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 7 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

## MONTANA

63

# NORTH DAKOTA

Table 9. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Dissolved Oxygen</u>            |                              | <u>WQI*</u> |
|------------------------------------|------------------------------|-------------|
| 1.                                 | Souris R nr Westhope         | 28          |
| 2.                                 | Park R on I-29               | 27          |
| 3.                                 | Souris R at Towner           | 24          |
| 4.                                 | Souris R nr Sherwood         | 23          |
| <br><u>pH</u>                      |                              |             |
| 1.                                 | Little Muddy Cr blw Cow Cr   | 15          |
| 2.                                 | Souris R nr Verendrye        | 14          |
| <br><u>Fecal Coliform Bacteria</u> |                              |             |
| 1.                                 | Red R at Fargo               | 49          |
| <br><u>Phosphorus</u>              |                              |             |
| 1.                                 | Red R blw Fargo              | 61          |
| 2.                                 | Red R nr Perley              | 59          |
| 3.                                 | Red R nr Oslo                | 54          |
| <br><u>Turbidity</u>               |                              |             |
| 1.                                 | Missouri R nr Williston      | 70          |
| 2.                                 | Little Missouri R nr Watford | 59          |
| 3.                                 | Cedar Cr nr Raleigh          | 51          |
| <br><u>Suspended Sediment</u>      |                              |             |
| 1.                                 | Little Missouri nr Watford   | 89          |
| 2.                                 | Missouri R nr Williston      | 63          |
| <br><u>Trace Elements</u>          |                              |             |
| 1.                                 | Red R at Emerson, Manitoba   | CN=100      |
| 2.                                 | Little Missouri R nr Watford | Cu=100      |
|                                    |                              | Hg= 58      |
|                                    |                              | Cr= 68      |
|                                    |                              | Zn= 65      |
| 3.                                 | Heart R at Mandan            | CN=100      |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature.

Table 10. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - North Dakota

| STATION                          |                | TEMP | DO | PH | FECAI<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | MB3 | RETAILS |
|----------------------------------|----------------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|---------|
| 121MRRCF                         | 370005         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER NEAR WILLISTON ND |                |      |    |    |               | 1   | 1    |      |              |               | 1   |         |
| 21MRHDWQ                         | 380053         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI R. SOUTH OF WILLISTON   |                | 1    | 1  | 1  |               | 1   | 2    |      | 1            |               |     |         |
| 112WRD                           | 06330000       |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER NR WILLISTON, ND  |                | 12   | 12 | 12 | 4             | 19  | 12   | 6    | 36           | 8             | 12  | 67      |
| 121MRRCF                         | 370004         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT NEWTON ND      |                | 44   |    | 33 |               | 10  | 28   | 4    | 4            | 4             | 12  | 25      |
| 121MRRCF                         | 370002         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT GARRISON DAM   |                |      |    |    |               |     |      |      |              |               |     |         |
| 112WRD                           | 06338490       |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT GARRISON DAM,  |                | 12   | 10 | 12 | 11            | 19  | 24   | 9    | 38           |               | 12  | 85      |
| 121MRRCF                         | 370001         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT WASHBURN ND    |                |      |    |    |               |     |      |      |              |               |     |         |
| 1110NFT                          | 370033         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT RISMARCK       |                |      |    |    |               |     |      |      |              |               |     |         |
| 21MRHDWQ                         | 380028         |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT RISMARCK       |                |      |    |    |               |     |      |      |              |               |     |         |
| 112WRD                           | 06342500       |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER AT RISMARCK, ND   |                | 25   | 24 | 25 | 25            | 29  | 25   | 25   | 61           | 25            | 25  | 47      |
| 112WRD                           | 05114000       |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS RIVER NR SHERWOOD, ND     |                | 25   | 24 | 24 | 22            | 30  | 47   | 25   | 59           | 28            | 21  | 28      |
| 112WRD                           | 05116000       |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS RIVER NR FOXHOLM, ND      |                | 20   | 12 | 12 | 12            | 12  | 36   | 12   | 42           | 9             | 12  | 24      |
| 112WRD                           | 05117500       |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS RIVER ABOVE MINOT, ND     |                | 15   |    | 2  |               |     |      |      | 19           |               |     |         |
| 21MRHDWQ                         | 380050         |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS R. NORTH OF SAWYER        |                |      |    |    |               |     |      |      |              |               |     |         |
| 112WRD                           | 05120000       |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS RIVER NR VERENDRYE, ND    |                | 20   |    | 12 |               |     | 45   |      | 42           | 9             | 11  | 14      |
| 21MRHDWQ                         | 380018         |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS R - TOWNER, ND            |                | 10   | 10 | 10 |               | 10  | 18   |      | 10           |               | 10  | 18      |
| 21MRHDWQ                         | 380019         |      |    |    |               |     |      |      |              |               |     |         |
| SOURIS R - WESTHOPE, ND          |                |      |    |    |               |     |      |      |              |               |     |         |
| 112WRD                           | 05124000       |      |    |    |               |     |      |      |              |               |     |         |
| MISSOURI RIVER NR WESTHOPE, ND   |                | 24   | 23 | 24 | 23            | 30  | 54   | 24   | 61           | 33            | 21  | 54      |
| 21MRHDWQ                         | 380029         |      |    |    |               |     |      |      |              |               |     |         |
| BOIS DE SIOUX R. NEAR FAIRMOUNT  |                |      |    |    |               |     |      |      |              |               |     |         |
| 21MRHDWQ                         | 380001         |      |    |    |               |     |      |      |              |               |     |         |
| BOIS DE SIOUX R - WAHPETON, ND   |                | 4    | 4  | 4  |               | 4   | 8    |      | 4            |               | 4   | 12      |
| 21MINN                           | RRR547---10E67 |      |    |    |               |     |      |      |              |               |     |         |
| BOIS DE SIOUX R. AT BRECKENRIDGE |                |      |    |    |               |     |      |      |              |               |     |         |
| 21MINN                           | RRR-13---10E53 |      |    |    |               |     |      |      |              |               |     |         |
| RED RIVER CSAH-19 AT BRUSHVALE   |                | 12   | 12 | 12 | 12            | 12  | 12   |      | 12           | 12            | 12  | 7       |
| 112WRD                           | 05051500       |      |    |    |               |     |      |      |              |               |     |         |
| RED RIVER OF THE NORTH AT WAHPET |                | 16   |    | 2  |               |     |      |      | 20           |               |     |         |
| 112WRD                           | 05054000       |      |    |    |               |     |      |      |              |               |     |         |
| RED RIVER OF THE NORTH AT FARGO, |                | 18   |    | 2  |               |     |      |      | 22           |               |     |         |
| 112WRD                           | 05054020       |      |    |    |               |     |      |      |              |               |     |         |
| RED RIVER OF THE NORTH BELOW FAR |                | 12   | 1  | 12 |               |     | 12   |      | 34           |               |     | 7       |

Table 10 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - North Dakota

| STATION                           |                 | TEMP | DO  | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | MM3 | METALS |
|-----------------------------------|-----------------|------|-----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 2141NA                            | RRRR452---10E71 |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER MAIN & FIRST AT FARGO   |                 | 12   | 12  | 12 | 12            | 12  | 12   |      | 12           | 12            | 12  | 6      |
| 21NDHDMQ                          | 380002          |      |     |    |               |     |      |      |              |               |     |        |
| RED R - FARGO, ND                 |                 | 11   | 11  | 8  |               | 12  | 23   |      | 12           |               | 12  | 24     |
| 2141NB                            | RRRR403---10E67 |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER CSAH-39 W. OF PERLEY    |                 | 12   | 12  | 12 | 12            | 12  | 12   |      | 12           | 12            | 12  | 7      |
| 21NDHDMQ                          | 380003          |      |     |    |               |     |      |      |              |               |     |        |
| RED R - GRAND FORK, ND            |                 | 10   | 10  | 10 |               | 10  | 20   |      | 10           |               | 8   | 24     |
| 21NDGPEK                          | 000002          |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER OF THE NORTH            |                 |      |     |    |               |     |      |      |              |               |     |        |
| 2141NN                            | RRRR296---10E53 |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER AT GRAND FORKS          |                 | 13   | 13  | 13 | 13            | 13  | 13   |      | 13           | 13            | 13  | 6      |
| 112WRD                            | 05082500        |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER OF THE NORTH AT GRAND   |                 | 24   |     | 3  |               |     |      |      | 30           |               |     |        |
| 112WRD                            | 05083500        |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER OF THE NORTH AT OSIO,   |                 | 1    |     |    |               |     |      |      | 1            |               |     |        |
| 21NDHDMQ                          | 380004          |      |     |    |               |     |      |      |              |               |     |        |
| RED R - DRAYTON, ND               |                 |      |     |    |               |     |      |      |              |               |     |        |
| 21NDHDMQ                          | 380005          |      |     |    |               |     |      |      |              |               |     |        |
| RED R - PEMBINA, ND               |                 | 4    | 4   | 4  |               | 3   | 8    |      | 4            |               | 4   | 12     |
| 2141UN                            | RRRR155---10E62 |      |     |    |               |     |      |      |              |               |     |        |
| RED R.USH-75 BY EMERSON, MANITOTA |                 |      |     |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 05102490        |      |     |    |               |     |      |      |              |               |     |        |
| RED RIVER OF THE NORTH NEAR PEHR  |                 |      |     |    |               |     |      |      |              |               |     |        |
| 51MANEDR                          | 000001          |      |     |    |               |     |      |      |              |               |     |        |
| EMERSON MANITOTA                  |                 | 3    | 3:H | 3  | 10            |     | 26   | 12   | 17           | 12            |     | 72     |
| 21NDHDMQ                          | 380014          |      |     |    |               |     |      |      |              |               |     |        |
| JAMES R - EDMUNDS, ND             |                 |      |     |    |               |     |      |      |              |               |     |        |
| 21NDHDMQ                          | 380013          |      |     |    |               |     |      |      |              |               |     |        |
| JAMES R - JAMESTOWN, ND           |                 |      |     |    |               |     |      |      |              |               |     |        |
| 21NDHDMQ                          | 380071          |      |     |    |               |     |      |      |              |               |     |        |
| JAMES RIVER @ JAMESTOWN           |                 | 9    | 9   | 9  |               | 9   | 17   |      | 9            |               | 9   | 12     |
| 112WRD                            | 06470500        |      |     |    |               |     |      |      |              |               |     |        |
| JAMES RIVER AT JAMOUR, ND         |                 | 13   | 11  | 12 |               |     | 13   |      | 36           | 9             |     | 13     |
| 21NDHDMQ                          | 380012          |      |     |    |               |     |      |      |              |               |     |        |
| JAMES R - LA MOURE, ND            |                 |      |     |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 06470830        |      |     |    |               |     |      |      |              |               |     |        |
| JAMES RIVER AT OAKES, N. DAK.     |                 |      |     |    |               |     |      |      |              |               |     |        |
| 21NDHDMQ                          | 380074          |      |     |    |               |     |      |      |              |               |     |        |
| JAMES RIVER WEST OF OAKES         |                 | 7    | 2   | 2  |               | 3   | 6    |      | 3            |               | 3   | 12     |
| 21NDHDMQ                          | 380008          |      |     |    |               |     |      |      |              |               |     |        |
| SHEYENNE R - VALLEY CITY, ND      |                 | 6    | 6   | 6  |               | 6   | 12   |      | 6            |               | 7   |        |
| 21NDHDMQ                          | 380076          |      |     |    |               |     |      |      |              |               |     |        |
| SHEYENNE RIVER @ HARMWOOD         |                 | 12   | 11  | 12 |               | 12  | 24   |      | 12           |               | 8   | 24     |
| 21NDHDMQ                          | 380015          |      |     |    |               |     |      |      |              |               |     |        |
| PIPESTONE R - RUCHANAN, ND        |                 | 3    | 3   | 3  |               | 3   | 5    |      | 3            |               | 3   | 12     |
| 112WRD                            | 05054500        |      |     |    |               |     |      |      |              |               |     |        |
| SHEYENNE RIVER ABOVE HARVEY, ND   |                 | 16   |     | 11 |               |     | 14   |      | 38           |               |     | 14     |
| 21NDHDMQ                          | 380016          |      |     |    |               |     |      |      |              |               |     |        |
| MAPLE R - ELLENDALE, ND           |                 | 2    | 2   | 2  |               | 2   | 3    |      | 2            |               | 2   | 6      |

Table 10 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - North Dakota

| STATION                            |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NR3 | METALS |
|------------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 21NDH04                            | 380034   |      |    |    |               |     |      |      |              |               |     |        |
| HADE RIVER WEST OF FARGO N. D.     |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 12     |
| 21NDH05                            | 380017   |      |    |    |               |     |      |      |              |               |     |        |
| FLY R - ELLENDALE, ND              |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 6      |
| 21NDH06                            | 380036   |      |    |    |               |     |      |      |              |               |     |        |
| FLY RIVER NORTHEAST OF GRANDIN     |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 6      |
| 112WRD                             | 06339490 |      |    |    |               |     |      |      |              |               |     |        |
| FLY CREEK NE GOLDEN VALLEY, ND     |          | 17   | 6  | 7  | 6             | 6   | 12   |      | 31           | 6             | 6   | 27     |
| 21NDH08                            | 380021   |      |    |    |               |     |      |      |              |               |     |        |
| DELAOS R - FOXHOLM, ND             |          | 1    | 1  | 1  |               | 1   | 2    |      | 1            |               | 1   |        |
| 112WRD                             | 05116500 |      |    |    |               |     |      |      |              |               |     |        |
| DES LAOS RIVER AT FOXHOLM, ND      |          | 16   |    | 3  |               |     |      |      | 22           |               |     |        |
| 21NDH09                            | 380022   |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE MISSOURI R - MEDORA, ND     |          | 6    | 6  | 6  |               | 6   | 12   |      | 6            |               | 6   | 30     |
| 112WRD                             | 06337000 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE MISSOURI RIVER NR WATERFORD |          | 13   | 9  | 9  | 8             | 15  | 18   | 11   | 30           | 6             | 9   | 70     |
| 112WRD                             | 06335500 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE MISSOURI RIVER AT NARMART   |          | 14   |    | 2  |               |     |      |      | 18           |               |     |        |
| 112WRD                             | 06336000 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE MISSOURI RIVER AT MEDORA,   |          |      |    |    |               |     |      |      |              |               |     |        |
| 21NDH10                            | 380024   |      |    |    |               |     |      |      |              |               |     |        |
| HEART R - MANDAN, ND               |          | 11   | 12 | 12 |               | 12  | 23   |      | 12           |               | 12  | 24     |
| 21NDH11                            | 380062   |      |    |    |               |     |      |      |              |               |     |        |
| HEART RIVER SOUTH OF GLADSTONE     |          | 5    | 5  | 5  |               | 5   | 10   |      | 5            |               | 4   | 12     |
| 112WRD                             | 06345500 |      |    |    |               |     |      |      |              |               |     |        |
| HEART RIVER NR RICHARDTON, ND      |          | 18   |    | 1  |               |     |      |      | 21           |               |     |        |
| 112WRD                             | 06348000 |      |    |    |               |     |      |      |              |               |     |        |
| HEART RIVER NR LARK, ND            |          | 16   |    | 1  |               |     |      |      | 20           |               |     |        |
| 112WRD                             | 06349000 |      |    |    |               |     |      |      |              |               |     |        |
| HEART RIVER NR MANDAN, ND          |          | 17   | 12 | 12 | 12            | 20  | 24   | 14   | 41           | 9             | 12  | 83     |
| 21NDH12                            | 380026   |      |    |    |               |     |      |      |              |               |     |        |
| SQUARE BUTTE CR - CENTER, ND       |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 12     |
| 112WRD                             | 06342100 |      |    |    |               |     |      |      |              |               |     |        |
| SQUARE BUTTE CREEK TRIBUTARY NO    |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                             | 06342260 |      |    |    |               |     |      |      |              |               |     |        |
| SQUARE BUTTE CREEK BELOW CENTER,   |          | 16   |    | 2  |               |     |      |      | 20           |               |     |        |
| 21NDH13                            | 380027   |      |    |    |               |     |      |      |              |               |     |        |
| GOOSE RIVER NEAR HILLSBORO         |          | 8    | 8  | 8  |               | 8   | 16   |      | 8            |               | 7   | 18     |
| 21NDH14                            | 380030   |      |    |    |               |     |      |      |              |               |     |        |
| ANTELOPE CR SOUTH OF ABERCROMBIE   |          | 1    | 1  | 1  |               | 1   | 2    |      | 1            |               | 1   | 6      |
| 21NDH15                            | 380064   |      |    |    |               |     |      |      |              |               |     |        |
| ANTELOPE CREEK WEST OF CARSON      |          | 1    | 1  | 1  |               | 1   | 2    |      | 1            |               | 1   | 6      |
| 21NDH16                            | 380031   |      |    |    |               |     |      |      |              |               |     |        |
| WILD RICE R N-WEST - ABERCROMBIE   |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 6      |
| 21NDH17                            | 380033   |      |    |    |               |     |      |      |              |               |     |        |
| RAID HILL CREEK EAST OF DAZEY      |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 6      |
| 21NDH18                            | 380035   |      |    |    |               |     |      |      |              |               |     |        |
| RUSH RIVER NORTHEAST OF HARWOOD    |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 6      |
| 21NDH19                            | 380037   |      |    |    |               |     |      |      |              |               |     |        |
| TURTLE RIVER NORTH OF MANVEL       |          | 2    | 2  | 2  |               | 2   | 4    |      | 2            |               | 2   | 6      |

Table 10 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - North Dakota

| STATION                                              | TEMP | PH | DO | FECAL<br>COLI | NIT | DHS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|------------------------------------------------------|------|----|----|---------------|-----|-----|------|--------------|---------------|-----|--------|
|                                                      |      |    |    |               |     |     |      |              |               |     |        |
| 21NDHDW0 380038<br>FOREST RIVER NEAR FORDVILLE N. D. | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 1   | 6      |
| 21NDHDW0 380039<br>FOREST RIVER NEAR MINTO N. D.     | 4    | 4  | 4  |               | 4   | 8   |      | 3            |               | 3   | 6      |
| 21NDHDW0 380040<br>FOREST R R MILES EAST OF MINTO    | 7    | 6  | 7  |               | 7   | 14  |      | 7            |               | 6   | 6      |
| 21NDHDW0 380041<br>2.8 MI N HOOPLE HWY #1R 230100    |      |    |    |               |     |     |      |              |               |     |        |
| 21NDHDW0 380069<br>SPRING CREEK EAST OF ROMAN        |      |    |    |               |     |     |      |              |               |     |        |
| 21NDHDW0 380073<br>COTTONWOOD CREEK @ LANGRUE        |      |    |    |               |     |     |      |              |               |     |        |
| 21NDHDW0 380077<br>CEDAR CREEK @ RALEIGH N-DAKOTA    | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 2   | 12     |
| 112WRD 06352000<br>CEDAR CREEK NR HAYNES, ND         | 15   |    | 2  |               |     |     |      | 19           |               |     |        |
| 112WRD 06352500<br>CEDAR CREEK NR PRETTY ROCK, ND    |      |    |    |               |     |     |      |              |               |     |        |
| 112WRD 06353000<br>CEDAR CREEK NR RALEIGH, ND        | 17   |    | 9  |               |     |     |      | 37           |               |     |        |
| 21NDHDW0 380042<br>PARK RIVER EAST OF HOOPLE N. D.   | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 2   | 6      |
| 21NDHDW0 380043<br>PARK RIVER 3 MILES SOUTH HOOPLE   | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 1   | 6      |
| 21NDHDW0 380044<br>PARK R 6 MILES EAST OF PARK R.    | 4    | 4  | 4  |               | 4   | 8   |      | 3            |               | 4   | 12     |
| 21NDHDW0 380045<br>PARK RIVER NORTH OF OAKWOOD N. D. | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 2   | 6      |
| 21NDHDW0 380046<br>PARK RIVER ON I-29 NORTH DAKOTA   | 9    | 8  | 9  |               | 9   | 18  |      | 9            |               | 8   | 18     |
| 21NDHDW0 380047<br>TONGUE RIVER SOUTHWEST PEMBINA    | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 2   | 6      |
| 21NDHDW0 380048<br>PEMBINA RIVER SOUTH OF PEMBINA    | 4    | 4  | 4  |               | 4   | 8   |      | 4            |               | 4   | 12     |
| 21NDHDW0 380051<br>WILLOW CREEK WEST OF WILLOW CITY  | 2    | 2  | 2  |               | 2   | 4   |      | 2            |               | 2   | 6      |
| 112WRD 05123400<br>WILLOW CREEK NR WILLOW CITY, ND   | 8    |    | 2  |               |     |     |      | 12           |               |     |        |
| 21NDHDW0 380052<br>DEEP RIVER WEST OF UPHAM          |      |    |    |               |     |     |      |              |               |     |        |
| 112WRD 05123510<br>DEEP RIVER NR UPHAM, ND           | 6    |    | 1  |               |     |     |      | 8            |               |     |        |
| 21NDHDW0 380054<br>LITTLE MUDDY CR. NE OF WILLISTON  | 1    | 1  | 1  |               | 1   | 2   |      | 1            |               |     |        |
| 112WRD 06331000<br>LITTLE MUDDY RIVER RI. COE CREEK  | 14   |    | 10 |               |     |     |      | 34           |               |     |        |
| 21NDHDW0 380055<br>WHITE EARTH R SOUTH WHITE EARTH   |      |    |    |               |     |     |      |              |               |     |        |
| 112WRD 06332000<br>WHITE EARTH RIVER AT WHITE EARTH  | 15   |    | 2  |               |     |     |      | 19           |               |     |        |

Table 10 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - North Dakota

| STATION                          |          | TEMP | DO | PH | FECAL<br>COLI | BIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 21NDHDW0                         | 380057   |      |    |    |               |     |      |      |              |               |     |        |
| APPLE CREEK ON HWY. 1804 BRIDGE  |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 12     |
| 21NDHDW0                         | 380058   |      |    |    |               |     |      |      |              |               |     |        |
| BEAVER CREEK SOUTH OF LINTON     |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 12     |
| 21NDHDW0                         | 380072   |      |    |    |               |     |      |      |              |               |     |        |
| CART CR 2.8 MI N HOOPER HWY #18  |          | 2    | 2  | 2  |               | 2   | 3    |      | 2            |               | 2   | 6      |
| 21NDHDW0                         | 380060   |      |    |    |               |     |      |      |              |               |     |        |
| SPRING CREEK SOUTH OF ZAP        |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06340000 |      |    |    |               |     |      |      |              |               |     |        |
| SPRING CREEK AT ZAP, ND          |          | 18   | 12 | 11 |               | 12  | 12   |      | 40           | 13            | 12  | 55     |
| 21NDHDW0                         | 380061   |      |    |    |               |     |      |      |              |               |     |        |
| KNIFE RIVER SOUTH OF HAZEN       |          | 1    | 1  | 1  |               | 1   | 2    |      | 1            |               | 1   | 6      |
| 112WRD                           | 06339500 |      |    |    |               |     |      |      |              |               |     |        |
| KNIFE RIVER NR GOLDEN VALLEY, ND |          | 17   |    | 1  |               |     |      |      | 20           |               |     |        |
| 112WRD                           | 06339100 |      |    |    |               |     |      |      |              |               |     |        |
| KNIFE RIVER AT MANNING, ND       |          | 29   | 12 | 13 | 9             | 12  | 24   |      | 54           | 10            | 12  | 34     |
| 112WRD                           | 06339300 |      |    |    |               |     |      |      |              |               |     |        |
| KNIFE RIVER AT MARSHALL, ND      |          | 29   | 11 | 13 | 11            | 12  | 24   |      | 55           | 8             | 12  | 31     |
| 112WRD                           | 06340500 |      |    |    |               |     |      |      |              |               |     |        |
| KNIFE RIVER AT HAZEN, ND         |          | 19   | 12 | 12 | 10            | 19  | 24   | 9    | 43           | 9             | 12  | RR     |
| 21NDHDW0                         | 380063   |      |    |    |               |     |      |      |              |               |     |        |
| GREEN RIVER WEST OF GLADSTONE    |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 6      |
| 21NDHDW0                         | 380065   |      |    |    |               |     |      |      |              |               |     |        |
| PIC MUDDY CREEK SOUTHEAST ALMONT |          | 3    | 3  | 3  |               | 3   | 6    |      | 3            |               | 3   | 18     |
| 21NDHDW0                         | 380067   |      |    |    |               |     |      |      |              |               |     |        |
| CANNONBALL R SOUTH BREJEN        |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06350000 |      |    |    |               |     |      |      |              |               |     |        |
| CANNONBALL RIVER AT REGENT, ND   |          | 30   | 12 | 14 | 10            | 12  | 24   |      | 57           | 11            | 12  | 33     |
| 112WRD                           | 06351000 |      |    |    |               |     |      |      |              |               |     |        |
| CANNONBALL RIVER BELOW BENTLEY,  |          | 16   |    | 2  |               |     |      |      | 20           |               |     |        |
| 21NDHDW0                         | 380068   |      |    |    |               |     |      |      |              |               |     |        |
| NORTH FORK GRAND R SOUTH BOWMAN  |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                           | 06355000 |      |    |    |               |     |      |      |              |               |     |        |
| NORTH FORK GRAND RIVER AT HALEY, |          | 15   |    | 2  |               |     |      |      | 19           |               |     |        |
| 112WRD                           | 06469500 |      |    |    |               |     |      |      |              |               |     |        |
| PIPESTEM CREEK NEAR BUCHANAN, N. |          |      |    |    |               |     |      |      |              |               |     |        |

Table 11. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>DO</u>                        |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Souris R nr Sherwood             | ○   | ●   | ○   |     |     |     |     |     |     |     | ○   |     | 23         | 4   |
| Souris R nr Foxholm              | ●   | ●   |     |     |     |     |     |     |     |     |     |     | 20         |     |
| Souris R nr Sawyer               |     |     | ●   | X   |     |     | X   |     |     |     |     |     |            |     |
| Souris R at Towner               |     | ●   | ●   |     |     |     | X   |     |     |     |     |     | 24         | 3   |
| Souris R nr Westhope             | ●   | ●   | ●   |     |     |     | X   |     |     |     |     |     | 28         | 1   |
| Boise de Sioux R at Breckenridge | X   |     |     |     |     |     | X   |     |     |     |     |     |            |     |
| James R at Jamestown             |     |     |     | ○   |     |     |     |     |     |     |     |     | 11         |     |
| James R at La Moure              | ●   |     | ○   |     |     |     |     |     |     |     |     |     |            |     |
| Sheyenne R at Valley City        |     |     |     |     | ●   |     |     |     |     |     |     |     | 20         |     |
| Elm Cr nr Golder Valley          |     |     |     |     |     | ○   | ○   |     |     |     |     |     | 16         |     |
| Heart R at Mandan                |     |     | ●   |     |     |     |     |     |     |     |     |     | 12         |     |
| Heart R nr Mandan                |     | X   |     |     |     |     |     |     |     |     |     |     | 11         |     |
| Wild Rice R nr Abercrombie       |     |     |     |     | ●   |     |     |     |     |     |     |     |            |     |
| Forest R nr Minto                |     | ●   |     |     |     |     |     |     |     |     |     |     | 22         | 5   |
| Park R on I-29                   |     |     | ●   |     |     |     |     | ○   |     |     |     |     | 27         | 2   |
| <u>pH</u>                        |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Souris R nr Verendrye            |     |     |     |     |     | ●   |     |     |     |     |     |     | 14         |     |
| Souris R nr Westhope             |     |     |     |     |     |     | X   |     |     |     |     |     |            |     |
| James R at La Moure              |     |     |     |     |     |     |     | X   |     |     |     |     |            |     |
| Little Muddy Cr blw Cow Cr       |     |     |     |     |     |     |     |     | ●   |     |     |     | 15         |     |
| <u>Fecal Coliform Bacteria</u>   |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Souris R nr Sawyer               | ●   |     |     |     |     |     |     |     |     |     |     |     | 23         |     |
| Souris R at Towner               |     |     |     |     |     |     |     |     |     |     |     |     | 17         | (a) |
| Red R at Brushvale               |     | ●   |     |     |     |     |     |     |     |     |     |     | 17         |     |
| Red R blw Fargo                  |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 35         |     |
| Red R at Fargo                   |     |     |     |     |     | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 49         |     |
| Red R nr Perley                  | ○   |     | ●   |     |     |     | ●   |     |     |     |     |     | 27         |     |
| Heart R nr Mandan                |     |     |     |     |     | ○   |     |     |     |     |     |     | 11         |     |
| Goose R nr Hillsboro             |     |     |     |     |     |     |     |     |     |     |     |     | 34         | (a) |

(a) WQI values for years 1975-76 indicated problems but no recent data are available for reporting current status.

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 11. TABLE OF CRITICAL STATIONS AND PARAMETERS.

NORTH DAKOTA

| STATION                          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| Beaver Cr nr Linton              | -   | -   | -   | -   | ●   | -   | -   | -   | -   | -   | -   | -   |            |     |
| Knife R at Manning               |     |     |     |     |     | ●   |     |     |     |     |     |     | 22         |     |
| Red R at Grand Forks             |     |     |     |     |     | ○   |     |     |     |     |     |     | 12         |     |
| <u>Nitrate</u>                   |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Sheyenne R at Valley City        |     |     |     |     |     |     |     |     |     |     |     | ●   | 23         |     |
| Little Muddy Cr nr Williston     | ●   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cart Cr nr Hoople                |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| <u>Phosphorus</u>                |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R nr Williston          |     |     |     | ●   | ○   | ●   |     |     |     |     |     |     | 27         |     |
| Souris R nr Foxholm              | ○   | ●   | ●   |     |     | ○   | ●   | ○   | ○   |     |     |     | 45         |     |
| Souris R nr Sawyer               |     |     |     |     | ○   |     | ○   | ○   | ●   |     |     |     | 39         |     |
| Souris R nr Verendrye            | ●   |     | ○   |     | ○   | ○   | ○   |     |     |     |     |     | 47         |     |
| Souris R at Towner               |     |     |     |     | ●   | ○   |     |     |     |     |     |     | 32         |     |
| Souris R nr Westhope             |     | ●   | ●   |     |     |     | ○   |     | ○   |     |     |     | 44         |     |
| Boise de Sioux R at Breckenridge | ●   |     |     |     | ○   | ○   | ○   | ○   | ○   | ○   |     |     |            |     |
| Red R at Brushvale               |     |     |     |     |     | ○   | ○   |     |     |     |     |     | 30         |     |
| Red R blw Fargo                  | ●   | ●   | ●   |     | ○   | ○   | ●   | ●   | ●   | ○   | ○   | ○   | 61         |     |
| Red R at Fargo                   |     |     |     | ●   |     | ○   | ●   |     |     |     |     |     | 40         |     |
| Red R nr Perley                  |     |     |     | ●   | ○   | ●   | ●   | ○   | ○   | ●   |     | ●   | 59         |     |
| Red R at Grand Forks             |     |     |     | ○   | ○   | ●   | ○   |     |     | ○   |     | ○   | 44         |     |
| Red R nr Oslo                    | ●   | ●   | ●   |     |     | ○   | ○   | ○   | ○   |     |     |     | 54         |     |
| Red R at Emerson, Mtha           |     |     |     | ●   |     | ○   | ○   |     |     |     |     |     | 37         |     |
| Sheyenne R at Valley City        |     |     |     |     | ○   |     |     |     |     |     |     |     | 32         |     |
| Sheyenne R at Harwood            |     |     |     |     |     | ○   |     |     |     |     |     |     | 25         |     |
| Pipestem R at Buchanan           |     |     |     |     | ○   |     |     |     |     |     |     |     |            |     |
| Maple R at Ellendale             |     |     |     | ○   |     |     | ○   |     |     |     |     |     |            |     |
| Maple R nr Fargo                 |     |     |     | ○   |     |     |     |     |     |     |     |     |            |     |
| Elm R at Ellendale               |     |     |     | ○   |     |     |     |     |     |     |     |     |            |     |
| Elm Cr nr Golden Valley          | ○   |     | ○   |     |     |     |     |     |     |     |     |     | 29         |     |
| Little Missouri R at Medora      |     |     |     |     |     |     | ○   |     |     |     |     |     |            |     |
| Little Missouri R nr Watford     |     |     |     | ●   |     | ●   | ●   |     | ●   |     |     |     | 52         |     |
| Heart R at Mandan                |     |     |     | ○   |     |     |     |     |     |     |     |     | 19         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 11. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                       | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Phosphorus Continued</u>   |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Heart R nr Mandan             |     |     |     | ○   |     |     |     |     |     |     |     |     | 17         |     |
| Square Butte Cr at Center     |     |     |     |     |     |     |     |     |     | ●   |     |     |            |     |
| Goose R nr Hillsboro          |     |     |     |     |     |     |     | ○   | ●   |     |     |     | 34         |     |
| Antelope Cr nr Abercrombie    | -   | -   |     | ○   | -   |     | -   | -   | -   | -   | -   | -   |            |     |
| Wild Rice R nr Abercrombie    | -   | -   |     | ○   |     |     | -   | -   |     | -   | -   | -   |            |     |
| Cedar Cr at Raleigh           |     |     |     |     |     |     | ○   |     |     |     |     |     |            |     |
| Park R nr Hoople              | -   | -   | -   | -   |     | ●   | -   | -   | -   | -   | -   | -   |            |     |
| Park R nr Park River          |     |     |     |     |     |     | ●   |     |     |     |     |     |            |     |
| Park R on I-29                |     |     |     |     |     | ●   | ●   |     |     |     |     |     | 31         |     |
| Tongue R nr Pembina           |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Deep R nr Upham               |     |     |     |     |     |     |     |     | ○   |     |     |     |            |     |
| Apple Cr on Hwy 1804          | -   | -   | -   |     | ○   |     | -   | -   | -   | -   | -   | -   |            |     |
| Beaver Cr nr Linton           | -   | -   | -   |     | -   | -   |     | -   | -   | ○   | -   | -   |            |     |
| Big Muddy Cr nr Almont        |     |     |     | ○   |     |     |     |     |     |     |     |     |            |     |
| Cannonball R nr Breien        |     |     | ○   |     |     |     |     |     |     |     |     |     |            |     |
| <u>Turbidity</u>              |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R nr Williston       |     |     |     | ●   | ●   | ●   | ●   | ○   |     |     |     |     | 70         |     |
| Missouri R at Bismarck        |     |     | ●   |     |     |     |     |     |     |     |     |     | 10         |     |
| Red R at Oslo                 |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Red R at Emerson, Mtba        |     |     |     | ●   |     | ●   | ●   |     |     |     |     |     | 35         |     |
| Little Missouri R at Medora   |     |     |     | ○   |     |     |     |     |     | ○   |     |     |            |     |
| Little Missouri R nr Watford  |     |     |     | ●   | ●   |     | ●   | ●   | ●   |     |     |     | 59         |     |
| Heart R nr Mandan             |     |     |     | ●   |     |     |     |     |     |     |     |     | 12         |     |
| Cedar Cr at Raleigh           |     |     |     |     |     |     | ○   |     |     |     |     |     |            |     |
| <u>Total Dissolved Solids</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Souris R nr Westhope          | ○   | ○   |     |     |     |     |     |     |     |     |     |     | 29         |     |
| Elm Cr nr Golden Valley       | ○   |     |     |     | ○   | ○   | ○   |     |     |     |     |     | 42         |     |
| Des Lacs R nr Foxholm         |     |     |     |     |     | ○   |     |     |     |     |     |     | 33         |     |
| Little Missouri R nr Watford  |     |     |     |     |     |     |     |     |     | ○   | ○   | ●   | 40         |     |
| Turtle R nr Manvel            |     |     |     |     |     | ●   |     |     |     |     |     |     |            |     |

x Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 11. TABLE OF CRITICAL STATIONS AND PARAMETERS.

NORTH DAKOTA

| STATION                                 | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|-----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Total Dissolved Solids Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Forest R nr Minto                       |     |     |     |     |     |     |     | ○   |     |     |     |     | 31         |     |
| Spring Cr nr Bowman                     |     |     |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Cedar Cr nr Haynes                      |     |     |     |     |     |     |     | ○   |     |     |     |     | 45         |     |
| Cedar Cr nr Raleigh                     | ●   | ●   |     | ○   |     | ○   | ○   | ○   | ○   | ○   |     |     | 51         |     |
| Park R on I-29                          |     |     |     |     |     | ○   | ●   | ●   |     |     |     |     |            |     |
| Tongue R nr Pembina                     |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Pembina R nr Pembina                    |     |     |     |     |     |     | ●   |     |     |     |     |     |            |     |
| Willow Cr nr Willow City                |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Little Muddy R blw Cow Cr               | ○   | ○   |     |     |     |     |     |     |     |     |     |     | 40         |     |
| Knife R nr Golden Valley                | ●   | ○   |     |     |     |     |     |     |     |     | ○   | ○   | 40         |     |
| Knife R at Marshall                     | ○   | ○   | ○   |     |     | ○   |     |     |     |     |     | ○   | 40         |     |
| Big Muddy Cr nr Almont                  |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Cannonball R at Regent                  | ○   | ○   | ○   |     | ○   | ○   |     |     | ○   |     |     | ○   | 46         |     |
| Cannonball R blw Bentley                | ○   | ○   |     |     |     |     |     |     |     |     |     | ○   | 39         |     |
| Spring Cr at Zap                        |     |     |     |     |     |     |     |     |     |     |     | ○   | 37         |     |
| Knife R nr Manning                      | ○   | ○   |     |     |     |     |     |     |     |     |     |     | 37         |     |
| Knife R nr Hazen                        |     |     |     |     |     |     |     |     |     |     |     | ○   | 35         |     |
| N Fork Grand R at Haley                 |     |     |     |     |     |     |     | ○   |     |     |     |     | 42         |     |
| Little Missouri nr Monarch              |     |     |     |     |     |     |     |     |     |     |     | ○   | 34         |     |
| <u>Suspended Sediment</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R nr Williston                 |     |     |     | ●   | ●   | ●   | ●   |     | ○   |     |     |     | 63         |     |
| Missouri R at Bismarck                  |     |     | ●   |     |     |     | ○   |     |     |     |     |     | 38         |     |
| Elm Cr nr Golden Valley                 |     |     | ●   |     |     |     |     |     |     |     |     |     | 27         |     |
| Little Missouri nr Watford              |     |     |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     | 89         |     |
| Heart R nr Mandan                       |     |     |     | ●   |     | ●   |     |     |     |     |     |     | 30         |     |
| Spring Cr at Zap                        |     |     | ○   |     |     |     |     |     |     |     |     |     | 17         |     |
| Knife R at Marshall                     |     |     |     | ●   |     |     |     |     | ○   |     |     |     | 30         |     |
| Knife R at Hazen                        |     |     |     | ○   |     |     |     |     |     |     |     |     | 19         |     |
| Cannonball R at Regent                  |     |     | ○   |     |     |     |     |     |     |     |     |     | 22         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 11. TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

X Minor exceedance of standards (for Temperature, DO, and pH only)  
 ○ At or approaching critical levels      ● Above critical levels      - Insufficient data

Table 11 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

Table 12. WATER QUALITY TREND TABLE. - NORTH DAKOTA  
Stations and Parameters where Significant Statistical  
Differences were Observed.

[illegible]

Table 13. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Dissolved Oxygen</u>            | <u>WQI*</u> |
|------------------------------------|-------------|
| 1. James R nr Stratford            | 35          |
| 2. James R blw Mitchell            | 27          |
| 3. Big Sioux R abv Waterton        | 26          |
| <br><u>pH</u>                      |             |
| 1. White R nr Oacoma               | 18          |
| 2. Big Sioux R at Sioux Falls      | 10          |
| 3. Cheyenne R at Plainview         | 10          |
| <br><u>Fecal Coliform Bacteria</u> |             |
| 1. Whitewood Cr at Pluma           | 100         |
| 2. Whitewood Cr at Deadwood        | 100         |
| 3. Whitewood Cr nr Whitewood       | 44          |
| 4. White R nr Oacoma               | 42          |
| 5. Ponca Cr nr St Charles          | 38          |
| 6. Big Sioux R nr Alcester         | 35          |
| <br><u>Nitrogen</u>                |             |
| 1. Belle Fourche R nr Sturgis      | 53          |
| 2. Belle Fourche R nr Elm Springs  | 45          |
| 3. Whitewood Cr at Pluma           | 43          |
| <br><u>Phosphorus</u>              |             |
| 1. Big Sioux R at Sioux Falls      | 96          |
| 2. Big Sioux R at Canton           | 91          |
| 3. Big Sioux R at Brandon          | 100         |
| 4. Big Sioux R nr Alcester         | 88          |
| 5. Big Sioux R nr Hudson           | 93          |
| 6. Boxelder Cr at New Underwood    | 89          |
| <br><u>Turbidity</u>               |             |
| 1. White R nr Oacoma               | 82          |

SOUTH DAKOTA

Table 13 (continued)

Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Total Dissolved Solids</u>     | <u>WQI*</u> |
|-----------------------------------|-------------|
| 1. Cheyenne R at Edgemont         | 66          |
| 2. N Fork Grand R nr Shadehill    | 65          |
| 3. Belle Fourche R nr Sturgis     | 54          |
| 4. Cheyenne R nr Buffalo Gap      | 53          |
| 5. Cheyenne R nr Plainview        | 47          |
| <u>Suspended Sediment</u>         |             |
| 1. White R nr Oacoma              | 93          |
| 2. Belle Fourche R nr Elm Springs | 91          |
| 3. Grand R at Little Eagle        | 72          |
| 4. White R nr Kadoka              | 69          |
| 5. Little White R nr White River  | 59          |
| 6. Bad R nr Ft Pierre             | 53          |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature.

Table 14. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - South Dakota

| STATION                           |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SHSP<br>SOLID | NH3 | NETALS |
|-----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 21SDAK01                          | 460671   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT GAHE DAM        |          | 23   | 13 | 10 | 13            | 13  | 13   |      | 26           | 13            | 13  |        |
| 121MRRCF                          | 460008   |      |    |    |               |     |      |      |              |               |     |        |
| POWERHOUSE OUTFLOW AT GAHE        |          | 7    |    | 7  | 4             |     |      |      |              |               |     | 5      |
| 112WRD                            | 06440000 |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI R AT PIERRE SD           |          | 27   | 27 | 13 | 11            | 13  | 46   | 13   | 37           | 4             | 13  | 56     |
| 21SDAK01                          | 460672   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT BIG BEND DAM    |          | 10   | 6  | 3  | 6             | 6   | 6    |      | 12           | 6             | 6   |        |
| 121MRRCF                          | 460005   |      |    |    |               |     |      |      |              |               |     |        |
| POWERHOUSE OUTFLOW AT BIG BEND    |          | 5    |    | 5  |               | 3   | 6    |      | 3            | 4             | 3   | 14     |
| 1110NET                           | 460032   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI RIVER AT YANKTON         |          |      |    |    |               |     |      |      |              |               |     |        |
| 121MRRCF                          | 460029   |      |    |    |               |     |      |      |              |               |     |        |
| MO R & DAM ABOVE YANKTON, SD      |          |      |    |    |               |     |      |      |              |               |     |        |
| 21SDAK01                          | 460673   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI R. AT FORT RANDALL DAM   |          | 9    | 5  | 3  | 5             | 5   | 5    |      | 10           | 5             | 5   |        |
| 21SDAK01                          | 460674   |      |    |    |               |     |      |      |              |               |     |        |
| MISSOURI R. AT GAVINS POINT DAM   |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 06395000 |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE RIVER AT EDGE MONT, S.D. |          | 11   | 1  | 1  |               | 1   | 5    | 1    | 11           |               |     | 2      |
| 21SDAK01                          | 460875   |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R AT EDGE MONT           |          | 19   | 10 | 10 | 10            | 10  | 11   |      | 22           | 11            | 11  |        |
| 112WRD                            | 06401500 |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R BELOW ANGOSTURA DAM S  |          | 9    |    | 9  |               |     | 36   |      | 18           |               |     |        |
| 112WRD                            | 06402600 |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R NEAR BUFFALO GAP SD    |          | 12   |    | 12 |               |     | 48   |      | 23           |               |     |        |
| 21SDAK01                          | 460656   |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE RIVER                    |          |      |    |    |               |     |      |      |              |               |     |        |
| 112WRD                            | 06423500 |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R NEAR WASTA SD          |          | 9    |    |    |               |     |      |      | 9            |               |     |        |
| 21SDAK01                          | 460865   |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R NEAR WASTA             |          | 21   | 12 | 11 | 12            | 10  | 12   |      | 24           | 12            | 12  |        |
| 21SDAK01                          | 468860   |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE RIVER SE OF PLAINVIEW    |          | 22   | 13 | 11 | 13            | 10  | 13   |      | 26           | 13            | 13  |        |
| 121MRRCF                          | 460010   |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE RIVER NEAR EAGLE BUTTE   |          | 7    |    | 7  | 4             |     |      |      |              |               |     | 5      |
| 112WRD                            | 06439500 |      |    |    |               |     |      |      |              |               |     |        |
| CHEYENNE R NEAR EAGLE BUTTE SD    |          | 10   |    | 10 |               |     | 39   |      | 20           |               |     |        |
| 21SDAK01                          | 460655   |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX RIVER ABOVE WATERTOWN   |          | 19   | 11 | 8  | 11            | 11  | 11   |      | 22           | 11            | 11  |        |
| 21SDAK01                          | 460740   |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX NEAR WATERTOWN          |          | 25   | 14 | 11 | 14            | 14  | 14   |      | 28           | 14            | 14  |        |
| 21SDAK01                          | 460662   |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX RIVER CEMETARY ROAD     |          | 21   | 12 | 9  | 12            | 11  | 12   |      | 24           | 12            | 12  |        |
| 112WRD                            | 06480000 |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX RIVER NEAR BROOKINGS S  |          | 12   |    |    |               |     |      |      | 12           |               |     |        |
| 21SDAK01                          | 460702   |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX RIVER NEAR BROOKINGS    |          | 21   | 12 | 9  | 12            | 11  | 12   |      | 24           | 12            | 12  |        |
| 21SDAK01                          | 460663   |      |    |    |               |     |      |      |              |               |     |        |
| BIG SIOUX EAST OF EGAN ON SD 34   |          |      |    |    |               |     |      |      |              |               |     |        |

Table 14 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - South Dakota

| STATION                          |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | THUR | DIS<br>SOLID | SUSP<br>SOLID | CU | ZN | FE | COBALT |
|----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|----|----|----|--------|
| 21SDAK01                         | 460664   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER IN SIOUX FALLS   |          | 25   | 14 | 14 | 14            | 13  | 14   |      | 28           | 13            | 14 |    |    |        |
| 21SDAK01                         | 460703   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER NEAR DELL RAPIDS |          | 21   | 12 | 12 | 10            | 11  | 12   |      | 24           | 12            | 12 |    |    |        |
| 112-RP                           | 06481000 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY R NEAR DELL RAPIDS SD  |          | 22   | 19 | 22 | 17            | 22  | 55   | 22   | 54           | 30            | 22 | 53 |    |        |
| 11100FT                          | 460080   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER BLW SIOUX FALLS  |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 112-RP                           | 06482020 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY R AT NORTH CLIFF AVE A |          | 22   | 19 | 22 | 17            | 22  | 22   | 22   | 47           | 22            | 22 | 51 |    |        |
| 112-RP                           | 06482100 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER NEAR BRANDON, S. |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 21SDAK01                         | 460831   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER AT BRANDON S DAK |          | 26   | 14 | 14 | 14            | 14  | 13   |      | 27           | 14            | 13 |    |    |        |
| 21SDAK01                         | 460665   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER EAST OF CANTON   |          | 21   | 12 | 12 | 12            | 10  | 12   |      | 24           | 12            | 12 |    |    |        |
| 21SDAK01                         | 460666   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER EAST OF HUDSON   |          | 21   | 12 | 12 | 11            | 10  | 12   |      | 24           | 12            | 12 |    |    |        |
| 21SDAK01                         | 460667   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER SE OF ALCESTER   |          | 21   | 12 | 12 | 11            | 10  | 12   |      | 24           | 12            | 12 |    |    |        |
| 21SDAK01                         | 460832   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER NEAR RICHLAND SD |          | 23   | 13 | 13 | 13            | 11  | 13   |      | 26           | 13            | 13 |    |    |        |
| 112-RP                           | 06482875 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| RIO STONY RIVER NR HUDSON, SOUTH |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 21SDAK01                         | 460805   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER NEAR HECLA           |          | 16   | 9  | 6  | 9             | 9   | 9    |      | 18           | 9             | 9  |    |    |        |
| 21SDAK01                         | 460734   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER NEAR STRATFORD       |          | 14   | 8  | 5  | 8             | 8   | 8    |      | 16           | 8             | 8  |    |    |        |
| 112-RP                           | 06471000 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES R AT COLUMBIA SD           |          | 7    |    | 8  |               |     | 32   |      | 16           |               |    |    |    |        |
| 21SDAK01                         | 460733   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER AT COLUMBIA          |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 21SDAK01                         | 460735   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER ABOVE HURON          |          | 21   | 12 | 5  | 12            | 12  | 12   |      | 24           | 12            | 12 |    |    |        |
| 112-RP                           | 06476000 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES R AT HURON SD              |          | 10   | 1  | 10 |               |     | 40   |      | 20           |               |    |    |    |        |
| 112-RP                           | 06476001 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER AT HURON, S. DAK.    |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 112-RP                           | 06476050 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES R 2 21ST BRIDGE @ HURON, S |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 21SDAK01                         | 460736   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER BELOW HURON          |          | 1    | 1  | 1  | 1             | 1   | 1    |      | 2            | 1             | 1  |    |    |        |
| 21SDAK01                         | 460737   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER ABOVE MITCHELL       |          | 20   | 11 | 11 | 11            | 10  | 11   |      | 22           | 10            | 11 |    |    |        |
| 21SDAK01                         | 460638   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER BELOW WOLF CREEK     |          |      |    |    |               |     |      |      |              |               |    |    |    |        |
| 21SDAK01                         | 460770   |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES RIVER NEAR MITCHELL        |          | 2    | 1  | 1  | 1             | 1   | 1    |      | 2            | 1             | 1  |    |    |        |
| 112-RP                           | 06478000 |      |    |    |               |     |      |      |              |               |    |    |    |        |
| JAMES R NR MITCHELL, S. DAK.     |          |      |    |    |               |     |      |      |              |               |    |    |    |        |

Table 14 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - South Dakota

| STATION                         |          | TEMP | DO | PH | FECAL<br>COLI | ATT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | HE3 | HEALS |
|---------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|-------|
| 21SDAK01                        | 460707   |      |    |    |               |     |      |      |              |               |     |       |
| JAMES RIVER BELOW MITCHELL      |          | 22   | 11 | 12 | 12            | 10  | 12   |      | 24           | 11            | 12  |       |
| 112WRD                          | 06478500 |      |    |    |               |     |      |      |              |               |     |       |
| JAMES R NEAR SCOTLAND SD        |          | 24   | 24 | 12 | 11            | 12  | 24   | 12   | 36           | 8             | 12  | 56    |
| 21SDAK01                        | 460760   |      |    |    |               |     |      |      |              |               |     |       |
| JAMES RIVER NEAR YANKTON        |          |      |    |    |               |     |      |      |              |               |     |       |
| 21SDAK01                        | 460761   |      |    |    |               |     |      |      |              |               |     |       |
| JAMES RIVER NORTH OF YANKTON    |          | 21   | 12 | 12 | 12            | 9   | 12   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460755   |      |    |    |               |     |      |      |              |               |     |       |
| VERMILION R NEAR WAKONDA        |          | 19   | 11 | 11 | 11            | 9   | 10   |      | 22           | 11            | 11  |       |
| 21SDAK01                        | 460745   |      |    |    |               |     |      |      |              |               |     |       |
| VERMILION R NEAR VERMILION      |          | 6    | 3  | 3  | 3             | 2   | 3    |      | 6            | 2             | 3   |       |
| 21SDAK01                        | 460661   |      |    |    |               |     |      |      |              |               |     |       |
| VERMILION RIVER W OF CHANCELLOR |          | 21   | 12 | 12 | 12            | 10  | 12   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460815   |      |    |    |               |     |      |      |              |               |     |       |
| KEYA PABA RIVER NEAR KEWEEA     |          | 21   | 12 | 10 | 12            | 10  | 11   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460835   |      |    |    |               |     |      |      |              |               |     |       |
| WHITE RIVER NEAR KADOKA         |          | 25   | 14 | 12 | 14            | 7   | 14   |      | 28           | 14            | 14  |       |
| 21SDAK01                        | 460825   |      |    |    |               |     |      |      |              |               |     |       |
| WHITE RIVER NEAR OACOMA         |          | 9    | 5  | 3  | 5             | 5   | 4    |      | 10           | 5             | 5   |       |
| 21SDAK01                        | 460842   |      |    |    |               |     |      |      |              |               |     |       |
| WHITE RIVER NEAR DGLALA         |          | 19   | 11 | 10 | 10            | 8   | 11   |      | 22           | 11            | 11  |       |
| 112WRD                          | 06452000 |      |    |    |               |     |      |      |              |               |     |       |
| WHITE R NEAR OACOMA SD          |          | 26   | 27 | 14 | 11            | 12  | 24   | 15   | 36           | 7             | 12  | 56    |
| 21SDAK01                        | 460840   |      |    |    |               |     |      |      |              |               |     |       |
| LITTLE WHITE R NEAR WHITE R SD  |          | 21   | 12 | 10 | 12            | 6   | 11   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460843   |      |    |    |               |     |      |      |              |               |     |       |
| LITTLE WHITE RIVER NEAR TUTHILL |          |      |    |    |               |     |      |      |              |               |     |       |
| 21SDAK01                        | 460905   |      |    |    |               |     |      |      |              |               |     |       |
| BATTLE CREEK NEAR KEYSTONE      |          | 21   | 12 | 11 | 12            | 12  | 12   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460910   |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CREEK NEAR FARMINGDALE    |          | 21   | 12 | 11 | 12            | 11  | 11   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460920   |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CREEK BELOW PACTOLA RES.  |          |      |    |    |               |     |      |      |              |               |     |       |
| 112WRD                          | 06411500 |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CR BELOW PACTOLA DAM SD   |          | 11   |    | 11 |               |     | 44   |      | 22           |               |     |       |
| 112WRD                          | 06421500 |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CR NEAR FARMINGDALE SD    |          | 17   |    | 9  |               |     | 38   |      | 27           |               |     |       |
| 21SDAK01                        | 460647   |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CREEK NEAR ROCHESTER      |          | 21   | 12 | 11 | 12            | 11  | 12   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460649   |      |    |    |               |     |      |      |              |               |     |       |
| RAPID CREEK WEST OF RAPID CITY  |          | 21   | 12 | 11 | 11            | 12  | 12   |      | 24           | 12            | 12  |       |
| 21SDAK01                        | 460890   |      |    |    |               |     |      |      |              |               |     |       |
| BELE FOURCHE R NEAR BELE FOURC  |          | 21   | 11 | 11 | 11            | 10  | 12   |      | 24           | 11            | 12  |       |
| 21SDAK01                        | 460880   |      |    |    |               |     |      |      |              |               |     |       |
| BELE FOURCHE R NEAR STURGIS     |          | 21   | 12 | 11 | 12            | 10  | 12   |      | 24           | 12            | 12  |       |
| 112WRD                          | 06428500 |      |    |    |               |     |      |      |              |               |     |       |
| BELE FOURCHE R AT WY-SD STATE L |          | 20   | 11 | 11 | 11            | 21  | 12   | 11   | 29           | 9             | 9   | 28    |
| 112WRD                          | 06437000 |      |    |    |               |     |      |      |              |               |     |       |
| BELE FOURCHE R NEAR STURGIS SD  |          | 12   |    | 12 |               |     | 47   |      | 24           |               |     | 13    |

Table 14 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - South Dakota

| STATION                            |                 | TEMP | DO | PH | ECOM<br>COND | NTL | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NO3 | METALS |
|------------------------------------|-----------------|------|----|----|--------------|-----|------|------|--------------|---------------|-----|--------|
| 1124RD                             | 06418000        |      |    |    |              |     |      |      |              |               |     |        |
| BELE FOURCHE R. NEAR FLM SPRINGS   | 21SDAK01 460676 | 23   | 22 | 12 | 11           | 11  | 22   | 11   | 34           | 6             | 11  | 56     |
| BELE FOURCHE R. NE. OF FLM SPRINGS | 21SDAK01 460900 | 21   | 12 | 11 | 10           | 10  | 12   |      | 24           | 12            | 12  |        |
| SWEDESH CR. IN SWEDESH, SD         | 21SDAK01 460895 | 21   | 12 | 11 | 12           | 12  | 12   |      | 24           | 12            | 12  |        |
| REDWATER R. AT BELE FOURCHE        | 21SDAK01 460935 | 21   | 12 | 11 | 12           | 12  | 12   |      | 24           | 12            | 12  |        |
| MOOREAU RIVER NEAR WHITEHORSE      | 21SDAK01 460039 | 5    | 3  | 1  | 3            | 2   | 3    |      | 6            | 3             | 3   |        |
| MOOREAU RIVER NEAR USTA            | 1124RD 06357800 | 4    | 3  | 2  | 3            | 3   | 3    |      | 6            | 3             | 3   |        |
| GRAND R. AT LITTLE EAGLE SD        | 21SDAK01 460677 | 23   | 24 | 13 | 9            | 11  | 20   | 10   | 33           | 7             | 10  | 56     |
| N. FORK GRAND R. NEAR SHADEHILL    | 21SDAK01 460678 | 4    | 3  | 2  | 3            | 3   | 3    |      | 6            | 3             | 3   |        |
| S. FORK GRAND R. NORTH OF RISON    | 21SDAK01 460640 | 4    | 3  | 2  | 2            | 3   | 3    |      | 6            | 3             | 3   |        |
| GRAND RIVER AT SHADEHILL           | 21SDAK01 460955 | 4    | 3  | 2  | 3            | 3   | 3    |      | 6            | 3             | 3   |        |
| LITTLE MISSOURI R. AT CAMP CROOK   | 21SDAK01 460710 | 4    | 2  | 2  | 2            | 2   | 2    |      | 4            | 2             | 2   |        |
| LITTLE MINNESOTA R. NEAR PEEVER    | 21SDAK01 460700 | 21   | 12 | 9  | 12           | 12  | 12   |      | 24           | 12            | 12  |        |
| WETSTONE R. NEAR BIG STONE CITY    | 21SDAK01 460850 | 17   | 10 | 8  | 10           | 10  | 10   |      | 20           | 10            | 10  |        |
| RAD R. NEAR FT PIERRE              | 21SDAK01 460841 | 15   | 8  | 7  | 8            | 5   | 8    |      | 16           | 8             | 8   |        |
| RAD RIVER AT POWELL                | 1124RD 06441500 |      |    |    |              |     |      |      |              |               |     |        |
| RAD R. NEAR FORT PIERRE SD         | 21SDAK01 460679 | 1    |    |    |              |     |      |      |              | 1             |     |        |
| ROY ELDER CRK AT NEW UNDERWOOD     | 21SDAK01 460925 | 18   | 9  | 8  | 9            | 9   | 9    |      | 18           | 9             | 9   |        |
| ROY ELDER CREEK NEAR NEMO          | 21SDAK01 460646 | 21   | 12 | 11 | 12           | 12  | 12   |      | 24           | 12            | 12  |        |
| CASTLE CREEK NEAR MYSTIC           | 21SDAK01 460650 | 22   | 13 | 12 | 13           | 13  | 13   |      | 26           | 13            | 13  |        |
| GRACE COOLIDGE CREEK               | 21SDAK01 460651 | 21   | 12 | 10 | 12           | 11  | 12   |      | 24           | 12            | 12  |        |
| FRENCH CREEK IN CUSTER STATE PK.   | 21SDAK01 460653 | 21   | 12 | 10 | 11           | 12  | 12   |      | 24           | 12            | 12  |        |
| FRENCH CREEK NEAR CUSTER           | 21SDAK01 460658 | 21   | 12 | 10 | 11           | 12  | 12   |      | 24           | 12            | 12  |        |
| WHITEWOOD CREEK ABOVE HOMESTEAK    | 21SDAK01 460659 | 21   | 11 | 11 | 12           | 12  | 12   |      | 24           | 12            | 12  |        |
| WHITEWOOD CREEK AT PLUMA           | 21SDAK01 460660 | 17   | 9  | 9  | 10           | 9   | 10   |      | 20           | 10            | 10  |        |
| WHITEWOOD CREEK NE. OF DEANWOOD    |                 | 19   | 10 | 10 | 11           | 10  | 11   |      | 22           | 11            | 11  |        |

Table 14 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - South Dakota

| STATION                            |        | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | HEAVY<br>METALS |
|------------------------------------|--------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|-----------------|
| 21SDAK01                           | 460652 |      |    |    |               |     |      |      |              |               |     |                 |
| WHITEWOOD CREEK NEAR WHITEWOOD     |        | 12   | 7  | 6  | 7             | 6   | 7    |      | 14           | 7             | 7   |                 |
| 21SDAK01                           | 460649 |      |    |    |               |     |      |      |              |               |     |                 |
| SPRING CREEK SOUTHWEST OF RAPID    |        | 21   | 12 | 11 | 12            | 12  | 12   |      | 24           | 12            | 12  |                 |
| 21SDAK01                           | 460654 |      |    |    |               |     |      |      |              |               |     |                 |
| SPRING CREEK AT SHERIDAN LAKE      |        | 21   | 12 | 11 | 12            | 12  | 12   |      | 24           | 12            | 12  |                 |
| 21SDAK01                           | 460648 |      |    |    |               |     |      |      |              |               |     |                 |
| SPRING CREEK NEAR HILL CITY        |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460657 |      |    |    |               |     |      |      |              |               |     |                 |
| FALL RIVER NEAR CONFLUENCE         |        | 19   | 11 | 10 | 10            | 11  | 11   |      | 22           | 11            | 11  |                 |
| 21SDAK01                           | 460668 |      |    |    |               |     |      |      |              |               |     |                 |
| SIX MILE CREEK ABOVE BROOKINGS STP |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460670 |      |    |    |               |     |      |      |              |               |     |                 |
| PONCA CREEK SOUTH OF ST. CHARLES   |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460810 |      |    |    |               |     |      |      |              |               |     |                 |
| MAPLE R NEAR FREDERICK             |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460645 |      |    |    |               |     |      |      |              |               |     |                 |
| LAC QUI MAPLE RIVER AT GARY        |        | 4    | 3  | 3  | 3             | 3   | 3    |      | 6            | 3             | 3   |                 |
| 21SDAK01                           | 460844 |      |    |    |               |     |      |      |              |               |     |                 |
| LAKE CREEK NEAR TUTTHILL           |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460680 |      |    |    |               |     |      |      |              |               |     |                 |
| T116N R52E SECTION 9 WILLOW CREEK  |        |      |    |    |               |     |      |      |              |               |     |                 |
| 21SDAK01                           | 460675 |      |    |    |               |     |      |      |              |               |     |                 |
| 0.5 MILES S JUNC U.S. HWY R5 365   |        | 7    | 4  | 4  | 3             | 4   | 4    |      | 8            | 4             | 4   |                 |
| 21SDAK01                           | 460680 |      |    |    |               |     |      |      |              |               |     |                 |
| T116N R52E SECTION 9 WILLOW CREEK  |        |      |    |    |               |     |      |      |              |               |     |                 |

Table 15 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                                         | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>QOI | RKG |
|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Temperature</u>                              |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Big Sioux R at Brandon                          |     |     |     |     |     |     |     | X   |     |     |     |     |            |     |
| James R nr Yankton                              |     |     |     |     |     | X   |     | X   |     |     |     |     |            |     |
| Vermillion R nr Wakonda                         |     |     |     |     |     |     |     | X   |     |     |     |     |            |     |
| Vermillion R nr Chancellor                      |     |     |     |     |     |     |     | X   |     |     |     |     |            |     |
| Keya Paha R nr Wewela                           |     |     |     |     |     |     | X   |     |     |     |     |     |            |     |
| Whetstone R nr Big Stone City                   |     |     |     |     |     |     |     | X   |     |     |     |     |            |     |
| Bad R nr Ft. Pierre                             |     |     |     |     |     | X   |     |     |     |     |     |     |            |     |
| <u>Dissolved Oxygen</u>                         |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Big Sioux R abv Waterton                        | ●   |     |     |     |     | X   | ○   | X   | ○   |     |     |     | 26         | 3   |
| Big Sioux R nr Waterton                         |     | ●   |     |     |     |     |     | X   |     |     |     |     | 16         |     |
| Big Sioux R nr Brookings                        | ●   | ○   | X   |     |     |     |     |     |     |     |     | X   | 19         |     |
| Big Sioux R nr Egan                             |     |     |     |     |     |     |     |     |     |     |     |     |            | (a) |
| Big Sioux R nr Canton                           |     | X   |     |     |     |     |     |     |     |     |     |     | 7          |     |
| Big Sioux R nr Hudson                           |     | X   |     |     |     |     |     |     |     |     |     |     | 8          |     |
| Big Sioux R nr Richland                         |     | X   |     |     |     |     |     |     |     |     |     |     | 8          |     |
| James R nr Hecla                                |     |     |     |     |     |     |     | X   |     |     |     |     | 10         |     |
| James R nr Stratford                            |     |     |     |     |     | ●   | ○   | ●   | X   |     |     |     | 35         |     |
| James R abv Huron                               |     | ○   |     |     |     |     |     |     |     |     |     |     | 11         |     |
| James R abv Mitchell                            | X   |     | X   |     |     |     |     |     |     |     |     |     | 10         |     |
| James R blw Mitchell                            | ●   |     | ●   |     |     |     |     |     |     |     |     |     | 27         | 2   |
| James R nr Scotland                             |     | ●   |     |     |     |     |     |     |     |     |     |     | 11         |     |
| James R nr Yankton                              | ●   | ●   |     |     |     |     |     |     |     |     |     |     | 17         |     |
| Vermillion R nr Chancellor                      |     | X   |     |     |     |     |     |     |     |     |     |     | 5          |     |
| Belle Fourche R nr Sturgis                      | X   |     |     |     |     |     |     |     |     |     |     |     | 6          |     |
| Six Mile Cr nr Brookings                        |     | X   |     |     |     | ●   | ●   |     |     |     |     |     |            |     |
| <u>pH</u>                                       |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Missouri R at Dane Dam                          |     |     |     |     |     |     |     |     |     | X   |     |     |            |     |
| Cheyenne R nr Plainview                         |     |     |     |     |     |     |     |     |     | ○   |     |     | 10         |     |
| (a) 1977 data indicates problems. No 1978 data. |     |     |     |     |     |     |     |     |     |     |     |     |            |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 15. TABLE OF CRITICAL STATIONS AND PARAMETERS.

SOUTH DAKOTA

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>pH Continued</u>            |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Big Sioux R abv Watertown      |     |     |     |     |     |     |     |     | X   |     |     |     | 9          |     |
| Big Sioux R nr Brookings       |     | X   |     |     |     |     |     |     |     |     |     |     |            |     |
| Big Sioux R at Sioux Falls     |     | X   |     |     |     |     |     |     |     |     | X   |     | 10         |     |
| Big Sioux R nr Richland        | X   |     |     |     |     |     |     |     |     |     |     |     | 8          |     |
| James R abv Huron              |     | X   |     |     |     |     |     |     |     |     |     |     | 7          |     |
| James R nr Yankton             |     | X   |     |     |     |     |     |     |     |     |     |     | 7          |     |
| Vermillion R nr Wakonda        |     | X   |     |     |     |     |     |     |     |     |     |     |            |     |
| Vermillion R nr Vermillion     | X   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Vermillion R nr Chancellor     |     | X   |     |     |     |     |     |     |     |     |     |     |            |     |
| Keya Paha R nr Wewela          |     | X   |     |     |     |     |     |     |     |     |     |     | 8          |     |
| White R nr Oacoma              |     | X   |     |     |     |     |     |     |     |     |     |     | 18         |     |
| Little White R nr White R      |     | X   |     |     |     |     |     |     |     |     |     |     | 9          |     |
| Little Minnesota R nr Peever   |     | ○   |     |     |     |     |     |     |     |     |     |     | 8          |     |
| Whetstone R nr Big Stone City  |     | X   |     |     |     |     |     |     |     |     |     |     | 7          |     |
| Rapid Creek nr Farmingdale     |     |     |     |     |     |     |     |     |     |     | ●   |     | 17         |     |
| <u>Fecal Coliform Bacteria</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cheyenne R at Edgemont         |     |     |     |     |     | ●   |     |     |     |     |     |     | 17         |     |
| Cheyenne R nr Wasta            |     |     |     |     | ●   |     |     |     |     |     |     |     | 20         |     |
| Cheyenne R nr Plainview        |     |     |     | ●   |     |     |     | ●   |     |     |     |     | 20         |     |
| Big Sioux R nr Watertown       |     | ●   | ●   |     |     |     | ○   |     |     |     |     |     | 32         |     |
| Big Sioux R nr Brookings       |     |     |     |     |     | ○   |     |     |     |     |     |     | 15         |     |
| Big Sioux R at Sioux Falls     | ○   |     |     |     |     | ○   | ○   |     |     |     |     |     | 24         |     |
| Big Sioux R at Sioux Falls     |     |     |     |     |     |     |     | ●   | ●   |     | ●   | ●   | 32         |     |
| Big Sioux R at Brandon         | ○   |     |     |     |     | ●   |     | ●   |     |     |     |     | 32         |     |
| Big Sioux R nr Canton          |     |     |     |     |     | ○   | ●   |     |     |     |     |     | 19         |     |
| Big Sioux R nr Hudson          |     |     |     |     |     | ●   | ●   |     |     |     |     |     | 20         |     |
| Big Sioux R nr Alcester        |     |     |     |     |     | ●   | ●   | ●   |     |     |     |     | 35         | 7   |
| Big Sioux R nr Richland        |     |     |     |     |     | ●   | ○   |     |     |     |     | ○   | 23         |     |
| James R blw Mitchell           |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 30         |     |
| James R nr Yankton             |     |     |     |     |     |     | ●   |     |     |     |     |     | 10         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 15 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                                  | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | PKG. |
|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Fecal Coliform Bacteria Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Vermillion R nr Wakonda                  |     |     |     |     |     | ●   | ●   |     |     |     |     |     |            |      |
| Vermillion R nr Vermillion               | ●   |     |     |     |     | ●   |     |     |     |     |     |     | 23         |      |
| Vermillion R nr Chancellor               |     |     |     |     |     | ●   | ●   |     |     |     |     |     | 25         |      |
| White R nr Kadoka                        |     |     |     |     |     |     | ○   | ○   | ●   |     |     |     | 31         |      |
| White R nr Oglala                        |     |     |     |     |     |     | ●   |     |     |     |     |     | 19         |      |
| White R nr Oacoma                        |     |     |     | ●   | ●   | ●   |     | ●   | ●   |     |     |     | 42         | 4    |
| Little White R nr White River            |     |     |     | ●   |     |     | ●   | ○   | ●   |     |     |     | 30         |      |
| Little White R nr Tuthill                |     | ●   |     |     |     |     | ●   |     |     |     |     |     |            |      |
| Belle Fourche R nr Elm Springs           |     |     |     |     | ●   |     | ○   |     |     |     |     |     | 20         |      |
| Belle Fourche R nr Sturgis               |     |     |     |     | ●   |     |     |     |     |     |     |     | 19         |      |
| Grand R at Little Eagle                  |     |     |     |     |     |     |     |     | ●   |     |     |     | 23         |      |
| Bad R nr Ft. Pierre                      |     |     |     |     | ●   |     |     | ●   |     |     |     |     | 20         |      |
| Bad R at Powell                          |     |     | ○   |     |     |     |     |     |     |     |     |     |            |      |
| French Cr nr Custer                      |     |     | ●   |     |     | ●   |     |     |     |     |     |     | 20         |      |
| Whitewood Cr at Pluma                    | -   | -   | -   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 100        | 1    |
| Whitewood Cr nr Deadwood                 | -   | -   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 100        | 2    |
| Whitewood Cr nr Whitewood                |     | ●   |     | ●   |     |     | ○   |     |     |     |     |     | 44         | 3    |
| Fall R at Mouth                          |     |     |     |     |     |     | ○   |     |     |     |     |     | 31         |      |
| Six Mile Cr abv Brookings                |     |     |     |     |     | ●   |     |     |     |     |     |     |            |      |
| Ponca Cr nr St. Charles                  |     |     | ○   | ●   |     |     | ○   |     |     |     |     |     | 38         | 5    |
| Lac Qui Parle R at Gary                  |     |     |     |     |     |     |     |     |     |     |     |     |            | (b)  |
| Strawberry Cr nr Lead                    | ●   |     |     |     |     |     |     |     |     |     |     |     |            |      |
| <u>Nitrate</u>                           |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Cheyenne R nr Plainview                  |     | ○   |     |     |     |     |     |     |     |     |     |     | 23         |      |
| Big Sioux R above Watertown              |     |     | ●   |     |     |     |     |     |     |     |     |     | 14         |      |
| Big Sioux R nr Watertown                 |     |     |     |     |     |     |     |     |     |     | ○   | ○   | 18         |      |
| Big Sioux R at Brandon                   |     |     |     |     |     |     |     | ○   |     |     |     |     | 22         |      |
| Big Sioux R nr Alcester                  | ●   | ○   |     | ○   |     |     | ○   |     |     |     | ○   | ○   | 38         |      |
| Big Sioux R nr Richland                  | ○   | ○   |     | ○   |     |     |     |     |     |     |     | ○   | 30         |      |

(b) WQIs for 1975 indicated critical level concentrations for the period Jan-Jun.  
No 1978 data available Jan-Sep.

○ Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 15 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

SOUTH DAKOTA

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQT | RKG |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Nitrate Continued</u>       |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Belle Fourche R nr Elm Springs | ●   | ●   | ●   |     |     |     |     |     |     |     | ●   |     | 45         | 2   |
| Belle Fourche R nr Sturgis     | ●   | ○   | ●   |     |     |     |     |     |     |     | ●   | ●   | 53         | 1   |
| Whitewood Cr at Pluma          |     |     |     | ○   |     |     | ○   |     |     | ○   | ○   |     | 43         | 3   |
| Whitewood Cr nr Whitewood      |     |     |     |     |     |     |     |     |     | ○   |     |     |            |     |
| <u>Phosphorus</u>              |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cheyenne R nr Buffalo Gap      |     |     |     |     | ○   |     |     |     |     |     |     |     | 8          |     |
| Cheyenne R nr Eagle Butte      |     |     | ●   | ●   | ●   |     | ●   |     |     |     |     |     | 56         |     |
| Big Sioux R nr Waterton        |     |     |     |     |     | ●   |     | ●   |     | ●   | ●   | ●   | 73         |     |
| Big Sioux R nr Brookings       | ●   | ●   |     |     |     | ○   |     | ●   |     |     |     | ○   | 50         |     |
| Big Sioux R nr Dell Rapids     | ○   |     |     |     |     |     |     |     |     |     |     |     | 29         |     |
| Big Sioux R at Sioux Falls     | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   | 96         | 1   |
| Big Sioux R at Brandon         |     | ●   |     |     |     | ●   | ●   |     |     | ●   |     | ●   | 100        | 3   |
| Big Sioux R at Canton          | ●   |     |     | ○   |     |     | ●   | ●   | ●   | ●   | ●   | ●   | 91         | 2   |
| Big Sioux R nr Hudson          | ●   | ●   |     |     |     |     |     | ○   | ●   | ●   | ●   | ●   | 93         | 5   |
| Big Sioux R nr Alcester        | ●   | ●   |     |     |     |     | ●   |     | ●   | ●   | ●   | ●   | 88         | 4   |
| Big Sioux R nr Richland        | ●   |     |     |     |     |     | ●   |     |     | ●   | ●   | ●   | 71         |     |
| James R nr Hecla               |     |     |     |     |     |     |     | ●   |     |     |     |     | 38         |     |
| James R at Columbia            |     |     |     |     |     | ○   | ●   | ●   | ○   |     |     |     | 47         |     |
| James R nr Stratford           |     |     |     |     |     | ●   |     | ●   | ●   |     |     | ○   | 73         |     |
| James R abv Huron              |     |     | ●   |     |     | ●   |     | ●   | ○   |     |     | ●   | 70         |     |
| James R at Huron               |     |     | ●   | ●   |     | ●   |     |     |     |     |     | ●   | 65         |     |
| James R blw Huron              |     |     |     |     |     |     |     |     |     |     | ●   |     |            |     |
| James R abv Mitchell           | ●   |     |     |     |     |     |     |     |     |     |     | ○   | 52         |     |
| James R blw Mitchell           | ●   |     |     |     |     |     |     |     |     |     |     | ○   | 56         |     |
| James R nr Scotland            | ●   | ●   |     | ●   | ●   |     | ○   |     |     |     |     |     | 52         |     |
| James R nr Yankton             | ●   |     |     |     | ●   |     | ○   |     |     |     |     |     | 32         |     |
| White R nr Oglala              |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 30         |     |
| White R nr Kadoka              | ○   |     | ●   |     |     | ○   |     | ●   |     |     |     |     | 33         |     |
| White R nr Oacoma              |     |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     |     | 62         |     |
| Little White R nr White River  | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     |     | 62         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical  
levels

● Above critical levels

- Insufficient data

Table 15 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Phosphorus Continued</u>    |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Rapid Cr nr Farmingdale        |     | ●   | ●   |     | ●   |     | ●   | ●   | ○   | ●   | ●   | ●   | 84         |     |
| Belle Fourche at WY-SD Line    |     |     |     |     |     | ●   |     |     |     |     |     |     | 16         |     |
| Belle Fourche R nr Sturgis     |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 22         |     |
| Belle Fourche R nr Elm Springs |     |     | ○   |     | ●   | ○   | ●   |     |     |     |     |     | 35         |     |
| French Cr nr Custer            | ○   |     | ●   | ●   | ○   |     | ●   | ●   | ●   | ●   |     |     | 65         |     |
| Whitewood Cr at Pluma          |     |     |     | ●   | ●   |     | ○   | ●   |     |     |     |     | 44         |     |
| Whitewood Cr nr Deadwood       | ●   |     |     | ○   |     | ○   |     |     |     |     |     |     |            |     |
| Whitewood Cr nr Whitewood      |     | ○   |     |     |     |     |     |     |     |     |     |     |            |     |
| Fall R at Mouth                | ○   |     | ●   |     | ●   |     |     |     |     |     |     |     | 42         |     |
| Grand R at Little Eagle        |     |     | ●   | ○   |     |     |     |     |     |     |     |     | 26         |     |
| Keya Paha R nr Wewala          |     | ○   |     | ○   |     |     |     |     |     |     |     |     | 20         |     |
| Boxelder Cr at New Underwood   | ●   | ●   | ●   | ○   | ●   |     |     |     |     |     |     |     | 89         | 6   |
| Vermillion R nr Wakonda        |     |     |     |     |     | ○   | ●   |     |     |     |     |     | 32         |     |
| Vermillion R nr Vermillion     | ○   |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Vermillion R nr Chancellor     |     |     |     |     |     |     | ○   |     |     |     |     |     | 18         |     |
| Whetstone R nr Big Stone City  | ●   | ●   | ●   |     |     |     | ○   |     |     |     |     |     | 42         |     |
| Little Minnesota R nr Peever   |     |     | ●   |     |     |     | ○   |     |     |     |     |     | 26         |     |
| <u>Turbidity</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cheyenne R at Edgemont         |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| White R nr Oacoma              |     |     | ●   | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     | 82         |     |
| Belle Fourche R at WY-SD Line  |     |     | ○   |     | ●   | ●   |     |     |     |     |     |     | 28         |     |
| Belle Fourche R nr Elm Springs |     |     | ○   |     | ●   | ●   | ●   |     |     |     |     |     | 40         |     |
| Grand R at Little Eagle        |     |     | ●   | ●   | ●   | ○   | ●   |     |     |     |     |     | 34         |     |
| <u>Total Dissolved Solids</u>  |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Cheyenne R at Edgemont         | ●   | -   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ●   | ●   | ●   | 61         | 1   |
| Cheyenne R b/w Angostura Dam   |     | ●   |     | ○   |     |     |     |     | ○   |     |     |     | 47         |     |
| Cheyenne R nr Buffalo Gap      |     | ○   |     | ○   |     | ○   | ○   | ○   | ○   | ○   |     | ○   | 53         | 4   |
| Cheyenne R nr Wasta            | ○   | ●   |     | ○   |     |     |     |     | ○   |     |     |     | 46         |     |
| Cheyenne R nr Plainview        | ●   | ●   |     |     |     |     | ○   |     | ○   | ○   | ●   | ●   | 47         | 5   |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 15. TABLE OF CRITICAL STATIONS AND PARAMETERS.

SOUTH DAKOTA

| STATION                                 | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG. |
|-----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Total Dissolved Solids Continued</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Cheyenne R nr Eagle Butte               | ●   | ○   |     |     |     |     |     |     |     |     | ○   | ●   | 42         |      |
| James R abv Huron                       | ○   | ●   |     |     |     |     |     |     |     |     |     |     | 29         |      |
| James R abv Mitchell                    | ●   |     | ○   |     |     |     |     |     |     |     |     |     | 31         |      |
| James R blw Mitchell                    | ○   |     |     |     |     |     |     |     |     |     |     |     | 26         |      |
| James R nr Scotland                     | ○   | ○   |     |     |     |     |     |     |     |     |     |     | 31         |      |
| James R nr Yankton                      | ●   | ○   |     |     |     |     |     |     |     |     |     |     | 31         |      |
| Vermillion R nr Vermillion              | ○   |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Belle Fourche at WY-SD Line             |     |     | ○   |     | ●   | ●   |     |     |     |     |     |     | 41         |      |
| Belle Fourche R nr Belle Fourche        | ○   | ○   |     |     |     |     |     |     |     | ○   | ●   | ○   | 42         |      |
| Belle Fourche R nr Sturgis              | ●   | ●   | ●   |     | ○   | ○   | ○   |     | ○   |     | ●   | ●   | 54         | 3    |
| Belle Fourche R nr Elm Springs          | ●   | ●   | ●   |     |     |     |     |     |     | ○   | ●   | ●   | 49         |      |
| Moreau R nr Usta                        |     |     |     |     |     |     |     |     |     |     | ○   | ●   | 53         |      |
| N Fork Grand R nr Shadehill             |     |     |     |     |     |     |     |     |     | ●   | ●   | ●   | 65         | 2    |
| N Fork Grand R nr Bison                 |     |     |     |     |     |     |     |     |     | ○   | ●   | ●   | 53         |      |
| Bad R nr Ft. Pierre                     |     |     |     |     |     |     |     |     |     |     | ●   |     | 40         |      |
| <u>Suspended Sediment</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| James R nr Scotland                     | ○   | ○   |     |     |     |     |     |     |     |     |     |     | 37         |      |
| James R nr Yankton                      |     |     |     |     |     | ○   |     |     |     |     |     |     | 15         |      |
| Big Sioux R abv Watertown               | ●   |     |     |     |     |     |     |     |     |     |     |     | 10         |      |
| Big Sioux R at Brandon                  |     |     | ○   |     |     |     |     |     |     |     |     |     | 15         |      |
| Big Sioux R at Canton                   |     |     | ○   |     |     | ○   |     |     |     |     |     |     | 20         |      |
| Big Sioux R nr Hudson                   |     |     | ○   |     |     | ●   | ○   |     |     |     |     |     | 28         |      |
| Big Sioux R nr Alcester                 |     |     | ●   |     |     | ●   | ●   |     |     |     |     |     | 32         |      |
| Big Sioux R nr Richland                 |     |     | ○   |     |     | ●   | ○   |     |     |     |     |     | 35         |      |
| White R nr Oglala                       |     |     |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     | 46         |      |
| White R nr Kadoka                       |     | ●   | ●   | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     | 69         | 4    |
| White R nr Oacoma                       | ○   |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     |     | 93         | 1    |
| Little White R nr White River           |     |     | ●   | ●   | ○   | ○   | ●   | ●   | ●   |     |     |     | 59         | 5    |
| Belle Fourche R at WY-SD Line           |     |     | ○   |     |     |     |     |     |     |     |     |     | 10         |      |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 15 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

X Minor exceedence of standards (for Temperature, DO, and pH only)

- At or approaching critical levels

- Above critical levels

- insufficient data

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TABLE 10. WATER QUALITY TREND TABLE -

Stations and Parameters where Significant Statistical Differences were Observed.

SOUTH DAKOTA

| STATION                         | TEMPERATURE | DISSOLVED OXYGEN | PH | BACTERIA | NITROGEN | PHOSPHORUS | TURBIDITY | DISSOLVED SOLIDS | SUSPENDED SOLIDS | AMMONIA | METALS          |
|---------------------------------|-------------|------------------|----|----------|----------|------------|-----------|------------------|------------------|---------|-----------------|
|                                 |             |                  |    |          |          |            |           |                  |                  |         |                 |
| Missouri R. @ Oshe Dam          |             |                  |    |          |          |            |           | D                |                  |         |                 |
| Missouri R. @ Pierre            |             |                  |    |          |          |            |           | D                |                  |         |                 |
| Missouri R. @ Big Bend Dam      |             |                  |    |          | D        |            |           |                  | I                |         |                 |
| Cheyenne R. bl Angostura Dam    |             |                  |    |          |          |            |           | I                |                  |         |                 |
| Cheyenne R. nr Wasta            |             |                  | I  |          |          |            |           |                  |                  |         |                 |
| Big Sioux R. ab Waterton        |             |                  |    |          |          |            |           |                  | I*               |         |                 |
| Big Sioux R. nr Brookings       | D           |                  |    |          |          |            |           |                  |                  |         |                 |
| Big Sioux R. in Sioux Falls     | D           |                  |    |          |          |            |           |                  | D                |         |                 |
| Big Sioux R. nr Dell Rapids     |             |                  |    |          |          |            |           | I                |                  |         |                 |
| Big Sioux R. @ N. Cliff Ave.    |             |                  |    |          |          | I          | I         | I                |                  |         | I <sub>zn</sub> |
| Big Sioux R. E. of Hudson       |             |                  |    |          |          |            |           | I                |                  |         |                 |
| Big Sioux R. nr Richland        | D           |                  |    |          |          |            |           |                  |                  |         |                 |
| James R. nr Hecla               |             |                  | I  |          |          |            |           | I                |                  |         |                 |
| James R. @ Columbia             |             |                  |    |          |          | D*         |           |                  |                  |         |                 |
| James R. @ Huron                |             |                  |    |          |          | D*         |           |                  |                  |         |                 |
| James R. blw Mitchell           |             |                  | I  |          |          |            |           |                  |                  |         |                 |
| Vermillion R. W. of Chancellor  |             |                  |    |          |          | I*         |           |                  |                  |         |                 |
| White River nr Oglala           |             |                  | I  |          |          | I*         |           | I                |                  |         |                 |
| Battle Creek nr Keystone        |             |                  | I  |          |          |            |           |                  | I                |         |                 |
| Rapid Creek bl Pactola Dam      |             |                  | I  |          |          |            |           | I                |                  |         |                 |
| Belle Fourche R. WY-SD Line     |             |                  |    |          | D        |            |           |                  |                  |         |                 |
| Belle Fourche R. bl Elm Springs |             |                  | I  |          |          |            |           |                  |                  |         |                 |
| Spearfish Cr. in Spearfish      |             |                  | I  |          |          | I          |           |                  |                  |         |                 |
| Red Water R. @ Belle Fourche    |             |                  | I  |          |          |            |           |                  |                  |         |                 |
| Bad River nr Pierre             | D*          |                  |    |          |          |            |           |                  | D*               |         |                 |
| French Cr. Caster St. Park      |             |                  | I  |          |          |            |           | D                |                  |         |                 |
| French Cr. nr Custer            |             |                  |    | D*       |          |            |           |                  |                  |         |                 |
| Whitewood Cr. @ Pluma           |             |                  |    |          |          |            |           |                  | I*               |         |                 |
| Whitewood Cr. nr Deadwood       |             |                  |    |          |          |            |           |                  | I*               |         |                 |
| Whitewood Cr. nr Whitewood      |             |                  |    |          |          |            |           |                  | I*               |         |                 |
| Spring Cr. SW of Rapid          |             |                  | I  |          |          |            |           |                  |                  |         |                 |
| Fall River nr Confluence        |             |                  |    |          |          | I*         |           |                  |                  |         |                 |

Table 17. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Phosphorus</u>              | <u>WQI*</u> |
|--------------------------------|-------------|
| 1. Jordan R at Newstate Road   | 97          |
| 2. San Juan R nr Bluff         | 68          |
| 3. Price R at Woodside         | 53          |
| 4. Green R at Green River      | 43          |
| 5. White R at Mouth            | 45          |
| <br><u>Turbidity</u>           |             |
| 1. San Rafael R nr Green River | 70          |
| 2. San Juan R nr Bluff         | 75          |
| 3. Colorado R at Moab          | 61          |
| 4. Colorado R at Cisco         | 57          |
| 5. Price R at Woodside         | 55          |
| <br><u>Dissolved Solids</u>    |             |
| 1. Malad R nr Plymouth         | 79          |
| 2. San Rafael R nr Green River | 76          |
| 3. Price R at Woodside         | 71          |
| 4. Dolores R nr Cisco          | 46          |
| 5. Virgin R nr St George       | 52          |
| <br><u>Suspended Sediment</u>  |             |
| 1. White R at Mouth            | 72          |
| 2. Green R at Green R          | 72          |
| 3. San Juan R nr Bluff         | 70          |
| 4. San Rafael R nr Green River | 71          |
| 5. Colorado R nr Cisco         | 67          |
| 6. Green R nr Jensen           | 100         |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of a severe nature.

Table 18. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Utah

| STATION                           |        | TEMP | DO | PH | ECOI<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | CHL<br>PHYT |
|-----------------------------------|--------|------|----|----|--------------|-----|------|------|--------------|---------------|-------------|
| JORDAN R                          | 491501 |      |    |    |              |     |      |      |              |               |             |
| JORDAN R BELOW AC PUMP PLANT      |        | 6    | 5  | 6  |              | 4   | 7    | 3    | 17           |               | 5 12        |
| JORDAN R                          | 331158 |      |    |    |              |     |      |      |              |               |             |
| JORDAN R AT UTAH LAKE BY ROAD     |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 331199 |      |    |    |              |     |      |      |              |               |             |
| JORDAN R ABOVE E JORDAN DIVERSION |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491502 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT BLUEFOALF ROAD    |        | 6    | 5  | 6  |              | 4   | 8    | 4    | 19           |               | 5 14        |
| JORDAN R                          | 491505 |      |    |    |              |     |      |      |              |               |             |
| JORDAN AT DEAPER RIVERTON ROAD    |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 331202 |      |    |    |              |     |      |      |              |               |             |
| JORDAN R AT 12600 SOUTH           |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491506 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT 9000 ABOVE SANDY  |        |      |    |    |              | 1   | 1    |      | 4            |               | 1           |
| JORDAN R                          | 491508 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW SANDY WWTP     |        |      |    |    |              | 1   | 1    |      | 4            |               | 1           |
| JORDAN R                          | 491510 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT 7800 SOUTH        |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491514 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER ABOVE KEARNS WWTP    |        |      |    |    |              |     |      |      | 2            |               |             |
| JORDAN R                          | 491516 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW KEARNS WWTP    |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491518 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER ABOVE MURRAY WWTP    |        |      |    |    |              | 1   | 1    |      | 4            |               | 1           |
| JORDAN R                          | 491520 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW MURRAY WWTP    |        |      |    |    |              | 1   | 1    |      | 4            |               | 1           |
| JORDAN R                          | 491524 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER ABOVE JORDAN MEAT    |        |      |    |    |              |     |      |      | 2            |               |             |
| JORDAN R                          | 491525 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW JORDAN MEAT    |        |      |    |    |              | 3   | 3    |      | 6            |               | 3           |
| JORDAN R                          | 491526 |      |    |    |              |     |      |      |              |               |             |
| GRANGER-HUNTER WETW EFFLUENT      |        | 2    |    | 1  |              | 5   | 5    |      | 15           |               | 5           |
| JORDAN R                          | 491527 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIV BELOW GR-HUNTER WWTP   |        | 1    |    | 1  |              | 3   | 3    |      | 6            |               | 3           |
| JORDAN R                          | 491536 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT 2100 SOUTH        |        |      |    |    |              |     |      |      | 2            |               |             |
| JORDAN R                          | 491538 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW SO SL WWTP     |        |      |    |    |              |     |      |      | 2            |               |             |
| JORDAN R                          | 491542 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT BRIDGE ON 4TH RD  |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491543 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT 900 MO REDWOOD    |        |      |    |    |              |     |      |      |              |               |             |
| JORDAN R                          | 491544 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER NEAR 17TH NORTH      |        |      |    |    |              |     |      |      | 2            |               |             |
| JORDAN R                          | 491545 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER AT CUDAHY LANE       |        | 4    |    | 2  |              | 4   | 4    |      | 11           |               | 4           |
| JORDAN R                          | 491546 |      |    |    |              |     |      |      |              |               |             |
| JORDAN RIVER BELOW SO DAVIS WWTP  |        | 4    |    | 2  |              | 4   | 4    |      | 12           |               | 4           |
| JORDAN R                          | 491580 |      |    |    |              |     |      |      |              |               |             |
| JORDAN R-STATE CHL NEWSTATE RD    |        | 5    | 4  | 5  |              | 4   | 7    | 3    | 16           |               | 5 16        |

Table 18 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Utah

| STATION                           |          | TEMP | DO | PH | ECOM |     |      | DIS  | SUSP  | METALS |     |
|-----------------------------------|----------|------|----|----|------|-----|------|------|-------|--------|-----|
|                                   |          |      |    |    | CELL | MTI | PHOS | TECH | SOLID | SOLID  | MP3 |
| 3JUTLINE                          | 331233   |      |    |    |      |     |      |      |       |        |     |
| JOB R AT FARM RAY NEAR HOON DUEP  |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 09180500 |      |    |    |      |     |      |      |       |        |     |
| COLORADO RIVER NEAR CISCO UTAH    |          | 12   | 10 | 10 | 9    | 10  | 20   | 10   | 30    | 10     | 56  |
| 21UTAH                            | 495560   |      |    |    |      |     |      |      |       |        |     |
| COLORADO R AT US163 CROSSING      |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 495605   |      |    |    |      |     |      |      |       |        |     |
| COLORADO R APR L POWELL NR HITE   |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 09182880 |      |    |    |      |     |      |      |       |        |     |
| COLORADO RIVER AT HIGHWAY BRIDGE  |          | 22   | 20 | 22 |      | 10  | 10   | 10   | 52    | 10     | 10  |
| 21UTAH                            | 490610   |      |    |    |      |     |      |      |       |        |     |
| PEAR RIVER AT UT-IDA STATE LINE   |          | 6    | 5  | 5  |      | 5   | 2    | 5    | 19    |        | 20  |
| 112WPD                            | 10092200 |      |    |    |      |     |      |      |       |        |     |
| PEAR R AT CORNISH UTAH            |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 491427   |      |    |    |      |     |      |      |       |        |     |
| PEAR RIVER WEST OF RICHMOND       |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 491429   |      |    |    |      |     |      |      |       |        |     |
| PEAR RIVER BELOW CONFL WITH CUR   |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 491433   |      |    |    |      |     |      |      |       |        |     |
| PEAR RIVER AT AMALGA              |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 10126100 |      |    |    |      |     |      |      |       |        |     |
| PEAR RIVER AT BIRD REFUGE NR BRI  |          | 1    |    |    |      |     | 2    |      | 2     |        |     |
| 112WPD                            | 10136500 |      |    |    |      |     |      |      |       |        |     |
| WERER RIV AT GATEWAY UTAH         |          | 12   | 11 | 11 |      |     | 24   |      | 22    |        |     |
| 112WPD                            | 10129300 |      |    |    |      |     |      |      |       |        |     |
| WERER RIVER NR. PEDRA, UTAH       |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 10130500 |      |    |    |      |     |      |      |       |        |     |
| WERER RIVER NEAR COALVILLE UTAH   |          | 7    |    |    |      |     |      |      | 7     |        |     |
| 21UTAH                            | 491406   |      |    |    |      |     |      |      |       |        |     |
| WERER R. ABOVE CENT WERER WWTP    |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 491408   |      |    |    |      |     |      |      |       |        |     |
| WERER RIVER BELOW CENTRAL WERER   |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 10141100 |      |    |    |      |     |      |      |       |        |     |
| SOUTH FORK WERER RIVER NR HOOPER  |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 10141150 |      |    |    |      |     |      |      |       |        |     |
| MIDDLE FORK WERER RIVER NR HOOPER |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 10141200 |      |    |    |      |     |      |      |       |        |     |
| NORTH FORK WERER RIVER NR. HOOPER |          |      |    |    |      |     |      |      |       |        |     |
| 112WPD                            | 09234500 |      |    |    |      |     |      |      |       |        |     |
| GREEN RIVER NEAR GREENDALE, UTAH  |          | 12   | 10 | 10 | 10   | 9   | 14   | 9    | 28    | 8      | 54  |
| 112WPD                            | 09261000 |      |    |    |      |     |      |      |       |        |     |
| GREEN RIVER NEAR JENSEN, UTAH     |          | 12   | 9  | 10 |      |     | 18   |      | 19    | 3      |     |
| 112WPD                            | 09315000 |      |    |    |      |     |      |      |       |        |     |
| GREEN RIVER AT GREEN RIVER, UTAH  |          | 15   | 10 | 10 | 0    | 10  | 20   | 10   | 31    | 14     | 56  |
| 112WPD                            | 10125600 |      |    |    |      |     |      |      |       |        |     |
| MALAD R NR PLYMOUTH UTAH          |          | 7    |    |    |      |     |      |      | 7     |        |     |
| 112WPD                            | 10163000 |      |    |    |      |     |      |      |       |        |     |
| PROVO RIVER AT PROVO UTAH         |          |      |    |    |      |     |      |      |       |        |     |
| 21UTAH                            | 491586   |      |    |    |      |     |      |      |       |        |     |
| PROVO R US189 CROSSING-BOATARY PK |          | 6    | 5  | 5  |      | 3   | 6    | 4    | 16    |        | 15  |

Table 18 (Continued). STATION AND PARAMETER GROUP COVERAGE,  
Water Quality Data for Year 1978 - Utah

| STATION                          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | HMB METALS |    |
|----------------------------------|------|----|----|---------------|-----|------|------|--------------|---------------|------------|----|
|                                  |      |    |    |               |     |      |      |              |               |            |    |
| 21UTAH 491590                    |      |    |    |               |     |      |      |              |               |            |    |
| PROVO R-MEERER FALLS ON U150     | 6    |    | 6  |               | 6   | 7    |      | 16           |               | 7          |    |
| 112WRD 10152000                  |      |    |    |               |     |      |      |              |               |            |    |
| SPANISH FORK NEAR LAKE SHORE, UT | 9    |    |    |               |     |      |      | 9            |               |            |    |
| 21UTAH 492430                    |      |    |    |               |     |      |      |              |               |            |    |
| OGDEN R-MOUTH OF CANYON          |      |    |    |               |     |      |      |              |               |            |    |
| 112WRD 10237000                  |      |    |    |               |     |      |      |              |               |            |    |
| BEAVER RIV AT ADAMSVILLE, UTAH   | 8    | 7  | 8  | 3             | 8   | 16   | 8    | 24           | 7             | 8          | 69 |
| 21UTAH 494128                    |      |    |    |               |     |      |      |              |               |            |    |
| SEVIER RIVER ABV GUNNISON RHD DS | 6    | 6  | 6  |               | 4   | 7    | 4    | 24           |               | 3          | 12 |
| 112WRD 10219000                  |      |    |    |               |     |      |      |              |               |            |    |
| SEVIER RIV NR JUAR UTAH          | 7    |    |    |               |     |      |      | 7            |               |            |    |
| 112WRD 10217000                  |      |    |    |               |     |      |      |              |               |            |    |
| SEVIER RIVER BLK SAK PITCH R NR  | 6    |    |    |               |     |      |      | 6            |               |            |    |
| 112WRD 10191500                  |      |    |    |               |     |      |      |              |               |            |    |
| SEVIER RIVER BELOW PLUTE DAM NR  | 7    | 7  | 7  |               |     | 2    |      | 9            |               |            |    |
| 21UTAH 494965                    |      |    |    |               |     |      |      |              |               |            |    |
| EVIER RIVER NEAR WATCH           | 6    | 6  | 6  |               | 3   | 4    | 3    | 16           |               | 3          | 14 |
| 112WRD 10189000                  |      |    |    |               |     |      |      |              |               |            |    |
| EAST FORK SEVIER RIVER NEAR KING | 7    |    |    |               |     |      |      | 8            |               |            |    |
| 112WRD 09234700                  |      |    |    |               |     |      |      |              |               |            |    |
| RED CREEK NEAR DUTCH JOHN, UTAH  |      |    |    |               |     |      |      |              |               |            |    |
| 112WRD 09288180                  |      |    |    |               |     |      |      |              |               |            |    |
| STRAWBERRY RIVER NEAR DUCHESNE,  | 8    |    |    |               |     |      |      | 8            |               |            |    |
| 112WRD 09302000                  |      |    |    |               |     |      |      |              |               |            |    |
| DUCHESNE RIVER NEAR RANDLETT, UT | 10   | 8  | 9  |               | 9   | 9    | 9    | 27           | 16            | 9          | 42 |
| 112WRD 09306500                  |      |    |    |               |     |      |      |              |               |            |    |
| WHITE R NR WATSON UT             | 18   | 6  | 2  |               | 4   | 14   | 4    | 21           | 10            | 4          | 14 |
| 112WRD 09306900                  |      |    |    |               |     |      |      |              |               |            |    |
| WHITE RIVER AT MOUTH NEAR OURAY  | 23   | 14 | 13 | 10            | 17  | 34   | 14   | 48           | 25            | 14         | 56 |
| 21UTAH 495318                    |      |    |    |               |     |      |      |              |               |            |    |
| PRICE R BRIDGE AB NR AM COAL CO  |      |    |    |               |     |      |      |              |               |            |    |
| 112WRD 09114500                  |      |    |    |               |     |      |      |              |               |            |    |
| PRICE RIVER AT WOODSIDE, UTAH    | 10   | 10 | 10 |               | 9   | 10   | 10   | 30           | 18            | 9          | 28 |
| 112WRD 09128500                  |      |    |    |               |     |      |      |              |               |            |    |
| SAN RAFAEL RIVER NEAR GREEN PIVE | 13   | 11 | 13 |               | 10  | 12   | 10   | 36           | 18            | 10         | 32 |
| 112WRD 09180000                  |      |    |    |               |     |      |      |              |               |            |    |
| DOLORES RIVER NEAR CISCO, UT.    | 13   | 11 | 13 |               |     | 6    |      | 25           |               |            |    |
| 112WRD 09333500                  |      |    |    |               |     |      |      |              |               |            |    |
| DIRTY DEVIL R AB POISON SP WA NR | 6    |    |    |               |     |      |      | 6            |               |            |    |
| 21UTAH 495707                    |      |    |    |               |     |      |      |              |               |            |    |
| SAN JUAN R- US160 CROSSING       |      |    |    |               |     |      |      |              |               |            |    |
| 112WRD 09379500                  |      |    |    |               |     |      |      |              |               |            |    |
| SAN JUAN RIVER NEAR BLUFF, UTAH  | 15   | 9  | 10 | 9             | 10  | 20   | 10   | 30           | 12            | 10         | 56 |
| 21UTAH 495177                    |      |    |    |               |     |      |      |              |               |            |    |
| KANAB CK AB KANAB WWTG OUTFALL   | 2    |    | 1  |               | 2   | 2    |      | 2            |               | 1          |    |

Table 19 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

UTAH

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI RKG. |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|
| <u>Temperature</u>             |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| Green R at Green River         |     |     |     |     |     |     |     | X   |     |     |     |     |                 |
| San Rafael R nr Green River    |     |     |     |     |     |     |     | X   |     |     |     |     |                 |
| Virgin R nr St. George         |     |     |     |     |     | X   |     |     |     |     |     |     |                 |
| <u>Dissolved Oxygen</u>        |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| Green R nr Greendale           | X   |     |     |     |     |     |     |     |     |     |     |     |                 |
| <u>pH</u>                      |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| Colorado R at Moab             |     |     |     |     |     |     |     |     |     |     | X   |     |                 |
| <u>Fecal Coliform Bacteria</u> |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| White R at Mouth               |     |     |     |     |     |     |     | ○   |     |     |     |     | 12              |
| San Juan R nr Bluff            |     |     |     |     |     |     |     | ●   | ●   |     |     |     | 28              |
| <u>Nitrite Nitrate</u>         |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| Jordan R at Cudahy Lane        |     |     |     |     |     |     |     |     |     | ○   |     |     |                 |
| Jordan R blw S Davis           |     |     |     |     |     |     |     |     |     | ○   |     |     |                 |
| Jordan R at Newstate Rd        |     |     |     |     |     |     | ○   |     |     |     |     |     | 43              |
| <u>Phosphorus</u>              |     |     |     |     |     |     |     |     |     |     |     |     |                 |
| Jordan R abv Murray WWTP       |     |     |     | ●   |     |     |     |     |     |     |     |     |                 |
| Jordan R blw Murray WWTP       |     |     |     | ●   |     |     |     |     |     |     |     |     |                 |
| Jordan R blw Jordan Meat       |     |     |     |     |     | ○   |     |     |     |     | ●   |     |                 |
| Jordan R blw Gr-Hunter         |     |     |     |     |     | ○   |     |     |     |     | ●   |     |                 |
| Jordan R at Cudahy Lane        |     | ○   |     |     |     |     |     |     |     | ●   |     |     |                 |
| Jordan R blw S Davis           |     | ●   |     |     |     | ○   |     |     |     | ●   |     |     |                 |
| Jordan R at Newstate Rd        | ●   |     |     |     |     |     | ●   |     | ●   |     | ●   |     | 97 1            |
| Colorado R abv Moab            |     | ○   | ●   | ●   |     |     |     |     |     |     |     |     | 33              |
| Green R nr Ouray               |     |     |     | ●   |     |     |     |     |     |     |     |     |                 |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 19 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                       | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | IRKG |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Phosphorus Continued</u>   |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Green R at Green River        |     |     | ○   | ●   | ●   |     | ○   |     | ●   |     |     |     | 43         | 4    |
| White R at Mouth              |     |     | ●   | ○   | ●   | ●   |     | ●   |     |     |     |     | 45         | 5    |
| Price R at Woodside           | ○   | ●   | ●   | ●   | ●   |     |     |     |     |     |     |     | 53         | 3    |
| San Rafael R nr Green River   |     | ●   | ●   |     |     |     | ○   |     |     |     |     |     | 39         |      |
| San Juan R nr Bluff           | ●   |     | ●   | ●   | ●   |     |     |     | ●   | ●   |     |     | 68         | 2    |
| Virgin R nr St. George        | ●   |     |     |     |     |     |     |     |     |     |     |     | 28         |      |
| Colorado R nr Cisco           |     |     | ○   | ●   | ●   |     |     |     |     |     |     |     | 37         |      |
| Green R nr Jensen             |     |     |     |     | ●   |     |     |     |     |     |     |     | 18         |      |
| <u>Turbidity</u>              |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Colorado R nr Cisco, UT       |     | ●   | ●   | ●   | ●   | ●   | ●   |     | ●   |     |     |     | 57         | 4    |
| Colorado R at Moab            |     | ●   | ●   |     | ●   | ●   | ●   |     | ●   |     |     |     | 61         | 3    |
| Green R at Dinosaur Natl Park |     |     | ●   | ●   | ●   | ○   |     |     | ●   |     |     |     | 51         |      |
| Green R nr Ouray              |     |     |     |     |     |     |     |     |     | ○   |     |     |            |      |
| Green R at Green River        |     |     |     |     | ●   |     | ●   |     | ●   |     |     |     | 48         |      |
| Duchesne R nr Randlett        |     |     |     |     |     | ○   |     |     |     |     |     |     | 15         |      |
| White R nr Watson             |     |     | ●   | ●   | ●   | ●   | ●   | ●   |     |     |     |     | 41         |      |
| White R at Mouth              |     |     |     |     |     |     |     |     |     |     |     |     | 52         | 5    |
| Price R at Woodside           |     | ●   | ●   | ●   | ●   |     | ●   |     |     |     |     |     | 55         | 5    |
| San Rafael R nr Green River   | ●   | ●   | ●   | ○   | ●   |     | ●   | ●   | ○   |     |     |     | 70         | 1    |
| San Juan R nr Bluff           |     |     |     |     | ●   | ●   |     |     | ●   |     |     |     | 75         | 2    |
| Santa Clara R nr St. George   |     |     | ●   |     |     |     |     |     |     |     |     |     |            |      |
| <u>Total Dissolved Solids</u> |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Jordan R blw Utah Lake        | ○   |     |     |     |     |     |     |     |     |     |     |     | 35         |      |
| Jordan R blw Sandy WWT        |     |     | ○   |     |     |     |     |     |     |     |     |     |            |      |
| Jordan R at Newstate Rd       | ●   |     |     |     |     |     |     |     |     |     |     |     | 35         |      |
| Sevier R abv Gunnison Bend    | ○   |     |     |     |     |     |     |     |     | ○   | ○   |     | 46         |      |
| Sevier R blw San Pitch R      |     |     |     |     |     |     | ○   |     |     |     |     |     | 39         |      |
| Duchesne R nr Randlett        |     |     |     |     |     |     |     | ○   |     | ○   |     |     | 13         |      |
| Price R at Woodside           | ●   | ●   | ●   |     |     |     | ○   | ●   | ●   | ●   |     | ●   | 71         | 3    |
| San Rafael R nr Green River   | ●   | ●   | ●   | ●   | ●   |     |     | ●   | ●   | ●   |     | ●   | 76         | 2    |
| Santa Clara R nr St. George   | ●   |     |     |     |     |     |     |     | ●   |     | ○   |     | 44         |      |
| Virgin R nr St. George        |     |     |     |     |     | ●   |     | ●   | ●   |     |     |     | 52         | 5    |
| Sevier R nr Juab              |     |     |     |     | ○   |     |     | ○   |     |     |     |     | 45         |      |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

[illegible]

X Minor exceedence of standards (for Temperature, DO, and pH only)

- At or approaching critical levels

- Above critical levels

- Insufficient data

Table 19 . TABLE OF CRITICAL STATIONS AND PARAMETERS.

[illegible]

Stations and Parameters where Significant Statistical Differences were Observed.

UTAH

[illegible]

Table 21. Ranking of Critical Water Quality Stations by Pollutant Group

| <u>Fecal Coliform Bacteria</u> |                               | <u>WQI*</u> |
|--------------------------------|-------------------------------|-------------|
| 1.                             | N Platte R blw Casper         | 37          |
| <u>Phosphorus</u>              |                               |             |
| 1.                             | Laramie R at Howell           | 73          |
| 2.                             | Laramie R at Two Rivers       | 63          |
| 3.                             | Belle Fourche R blw Moorcroft | 44          |
| 4.                             | Powder R at Arvada            | 32          |
| <u>Turbidity</u>               |                               |             |
| 1.                             | Powder R nr Kaycee            | 48          |
| 2.                             | Big Horn R at Kane            | 38          |
| <u>Dissolved Solids</u>        |                               |             |
| 1.                             | Salt Cr nr Sussex             | 84          |
| 2.                             | Beaver Cr nr Newcastle        | 68          |
| 3.                             | Belle Fourche R blw Moorcroft | 57          |
| 4.                             | Powder R at Arvada            | 52          |
| <u>Suspended Sediment</u>      |                               |             |
| 1.                             | Powder R at Arvada            | 100         |
| 2.                             | Big Horn R at Kane            | 73          |
| 3.                             | Salt Cr nr Sussex             | 69          |
| 4.                             | Shoshone R nr Lovell          | 55          |
| 5.                             | N Platte R at Orin            | 54          |

\* Average annual water quality indicator (WQI) value. A range from 20 to 60 signifies exceedence of water quality standards/criteria and the WQI greater than 60 represents exceedences of severe nature.

Table 22. STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Wyoming

| STATION                               |          | TEMP | DO | PH | FECAI.<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|---------------------------------------|----------|------|----|----|----------------|-----|------|------|--------------|---------------|-----|--------|
| 112WRD                                | 09188500 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN RIVER AT WARREN BRIDGE, WY      |          | 25   | 11 | 8  | 12             |     | 14   | 21   | 35           | 11            |     |        |
| 112WRD                                | 09192600 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN RIVER NEAR BIG PIPEY, WYO.      |          | 12   |    | 2  |                | 12  | 15   | 9    | 24           | 9             |     |        |
| 112WRD                                | 09209400 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN R. NR LARABEE WYO               |          | 31   | 12 | 13 | 11             | 24  | 15   | 24   | 40           | 26            | 12  | 28     |
| 112WRD                                | 09211200 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN R. BEL. FONTENELLE RES. WYO     |          | 26   | 12 | 13 | 10             | 23  | 12   | 24   | 38           | 24            | 11  | 14     |
| 112WRD                                | 09216300 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN RIVER AT BIG ISLAND, NEAR       |          | 12   |    | 8  |                | 12  | 12   |      | 24           | 12            |     |        |
| 21WYDHSS                              | 000531   |      |    |    |                |     |      |      |              |               |     |        |
| GREEN RIVER AT USGS 09217000          |          |      |    |    |                |     |      |      |              |               |     |        |
| 112WRD                                | 09217000 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN R. NR GREEN RIVER, WYO.         |          | 26   | 12 | 12 | 11             | 14  | 14   | 25   | 39           | 14            | 12  | 28     |
| 112WRD                                | 09217010 |      |    |    |                |     |      |      |              |               |     |        |
| GREEN RIVER BELOW GREEN RIVER WY      |          | 14   | 12 | 12 | 11             | 14  | 13   | 12   | 25           |               | 12  | 28     |
| 112WRD                                | 06312500 |      |    |    |                |     |      |      |              |               |     |        |
| POWDER RIVER NEAR KAYCEE, WYO.        |          | 14   | 12 | 8  | 12             | 13  | 14   | 12   | 23           |               | 1   |        |
| 21WYDHSS                              | 000385   |      |    |    |                |     |      |      |              |               |     |        |
| POWDER R. NEAR SUSSEX WYOMING         |          |      |    |    |                |     |      |      |              |               |     |        |
| 21WYDHSS                              | 000514   |      |    |    |                |     |      |      |              |               |     |        |
| POWDER RIVER AT USGS 06317000         |          |      |    |    |                |     |      |      |              |               |     |        |
| 112WRD                                | 06317000 |      |    |    |                |     |      |      |              |               |     |        |
| POWDER R. AT ARVADA WYO               |          | 23   | 4  | 9  | 4              | 14  | 16   | 9    | 30           | 9             | 2   |        |
| 21WYDHSS                              | 000398   |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE N-EAST OF SARATOGA       |          | 1    | 1  | 1  | 1              |     | 1    | 1    | 2            | 1             |     |        |
| 112WRD                                | 06630000 |      |    |    |                |     |      |      |              |               |     |        |
| N. PLATTE R. AB. SEMINOLE RES. NR STE |          | 12   | 12 | 7  | 12             | 12  | 12   | 12   | 19           |               |     |        |
| 112WRD                                | 06642000 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE R. AT ALCOVA WYO         |          | 12   | 12 | 7  | 12             | 12  | 12   | 12   | 19           |               |     |        |
| 112WRD                                | 06645000 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE RIVER BL. CASPER WYO     |          | 26   | 24 | 26 | 24             | 37  | 26   | 26   | 64           | 26            | 25  |        |
| 112WRD                                | 06646800 |      |    |    |                |     |      |      |              |               |     |        |
| N. PLATTE R. NR GLENROCK WYO          |          | 7    |    |    |                | 12  | 12   |      | 12           |               |     |        |
| 21WYDHSS                              | 000400   |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE SOUTH OF DOUGLAS         |          | 1    | 1  | 1  |                |     |      | 1    | 1            |               |     |        |
| 112WRD                                | 06652000 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE R. AT ORIN, WYO.         |          | 22   | 11 | 7  | 11             | 11  | 11   | 11   | 21           | 15            |     | 42     |
| 112WRD                                | 06652800 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE RIVER BELOW GLENDO       |          | 11   | 11 | 7  | 10             | 11  | 11   | 11   | 18           |               |     |        |
| 112WRD                                | 06656000 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE R. BL. GUERNSEY RE, W    |          | 3    |    |    |                | 12  | 12   |      | 12           |               |     |        |
| 112WRD                                | 06644085 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE RIVER AT MILLS WYO       |          | 23   | 23 | 23 |                |     |      | 23   | 23           |               |     |        |
| 112WRD                                | 06670900 |      |    |    |                |     |      |      |              |               |     |        |
| NORTH PLATTE RIVER NEAR LINGLE,       |          |      |    |    |                |     |      |      |              |               |     |        |
| 21WYDHSS                              | 000295   |      |    |    |                |     |      |      |              |               |     |        |
| NPLATTE BLW CON. WITH SAWHIDE CR      |          | 2    | 2  | 2  |                |     | 2    | 2    | 4            | 2             |     |        |
| 112WRD                                | 06674500 |      |    |    |                |     |      |      |              |               |     |        |
| N. PLATTE R. AT WYO-NEBR. STATE LTL   |          | 20   | 11 | 7  | 9              | 11  | 11   | 11   | 22           | 13            |     |        |

Table 22 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Wyoming

| STATION                          |          | TEMP | DO | PH | FECAL<br>COLI | NIT | PHOS | TURB | DIS<br>SOLID | SUSP<br>SOLID | NH3 | METALS |
|----------------------------------|----------|------|----|----|---------------|-----|------|------|--------------|---------------|-----|--------|
| 112WRD                           | 06214500 |      |    |    |               |     |      |      |              |               |     |        |
| WIND RIVER NEAR DUBOIS, WYO.     |          | 12   | 12 | 6  | 10            | 12  | 12   | 10   | 12           |               |     |        |
| 21WYDHSS                         | 000392   |      |    |    |               |     |      |      |              |               |     |        |
| WIND-RICHORN R CROWHEART DAM WYO |          | 2    | 2  | 2  | 2             | 1   | 2    | 2    | 3            | 2             |     |        |
| 112WRD                           | 06229000 |      |    |    |               |     |      |      |              |               |     |        |
| WIND R AT RIVERTON WYO           |          | 11   | 10 | 5  | 10            | 11  | 11   | 10   | 11           |               |     |        |
| 112WRD                           | 06236100 |      |    |    |               |     |      |      |              |               |     |        |
| WIND RIVER AB ROYSEN PE NR SHOSH |          | 14   | 12 | 6  | 12            |     | 12   | 12   | 13           |               |     |        |
| 112WRD                           | 06259000 |      |    |    |               |     |      |      |              |               |     |        |
| WIND R WL ROYSEN PES WYO         |          | 14   | 11 |    | 10            | 12  | 12   | 11   | 27           | 3             |     | 28     |
| 112WRD                           | 06259500 |      |    |    |               |     |      |      |              |               |     |        |
| RICHORN RIVER AT THERMOPOLIS, WY |          |      |    |    |               |     |      |      |              |               |     |        |
| 21WYDHSS                         | 000391   |      |    |    |               |     |      |      |              |               |     |        |
| WIND-RICHORN R EAST OF LUCERNE   |          | 1    | 1  | 1  | 1             | 1   | 1    | 1    | 2            | 1             |     |        |
| 112WRD                           | 06264700 |      |    |    |               |     |      |      |              |               |     |        |
| RICHORN RIVER AT LUCERNE, WYO.   |          | 11   | 2  | 2  | 2             | 12  | 12   | 2    | 14           |               |     |        |
| 112WRD                           | 06268600 |      |    |    |               |     |      |      |              |               |     |        |
| RICHORN R AT WOODLAND WYO        |          | 8    |    |    |               | 12  | 12   |      | 12           |               |     |        |
| 21WYDHSS                         | 000390   |      |    |    |               |     |      |      |              |               |     |        |
| WIND-RICHORN R E OF WOODLAND WYO |          | 2    | 2  | 2  | 2             | 1   | 2    | 2    | 3            | 2             |     |        |
| 112WRD                           | 06279500 |      |    |    |               |     |      |      |              |               |     |        |
| RICHORN R AT KANE WYO            |          | 20   | 12 | 7  | 12            | 12  | 12   | 12   | 24           | 6             |     |        |
| 112WRD                           | 06231000 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE WIND R ABOVE ARAPAHOE, WY |          | 12   |    | 6  |               | 12  | 12   |      | 12           |               |     |        |
| 112WRD                           | 06235500 |      |    |    |               |     |      |      |              |               |     |        |
| LITTLE WIND R NR RIVERTON WYO    |          | 12   |    | 6  |               | 13  | 13   |      | 13           |               |     |        |
| 112WRD                           | 06235000 |      |    |    |               |     |      |      |              |               |     |        |
| BEAVER CREEK NR ARAPAHOE WYO     |          | 6    |    | 1  |               | 6   | 6    |      | 6            |               |     |        |
| 112WRD                           | 06394000 |      |    |    |               |     |      |      |              |               |     |        |
| BEAVER CREEK NEAR NEWCASTLE, WYO |          | 11   | 1  | 2  |               | 13  | 18   | 1    | 16           | 1             | 3   |        |
| 112WRD                           | 06282000 |      |    |    |               |     |      |      |              |               |     |        |
| SHOSHONE RIVER BELOW BUFFALO RIL |          | 11   | 9  | 6  | 9             | 11  | 11   | 9    | 17           |               |     |        |
| 112WRD                           | 06282900 |      |    |    |               |     |      |      |              |               |     |        |
| SHOSHONE RIVER AD DEV C NR CODY, |          | 12   | 12 | 7  | 12            |     | 13   | 11   | 19           |               |     |        |
| 112WRD                           | 06285100 |      |    |    |               |     |      |      |              |               |     |        |
| SHOSHONE RIVER NEAR LOVELL WYO   |          | 22   | 2  | 7  | 2             |     | 24   | 2    | 24           | 10            |     |        |
| 21WYDHSS                         | 000386   |      |    |    |               |     |      |      |              |               |     |        |
| SHOSHONE 5.5 MILES FROM GARIAND  |          | 2    | 2  | 2  | 2             | 1   | 2    | 2    | 3            | 2             |     |        |
| 112WRD                           | 06298000 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER NR DAYTON WYO       |          | 12   |    | 7  |               | 12  | 12   | 9    | 19           |               |     |        |
| 112WRD                           | 06299980 |      |    |    |               |     |      |      |              |               |     |        |
| TONGUE RIVER AT MOHARCH WYO      |          | 14   | 11 | 13 | 12            | 13  | 14   | 12   | 28           |               | 13  | 28     |
| 112WRD                           | 06313400 |      |    |    |               |     |      |      |              |               |     |        |
| SALT CREEK NEAR SUSSEX, WYO.     |          | 23   | 11 | 11 |               | 21  | 11   |      | 25           | 16            | 10  | 35     |
| 112WRD                           | 06324000 |      |    |    |               |     |      |      |              |               |     |        |
| CLEAR CREEK NEAR ARYADA WYO      |          | 27   | 11 | 14 | 11            | 26  | 16   | 12   | 31           | 23            | 14  | 28     |
| 21WYDHSS                         | 000395   |      |    |    |               |     |      |      |              |               |     |        |
| CLEAR CR EAST OF BUFFALO WYOMING |          | 1    | 1  | 1  | 1             |     | 1    | 1    | 2            | 1             |     |        |
| 112WRD                           | 06426500 |      |    |    |               |     |      |      |              |               |     |        |
| BELE FOURCHE RIVER BELOW MOORCR  |          | 23   | 13 | 13 | 12            | 14  | 17   | 13   | 25           | 12            | 14  | 28     |

Table 22 (Continued). STATION AND PARAMETER GROUP COVERAGE.  
Water Quality Data for Year 1978 - Wyoming

| STATION                                              | TEMP | D.O. | PH | ECOLAT<br>COL I | NIT | PHOS | THUR | DIS<br>SOLID | SUSP<br>SOLID | HE3 | METALS |
|------------------------------------------------------|------|------|----|-----------------|-----|------|------|--------------|---------------|-----|--------|
| 112-PI 06427850<br>BEILE FOURCHE RIVER AT DEVILS TO  | 11   |      | 7  |                 | 11  | 11   | 11   | 18           |               |     |        |
| 112-PI 06428500<br>BEILE FOURCHE R AT LY-SD STATE I  | 20   | 11   | 11 | 11              | 21  | 12   | 11   | 29           | 9             | 9   | 28     |
| 112-PI 06623800<br>ENCAMPMENT RIV AB HOG PARK CR NR  | 9    | 9    | 9  | 9               | 10  | 9    | 1    | 27           | 7             |     | 7      |
| 112-PI 06625000<br>ENCAMPMENT RIVER AT MOUTH, NEAR   | 12   | 9    | 7  | 7               | 12  | 12   | 9    | 18           |               |     |        |
| 112-PI 06639000<br>SWEETWATER RIVER NEAR ALCOVA, WY  | 12   | 12   | 7  | 12              | 12  | 12   | 12   | 23           | 16            |     | 56     |
| 21WYDHSS 000294<br>SWEETWATER R. N. OF JEFFREY CITY  | 2    | 2    | 2  | 2               | 1   | 2    | 2    | 3            | 2             |     |        |
| 21WYDHSS 000234<br>SWEETWATER R. SWEETWATER STATION  |      |      |    |                 |     |      |      |              |               |     |        |
| 112-PI 06660100<br>LARAMIE RIVER AT HOWELL, WY       | 12   | 11   | 8  | 11              |     | 12   | 12   | 20           |               |     |        |
| 112-PI 06660500<br>LARAMIE RIVER AT TWO RIVERS, WY   | 12   |      | 8  |                 | 12  | 12   |      | 20           |               |     |        |
| 112-PI 06670500<br>LARAMIE RIVER NR ET LARAMIE WYO   | 19   | 11   | 7  | 9               | 11  | 11   | 11   | 22           | 12            |     |        |
| 112-PI 06661500<br>LITTLE LARAMIE RIVER AT TWO RIV   | 12   |      | 8  |                 | 12  | 12   |      | 20           |               |     |        |
| 21WYDHSS 000309<br>LARAMIE R. NE OF WHEATLAND        | 1    | 1    | 1  |                 |     | 1    |      | 2            | 1             |     |        |
| 112-PI 10020100<br>REAR RIVER ABOVE RESERVOIR NEAR   | 15   | 3    | 3  | 3               | 7   | 7    | 3    | 18           |               |     |        |
| 112-PI 10027000<br>TWIN CREEK AT SAGE WYO            | 29   | 11   | 12 | 11              | 14  | 13   | 29   | 42           | 17            | 12  | 28     |
| 112-PI 10039500<br>REAR R AT BORDER WY               | 22   | 12   | 13 | 12              | 24  | 24   | 20   | 46           | 12            | 12  | 56     |
| 21WYDHSS 000382<br>REAR R @ STATE 89 HIGHWAY WYO     | 1    | 1    | 1  | 1               | 1   | 1    | 1    | 2            |               |     |        |
| 112-PI 13022500<br>SNAKE RIVER AB RESERVOIR NR ALPI  | 18   | 11   | 8  | 12              | 12  | 12   | 12   | 30           |               |     |        |
| 112-PI 13011000<br>SNAKE RIVER NEAR MORAN            | 5    |      |    |                 |     |      |      | 5            |               |     |        |
| 112-PI 13016100<br>SNAKE RIVER NEAR WILSON WYOMING   |      |      |    |                 |     |      |      |              |               |     |        |
| 21WYDHSS 000397<br>SNAKE R. SOUTH OF JACKSON WYOMING |      |      |    |                 |     |      |      |              |               |     |        |
| 112-PI 13027500<br>SALT RIVER AB RESERVOIR NR ETHA   | 18   | 11   | 8  | 12              | 12  | 12   | 12   | 26           |               |     |        |
| 21WYDHSS 000399<br>SUGAR CR N-EAST OF SINCLAIR WYO.  | 2    | 2    | 2  | 2               | 2   | 2    | 2    | 4            |               |     |        |

Table 23. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                         | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQT | PKG. |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Temperature</u>              |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Beaver Cr nr Newcastle          |     |     |     |     |     |     |     | X   |     |     |     |     |            |      |
| <u>Dissolved Oxygen (DO)</u>    |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| N Platte R at WY-NB line        |     |     |     |     |     |     |     |     |     | ●   |     |     |            |      |
| Salt Cr nr Sessex               | ○   |     |     |     |     |     |     |     |     |     | X   |     |            |      |
| Sugar Cr nr Sinclair            | X   |     |     | X   |     |     |     |     |     |     |     |     |            |      |
| <u>pH</u>                       |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Shoshone R blw Buffalo Bill Res |     |     |     |     |     |     |     | X   | X   | X   |     |     |            |      |
| Laramie R at Two Rivers         |     |     |     |     |     |     |     |     | X   |     |     |     |            |      |
| <u>Fecal Coliform Bacteria</u>  |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Powder R nr Kaycee              |     |     |     |     | ○   |     |     | ○   | ○   |     |     |     | 29         |      |
| N Platte R blw Casper           | ●   | ●   |     |     |     |     |     |     |     |     | ○   |     | 37         |      |
| Big Horn R at Kane              |     |     |     |     | ○   |     |     |     |     |     |     |     | 22         |      |
| Belle Fourche R blw Moorcroft   |     |     |     |     |     |     |     | ○   |     |     |     |     | 22         |      |
| Sugar Cr nr Sinclair            | ●   |     |     | ●   |     |     |     |     |     |     |     |     |            |      |
| <u>Nitrate</u>                  |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| N Platte R at WY-NB line        | ○   |     |     |     |     |     |     |     |     |     | ●   |     | 32         |      |
| Belle Fourche blw Moorcroft     |     |     |     |     |     |     |     |     | ●   | ●   |     |     | 22         |      |
| <u>Phosphorus</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Powder R nr Kaycee              |     |     | ●   | ○   |     | ●   |     |     |     |     |     |     | 30         |      |
| Powder R at Arvada              |     |     |     |     |     | ●   |     | ○   |     |     |     |     | 32         | 4    |
| N Platte R blw Casper           |     |     |     |     | ○   | ○   |     |     |     |     |     |     | 23         |      |
| N Platte R nr Glenrock          | ○   |     |     |     |     |     |     |     |     |     |     |     | 24         |      |
| N Platte R at Orin              |     |     | ○   |     |     |     |     |     |     |     |     |     | 21         |      |
| N Platte R nr Lingle            | ●   |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Wind R nr Dubois                |     |     | ●   |     |     |     |     |     |     |     |     |     | 22         |      |
| Wind R at Crowheart Dam         |     |     |     | ○   |     |     |     |     |     |     |     |     |            |      |
| Wind R blw Worland              |     |     |     | ○   |     |     |     |     |     |     |     |     |            |      |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- insufficient data

Table 23. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                        | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKD |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|-----|
| <u>Phosphorus Continued</u>    |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Big Horn R. at Kane            |     |     | ●   |     |     | ●   |     |     |     |     |     |     | 28         |     |
| Beaver Cr. nr Arapahoe         |     |     |     |     |     | ●   |     |     |     |     |     |     | 19         |     |
| Beaver Cr. nr Newcastle        |     |     | ○   |     |     |     |     |     |     |     |     |     |            |     |
| Shoshone R. nr Garland         |     |     |     | ●   |     |     |     |     |     |     |     |     |            |     |
| Salt Cr. nr Sussex             |     |     | ●   |     | ●   |     |     |     |     |     |     |     | 32         | 5   |
| Belle Fourche R. blw Moorcroft | ●   | ●   | ●   |     | ○   |     |     |     | ○   |     |     |     | 44         | 3   |
| Belle Fourche R. at WY-SD line |     |     |     |     |     | ●   |     |     |     |     |     |     | 16         |     |
| Sweetwater Cr. nr Alcova       |     |     | ○   |     |     |     |     |     |     |     |     |     |            |     |
| Sweetwater Cr. nr Jeffrey City |     |     |     |     | ○   |     |     |     |     |     |     |     |            |     |
| Laramie R. at Howell           | ●   | ●   | ●   |     | ●   |     |     | ●   | ●   | ●   | ●   | ●   | 73         | 1   |
| Laramie R. at Two Rivers       | ●   | ●   | ●   |     |     |     |     |     | ○   | ●   | ●   | ●   | 63         | 2   |
| Twin Cr. at Sage               |     |     |     |     | ●   |     |     |     |     |     |     |     | 14         |     |
| Sugar Cr. nr Sinclair          |     | ●   |     |     | ●   |     |     |     |     |     |     |     |            |     |
| <u>Turbidity</u>               |     |     |     |     |     |     |     |     |     |     |     |     |            |     |
| Green R. nr La Barge           |     |     |     | ○   |     |     |     |     |     |     |     |     | 10         |     |
| Green R. nr Green River        |     |     | ○   |     |     |     |     |     |     |     |     |     | 13         |     |
| Green R. blw Green River       |     |     | ○   |     |     |     |     |     |     |     |     |     |            |     |
| Powder R. nr Kaycee            |     | ○   | ●   |     | ●   | ●   |     |     | ●   |     |     |     | 48         |     |
| Powder R. at Arvada            |     |     |     |     |     | ●   |     | ○   |     |     |     |     | 85         |     |
| N Platte R. blw Casper         |     |     |     |     | ●   | ●   |     |     |     |     |     |     | 24         |     |
| N Platte R. at Orin            |     |     |     |     | ○   | ●   |     | ○   |     |     |     |     | 26         |     |
| N Platte R. at Mills           |     |     |     |     | ●   | ○   |     |     |     |     |     |     |            |     |
| Wind R. at Crowheart Dam       |     |     | ●   |     |     |     |     |     |     |     |     |     |            |     |
| Wind R. blw Worland            |     |     | ●   |     |     |     |     |     |     |     |     |     |            |     |
| Big Horn R. at Kane            |     |     |     | ●   | ●   | ●   |     |     |     |     |     |     | 38         |     |
| Beaver Cr. nr Newcastle        |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Shoshone R. nr Garland         |     |     | ●   |     |     |     |     |     |     |     |     |     |            |     |
| Tongue R. at Monarch           |     |     |     |     |     | ○   |     |     |     |     |     |     |            |     |
| Belle Fourche R. blw Moorcroft |     |     | ○   |     | ●   |     |     | ●   |     |     |     |     | 23         |     |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 23. TABLE OF CRITICAL STATIONS AND PARAMETERS.

| STATION                         | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVG<br>WQI | RKG. |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| <u>Turbidity Continued</u>      |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Belle Fourche R at Devils Tower |     |     | ○   |     | ●   |     |     |     |     |     |     |     | 20         |      |
| Belle Fourche R at WY-SD line   |     |     | ○   |     | ●   | ●   |     |     |     |     |     |     | 28         |      |
| Twin Cr at Sage                 |     |     | ○   | ●   | ●   | ●   |     |     |     |     |     |     | 29         |      |
| Bear R at Border                |     |     |     |     | ○   |     |     |     |     |     |     |     | 11         |      |
| <u>Total Dissolved Solids</u>   |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Powder R at Arvada              | ●   | ○   | ○   |     | ○   |     | ○   | ●   | ●   | ○   | ○   | ○   | 52         | 4    |
| Beaver Cr nr Arapahoe           | ○   |     |     |     |     |     | ○   |     |     |     |     |     | 39         |      |
| Beaver Cr nr Newcastle          | ●   | ●   |     | ○   |     | ●   | ○   | ●   | ●   | ○   | ○   |     | 68         | 2    |
| Salt Cr nr Sussex               | ●   | ●   |     | ●   |     | ●   | ●   | ●   | ●   | ●   | ○   |     | 84         | 1    |
| Belle Fourche R blw Moorcroft   | ●   | ●   |     |     |     | ○   | ○   |     | ○   | ○   | ○   | ○   | 57         | 3    |
| Belle Fourche R at Devils Tower |     |     |     |     |     |     |     |     |     |     | ○   | ○   | 34         |      |
| Belle Fourche R at WY-SD line   |     | ○   |     |     |     |     |     |     |     | ○   | ○   | ○   | 41         |      |
| Sugar Cr nr Sinclair            |     | ●   |     |     | ●   |     |     |     |     |     |     |     |            |      |
| Twin Cr at Sage                 |     |     |     |     |     |     |     |     |     |     | ●   |     | 27         |      |
| <u>Suspended Sediment</u>       |     |     |     |     |     |     |     |     |     |     |     |     |            |      |
| Green R nr Big Piney            |     |     |     |     | ○   | ●   |     |     |     |     |     |     | 19         |      |
| Green R nr La Barge             |     |     |     |     |     | ○   |     |     |     |     |     |     |            |      |
| Green R nr Green River          |     |     | ●   |     |     |     |     |     |     |     |     |     |            |      |
| Powder R at Arvada              |     |     | ●   | ●   | ●   | ●   | ●   |     |     |     |     |     | 100        | 1    |
| N Platte R at Crin              | ●   | ●   |     |     | ●   | ●   | ●   | ●   |     |     |     |     | 54         | 5    |
| N Platte R at WY-NB line        |     |     |     |     |     |     | ●   |     |     |     |     |     |            |      |
| Big Horn R at Kane              |     |     |     | ●   | ●   |     | ●   |     |     | ○   |     |     | 73         | 2    |
| Shoshone R nr Lovell            |     |     | ○   |     | ●   | ●   | ●   |     |     |     |     |     | 55         | 4    |
| Salt Cr nr Sussex               | ●   |     | ●   |     | ●   | ●   | ●   |     | ○   |     | ●   | ○   | 69         | 3    |
| Clear Cr nr Arvada              |     |     |     |     | ●   | ●   | ○   |     |     |     |     |     | 35         |      |
| Belle Fourche R blw Moorcroft   |     |     | ●   |     | ●   |     | ○   |     |     |     |     |     | 37         |      |
| Laramie R nr Ft. Laramie        |     |     |     |     | ●   |     |     |     |     |     |     |     |            |      |
| Twin Cr at Sage                 |     |     | ●   | ●   | ●   | ●   |     |     |     |     |     |     | 43         |      |
| Bear R at Border                |     |     |     |     | ○   |     |     |     |     |     |     |     | 15         |      |
| Belle Fourche R at WY-SD line   |     |     | ○   |     |     |     |     |     |     |     |     |     | 10         |      |
| N Platte R blw Casper           |     |     |     |     | ●   | ●   |     |     |     |     |     |     | 24         |      |

X Minor exceedence of standards (for Temperature, DO, and pH only)

○ At or approaching critical levels

● Above critical levels

- Insufficient data

Table 24. WATER QUALITY TREND TABLE.

Stations and Parameters where Significant Statistical Differences were Observed.

WYOMING

| STATION                          | TEMPERATURE | DISSOLVED OXYGEN | PH | BACTERIA | NITROGEN | PHOSPHOROUS | TURBIDITY | DISSOLVED SOLIDS | SUSPENDED SOLIDS | AMMONIA | HEAVY METALS |
|----------------------------------|-------------|------------------|----|----------|----------|-------------|-----------|------------------|------------------|---------|--------------|
| Green R. @ Warren Bridge         |             |                  |    |          |          |             |           |                  | D                |         |              |
| Green R. nr Labarge              |             |                  |    |          |          |             | D*        |                  | D                |         |              |
| Green R. bl Fontenelle Res.      |             |                  |    |          |          | D           |           |                  |                  |         |              |
| Green R. @ Big Island            |             |                  |    |          |          |             |           | I                |                  |         |              |
| Powder River nr Kaycee           |             |                  |    |          |          |             |           | I                |                  |         |              |
| Powder River @ Arvada            | I           |                  |    |          |          |             |           |                  |                  |         |              |
| North Platte R. ab Seminoe Res.  |             |                  |    |          | D        |             |           |                  |                  |         |              |
| North Platte R. @ Alcova         |             |                  |    |          | D        |             |           | D                |                  |         |              |
| North Platte R. blw Cooper       |             | D                |    | I*       |          |             | D*        | D                |                  |         |              |
| North Platte nr Glen Rock        |             |                  |    |          |          | D*          |           | D                |                  |         |              |
| North Platte R. @ Orin           |             |                  |    |          | D        |             |           | D                |                  |         |              |
| North Platte R. @ Mills          | D           |                  | D  |          |          |             | D*        | D                |                  |         |              |
| North Platte R. @ WY-NB Line     |             |                  |    |          |          | D           |           | D                |                  |         |              |
| Wind River nr Dubois             |             | D                |    |          | D        |             |           |                  |                  |         |              |
| Big Horn River @ Lucerne         |             |                  |    |          | D        | D           |           |                  |                  |         |              |
| Big Horn River @ Worland         |             |                  |    |          |          | D           |           |                  |                  |         |              |
| Big Horn River @ Kane            |             |                  |    |          | D        |             |           |                  |                  |         |              |
| Shoshone R. blw Buffalo Bill     |             |                  |    |          | D        | D           |           |                  |                  |         |              |
| Shoshone R. nr Lovell            |             |                  |    |          |          | D           |           |                  |                  |         |              |
| Tongue R. nr Dayton              |             |                  | D  |          |          | D           |           |                  |                  |         |              |
| Salt Creek nr Sussex             |             |                  |    |          |          | D*          |           |                  |                  |         |              |
| Clear Creek nr Arvada            | D           |                  |    |          |          |             |           |                  |                  |         |              |
| Belle Fourche R blw Moorcroft    |             |                  |    |          | D*       | D*          |           | D*               |                  |         |              |
| Belle Fourche R. @ Devil's Tower |             |                  | D  |          |          |             |           |                  |                  |         |              |
| Belle Fourche @ WY-SD Line       |             |                  |    |          | D        |             |           |                  |                  |         |              |
| Sweetwater R. nr Alcova          |             |                  |    |          | D        |             |           |                  |                  |         |              |
| Laramie R. @ Two Rivers          |             |                  |    |          |          | D*          |           |                  |                  |         |              |
| Little Laramie R. @ Two Rivers   |             |                  |    |          |          | D           |           |                  |                  |         |              |
| Twin Creek @ Sage                |             |                  |    |          |          |             |           |                  | D*               |         |              |
| Snake River ab Res. nr Alpine    |             |                  |    |          |          | D           |           |                  |                  |         |              |
| Salt River ab Res. Etna          |             |                  |    |          |          | D           |           | D                |                  |         |              |
|                                  |             |                  |    |          |          |             |           |                  |                  |         |              |
|                                  |             |                  |    |          |          |             |           |                  |                  |         |              |



SECTION IV  
AIR QUALITY REPORT



## SUMMARY AND CONCLUSIONS

### Air Quality

Trend analyses performed on the 1976, 1977 and 1978 air quality data available in the SAROAD system indicates that 24 of the 91 counties where sufficient data were available experienced statistically significant changes (improved or deteriorated) for at least one pollutant group. A severity analysis of the 1978 air quality data shows that total suspended particulates continues to present the most wide-spread pollutant problem in this region where the 12 of the 17 counties which exceeded the primary standard also exceeded alert levels. Four counties exceeded the sulfur dioxide standard and 10 counties exceeded the carbon monoxide standard.

A comparison of the findings of this report and the report titled EPA-908/2-78-001, "Water And Air Quality Trends in Region VIII" which included data for 1974-1976 reveals that levels for suspended particulate, sulfur dioxide, and nitrogen dioxide generally remained at approximately the same levels over the two time periods. There was a significant decrease in the number of counties exhibiting carbon monoxide standards violations both in Colorado and Utah. Ozone violations decreased in Colorado.

## OVERALL REGIONAL AIR QUALITY

The color coded maps which are displayed on the following pages generally reflects the air quality for the worst site in each county of the region on a pollutant by pollutant basis. 1978 data analyzed for severity was used to construct these graphics.

Table 25.

### Summary of Air Monitoring in Region VIII in 1978

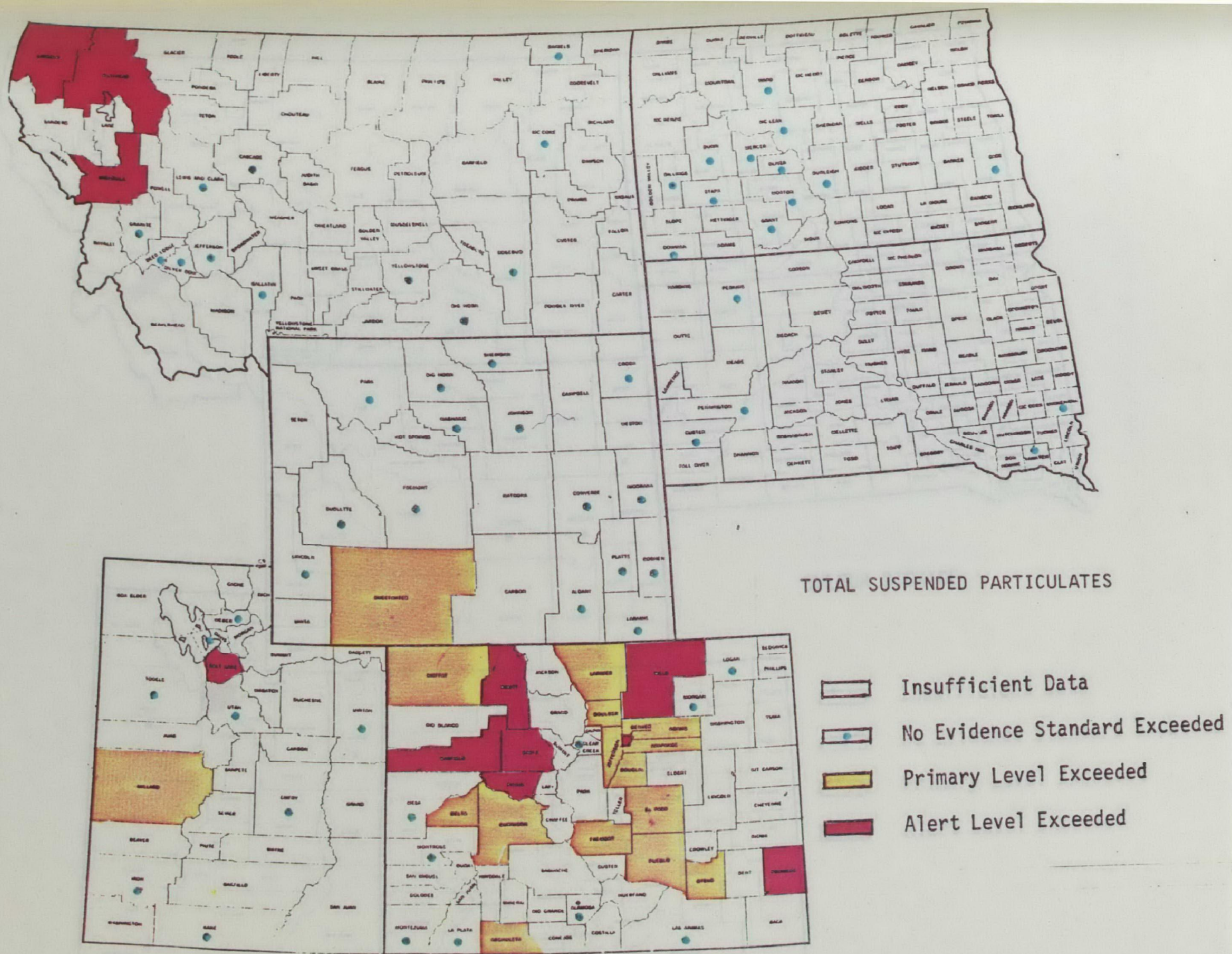
|                                                         | <u>TSP</u> | <u>SO<sub>2</sub></u> | <u>NO<sub>2</sub></u> | <u>CO</u> | <u>Oxidants (ozone)<sup>2</sup></u> | <u>Total</u> |
|---------------------------------------------------------|------------|-----------------------|-----------------------|-----------|-------------------------------------|--------------|
| Total sites                                             | 283        | 76                    | 67                    | 27        | 27                                  | 480          |
| Counties with data                                      | 130        | 49                    | 50                    | 17        | 20                                  | 266          |
| Counties exceeding primary standard                     | 27         | 2                     | 0                     | 13        | 4                                   | 46           |
| Counties exceeding alert level                          | 11         | 2                     | 0                     | 3         | 1                                   | 17           |
| Counties with deteriorating air quality                 | 3          | 2                     | 3                     | 1         | 4                                   | 13           |
| Counties with improving air quality                     | 14         | 3                     | 3                     | 5         | 1                                   | 26           |
| Counties with insufficient data or no discernible trend | 113        | 44                    | 46                    | 11        | 15                                  | 229          |

Total number of counties: 293

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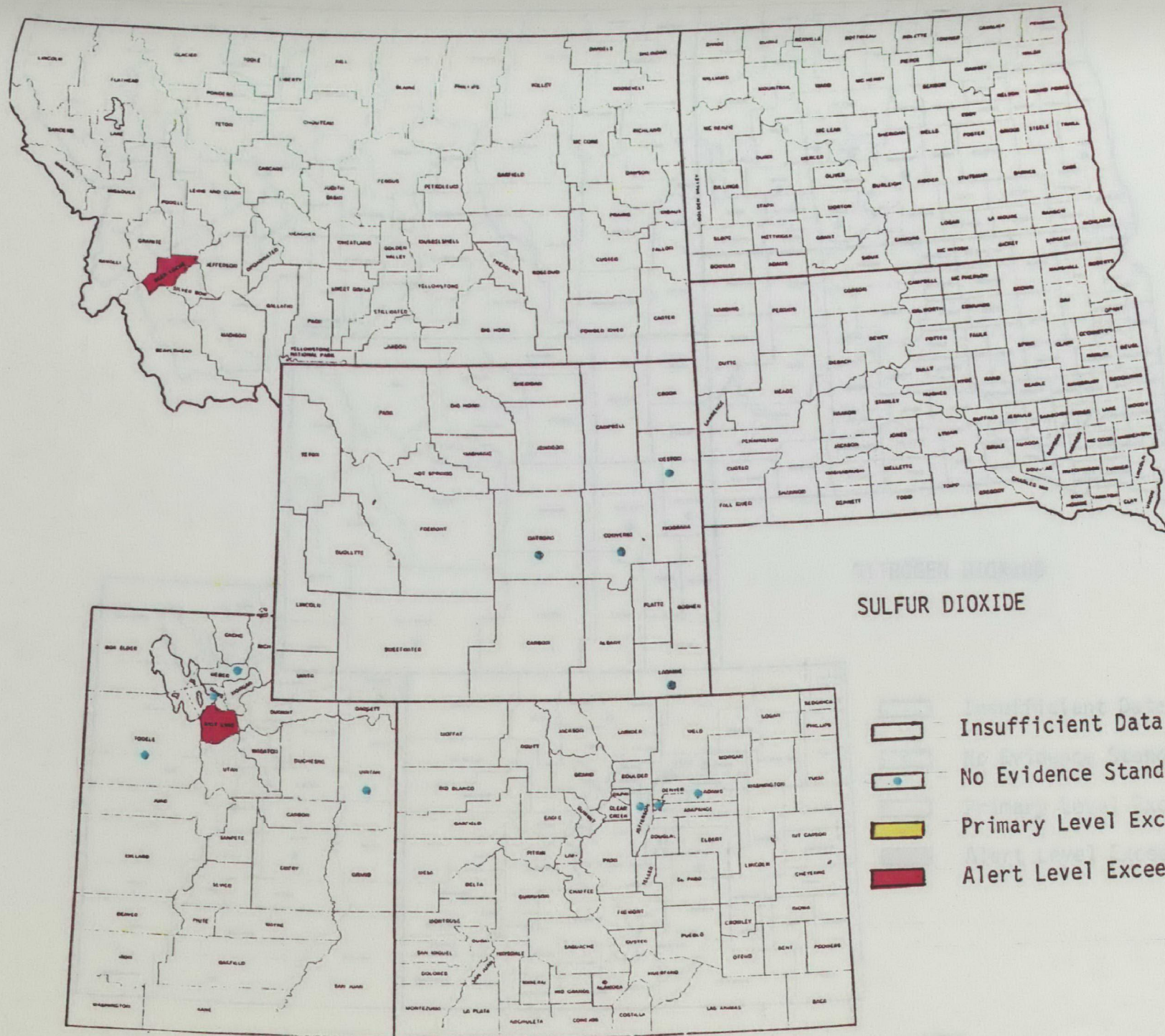
<sup>1</sup> U.S. EPA. "Guideline for Public Reporting of Daily Air Quality -- Pollutant Standards Index (PSI)," EPA 450/2-76-013, August 1976.

<sup>2</sup> Instrumentation measures ozone which is the primary constituent of oxidants.

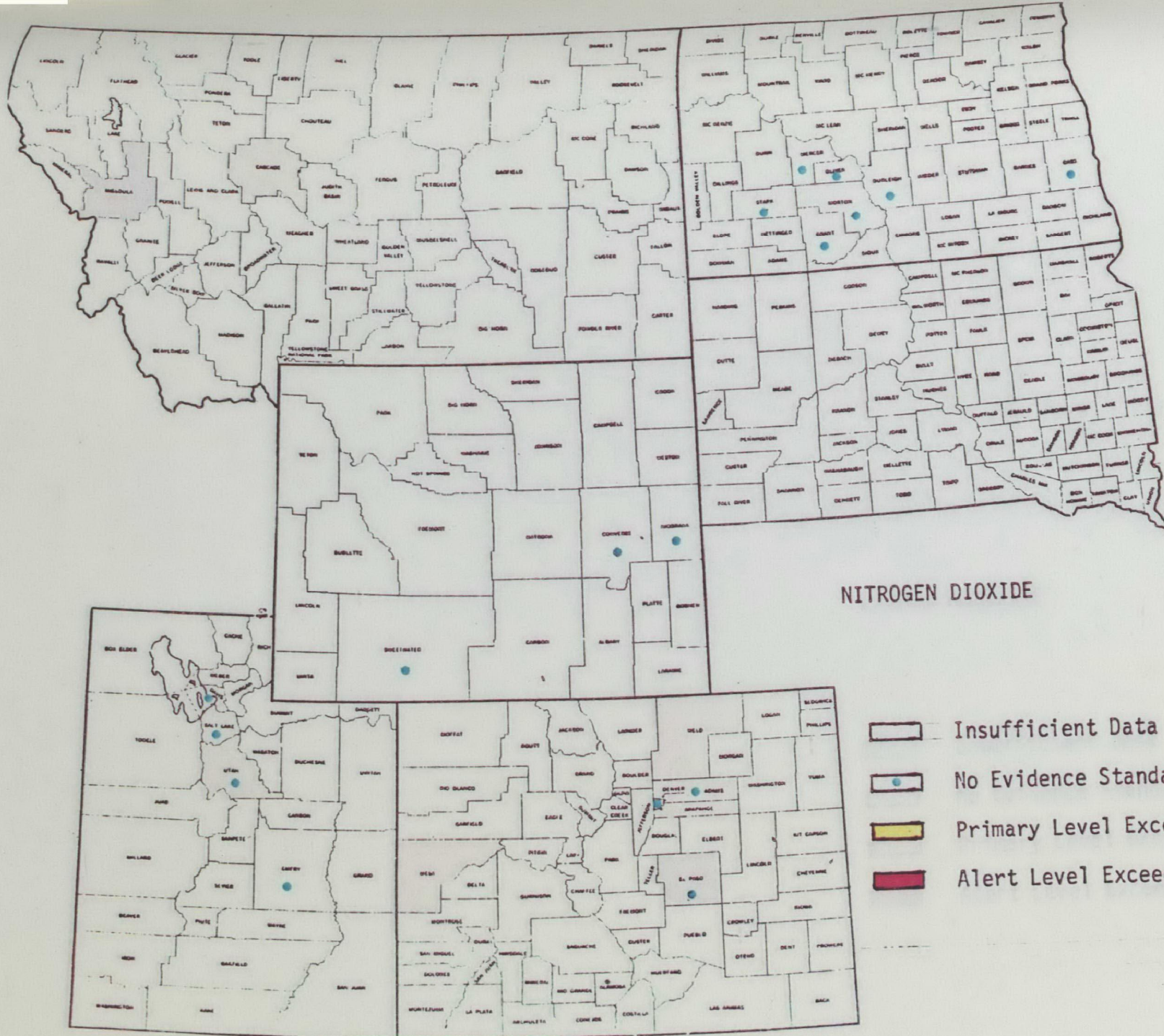


AIR QUALITY STATUS - 1978







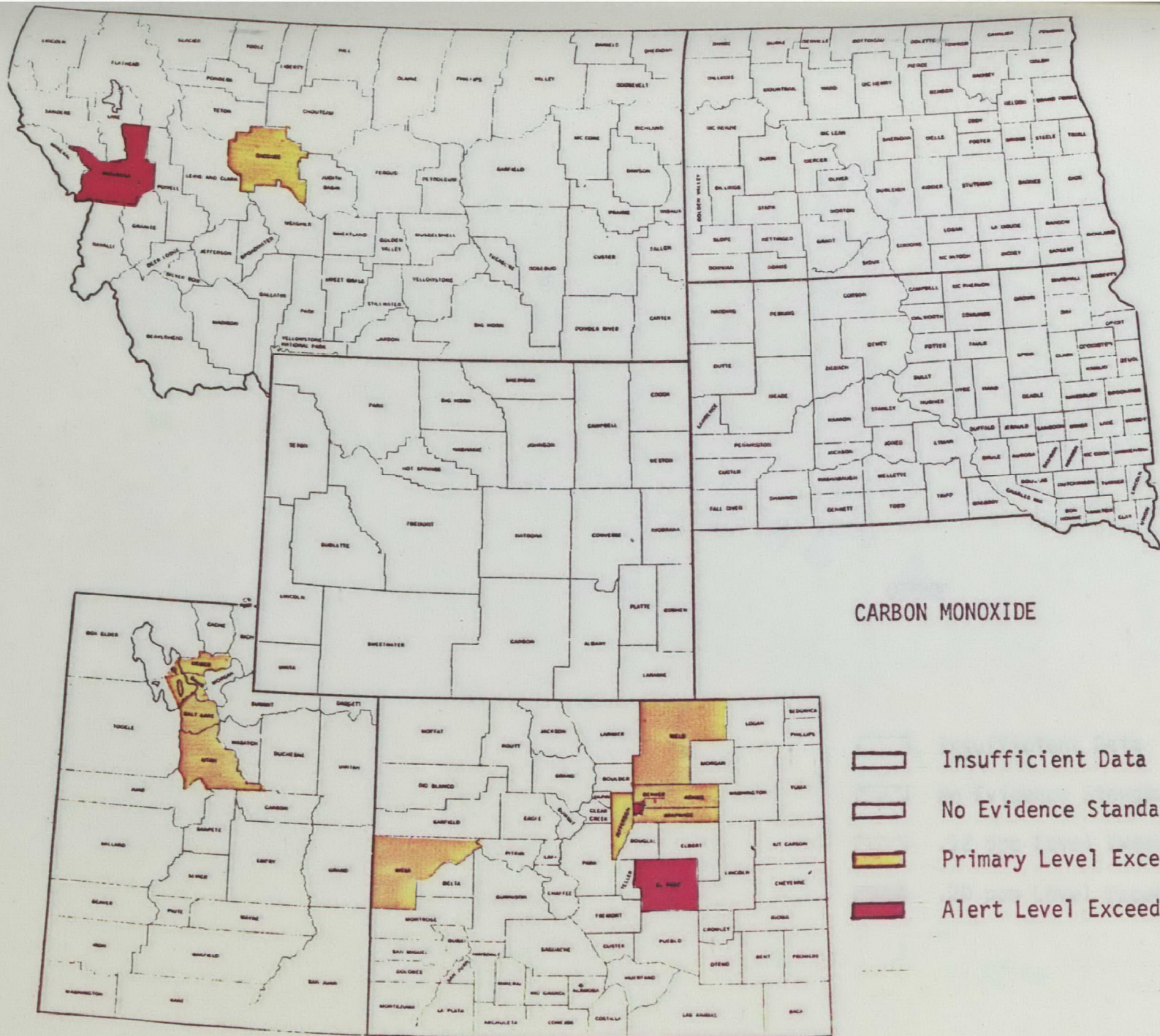


NITROGEN DIOXIDE

- Insufficient Data
- No Evidence Standard Exceeded
- Primary Level Exceeded
- Alert Level Exceeded

AIR QUALITY STATUS - 1978

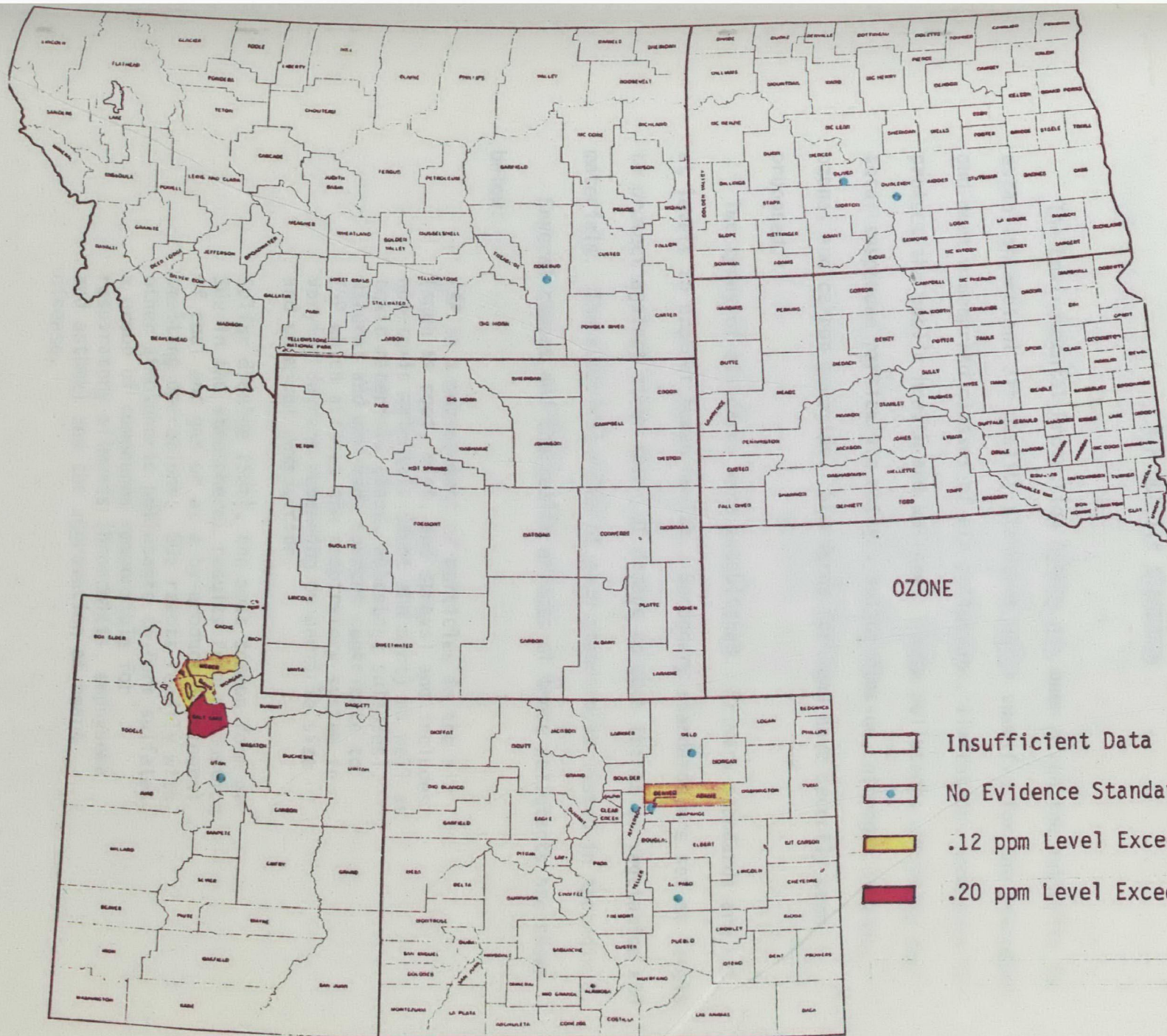




# CARBON MONOXIDE

- Insufficient Data
- No Evidence Standard Exceeded
- Primary Level Exceeded
- Alert Level Exceeded





AIR QUALITY STATUS - 1978



## AIR QUALITY STANDARDS

The Environmental Protection Agency has been given the authority to establish ambient air quality standards which specify, for the principal and most widespread classes of air pollutants, limitations necessary to protect the public health and welfare. These pollutants currently are total suspended particulate matter, sulfur dioxide, nitrogen dioxide, ozone, and carbon monoxide. Standards for lead have recently been proposed.

Two types of standards were established. Primary standards are set at levels to protect human health. Secondary standards are set at levels to protect against other forms of damage to such things as vegetation and materials. The numerical value of each standard is listed in Appendix B.

Several causes and the health effects of these pollutants are shown below:

TSP is a measurement of particles in the air (such as soot, mist, and sprays) and includes non-toxic materials (dust and dirt) as well as toxic materials (lead, asbestos, sulfates). Natural and man-made sources contribute to TSP which affects the respiratory system in varying degrees depending on particle size and chemical composition.

Sulfur dioxide ( $\text{SO}_2$ ), the most common form of  $\text{SO}_2$  in the atmosphere, results from combustion of coal and gas or as a by-product in mineral smelting operations.  $\text{SO}_2$  reacts readily with other atmospheric pollutants to form sulfates, a group of compounds responsible for respiratory ailments (bronchitis, emphysema and asthma) and the aggravation of heart disease.

$\text{NO}_2$  is a brown gas formed during high temperature combustion (automobile engines, power plant boilers),  $\text{NO}_2$  can affect lung tissue, reduce resistance to disease, contribute to bronchitis or pneumonia, and aggravate chronic lung disease. It reacts with hydrocarbon in the presence of sunlight to produce photochemical oxidants.

$\text{CO}$  is a colorless, odorless, tasteless gas--a toxic product of combustion. The automobile engine represents the major single source of this pollutant.  $\text{CO}$  in the lungs reduces the oxygen available to tissues and decreases heart and mental functions, visual perception and general alertness. For those with heart and lung problems,  $\text{CO}$  presents a life-threatening situation.

Photochemical Oxidant compounds are formed by a complex series of chemical reactions occurring when hydrocarbons and nitrogen oxides from motor vehicles or other emission sources are exposed to sunlight. Ozone, the critical constituent in oxidants, is a severe irritant to mucous membranes and may reduce lung function or aggravate existing lung disorders.

## ANALYTICAL PROCEDURES - AIR

### Status and Severity Analysis

Status and severity of air quality are determined by comparing measurements made at monitoring stations to air pollution standards. The indicator used to characterize air quality status in this manner was the number of days in which measurements exceed the primary standards at the worst site in each county. The indicator may not actually represent air quality for the entire county, however the worst site is always selected in an area where measured concentrations are affecting some segment of the population.

Another indicator is used to demonstrate the severity of the problem. Each pollutant has been assigned an alert level, the concentration at which the public must be notified of possible adverse health affects. These values shown in Appendix C are significantly higher than the standards and are not frequently encountered.

These two indicators correspond to break points in the Pollutant Standards Index (PSI) which is becoming the nationwide index for reporting air quality levels to the public. In the PSI the worst site pollutant concentration in each metropolitan area is chosen, and the index is calculated from the concentration at the site referenced to primary standards and alert levels. These methods are detailed by pollutant in Appendix D.

### Trend Analysis

Most research indicates that air pollutants are log-normally distributed. Utilizing this assumption, the relationship between

normally and log-normally distributed variables can be exploited in formulating statistics that are useful in trend analysis. The statistic that is a confidence interval estimate of the location of the underlying distribution is usually the one used, since significant differences in such a statistic suggests significant differences in the locations of the distributions in question. In other words, each year has its own distribution and any significant location shifts from year-to-year would indicate significant shifts in pollutant concentration. Since the location of a log-normal distribution is a difficult parameter for which to formulate a confidence interval, the method of forming a confidence interval around the location (mean) of the accompanying normal distribution was used. The bounds on the confidence interval were then converted back to actual concentration form. Since more than one interval was computed for each trend determination, the Bonferroni technique was utilized, which yielded a family confidence for whatever number of intervals that were to be constructed. The method used is as follows:

(1) Take the natural log of every observation, for a particular yr.

(2) find  $\bar{x} = \frac{\sum \ln x}{n}$

(3) find  $s = \sqrt{\frac{\sum (\ln x)^2 - \frac{(\sum \ln x)^2}{n}}{n-1}}$

(4) construct confidence interval using:

A) lower bound =  $\bar{x} - \frac{ts}{\sqrt{n}}$

B) upper bound =  $\bar{x} + \frac{ts}{\sqrt{n}}$

Where t=table, t-value chosen to yield an approximate 90-95% family confidence

(5) convert back to original concentration form by doing:

A) new lower bound =  $e^{\text{lower bound}}$

B) new upper bound =  $e^{\text{upper bound}}$

Each confidence interval for each year is then inspected for any overlaps. Overlapping years indicate those years to be insignificantly different whereas non-overlapping years indicate significant shifts in the geometric mean concentrations. The relative locations of the intervals along a real number line indicates whether or not the concentrations are increasing or decreasing.

## AIR QUALITY NON-ATTAINMENT AREAS

On March 3, 1978 the Federal Register set forth the attainment status of all states in relation to the national ambient air quality standards (NAAQS). Table 26 indicates, on a state by state, pollutant by pollutant basis the attainment status of every area as submitted by each of the appropriate state agencies in Region VIII and approved, or as designated by the Environmental Protection Agency. No distinctions have been made as to the severity of the violations recorded in the areas designated by nonattainment in this table. Current status (1978) for each county containing a nonattainment area in Region VIII is graphically described on annotated maps in the section dealing with state summaries.

TABLE 26.

EPA NON-ATTAINMENT AREAS IN REGION VIII  
FEDERAL REGISTER - MARCH 3, 1978

|          |                        | TSP | SO <sub>2</sub> | NO <sub>2</sub> | CO | O <sub>x</sub> |
|----------|------------------------|-----|-----------------|-----------------|----|----------------|
| Montana  | Colstrip Area          | P   |                 |                 |    |                |
|          | City of Columbia Falls | P   |                 |                 |    |                |
|          | City of Missoula       | P   |                 |                 |    |                |
|          | Missoula Area          | S   |                 |                 |    |                |
|          | Billings Area          | S   |                 |                 |    |                |
|          | Great Falls Area       | S   |                 |                 |    |                |
|          | Butte Area             | S   |                 |                 |    |                |
|          | East Helena Area       | S   | PS              |                 |    |                |
|          | Laurel Area            |     | P               |                 |    |                |
|          | Anaconda Area          |     | PS              |                 |    |                |
|          | City of Billings       |     |                 |                 | P  |                |
|          | Yellowstone County     |     |                 |                 |    | P              |
|          | Rosebud County         |     |                 |                 |    | P              |
| So. Dak. | Rapid City Area        | P   |                 |                 |    |                |
| Utah     | Davis County           | S   |                 |                 |    | P              |
|          | Salt Lake County       | P   | PS              |                 | P  | P              |
|          | Utah County            | P   |                 |                 |    | P              |
|          | Weber County           | P   |                 |                 |    | P              |
|          | City of Price          | P   |                 |                 |    |                |
|          | Cedar City             | S   | PS              |                 |    |                |
|          | Tooele County          |     | PS              |                 |    |                |
|          | Uintah County          |     |                 |                 |    | P              |
|          | City of Bountiful      |     |                 |                 | P  |                |
|          | City of Ogden          |     |                 |                 | P  |                |
|          | City of Provo          |     |                 |                 | P  |                |
| Wyoming  | Trona Industrial Area  | P   |                 |                 |    |                |
|          | Sweetwater County      |     |                 |                 |    |                |
| Colo.    | Larimer-Weld           | P   |                 |                 |    | P              |
|          | designated area        |     |                 |                 |    |                |
|          | Denver Designated Area | P   |                 | P               | P  | P              |
|          | Colo. Springs 3-C      | P   |                 |                 | P  |                |
|          | Pueblo 3-C             | P   |                 |                 |    |                |
|          | Mesa Designated Area   | P   |                 |                 |    |                |
|          | El Paso County         |     |                 |                 |    | P              |
|          | Ft. Collins-Greeley    |     |                 |                 | P  |                |

P - Does not meet primary standard  
S - Does not meet secondary standard



SECTION V  
STATE AIR QUALITY SUMMARIES



## STATE AIR QUALITY SUMMARIES

### General Description

The following three graphics appear for each state summary that is contained in this section:

1. Number of Days that the Primary Standard or Alert Level was Exceeded.

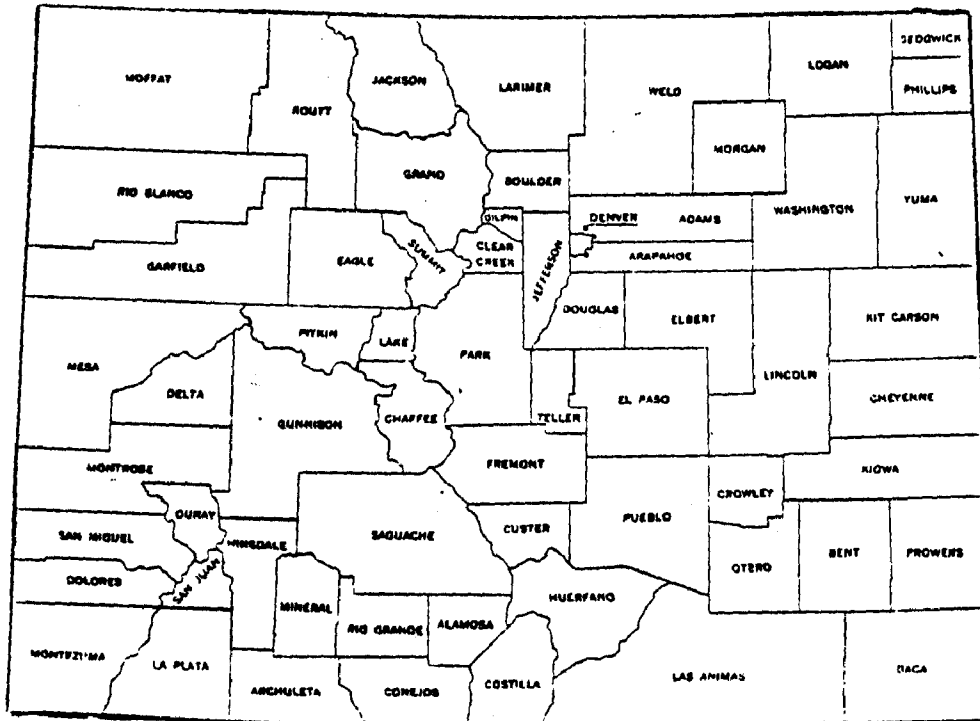
A bar chart compares 1976, 1977, and 1978 data. Primary standard and alert violations are recorded for the worst site in the county. For those pollutants reporting only yearly average primary standard violations or those reporting no violations, the county was omitted. If no data or insufficient data (75% of all possible data) were indicated, the county was omitted. One or more primary standard daily and/or alert level exceedences is shown even though more than one primary level concentration is required for a primary standard violation.

2. Status and Trends in Air Quality

A county chart showing current status and trends by pollutant for the worst station in the county. If no data or insufficient data were available in the county, arrows were not shown. Status was determined using 1978 data. Counties with primary standard and/or alert level exceedences are shown. Trends were determined by comparing the geometric means of 1976, 1977, and 1978 data. Ozone status is based on a 3-year average of 1 hour primary level violations.

3. Non-Attainment Areas

The status of counties containing non-attainment areas is shown by parameter. If no indication is given, the county did not have a non-attainment area designation in the March 3, 1978, Federal Register non-attainment area list. In some cases it appears that the status has changed in certain of these non-attainment areas.



# COLORADO

TABLE 27.

## STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION

## COLORADO

| County      | TSP          | SO <sub>2</sub> | NO <sub>2</sub> | CO           | O <sub>x</sub> |
|-------------|--------------|-----------------|-----------------|--------------|----------------|
| Adams       | 060020001F01 | 062210001F01    | 062210001F01    | 062210001F01 | 062210001F01   |
| Alamosa     | 060040001F01 |                 |                 |              |                |
| Arapahoe    | 060780001F01 |                 |                 |              |                |
| Archuleta   | 060100001F01 |                 |                 |              |                |
| Boulder     | 060200001F01 |                 |                 |              |                |
| Clear Creek | 060360001F01 |                 |                 |              |                |
| Delta       | 060540001F01 |                 |                 |              |                |
| Denver      | 060580002F01 | 060580002F01    | 060580002A05    | 060580010F01 | 060580009F01   |
| Douglas     | 060660001F01 |                 |                 |              |                |
| Eagle       | 060700001F01 |                 |                 |              |                |
| El Paso     | 060380004F01 |                 |                 | 060380004F01 | 060380004F01   |
| Fremont     | 060800001F01 |                 |                 |              |                |
| Garfield    | 060880001F01 |                 |                 |              |                |
| Gunnison    | 061040002F01 |                 |                 |              |                |
| Huerfano    | 062180001F01 |                 |                 |              |                |
| Jefferson   | 060720001F01 | 060120001F01    |                 | 060120001F01 | 060120001F01   |
| La Plata    | 060680003F01 |                 |                 |              |                |
| Larimer     | 061480002F01 |                 |                 |              |                |
| Las Animas  | 062160002F01 |                 |                 |              |                |
| Logan       | 062080001F01 |                 |                 |              |                |
| Mesa        | 060980010F01 |                 |                 |              |                |
| Moffat      | 060480001F01 |                 |                 |              |                |
| Montezuma   | 061530003F03 |                 |                 |              |                |
| Montrose    | 061620001F01 |                 |                 |              |                |

TABLE 27 (CONTINUED)

## COLORADO

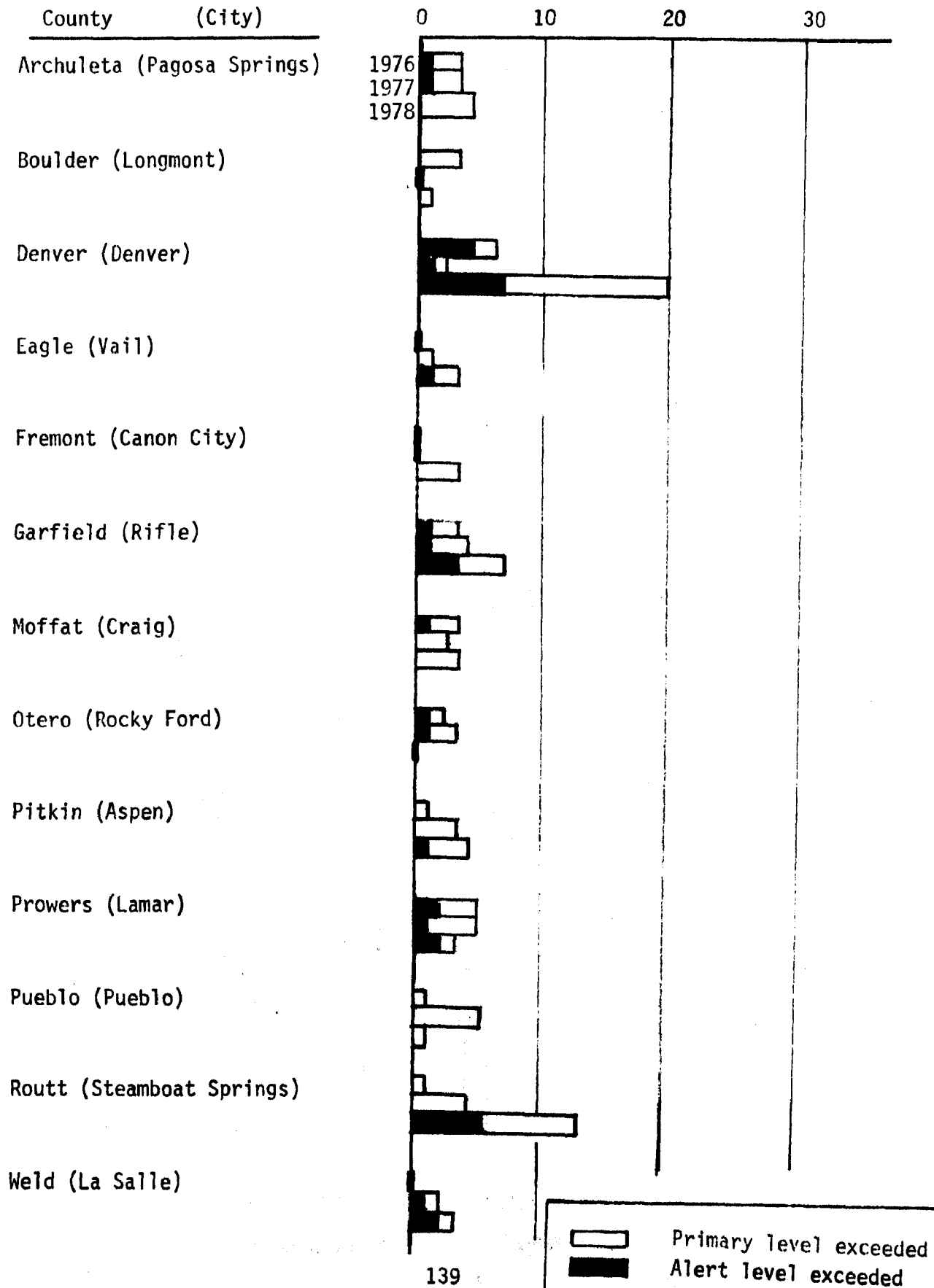
| County  | TSP          | SO <sub>2</sub> | NO <sub>2</sub> | CO           | O <sub>x</sub> |
|---------|--------------|-----------------|-----------------|--------------|----------------|
| Morgan  | 060280001F01 |                 |                 |              |                |
| Otero   | 061900001F01 |                 |                 |              |                |
| Pitkin  | 061780001F01 |                 |                 |              |                |
| Prowers | 061280001F01 |                 |                 |              |                |
| Pueblo  | 061820003F01 |                 |                 |              |                |
| Routt   | 061920003F01 |                 |                 |              |                |
| Welds   | 062220004F01 |                 |                 | 061000005F01 | 061000005F01   |

# NUMBER OF DAYS THAT PRIMARY STANDARD OR ALERT LEVEL WAS EXCEEDED

(Days/Year)

COLORADO

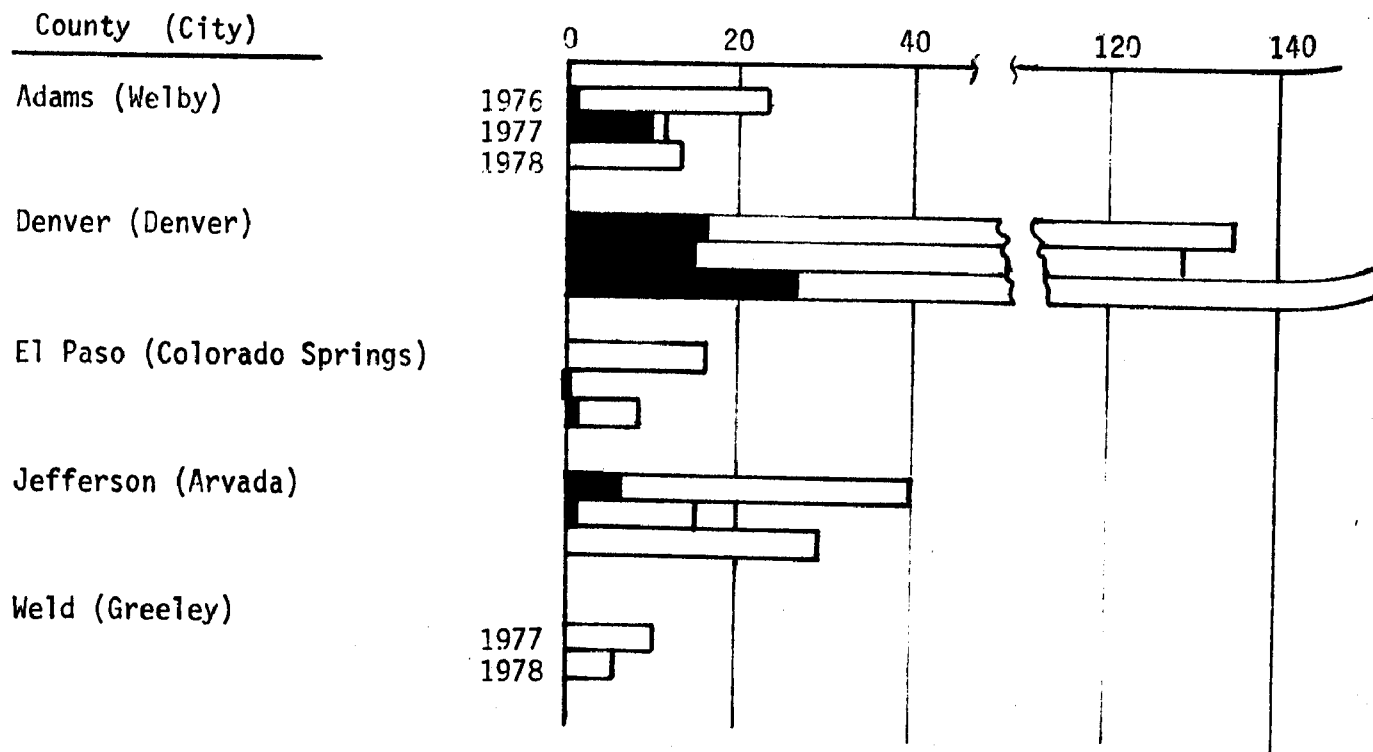
## TOTAL SUSPENDED PARTICULATES



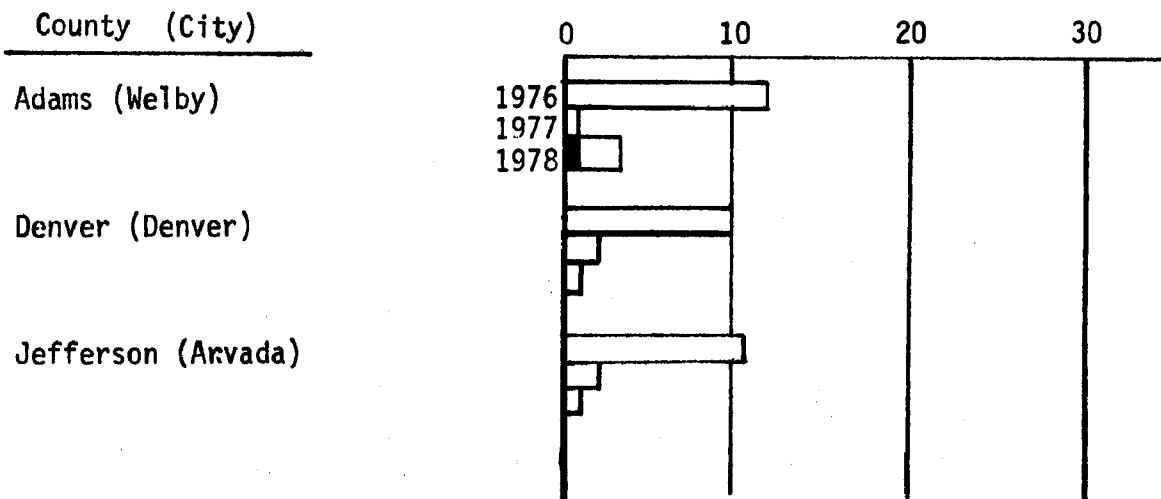
NUMBER OF DAYS THAT PRIMARY STANDARD OR ALERT LEVEL WAS EXCEEDED  
(Days/Year)

COLORADO

CARBON MONOXIDE



OZONE



Primary level exceeded

Alert level exceeded

# STATUS AND TRENDS IN AIR QUALITY

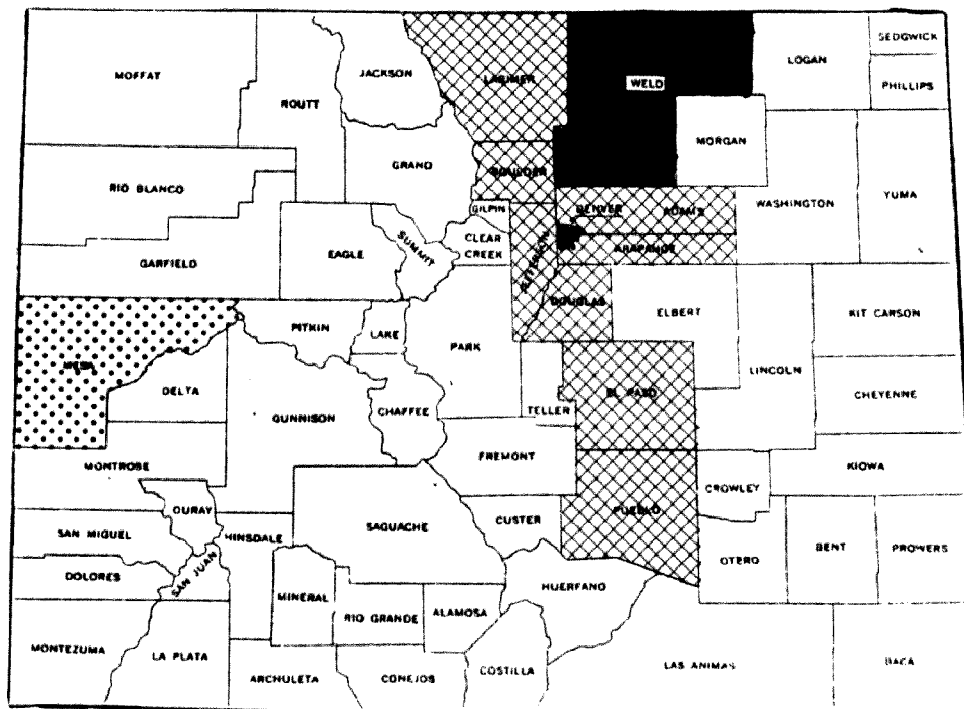
## COLORADO

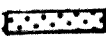
| County      | TSP                                                                                              | SO <sub>2</sub>                                                                   | NO <sub>2</sub>                                                                     | CO                                                                                  | O <sub>3</sub> (ozone)                                                              | County     | TSP                                                                                                | SO <sub>2</sub>                                                                     | NO <sub>2</sub> | CO                                                                                    | O <sub>3</sub> (ozone)                                                                |
|-------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Adams       |  <sup>a</sup>   |  |    |    |    | Jefferson  |  <sup>a</sup>   |  |                 |    |    |
| Alamosa     |                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     | La Plata   |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Arapahoe    |  <sup>a</sup>   |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Larimer    |  <sup>a</sup>   |                                                                                     |                 |                                                                                       |                                                                                       |
| Archuleta   |                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Las Animas |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Boulder     |  <sup>a</sup>   |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Logan      |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Clear Creek |                 |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Mesa       |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Delta       |  <sup>a</sup>   |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Moffat     |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Denver      |                 |  |    |    |    | Montezuma  |                 |                                                                                     |                 |                                                                                       |                                                                                       |
| Douglas     |  <sup>a</sup>  |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Montrose   |                |                                                                                     |                 |                                                                                       |                                                                                       |
| Eagle       |               |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Morgan     |               |                                                                                     |                 |                                                                                       |                                                                                       |
| El Paso     |  <sup>a</sup> |                                                                                   |  |  |  | Otero      |  <sup>a</sup> |                                                                                     |                 |                                                                                       |                                                                                       |
| Fremont     |               |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Pitkin     |               |                                                                                     |                 |                                                                                       |                                                                                       |
| Garfield    |               |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Prowers    |               |                                                                                     |                 |                                                                                       |                                                                                       |
| Gunnison    |  <sup>a</sup> |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Pueblo     |  <sup>a</sup> |                                                                                     |                 |                                                                                       |                                                                                       |
| Huerfano    |               |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Routt      |               |                                                                                     |                 |                                                                                       |                                                                                       |
|             |                                                                                                  |                                                                                   |                                                                                     |                                                                                     |                                                                                     | Weld       |               |                                                                                     |                 |  |  |

|                                                                                     |                                  |
|-------------------------------------------------------------------------------------|----------------------------------|
|  | No evidence standard exceeded    |
|  | Exceeds primary standard         |
|  | Exceeds alert level              |
|  | Increasing trend (deterioration) |
|  | No apparent trend                |
|  | Decreasing trend (improvement)   |

<sup>a/</sup> Status Based on Annual Mean Only

AIR QUALITY STATUS - 1978  
 COLORADO -  
 NON-ATTAINMENT AREAS  
 TOTAL SUSPENDED PARTICULATES



-  Insufficient Data (less than 75% of maximum possible observations)
-  No Evidence Primary Standard Exceeded
-  Primary Standard Exceeded
-  Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

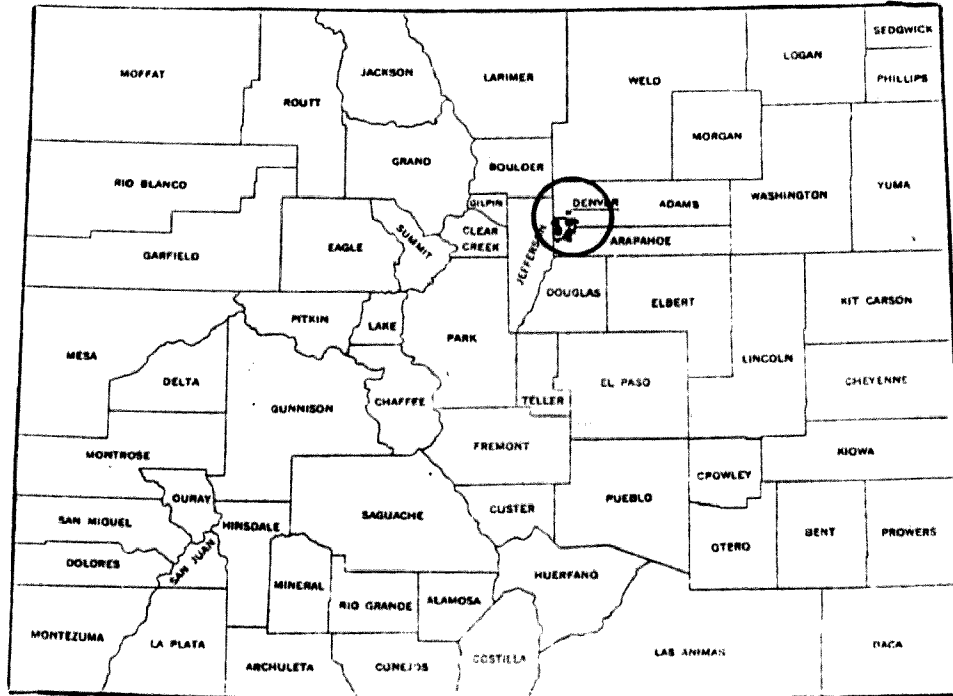
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## COLORADO -

### Non-Attainment Areas

#### NITROGEN DIOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

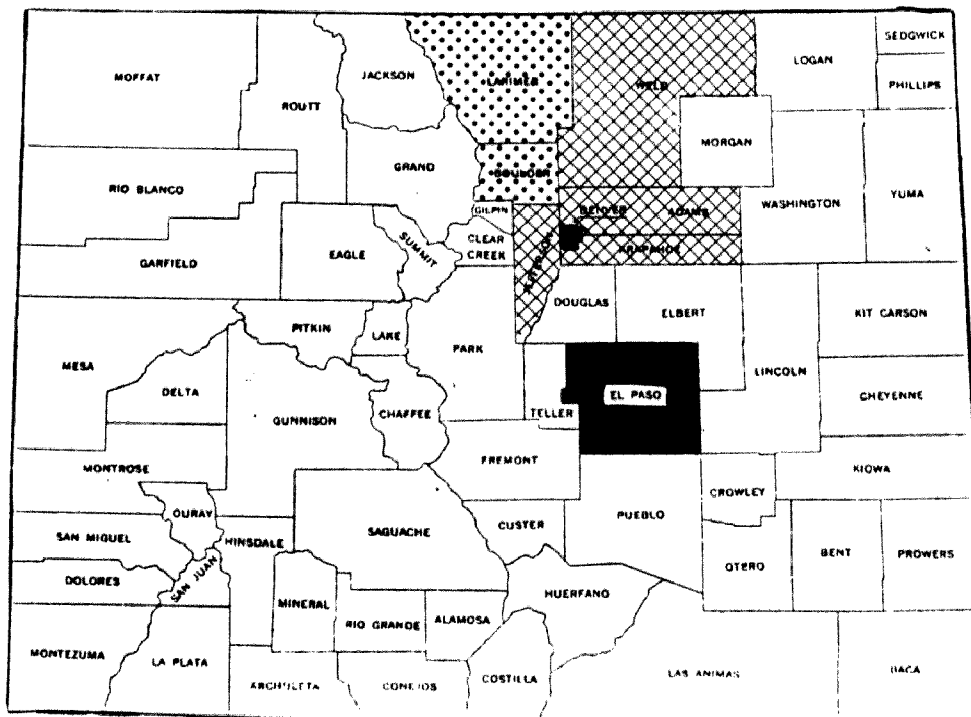
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## COLORADO -

### Non-Attainment Areas

#### CARBON MONOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or in all of annotated counties.

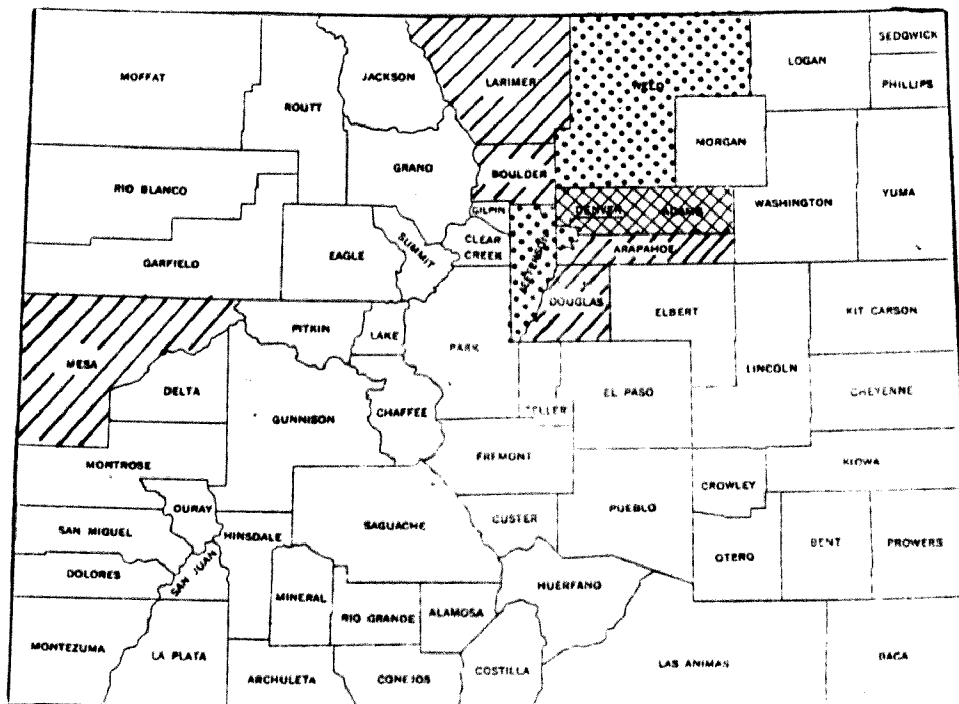
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## COLORADO -

### Non-Attainment Areas

#### OZONE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



.12 PPM Level Exceeded



.20 PPM Level Exceeded

A non-attainment area is in part or all of annotated counties.

The worst station in the county is used to represent the county.



MONTANA

TABLE 28.

## STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION

## MONTANA

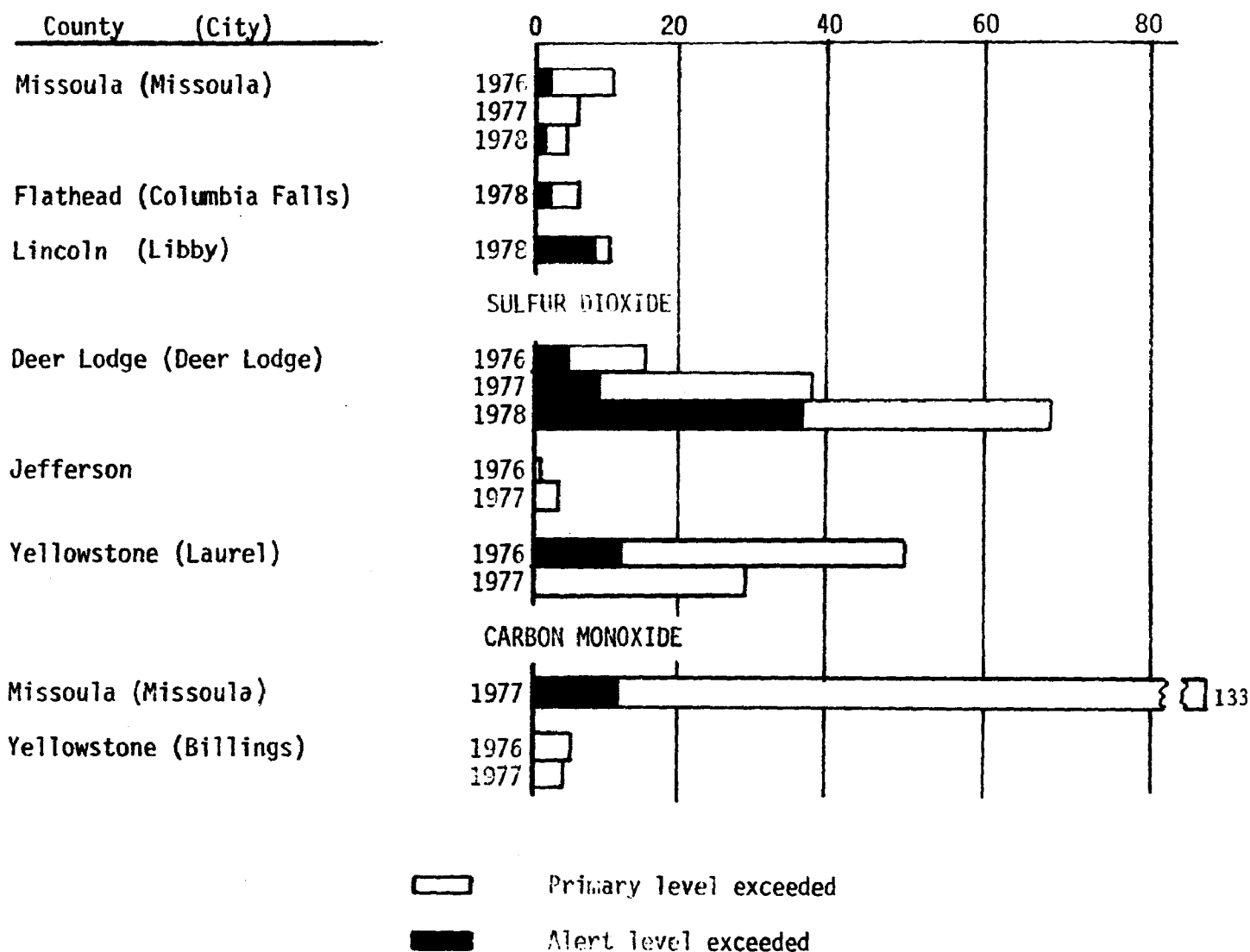
| County          | TSP                          | SO <sub>2</sub> | CO           | O <sub>x</sub> |
|-----------------|------------------------------|-----------------|--------------|----------------|
| Big Horn        | 270006010F03                 |                 |              |                |
| Cascade         | 270660009G01                 |                 | 270660015F01 |                |
| Daniels         | 270340003F03                 |                 |              |                |
| Deer Lodge      | 270400004F02                 | 270400004F02    |              |                |
| Flathead        | 270270005F01                 |                 |              |                |
| Gallatin        | 270120001F01                 |                 |              |                |
| Granite         | 270640005F02                 |                 |              |                |
| Jefferson       | 270760003F02                 |                 |              |                |
| Lewis and Clark | 270860002F02                 |                 |              |                |
| Lincoln         | 270900010F01                 |                 |              |                |
| McCone          | 270980001F03                 |                 |              |                |
| Missoula        | 271100001G01<br>271100019F01 |                 | 271080003F01 |                |
| Rosebud         | 271360026P03                 |                 |              | 270310101A08   |
| Silver Bow      | 271480015F02                 |                 |              |                |
| Yellowstone     | 270080008G01                 | 270840009G02    |              |                |

# NUMBER OF DAYS THAT PRIMARY STANDARD OR ALERT LEVEL WAS EXCEEDED

(Days/Year)

MONTANA

## TOTAL SUSPENDED PARTICULATES



# STATUS AND TRENDS IN AIR QUALITY

## MONTANA

| <u>County</u> | <u>TSP</u>                                                                        | <u>SO<sub>2</sub></u>                                                             | <u>County</u> | <u>TSP</u>                                                                          | <u>SO<sub>2</sub></u> |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|-----------------------|
| Big Horn      |  |                                                                                   | Lewis & Clark |  |                       |
| Cascade       |  |                                                                                   | Missoula      |  |                       |
| Deer Lodge    |  |  | Rosebud       |  |                       |
| Granite       |  |                                                                                   | Silver Bow    |  |                       |
| Jefferson     |  |                                                                                   | Yellowstone   |  |                       |



No evidence standard exceeded



Exceeds primary standard



Exceeds alert level



Increasing trend (deterioration)



No apparent trend

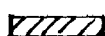
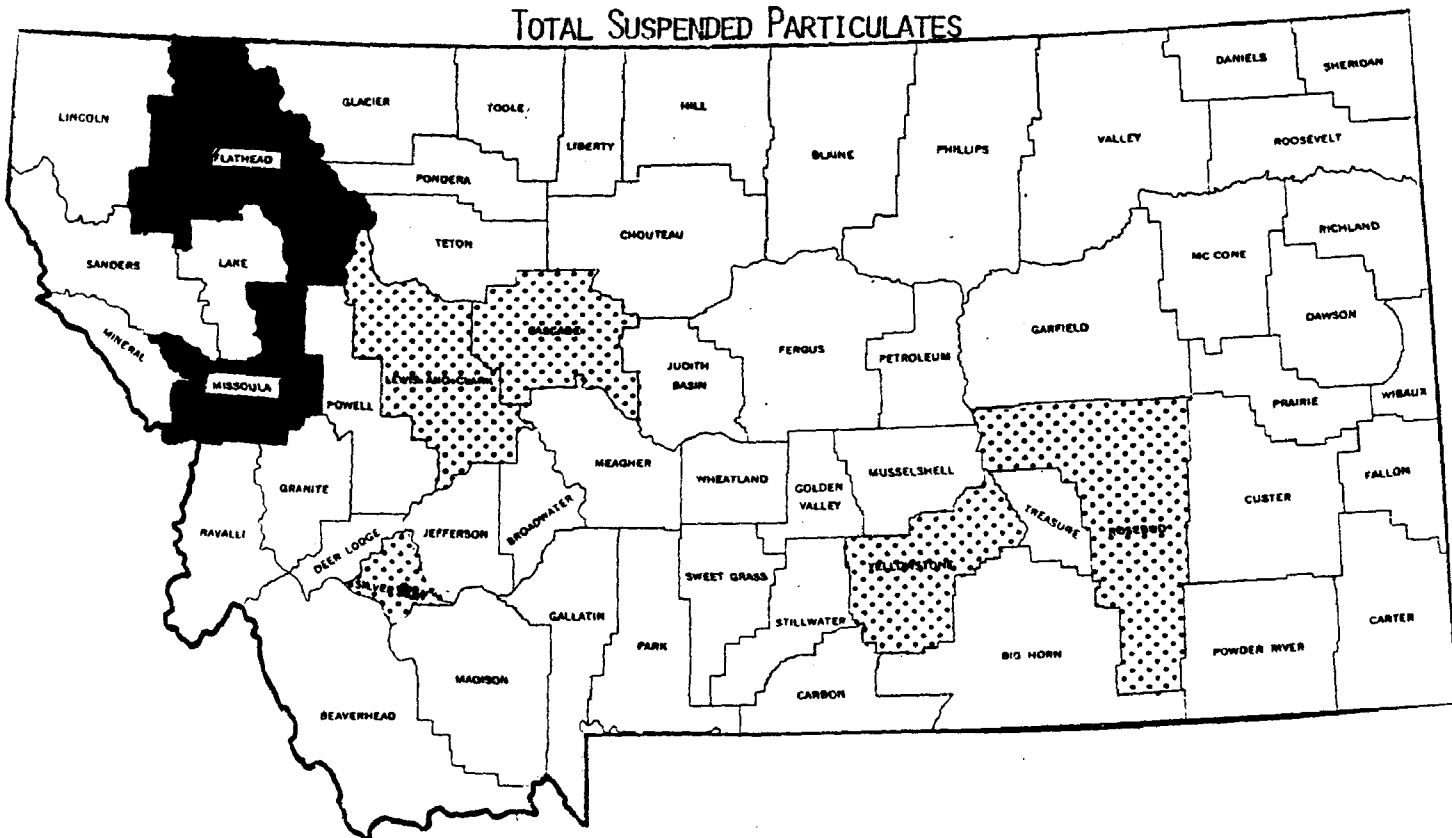


Decreasing trend (improvement)

# AIR QUALITY STATUS - 1978

## MONTANA -

### NON-ATTAINMENT AREAS TOTAL SUSPENDED PARTICULATES



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

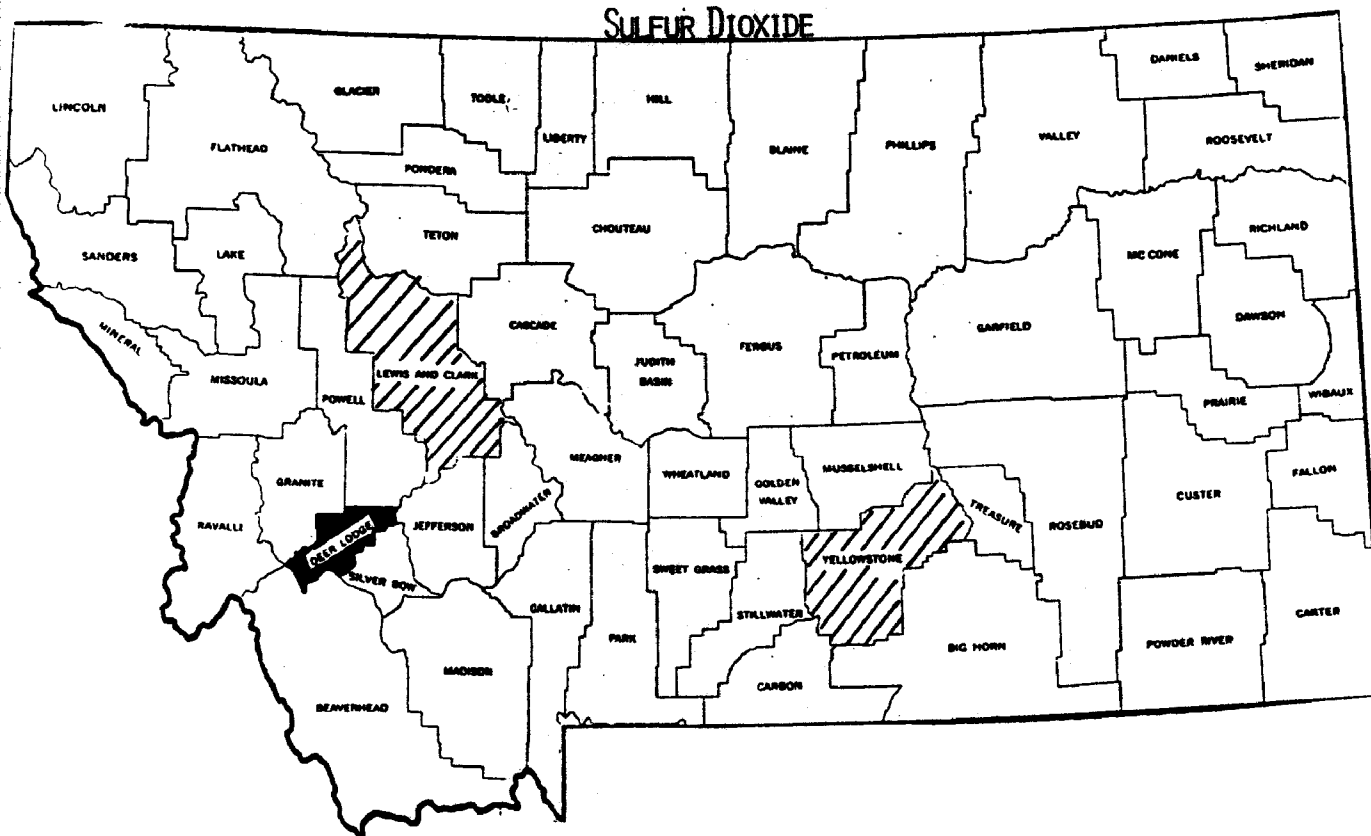
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## MONTANA -

### Non-Attainment Areas

#### SULFUR DIOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

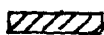
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## MONTANA -

### Non-Attainment Areas

#### CARBON MONOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

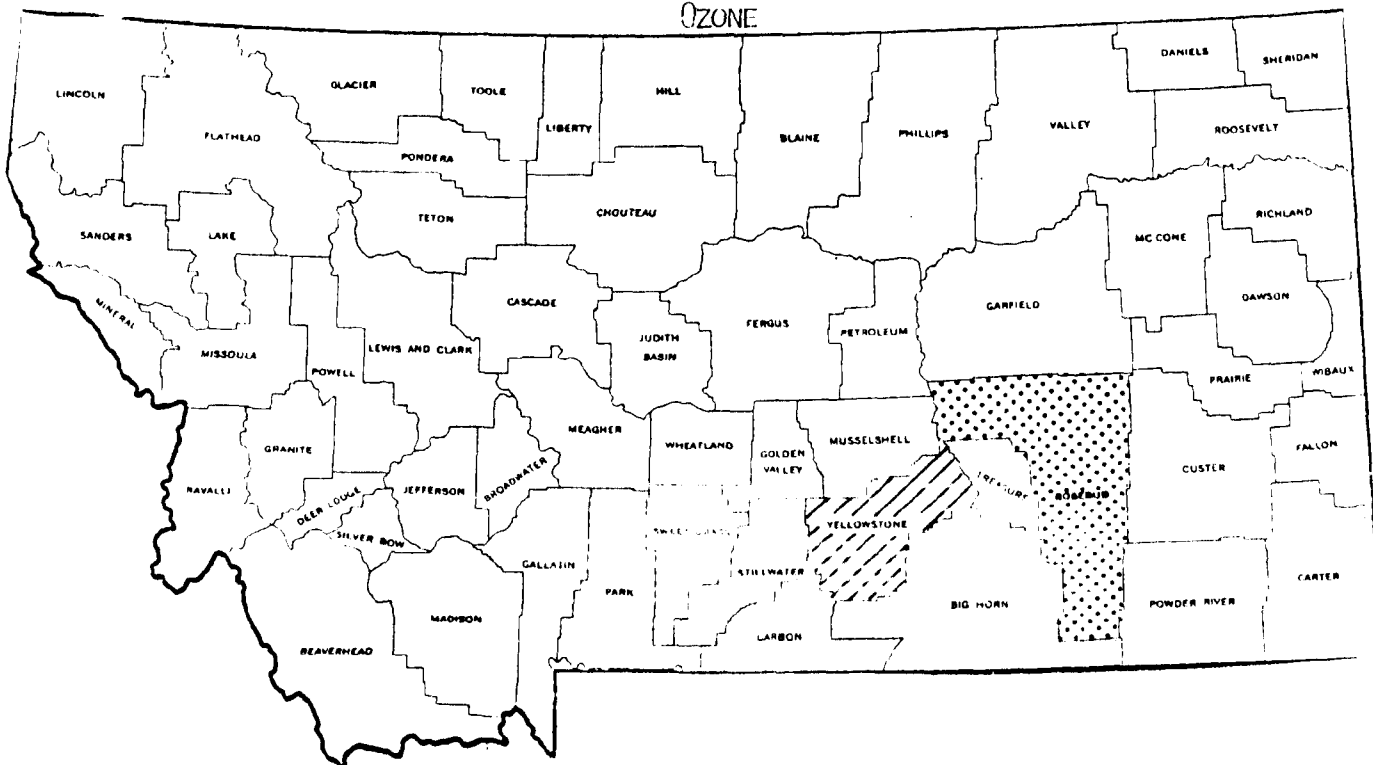
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## MONTANA -

### NON-ATTAINMENT AREAS

#### OZONE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



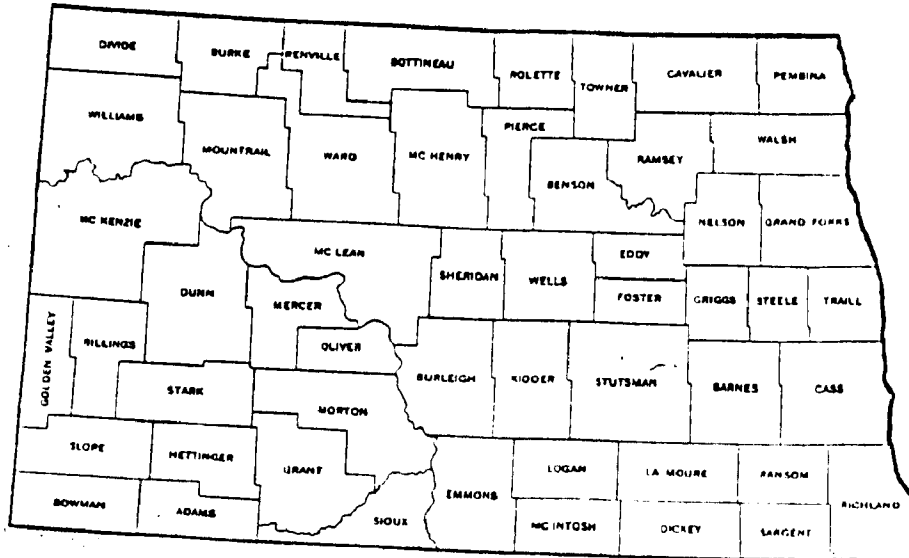
.12 PPM Level Exceeded



.20 PPM Level Exceeded

A non-attainment area is in part or all of annotated counties.

The worst station in the county is used to represent the county.



NORTH DAKOTA

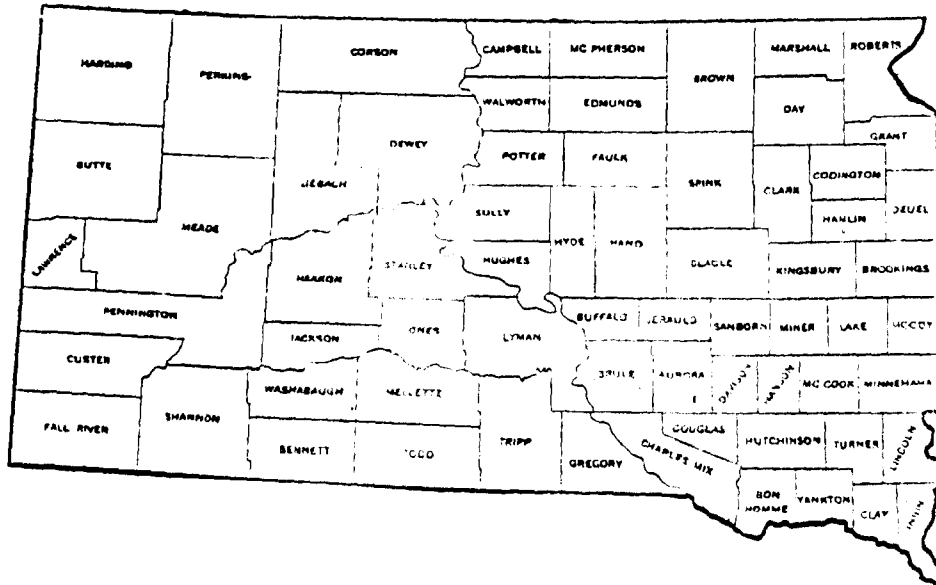
TABLE 29.  
STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION

| NORTH DAKOTA |              |                 |                 |                |
|--------------|--------------|-----------------|-----------------|----------------|
| County       | TSP          | SO <sub>2</sub> | NO <sub>2</sub> | O <sub>3</sub> |
| Burley       | 350100001F01 | 350200001F03    | 350100001F01    | 350200001F03   |
| Bowman       | 350160001F03 |                 |                 |                |
| Cass         | 350400002F01 | 350400001F01    | 350400001F01    |                |
| Dunn         | 350340001F03 | 350340002F03    | 350340002F03    |                |
| Grand Forks  | 350480002F01 |                 |                 |                |
| Grant        | 350520001F03 | 350520001F03    | 350520001F03    |                |
| Hettinger    | 350560001F03 | 350560001F03    | 350560001F03    |                |
| McKenzie     | 350700001F03 | 350700001F03    | 350700001F03    |                |
| McClane      | 350720001F03 | 350720002F03    | 350720002F03    |                |
| Mercer       | 350760001F01 | 350760002F03    | 350760001F01    |                |
| Medora       | 350080001F03 |                 |                 |                |
| Morton       | 350740001F01 | 350740001F01    | 350740001F01    |                |
| Mountrail    | 350820001F03 |                 |                 |                |
| Oliver       | 350860001F03 | 350860001F03    | 350860001F03    | 350860001F03   |
| Sheridan     | 351060001F03 |                 |                 |                |
| Stark        | 351140001F03 | 351140001F03    | 351140001F03    |                |

# STATUS AND TRENDS IN AIR QUALITY NORTH DAKOTA

| County      | TSP | SO <sub>2</sub> | NO <sub>2</sub> | CO | O <sub>3</sub> (ozone) | County    | TSP | SO <sub>2</sub> | NO <sub>2</sub> | CO | O <sub>3</sub> (ozone) |
|-------------|-----|-----------------|-----------------|----|------------------------|-----------|-----|-----------------|-----------------|----|------------------------|
| Billings    | →   |                 |                 |    |                        | Hettinger |     | →               | ↓               |    |                        |
| Bowman      | ↓   |                 |                 |    |                        | McLean    | ↓   | →               | →               |    |                        |
| Burleigh    | ↓   |                 | →               |    | →                      | Mercer    | →   |                 | →               |    |                        |
| Cass        | →   | →               | →               |    |                        | Morton    | →   | →               | →               |    |                        |
| Dunn        | →   | →               |                 |    |                        | Oliver    | ↓   | →               | →               |    | ↓                      |
| Grand Forks | →   |                 |                 |    |                        | Stark     | →   |                 | →               |    |                        |
| Grant       | →   | →               | ↑               |    |                        | Ward      | →   |                 |                 |    |                        |

|                                                                                     |                                  |
|-------------------------------------------------------------------------------------|----------------------------------|
|  | No evidence standard exceeded    |
|  | Exceeds primary standard         |
|  | Exceeds alert level              |
|  | Increasing trend (deterioration) |
|  | No apparent trend                |
|  | Decreasing trend (improvement)   |



## SOUTH DAKOTA

TABLE 30.  
STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION  
SOUTH DAKOTA

| County     | TSP          | SO <sub>2</sub> | NO <sub>2</sub> | CO | O <sub>3</sub> |
|------------|--------------|-----------------|-----------------|----|----------------|
| Beadle     | 430820001F01 |                 |                 |    |                |
| Brookings  | 430140001F01 |                 |                 |    |                |
| Custer     | 430110001F01 | 430110001F01    | 430110001F01    |    |                |
| Hughes     | 431340001F01 |                 |                 |    |                |
| Perkins    | 431320001F03 |                 |                 |    |                |
| Pennington | 431380001F01 |                 |                 |    |                |
| Minnehaha  | 431480001P01 |                 |                 |    |                |
| Yankton    | 431800001F03 |                 |                 |    |                |

STATUS AND TRENDS IN AIR QUALITY  
SOUTH DAKOTA

| <u>County</u> | <u>TSP</u>                                                                        | <u>SO<sub>2</sub></u>                                                             | <u>NO<sub>2</sub></u>                                                             |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Beadle        |  |                                                                                   |                                                                                   |
| Custer        |  |  |  |
| Minnehaha     |  |                                                                                   |                                                                                   |
| Pennington    |  |                                                                                   |                                                                                   |
| Perkins       |  |                                                                                   |                                                                                   |
| Yankton       |  |                                                                                   |                                                                                   |



No evidence standard exceeded



Exceeds primary standard



Exceeds alert level



Increasing trend (deterioration)



No apparent trend



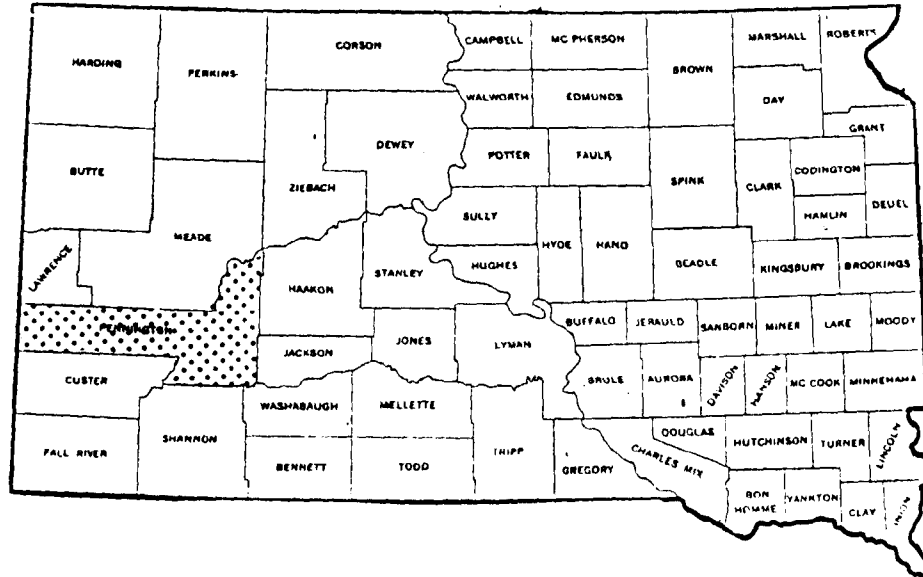
Decreasing trend (improvement)

# AIR QUALITY STATUS - 1978

## SOUTH DAKOTA -

### Non-Attainment Areas

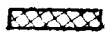
#### TOTAL SUSPENDED PARTICULATES



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



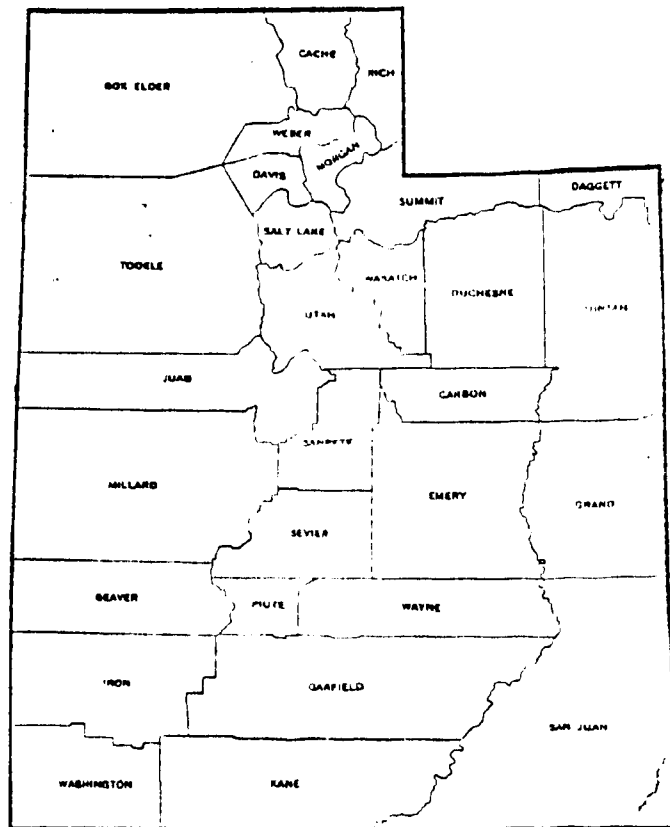
Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

The worst station in the county is used to represent the county.



UTAH

TABLE 31.  
STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION  
UTAH

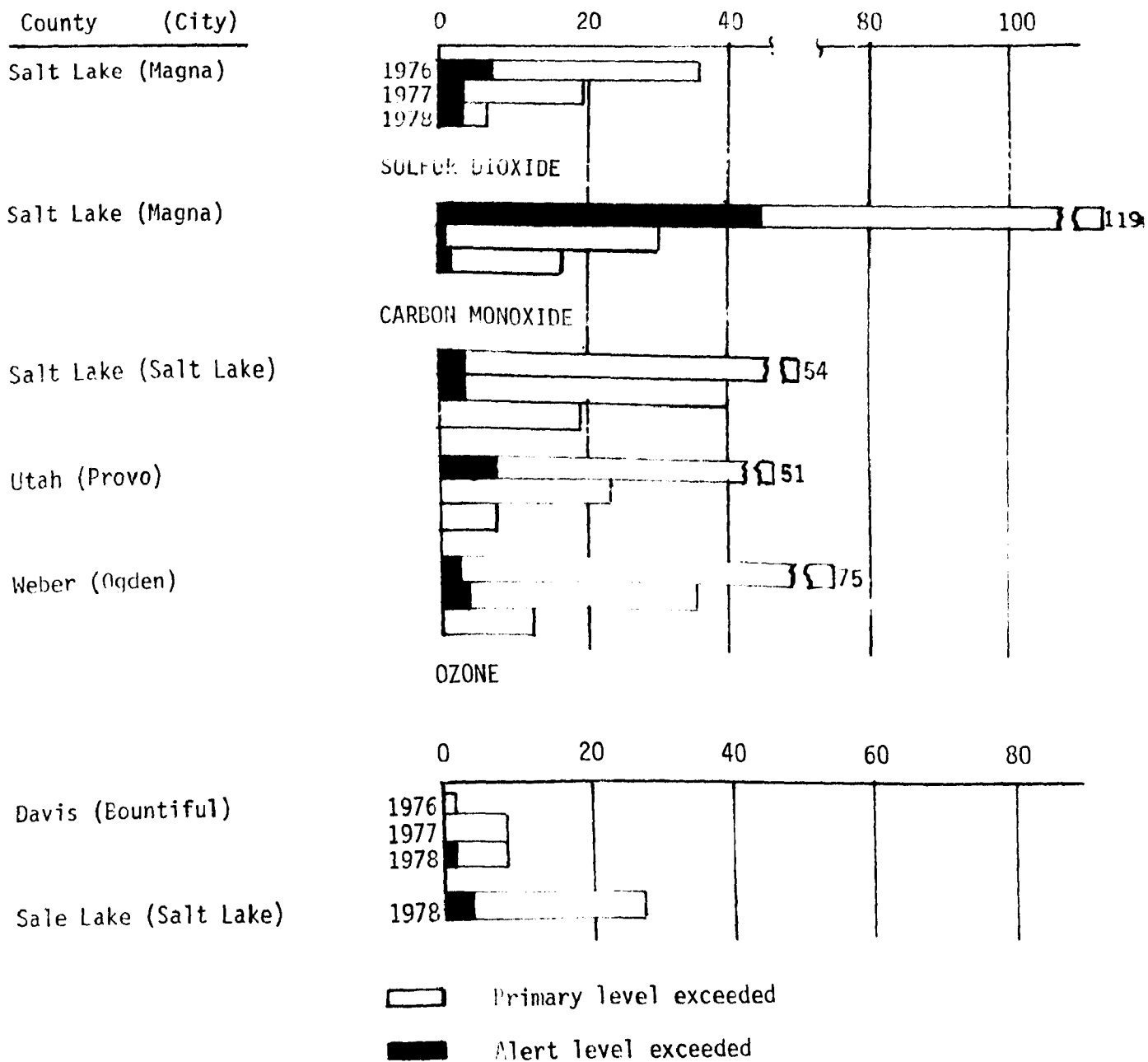
| County    | TSP          | SO <sub>2</sub> | NO <sub>2</sub> | CO           | O <sub>3</sub> |
|-----------|--------------|-----------------|-----------------|--------------|----------------|
| Carbon    | 460780001F01 | 460780001F01    |                 |              |                |
| Davis     | 460060001F01 | 460060001F01    | 460060001F01    | 460060001F01 | 460060001F01   |
| Iron      |              | 460160001F01    |                 |              |                |
| Kane      | 460400002F03 |                 |                 |              |                |
| Millard   | 460560001F01 |                 |                 |              |                |
| Salt Lake | 460520001F02 | 460520001F02    | 460920001P01    | 460920001F01 | 460920001F01   |
| Tooele    | 461160001F01 | 461160001F01    |                 |              |                |
| Utah      | 461220001F01 |                 | 460800001F01    | 460800001F01 | 460800001F01   |
| Weber     | 460680001F01 | 460680001F01    | 460680001F01    | 460680001F01 |                |

# NUMBER OF DAYS THAT PRIMARY STANDARD OR ALERT LEVEL WAS EXCEEDED

(Days/Year)

UTAH

## TOTAL SUSPENDED PARTICULATES



# STATUS AND TRENDS IN AIR QUALITY

## UTAH

| <u>County</u> | <u>TSP</u> | <u>SO<sub>2</sub></u> | <u>NO<sub>2</sub></u> | <u>CO</u> | <u>O<sub>3</sub></u> (ozone) |
|---------------|------------|-----------------------|-----------------------|-----------|------------------------------|
| Davis         | ↓          | ↓                     | ↓                     | ↓         | ↑                            |
| Emery         | →          |                       | →                     |           |                              |
| Iron          | →          |                       |                       |           |                              |
| Kane          | ↓          |                       |                       |           |                              |
| Millard       | →          |                       |                       |           |                              |
| Salt Lake     | ↓          | ↓                     | ↓                     | ↓         | ↑                            |
| Tooele        | →          | ↓                     |                       |           |                              |
| Uintah        | →          | →                     |                       |           |                              |
| Utah          | →          |                       | →                     | →         | ↑                            |
| Weber         | →          |                       |                       | ↓         |                              |



No evidence standard exceeded



Exceeds primary standard



Exceeds alert level



Increasing trend (deterioration)



No apparent trend



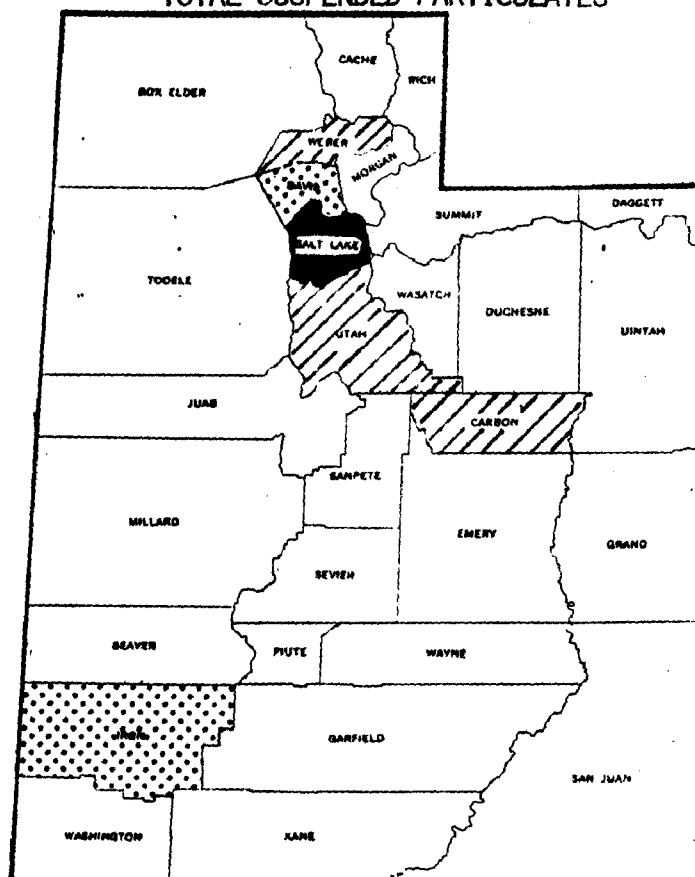
Decreasing trend (improvement)

# AIR QUALITY STATUS - 1978

UTAH -

## Non-Attainment Areas

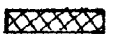
### TOTAL SUSPENDED PARTICULATES



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

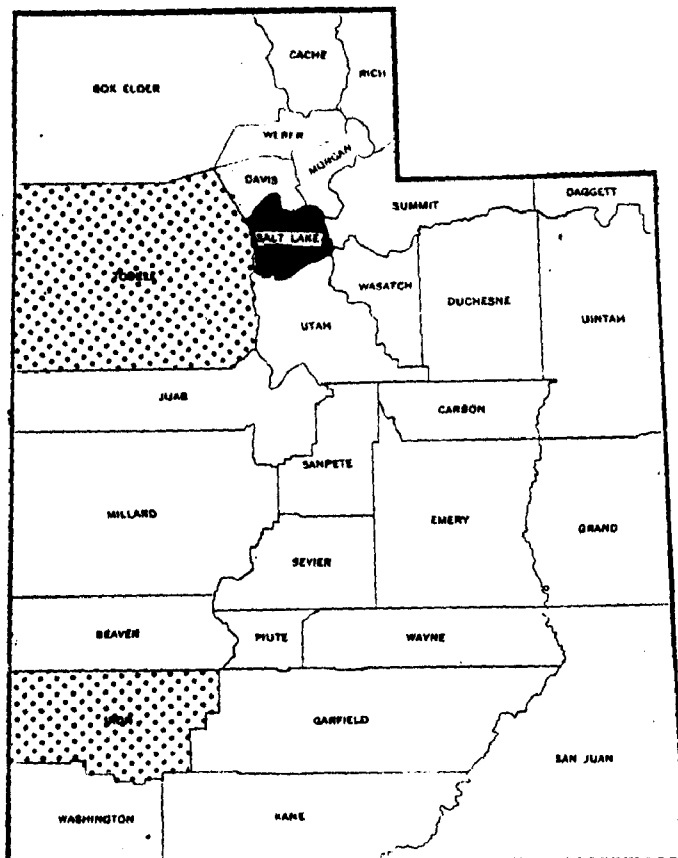
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

UTAH -

## NON-ATTAINMENT AREAS

### SULFUR DIOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

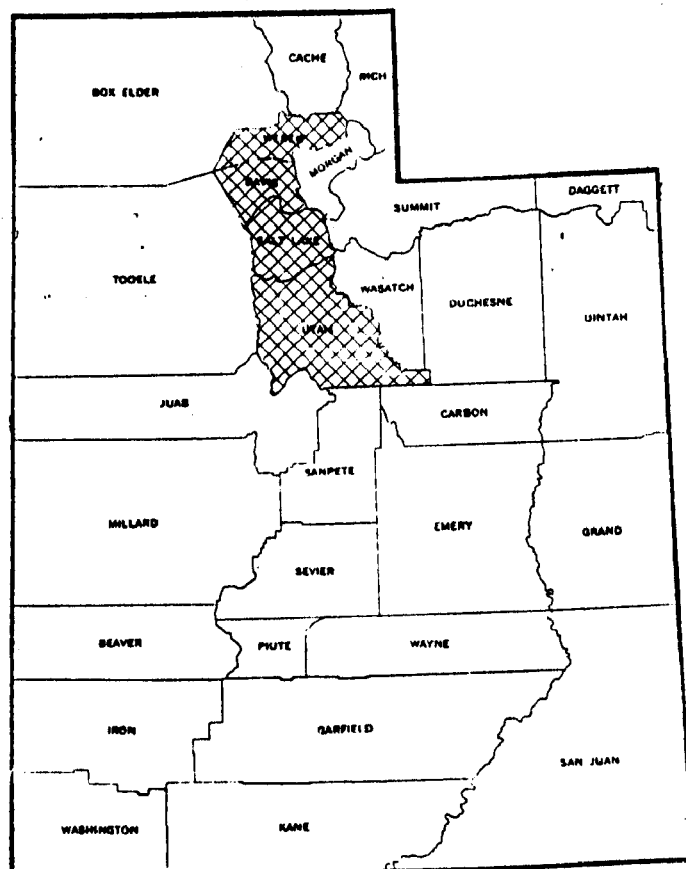
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## UTAH

### Non-ATTAINMENT AREAS

#### CARBON MONOXIDE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

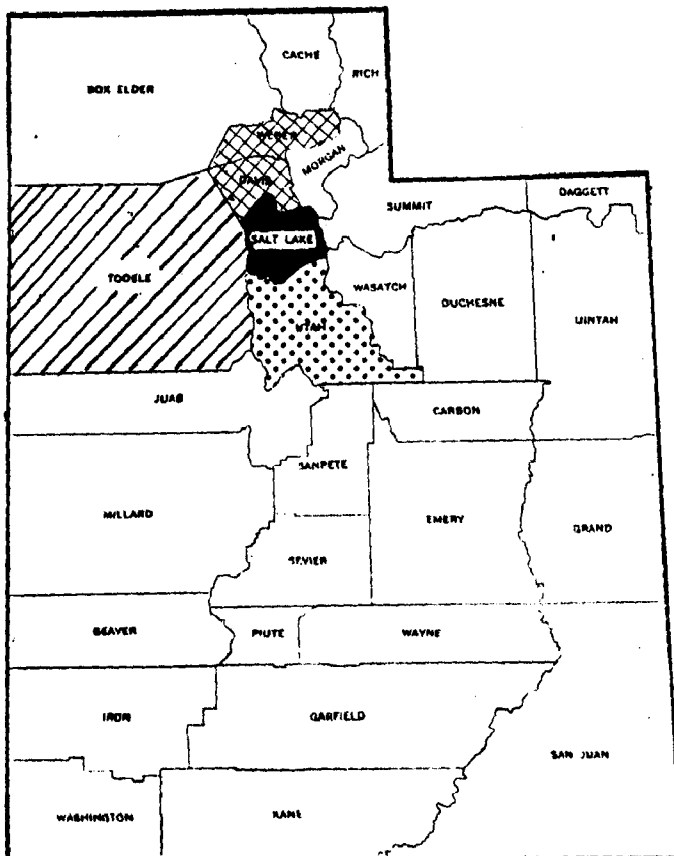
The worst station in the county is used to represent the county.

# AIR QUALITY STATUS - 1978

## UTAH -

### Non-Attainment Areas

#### OZONE



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard



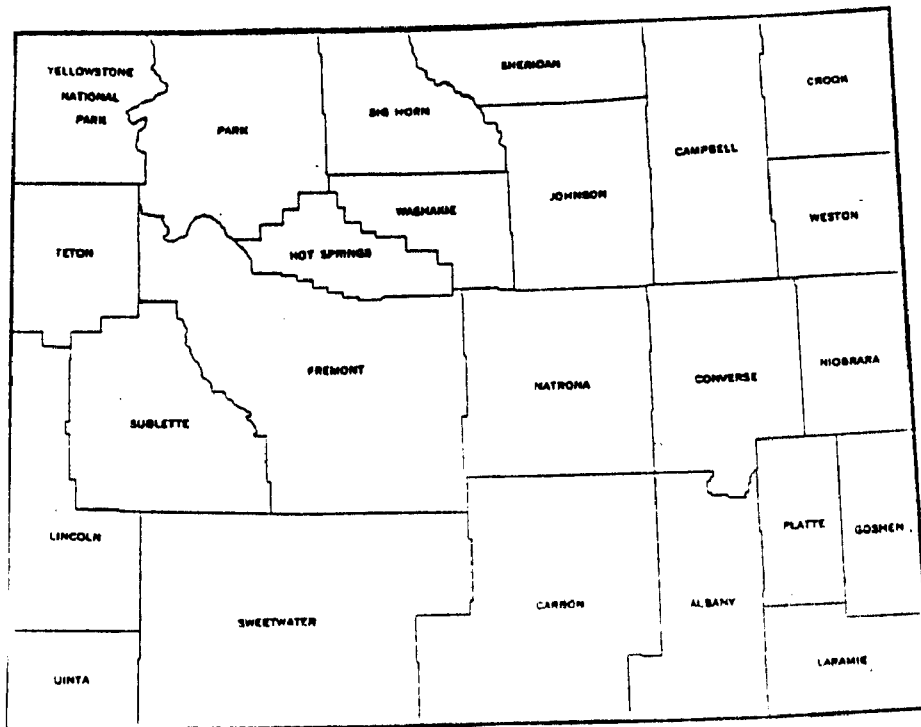
.12 PPM Level Exceeded



.20 PPM Level Exceeded

A non-attainment area is in part or all of annotated counties.

The worst station in the county is used to represent the county.



# WYOMING

TABLE 32.  
STATIONS USED FOR TRENDS AND/OR STATUS DETERMINATION  
WYOMING

| County     | TSP          | SO <sub>2</sub> | NO <sub>2</sub> |
|------------|--------------|-----------------|-----------------|
| Carbon     | 520580001F01 |                 |                 |
| Big Horn   | 520040001F01 |                 |                 |
| Converse   | 520180001F03 | 520180006F03    | 520180006F03    |
| Crook      | 520200002F03 |                 |                 |
| Fremont    | 520600001F01 |                 |                 |
| Doskin     | 520300003F03 |                 |                 |
| Johnston   | 520360001F03 |                 |                 |
| Laramie    | 520140001F01 | 520140001F01    | 520140001F01    |
| Lincoln    | 520440002F01 |                 |                 |
| Natrona    | 520120001F01 | 520120001F01    | 520120001F01    |
| Sheridan   | 520660002F01 |                 |                 |
| Sublette   | 520680001F01 |                 |                 |
| Platte     | 520830001F01 |                 |                 |
| Sweetwater | 520700001F01 |                 |                 |
| Teton      | 520720001F01 |                 |                 |
| Uinta      | 520240001F01 |                 |                 |
| Washakie   | 520840001F01 |                 |                 |
| Weston     | 520820001F03 | 520820001F03    | 520820001F03    |

# STATUS AND TRENDS IN AIR QUALITY

## WYOMING

| <u>County</u> | <u>TSP</u> | <u>SO<sub>2</sub></u> | <u>NO<sub>2</sub></u> | <u>County</u> | <u>TSP</u>     | <u>SO<sub>2</sub></u> | <u>NO<sub>2</sub></u> |
|---------------|------------|-----------------------|-----------------------|---------------|----------------|-----------------------|-----------------------|
| Albany        | ➡          |                       |                       | Natrona       | ➡              | ➡                     |                       |
| Big Horn      | ➡          |                       |                       | Niobrara      | ➡              |                       |                       |
| Carbon        | ➡          |                       |                       | Park          | ➡              |                       |                       |
| Converse      | ➡          | ➡                     |                       | Platte        | ➡              |                       |                       |
| Crook         | ➡          |                       |                       | Sheridan      | ➡              |                       |                       |
| Fremont       | ➡          |                       |                       | Sublette      | ➡              |                       |                       |
| Goshen        | ➡          |                       |                       | Sweetwater    | ➡ <sup>a</sup> |                       | ➡                     |
| Johnson       | ➡          |                       |                       | Uinta         | ➡              |                       |                       |
| Laramie       | ➡          | ➡                     | ➡                     | Washakie      | ➡              |                       |                       |
| Lincoln       | ➡          |                       |                       | Weston        | ➡              | ➡                     |                       |



No evidence standard exceeded



Exceeds primary standard



Exceeds alert level



Increasing trend (deterioration)



No apparent trend



Decreasing trend (improvement)

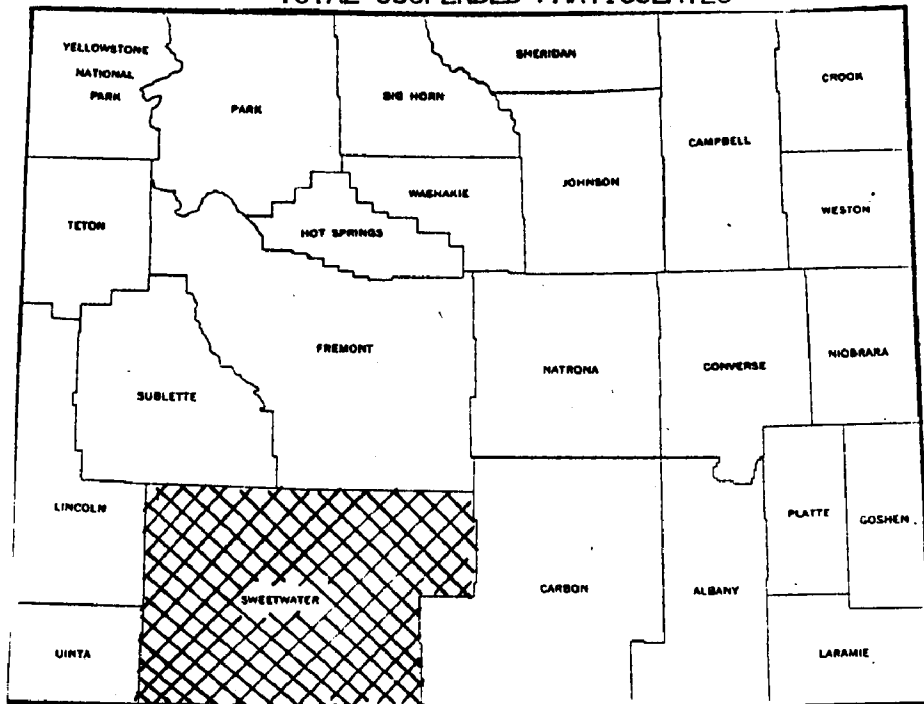
<sup>a/</sup> Status Based on Annual Mean Only

# AIR QUALITY STATUS - 1978

## WYOMING -

### NON-ATTAINMENT AREAS

#### TOTAL SUSPENDED PARTICULATES



Insufficient Data (less than 75% of maximum possible observations)



No Evidence Primary Standard Exceeded



Primary Standard Exceeded



Alert Standard Exceeded

A non-attainment area is in part or all of annotated counties.

The worst station in the county is used to represent the county.

## APPENDICES

### Water

- A. Severity Curves for Water Quality Parameters

### Air

- B. National Ambient Air Quality Standards
- C. Breakpoints for Pollutant Standards Index
- D. Procedures Used to Determine Status
- E. National Aerometric Data Bank - State Inventory by Pollutant



Figure A-1. Severity Curves for Water Quality Parameters.

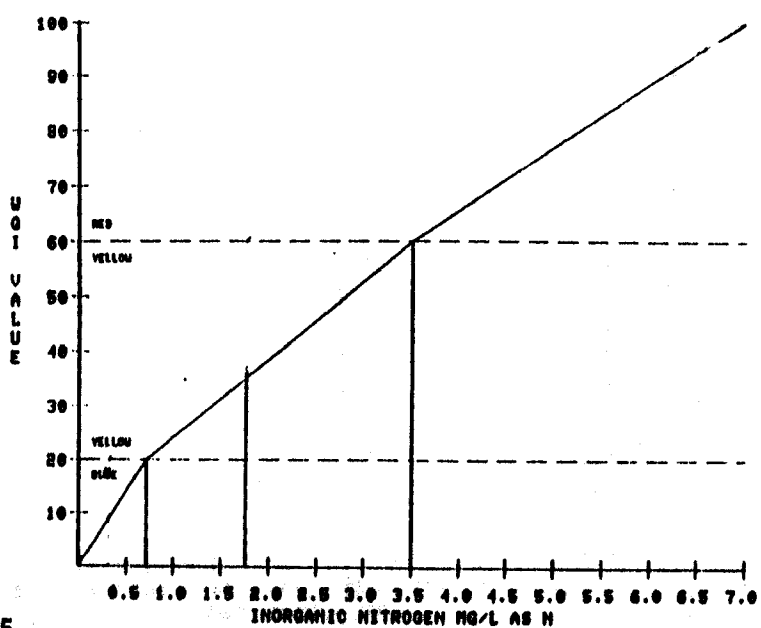
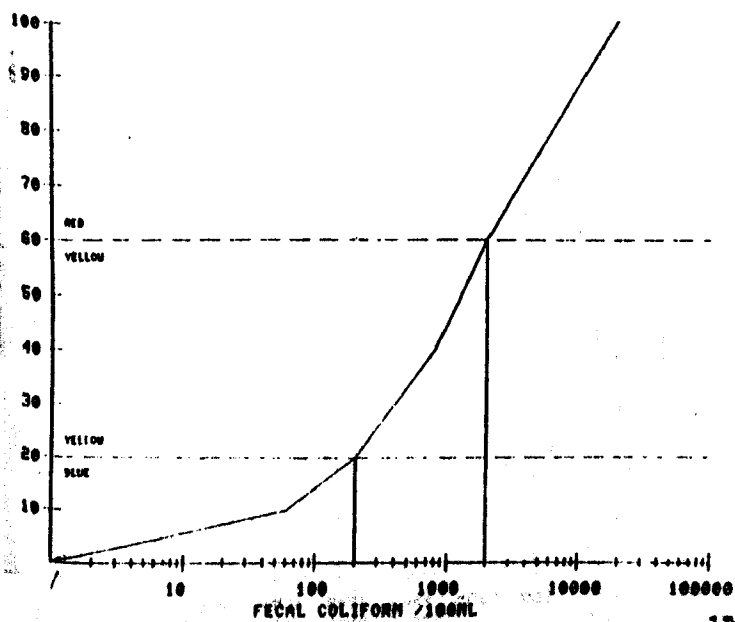
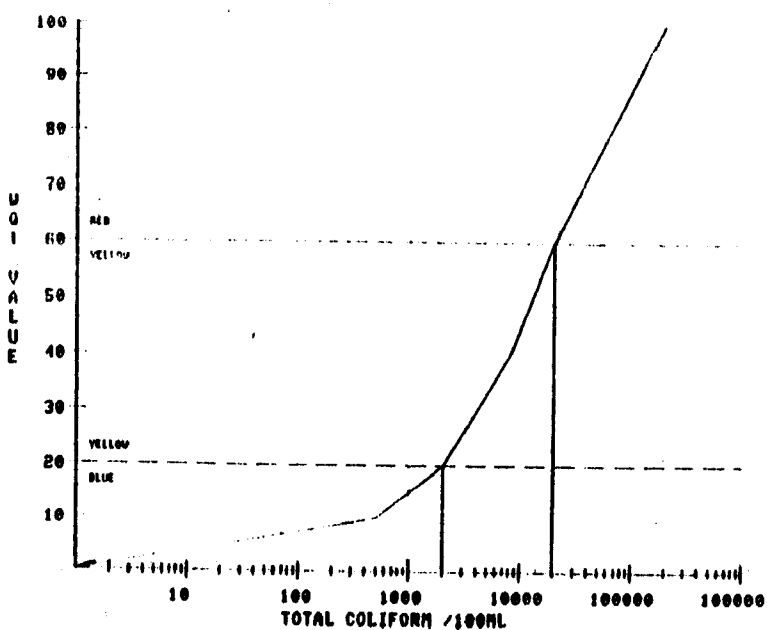
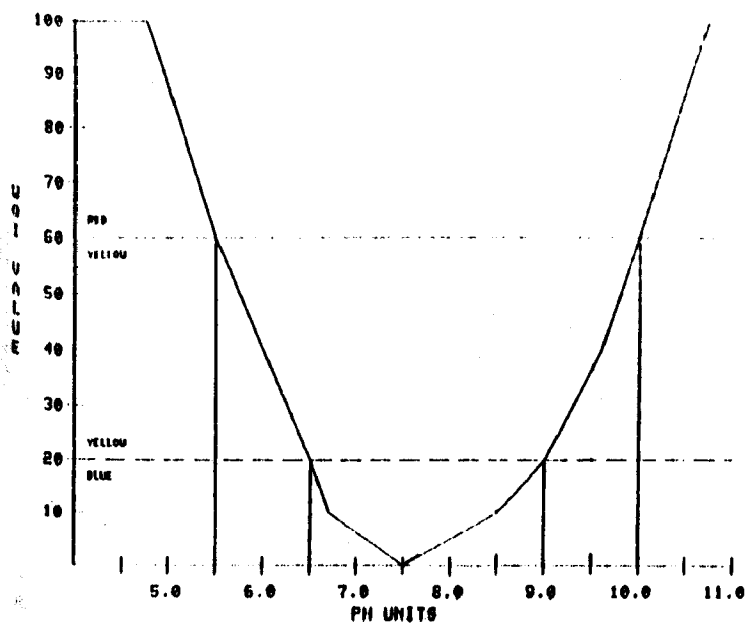
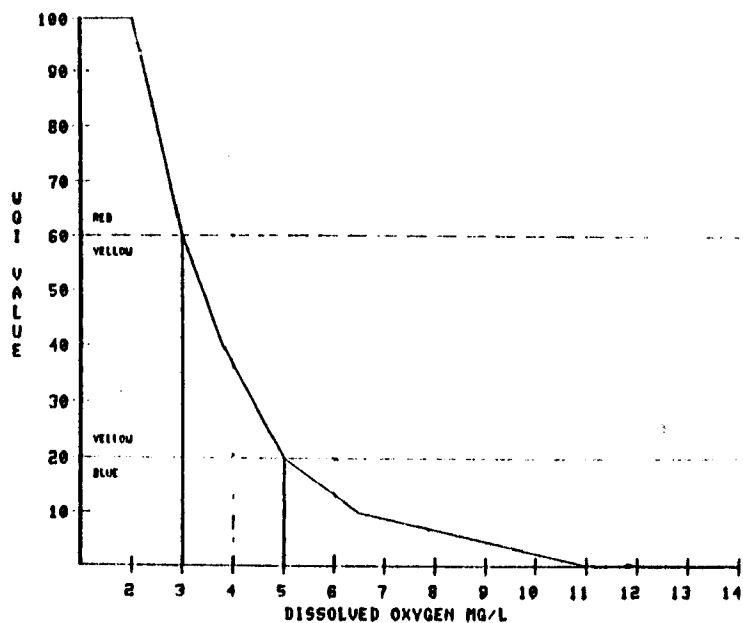
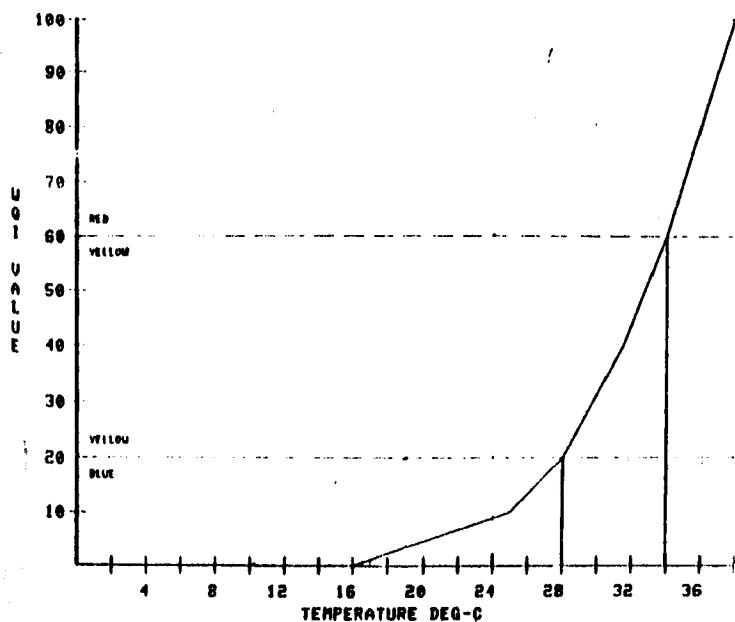


Figure A-1 (Continued). Severity Curves for Water Quality Parameters.

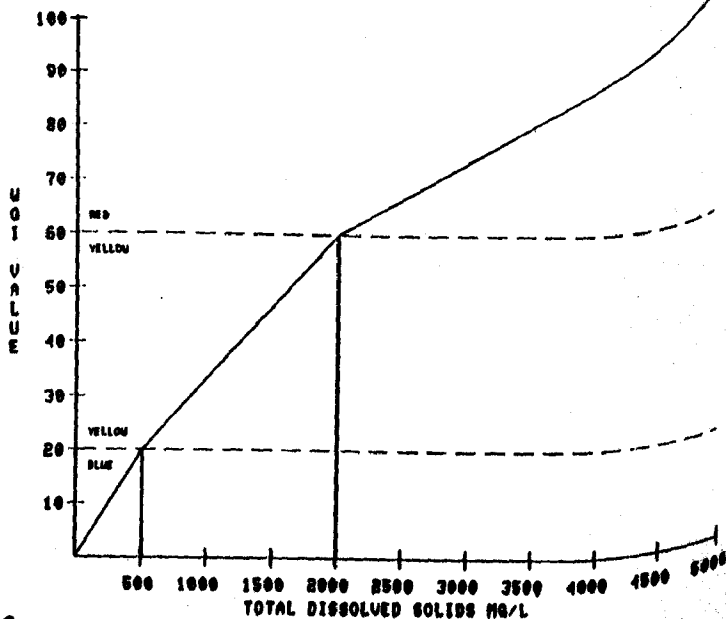
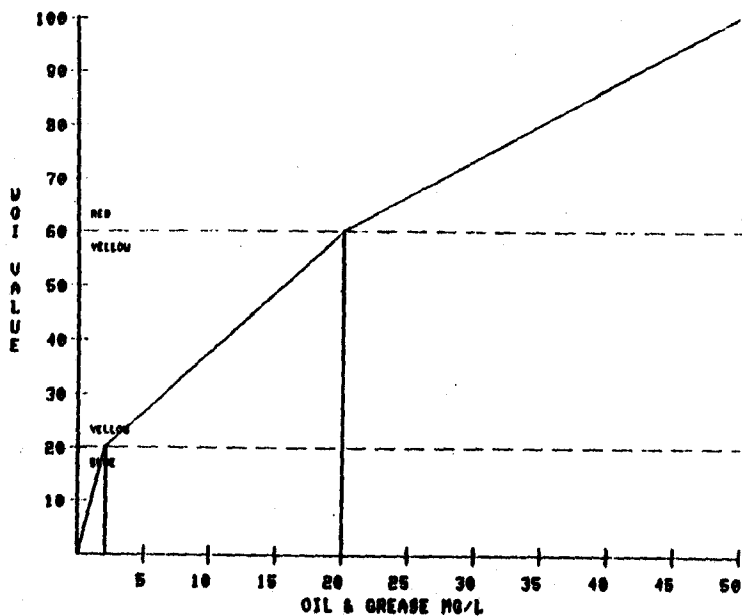
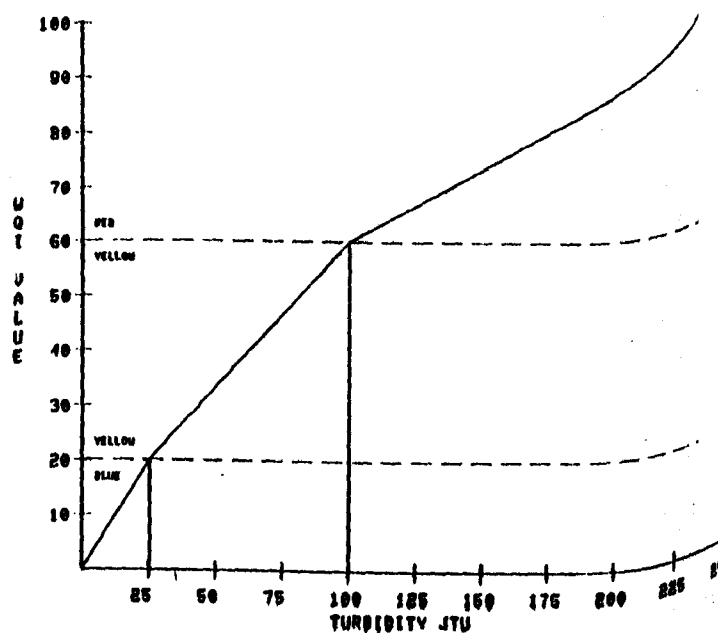
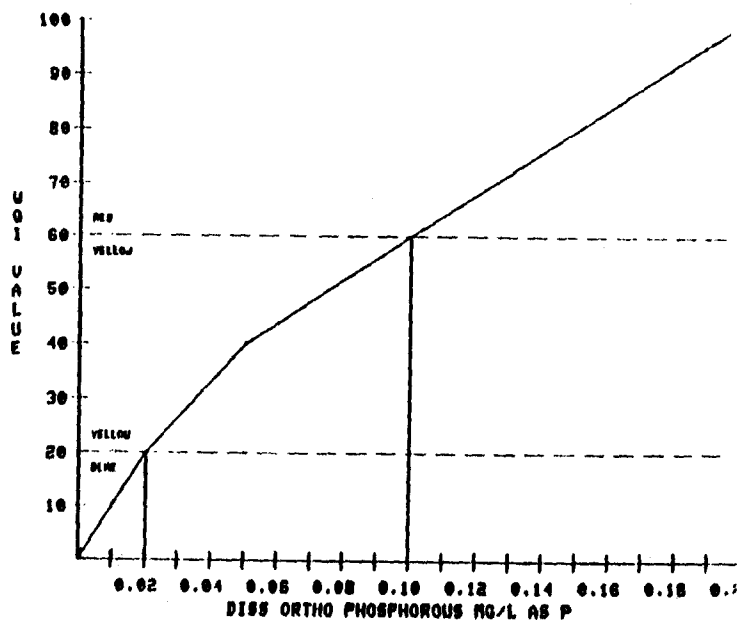
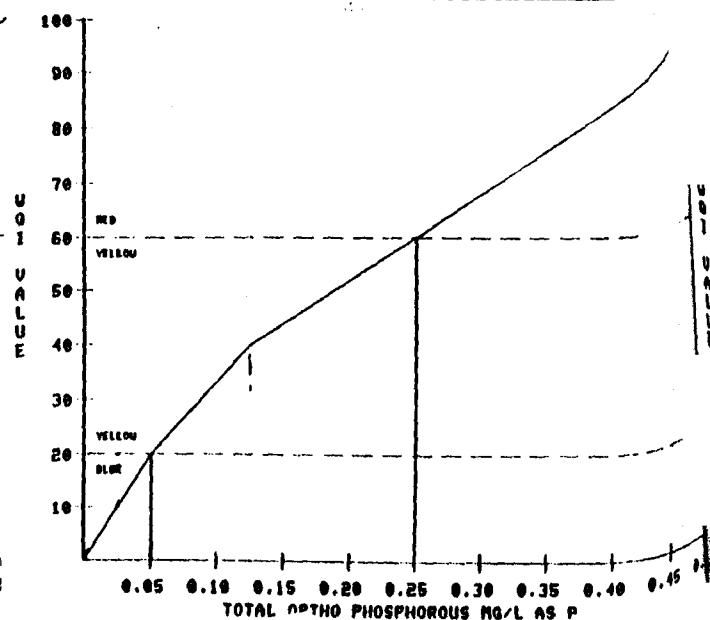
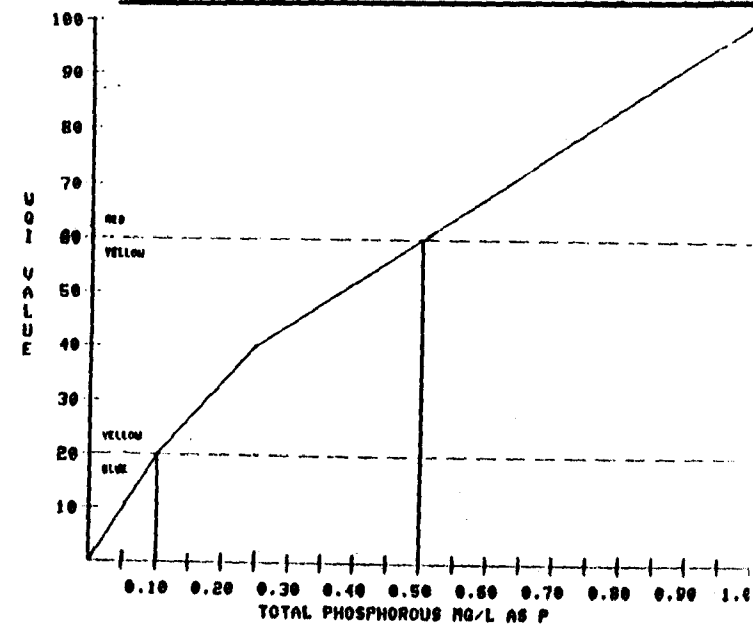


Figure A-1 (Continued). Severity Curves for Water Quality Parameters.

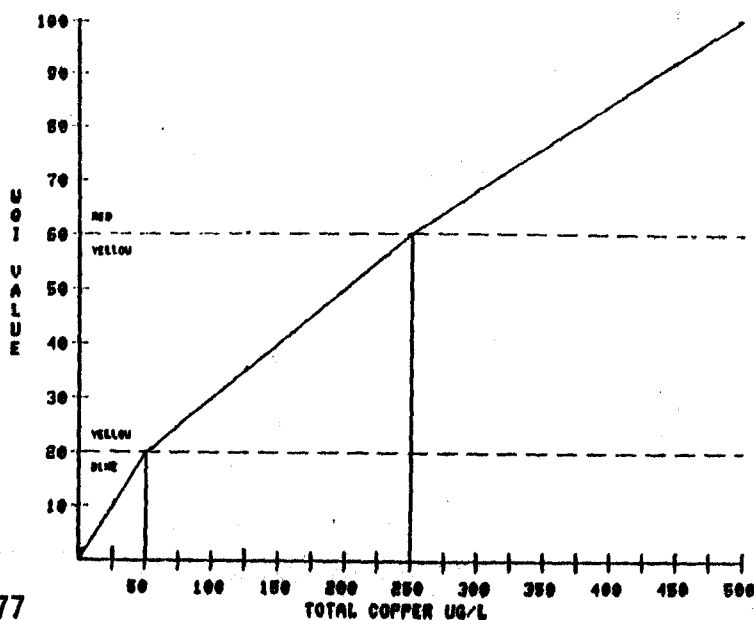
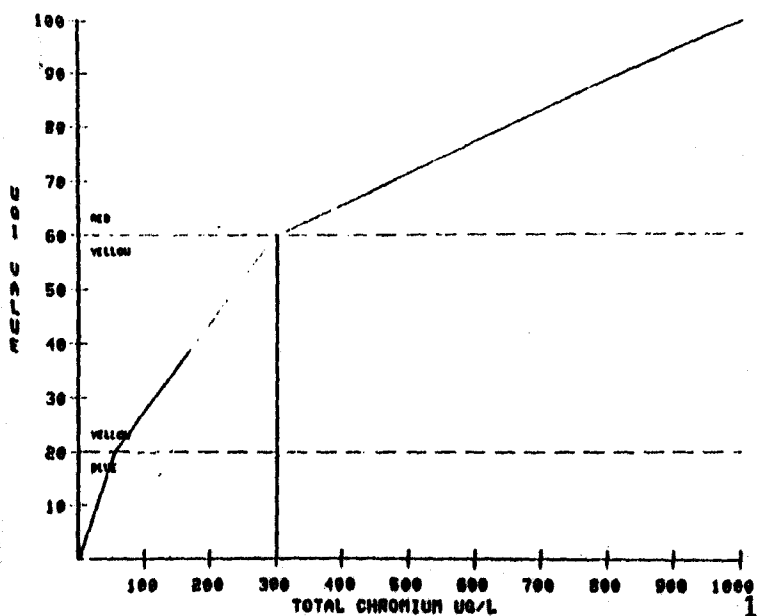
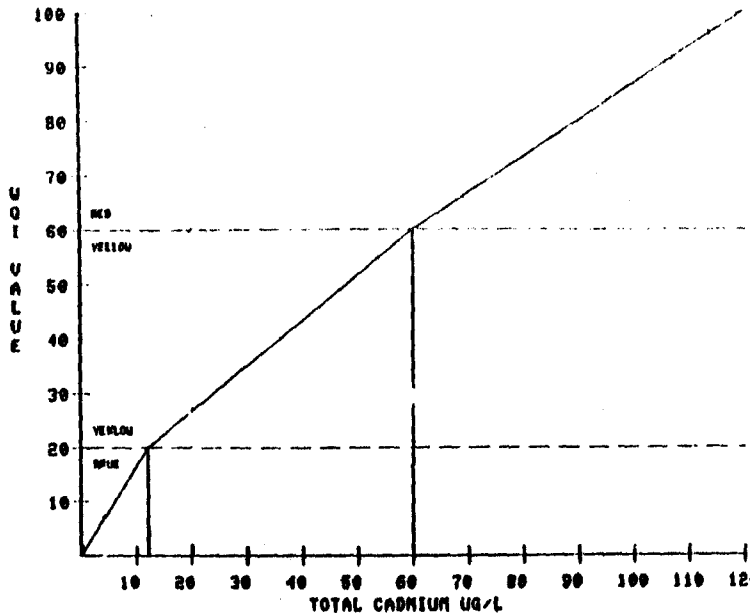
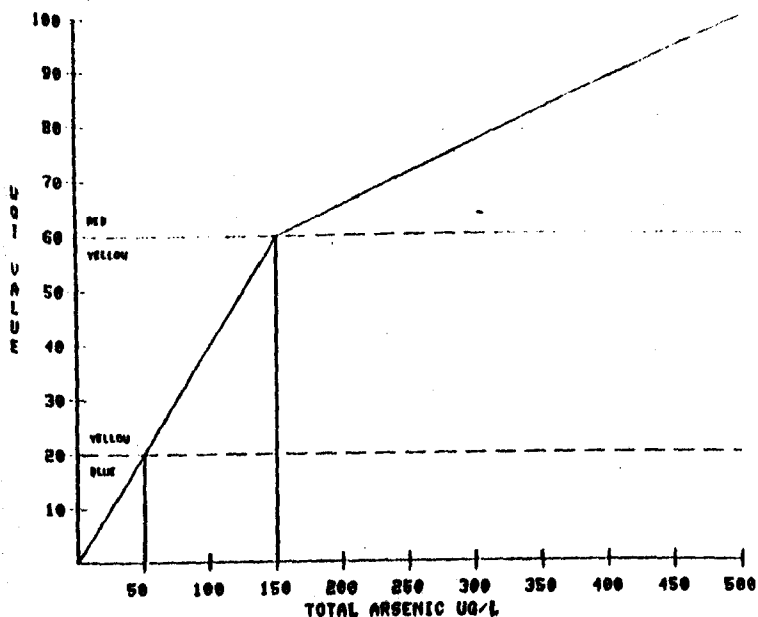
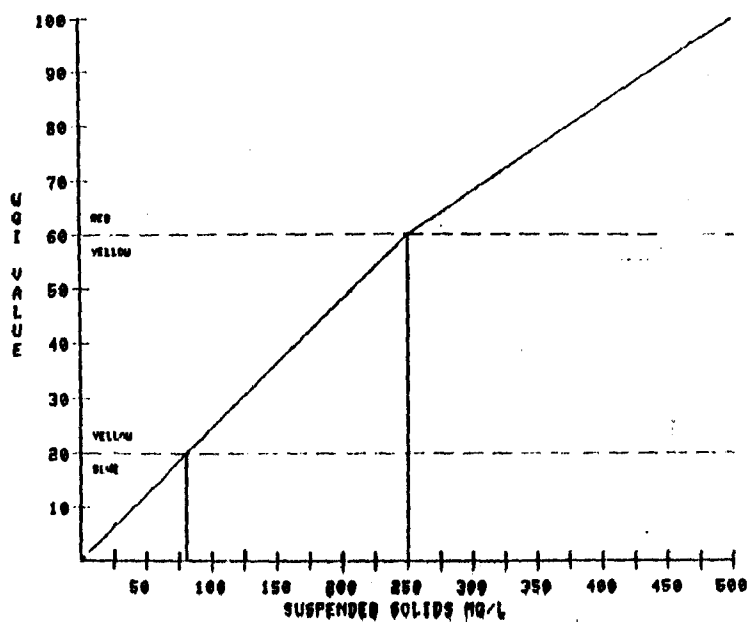
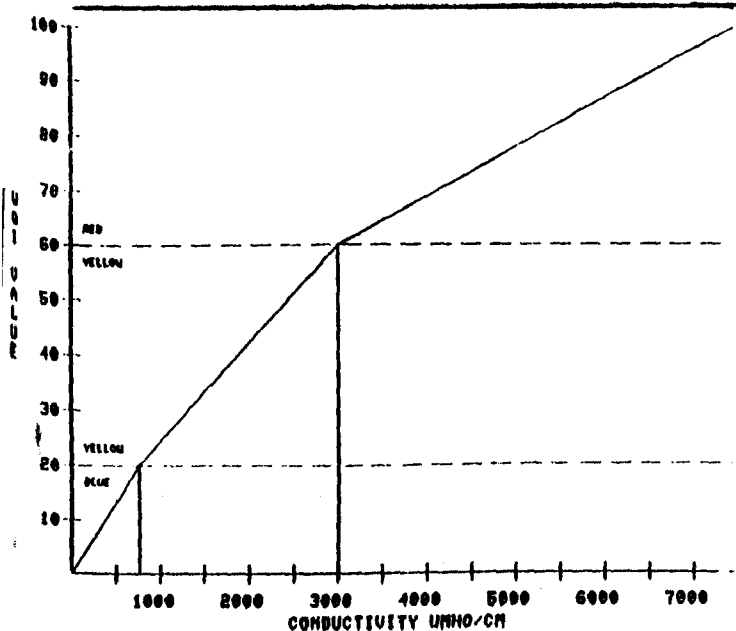
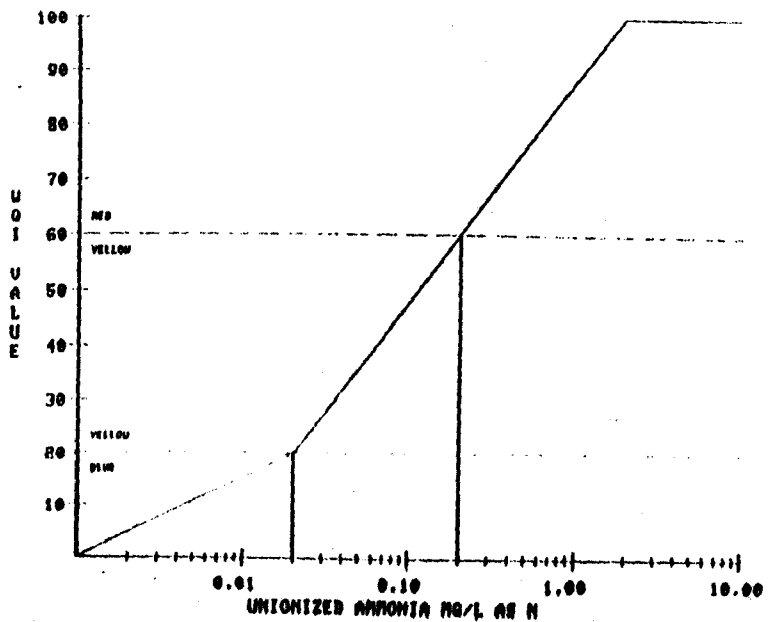
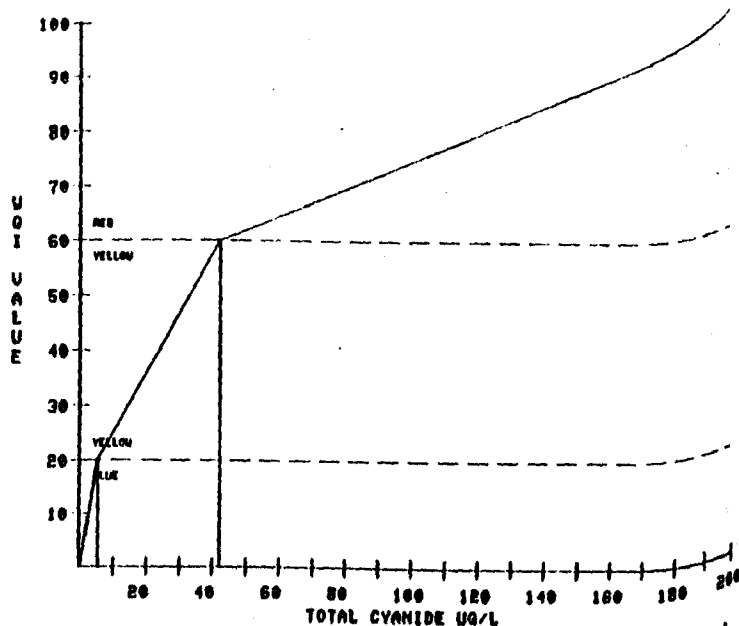
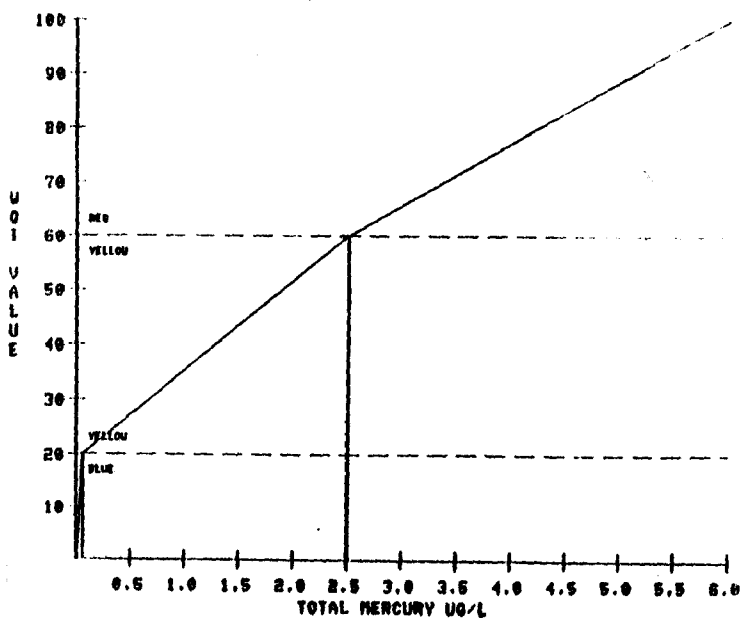
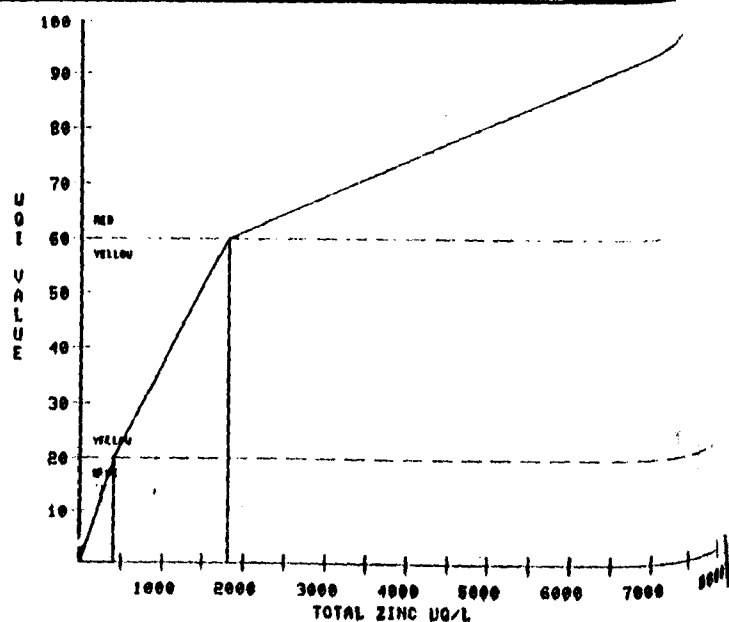
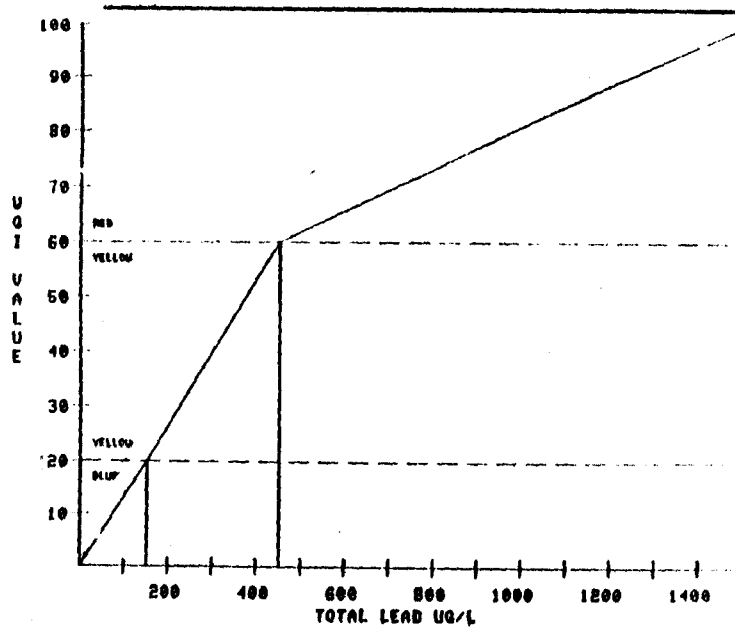


Figure A-1 (Continued). Severity Curves for Water Quality Parameters.



**APPENDIX B**  
**National Ambient Air Quality Standards**

**APPENDIX C**  
**Breakpoints For Pollutant**  
**Standards Index**  
**(Includes Alert Level For Each Pollutant)**

# Breakpoints for PSI ( $\psi$ ) in Metric Units

| Breakpoints                     | PSI<br>Value<br>( $\psi$ ) | TSP<br>$\mu\text{g}/\text{m}^3$<br>24-hr. | SO <sub>2</sub><br>$\mu\text{g}/\text{m}^3$<br>24-hr. | TSPxSO <sub>2</sub><br>( $\mu\text{g}/\text{m}^3$ ) <sup>2</sup> | CO<br>$\text{mg}/\text{m}^3$<br>8 hours | O <sub>3</sub><br>$\mu\text{g}/\text{m}^3$<br>1-hr. | NO <sub>2</sub><br>$\mu\text{g}/\text{m}^3$<br>1-hr. |
|---------------------------------|----------------------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------------------------------------|
| 50% of primary short-term NAAQS | 50                         | 75 <sup>a</sup>                           | 80 <sup>a</sup>                                       | b                                                                | 5.0                                     | 118                                                 | b                                                    |
| Primary short-term NAAQS        | 100                        | 260                                       | 365                                                   | b                                                                | 10.0                                    | 235                                                 | b                                                    |
| Alert Level                     | 200                        | 375                                       | 800                                                   | 65x10 <sup>3</sup>                                               | 17.0                                    | 400                                                 | 1130                                                 |
| Warning Level                   | 300                        | 625                                       | 1600                                                  | 261x10 <sup>3</sup>                                              | 34.0                                    | 800                                                 | 2260                                                 |
| Emergency Level                 | 400                        | 875                                       | 2100                                                  | 393x10 <sup>3</sup>                                              | 46.0                                    | 1000                                                | 3000                                                 |
| Significant Harm Level          | 500                        | 1000                                      | 2620                                                  | 490x10 <sup>3</sup>                                              | 57.5                                    | 1200                                                | 3750                                                 |

<sup>a</sup>Annual primary NAAQS.

<sup>b</sup>No index value reported at concentration levels below those specified by the Alert level criteria.

**APPENDIX D**  
**Procedures Used To Determine Status**

PROCEDURES USED TO DETERMINE STATUS  
TOTAL SUSPENDED PARTICULATES

1. Select worst site in each county based on
  - o Number of days per year greater than  $260 \mu\text{g}/\text{m}^3$ ,
  - o Data available in 1978
  - o Population exposure of site. Should be representative of populated area of county
2. For the selected site, the actual number of days greater than  $260 \mu\text{g}/\text{m}^3$  for each year (1976-1978)
3. For same site, number of days with at least one value greater than  $375 \mu\text{g}/\text{m}^3$ .

## SULFUR DIOXIDE

1. Select worst site in each county based on
  - o Population exposure. Must be in area where people are present
  - o Representativeness within county
  - o Number of days per year greater than 24-hour average of  $365 \mu\text{g}/\text{m}^3$
  - o Data available in 1978
2. For the selected site, number of days per year greater than primary 24-hour standard for three year period (1976-1978)
  - o Actual data used
  - o Continuous data preferred over noncontinuous
3. For same site count number of days with at least one value greater than  $800 \mu\text{g}/\text{m}^3$ 
  - o Actual data used

### Trends

1. Analysis done only for counties with 3 or more years of data
2. Judgements based on
  - o Number of days per year over standard
  - o Annual average

## NITROGEN DIOXIDE

1. Select worst site in each county based on
  - o Highest annual average
  - o Data available in 1978
2. Determine whether annual average is greater than  $100 \mu\text{g}/\text{m}^3$ , average 1976-1978
  - o Actual data are used
  - o Years without valid annual average are disregarded

## CARBON MONOXIDE

1. Select worst site in each county based on
  - o Number of days greater than  $10 \text{ mg/m}^3$  8-hour average
  - o Data available for 1978
2. For selected site, count the number of days per year (1976-1978), with at least one 8-hour average greater than  $10 \text{ mg/m}^3$ .

Average these yearly values.

- o For periods with no data, estimate by examining data for same site for same period of other years and by looking at data for other nearby sites.
3. For same site count number of days with at least one value greater than  $17 \text{ mg/m}^3$ .
    - o Actual number always used

## OZONE

1. Select worst site in county based on
  - o Number of days greater than  $235 \mu\text{g}/\text{m}^3$
  - o Data available for at least one year (1976-1978), during the months April through September.
2. For selected site, count the number of days per year (1976-1978), with at least one hourly value greater than  $235 \mu\text{g}/\text{m}^3$ .
  - o For periods with no data, estimate by examining data from nearby sites and for the same site during same period of other years.
  - o Data are insufficient if unavailable during the peak ozone season (April-September).
3. For same site, count number of days with at least one value greater than  $400 \mu\text{g}/\text{m}^3$ .
  - o Actual number is always used

APPENDIX E

National Aerometric Data Bank -  
State Inventory by Pollutant

10-11-79

NATIONAL AEROMETRIC DATA BANK  
STATE INVENTORY BY POLLUTANT  
COLORADO

PAGE 06-0001

| POL-UTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | JNT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 060020001    | F01        | ADAMS CO         | 7           | 01           | 1977 | 71         | 421.       | 97.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 87         | 255.       | 107.          |   |
|                 |                   | 060040001    | F01        | ALAMOSA          | 7           | 01           | 1977 | 87         | 433.       | 77.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 73         | 202.       | 60.           |   |
|                 |                   | 060060001    | F03        | ALAMOSA CO       | 7           | 01           | 1977 | 69         | 75.        | 17.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 26         | 73.        | 13.           | * |
|                 |                   | 060080001    | F01        | ARAPAHOE CO      | 7           | 01           | 1977 | 80         | 166.       | 60.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 83         | 161.       | 68.           |   |
|                 |                   | 060080002    | F01        | ARAPAHOE CO      | 7           | 01           | 1978 | 14         | 90.        | 50.           | * |
|                 |                   | 060100001    | F01        | ARCHULETA CO     | 7           | 01           | 1977 | 82         | 403.       | 118.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 80         | 354.       | 123.          |   |
|                 |                   | 060120003    | F01        | ARVADA           | 7           | 01           | 1977 | 77         | 180.       | 81.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 80         | 228.       | 98.           |   |
|                 |                   | 060140001    | F01        | AURORA           | 7           | 01           | 1977 | 77         | 157.       | 76.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 85         | 187.       | 76.           |   |
|                 |                   | 060200001    | F01        | BOULDER          | 7           | 01           | 1977 | 81         | 144.       | 69.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 197.       | 81.           |   |
|                 |                   | 060240001    | F01        | BRIGHTON         | 7           | 01           | 1977 | 75         | 176.       | 83.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 84         | 355.       | 98.           |   |
|                 |                   | 060260001    | F01        | BROOMFIELD       | 7           | 01           | 1977 | 75         | 148.       | 66.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 68         | 200.       | 76.           |   |
|                 |                   | 060280001    | F01        | BRUSH            | 7           | 01           | 1977 | 70         | 233.       | 76.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 50         | 155.       | 74.           |   |
|                 |                   | 060300001    | F01        | CANON CITY       | 7           | 01           | 1977 | 92         | 227.       | 63.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 89         | 313.       | 85.           |   |
|                 |                   | 060360001    | F01        | CLEAR CREEK CO   | 7           | 01           | 1977 | 85         | 168.       | 80.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 84         | 175.       | 79.           |   |
|                 |                   | 060380004    | F01        | COLORADO SPRINGS | 7           | 01           | 1977 | 80         | 255.       | 85.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 77         | 255.       | 96.           |   |
|                 |                   | 060440002    | F01        | CORTEZ           | 7           | 01           | 1977 | 16         | 79.        | 49.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 41         | 79.        | 43.           | * |
|                 |                   | 060480001    | F01        | CRAIG            | 7           | 01           | 1977 | 78         | 346.       | 117.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 70         | 322.       | 115.          |   |
|                 |                   | 060540001    | F01        | DELTA            | 7           | 01           | 1977 | 90         | 233.       | 91.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 89         | 281.       | 106.          |   |
|                 |                   | 060580001    | F01        | DENVER           | 7           | 01           | 1977 | 76         | 270.       | 105.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 83         | 497.       | 132.          |   |
|                 |                   | 060580001    | P01        | DENVER           | 7           | 01           | 1977 | 32         | 297.       | 106.          |   |
|                 |                   | 060580002    | F01        | DENVER           | 7           | 01           | 1978 | 154        | 629.       | 187.          |   |
|                 |                   | 060580002    | P01        | DENVER           | 7           | 01           | 1977 | 56         | 669.       | 142.          |   |
|                 |                   | 060580003    | F01        | DENVER           | 7           | 01           | 1977 | 7          | 187.       | 112.          | * |
|                 |                   | 060580003    | P02        | DENVER           | 7           | 01           | 1977 | 74         | 211.       | 94.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 80         | 309.       | 110.          |   |
|                 |                   | 060580007    | F01        | DENVER           | 7           | 01           | 1977 | 92         | 206.       | 73.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 85         | 170.       | 81.           |   |
|                 |                   | 060580009    | F01        | DENVER           | 7           | 01           | 1977 | 84         | 211.       | 79.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 85         | 251.       | 99.           |   |
|                 |                   | 060580012    | F01        | DENVER           | 7           | 01           | 1977 | 74         | 499.       | 167.          |   |

"\*" DENOTES A VALUE DERIVED FROM DATA WHICH DID NOT MEET SARAHAN SUMMARIZATION CRITERIA OF OARPS GUIDELINE 1.2-040, VOL. 3 2.3.0

10-11-79

NATIONAL AEROMETRIC DATA BANK  
STATE INVENTORY BY POLLUTANT  
COLORADO

PAGE 06-0002

| POL-114<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CONF | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 060580012    | F01        | DENVER           | 7           | 01           | 1978 | 61         | 378.       | 142.          | * |
|                 |                   | 060660001    | F01        | DOUGLAS CO       | 7           | 01           | 1978 | 74         | 269.       | 111.          |   |
|                 |                   | 060680003    | F01        | DURANGO          | 7           | 01           | 1977 | 89         | 218.       | 76.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 88         | 340.       | 79.           |   |
|                 |                   | 060700001    | F01        | EAGLE CO         | 7           | 01           | 1977 | 53         | 350.       | 67.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 43         | 468.       | 107.          |   |
|                 |                   | 060700003    | F01        | EAGLE CO         | 7           | 01           | 1977 | 13         | 280.       | 114.          | * |
|                 |                   | 060700004    | F01        | EAGLE CO         | 7           | 01           | 1977 | 55         | 218.       | 91.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 412.       | 115.          | * |
|                 |                   | 060720001    | F01        | EDGEWATER        | 7           | 01           | 1977 | 82         | 198.       | 83.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 81         | 273.       | 103.          |   |
|                 |                   | 060780001    | F01        | ENGLEWOOD        | 7           | 01           | 1977 | 82         | 249.       | 88.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 84         | 285.       | 108.          |   |
|                 |                   | 060800001    | F01        | FLORENCE         | 7           | 01           | 1977 | 83         | 202.       | 83.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 84         | 225.       | 87.           |   |
|                 |                   | 060820001    | F01        | FORT COLLINS     | 7           | 01           | 1977 | 71         | 172.       | 67.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 75         | 224.       | 83.           |   |
|                 |                   | 060880001    | F01        | GARFIELD CO      | 7           | 01           | 1977 | 91         | 377.       | 121.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 82         | 494.       | 144.          |   |
|                 |                   | 060880003    | F01        | GARFIELD CO      | 7           | 01           | 1977 | 35         | 334.       | 76.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 51         | 213.       | 78.           | * |
|                 |                   | 060920001    | F01        | GLENWOOD SPRINGS | 7           | 01           | 1977 | 74         | 194.       | 73.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 68         | 165.       | 62.           |   |
|                 |                   | 060940001    | F01        | GOLDEN           | 7           | 01           | 1977 | 82         | 225.       | 70.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 80         | 283.       | 84.           |   |
|                 |                   | 060980010    | F01        | GRAND JUNCTION   | 7           | 01           | 1977 | 91         | 176.       | 84.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 85         | 148.       | 80.           |   |
|                 |                   | 060980011    | F01        | GRAND JUNCTION   | 7           | 01           | 1978 | 11         | 163.       | 70.           | * |
|                 |                   | 061000003    | F01        | GREELEY          | 7           | 01           | 1977 | 76         | 224.       | 72.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 70         | 296.       | 83.           |   |
|                 |                   | 061000004    | F01        | GREELEY          | 7           | 01           | 1977 | 17         | 280.       | 131.          | * |
|                 |                   | 061000006    | F01        | GREELEY          | 7           | 01           | 1977 | 67         | 148.       | 63.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 87         | 291.       | 77.           |   |
|                 |                   | 061020001    | F01        | GUNNISON         | 7           | 01           | 1977 | 49         | 131.       | 49.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 69         | 193.       | 69.           |   |
|                 |                   | 061040002    | F01        | GUNNISON CO      | 7           | 01           | 1977 | 75         | 173.       | 81.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 81         | 244.       | 104.          |   |
|                 |                   | 061120001    | F01        | JACKSON CO       | 7           | 01           | 1977 | 8          | 45.        | 23.           | * |
|                 |                   | 061120002    | F01        | JACKSON CO       | 7           | 01           | 1977 | 16         | 135.       | 37.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 64         | 126.       | 46.           |   |
|                 |                   | 061140001    | F02        | JEFFERSON CO     | 7           | 01           | 1977 | 83         | 149.       | 43.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 151.       | 60.           |   |
|                 |                   | 061220001    | F01        | LA JUNTA         | 7           | 01           | 1977 | 91         | 920.       | 97.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 84         | 265.       | 78.           |   |
|                 |                   | 061260001    | F01        | LAKEWOOD         | 7           | 01           | 1977 | 81         | 273.       | 72.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 80         | 237.       | 96.           |   |
|                 |                   | 061280001    | F01        | LAFAR            | 7           | 01           | 1977 | 80         | 881.       | 123.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 88         | 497.       | 87.           |   |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET SARADAL SUMMARIZATION CRITERIA OF HADPS GUIDELINE 1.2-040, VOL. 1, C 2.3.0

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME    | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|---------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 061300001    | F03        | LA PLATA CO         | 7           | 01           | 1977 | 53         | 280.       | 50.           | * |
|                 |                   | 061300002    | K03        | LA PLATA CO         | 7           | 01           | 1977 | 121        | 272.       | 43.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 25         | 45.        | 12.           | * |
|                 |                   | 061300003    | K03        | LA PLATA CO         | 7           | 01           | 1977 | 121        | 175.       | 31.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 12         | 24.        | 13.           | * |
|                 |                   | 061320003    | F01        | LARIMER CO          | 7           | 01           | 1977 | 14         | 73.        | 42.           | * |
|                 |                   | 061420002    | F01        | LITTLETON           | 7           | 01           | 1977 | 78         | 174.       | 70.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 62         | 244.       | 96.           | * |
|                 |                   | 061460001    | F01        | LONGMONT            | 7           | 01           | 1977 | 79         | 185.       | 82.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 82         | 563.       | 101.          |   |
|                 |                   | 061480002    | F01        | LOVELAND            | 7           | 01           | 1977 | 67         | 164.       | 80.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 70         | 299.       | 93.           |   |
|                 |                   | 061500001    | F01        | MANITOU SPRINGS     | 7           | 01           | 1977 | 76         | 358.       | 92.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 71         | 186.       | 79.           |   |
|                 |                   | 061520001    | F01        | MESA CO             | 7           | 01           | 1977 | 90         | 198.       | 73.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 88         | 171.       | 80.           |   |
|                 |                   | 061520002    | F01        | MESA CO             | 7           | 01           | 1977 | 87         | 158.       | 50.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 81         | 224.       | 49.           |   |
|                 |                   | 061530002    | P03        | MESA VERDE NAT PARK | 7           | 01           | 1977 | 21         | 99.        | 20.           | * |
|                 |                   | 061530003    | F03        | MESA VERDE NAT PARK | 7           | 01           | 1977 | 57         | 125.       | 23.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 77         | 38.        | 16.           |   |
|                 |                   | 061600004    | K03        | MONTEZUMA CO        | 7           | 01           | 1977 | 112        | 280.       | 33.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 16         | 42.        | 13.           | * |
|                 |                   | 061620001    | F01        | MONTROSE            | 7           | 01           | 1977 | 71         | 165.       | 74.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 77         | 147.       | 64.           |   |
|                 |                   | 061780001    | F01        | PITKIN CO           | 7           | 01           | 1977 | 82         | 307.       | 88.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 57         | 455.       | 106.          |   |
|                 |                   | 061820001    | F01        | PUEBLO              | 7           | 01           | 1977 | 88         | 383.       | 116.          |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 87         | 299.       | 108.          |   |
|                 |                   | 061820003    | F01        | PUEBLO              | 7           | 01           | 1977 | 87         | 358.       | 109.          |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 72         | 301.       | 106.          |   |
|                 |                   | 061860001    | F01        | RIO BLANCO CO       | 7           | 01           | 1977 | 78         | 159.       | 40.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 42         | 138.       | 62.           | * |
|                 |                   | 061860003    | J03        | RIO BLANCO CO       | 7           | 01           | 1977 | 6          | 6.         | 4.            | * |
|                 |                   | 061860002    | F01        | RIO BLANCO CO       | 7           | 01           | 1977 | 88         | 161.       | 62.           |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 60         | 285.       | 69.           |   |
|                 |                   | 061860002    | J03        | RIO BLANCO CO       | 7           | 01           | 1977 | 10         | 10.        | 4.            | * |
|                 |                   | 061860003    | F03        | RIO BLANCO CO       | 7           | 01           | 1977 | 24         | 57.        | 15.           | * |
|                 |                   | 061860003    | J03        | RIO BLANCO CO       | 7           | 01           | 1977 | 10         | 14.        | 4.            | * |
|                 |                   | 061860004    | J03        | RIO BLANCO CO       | 7           | 01           | 1977 | 10         | 39.        | 8.            | * |
|                 |                   | 061900001    | F01        | ROCKY FORD          | 7           | 01           | 1977 | 88         | 478.       | 100.          |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 82         | 251.       | 96.           |   |
|                 |                   | 061920003    | F01        | ROTT CO             | 7           | 01           | 1977 | 68         | 353.       | 137.          |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 77         | 983.       | 188.          |   |
|                 |                   | 061920004    | F01        | ROTT CO             | 7           | 01           | 1977 | 7          | 122.       | 119.          | * |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 5          | 41.        | 29.           | * |
|                 |                   | 062000001    | F01        | SAN MIGUEL CO       | 7           | 01           | 1977 | 76         | 289.       | 100.          |   |
|                 |                   |              |            |                     | 7           | 01           | 1978 | 19         | 223.       | 122.          | * |

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 062080001    | F01        | STERLING         | 7           | 01           | 1977 | 79         | 647.       | 98.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 72         | 217.       | 82.           |   |
|                 |                   | 062160002    | F01        | TRINIDAD         | 7           | 01           | 1977 | 69         | 272.       | 72.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 79         | 109.       | 53.           |   |
|                 |                   | 062180001    | F01        | WALSENBURG       | 7           | 01           | 1977 | 78         | 324.       | 76.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 87         | 135.       | 56.           |   |
|                 |                   | 062220003    | F01        | WELD CO          | 7           | 01           | 1977 | 85         | 264.       | 114.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 87         | 417.       | 105.          |   |
|                 |                   | 062220004    | F01        | WELD CO          | 7           | 01           | 1977 | 91         | 485.       | 101.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 85         | 500.       | 113.          |   |
|                 |                   | 062220005    | F01        | WELD CO          | 7           | 01           | 1977 | 88         | 232.       | 77.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 86         | 770.       | 85.           |   |
|                 |                   | 062220006    | F01        | WELD CO          | 7           | 01           | 1977 | 20         | 866.       | 216.          | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 37         | 326.       | 140.          | * |
|                 |                   | 062240002    | F01        | WESTMINSTER      | 7           | 01           | 1977 | 81         | 191.       | 76.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 83         | 198.       | 84.           |   |
| 4210111         | CARBON MONOXIDE   | 060080002    | F01        | ARAPAHOE CO      | 1           | 07           | 1978 | 3669       | 13.0       | 1.9           | * |
|                 |                   | 060120002    | F01        | ARVADA           | 1           | 07           | 1977 | 8036       | 25.9       | 1.9           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7953       | 27.9       | 2.3           |   |
|                 |                   | 060200006    | P05        | BOULDER          | 1           | 07           | 1977 | 1369       | 20.0       | 1.5           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2691       | 15.0       | .9            | * |
|                 |                   | 060200008    | G05        | BOULDER          | 1           | 07           | 1978 | 695        | 11.3       | 1.7           | * |
|                 |                   | 060380004    | F01        | COLORADO SPRINGS | 1           | 07           | 1977 | 7724       | 16.0       | 1.8           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8016       | 24.0       | 1.8           |   |
|                 |                   | 060380005    | F01        | COLORADO SPRINGS | 1           | 07           | 1978 | 4432       | 21.5       | 2.1           | * |
|                 |                   | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 7879       | 35.2       | 3.1           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8045       | 42.8       | 4.1           |   |
|                 |                   | 060580009    | F01        | DENVER           | 1           | 07           | 1977 | 8021       | 20.7       | 2.7           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7840       | 24.2       | 2.2           |   |
|                 |                   | 060580010    | F01        | DENVER           | 1           | 07           | 1977 | 7921       | 40.6       | 5.3           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8062       | 45.5       | 5.7           |   |
|                 |                   | 060580011    | F01        | DENVER           | 1           | 07           | 1977 | 8091       | 25.6       | 1.6           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3133       | 21.0       | 1.9           | * |
|                 |                   | 060700006    | P05        | EAGLE CO         | 1           | 07           | 1978 | 466        | 28.9       | 4.0           | * |
|                 |                   | 060980010    | F01        | GRAND JUNCTION   | 1           | 07           | 1977 | 2374       | 18.5       | 1.7           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7726       | 16.0       | 1.5           |   |
|                 |                   | 061000005    | F01        | GREELEY          | 1           | 07           | 1977 | 8076       | 25.5       | 1.2           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8001       | 17.5       | 1.3           |   |
|                 |                   | 062210001    | F01        | WELBY            | 1           | 07           | 1977 | 7450       | 24.1       | 1.6           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7752       | 20.3       | 1.5           |   |
| 4240114         | SULFUR DIOXIDE    | 060080002    | F01        | ARAPAHOE CO      | 1           | 07           | 1978 | 4089       | .037       | .003          | * |
|                 |                   | 060120002    | F01        | ARVADA           | 1           | 07           | 1977 | 8003       | .108       | .003          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7832       | .077       | .003          |   |
|                 |                   | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 7977       | .206       | .011          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7960       | .318       | .011          |   |
|                 |                   | 060580009    | F01        | DENVER           | 1           | 07           | 1977 | 8047       | .132       | .004          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7888       | .148       | .005          |   |
|                 |                   | 060580010    | F01        | DENVER           | 1           | 07           | 1977 | 7978       | .110       | .005          |   |

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRI | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4240114         | SULFUR DIOXIDE    | 060580010    | F01        | DENVER           | 1           | 07           | 1978 | 8059       | .186       | .006          |   |
|                 |                   | 060580011    | F01        | DENVER           | 1           | 07           | 1977 | 7664       | .129       | .006          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3183       | .177       | .008          | * |
|                 |                   | 061820007    | F01        | PUERLO           | 1           | 07           | 1977 | 159        | .045       | .002          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5542       | .055       | .004          | * |
|                 |                   | 062210001    | F01        | WELBY            | 1           | 07           | 1977 | 7789       | .159       | .005          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7931       | .211       | .006          |   |
| 4240191         | SULFUR DIOXIDE    | 060580001    | P01        | DENVER           | 7           | 01           | 1977 | 51         | 48.        | 14.           |   |
|                 |                   | 060580002    | P01        | DENVER           | 7           | 01           | 1977 | 51         | 52.        | 16.           |   |
| 4260211         | NITROGEN DIOXIDE  | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 5214       | .36        | .06           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 227        | .24        | .05           | * |
| 4260214         | NITROGEN DIOXIDE  | 060380004    | F01        | COLORADO SPRINGS | 1           | 07           | 1977 | 5017       | .160       | .017          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 6978       | .190       | .024          |   |
|                 |                   | 060580002    | A05        | DENVER           | 1           | 07           | 1977 | 7936       | .330       | .054          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2769       | .200       | .047          | * |
|                 |                   | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 2380       | .146       | .051          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7822       | .290       | .049          |   |
|                 |                   | 062210001    | F01        | WELBY            | 1           | 07           | 1977 | 7679       | .170       | .021          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8034       | .210       | .023          |   |
| 4260284         | NITROGEN DIOXIDE  | 060580001    | P01        | DENVER           | 7           | 01           | 1977 | 49         | 77.        | 38.           |   |
|                 |                   | 060580002    | P01        | DENVER           | 7           | 01           | 1977 | 50         | 72.        | 48.           |   |
| 4310111         | TOTAL HYDROCARBON | 060080002    | F01        | ARAPAHOE CO      | 1           | 07           | 1978 | 4087       | 4.6        | 1.7           | * |
|                 |                   | 060120002    | F01        | ARVADA           | 1           | 07           | 1977 | 8063       | 8.7        | 2.5           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7978       | 8.3        | 2.3           |   |
|                 |                   | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 7575       | 15.8       | 2.7           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8053       | 12.9       | 2.6           |   |
|                 |                   | 060580009    | F01        | DENVER           | 1           | 07           | 1977 | 7962       | 10.8       | 2.3           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7892       | 10.4       | 2.5           |   |
|                 |                   | 060580010    | F01        | DENVER           | 1           | 07           | 1977 | 8032       | 11.0       | 2.9           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8095       | 12.7       | 2.9           |   |
|                 |                   | 060580011    | F01        | DENVER           | 1           | 07           | 1977 | 6508       | 15.4       | 2.7           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2675       | 11.7       | 2.8           | * |
|                 |                   | 062210001    | F01        | WELBY            | 1           | 07           | 1977 | 7953       | 15.4       | 2.5           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7811       | 15.4       | 2.9           |   |
| 4420111         | OZONE             | 060080002    | F01        | ARAPAHOE CO      | 1           | 07           | 1978 | 4083       | .110       | .033          | * |
|                 |                   | 060120002    | F01        | ARVADA           | 1           | 07           | 1977 | 7950       | .129       | .027          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7766       | .130       | .022          |   |
|                 |                   | 060200006    | G05        | BOULDER          | 1           | 07           | 1977 | 1068       | .052       | .011          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 701        | .098       | .029          | * |
|                 |                   | 060380004    | F01        | COLORADO SPRINGS | 1           | 07           | 1977 | 7858       | .085       | .023          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8227       | .100       | .022          |   |
|                 |                   | 060580002    | F01        | DENVER           | 1           | 07           | 1977 | 7890       | .146       | .021          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7973       | .120       | .018          |   |
|                 |                   | 060580009    | F01        | DENVER           | 1           | 07           | 1977 | 7753       | .166       | .024          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7812       | .140       | .022          |   |
|                 |                   | 060580010    | F01        | DENVER           | 1           | 07           | 1977 | 7928       | .098       | .015          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8080       | .070       | .013          |   |
|                 |                   | 060580011    | F01        | DENVER           | 1           | 07           | 1977 | 8001       | .155       | .022          |   |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET SARAOB SUMMARIZATION CRITERIA OF OAPS GUIDELINE 1.2-040, VOL. 1 EC 2.3.0

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>ORS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4420111         | OZONE             | 060580011    | F01        | DENVER           | 1           | 07           | 1978 | 3210       | .108       | .019          | * |
|                 |                   | 060820004    | F01        | FORT COLLINS     | 1           | 07           | 1978 | 4090       | .150       | .038          | * |
|                 |                   | 061000005    | F01        | GREELEY          | 1           | 07           | 1977 | 413        | .030       | .011          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8051       | .125       | .023          |   |
|                 |                   | 062210001    | F01        | WELBY            | 1           | 07           | 1977 | 7850       | .153       | .028          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7627       | .223       | .025          |   |

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 270020007    | F01        | ANACONDA         | 7           | 01           | 1978 | 94         | 101.       | 41.           | * |
|                 |                   | 270020008    | F01        | ANACONDA         | 7           | 01           | 1978 | 21         | 77.        | 39.           | * |
|                 |                   | 270060009    | F03        | BIG HORN CO      | 7           | 01           | 1977 | 55         | 159.       | 49.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 15         | 209.       | 67.           | * |
|                 |                   | 270060010    | F03        | BIG HORN CO      | 7           | 01           | 1977 | 50         | 108.       | 25.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 39         | 72.        | 22.           |   |
|                 |                   | 270080006    | G02        | BILLINGS         | 7           | 01           | 1977 | 59         | 166.       | 55.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 35         | 135.       | 54.           | * |
|                 |                   | 270080007    | G01        | BILLINGS         | 7           | 01           | 1977 | 60         | 163.       | 38.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 155.       | 43.           | * |
|                 |                   | 270080008    | G01        | BILLINGS         | 7           | 01           | 1977 | 57         | 165.       | 63.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 53         | 175.       | 74.           |   |
|                 |                   | 270080009    | G01        | BILLINGS         | 7           | 01           | 1977 | 55         | 155.       | 53.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 40         | 171.       | 55.           | * |
|                 |                   | 270080059    | F01        | BILLINGS         | 7           | 01           | 1978 | 88         | 183.       | 72.           | * |
|                 |                   | 270080059    | F07        | BILLINGS         | 7           | 01           | 1978 | 2          | 44.        | 32.           | * |
|                 |                   | 270080060    | F01        | BILLINGS         | 7           | 01           | 1978 | 17         | 145.       | 71.           | * |
|                 |                   | 270170001    | F01        | BOZEMAN          | 7           | 01           | 1978 | 48         | 60.        | 32.           |   |
|                 |                   | 270160003    | F01        | BUTTE            | 7           | 01           | 1977 | 16         | 210.       | 74.           | * |
|                 |                   | 270160005    | F01        | BUTTE            | 7           | 01           | 1977 | 41         | 233.       | 93.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 195.       | 80.           |   |
|                 |                   | 270160011    | F02        | BUTTE            | 7           | 01           | 1977 | 38         | 130.       | 42.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 14         | 60.        | 28.           | * |
|                 |                   | 270160014    | F01        | BUTTE            | 7           | 01           | 1977 | 42         | 49.        | 22.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 45         | 53.        | 21.           |   |
|                 |                   | 270160016    | F02        | BUTTE            | 7           | 01           | 1977 | 34         | 297.       | 99.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 24         | 191.       | 66.           | * |
|                 |                   | 270160017    | F01        | BUTTE            | 7           | 01           | 1978 | 102        | 158.       | 71.           | * |
|                 |                   | 270160018    | F01        | BUTTE            | 7           | 01           | 1978 | 26         | 106.       | 54.           | * |
|                 |                   | 270160019    | F01        | BUTTE            | 7           | 01           | 1978 | 32         | 169.       | 63.           | * |
|                 |                   | 270160020    | F01        | BUTTE            | 7           | 01           | 1978 | 13         | 111.       | 53.           | * |
|                 |                   | 270200002    | F03        | CARTER CO        | 7           | 01           | 1977 | 21         | 535.       | 77.           | * |
|                 |                   | 270270002    | F01        | COLUMBIA FALLS   | 7           | 01           | 1977 | 27         | 223.       | 92.           | * |
|                 |                   | 270270005    | F01        | COLUMBIA FALLS   | 7           | 01           | 1977 | 35         | 467.       | 126.          | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 55         | 426.       | 130.          |   |
|                 |                   | 270300004    | F03        | CUSTER CO        | 7           | 01           | 1977 | 38         | 45.        | 20.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 5          | 16.        | 11.           | * |
|                 |                   | 270340001    | F03        | DANIELS CO       | 7           | 01           | 1977 | 37         | 107.       | 33.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 80.        | 15.           |   |
|                 |                   | 270340002    | F03        | DANIELS CO       | 7           | 01           | 1977 | 34         | 100.       | 29.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 47         | 129.       | 20.           |   |
|                 |                   | 270340003    | F03        | DANIELS CO       | 7           | 01           | 1977 | 36         | 109.       | 37.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 100.       | 20.           |   |
|                 |                   | 270360001    | F03        | DAWSON CO        | 7           | 01           | 1977 | 21         | 51.        | 23.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 9          | 46.        | 21.           | * |
|                 |                   | 270360002    | F03        | DAWSON CO        | 7           | 01           | 1977 | 13         | 156.       | 38.           | * |
|                 |                   | 270360003    | F03        | DAWSON CO        | 7           | 01           | 1977 | 9          | 109.       | 37.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 6          | 40.        | 22.           | * |

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|-----------------|-------------------|--------------|------------|--------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 270360004    | F03        | DAWSON CO          | 7           | 01           | 1978 | 8          | 20.        | 8.            | * |
|                 |                   | 270400004    | F02        | DEER LODGE CO      | 7           | 01           | 1977 | 59         | 161.       | 50.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 54         | 155.       | 33.           |   |
|                 |                   | 270480029    | F02        | FLAT HEAD CO       | 7           | 01           | 1977 | 45         | 126.       | 28.           | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 55         | 59.        | 24.           |   |
|                 |                   | 270480034    | F05        | FLAT HEAD CO       | 7           | 01           | 1978 | 9          | 40.        | 14.           | * |
|                 |                   | 270520003    | F02        | GALLATIN CO        | 7           | 01           | 1977 | 23         | 309.       | 110.          | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 32         | 255.       | 79.           | * |
|                 |                   | 270570001    | P03        | GLACIER NAT PARK   | 7           | 01           | 1977 | 37         | 29.        | 8.            | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 22         | 30.        | 9.            | * |
|                 |                   | 270640005    | F02        | GRANITE CO         | 7           | 01           | 1977 | 51         | 217.       | 64.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 54         | 267.       | 55.           |   |
|                 |                   | 270660007    | G02        | GREAT FALLS        | 7           | 01           | 1977 | 93         | 225.       | 44.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 25         | 136.       | 46.           | * |
|                 |                   | 270660009    | G01        | GREAT FALLS        | 7           | 01           | 1977 | 93         | 869.       | 69.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 44         | 125.       | 61.           |   |
|                 |                   | 270660015    | F01        | GREAT FALLS        | 7           | 01           | 1977 | 34         | 411.       | 118.          | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 8          | 148.       | 58.           | * |
|                 |                   | 270660016    | F01        | GREAT FALLS        | 7           | 01           | 1978 | 19         | 62.        | 26.           | * |
|                 |                   | 270720001    | F01        | HELENA             | 7           | 01           | 1978 | 56         | 234.       | 55.           |   |
|                 |                   | 270720001    | P01        | HELENA             | 7           | 01           | 1977 | 41         | 208.       | 52.           |   |
|                 |                   | 270720002    | F01        | HELENA             | 7           | 01           | 1978 | 25         | 98.        | 49.           | * |
|                 |                   | 270760903    | F02        | JEFFERSON CO       | 7           | 01           | 1977 | 58         | 103.       | 27.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 58         | 101.       | 28.           |   |
|                 |                   | 270800013    | F01        | KALISPELL          | 7           | 01           | 1977 | 53         | 226.       | 75.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 37         | 411.       | 109.          | * |
|                 |                   | 270800014    | F01        | KALISPELL          | 7           | 01           | 1978 | 11         | 110.       | 65.           | * |
|                 |                   | 270820011    | F05        | LAKE CO            | 7           | 01           | 1978 | 9          | 170.       | 48.           | * |
|                 |                   | 270840001    | G02        | LAUREL             | 7           | 01           | 1977 | 54         | 150.       | 41.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 49         | 111.       | 44.           | * |
|                 |                   | 270860002    | F02        | LEWIS AND CLARK CO | 7           | 01           | 1977 | 49         | 192.       | 76.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 44         | 201.       | 87.           | * |
|                 |                   | 270900009    | F01        | LIBBY              | 7           | 01           | 1977 | 12         | 119.       | 59.           | * |
|                 |                   | 270900010    | F01        | LIBBY              | 7           | 01           | 1977 | 20         | 196.       | 113.          | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 52         | 1384.      | 196.          |   |
|                 |                   | 270940001    | F03        | LINCOLN CO         | 7           | 01           | 1977 | 37         | 171.       | 58.           | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 34         | 247.       | 74.           | * |
|                 |                   | 270940002    | F03        | LINCOLN CO         | 7           | 01           | 1977 | 20         | 33.        | 14.           | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 27         | 45.        | 17.           | * |
|                 |                   | 270980001    | F03        | MC CONE CO         | 7           | 01           | 1977 | 26         | 88.        | 28.           | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 46         | 58.        | 15.           |   |
|                 |                   | 271100001    | G01        | MISSOULA CO        | 7           | 01           | 1977 | 347        | 295.       | 95.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 294        | 390.       | 97.           | * |
|                 |                   | 271100009    | G01        | MISSOULA CO        | 7           | 01           | 1977 | 347        | 180.       | 53.           |   |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 320        | 320.       | 79.           |   |
|                 |                   | 271100010    | G01        | MISSOULA CO        | 7           | 01           | 1977 | 17         | 190.       | 90.           | * |
|                 |                   |              |            |                    | 7           | 01           | 1978 | 55         | 166.       | 71.           |   |
|                 |                   | 271100014    | G02        | MISSOULA CO        | 7           | 01           | 1977 | 225        | 255.       | 77.           | * |

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|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 271100015    | G02        | MISSOULA CO      | 7           | 01           | 1977 | 223        | 79.        | 30.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 295        | 144.       | 35.           | * |
|                 |                   | 271100016    | G02        | MISSOULA CO      | 7           | 01           | 1977 | 232        | 113.       | 32.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 299        | 201.       | 40.           | * |
|                 |                   | 271100017    | G02        | MISSOULA CO      | 7           | 01           | 1977 | 131        | 84.        | 22.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 295        | 125.       | 29.           | * |
|                 |                   | 271100018    | G01        | MISSOULA CO      | 7           | 01           | 1977 | 100        | 279.       | 87.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 86         | 457.       | 145.          | * |
|                 |                   | 271100018    | G02        | MISSOULA CO      | 7           | 01           | 1977 | 17         | 132.       | 62.           | * |
|                 |                   | 271100019    | F01        | MISSOULA CO      | 7           | 01           | 1977 | 29         | 335.       | 104.          | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 288        | 676.       | 106.          | * |
|                 |                   | 271100020    | G01        | MISSOULA CO      | 7           | 01           | 1978 | 90         | 244.       | 104.          | * |
|                 |                   | 271240008    | P03        | POWDER RIVER CO  | 7           | 01           | 1977 | 24         | 72.        | 19.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 6          | 37.        | 16.           | * |
|                 |                   | 271240009    | F03        | POWDER RIVER CO  | 7           | 01           | 1977 | 57         | 275.       | 23.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 26         | 56.        | 21.           | * |
|                 |                   | 271360003    | F03        | ROSERUD CO       | 7           | 01           | 1977 | 19         | 243.       | 26.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 17         | 34.        | 12.           | * |
|                 |                   | 271360026    | P03        | ROSERUD CO       | 7           | 01           | 1977 | 50         | 280.       | 32.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 46         | 84.        | 26.           | * |
|                 |                   | 271360027    | F02        | ROSERUD CO       | 7           | 01           | 1977 | 27         | 95.        | 32.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 13         | 138.       | 34.           | * |
|                 |                   | 271360028    | F02        | ROSERUD CO       | 7           | 01           | 1977 | 12         | 102.       | 24.           | * |
|                 |                   | 271360028    | F03        | ROSERUD CO       | 7           | 01           | 1978 | 1          | 8.         | 8.            | * |
|                 |                   | 271400002    | F01        | SANDERS CO       | 7           | 01           | 1978 | 23         | 367.       | 73.           | * |
|                 |                   | 271480015    | F02        | SILVER BOW CO    | 7           | 01           | 1977 | 42         | 89.        | 36.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 50         | 81.        | 29.           | * |
| 4210111         | CARBON MONOXIDE   | 270080053    | F01        | BILLINGS         | 1           | 07           | 1977 | 4620       | 19.2       | 2.3           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1563       | 15.9       | 1.7           | * |
|                 |                   | 270160015    | F01        | BUTTE            | 1           | 07           | 1977 | 3772       | 14.0       | .9            | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1971       | 12.5       | 1.3           | * |
|                 |                   | 270160015    | F02        | BUTTE            | 1           | 07           | 1978 | 1279       | 14.9       | 1.6           | * |
|                 |                   | 270660015    | F01        | GREAT FALLS      | 1           | 07           | 1977 | 3601       | 23.1       | 2.4           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1309       | 24.5       | 3.1           | * |
|                 |                   | 270660015    | F02        | GREAT FALLS      | 1           | 07           | 1978 | 1092       | 15.1       | 3.2           | * |
|                 |                   | 271080003    | F01        | MISSOULA         | 1           | 07           | 1977 | 6788       | 31.6       | 5.1           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2436       | 28.0       | 6.9           | * |
|                 |                   | 271100019    | F01        | MISSOULA CO      | 1           | 07           | 1978 | 1307       | 24.0       | 3.3           | * |
|                 |                   | 270160018    | F01        | BUTTE            | 1           | 07           | 1978 | 1516       | 15.5       | 1.2           | * |
| 4210121         | CARBON MONOXIDE   | 270020007    | F01        | ANACONDA         | 1           | 07           | 1978 | 2723       | 1.210      | .017          | * |
| 4240114         | SULFUR DIOXIDE    | 270020904    | F02        | ANACONDA         | 1           | 07           | 1977 | 6826       | 1.050      | .012          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1946       | .950       | .019          | * |
|                 |                   | 270080053    | F01        | BILLINGS         | 1           | 07           | 1977 | 5649       | .200       | .003          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2171       | .170       | .003          | * |
|                 |                   | 270160018    | F01        | BUTTE            | 1           | 07           | 1978 | 892        | .090       | .007          | * |
|                 |                   | 270400004    | F02        | DEER LODGE CO    | 1           | 07           | 1977 | 7043       | 1.840      | .036          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7591       | 2.750      | .058          | * |
|                 |                   | 270400012    | F02        | DEER LODGE CO    | 1           | 07           | 1977 | 6623       | 1.680      | .028          | * |

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|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4240114         | SULFUR DIOXIDE    | 270400012    | F02        | DEER LODGE CO    | 1           | 07           | 1978 | 6741       | 1.600      | .036          |   |
|                 |                   | 270400001    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 8444       | .960       | .016          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5935       | 1.250      | .020          | * |
|                 |                   | 270400002    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 8421       | .910       | .014          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 6010       | .710       | .017          | * |
|                 |                   | 270400003    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 8346       | .690       | .013          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5428       | 1.600      | .016          | * |
|                 |                   | 270400004    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 8461       | 1.270      | .020          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5542       | 1.240      | .024          | * |
|                 |                   | 270400006    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 7771       | 16.100     | .026          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5925       | 1.500      | .033          | * |
|                 |                   | 270400007    | J02        | DEER LODGE CO    | 1           | 07           | 1977 | 7781       | 1.030      | .016          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5783       | 1.250      | .023          | * |
|                 |                   | 270400906    | F02        | DEER LODGE CO    | 1           | 07           | 1977 | 7840       | 3.510      | .023          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1961       | 2.430      | .028          | * |
|                 |                   | 270720001    | F02        | HELENA           | 1           | 07           | 1977 | 3330       | .400       | .006          | * |
|                 |                   | 270720011    | F02        | HELENA           | 1           | 07           | 1977 | 6644       | .660       | .014          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 4284       | .480       | .007          | * |
|                 |                   | 270760902    | F02        | JEFFERSON CO     | 1           | 07           | 1977 | 3601       | .780       | .013          | * |
|                 |                   | 270760903    | F02        | JEFFERSON CO     | 1           | 07           | 1977 | 8290       | 1.400      | .012          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3794       | .420       | .008          | * |
|                 |                   | 270760904    | F02        | JEFFERSON CO     | 1           | 07           | 1977 | 500        | .880       | .037          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5064       | .800       | .009          | * |
|                 |                   | 270840009    | F01        | LAUREL           | 1           | 07           | 1978 | 373        | .530       | .046          | * |
|                 |                   | 270840009    | F05        | LAUREL           | 1           | 07           | 1977 | 4474       | .630       | .050          | * |
|                 |                   | 270840009    | G02        | LAUREL           | 1           | 07           | 1977 | 1269       | .620       | .056          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1214       | .660       | .057          | * |
|                 |                   | 271100019    | F01        | MISSOULA CO      | 1           | 07           | 1977 | 1005       | .010       | .001          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5104       | .050       | .002          | * |
|                 |                   | 271360027    | F02        | ROSEBUD CO       | 1           | 07           | 1977 | 3351       | .100       | .003          | * |
| 4240120         | SULFUR DIOXIDE    | 270020007    | F01        | AMACONDA         | 1           | 07           | 1978 | 2190       | 1.000      | .028          | * |
|                 |                   | 270080059    | F01        | BILLINGS         | 1           | 07           | 1978 | 1827       | .195       | .012          | * |
| 4240191         | SULFUR DIOXIDE    | 270080006    | F05        | BILLINGS         | 7           | 01           | 1977 | 38         | 354.       | 71.           | * |
|                 |                   | 270340001    | F03        | DAVIEFS CO       | 7           | 07           | 1977 | 37         | .001       | .001          | * |
|                 |                   | 270570001    | P03        | GLACIER NAT PARK | 7           | 01           | 1977 | 45         | 6.         | 3.            |   |
|                 |                   | 270840009    | G02        | LAUREL           | 7           | 01           | 1977 | 18         | 391.       | 174.          | * |
|                 |                   | 270980001    | F03        | MC CONE CO       | 7           | 07           | 1977 | 24         | .001       | .001          | * |
|                 |                   | 271360003    | F03        | ROSEBUD CO       | 7           | 07           | 1977 | 15         | .001       | .001          | * |
|                 |                   | 271360028    | F02        | ROSEBUD CO       | 7           | 07           | 1977 | 5          | .001       | .001          | * |
| 4240197         | SULFUR DIOXIDE    | 270340001    | F03        | DAVIEFS CO       | 7           | 07           | 1978 | 6          | .001       | .001          | * |
| 4260211         | NITROGEN DIOXIDE  | 270020007    | F01        | AMACONDA         | 1           | 07           | 1978 | 128        | .02        | .01           | * |
|                 |                   | 270080053    | F01        | BILLINGS         | 1           | 07           | 1977 | 2352       | .18        | .03           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 658        | .18        | .04           | * |
|                 |                   | 270080059    | F01        | BILLINGS         | 1           | 07           | 1978 | 425        | .05        | .01           | * |
|                 |                   | 270160015    | F01        | BUTTE            | 1           | 07           | 1977 | 682        | .06        | .01           | * |
|                 |                   | 270160018    | F01        | BUTTE            | 1           | 07           | 1978 | 372        | .04        | .01           | * |
|                 |                   | 271100019    | F01        | MISSOULA CO      | 1           | 07           | 1977 | 685        | .10        | .03           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3028       | .10        |               | * |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET STANDARD SUMMARIZATION CRITERIA OF QA/QC GUIDELINE 1.2-040, VOL 1, SEC 2.3.0

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| POL-ETH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME       | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4260211         | NITROGEN DIOXIDE  | 271360027    | F02        | ROSERUD CO             | 1           | 07           | 1977 | 1953       | .13        | .03           | * |
| 4260214         | NITROGEN DIOXIDE  | 270020007    | F01        | ANACONDA               | 1           | 07           | 1978 | 2003       | .280       | .007          | * |
|                 |                   | 270080059    | F01        | BILLINGS               | 1           | 07           | 1978 | 1469       | .075       | .011          | * |
|                 |                   | 270160015    | F01        | BUTTE                  | 1           | 07           | 1977 | 308        | .078       | .023          | * |
|                 |                   | 270160018    | F01        | BUTTE                  | 1           | 07           | 1978 | 1293       | .155       | .024          | * |
| 4260284         | NITROGEN DIOXIDE  | 270340001    | F03        | DANIELS CO             | 7           | 07           | 1977 | 38         | .005       | .001          | * |
|                 |                   |              |            |                        | 7           | 07           | 1978 | 14         | .001       | .001          | * |
|                 |                   | 270570001    | F03        | GLACIER NAT PARK       | 7           | 01           | 1977 | 46         | 42.        | 3.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 22         | 12.        | 3.            | * |
|                 |                   | 270980001    | F03        | MC CONE CO             | 7           | 07           | 1977 | 27         | .001       | .001          | * |
|                 |                   |              |            |                        | 7           | 07           | 1978 | 17         | .001       | .001          | * |
|                 |                   | 271360003    | F03        | ROSERUD CO             | 7           | 07           | 1977 | 15         | .001       | .001          | * |
|                 |                   |              |            |                        | 7           | 07           | 1978 | 3          | .001       | .001          | * |
|                 |                   | 271360028    | F02        | ROSERUD CO             | 7           | 07           | 1977 | 5          | .005       | .003          | * |
| 4310111         | TOTAL HYDROCARBON | 270080053    | F01        | BILLINGS               | 1           | 07           | 1977 | 4747       | 26.4       | 3.1           | * |
|                 |                   |              |            |                        | 1           | 07           | 1978 | 1573       | 11.4       | 3.8           | * |
|                 |                   | 270080059    | F01        | BILLINGS               | 1           | 07           | 1978 | 865        | 8.3        | 2.4           | * |
|                 |                   | 270160018    | F01        | BUTTE                  | 1           | 07           | 1978 | 2653       | 7.1        | 2.0           | * |
|                 |                   | 271100019    | F01        | MISSOULA CO            | 1           | 07           | 1977 | 573        | 7.6        | 2.1           | * |
|                 |                   |              |            |                        | 1           | 07           | 1978 | 5367       | 5.3        | 2.1           | * |
|                 |                   | 271360027    | F02        | ROSERUD CO             | 1           | 07           | 1977 | 1122       | 2.7        | .5            | * |
| 4420111         | OZONE             | 270080053    | F01        | BILLINGS               | 1           | 07           | 1977 | 7428       | .078       | .018          | * |
|                 |                   |              |            |                        | 1           | 07           | 1978 | 3419       | .120       | .020          | * |
|                 |                   | 270080059    | F01        | BILLINGS               | 1           | 07           | 1978 | 1394       | .095       | .021          | * |
|                 |                   | 270160015    | F01        | BUTTE                  | 1           | 07           | 1977 | 2577       | .155       | .045          | * |
|                 |                   | 270160018    | F01        | BUTTE                  | 1           | 07           | 1978 | 3672       | .077       | .022          | * |
|                 |                   | 270310101    | A08        | CUSTER NATIONAL FOREST | 1           | 07           | 1977 | 7603       | .080       | .040          | * |
|                 |                   |              |            |                        | 1           | 07           | 1978 | 7675       | .075       | .029          | * |
|                 |                   | 271100019    | F01        | MISSOULA CO            | 1           | 07           | 1977 | 37         | .023       | .011          | * |
|                 |                   |              |            |                        | 1           | 07           | 1978 | 3705       | .063       | .013          | * |
|                 |                   | 271360027    | F02        | ROSERUD CO             | 1           | 07           | 1977 | 2922       | .140       | .058          | * |
|                 |                   | 271720003    | F02        | YELLOWSTONE CO         | 1           | 07           | 1978 | 729        | .200       | .013          | * |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET SAROAN SUMMARIZATION CRITERIA OF OARPS GUIDELINE 1.2-040, VOL. 2 2.3.0

NATIONAL AEROMETRIC DATA BANK  
 STATE INVENTORY BY POLLUTANT  
 NORTH DAKOTA

| POL-IMP<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 350040002    | F03        | BARNES CO        | 7           | 01           | 1977 | 30         | 94.        | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 18         | 190.       | 42.           | * |
|                 |                   | 350080001    | F03        | BILLINGS CO      | 7           | 01           | 1977 | 49         | 118.       | 23.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 51         | 95.        | 18.           |   |
|                 |                   | 350100001    | F01        | BISMARCK         | 7           | 01           | 1977 | 58         | 632.       | 86.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 60         | 199.       | 58.           |   |
|                 |                   | 350100002    | F01        | BISMARCK         | 7           | 01           | 1977 | 61         | 630.       | 140.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 40         | 537.       | 134.          | * |
|                 |                   | 350160001    | F03        | BOWMAN CO        | 7           | 01           | 1977 | 59         | 232.       | 31.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 112.       | 24.           |   |
|                 |                   | 350200001    | F03        | BURLEIGH CO      | 7           | 01           | 1977 | 46         | 493.       | 71.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 180.       | 36.           |   |
|                 |                   | 350220001    | F03        | CASS CO          | 7           | 01           | 1977 | 52         | 101.       | 42.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 231.       | 42.           |   |
|                 |                   | 350260001    | F01        | DEVILS LAKE      | 7           | 01           | 1977 | 19         | 131.       | 56.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 13         | 112.       | 62.           | * |
|                 |                   | 350300001    | F01        | DICKINSON        | 7           | 01           | 1977 | 28         | 100.       | 48.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 28         | 82.        | 41.           |   |
|                 |                   | 350340001    | F03        | DUNN CO          | 7           | 01           | 1977 | 44         | 78.        | 29.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 54         | 108.       | 24.           |   |
|                 |                   | 350340002    | F03        | DUNN CO          | 7           | 01           | 1977 | 56         | 189.       | 28.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 33         | 47.        | 16.           | * |
|                 |                   | 350400001    | F01        | FARGO            | 7           | 01           | 1977 | 58         | 145.       | 54.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 53         | 181.       | 55.           |   |
|                 |                   | 350400002    | F01        | FARGO            | 7           | 01           | 1977 | 57         | 243.       | 73.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 39         | 250.       | 75.           | * |
|                 |                   | 350480001    | F01        | GRAND FORKS      | 7           | 01           | 1977 | 29         | 128.       | 60.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 91.        | 41.           |   |
|                 |                   | 350480002    | F01        | GRAND FORKS      | 7           | 01           | 1977 | 58         | 162.       | 56.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 40         | 143.       | 41.           | * |
|                 |                   | 350520001    | F03        | GRANT CO         | 7           | 01           | 1977 | 56         | 228.       | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 120.       | 22.           |   |
|                 |                   | 350560001    | F03        | HETTINGER CO     | 7           | 01           | 1977 | 60         | 224.       | 41.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 36         | 330.       | 44.           | * |
|                 |                   | 350560002    | F03        | HETTINGER CO     | 7           | 01           | 1977 | 59         | 317.       | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 33         | 37.        | 15.           | * |
|                 |                   | 350580001    | F01        | JAKESTOWN        | 7           | 01           | 1977 | 26         | 417.       | 92.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 19         | 104.       | 45.           | * |
|                 |                   | 350700001    | F03        | MC KENZIE CO     | 7           | 01           | 1977 | 52         | 126.       | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 34         | 81.        | 18.           | * |
|                 |                   | 350700002    | F03        | MC KENZIE CO     | 7           | 01           | 1978 | 1          | 8.         | 8.            | * |
|                 |                   | 350720001    | F03        | MC LEAN CO       | 7           | 01           | 1977 | 43         | 245.       | 39.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 54         | 69.        | 20.           |   |
|                 |                   | 350720002    | F03        | MC LEAN CO       | 7           | 01           | 1977 | 55         | 154.       | 33.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 36         | 128.       | 34.           | * |
|                 |                   | 350740001    | F01        | MANDAN           | 7           | 01           | 1977 | 61         | 273.       | 53.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 53         | 174.       | 50.           |   |
|                 |                   | 350760001    | F01        | MERCER CO        | 7           | 01           | 1977 | 58         | 290.       | 55.           |   |

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| POL-NTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | TNT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 350760001    | F01        | MERCER CO        | 7           | 01           | 1978 | 19         | 284.       | 68.           | * |
|                 |                   | 350760002    | F03        | MERCER CO        | 7           | 01           | 1977 | 58         | 224.       | 31.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 288.       | 52.           |   |
|                 |                   | 350780001    | F01        | MINOT            | 7           | 01           | 1977 | 17         | 166.       | 75.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 26         | 106.       | 48.           |   |
|                 |                   | 350800001    | F03        | MORTON CO        | 7           | 01           | 1977 | 59         | 209.       | 34.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 38         | 113.       | 29.           | * |
|                 |                   | 350820001    | F03        | MOUNT TRAIL CO   | 7           | 01           | 1977 | 53         | 109.       | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 35         | 77.        | 24.           | * |
|                 |                   | 350860001    | F03        | OLIVER CO        | 7           | 01           | 1977 | 60         | 237.       | 32.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 58         | 104.       | 24.           |   |
|                 |                   | 351060001    | F03        | SHERIDAN CO      | 7           | 01           | 1977 | 50         | 186.       | 33.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 37         | 84.        | 21.           | * |
|                 |                   | 351060002    | F03        | SHERIDAN CO      | 7           | 01           | 1977 | 51         | 132.       | 32.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 33         | 72.        | 20.           | * |
|                 |                   | 351140001    | F03        | STARK CO         | 7           | 01           | 1977 | 55         | 421.       | 41.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 54         | 162.       | 29.           |   |
|                 |                   | 351180001    | F03        | STUTSMAN CO      | 7           | 01           | 1977 | 25         | 76.        | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 16         | 63.        | 28.           | * |
|                 |                   | 351240001    | F01        | VALLEY CITY      | 7           | 01           | 1977 | 23         | 202.       | 61.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 15         | 251.       | 68.           | * |
| 1110192         | PARTICULATE       | 351260001    | F01        | WAMPETON         | 7           | 01           | 1977 | 28         | 81.        | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 121.       | 39.           |   |
|                 |                   | 351300001    | F03        | WARD CO          | 7           | 01           | 1977 | 44         | 133.       | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 48         | 111.       | 23.           | * |
|                 |                   | 351360001    | F01        | WILLISTON        | 7           | 01           | 1977 | 29         | 520.       | 56.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 29         | 81.        | 35.           |   |
|                 |                   | 350200001    | F03        | BURLINGHAM CO    | 7           | 01           | 1977 | 57         | 211.       | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 39         | 79.        | 20.           | * |
|                 |                   | 350720001    | F03        | MC LEAN CO       | 7           | 01           | 1977 | 58         | 124.       | 20.           |   |
|                 |                   | 350860001    | F03        | OLIVER CO        | 7           | 01           | 1978 | 13         | 26.        | 15.           | * |
| 4240114         | SULFUR DIOXIDE    | 350200001    | F03        | BURLINGHAM CO    | 1           | 07           | 1977 | 6394       | .100       | .002          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1374       | .080       | .003          | * |
|                 |                   | 350860001    | F03        | OLIVER CO        | 1           | 07           | 1977 | 5366       | .050       | .002          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5542       | .110       | .001          | * |
| 4240191         | SULFUR DIOXIDE    | 350100001    | F01        | RISMARCK         | 7           | 01           | 1977 | 61         | 11.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 3.         | 3.            | * |
|                 |                   | 350100002    | F01        | RISMARCK         | 7           | 01           | 1977 | 54         | 9.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 16.        | 3.            | * |
|                 |                   | 350200001    | F03        | BURLINGHAM CO    | 7           | 01           | 1977 | 53         | 14.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 25         | 14.        | 3.            | * |
|                 |                   | 350340002    | F03        | DIJON CO         | 7           | 01           | 1977 | 58         | 9.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 3.         | 3.            | * |
|                 |                   | 350400001    | F01        | FARGO            | 7           | 01           | 1977 | 54         | 22.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 21.        | 4.            | * |
|                 |                   | 350520001    | F03        | GRANT CO         | 7           | 01           | 1977 | 57         | 9.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 22.        | 3.            | * |
|                 |                   | 350580001    | F03        | HETTINGER CO     | 7           | 01           | 1977 | 60         | 10.        | 3.            |   |

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 STATE INVENTORY BY POLLUTANT  
 NORTH DAKOTA

| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4240191         | SULFUR DIOXIDE    | 350560001    | F03        | HETTINGER CO     | 7           | 01           | 1978 | 30         | 8.         | 3.            | * |
|                 |                   | 350700001    | F03        | MC KENZIE CO     | 7           | 01           | 1977 | 53         | 3.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 29         | 6.         | 3.            | * |
|                 |                   | 350720002    | F03        | MC LEAN CO       | 7           | 01           | 1977 | 60         | 8.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 29         | 5.         | 3.            | * |
|                 |                   | 350740001    | F01        | MANDAN           | 7           | 01           | 1977 | 61         | 15.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 29         | 10.        | 3.            | * |
|                 |                   | 350760001    | F01        | MERCER CO        | 7           | 01           | 1977 | 59         | 8.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 18         | 12.        | 4.            | * |
|                 |                   | 350760002    | F03        | MERCER CO        | 7           | 01           | 1977 | 61         | 12.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 39.        | 4.            | * |
|                 |                   | 350800001    | F03        | MORTON CO        | 7           | 01           | 1977 | 7          | 3.         | 3.            | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 22         | 3.         | 3.            | * |
|                 |                   | 350860001    | F03        | OLIVER CO        | 7           | 01           | 1977 | 61         | 7.         | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 30         | 3.         | 3.            | * |
|                 |                   | 351140001    | F03        | STARK CO         | 7           | 01           | 1977 | 58         | 12.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 31         | 3.         | 3.            | * |
| 4260214         | NITROGEN DIOXIDE  | 350200001    | F03        | BURLINGHAM CO    | 1           | 07           | 1977 | 4753       | .030       | .004          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 4448       | .020       | .003          | * |
|                 |                   | 350860001    | F03        | OLIVER CO        | 1           | 07           | 1977 | 7878       | .090       | .003          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7840       | .050       | .003          |   |
| 4260283         | NITROGEN DIOXIDE  | 350080001    | F03        | BILLINGS CO      | 7           | 01           | 1978 | 14         | 34.        | 15.           | * |
|                 |                   | 350100001    | F01        | BISMARCK         | 7           | 01           | 1977 | 61         | 61.        | 25.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 60         | 63.        | 26.           |   |
|                 |                   | 350100002    | F01        | BISMARCK         | 7           | 01           | 1977 | 54         | 53.        | 15.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 41         | 40.        | 11.           | * |
|                 |                   | 350200001    | F03        | BURLINGHAM CO    | 7           | 01           | 1977 | 53         | 53.        | 9.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 56         | 61.        | 14.           |   |
|                 |                   | 350340002    | F03        | DUNN CO          | 7           | 01           | 1977 | 59         | 28.        | 5.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 39         | 26.        | 11.           | * |
|                 |                   | 350400001    | F01        | FARGO            | 7           | 01           | 1977 | 54         | 55.        | 30.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 58         | 68.        | 39.           |   |
|                 |                   | 350520001    | F03        | GRANT CO         | 7           | 01           | 1977 | 61         | 12.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 26.        | 5.            |   |
|                 |                   | 350560001    | F03        | HETTINGER CO     | 7           | 01           | 1977 | 60         | 15.        | 5.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 41         | 43.        | 10.           | * |
|                 |                   | 350700001    | F03        | MC KENZIE CO     | 7           | 01           | 1977 | 53         | 152.       | 20.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 38         | 29.        | 7.            | * |
|                 |                   | 350700002    | F03        | MC KENZIE CO     | 7           | 01           | 1978 | 4          | 34.        | 25.           | * |
|                 |                   | 350720001    | F03        | MC LEAN CO       | 7           | 01           | 1978 | 14         | 31.        | 12.           | * |
|                 |                   | 350720002    | F03        | MC LEAN CO       | 7           | 01           | 1977 | 60         | 20.        | 3.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 40         | 22.        | 9.            | * |
|                 |                   | 350740001    | F01        | MANDAN           | 7           | 01           | 1977 | 62         | 71.        | 21.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 61         | 45.        | 18.           |   |
|                 |                   | 350760001    | F01        | MERCER CO        | 7           | 01           | 1977 | 59         | 47.        | 16.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 46         | 116.       | 17.           |   |
|                 |                   | 350760002    | F03        | MERCER CO        | 7           | 01           | 1977 | 61         | 26.        | 5.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 68.        |               |   |

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NATIONAL AEROMETRIC DATA BANK  
STATE INVENTORY BY POLLUTANT  
NORTH DAKOTA

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| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 42602R4         | NITROGEN DIOXIDE  | 350800001    | F03        | MORTON CO        | 7           | 01           | 1977 | 7          | 8.         | 3.            | * |
|                 |                   | 350860001    | F03        | OLIVER CO        | 7           | 01           | 1978 | 37         | 51.        | 6.            | * |
|                 |                   |              |            |                  | 7           | 01           | 1977 | 60         | 17.        | 7.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 61         | 23.        | 9.            |   |
|                 |                   | 351140001    | F03        | STARK CO         | 7           | 01           | 1977 | 58         | 32.        | 10.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 59         | 31.        | 11.           |   |
| 4420111         | OZONE             | 350200001    | F03        | BURLEIGH CO      | 1           | 07           | 1977 | 7237       | .100       | .035          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 6889       | .110       | .032          |   |
|                 |                   | 350860001    | F03        | OLIVER CO        | 1           | 07           | 1977 | 8007       | .070       | .033          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8093       | .070       | .033          |   |

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NATIONAL AEROMETRIC DATA BANK  
 STATE INVENTORY BY POLLUTANT  
 SOUTH DAKOTA

| POI-RTN<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME       | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 430020001    | F01        | ABERDEEN               | 7           | 01           | 1977 | 28         | 221.       | 71.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 11         | 182.       | 102.          | * |
|                 |                   | 430110001    | P03        | BLACK HILLS NAT FOREST | 7           | 01           | 1977 | 46         | 82.        | 14.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 51         | 68.        | 13.           |   |
|                 |                   | 430140001    | F01        | BROOKINGS              | 7           | 01           | 1977 | 50         | 141.       | 42.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 42         | 124.       | 46.           |   |
|                 |                   | 430240001    | F03        | BUTTE CO               | 7           | 01           | 1977 | 6          | 22.        | 10.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 16         | 64.        | 20.           | * |
|                 |                   | 430640001    | F02        | GRANT CO               | 7           | 01           | 1978 | 22         | 103.       | 42.           | * |
|                 |                   | 430640002    | F02        | GRANT CO               | 7           | 01           | 1978 | 20         | 107.       | 36.           | * |
|                 |                   | 430760001    | F03        | HARDING CO             | 7           | 01           | 1977 | 5          | 25.        | 18.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 14         | 38.        | 27.           | * |
|                 |                   | 430780001    | F03        | HOT SPRINGS            | 7           | 01           | 1977 | 38         | 211.       | 51.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 24         | 132.       | 55.           | * |
|                 |                   | 430820001    | F01        | HURON                  | 7           | 01           | 1977 | 45         | 129.       | 48.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 43         | 226.       | 71.           | * |
|                 |                   | 431240001    | F01        | MITCHELL               | 7           | 01           | 1977 | 27         | 151.       | 54.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 27         | 188.       | 58.           |   |
|                 |                   | 431300001    | F03        | PENNINGTON CO          | 7           | 01           | 1977 | 6          | 88.        | 54.           | * |
|                 |                   | 431320001    | F03        | PERKINS CO             | 7           | 01           | 1977 | 53         | 295.       | 32.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 50         | 164.       | 22.           |   |
|                 |                   | 431320001    | F05        | PERKINS CO             | 7           | 01           | 1977 | 34         | 278.       | 38.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 47         | 111.       | 20.           |   |
|                 |                   | 431340001    | F01        | PIERRE                 | 7           | 01           | 1977 | 59         | 126.       | 53.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 45         | 257.       | 55.           | * |
|                 |                   | 431380001    | F01        | RAPID CITY             | 7           | 01           | 1977 | 48         | 293.       | 86.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 40         | 293.       | 91.           | * |
|                 |                   | 431380002    | F01        | RAPID CITY             | 7           | 01           | 1977 | 48         | 288.       | 70.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 37         | 210.       | 72.           | * |
|                 |                   | 431380005    | F01        | RAPID CITY             | 7           | 01           | 1977 | 51         | 301.       | 66.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 48         | 146.       | 63.           |   |
|                 |                   | 431380006    | F01        | RAPID CITY             | 7           | 01           | 1977 | 50         | 93.        | 39.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 50         | 139.       | 48.           |   |
|                 |                   | 431480001    | P01        | SIOUX FALLS            | 7           | 01           | 1977 | 46         | 129.       | 61.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 43         | 119.       | 54.           | * |
|                 |                   | 431480002    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 48         | 140.       | 51.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 34         | 92.        | 50.           | * |
|                 |                   | 431480003    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 48         | 156.       | 66.           | * |
|                 |                   | 431480004    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 51         | 125.       | 49.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 48         | 130.       | 47.           |   |
|                 |                   | 431520001    | F02        | SPEARFISH              | 7           | 01           | 1977 | 24         | 91.        | 32.           | * |
|                 |                   | 431760001    | F01        | WATERLOO               | 7           | 01           | 1977 | 42         | 175.       | 58.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 41         | 120.       | 52.           |   |
|                 |                   | 431800001    | F03        | YANKTON                | 7           | 01           | 1977 | 52         | 191.       | 70.           |   |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 53         | 137.       | 53.           |   |
| 4240191         | SULFUR DIOXIDE    | 430110001    | P03        | BLACK HILLS NAT FOREST | 7           | 01           | 1977 | 47         | 3.         | 3.            |   |
|                 |                   | 430760001    | F03        | HARDING CO             | 7           | 01           | 1977 | 19         | 8.         | 4.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 3          | 5.         | 1.            | * |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET SAGWAQ SUMMARIZATION CRITERIA OF OAOPS GUIDELINE 1.2-040, VOL 1, LC 2.3.0

NATIONAL AERONAUTIC DATA BANK  
STATE INVENTORY BY POLLUTANT  
SOUTH DAKOTA

| POL-PTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME       | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4240191         | SULFUR DIOXIDE    | 431340001    | F01        | PIERRE                 | 7           | 01           | 1977 | 39         | 6.         | 3.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 15         | 3.         | 3.            | * |
|                 |                   | 431380001    | F01        | RAPID CITY             | 7           | 01           | 1977 | 37         | 11.        | 3.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 15         | 5.         | 3.            | * |
|                 |                   | 431380002    | F01        | RAPID CITY             | 7           | 01           | 1977 | 16         | 40.        | 5.            | * |
|                 |                   | 431480002    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 33         | 15.        | 4.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 2          | 3.         | 3.            | * |
|                 |                   | 431480003    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 2          | 44.        | 32.           | * |
| 4240197         | SULFUR DIOXIDE    | 430640001    | F02        | GRANT CO               | 7           | 01           | 1978 | 38         | 25.        | 4.            | * |
|                 |                   | 430760001    | F03        | HARDING CO             | 7           | 01           | 1978 | 17         | 7.         | 3.            | * |
|                 |                   | 431340001    | F01        | PIERRE                 | 7           | 01           | 1978 | 36         | 6.         | 3.            | * |
|                 |                   | 431380001    | F01        | RAPID CITY             | 7           | 01           | 1978 | 32         | 6.         | 3.            | * |
|                 |                   | 431480002    | F01        | SIOUX FALLS            | 7           | 01           | 1978 | 33         | 5.         | 3.            | * |
| 4260284         | NITROGEN DIOXIDE  | 430110001    | P03        | BLACK HILLS NAT FOREST | 7           | 01           | 1977 | 48         | 12.        | 3.            | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 35         | 21.        | 3.            | * |
|                 |                   | 430640001    | F02        | GRANT CO               | 7           | 01           | 1978 | 32         | 16.        | 4.            | * |
|                 |                   | 430760001    | F03        | HARDING CO             | 7           | 01           | 1977 | 17         | 65.        | 13.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 22         | 12.        | 5.            | * |
|                 |                   | 431340001    | F01        | PIERRE                 | 7           | 01           | 1977 | 18         | 31.        | 17.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 45         | 33.        | 14.           | * |
|                 |                   | 431380001    | F01        | RAPID CITY             | 7           | 01           | 1977 | 15         | 73.        | 39.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 42         | 62.        | 20.           | * |
|                 |                   | 431480002    | F01        | SIOUX FALLS            | 7           | 01           | 1977 | 19         | 47.        | 27.           | * |
|                 |                   |              |            |                        | 7           | 01           | 1978 | 30         | 32.        | 18.           | * |

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| POL-PTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | TNT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 460060001    | F01        | BLOUNTIFUL       | 7           | 01           | 1977 | 334        | 396.       | 72.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 333        | 182.       | 60.           |   |
|                 |                   | 460140001    | F02        | CARBON CO        | 7           | 01           | 1977 | 257        | 144.       | 39.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 176        | 93.        | 37.           |   |
|                 |                   | 460160001    | F01        | CEDAR CITY       | 7           | 01           | 1977 | 252        | 151.       | 55.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 333        | 262.       | 56.           |   |
|                 |                   | 460280001    | K03        | EMERY CO         | 7           | 01           | 1977 | 85         | 83.        | 24.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 19         | 58.        | 20.           | * |
|                 |                   | 460280003    | K03        | EMERY CO         | 7           | 01           | 1977 | 76         | 75.        | 26.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 22         | 41.        | 20.           | * |
|                 |                   | 460280004    | F02        | EMERY CO         | 7           | 01           | 1977 | 189        | 665.       | 59.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 268        | 170.       | 47.           |   |
|                 |                   | 460300002    | K03        | GARFIELD CO      | 7           | 01           | 1977 | 140        | 294.       | 70.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 26         | 36.        | 18.           | * |
|                 |                   | 460300003    | K03        | GARFIELD CO      | 7           | 01           | 1977 | 120        | 153.       | 47.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 17         | 24.        | 7.            | * |
|                 |                   | 460380001    | F03        | JUAB CO          | 7           | 01           | 1978 | 190        | 126.       | 38.           | * |
|                 |                   | 460400001    | F01        | KANE CO          | 7           | 01           | 1977 | 326        | 423.       | 26.           |   |
|                 |                   | 460400002    | F03        | KANE CO          | 7           | 01           | 1977 | 340        | 661.       | 32.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 156        | 186.       | 16.           |   |
|                 |                   | 460400003    | K03        | KANE CO          | 7           | 01           | 1977 | 133        | 176.       | 23.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 19         | 54.        | 12.           | * |
|                 |                   | 460440001    | F01        | KEARNS           | 7           | 01           | 1977 | 108        | 475.       | 106.          | * |
|                 |                   | 460480001    | F01        | LEHI             | 7           | 01           | 1977 | 284        | 470.       | 85.           |   |
|                 |                   | 460520001    | F02        | MAGNA            | 7           | 01           | 1977 | 345        | 576.       | 99.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 340        | 535.       | 70.           |   |
|                 |                   | 460520902    | P02        | MAGNA            | 7           | 01           | 1977 | 15         | 198.       | 93.           | * |
|                 |                   | 460560001    | F05        | MILLARD CO       | 7           | 01           | 1977 | 136        | 242.       | 80.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 139        | 276.       | 93.           | * |
|                 |                   | 460680001    | F01        | OGDEN            | 7           | 01           | 1977 | 348        | 524.       | 94.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 288        | 281.       | 87.           | * |
|                 |                   | 460680001    | P01        | OGDEN            | 7           | 01           | 1977 | 45         | 175.       | 81.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 54         | 178.       | 83.           |   |
|                 |                   | 460700001    | F01        | ORFM             | 7           | 01           | 1977 | 243        | 442.       | 95.           | * |
|                 |                   | 460760001    | F01        | PLEASANT GROVE   | 7           | 01           | 1977 | 346        | 436.       | 94.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 328        | 242.       | 81.           |   |
|                 |                   | 460780001    | F01        | PRICE            | 7           | 01           | 1977 | 333        | 406.       | 80.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 191        | 303.       | 71.           | * |
|                 |                   | 460800001    | F01        | PROVO            | 7           | 01           | 1977 | 332        | 897.       | 93.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 327        | 254.       | 85.           |   |
|                 |                   | 460900001    | P02        | SALT LAKE CO     | 7           | 01           | 1977 | 14         | 330.       | 114.          | * |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 7           | 01           | 1977 | 349        | 473.       | 122.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 344        | 284.       | 103.          |   |
|                 |                   | 460920001    | P01        | SALT LAKE CITY   | 7           | 01           | 1977 | 45         | 281.       | 102.          |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 261.       | 99.           |   |
|                 |                   | 460920004    | F01        | SALT LAKE CITY   | 7           | 01           | 1977 | 313        | 414.       | 98.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 286        | 411.       | 76.           |   |
|                 |                   | 460960001    | K03        | SAN JUAN CO      | 7           | 01           | 1977 | 115        | 310.       | 7             |   |

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STATE INVENTORY BY POLLUTANT  
UTAH

| POL-UTL<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 460960001    | K03        | SAN JUAN CO      | 7           | 01           | 1978 | 17         | 15.        | 7.            | * |
|                 |                   | 460960002    | K03        | SAN JUAN CO      | 7           | 01           | 1977 | 123        | 220.       | 33.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 21         | 124.       | 17.           | * |
|                 |                   | 460960003    | K03        | SAN JUAN CO      | 7           | 01           | 1977 | 125        | 346.       | 38.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 27.        | 13.           | * |
|                 |                   | 461160001    | F01        | TOOELE           | 7           | 01           | 1977 | 322        | 1799.      | 58.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 338        | 207.       | 51.           |   |
|                 |                   | 461200001    | F01        | UINTAH CO        | 7           | 01           | 1977 | 93         | 190.       | 36.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 340        | 105.       | 35.           |   |
|                 |                   | 461200003    | J03        | UINTAH CO        | 7           | 01           | 1977 | 3          | 20.        | 15.           | * |
|                 |                   | 461200004    | J03        | UINTAH CO        | 7           | 01           | 1977 | 3          | 15.        | 13.           | * |
|                 |                   | 461200006    | J03        | UINTAH CO        | 7           | 01           | 1977 | 2          | 31.        | 27.           | * |
|                 |                   | 461200007    | J03        | UINTAH CO        | 7           | 01           | 1977 | 3          | 22.        | 18.           | * |
|                 |                   | 461220001    | F01        | UTAH CO          | 7           | 01           | 1977 | 288        | 416.       | 95.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 337        | 271.       | 88.           |   |
|                 |                   | 461220002    | F01        | UTAH CO          | 7           | 01           | 1977 | 210        | 272.       | 69.           | * |
|                 |                   | 461220003    | F02        | UTAH CO          | 7           | 01           | 1977 | 240        | 245.       | 98.           | * |
|                 |                   | 461280001    | K03        | WASHINGTON CO    | 7           | 01           | 1977 | 136        | 170.       | 29.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 17.        | 8.            | * |
|                 |                   | 461280002    | K03        | WASHINGTON CO    | 7           | 01           | 1977 | 140        | 96.        | 25.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 26         | 15.        | 6.            | * |
|                 |                   | 461280003    | F02        | WASHINGTON CO    | 7           | 01           | 1977 | 229        | 175.       | 40.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 155        | 193.       | 26.           | * |
| 1110192         | PARTICULATE       | 460900001    | P02        | SALT LAKE CO     | 7           | 01           | 1977 | 1          | 54.        | 54.           | * |
| 4210111         | CARBON MONOXIDE   | 460060001    | F01        | BOUNTIFUL        | 1           | 07           | 1977 | 5018       | 27.0       | 1.8           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7630       | 18.0       | 1.2           |   |
|                 |                   | 460520001    | F02        | MAGNA            | 1           | 07           | 1977 | 5546       | 10.0       | 1.0           | * |
|                 |                   | 460680001    | F01        | OGDEN            | 1           | 07           | 1977 | 7909       | 21.0       | 2.6           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8144       | 19.0       | 1.8           |   |
|                 |                   | 460800001    | F01        | PROVO            | 1           | 07           | 1977 | 8580       | 25.0       | 3.0           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 6162       | 23.0       | 2.3           | * |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1977 | 8455       | 31.0       | 2.8           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8247       | 27.0       | 2.4           |   |
|                 |                   | 461220001    | F01        | UTAH CO          | 1           | 07           | 1977 | 2197       | 11.0       | .7            | * |
| 4210121         | CARBON MONOXIDE   | 461200006    | J03        | UINTAH CO        | 1           | 07           | 1977 | 360        | .9         | .3            | * |
| 4240113         | SULFUR DIOXIDE    | 460160001    | F01        | CEDAR CITY       | 1           | 07           | 1977 | 6247       | .63        | .03           | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3632       | .42        | .03           | * |
|                 |                   | 460440001    | F01        | KEARNS           | 1           | 07           | 1977 | 2474       | .51        | .02           | * |
|                 |                   | 460480001    | F01        | LEHI             | 1           | 07           | 1977 | 4861       | .10        | .01           | * |
|                 |                   | 461160001    | F01        | TOOELE           | 1           | 07           | 1977 | 6726       | 1.24       | .02           |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7132       | .68        | .01           |   |
| 4240114         | SULFUR DIOXIDE    | 460520002    | A05        | MAGNA            | 1           | 07           | 1977 | 1808       | 1.600      | .134          | * |
|                 |                   | 460900001    | P02        | SALT LAKE CO     | 1           | 07           | 1977 | 2016       | 2.540      | .093          | * |
| 4240116         | SULFUR DIOXIDE    | 460060001    | F01        | BOUNTIFUL        | 1           | 07           | 1977 | 7629       | .450       | .013          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8217       | .200       | .007          |   |
|                 |                   | 460140001    | F02        | CARBON CO        | 1           | 07           | 1977 | 7794       | .050       | .001          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3901       | .030       | .002          | * |
|                 |                   | 460280004    | F02        | ENERGY CO        | 1           | 07           | 1977 | 3761       | .010       | .001          | * |

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 STATE INVENTORY BY POLLUTANT  
 UTAH

| POL-INT<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4240116         | SULFUR DIOXIDE    | 460280004    | F02        | EMERY CO         | 1           | 07           | 1978 | 6002       | .090       | .002          | * |
|                 |                   | 460380001    | F03        | JUAB CO          | 1           | 07           | 1978 | 3379       | .010       | .001          | * |
|                 |                   | 460400002    | F03        | KANE CO          | 1           | 07           | 1977 | 651        | .001       | .001          | * |
|                 |                   | 460520001    | F02        | MAGNA            | 1           | 07           | 1977 | 6192       | .930       | .052          | * |
|                 |                   | 460680001    | F01        | OGDEN            | 1           | 07           | 1977 | 8613       | .110       | .004          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7693       | .040       | .002          |   |
|                 |                   | 460780001    | F01        | PRICE            | 1           | 07           | 1977 | 5081       | .050       | .004          | * |
|                 |                   | 460800001    | F01        | PROVO            | 1           | 07           | 1977 | 6252       | .120       | .007          | * |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1977 | 6464       | .260       | .012          | * |
|                 |                   | 461200001    | F01        | UINTAH CO        | 1           | 07           | 1977 | 1553       | .001       | .001          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7202       | .010       | .001          |   |
|                 |                   | 461200003    | J03        | UINTAH CO        | 1           | 08           | 1977 | 342        | 2.         | 1.            | * |
|                 |                   | 461200004    | J03        | UINTAH CO        | 1           | 08           | 1977 | 340        | 5.         | 1.            | * |
|                 |                   | 461200006    | J03        | UINTAH CO        | 1           | 08           | 1977 | 1058       | 1.         | 1.            | * |
|                 |                   | 461200007    | J03        | UINTAH CO        | 1           | 08           | 1977 | 339        | 4.         | 1.            | * |
|                 |                   | 461220001    | F01        | UTAH CO          | 1           | 07           | 1977 | 5730       | .080       | .003          | * |
|                 |                   | 461280003    | F02        | WASHINGTON CO    | 1           | 07           | 1977 | 5702       | .010       | .001          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2621       | .020       | .001          | * |
| 4240120         | SULFUR DIOXIDE    | 460280005    | F03        | EMERY CO         | 1           | 07           | 1978 | 751        | .010       | .001          | * |
|                 |                   | 460400002    | F03        | KANE CO          | 1           | 07           | 1977 | 1457       | .060       | .002          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3007       | .030       | .001          | * |
|                 |                   | 460520001    | F02        | MAGNA            | 1           | 07           | 1977 | 2200       | 1.130      | .107          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8624       | 1.030      | .036          |   |
|                 |                   | 460560002    | F03        | MILLARD CO       | 1           | 07           | 1978 | 3572       | .050       | .001          | * |
|                 |                   | 460780001    | F01        | PRICE            | 1           | 07           | 1977 | 2161       | .060       | .006          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 5038       | .070       | .004          | * |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1977 | 2181       | .230       | .015          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 6113       | .120       | .007          | * |
| 4240191         | SULFUR DIOXIDE    | 460920001    | P01        | SALT LAKE CITY   | 7           | 01           | 1977 | 58         | 163.       | 22.           |   |
| 4260214         | NITROGEN DIOXIDE  | 460060001    | F01        | ROUTIFUL         | 1           | 07           | 1977 | 8716       | .200       | .024          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7680       | .150       | .020          |   |
|                 |                   | 460140001    | F02        | CARBON CO        | 1           | 07           | 1977 | 1561       | .040       | .007          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3990       | .040       | .007          | * |
|                 |                   | 460280004    | F02        | EMERY CO         | 1           | 07           | 1977 | 4959       | .040       | .005          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 7586       | .040       | .006          |   |
|                 |                   | 460280005    | F03        | EMERY CO         | 1           | 07           | 1978 | 980        | .040       | .008          | * |
|                 |                   | 460380001    | F03        | JUAB CO          | 1           | 07           | 1978 | 4171       | .030       | .005          | * |
|                 |                   | 460400002    | F03        | KANE CO          | 1           | 07           | 1977 | 999        | .030       | .003          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 3158       | .020       | .003          | * |
|                 |                   | 460520001    | F02        | MAGNA            | 1           | 07           | 1977 | 8361       | .120       | .016          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8500       | .100       | .014          |   |
|                 |                   | 460560002    | F03        | MILLARD CO       | 1           | 07           | 1978 | 2982       | .040       | .003          | * |
|                 |                   | 460680001    | F01        | OGDEN            | 1           | 07           | 1977 | 8478       | .180       | .029          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 4738       | .110       | .027          | * |
|                 |                   | 460800001    | F01        | PROVO            | 1           | 07           | 1977 | 7910       | .110       | .025          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 2808       | .090       | .022          | * |
|                 |                   | 460920001    | AGS        | SALT LAKE CITY   | 1           | 07           | 1977 | 2919       | .250       | .044          | * |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1977 | 7904       | .250       |               |   |

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| POL-INT<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4260214         | NITROGEN DIOXIDE  | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1978 | 5900       | .140       | .035          | * |
|                 |                   | 461200001    | F01        | UINTAH CO        | 1           | 07           | 1977 | 1788       | .050       | .009          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 4167       | .080       | .010          | * |
|                 |                   | 461200006    | J03        | UINTAH CO        | 1           | 07           | 1977 | 311        | .006       | .003          | * |
|                 |                   | 461220001    | F01        | UTAH CO          | 1           | 07           | 1977 | 8604       | .080       | .013          |   |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 8283       | .070       | .013          |   |
|                 |                   | 461280003    | F02        | WASHINGTON CO    | 1           | 07           | 1977 | 6154       | .030       | .003          | * |
|                 |                   |              |            |                  | 1           | 07           | 1978 | 1922       | .020       | .003          | * |
| 4260284         | NITROGEN DIOXIDE  | 460920001    | P01        | SALT LAKE CITY   | 7           | 01           | 1977 | 53         | 119.       | 44.           |   |
| 4310111         | TOTAL HYDROCARBON | 461200006    | J03        | UINTAH CO        | 1           | 07           | 1977 | 360        | 4.3        | 2.0           | * |
| 4420111         | OZONE             | 460060001    | F01        | BOUNTIFUL        | 1           | 07           | 1977 | 8614       | .145       | .025          |   |
|                 |                   |              |            |                  | 1           | 08           | 1978 | 8688       | 214.       | 29.           |   |
|                 |                   | 460520001    | F02        | MAGNA            | 1           | 07           | 1977 | 1303       | .037       | .009          | * |
|                 |                   | 460680001    | F01        | OGDEN            | 1           | 07           | 1977 | 4797       | .115       | .020          | * |
|                 |                   |              |            |                  | 1           | 08           | 1978 | 6511       | 128.       | 29.           | * |
|                 |                   | 460800001    | F01        | PROVO            | 1           | 07           | 1977 | 8672       | .107       | .019          |   |
|                 |                   |              |            |                  | 1           | 08           | 1978 | 8438       | 144.       | 22.           |   |
|                 |                   | 460920001    | F01        | SALT LAKE CITY   | 1           | 07           | 1977 | 8311       | .117       | .020          |   |
|                 |                   |              |            |                  | 1           | 08           | 1978 | 7957       | 244.       | 29.           |   |
|                 |                   | 461200006    | J03        | UINTAH CO        | 1           | 07           | 1977 | 349        | .050       | .028          | * |
|                 |                   | 461220001    | F01        | UTAH CO          | 1           | 07           | 1977 | 8554       | .079       | .021          |   |
|                 |                   |              |            |                  | 1           | 08           | 1978 | 4453       | 86.        | 27.           | * |

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 NYOLING

| POL-RTN<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 520040001    | F01        | BIG HORN CO      | 7           | 01           | 1977 | 43         | 120.       | 42.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 57         | 210.       | 47.           |   |
|                 |                   | 520060001    | F03        | BUFFALO          | 7           | 01           | 1977 | 30         | 27.        | 10.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 45         | 37.        | 14.           |   |
|                 |                   | 520080001    | F03        | CAMPBELL CO      | 7           | 01           | 1977 | 8          | 35.        | 24.           | * |
|                 |                   | 520080002    | F03        | CAMPBELL CO      | 7           | 01           | 1977 | 43         | 91.        | 27.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 80.        | 20.           | * |
|                 |                   | 520100003    | F03        | CARRON CO        | 7           | 01           | 1978 | 7          | 136.       | 47.           | * |
|                 |                   | 520120001    | F01        | CASPER           | 7           | 01           | 1977 | 60         | 164.       | 67.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 10         | 179.       | 74.           | * |
|                 |                   | 520140001    | F01        | CHEYENNE         | 7           | 01           | 1977 | 57         | 84.        | 42.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 61         | 134.       | 46.           |   |
|                 |                   | 520160001    | F01        | CODY             | 7           | 01           | 1977 | 33         | 189.       | 39.           | * |
|                 |                   | 520180001    | F03        | CONVERSE CO      | 7           | 01           | 1977 | 52         | 98.        | 35.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 27         | 53.        | 22.           | * |
|                 |                   | 520180006    | F03        | CONVERSE CO      | 7           | 01           | 1977 | 52         | 72.        | 14.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 44         | 68.        | 18.           | * |
|                 |                   | 520200001    | F01        | CROOK CO         | 7           | 01           | 1977 | 8          | 78.        | 47.           | * |
|                 |                   | 520200002    | F03        | CROOK CO         | 7           | 01           | 1977 | 57         | 48.        | 13.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 55         | 48.        | 14.           |   |
|                 |                   | 520220002    | F01        | DOUGLAS          | 7           | 01           | 1977 | 33         | 152.       | 27.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 12         | 22.        | 10.           | * |
|                 |                   | 520220002    | F03        | DOUGLAS          | 7           | 01           | 1978 | 52         | 118.       | 26.           |   |
|                 |                   | 520240001    | F01        | EVANSTON         | 7           | 01           | 1977 | 51         | 167.       | 62.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 42         | 137.       | 61.           |   |
|                 |                   | 520260001    | F03        | FRERONT CO       | 7           | 01           | 1978 | 2          | 3.         | 2.            | * |
|                 |                   | 520280002    | F01        | GILLETTE         | 7           | 01           | 1978 | 13         | 176.       | 64.           | * |
|                 |                   | 520300001    | F03        | GOSHEN CO        | 7           | 01           | 1977 | 32         | 43.        | 15.           | * |
|                 |                   | 520300002    | F03        | GOSHEN CO        | 7           | 01           | 1977 | 31         | 35.        | 16.           | * |
|                 |                   | 520300003    | F03        | GOSHEN CO        | 7           | 01           | 1977 | 58         | 109.       | 33.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 57         | 119.       | 29.           |   |
|                 |                   | 520320001    | F01        | GREEN RIVER      | 7           | 01           | 1977 | 43         | 100.       | 44.           | * |
|                 |                   | 520360001    | F03        | JOHNSON CO       | 7           | 01           | 1977 | 57         | 38.        | 9.            |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 50         | 27.        | 9.            |   |
|                 |                   | 520400005    | F01        | LARAMIE          | 7           | 01           | 1977 | 53         | 85.        | 40.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 53         | 119.       | 41.           |   |
|                 |                   | 520440002    | F01        | LINCOLN CO       | 7           | 01           | 1977 | 59         | 142.       | 29.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 15         | 44.        | 21.           | * |
|                 |                   | 520440002    | F03        | LINCOLN CO       | 7           | 01           | 1978 | 58         | 110.       | 35.           |   |
|                 |                   | 520440003    | F03        | LINCOLN CO       | 7           | 01           | 1977 | 16         | 39.        | 19.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 17         | 53.        | 28.           | * |
|                 |                   | 520480001    | F01        | NEWCASTLE        | 7           | 01           | 1977 | 55         | 75.        | 26.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 13         | 31.        | 12.           | * |
|                 |                   | 520480001    | F03        | NEWCASTLE        | 7           | 01           | 1978 | 29         | 58.        | 23.           | * |
|                 |                   | 520480002    | F01        | NEWCASTLE        | 7           | 01           | 1978 | 22         | 109.       | 41.           | * |
|                 |                   | 520500001    | F03        | WYOMING          | 7           | 01           | 1977 | 12         | 24.        | 11.           | * |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 49         | 56.        |               |   |
|                 |                   | 520520002    | F01        | PARK CO          | 7           | 01           | 1977 | 49         | 92.        |               |   |

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WYOMING

| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 520520002    | F03        | PARK CO          | 7           | 01           | 1978 | 51         | 328.       | 23.           |   |
|                 |                   | 520540001    | F03        | PLATTE CO        | 7           | 01           | 1977 | 50         | 99.        | 16.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 31         | 31.        | 15.           | * |
|                 |                   | 520580001    | F01        | RAWLINS          | 7           | 01           | 1977 | 55         | 49.        | 23.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 15         | 29.        | 13.           | * |
|                 |                   | 520580001    | F03        | RAWLINS          | 7           | 01           | 1978 | 34         | 67.        | 19.           | * |
|                 |                   | 520600001    | F01        | RIVERTON         | 7           | 01           | 1977 | 56         | 79.        | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 91.        | 40.           |   |
|                 |                   | 520620001    | F01        | ROCK SPRINGS     | 7           | 01           | 1977 | 44         | 220.       | 94.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 61         | 360.       | 130.          |   |
|                 |                   | 520620002    | F01        | ROCK SPRINGS     | 7           | 01           | 1977 | 61         | 127.       | 52.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 42         | 151.       | 60.           | * |
|                 |                   | 520620003    | F01        | ROCK SPRINGS     | 7           | 01           | 1977 | 55         | 260.       | 61.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 60         | 338.       | 61.           |   |
|                 |                   | 520660001    | F01        | SHERIDAN CO      | 7           | 01           | 1977 | 31         | 197.       | 22.           | * |
|                 |                   | 520660002    | F01        | SHERIDAN CO      | 7           | 01           | 1977 | 54         | 200.       | 28.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 13         | 55.        | 29.           | * |
|                 |                   | 520660002    | F03        | SHERIDAN CO      | 7           | 01           | 1978 | 57         | 94.        | 29.           |   |
|                 |                   | 520680001    | F01        | SURLETTE CO      | 7           | 01           | 1977 | 60         | 62.        | 11.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 12         | 8.         | 5.            | * |
|                 |                   | 520680001    | F03        | SURLETTE CO      | 7           | 01           | 1978 | 54         | 36.        | 13.           |   |
|                 |                   | 520700001    | F01        | SWEETWATER CO    | 7           | 01           | 1977 | 58         | 102.       | 37.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 55         | 121.       | 38.           |   |
|                 |                   | 520700007    | F01        | SWEETWATER CO    | 7           | 01           | 1977 | 56         | 45.        | 18.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 12         | 17.        | 11.           | * |
|                 |                   | 520700007    | F03        | SWEETWATER CO    | 7           | 01           | 1978 | 30         | 39.        | 17.           | * |
|                 |                   | 520700007    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 9          | 27.        | 20.           | * |
|                 |                   | 520700008    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 9          | 35.        | 23.           | * |
|                 |                   | 520700009    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 7          | 29.        | 21.           | * |
|                 |                   | 520700010    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 10         | 25.        | 20.           | * |
|                 |                   | 520700011    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 5          | 43.        | 30.           | * |
|                 |                   | 520700012    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 3          | 18.        | 15.           | * |
|                 |                   | 520700013    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 5          | 109.       | 65.           | * |
|                 |                   | 520700014    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 6          | 35.        | 21.           | * |
|                 |                   | 520700015    | J02        | SWEETWATER CO    | 7           | 01           | 1977 | 6          | 38.        | 23.           | * |
|                 |                   | 520700016    | F03        | SWEETWATER CO    | 7           | 01           | 1977 | 57         | 116.       | 21.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 52         | 63.        | 22.           |   |
|                 |                   | 520720001    | F01        | TETON CO         | 7           | 01           | 1977 | 52         | 51.        | 11.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 12         | 16.        | 6.            | * |
|                 |                   | 520720001    | F03        | TETON CO         | 7           | 01           | 1978 | 44         | 42.        | 11.           |   |
|                 |                   | 520740001    | F01        | THERMOPOLIS      | 7           | 01           | 1977 | 59         | 58.        | 23.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 10         | 33.        | 17.           | * |
|                 |                   | 520740001    | F01        | THERMOPOLIS      | 7           | 01           | 1978 | 10         | 33.        | 17.           | * |
|                 |                   | 520760001    | F01        | TORRINGTON       | 7           | 01           | 1977 | 48         | 83.        | 34.           |   |
|                 |                   |              |            |                  | 7           | 01           | 1978 | 14         | 43.        | 22.           | * |
|                 |                   | 520760001    | F03        | TORRINGTON       | 7           | 01           | 1978 | 30         | 64.        | 27.           | * |
|                 |                   | 520800001    | F01        | WASHAKIE CO      | 7           | 01           | 1977 | 21         | 12.        | 4.            | * |
|                 |                   | 520820001    | F03        | WYOMING CO       | 7           | 01           | 1977 | 45         | 140.       | 21.           |   |

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 WYOMING

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|-----------------|-------------------|--------------|------------|----------------------|-------------|--------------|------|------------|------------|---------------|---|
| 1110191         | PARTICULATE       | 520820001    | F03        | WESTON CO            | 7           | 01           | 1978 | 27         | 46.        | 17.           | * |
|                 |                   | 520830001    | F01        | WHEATLAND            | 7           | 01           | 1977 | 47         | 79.        | 31.           |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 53         | 194.       | 44.           |   |
|                 |                   | 520840001    | F01        | WORLDAND             | 7           | 01           | 1977 | 59         | 98.        | 42.           |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 58         | 105.       | 46.           |   |
|                 |                   | 520860001    | P03        | YELLOWSTONE NAT PARK | 7           | 01           | 1977 | 37         | 31.        | 12.           | * |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 12         | 533.       | 52.           | * |
| 4240111         | SULFUR DIOXIDE    | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1978 | 1144       | .03        | .01           | * |
| 4240116         | SULFUR DIOXIDE    | 520180006    | F03        | CONVERSE CO          | 1           | 07           | 1977 | 8437       | .050       | .001          |   |
|                 |                   |              |            |                      | 1           | 07           | 1978 | 4965       | .040       | .001          | * |
|                 |                   | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1977 | 8558       | .130       | .001          | * |
|                 |                   |              |            |                      | 1           | 07           | 1978 | 5134       | .150       | .001          | * |
| 4240191         | SULFUR DIOXIDE    | 520080001    | F03        | CAMPBELL CO          | 7           | 01           | 1977 | 10         | 3.         | 3.            | * |
|                 |                   | 520120001    | F01        | CASPER               | 7           | 01           | 1977 | 58         | 23.        | 4.            |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 15         | 28.        | 8.            | * |
|                 |                   | 520140001    | F01        | CHEYENNE             | 7           | 01           | 1977 | 57         | 21.        | 4.            |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 15         | 6.         | 3.            | * |
|                 |                   | 520180004    | F03        | CONVERSE CO          | 7           | 01           | 1977 | 41         | 3.         | 3.            | * |
|                 |                   | 520220002    | F01        | DOUGLAS              | 7           | 01           | 1978 | 10         | 3.         | 3.            | * |
|                 |                   | 520220002    | F03        | DOUGLAS              | 7           | 01           | 1978 | 10         | 3.         | 3.            | * |
|                 |                   | 520300001    | F03        | GOSHEN CO            | 7           | 01           | 1977 | 30         | 3.         | 3.            | * |
|                 |                   | 520440003    | F03        | LINCOLN CO           | 7           | 01           | 1977 | 16         | 3.         | 3.            | * |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 4          | 3.         | 3.            | * |
|                 |                   | 520500001    | F03        | NIOBRARA CO          | 7           | 01           | 1977 | 13         | 3.         | 3.            | * |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 12         | 3.         | 3.            | * |
|                 |                   | 520540001    | F03        | PLATTE CO            | 7           | 01           | 1977 | 58         | 6.         | 3.            |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 13         | 3.         | 3.            | * |
|                 |                   | 520620001    | F01        | ROCK SPRINGS         | 7           | 01           | 1977 | 44         | 6.         | 3.            | * |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 15         | 7.         | 3.            | * |
|                 |                   | 520700008    | J02        | SWEETWATER CO        | 7           | 01           | 1977 | 4          | 3.         | 3.            | * |
|                 |                   | 520700009    | J02        | SWEETWATER CO        | 7           | 01           | 1977 | 3          | 3.         | 3.            | * |
|                 |                   | 520820001    | F03        | WESTON CO            | 7           | 01           | 1977 | 54         | 13.        | 3.            |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 14         | 3.         | 3.            | * |
|                 |                   | 520860001    | P03        | YELLOWSTONE NAT PARK | 7           | 01           | 1977 | 51         | 3.         | 3.            |   |
| 4240197         | SULFUR DIOXIDE    | 520120001    | F01        | CASPER               | 7           | 01           | 1978 | 3          | 3.         | 3.            | * |
|                 |                   | 520140001    | F01        | CHEYENNE             | 7           | 01           | 1978 | 30         | 6.         | 3.            | * |
|                 |                   | 520220002    | F03        | DOUGLAS              | 7           | 01           | 1978 | 27         | 3.         | 3.            | * |
|                 |                   | 520280002    | F01        | GILLETTE             | 7           | 01           | 1978 | 21         | 3.         | 3.            | * |
|                 |                   | 520480002    | F01        | NEWCASTLE            | 7           | 01           | 1978 | 16         | 16.        | 4.            | * |
|                 |                   | 520500001    | F03        | NIOBRARA CO          | 7           | 01           | 1978 | 30         | 3.         | 3.            | * |
| 4260211         | NITROGEN DIOXIDE  | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1978 | 1208       | .08        | .01           | * |
| 4260214         | NITROGEN DIOXIDE  | 520180006    | F03        | CONVERSE CO          | 1           | 07           | 1977 | 8491       | .030       | .003          |   |
|                 |                   |              |            |                      | 1           | 07           | 1978 | 1713       | .040       | .003          | * |
|                 |                   | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1977 | 4452       | .080       | .005          | * |
|                 |                   |              |            |                      | 1           | 07           | 1978 | 2276       | .080       | .005          | * |
| 4260244         | NITROGEN DIOXIDE  | 520080001    | F03        | CAMPBELL CO          | 7           | 01           | 1977 | 10         | 10.        | 4.            | * |
|                 |                   | 520120001    | F01        | CASPER               | 7           | 01           | 1977 | 59         | 48.        | 1             |   |
|                 |                   |              |            |                      | 7           | 01           | 1978 | 24         | 62.        | 26.           | * |

\*\* DENOTES A VALUE DERIVED FROM DATA WHICH DO NOT MEET SARNOAD SUMMARIZATION CRITERIA OF OARPS GUIDELINE 1.2-040, VOL 3, SEC 2.3.0

10-11-79

NATIONAL AEROMETRIC DATA BANK  
STATE INVENTORY BY POLLUTANT  
WYOMING

PAGE 52-0025

| POL-MTH<br>CODE | POLLUTANT<br>NAME | SITE<br>CODE | AG/<br>PRJ | LOCATION<br>NAME     | INT<br>CODE | UNIT<br>CODE | YEAR | NUM<br>OBS | MAX<br>OBS | ARITH<br>MEAN |   |
|-----------------|-------------------|--------------|------------|----------------------|-------------|--------------|------|------------|------------|---------------|---|
| 4260284         | NITROGEN DIOXIDE  | 520140001    | F01        | CHEYENNE             | 7           | 01           | 1977 | 53         | 61.        | 26.           |   |
|                 |                   | 520180004    | F03        | CONVERSE CO          | 7           | 01           | 1978 | 59         | 41.        | 21.           |   |
|                 |                   | 520220002    | F01        | DOUGLAS              | 7           | 01           | 1977 | 40         | 17.        | 6.            | * |
|                 |                   | 520220002    | F03        | DOUGLAS              | 7           | 01           | 1978 | 10         | 8.         | 4.            | * |
|                 |                   | 520280002    | F01        | GILLETTE             | 7           | 01           | 1978 | 50         | 10.        | 4.            |   |
|                 |                   | 520280002    | F01        | GILLETTE             | 7           | 01           | 1978 | 20         | 23.        | 12.           | * |
|                 |                   | 520300001    | F03        | GOSHEN CO            | 7           | 01           | 1977 | 32         | 31.        | 6.            | * |
|                 |                   | 520440003    | F03        | LINCOLN CO           | 7           | 01           | 1977 | 15         | 3.         | 3.            | * |
|                 |                   | 520480002    | F01        | NEWCASTLE            | 7           | 01           | 1978 | 11         | 25.        | 10.           | * |
|                 |                   | 520500001    | F03        | NIOBRARA CO          | 7           | 01           | 1978 | 21         | 18.        | 6.            | * |
|                 |                   | 520500001    | F03        | NIOBRARA CO          | 7           | 01           | 1977 | 13         | 6.         | 3.            | * |
|                 |                   | 520540001    | F03        | PLATTE CO            | 7           | 01           | 1978 | 54         | 9.         | 5.            |   |
|                 |                   | 520540001    | F03        | PLATTE CO            | 7           | 01           | 1977 | 58         | 9.         | 3.            |   |
|                 |                   | 520620001    | F01        | ROCK SPRINGS         | 7           | 01           | 1978 | 40         | 15.        | 6.            | * |
|                 |                   | 520620001    | F01        | ROCK SPRINGS         | 7           | 01           | 1977 | 45         | 51.        | 26.           | * |
|                 |                   | 520820001    | F03        | WESTON CO            | 7           | 01           | 1978 | 61         | 58.        | 29.           |   |
|                 |                   | 520820001    | F03        | WESTON CO            | 7           | 01           | 1977 | 51         | 21.        | 5.            |   |
|                 |                   | 520860001    | P03        | YELLOWSTONE NAT PARK | 7           | 01           | 1978 | 30         | 17.        | 6.            | * |
|                 |                   | 520860001    | P03        | YELLOWSTONE NAT PARK | 7           | 01           | 1977 | 51         | 6.         | 3.            |   |
|                 |                   | 520860001    | P03        | YELLOWSTONE NAT PARK | 7           | 01           | 1978 | 13         | 36.        | 7.            | * |
| 4420111         | OZONE             | 520180006    | F03        | CONVERSE CO          | 1           | 07           | 1977 | 2912       | .110       | .025          | * |
|                 |                   | 520180006    | F03        | CONVERSE CO          | 1           | 07           | 1978 | 5344       | .070       | .035          | * |
|                 |                   | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1977 | 3185       | .060       | .022          | * |
|                 |                   | 520700016    | F03        | SWEETWATER CO        | 1           | 07           | 1978 | 5517       | .070       | .027          | * |

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# **TECHNICAL REPORT DATA**

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| 1. REPORT NO.<br>EPA-908/2-79-001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | 2.                                                                                                 |  | 3. RECIPIENT'S ACCESSION NO.                   |  |
| 4. TITLE AND SUBTITLE<br>Water and Air Quality Trends in Region VIII<br>(1978 Data)<br>U.S. Environmental Protection Agency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                    |  | 5. REPORT DATE<br>October 1979                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                    |  | 6. PERFORMING ORGANIZATION CODE                |  |
| 7. AUTHOR(S)<br>Thomas A. Entzminger, Richard Sotiros,<br>William H. Tabor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                    |  | 8. PERFORMING ORGANIZATION REPORT NO.          |  |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS<br>U.S. Environmental Protection Agency<br>Surveillance and Analysis Division<br>1860 Lincoln Street<br>Denver, Colorado 80295                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                    |  | 10. PROGRAM ELEMENT NO.                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                    |  | 11. CONTRACT/GRANT NO.                         |  |
| 12. SPONSORING AGENCY NAME AND ADDRESS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                    |  | 13. TYPE OF REPORT AND PERIOD COVERED<br>Final |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                    |  | 14. SPONSORING AGENCY CODE                     |  |
| 15. SUPPLEMENTARY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                    |  |                                                |  |
| 16. ABSTRACT<br><p>Water and air quality trends and status for the calendar year 1978 were determined for the six states in Region VIII. These states include Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming. Data resident in EPA national data banks (STORET, SAROAD) were analyzed.</p> <p>Statistical tests which detect significant differences between two populations were utilized to show trends in both air and water quality. The status and severity of stream pollutants were determined by relating parameter concentrations to Water Quality Indicator (WQI) values on a numerical scale from 0 to 100. The status and severity of air pollutants reported continues to be a direct measure of air quality standard and alert level exceedences.</p> |  |                                                                                                    |  |                                                |  |
| 17. KEY WORDS AND DOCUMENT ANALYSIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                                    |  |                                                |  |
| a. DESCRIPTORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | b. IDENTIFIERS/OPEN ENDED TERMS                                                                    |  | c. COSATI Field/Group                          |  |
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