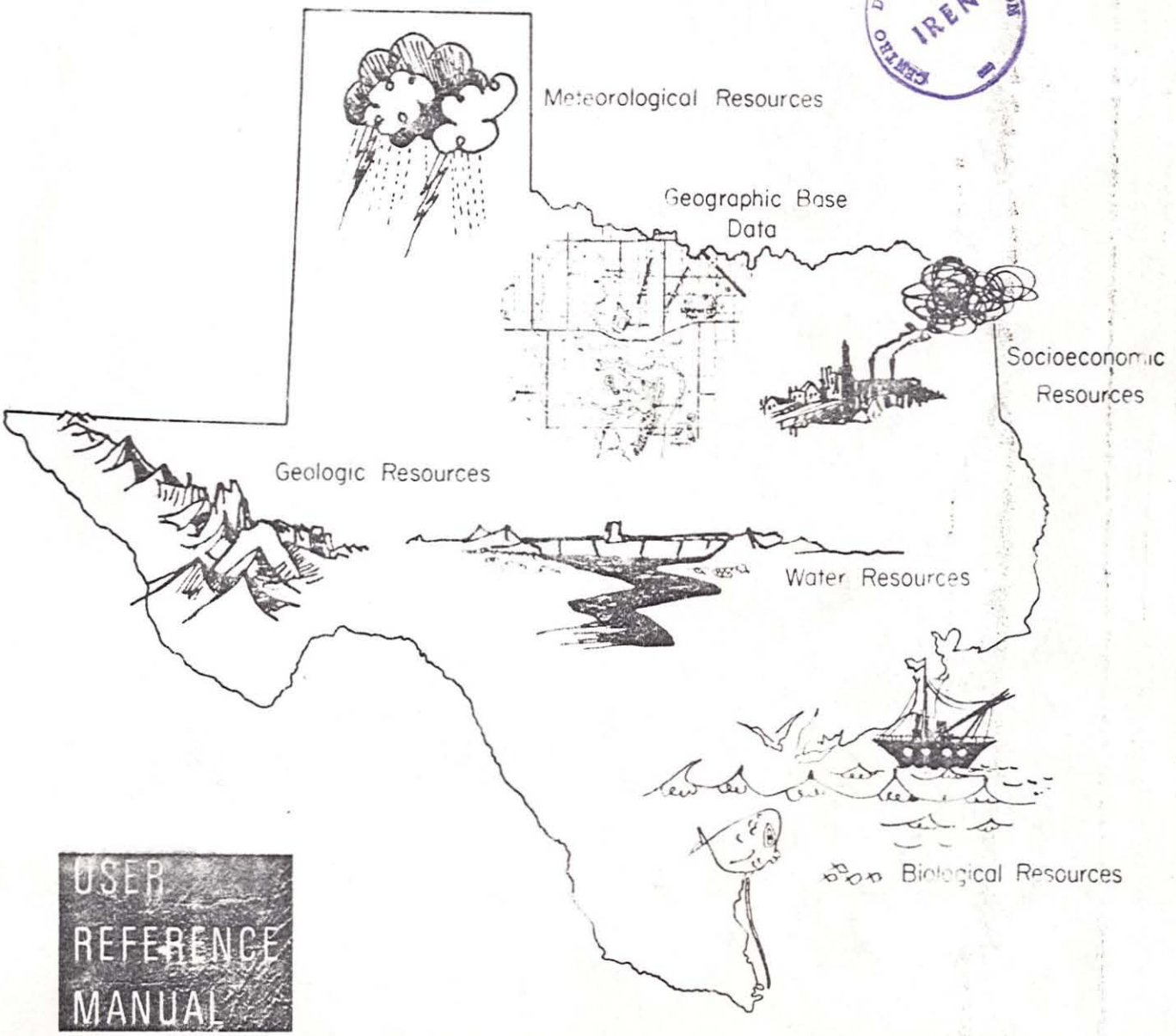
TEXAS WATER ORIENTED DATA BANK

DAILY DATA RETRIEVAL SYSTEM



USER REFERENCE MANUAL

IMPORTANT

TITLE OF PUBLICATION

Daily Data
Retrieval System

PUBLICATION NUMBER

WD-0105-01

REVISION NO. ☐

IF YOU WISH TO RECEIVE FUTURE REVISIONS OF THIS PUBLICATION OR ANY UPDATES TO THIS PUBLICATION, PLEASE REMOVE THIS PAGE, COMPLETE THE QUESTIONNAIRE PORTION, AND RETURN TO THE FOLLOWING ADDRESS:

TEXAS WATER DEVELOPMENT BOARD
ELECTRONIC DATA PROCESSING DIVISION
P.O. BOX 13087, CAPITOL STATION
AUSTIN, TEXAS 78711

AFTER YOU HAVE HAD A CHANCE TO REVIEW THIS MANUAL, YOU MAY WISH TO MAKE SOME COMMENTS. IF SO, YOU WILL FIND A PAGE AT THE BACK OF THE MANUAL FOR THIS PURPOSE. THE EDP STAFF OF THE TEXAS WATER DEVELOPMENT BOARD WOULD APPRECIATE ANY CRITICAL COMMENTS, GOOD OR BAD, REGARDING THIS OR ANY OTHER PUBLICATION THAT HAS BEEN DISTRIBUTED BY THIS OFFICE. YOUR COMMENTS WILL HELP TO IMPROVE THE QUALITY OF ANY FUTURE PUBLICATIONS OR REVISIONS OF EXISTING PUBLICATIONS.

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DATE _____

SOCIAL SECURITY NUMBER _____ - _____ - _____

AGENCY FOR WHICH YOU WORK _____

_____ DIVISION _____

AGENCY ADDRESS _____

CITY _____ STATE _____ ZIP _____

YOUR JOB TITLE _____

SUPERVISOR _____

I ACKNOWLEDGE RECEIPT OF THE MANUAL LISTED ABOVE AND

☐ WOULD LIKE TO ☐ WOULD NOT LIKE TO

RECEIVE FUTURE REVISIONS AND UPDATES.

SIGNED: _____

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A ☐
B ☐
C ☐
D ☐
E ☐
F ☐
G ☐
H ☐
I ☐
J ☐
K ☐
L ☐

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TEXAS WATER DEVELOPMENT BOARD
ELECTRONIC DATA PROCESSING DIVISION
P.O. BOX 13087, CAPITOL STATION
AUSTIN, TEXAS 78711

FOLD ON DOTTED LINE AND TAPE ENDS TOGETHER

TEXAS WATER ORIENTED DATA BANK

DAILY DATA RETRIEVAL SYSTEM

USER REFERENCE MANUAL

ELECTRONIC DATA PROCESSING DIVISION

David L. Ferguson, Director

Published By The
Texas Water Development Board
Post Office Box 13087
Austin, Texas 78711

The information contained in this documentation is subject to change as the need arises. Any request for modifications or revisions should be submitted to the Electronic Data Processing Division of the Texas Water Development Board. When such modifications are performed, notices of change will be made available to the users of this documentation.

First Edition: February, 1972

Subsequent Revisions: June, 1974

Publication Number: WD-0105-01

DAILY DATA RETRIEVAL SYSTEM

IDENTIFICATION AND ACKNOWLEDGEMENTS

DEVELOPED FOR:	Water Oriented Data Bank Committee, TWDB David L. Ferguson, Chairman
DEVELOPED BY:	Systems and Programming Branch Electronic Data Processing Division Texas Water Development Board
SYSTEM NAME:	Daily Data Retrieval System
SYSTEM NUMBER:	WD0100
LANGUAGE:	COBOL, FORTRAN and ASSEMBLER
COMPUTER:	UNIVAC 1106
CORE SIZE:	Maximum 30K Words
SYSTEMS ANALYST:	T. R. Evans
PROGRAMMED AND DOCUMENTED BY:	Michael Ellis

TABLE OF CONTENTS

THE TEXAS WATER ORIENTED DATA BANK

Planning, management, and enforcement functions related to the development, conservation, and future uses of Texas water resources ultimately affect all citizens of our great state. As these planning, management, and enforcement activities grow more complex, the need for responsive access to a wide variety of water-oriented data becomes essential to the decision-making process concerning this vital resource.

Recognizing a need for interagency coordination and cooperation in water data activities, the 60th Legislature in May of 1967 charged the Texas Water Development Board with creating a "centralized data bank incorporating all hydrologic data collected by the several agencies of the State of Texas." In response, representatives of eight state agencies established a formal work group designed to provide coordination for the eight agencies in the formation of the data bank. This work group in early 1968, petitioned the Planning Agency Council of Texas (PACT) to become an arm of the Interagency Natural Resources Council (now the Interagency Council on Natural Resources and the Environment). In August 1968, the requested affiliation was granted, and the work group was officially designated the Water Oriented Data Programs Section (WODPS).

The WODPS has promoted cooperation among participating agencies in several areas. One of their major accomplishments has been the completion of a 24-volume catalog of the water-oriented data available from eight state agencies for the 23 river and coastal basins and the bay and estuarine areas of the state. The WODPS has also participated in the adoption of uniform geographic area identification codes, cataloging of standard codes and procedures, and establishment of storage and retrieval standards designed to meet the comprehensive needs of the eight WODPS member agencies and other participating entities.

Many of these existing needs are now being met by the Texas Water Oriented Data Bank (TWODB), which has been developed with the primary purpose of providing the means to efficiently serve the data storage and retrieval, data presentation, and limited computational needs of the various participating state and federal entities requiring water-oriented data and related information. Data and information are also being made available to the general public upon request.

As outlined in the *Preliminary Report on Establishment of the Texas Water Oriented Data Bank* of June 1971, a three-phased effort has been defined which will provide the State of Texas with a fully coordinated, partially automated water-oriented data and information handling system by 1975.

The TWODB is designed to perform a service-oriented function. A number of goals have been established and to some measure achieved in order to provide TWODB users with the best means of data storage and retrieval. Some of the more important of these are:

- Establish compatible standards and formats for storing and retrieving data and information.
- Establish a comprehensive set of security standards for retrieval of stored data and information which is responsive to user needs yet protects supplying entities.
- Provide user entities with knowledge of the availability, accuracy, and source of the various data and information types contained in the data bank.
- Provide computational services over and above basic storage and retrieval for those entities requesting such services in order to provide the retrieved data and information in the form most useful to the requesting entity.

  Interface TWODB activities with those of the Office of Water Data Coordination and with other state and federal information systems.

It is also felt that the establishment of the Texas Water Oriented Data bank will be an important step in the establishment of the even more comprehensive *Natural Resources Information System (NRIS)* for the State of Texas.

We feel that the NRIS, when established, would of certainty include as one of its most substantial components the TWODB. We hope you will find both this reference manual and the TWODB of use and assistance to you.

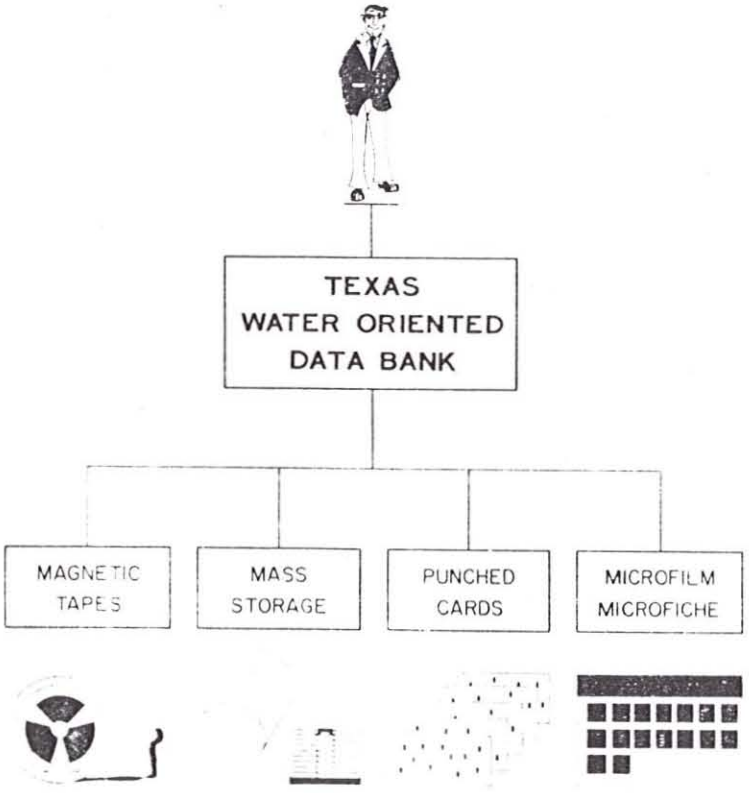
C. R. Baskin, Chairman
Water Oriented Data Programs Section

OPERATING CONCEPTS

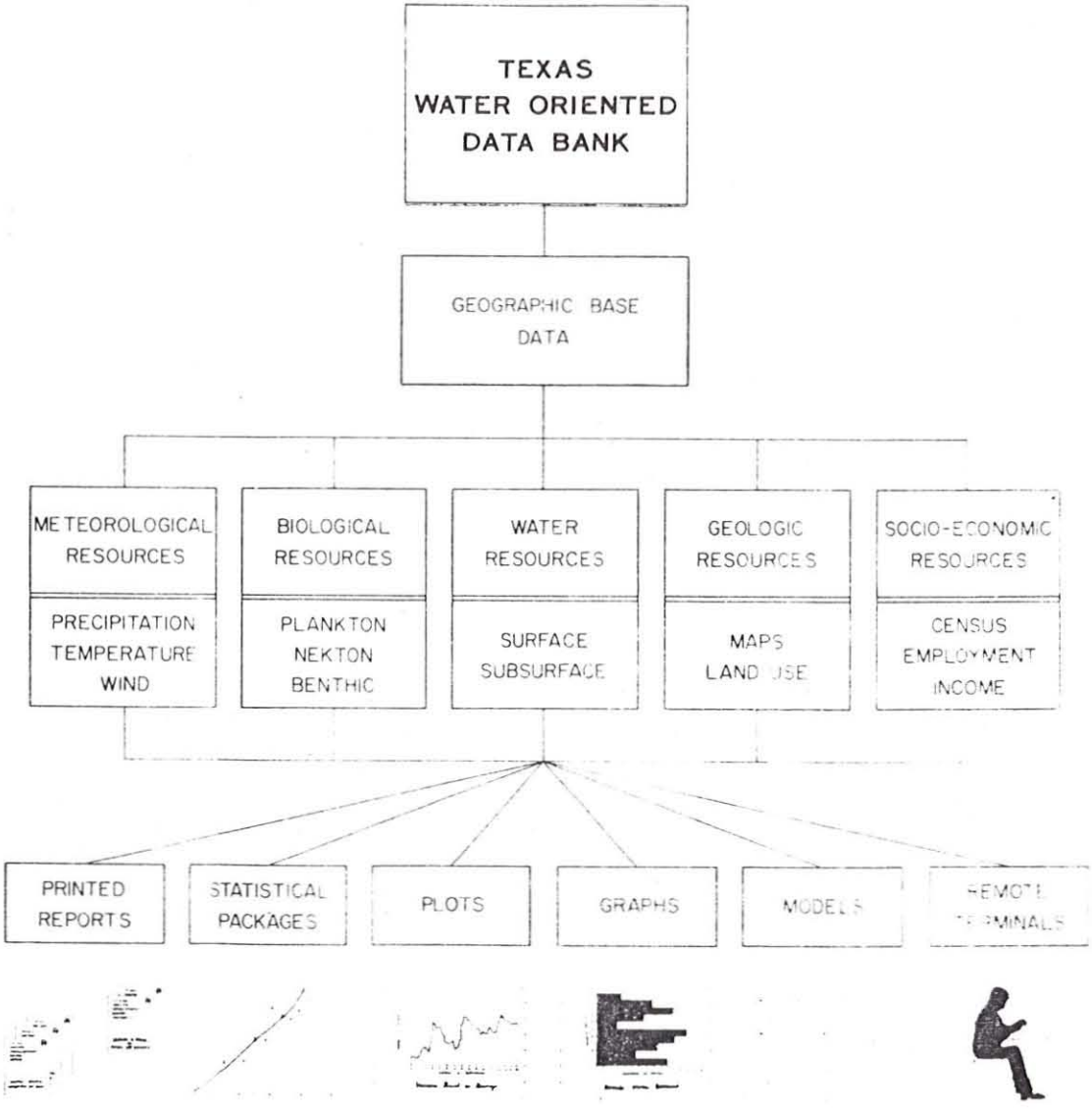
Under its service-oriented operating concept, the Texas Water Oriented Data Bank can be labeled as a "User-Oriented Data Bank." The process of data and information retrieval usually begins with a request from a participating entity, who may require data from one or all of the six data and information categories.

When the request for data or information is received, it is logged in and processing is begun immediately. Some requests may be fulfilled within a matter of minutes; others will take a longer time. Users who prefer much faster retrieval may choose to install a remote terminal in their own offices, which will offer them immediate access to many of the files of the TWODB. Whichever method is chosen by the user, it is the goal of the TWODB to offer participating users access to a maximum amount of high quality information in the most meaningful form within a minimum amount of time. On the opposite page is a portrayal of storage capabilities and output capabilities of the TWODB.

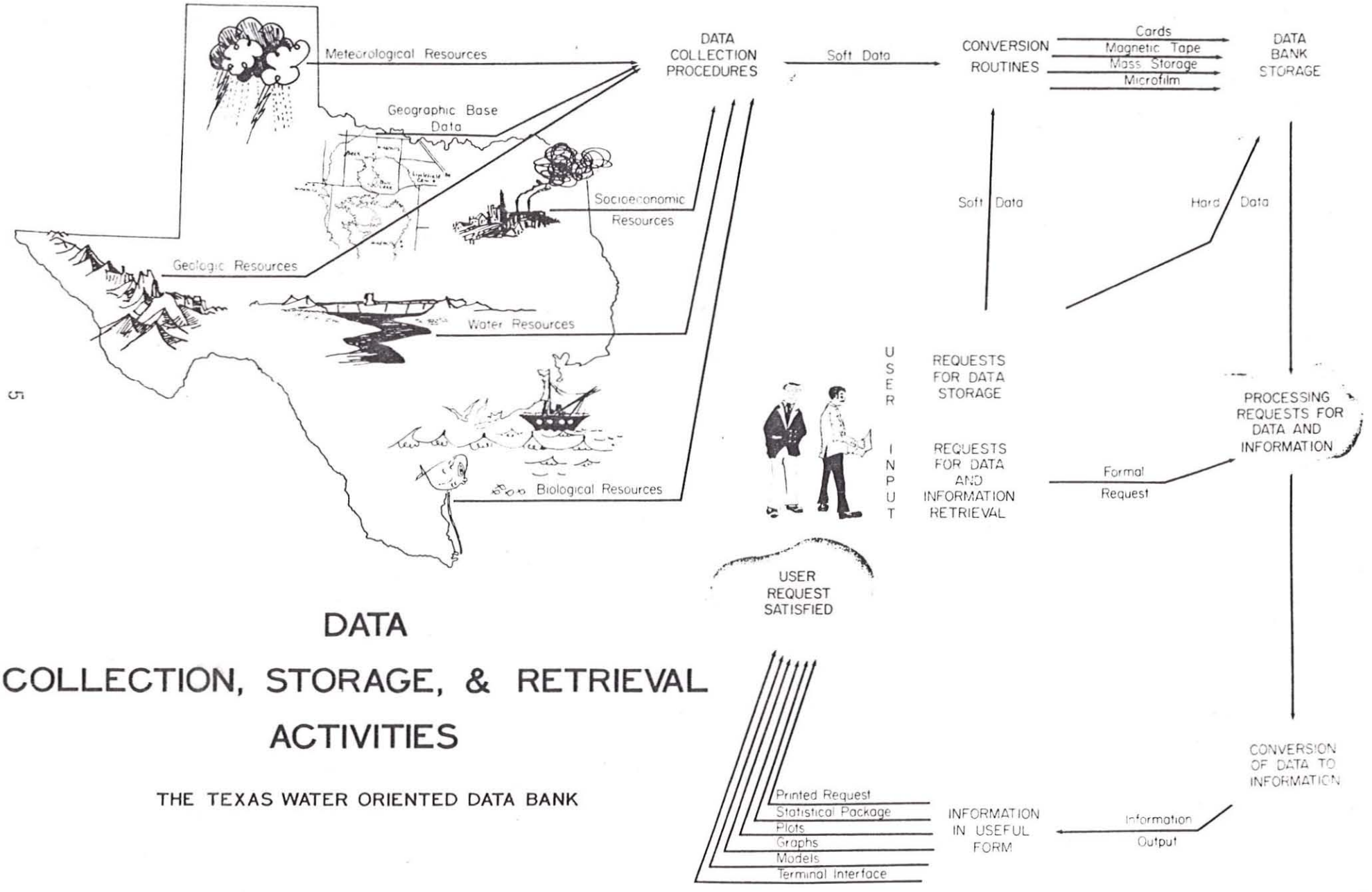
OPERATING CONCEPTS



STORAGE CAPABILITIES



OUTPUT FROM THE TEXAS WATER ORIENTED DATA BANK



DATA COLLECTION, STORAGE, & RETRIEVAL ACTIVITIES

THE TEXAS WATER ORIENTED DATA BANK

CLASSIFICATION OF DATA AND INFORMATION

To facilitate the storage and retrieval of data in the Texas Water Oriented Data Bank, a system of General Data and Information Categories has been defined. These categories, shown pictorially on the following page, were designed to best satisfy the potential data and information needs of all users of the TWODB. These major categories were defined during the identification and categorization phase of developing a *Texas Natural Resources Information System* which would include water oriented data as an important subset. These categories with appropriate subcategories are listed below:

I. GEOGRAPHIC BASE DATA - Landmark data and man's subdivisions which serve as a supportive category to locate natural resources.

II. METEOROLOGICAL RESOURCES - Data and information related to all forms of climatological and atmospheric conditions.

- A. Climatological
- B. Air Quality
- C. Man's Activities

III. BIOLOGICAL RESOURCES - Data and information related to all living organisms as an aggregate.

- A. Animal
- B. Plant
- C. Micro-Organisms
- D. Man's Activities

IV. WATER RESOURCES - Data and information related to all occurrences of water.

- A. Surface
- B. Subsurface
- C. Man's Activities

V. GEOLOGIC RESOURCES - Data and information related to the constitution and structure of the earth, including land usage.

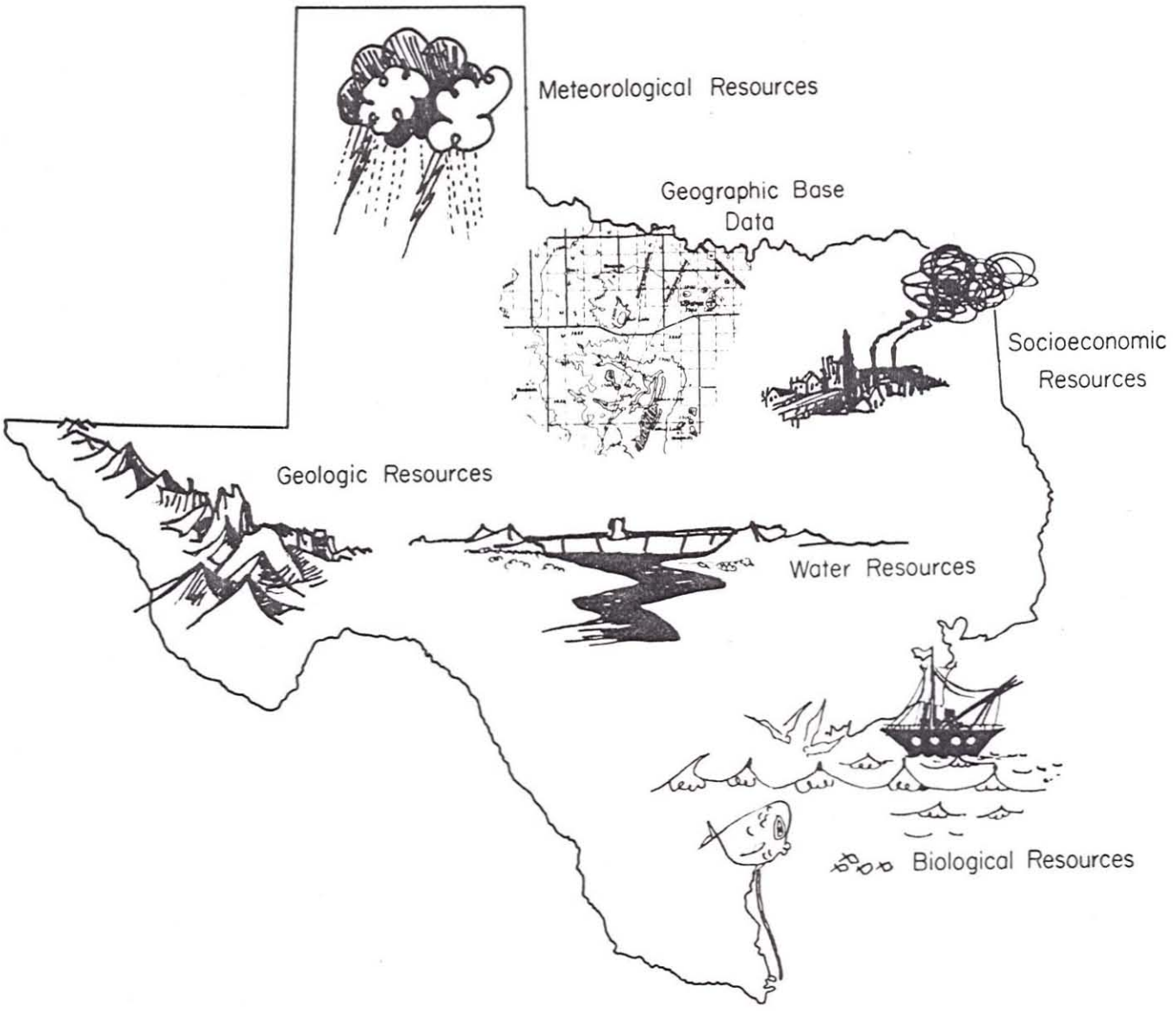
- A. Surface
- B. Subsurface
- C. Man's Activities

VI. SOCIO-ECONOMIC RESOURCES - Although not purely "natural" these resources describe interrelationships between man, nature, and man-made conditions.

- A. Social
- B. Economic
- C. Commerce
- D. Government
- E. Archaeologic

TEXAS WATER ORIENTED DATA BANK

DATA AND INFORMATION CATEGORIES



II. SYSTEM OVERVIEW

The Daily Data Retrieval System provides access to all of the daily data files in the Texas Water Oriented Data Bank. The system allows the user to select a subset of a daily file or process the entire file. Output products include a variety of reports and computer processable files. This manual describes in detail the output products available and the procedures necessary to obtain them. The files available via this system are described in detail in the 'TEXAS WATER ORIENTED DATA BANK FILE DESCRIPTION REPORT'. The identification numbers necessary for selecting data may be found in the 'TEXAS WATER ORIENTED DATA BANK STANDARD CODES AND PROCEDURES' Manual.

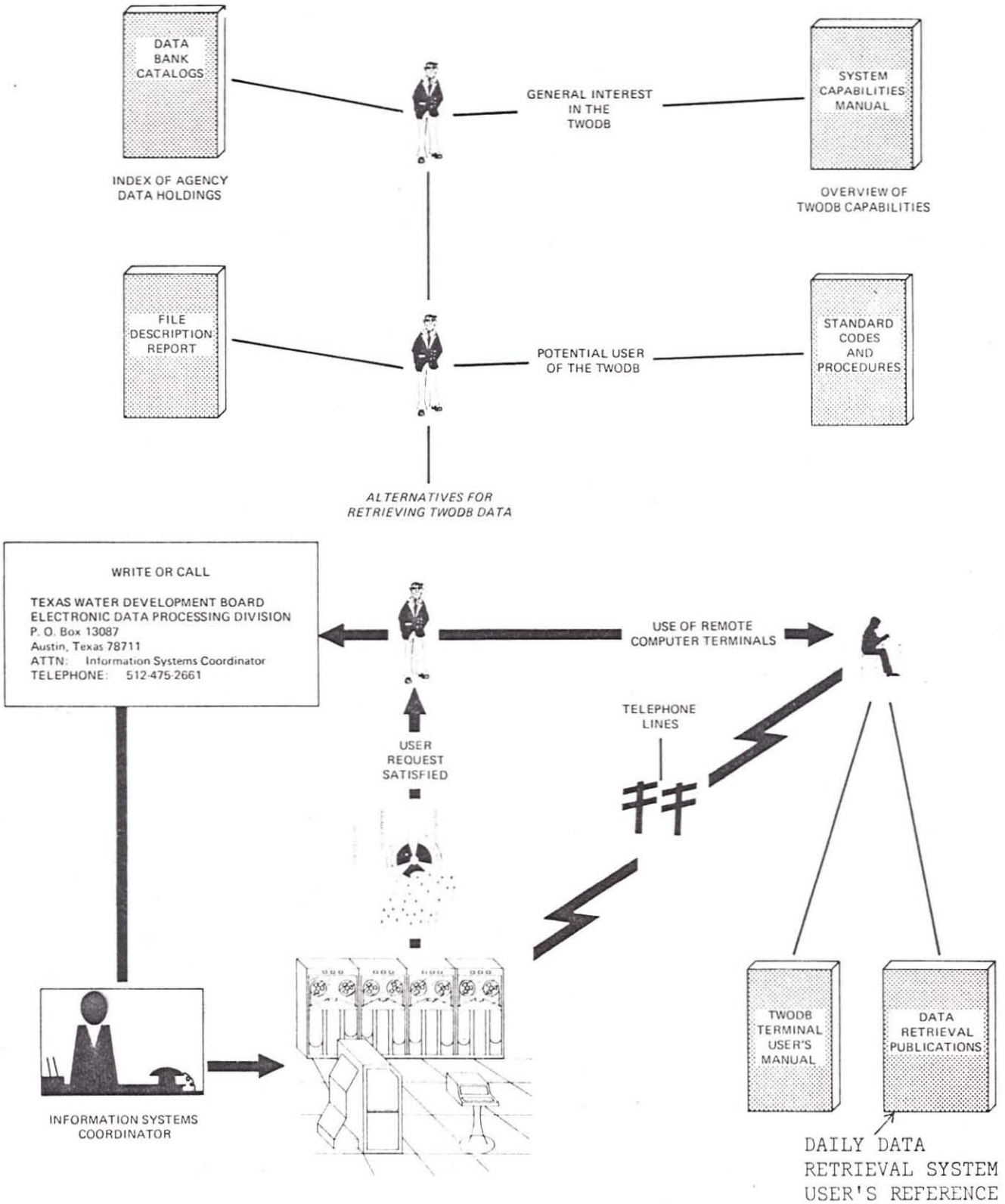
This manual describes the use of the Daily Data System via EDP Data Control (i.e. the user submits a request form to Data Control and receives the results from them a short time later). This system may also be used at remote terminals via the Data Bank Monitor. The same options are available via the Monitor that are described herein. The 'DATA BANK MONITOR USER'S MANUAL' describes the remote access features in detail.

All Data Bank Publications are available upon request from:

ELECTRONIC DATA PROCESSING DIVISION
TEXAS WATER DEVELOPMENT BOARD
P. O. BOX 13087
AUSTIN, TEXAS 78711

ATTN: Information Systems Coordinator

OVERVIEW OF RELATED TWODB PUBLICATIONS AND DATA RETRIEVAL ALTERNATIVES



III. SYSTEM CAPABILITIES

DATA SELECTION

The user may wish to extract a subset of a daily file or use the entire file for subsequent processing. Data may be selected according to identification number (e.g. USGS gauge number) and year. All daily files are sequenced by identification number and then year in ascending order. Therefore, the subset must be requested in this order by coding the numbers in the above order on the coding form (see Section IV). If the user wishes all years for a given identification number he must code the earliest and latest years possible for that item in the appropriate locations. All identification numbers must be selected specifically (i.e. no ranges are allowed).

The extracted subset (or entire file) may then be used to produce any or all of the output formats which are described next.

AVAILABILITY REPORTS

There are two types of availability reports in this system, summary and detailed.

The summary availability report provides a brief status of each identification number in the selected subset including the following information:

(a) Beginning and Ending year for which data is recorded (Note: data is not necessarily continuous in-between).

(b) Number of months of record - this is a count of the months which have at least one day's data present.

(c) Number of months of complete record - the number of months which have 100% data present.

(d) Percent of complete months - (c)/(b) * 100.

(e) Percent of daily data present - this is the number of days with data present divided by the total number of days (excluding months where no data is present).

This report is designed to give the user an overview of what data is available on a given subject for a given area and time frame.

The detailed availability report provides the status of each identification number by year and month. Twelve characters are listed below each year of data available for every identification number in the subset. Each character represents one month's data and may be interpreted as follows:

' '	no data present
'0'	1- 9% data present
'1'	10-19% data present
'2'	20-29% data present
'3'	30-39% data present
'4'	40-49% data present
'5'	50-59% data present
'6'	60-69% data present
'7'	70-79% data present
'8'	80-89% data present
'9'	90-99% data present
'*'	100% data present

The symbol '|' is above January for every year, and a '.' is above July.

PRINTED DATA REPORTS

The selected subset (or entire file) may be presented in a printed report with one year's data per page. The report is in ascending order by identification number and year.

The following conventions apply to printed reports:

- Missing values are represented by asterisks
- Monthly and year totals or averages are computed only if all data for the month/year is present.
- Trace precipitation data is represented by 'TRACE'.

PUNCHED CARD OUTPUT

The selected subset (or entire file) may be placed on punched cards for further computer processing. The data for one month is punched on three (3) cards and the deck is in ascending order by identification number and year.

For Card 1, there are entries for days 1 - 10 of the month with Columns 74 - 80 not used. For Card 2, there are entries for days 11 - 20 of the month with Columns 74 - 80 not used. For Card 3, there are entries for the remainder of the days in the month with blank fields for the nonexistent days in the month. Figures of daily data are entered for values from -9999 (representing missing daily data) to 999999. For values not requiring significant figures to the right of the decimal, the values are punched as whole numbers, right aligned in the field. For values requiring significant figures to the right of the decimal, the values are punched including the punch for the decimal character. Values with a punched decimal are punched right aligned in the field. Values of zeros are punched as six zeros in the field. Negative figures are punched with the minus sign immediately preceding the first significant figure. Missing daily data is punched as -9999.

BINARY TAPE OUTPUT

The last option available is to store the selected subset (or entire file) on a magnetic tape for further computer processing. The tape is a UNIVAC FORTRAN UNFORMATED type file. The data is in ascending order by identification number and year with an end-of-file at the end.

The following conventions apply to these files:

- The data is stored one month per logical record.
- If all of the data for a month is missing, the record is not present in the file.
- Missing values are represented by the constant -9999.0.
- Non-existent days in a month contain missing values.
- Monthly totals/averages contain missing values if any daily value for the month is missing.
- Trace precipitation data is represented by the constant 0.0001.

IV. USER REQUEST PROCEDURES

In order to request daily data from the data bank, the requester need only complete form number TWDBS-ED-42 (Rev. 1-29-73) and submit it to EDP Data Control.

If the entire file is desired, leave the top portion of the form blank and go to step 2, else:

STEP 1 - Code the desired identification numbers (right justified) and year ranges in the appropriate locations in ascending order by identification number. Note: the year ranges must be included and additional forms should be used if necessary. The comment field is not used by the program.

STEP 2 - Check the box to the left of the file that is desired.

STEP 3 - Check as many of the output options as are desired.

STEP 4 - Submit the request form to EDP Data Control.

If any of the selected identification numbers and/or years cannot be located on the file, an appropriate error message is given at the beginning of the output listing. A sample request form is shown on the next page.

TEXAS WATER ORIENTED DATA BANK - DAILY DATA EXTRACTION

WD0100

SUBMITTED BY _____
TASK ORDER NO. _____
ORG. UNIT NO. _____
DATE _____
PAGE _____ OF _____

IDENTIFICATION NUMBER (Right Justify)	from	BEGIN YEAR	thru	END YEAR	COMMENTS (Identification Description, Location, etc.)

DESIRED FILE

FILE NO.	FILE DESCRIPTION
1	☐ USGS Streamflow
2	☐ USWB Precipitation
3	☐ USWB Maximum Temperature
4	☐ USWB Minimum Temperature
5	☐ USWB Evaporation
6	☐ USWB Wind Movement
7	☐ USGS Sediment Load
8	☐ USGS Reservoir Content

DESIRED OUTPUT

☐ Card
☐ Print-Out
☐ Tape (Binary) - Specify Track/Density/Parity:

☐ Summary Availability Report
☐ Detailed Availability Report

TWDBS-ED-42 (Rev. 1-29-73)

V. OUTPUT EXAMPLES AND DESCRIPTIONS

1. Availability Reports
2. Printed Data Reports
3. Punched Card Output
4. Binary Tape Output

SUMMARY AVAILABILITY REPORT

T E X A S W A T E R O R I E N T E D D A T A B A N K

11/13/73

SUMMARY AVAILABILITY REPORT
ON
USWB EVAPORATION

ID NUMBER	BEGIN YEAR	END YEAR	NO. OF MONTHS OF RECORD	NO. OF MONTHS OF COMPLETE RECORD	% OF COMPLETE MONTHS	% OF DAILY DATA PRESENT
0174	1972	1972	12	6	50%	92%
0225	1964	1972	98	37	37% •	92% •
0257	1952	1964	131	65	49% •	96% •
0428	1948	1972	297	159	53% •	94% •
0437	1954	1954	1	0	0%	92%
0496	1948	1950	25	21	83% •	98% •
0498	1948	1964	163	129	79% •	98% •
0518	1965	1972	90	24	26% •	90% •
0613	1948	1964	178	59	33% •	89% •
0639	1948	1972	292	173	59% •	97% •
0665	1953	1972	231	100	43% •	94% •
0691	1953	1972	231	93	40% •	92% •
1165	1948	1964	170	0	0% •	67% •
1166	1948	1948	6	0	0%	72%
1429	1961	1972	135	46	34% •	92% •
1823	1957	1957	1	0	0%	3%
1888	1948	1956	40	24	59% •	93% •
2225	1959	1972	160	54	33% •	93% •

•THIS FIGURE DOES NOT TAKE INTO ACCOUNT MONTHS HAVING NO RECORDED DATA WHICH OCCURRED DURING THE PERIOD OF RECORD.

DETAILED AVAILABILITY REPORT

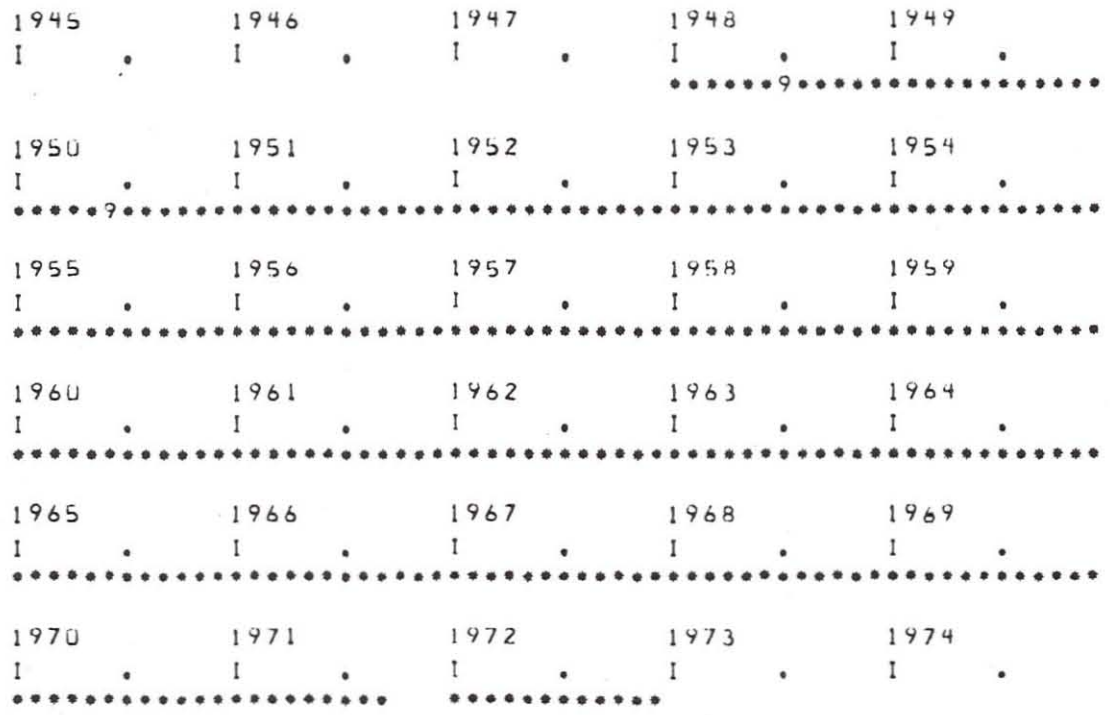
T E X A S W A T E R O R I E N T E D D A T A B A N K

11/09/73

AVAILABILITY REPORT PAGE : 1
ON
USWB PRECIPITATION

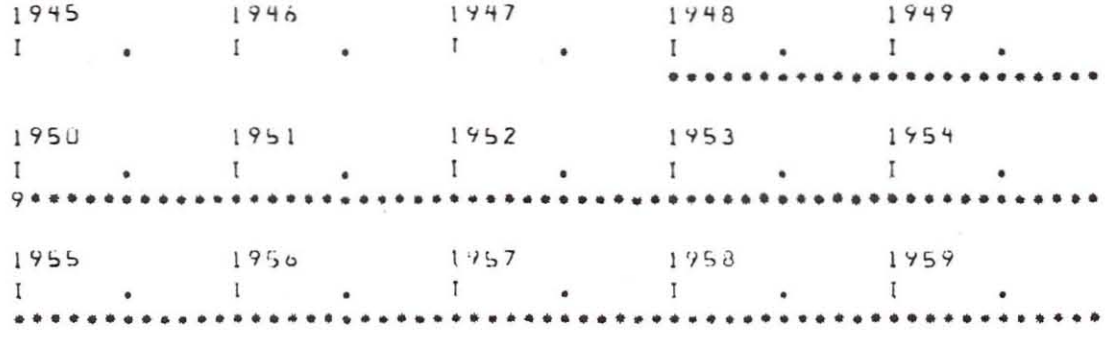
12 ID NUMBER

LOCATION: ABERNATHY
LAT: 33 50 00 LONG: 101 50 00 BASIN: 12 COUNTY: HALE



16 ID NUMBER

LOCATION: ABILENE WB AP
LAT: 32 26 00 LONG: 99 41 00 BASIN: 12 COUNTY: TAYLOR



PRINTED DATA REPORT

USGS PRECIPITATION
FOR
ID NUMBER 00000012

LOCATION: ABERNATHY
LAT: 33 50 00 LONG: 101 50 00 BASIN: 12 COUNTY: HALE

YEAR = 1968

DAY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
01	TRACE	0.00	0.00	TRACE	0.00	0.41	0.00	0.60	0.24	0.00	0.00	0.00
02	0.00	0.00	0.00	0.24	0.00	0.09	1.12	0.00	0.00	0.00	0.05	TRACE
03	0.03	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
04	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00
06	0.00	0.00	0.22	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
07	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08	TRACE	0.00	0.02	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.07	0.00
09	0.00	0.00	0.01	0.00	0.00	0.70	0.58	0.00	0.00	0.06	0.09	0.00
10	0.00	0.00	0.00	0.14	0.79	0.00	0.00	0.02	0.00	0.00	0.00	0.00
11	0.00	0.00	0.37	0.00	0.31	0.00	0.00	0.09	0.00	0.00	0.00	0.00
12	0.00	0.00	0.12	0.00	0.03	0.00	0.42	0.58	0.00	0.00	0.00	0.00
13	0.00	0.27	0.00	0.00	0.75	0.18	0.34	0.39	0.00	0.09	0.00	0.00
14	0.00	0.24	0.00	0.00	0.03	0.44	0.00	0.00	0.00	0.00	0.05	0.00
15	0.00	0.00	0.00	0.00	0.00	0.07	0.03	TRACE	TRACE	0.00	0.69	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	TRACE	0.00	0.00	0.17	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.74	0.14	0.00	0.00	0.00
18	0.00	0.03	0.02	0.03	0.00	0.00	0.30	0.32	0.00	0.00	0.00	0.00
19	0.05	0.02	0.05	0.03	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.00
20	0.09	0.00	1.17	0.00	0.04	0.00	0.07	0.00	0.00	0.00	0.00	0.00
21	0.60	0.04	0.19	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.10
22	0.20	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.19	0.00	0.00
23	0.15	0.05	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.60	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
27	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.21
28	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00
31	TRACE	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MONTHLY TOTAL	1.14	1.03	2.20	0.53	2.01	2.75	3.25	4.94	1.19	1.03	1.27	0.51

ANNUAL TOTAL FOR 1968 = 21.85

PUNCHED CARD OUTPUT DESCRIPTION

TEXAS WATER ORIENTED DATA BANK

Daily Data Punched Output
Description

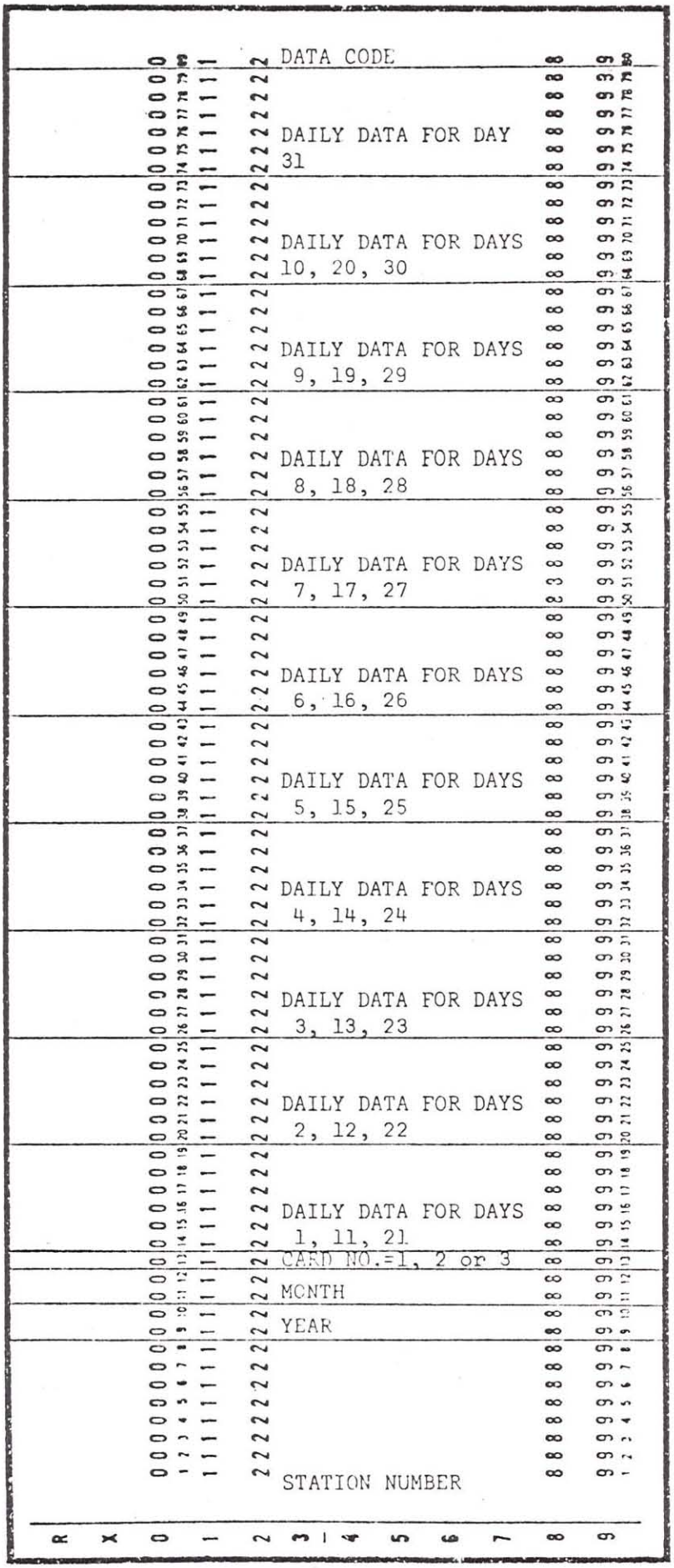


TABLE OF DATA CODES

1 = USGS Streamflow
2 = USWB Precipitation
3 = USWB Maximum Temperature
4 = USWB Minimum Temperature
5 = USWB Evaporation
6 = USWB Wind Movement

ACCESS METHOD

FORTRAN:

```
FORMAT(I8,2I2,I1,11F6.0,I1)
```

BINARY TAPE OUTPUT DESCRIPTION

BINARY TAPE OUTPUT DESCRIPTION

MODE: Tape

FORMAT: FORTRAN Unformated (Binary)

RECORD SIZE: 36 Words

B	B	B	B	F.P.	F.P.	
ID NUMBER	YEAR	MONTH NUMBER	NO. CALENDAR DAYS IN MONTH	VALUE FOR DAY 1	VALUE FOR DAY 2	~

		F.P.	F.P.
~	-----	VALUE FOR DAY 31	MONTHLY TOTAL OR AVG.

F.P. = Floating Point Binary

B = Integer Binary

ACCESS METHOD:

```
READ(10) ID, IYEAR, MONTH, NDAYS, (DAILY (I), I=1, 31), TOTAVG
```

VI. ERROR MESSAGES

The only error messages returned by the system occur when selected data cannot be found on the master file. The two messages are

REQUESTED STATION NOT FOUND XXXXXXXXX

REQUESTED YEARS NOT FOUND YYYY YYYY

FOR XXXXXXXXX

The data either does not exist for the identification number and/or years requested or the request is not sequenced correctly. A detailed availability report should be obtained to find out what data is available for that file.

USER COMMENTS

THE EDP STAFF AT THE TEXAS WATER DEVELOPMENT BOARD IS VERY ANXIOUS TO CONTINUALLY IMPROVE THE QUALITY OF PUBLICATIONS THAT ORIGINATE IN THE ELECTRONIC DATA PROCESSING DIVISION. FEELING THAT THE USER OF THESE PUBLICATIONS IS REALLY THE ONLY CRITIC THAT CAN OBJECTIVELY ASSESS THEIR VALUE, THE EDP STAFF WOULD LIKE TO HEAR FROM YOU AFTER YOU HAVE HAD A CHANCE TO REVIEW OR USE THIS PARTICULAR PUBLICATION. IF YOU WISH TO MAKE ANY COMMENTS REGARDING THIS MANUAL PLEASE COMPLETE THE QUESTIONAIRE BELOW AND RETURN TO THE FOLLOWING ADDRESS:

TEXAS WATER DEVELOPMENT BOARD
ELECTRONIC DATA PROCESSING DIVISION
P. O. BOX 13087, CAPITOL STATION
AUSTIN, TEXAS 78711

THE EDP STAFF WILL APPRECIATE ANY COMMENTS, GOOD OR BAD.

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1. *In your opinion does this manual serve the purpose for which it was intended? Comment.*

2. *Did you notice any errors which you would like to correct? (Use additional pages if necessary)*

3. a. *In your opinion what are the strong points of this manual?*

b. *the weak points?*

4. *Do you have any suggestions as to how the quality of this manual could be improved?*