NOAA Western Region Computer Programs
and Problems NWS WRCP No. 58

DAILY CLIMATE SUMMARY FOR MAPSO

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(Revised May 1991)

U.S. DEPARTMENT OF COMMERCE / National Oceanic and Atmospheric Administration / National Weather Service

PREFACE

This Western Region publication series is a subset of our Technical Memorandum series. This series will be devoted exclusively to the exchange of information on and documentation of computer programs and related subjects. This series was initiated because it did not seem appropriate to publish computer program papers as Technical Memoranda; yet, we wanted to share this type of information with all Western Region forecasters in a systematic way. Another reason was our concern that in the developing AFOS-era there would be unnecessary and wasteful duplication of effort in writing computer programs in National Weather Service (NWS). Documentation and exchange of ideas and programs envisioned in this series hopefully will reduce such duplication. We also believe that by publishing the programming work of our forecasters, we will stimulate others to use these programs or develop their own programs to take advantage of the computing capabilities AFOS makes available.

We solicit computer-oriented papers and computer programs from forecasters for us to publish in this series. Simple and short programs should not be prejudged as unsuitable.

The great potential of the AFOS-era is strongly related to local computer facilities permitting meteorologists to practice in a more scientific environment. It is our hope that this series will help in developing this potential into reality.

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4 Precipitable Water Estimate. Elizabeth Morse, October 1979.
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Revised
May 1991

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I. INTRODUCTION

This publication is an update because of several major changes to the software and the resulting effect on the setup and execution of the program.

CLI.EXE is an IBM-PC or compatible program that will produce a Daily Climate Summary for distribution to AFOS or RTA. If a MAPSO database is present, the software will read these files for the information needed to complete the summary. However, a non-MAPSO station can use CLI.EXE to produce a daily summary as well because a manual entry for daily input data is prompted when MAPSO data are missing.

Prior to MAPSO, most AFOS sites were using the Central Region F6 software package (see CRCP #14, T. Schwein). This F6 package has an associated program titled SUMMARY.SV. This AFOS program required a daily entry at the dasher terminal. CLI.EXE will produce the same output as SUMMARY.SV to eliminate the dasher entry. It will work at both AFOS and RTA sites. An example output is in Appendix B.

Additional features of the CLI.EXE output are:

1. High and low record temperatures are annotated with the words "EXCEEDED" or "TIED" followed by the record year.

2. A water year total and normal precipitation from October 1 can be included.

3. The Moonrise/Moonset table generated by the Floppy Almanac software can be read and included in the output.

4. A file generated by the Tide Predictions package from the National Ocean Service (NOS) can also be read to include daily tide information.

5. The Tide, Moon, Water Year, Snow, and Wind output sections are user selectible.

The program package includes a utility program CLISETUP.EXE which has 18 different options ranging from the creation or editing of all the main input files to control over communications and assigning AFOS PIL IDs. Data files for Moonrise/Moonset and Tide are created separately and the programs FIXMOON.EXE and FIXTIDE.EXE are included to put these files into the proper configuration for use by CLI.EXE.

II. METHODOLOGY AND SOFTWARE STRUCTURE

A. GENERAL

CLI.EXE and CLISETUP.EXE can be run at any site with or without MAPSO files present. However, the program was designed to take advantage of the data available within the MAPSO subdirectory.

Program output is controlled with disk files. CLIDAT.CLI, for example, contains the AFOS/RTA PIL, addressee, station name, time zone, and on/off switches for specific outputs such as water year, snow, wind, moonrise/moonset, and tide data.

TOTALS.CLI is a file created and maintained by the program to keep track of monthly, annual, and seasonal totals. It also tracks the last date the program was used and compares this to dates stored in the file DATES.CLI.

Both CLIDAT.CLI and TOTALS.CLI can be very easily edited using the utility program CLISETUP.EXE because these two files do most of the program control. All other files can be easily created and edited by CLISETUP.EXE as well.

Below is a complete list of all files used by the program which should be located in the appropriate subdirectory: (Examples are included in Appendix B)

CDD.CLI	CDD normals
CLI.EXE	Main program
CLIDAT.CLI	See above
COMMS.CLI	Comms parms
DATES.CLI	Created by CLI
HDD.CLI	HDD normals
MAXYR.CLI	Record years
MINYR.CLI	Record years
MOON.DST	*Daylight times
MOON.STD	*Standard times
NMAX.CLI	Normal highs
NMIN.CLI	Normal lows
NRMT.CLI	Normal temps
PCPN.CLI	Normal precip
RECH.CLI	Record highs
RECL.CLI	Record lows
SEASON.CLI	Seasonal normals
SUMMARY.CLI	Created by CLI
SUNR.CLI	Sunrise
SUNS.CLI	Sunset
TIDE.CLI	*Tide corrections
TIDExx.CLI	*Tide table xx=yr
TOTALS.CLI	Accumulations
WTRYR.CLI	*Water year norms

* These files may not be necessary depending on whether you are using these options in the program.

On the root directory C:\ you should have:

CLISETUP.EXE	Utility program
CLI.BAT	(See example below)

Example of file CLI.BAT

```
CD\
CD\CLI
CLI
CD\
COMI
```

The program COMI.COM is a program provided with the ABT package which resets the communications ports on the ABT. If this is not executed after CLI has been run, your ABT printer will not be able to receive data from AFOS.

The file SEASON.CLI should **ONLY** be created with CLISETUP. This will construct the file for you in the proper format. This file contains the seasonal normals for HDD, CDD, and PCPN.

Twice a year you are required to make a change to the CLIDAT.CLI file for changes in local time. This is very easy with the CLISETUP utility. Use option number 14 and change the time flag number (0 for standard and 1 for daylight) and the time zone letters, e.g., PST. Both must agree as these parameters are used extensively and sometimes individually through the CLI program execution.

TOTALS.CLI is maintained by the CLI program. This file tracks the date and contains the monthly and annual totals for the precipitation and degree days. The initial creation of the TOTALS.CLI file can be accomplished two ways; either by attempting to run CLI for the first time or by first using CLISETUP and selecting option number 17. The latter is basically a TOTALS.CLI editor but will create a new file as well.

If you choose to start the CLI program for the first time with no TOTALS.CLI file present, you will see a series of input prompts after initially hitting the return

key. After initial input is complete, the program will discover the missing TOTALS.CLI file and will prompt you with a warning message along with an indication that the TOTALS.CLI file is missing. This will be followed by the question, "If you want to CREATE/EDIT this file enter (Y)".

If you enter a Y, you will enter into another series of input prompts for the information needed in TOTALS.CLI. These data entries are for accumulative data up to but not including the initial date you enter.

When you enter the Y, you will see the following:

ENTER MONTH NUMBER? ___

FOR WHICH DAY? ___

The following are UP TO BUT NOT INCLUDING the above date!

Monthly total HDD? ___
Seasonal total HDD? ___
Monthly total CDD? ___
Monthly total CDD? ___

*** This entry is if the MONTHLY SNOWFALL is ONLY a Trace.
ENTER (T) if a Trace (otherwise hit return)? ___

MONTHLY TOTAL SNOWFALL IN TENTHS? ___
SEASONAL TOTAL SNOWFALL IN TENTHS? ___

*** This entry is if the MONTHLY PRECIP is ONLY a Trace.
ENTER (T) if a Trace (otherwise hit return)? ___

MONTHLY TOTAL PRECIPITATION IN HUNDREDTHS? ___
ANNUAL TOTAL PRECIPITATION IN HUNDREDTHS? ___

TOTAL PRECIP SINCE OCT 1 IN HUNDREDTHS? ___

NOTICE! If you WANT these changes STORED, enter Y ___

Once you have made the above entries (using February 5 as an example) you will see:

TOTALS.CLI UPDATED! PROGRAM CAN BE RUN FOR 2/5

RESTART CLI PROGRAM

C:\CLI>

When you restart the CLI program, February 5 is the day it will be looking for. In order for February 5 to be the data day, you must be somewhere into February 6. Therefore, the output summary produced by the CLI program will be dated February 6, with some of the information contained within the summary referring to "YESTERDAY", etc. See an example output using all options in Appendix A.

B. SOFTWARE STRUCTURE

All executable files in this package are written and compiled in Microsoft QuickBASIC version 4.5 as stand-alone executable files and should run on any IBM or compatible from an XT to a 386-based machine. It has not been written for or tested in a multitasking environment. There is no control of screen colors.

Files are opened and closed as quickly as possible with extensive use of ON ERROR to flag the exact spot where problems might occur. This should be especially helpful when first setting up the program. If a data file is missing, CLI will abort and tell you the file name it tried to open for reading. A couple of exceptions to this are, 1) no errors are returned if the program does not find the tide files and,

2) the same is true for the moonrise/moonset data files.

CLI.EXE is structured in such a way that a check is first made to see if the program has already been executed for the date entered. It also checks to see if the date entered is the NEXT day as well. This is an important feature since the program keeps track of record high and low temperatures and the dates of occurrence. This date is kept track of in the TOTALS.CLI file. Also, upon starting the program, the dates stored in TOTALS.CLI are checked against dates in the file DATES.CLI to see if an output has already been produced for the current day. If this is true, you are given the opportunity to retransmit the CLI output upon first starting the program.

As the program begins to execute, appropriate MAPSO files are opened and all necessary information is read. If MAPSO files are not present, the software will branch to a series of input prompts for the data it would have normally extracted from the MAPSO database. This allows the program to be used at non-MAPSO sites as well as giving the option to create additional summaries for other cities.

Additional summaries can be produced by creating an additional set of data files and placing these additional files into a different subdirectory. By calling this subdirectory from the command line, e.g., CLI <dir>, the program then begins to execute with the files in subdirectory <dir> and functions as though no MAPSO files are present by prompting for manual data input.

The serial output can be set for either 1200 baud or 300 baud. However, there are special setup options for stations that require other than normal ABT communication configuration which also allows for different baud rates.

The retransmit option allows selection of (**A**)FOS or (**R**)TA since it is possible for a normally configured RTA site's ABT system to be dialed up to an AFOS. The software will then provide the appropriate asynchronous header depending on the user's selection.

III. PROGRAM IMPROVEMENTS

Since version 2.0 (December 1, 1989), many changes have been made to both CLI.EXE and CLISETUP.EXE. From version 3.00 through the present, you can tell which version you are using. As you start the program, a (v3.xx) appears in the upper right-hand portion of the screen. As of this publication, the latest CLISETUP.EXE is version 3.01 and CLI.EXE is version 3.02. Here are the changes as they occurred beginning with:

Version 3.00

CLI version 3.00 corrects some small problems here and there, one of which was the need for a 5 digit HDD for places like International Falls. As a result of this correction, a utility program has been included with this version that must be run to modify your present TOTALS.CLI file. This utility program is named FIXTOTAL. The command line is FIXTOTAL [<dir>] and you are prompted on the screen when the program is finished. FIXTOTAL should only be run once on each subdirectory you are using THEN REMOVED FROM YOUR SYSTEM!!

The command line for this and all CLI related programs is to specify the directory after the program name. If none is entered, then files will be accessed from within the CLI subdirectory.

Version 3.00 will have a different CLIDAT.CLI file, and option number 14 of CLISETUP must be run first to (C)reate

a new file. The CLIDAT.CLI section has been changed to allow easier editing of this file. HOWEVER, to install version 3.00, you must use the (C)reate option the first time through. You will be asked if you want Moonrise/Moonset included and if you want tide data included in the output. You should not select these two new outputs until you have created the necessary data files.

MOONRISE/MOONSET

Moonrise/Moonset information can be generated with this version of the program. This requires two new files on a yearly basis! These files must be created with the Floppy Almanac software and the small utility program FIXMOON.EXE. The Floppy Almanac software is available through your SSD; FIXMOON.EXE is included in this package. The Floppy Almanac software should be version 0.51 or greater. I used version 0.51 and assumed no formatting changes in later versions. This is how to create your Moonrise/Moonset files:

1. Start the Floppy Almanac software by typing ICE and hitting the return key.

2. Select F1 from the main menu.

   a. Enter the starting date with F1

   b. Enter station latitude with F2

   c. Enter station longitude with F3

   d. Enter tabulation interval with F4 using +1.000000

   e. Enter number of lines as 365 with F5

   f. Set the time zone correction with F6

   g. Select F7 to save your entries

3. At the main menu, select F2 and enter a temporary filename. This will be the filename on disk that will contain the output.

4. Once you have the file name entered, select F6 from the main menu to run the program.

5. When this is completed, reset the time zone value with the menu and rerun the program for the second file.

You should now have the two files, one for standard time and one for daylight time.

6. Now you can create the final two files using the small utility program FIXMOON.EXE. Type FIXMOON <dir> and you will be prompted:

   Enter input file name?
   Enter output filename? (either MOON.DST or MOON.STD)

The output file must be named MOON.DST for daylight time and MOON.STD for standard time.

TIDE DATA

Tide data can be included in the CLI output. To do this, three things must be done:

1. Run CLISETUP to (E)dit the CLIDAT.CLI file. Enter a 1 for Tide data.

2. Again, using CLISETUP, run option number 18 and enter the data from the appropriate NOS tide tables high and low water predictions. Differences for time and height are entered along with the PLACE name. The differences for a subordinate station entered must be matched by the appropriate TIDE PREDICTION POINT.

3. A TIDE PREDICTION POINT table for the program to reference must be created. This file must be created with the NOS software NTP4.EXE. The output file from NTP4 is then altered with the utility program FIXTIDE.EXE (included in this package) to produce a final output file named TIDExx.CLI (where xx = the last two digits of the year). NTP4.EXE requires an 8087, 80287 or 80387 math co-processor for operation. The setup is difficult but not impossible if you follow the instructions included with the NTP4 program. You will need to obtain station constants for the TIDE PREDICTION point from the NOS. NTP4.EXE will only generate data for the following points:

Eastern and Southern Regions

Albany, NY	Baltimore, MD
Boston, MD	Breakwater Harbor,
DE Bridgeport, CN	Charleston, SC
Eastport, ME	Galveston, TX
Hampton Roads, VA	Key West, FL
Mayport, FL	Miami Harbor, FL
Mobile, AL	New London, CT
Newport, RI	New York, NY
Pensacola, FL	Philadelphia, PA
Portland, ME	Reedy Point, DE
St. Marks, FL	St. Petersburg, FL
Sandy Hook, NJ	Savannah, GA
Washington, DC	Willets Pt., NY
Wilmington, NC	

Western, Alaska, and Pacific Regions

Aberdeen, WA	Astoria, OR
Cordova, AK	Dutch Harbor, AK
Honolulu, HI	Humbolt Bay, CA
Ketchikan, AK	Kodiak, AK
Massacre Bay, AK	Nikishka, AK
Nushagak, AK	Pt. Townsend, WA
St. Michael, AK	San Diego, CA
San Francisco, CA	Seattle, WA
Seldovia, AK	Sitka, AK
Sweeper Cove, AK	Valdez, AK

Station constants can be obtained from NOS, the Tide and Currents Prediction Section, W/OMA132, for your TIDE PREDICTION POINT. Please refer to the document file NOTE with the TIDE PREDICTION PACKAGE for more information. The constant file is constructed as follows:

Line 1	Station Name
Line 2	Datum & control index (Datum is Mean tide level)
Lines 3-8	Station Constants (from NOS if not with this package)
Lines 9-13	Year constants taken from the file YEARDATA
Line 14	Year control line
Line 15	Termination code (copy what I did)

Here is an order of events to follow to use NTP4.EXE...

1. Develop your constant file. Use ASTORIA.CON as a reference. I used this file to generate a 1990 tide table for the Astoria Tongue Point TIDE PREDICTION POINT.

2. Run the program: NTP4 < constant > output., e.g., I used NTP4 < ASTORIA.CON > TIDEFILE.

3. Run the utility program FIXTIDE.EXE to produce the final output. Example: FIXTIDE <dir> (if dir is omitted, the default is CLI).

Enter Input file?	TIDEFILE
Enter Output file?	TIDE91.CLI

CLISETUP CHANGES in Version 3.00

With new climatological normals due to come on the scene, the CLISETUP program was changed to allow a partial entry of a new file while in the (C)reation mode. To finish making entries into a file containing partial data, simply continue with (C)reate rather than (E)dit, and if the file does indeed exist, you will be prompted for the month and day where you want to begin within the file.

(Hint! You can set up a TEMP subdirectory and start the program with the command CLISETUP TEMP and create the new normal files there first. Then when you are finished, move them into the CLI subdirectory.)

Option number 18 (TIDE.CLI) is added to (C)reate the file TIDE.CLI which contains information for including tide data in the output.

Option number 14 (CLIDAT.CLI) will now display this file and let you edit individual sections rather than re-entering the entire file each time. This is much better for making the changes from daylight to standard time.

Option number 17 (TOTALS.CLI) also was changed to support the 5-digit HDD correction.

SUMMARY OF CHANGES
IN VERSION 3.00

1. Moonrise/Moonset

2. Tide information

3. Over 10,000 Heating Degree Days supported.

4. CLISETUP will save partially (C)reated data to finish later.

5. If options for Wind, Snow, Water Year, Tide & Moon are not chosen, the files need not be present in the subdirectory.

6. A line return is printed between WMO header and first line.

7. Two utilities, FIXMOON.EXE and FIXTIDE.EXE, are included.

8. Some instruction prompts were clarified in CLISETUP.EXE

9. Estimated data in MAPSO are filtered to remove the E and the ( ) so it can be read by the CLI program.

10. FIXTOTAL.EXE is provided to update TOTALS.CLI file to version 3.00

Version 3.01

A handful of minor but important changes were made:

CLI.EXE · Version 3.01

Tied or exceeded record years were printing out minus 200 years; this problem was located and corrected. This only occurred when the year in question was a multiple record year.

The time zone after moonrise and moonset times was fixed to correctly display the time zone you have entered in the CLIDAT.CLI file.

A bug in the CLISETUP.EXE Version 3.01 option to edit the CLIDAT.CLI file was fixed!

FIXMOON.EXE was corrected to alter the output file from the Floppy Almanac so the file begins with the first day's data of the year on the first line instead of leaving a line of junk.

Version 3.02

It became necessary to have the CLI output produce an AFOS mass media style heading at the beginning of the product. Versions 3.01 and prior versions, had a heading with the third line showing only the month, day & year. Now it will look like:

CLIMATIC SUMMARY FOR ...
NATIONAL WEATHER SERVICE ...
235 AM PST WED MAR 20 1991

...TEMPERATURE....

NOTE: The ... portions are station entries controlled by the user through input into file CLIDAT.CLI.

There was also a work-around inserted into the program to take care of a MAPSO data problem caused when entering the edit mode for SYNOPTIC DATA. Data for that day are not written correctly back into the MAPSO file. The day is written back into the space where the year should be. This only occurs when you select the edit SYNOPTIC DATA F6 as of MAPSO version 4.03. All other edit options in MAPSO cause no problems with the data file.

It has been suggested that you check through your older CLI files MAXYR.CLI and MINYR.CLI for record years that may have been corrupt. The CLISETUP.EXE utility program is the easiest way to edit these files and restore the proper year.

IV. CAUTIONS AND RESTRICTIONS

The user of this program must realize that there is no hardware signal control between the ABT and the host computer. Therefore the output assumes there is a "listening" AFOS/RTA system. However, this is the reason for the retransmit option.

Most problems reported with setting up the program or changing program files have come from the use of other editors and word processors. Even though these store in ASCII, they leave a CTRL-Z at the end of the file. This can cause problems with the file CLIDAT.CLI. If you use a different editor, you should call each of these files into edit mode with the CLISETUP program which is somewhat of a check in itself.

Getting started can be a little tricky. The biggest problem is getting the correct accumulative totals going. But this is very easy to control with the TOTALS.CLI editor in CLISETUP.EXE.

A copy of the CLISETUP.EXE menu is shown as APPENDIX C.

V. REFERENCES

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APPENDIX A

ZCZC PDXCLIAST WES
TTAA00 KAST 220931

CLIMATIC SUMMARY FOR ASTORIA
NATIONAL WEATHER SERVICE ASTORIA OREGON
131 AM PST FRI MAR 22 1991

...TEMPERATURE...

HIGH YESTERDAY... 50 < Record high and previous date here >
LOW YESTERDAY... 40 < Record low and previous date here >
MEAN TEMP..... 45 DEPARTURE FROM NORMAL... 0

NORMAL HIGH FOR TODAY... 52
NORMAL LOW FOR TODAY... 37
RECORD HIGH FOR TODAY... 61 SET IN 1978 AND PREVIOUS YEARS
RECORD LOW FOR TODAY... 28 SET IN 1966 (if appropriate)

...DEGREE DAY DATA...

HEATING
YESTERDAY... 20 DEPARTURE... 0
MONTH..... 448 DEPARTURE... 8
SEASON..... 3724 DEPARTURE... -154

COOLING
YESTERDAY... 0 DEPARTURE... 0
MONTH..... 0 DEPARTURE... 0
SEASON..... 0 DEPARTURE... 0

...PRECIPITATION...

YESTERDAY..... 0.28
TOTAL FOR THE MONTH... 5.38
NORMAL MONTH TO DATE.. 5.12
TOTAL FOR THE YEAR.... 20.71 TOTAL SINCE OCT 1... 45.54
NORMAL YEAR TO DATE... 24.22 NORMAL FROM OCT 1... 51.88

SNOWFALL YESTERDAY... 0
SNOWFALL THIS MONTH.. 0
SNOWFALL THIS SEASON. 1.5

...WIND DATA IN MPH...

AVERAGE WIND SPEED YESTERDAY... 8.8
FASTEST 1-MIN WIND YESTERDAY... 15 FROM 270 DEGREES
PEAK WIND GUST YESTERDAY..... 21 FROM THE W

APPENDIX B

File CDD.CLI
Normal Cooling Degree Days

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000,000,000,000,000,000,000,000,000,000,000,000
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File CLI.BAT on root directory C:\

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ECHO OFF
C:\CLI\CLI.EXE
COMI
ECHO ...
ECHO  IF YOU WANT TO BACKUP THE CLI FILES, INSERT THE
ECHO  CLI PROGRAM DISK IN DRIVE  A  AND TYPE CLIBACKUP
ECHO  (and hit return).  OTHERWISE TYPE  ABT  TO RESTART
ECHO  MAPSO.
ECHO ...
ECHO ON
```

File CLIDAT.CLI
CLI control file

A10111ASTORIA PDXWRKASTLOCPST0ASTASTORIA OREGON

File COMMS.CLI
Communications parameters

COM1:
1200
,N,8,1, TB128,RS,OP0,CD0,CS0,DS0,LF

File DATES.CLI
Control file for date of last run of program

321 322

File HDD.CLI
Normal Heating Degree days

024,022,021,019,015,010,006,004,005,009,016,020
024,022,021,019,015,010,006,004,005,009,016,021
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024,021,021,017,013,008,005,005,007,012,019,022
024,021,021,017,012,008,005,005,007,012,019,022
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024,021,020,016,012,007,005,005,008,014,020,023
024,021,020,016,011,007,005,005,008,014,020,023
024,021,020,016,011,007,005,005,008,014,020,023
023,021,020,016,011,007,005,005,008,015,020,023
023,021,020,016,011,007,004,005,008,015,020,023
023,021,020,015,011,007,004,005,009,015,020,023
023,000,020,015,011,006,004,005,009,015,020,023
023,000,019,000,011,000,004,005,000,015,000,024

File MAXYR.CLI
Years for record maximum temperatures

981,991,981,987,971,970,967,974,972,988,969,958
981,962,986,787,971,970,972,967,972,980,990,958
984,984,965,966,989,987,972,988,953,966,970,979
984,984,965,966,953,989,975,990,955,980,980,981
981,787,965,960,953,958,960,958,975,964,987,987
981,954,965,785,987,977,953,972,958,987,980,987
986,963,982,959,787,955,977,978,958,976,980,962
981,987,953,959,987,955,956,981,960,971,976,962
961,963,979,959,960,975,985,981,960,979,953,981
986,963,965,990,988,986,990,977,973,987,976,957
956,983,965,980,988,985,961,977,975,987,990,980
986,963,965,980,959,986,961,977,975,982,976,960
981,981,979,980,973,983,973,985,957,982,974,969
981,791,972,981,958,988,958,962,967,978,979,962
965,962,790,983,976,966,979,967,981,954,981,980
958,957,790,983,985,958,979,785,982,960,978,980
986,957,956,983,958,985,972,982,962,959,967,979
786,958,983,982,961,982,956,972,971,978,980,979
961,978,960,956,978,973,988,967,974,964,987,960
961,970,968,956,963,973,790,966,953,964,987,980
981,973,968,982,969,990,980,988,790,965,954,980
981,981,978,968,969,961,984,988,989,965,954,963
968,988,979,977,983,989,965,985,974,965,956,963
983,970,960,978,986,989,984,964,974,965,956,963
986,991,969,965,979,987,988,967,980,965,956,980
983,988,969,987,972,986,981,986,967,987,980,980
988,968,790,983,983,978,958,972,970,953,980,980
988,968,964,989,984,967,974,978,989,962,789,980
960,988,964,989,973,974,990,976,987,958,964,963
962,0 ,987,977,986,965,959,968,987,954,958,980
976,0 ,987, 0 ,978, 0 ,968,972, 0 ,954, 0 ,963

File MINYR.CLI
Years for record minimum temperatures

981,991,981,987,971,970,967,974,972,988,969,958
981,962,986,787,971,970,972,967,972,980,990,958
984,984,965,966,989,987,972,988,953,966,970,979
984,984,965,966,953,989,975,990,955,980,980,981
981,787,965,960,953,958,960,958,975,964,987,987
981,954,965,785,987,977,953,972,958,987,980,987
986,963,982,959,787,955,977,978,958,976,980,962
981,987,953,959,987,955,956,981,960,971,976,962
961,963,979,959,960,975,985,981,960,979,953,981
986,963,965,990,988,986,990,977,973,987,976,957
956,983,965,980,988,985,961,977,975,987,990,980
986,963,965,980,959,986,961,977,975,982,976,960
981,981,979,980,973,983,973,985,957,982,974,969
981,791,972,981,958,988,958,962,967,978,979,962
965,962,790,983,976,966,979,967,981,954,981,980
958,957,790,983,985,958,979,785,982,960,978,980
986,957,956,983,958,985,972,982,962,959,967,979
786,958,983,982,961,982,956,972,971,978,980,979
961,978,960,956,978,973,988,967,974,964,987,960
961,970,968,956,963,973,790,966,953,964,987,980
981,973,968,982,969,990,980,988,790,965,954,980
981,981,978,968,969,961,984,988,989,965,954,963
968,988,979,977,983,989,965,985,974,965,956,963
983,970,960,978,986,989,984,964,974,965,956,963
986,991,969,965,979,987,988,967,980,965,956,980
983,988,969,987,972,986,981,986,967,987,980,980
988,968,790,983,983,978,958,972,970,953,980,980
988,968,964,989,984,967,974,978,989,962,789,980
960,988,964,989,973,974,990,976,987,958,964,963
962,0 ,987,977,986,965,959,968,987,954,958,980
976,0 ,987, 0 ,978, 0 ,968,972, 0 ,954, 0 ,963

File NMAX.CLI
Normal maximum temperatures

047,049,051,053,058,062,066,069,069,065,057,051
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046,051,052,056,060,064,068,068,068,061,053,049
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047,051,052,056,061,064,068,069,068,061,053,048
047,051,052,056,061,064,068,069,067,060,052,048
047,051,052,056,061,065,068,069,067,060,052,048
047,051,052,056,061,065,068,069,067,060,052,048
047,051,052,057,061,065,069,069,067,060,052,048
047,051,052,057,061,065,069,069,067,059,052,048
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048,000,053,058,062,066,069,069,066,057,051,047
049,000,053,000,062,000,069,069,000,057,000,047

File NMIN.CLI
Normal minimum temperatures

36,36,37,38,42,47,51,53,51,47,42,38
36,37,37,38,42,47,51,53,51,47,41,38
36,37,37,38,42,47,51,53,51,46,41,38
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35,37,36,39,44,49,52,53,50,45,40,38
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36,00,37,42,46,51,53,52,47,42,38,36
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File NRMT.CLI
Daily normal temperatures

41,43,44,46,50,55,59,61,60,56,49,45
41,43,44,46,50,55,59,61,60,56,49,44
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42,44,45,50,54,59,61,60,56,50,45,42
42,44,46,50,54,59,61,60,56,50,45,41

File PCPN.CLI
Daily normal precipitation
(leading zeros not necessary)

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038,029,025,017,009,009,004,004,009,017,032,037
038,028,025,017,009,009,003,004,009,018,032,037
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036,026,023,014,009,008,003,005,011,021,035,038
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File RECH.CLI (spaces not necessary)
Record high temperatures

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60 , 61 , 63 , 69 , 70 , 90 , 88 , 74 , 90 , 77 , 71 , 62
61 , 60 , 70 , 63 , 68 , 79 , 88 , 75 , 95 , 85 , 71 , 60
59 , 60 , 67 , 70 , 72 , 84 , 89 , 85 , 85 , 73 , 68 , 63
59 , 65 , 66 , 78 , 86 , 89 , 84 , 86 , 92 , 80 , 66 , 60
56 , 60 , 67 , 68 , 73 , 87 , 83 , 76 , 87 , 81 , 69 , 57
56 , 65 , 66 , 70 , 80 , 73 , 83 , 88 , 90 , 85 , 64 , 57
67 , 66 , 64 , 67 , 83 , 77 , 76 , 94 , 87 , 78 , 65 , 57
56 , 66 , 68 , 72 , 75 , 93 , 86 , 88 , 83 , 81 , 65 , 60
56 , 65 , 68 , 77 , 70 , 72 , 80 , 96 , 85 , 78 , 64 , 61
61 , 68 , 72 , 71 , 76 , 73 , 77 , 88 , 89 , 78 , 63 , 62
58 , 63 , 68 , 69 , 75 , 72 ,100 , 85 , 85 , 78 , 63 , 57
61 , 66 , 65 , 76 , 86 , 78 , 79 , 80 , 86 , 76 , 63 , 58
58 , 60 , 73 , 76 , 84 , 76 , 79 , 86 , 91 , 79 , 63 , 59
59 , 60 , 60 , 71 , 72 , 79 , 82 , 77 , 89 , 78 , 62 , 62
61 , 62 , 61 , 68 , 76 , 91 , 86 , 85 , 77 , 78 , 60 , 62
57 , 58 , 65 , 69 , 87 , 87 , 87 , 87 , 79 , 75 , 65 , 61
60 , 62 , 67 , 81 , 83 , 88 , 85 , 74 , 86 , 76 , 63 , 60
61 , 67 , 64 , 68 , 79 , 91 , 88 , 80 , 78 , 79 , 59 , 58
63 , 62 , 68 , 74 , 81 , 71 , 93 , 79 , 83 , 75 , 64 , 56
65 , 62 , 68 , 83 , 83 , 79 , 82 , 89 , 79 , 70 , 63 , 57
61 , 68 , 66 , 77 , 81 , 89 , 92 , 76 , 85 , 71 , 66 , 60
62 , 64 , 61 , 64 , 81 , 76 , 85 , 88 , 89 , 75 , 60 , 58
60 , 64 , 67 , 70 , 78 , 85 , 81 , 82 , 82 , 77 , 62 , 58
57 , 64 , 65 , 71 , 71 , 87 , 80 , 86 , 85 , 73 , 61 , 63
60 , 65 , 68 , 65 , 77 , 78 , 85 , 85 , 80 , 68 , 60 , 63
63 , 67 , 65 , 83 , 78 , 73 , 81 , 81 , 85 , 66 , 59 , 64
60 , 71 , 65 , 71 , 78 , 78 , 90 , 85 , 82 , 69 , 61 , 58
59 , 72 , 70 , 73 , 76 , 72 , 81 , 76 , 83 , 72 , 57 , 60
63 , 65 , 73 , 78 , 76 , 80 , 79 , 80 , 84 , 72 , 60 , 60
63 ,  0 , 68 , 71 , 78 , 75 , 92 , 84 , 86 , 67 , 61 , 60
63 ,  0 , 72 , 0  , 81 ,  0 , 82 , 86 ,  0 , 70 ,  0 , 60
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File RECL.CLI (spaces not necessary)
Record low temperatures

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14 , 21 , 22 , 29 , 30 , 38 , 43 , 43 , 38 , 35 , 29 , 22
21 , 14 , 26 , 30 , 35 , 39 , 42 , 45 , 41 , 34 , 30 , 27
17 , 11 , 24 , 30 , 35 , 38 , 43 , 43 , 39 , 34 , 30 , 29
21 , 13 , 27 , 30 , 33 , 37 , 45 , 43 , 41 , 33 , 29 , 24
16 ,  9 , 26 , 30 , 35 , 40 , 44 , 45 , 43 , 36 , 29 , 24
15 , 21 , 27 , 32 , 31 , 40 , 43 , 44 , 41 , 38 , 30 , 16
15 , 22 , 25 , 32 , 33 , 42 , 39 , 48 , 39 , 32 , 30 , 10
16 , 24 , 27 , 30 , 34 , 40 , 44 , 45 , 40 , 33 , 29 , 6
15 , 26 , 27 , 32 , 35 , 40 , 47 , 44 , 38 , 31 , 29 , 17
22 , 24 , 25 , 31 , 34 , 39 , 44 , 46 , 38 , 34 , 29 , 15
15 , 26 , 28 , 32 , 35 , 40 , 45 , 47 , 37 , 33 , 24 , 25
17 , 27 , 27 , 30 , 31 , 41 , 44 , 43 , 38 , 34 , 21 , 12
23 , 26 , 25 , 29 , 33 , 41 , 44 , 45 , 33 , 33 , 21 , 11
27 , 22 , 27 , 31 , 35 , 43 , 42 , 44 , 37 , 35 , 15 , 25
24 , 21 , 28 , 30 , 35 , 41 , 45 , 45 , 38 , 32 , 17 , 26
20 , 20 , 29 , 32 , 35 , 40 , 44 , 44 , 41 , 33 , 24 , 15
25 , 25 , 29 , 30 , 33 , 41 , 46 , 41 , 36 , 31 , 28 , 15
22 , 23 , 27 , 31 , 36 , 41 , 43 , 40 , 38 , 33 , 26 , 25
24 , 27 , 26 , 30 , 37 , 38 , 42 , 39 , 36 , 35 , 24 , 21
20 , 25 , 28 , 33 , 38 , 43 , 45 , 45 , 40 , 35 , 27 , 9
14 , 27 , 29 , 31 , 36 , 42 , 44 , 42 , 39 , 33 , 25 , 6
17 , 29 , 28 , 32 , 37 , 41 , 44 , 41 , 39 , 34 , 22 , 15
19 , 27 , 29 , 36 , 34 , 44 , 44 , 44 , 38 , 34 , 21 , 13
22 , 23 , 27 , 31 , 39 , 41 , 44 , 47 , 36 , 32 , 19 , 18
18 , 24 , 30 , 29 , 34 , 39 , 48 , 44 , 38 , 33 , 25 , 24
16 , 19 , 30 , 31 , 37 , 41 , 44 , 44 , 39 , 32 , 27 , 24
15 , 21 , 29 , 30 , 39 , 42 , 46 , 43 , 33 , 29 , 25 , 23
11 , 22 , 28 , 32 , 38 , 40 , 45 , 42 , 33 , 26 , 27 , 18
11 , 26 , 30 , 31 , 37 , 42 , 44 , 42 , 34 , 27 , 26 , 16
21 , 0  , 28 , 32 , 39 , 40 , 47 , 46 , 34 , 29 , 24 , 19
19 , 0  , 30 , 0  , 35 , 0  , 46 , 43 , 0  , 34 , 0  , 11
```

File SEASON.CLI
Accumulative monthly HDD, CDD & Precipitation

```
2847,00,11.29
3438,00,19.10
4077,00,26.36
4599,00,30.96
4996,00,33.80
5248,00,36.23
 158,07,37.27
 301,14,38.83
 500,14,41.94
 875,14,48.15
1427,14,58.03
2106,14,69.60
```

File TOTALS.CLI
Yearly and monthly totals for HDD, CDD & Precipitation

```
22 3 448 3724   0   0T T    0  14T T  538 2071 4554
```

File MOON.STD (same as MOON.DST except for times)
Data file for Moonrise/Moonset (from FIXMOON)
(only first line is shown due to a large file with long lines)

```
1991 Jan  1  2448257.512658   0 18 13.7  p17 45 ( 54 )   1 55   9  51 (302)
```

File TIDE.CLI
Correction and information file for Tide output

```
   0    0    0    0  0.0  0.0ASTORIA (TONGUE POINT) OREGON
```

File TIDE91.CLI
Data file for Tide output (from FIXTIDE)
(only first line is shown due to a large file with long lines)

```
      1      200      8.1      719      3.1      1308     10.2      2019    -1.5
```

File SUNR.CLI
Daily sunrise in local standard time

758,738,655,556,502,428,428,457,536,614,656,737
758,737,653,554,501,427,429,459,537,615,658,739
758,736,651,552,459,427,429,500,538,616,659,740
758,734,649,550,458,426,430,501,540,618,701,741
758,733,647,548,456,426,431,502,541,619,702,742
757,732,645,546,455,426,431,503,542,620,704,743
757,730,644,644,454,425,432,505,543,622,705,744
757,729,642,642,452,425,433,506,545,623,706,745
757,727,640,640,451,425,434,507,546,624,708,746
756,726,638,539,449,424,435,508,547,626,709,747
756,725,636,537,448,424,435,510,548,627,711,748
755,723,634,535,447,424,436,511,550,628,712,749
755,722,632,533,446,424,437,512,551,630,714,750
754,720,630,531,444,424,438,513,552,631,715,750
754,718,628,529,443,424,439,515,553,633,716,751
753,717,626,528,442,424,440,516,555,634,718,752
753,715,625,526,441,424,441,517,556,635,719,753
752,714,623,524,440,424,442,518,557,637,721,753
751,712,621,522,439,424,443,520,558,638,722,754
750,710,619,520,438,424,444,521,600,639,723,754
750,709,617,519,437,424,445,522,601,641,725,755
749,707,615,517,436,424,446,523,602,642,726,755
748,705,613,515,435,425,447,525,604,644,727,756
747,703,611,514,434,425,448,526,605,645,729,756
746,702,609,515,433,425,449,527,606,646,730,756
745,700,607,510,432,426,450,528,607,648,731,757
744,658,605,509,431,426,452,530,609,649,733,757
743,656,603,507,431,427,453,531,610,651,734,757
742,655,601.506,430,427,454,532,611,652,735,758
740,0 ,559,504,429,428,455,533,613,654,736,758
739,0 ,557,0 ,429,0 ,456,535,0 ,655,0 ,758

File SUNS.CLI
Daily sunset in local standard time

440,519,600,643,723,758,810,747,656,558,503,432
441,521,602,644,724,759,810,745,654,556,502,432
442,522,603,645,725,800,810,744,652,554,500,431
443,524,605,647,726,801,810,743,650,552,459,431
444,525,606,648,728,802,809,741,648,550,457,431
445,527,607,649,729,803,809,740,646,548,456,431
446,528,609,651,730,803,809,738,645,546,455,430
447,529,610,652,732,804,808,737,643,544,453,430
448,531,612,653,733,805,808,735,641,542,452,430
449,532,613,655,734,805,807,734,739,540,451,430
450,534,614,656,735,806,807,732,737,539,449,430
451,535,616,657,737,807,806,731,735,537,448,430
453,537,617,659,738,807,805,729,733,535,447,430
454,538,618,700,739,808,805,728,731,533,446,430
455,540,620,701,740,808,804,726,629,531,445,430
457,541,621,703,741,809,803,724,627,530,444,430
458,543,623,704,743,809,803,723,625,528,443,431
459,544,624,705,744,809,802,721,623,526,442,431
500,546,625,707,745,810,801,719,621,524,441,431
502,547,627,708,746,810,800,718,619,522,440,432
503,549,628,709,747,810,759,716,617,521,439,432
505,550,629,711,748,810,758,714,615,519,438,433
506,552,631,712,749,811,757,712,613,517,437,433
507,553,632,713,751,811,756,711,611,516,436,434
509,555,633,715,752,811,755,709,609,514,436,434
510,556,635,716,753,811,754,707,607,512,435,435
512,557,636,717,754,811,753,705,605,511,434,436
513,559,637,719,755,811,752,703,603,509,434,436
515,600,639,720,756,811,750,702,602,508,433,437
516,0 ,640,721,757,811,749,700,600,506,433,438
518,0 ,641,0 ,758,0 ,748,658,0 ,505,0 ,439

File SUMMARY.CLI

This file is the output file produced by the CLI program and is shown as APPENDIX A

File WTRYR.CLI
Accumulative precipitation normals beginning October 1
(Use CLISETUP option 16 if this file is needed)

2804,3927,4702,5422,5873,6155,6394,6496,6656, 14,648,1645
2842,3958,4727,5441,5884,6164,6399,6499,6663, 29,676,1681
2880,3989,4752,5460,5895,6173,6404,6502,6671, 44,705,1717
2918,4020,4777,5479,5905,6182,6409,6505,6679, 59,734,1754
2956,4050,4802,5497,5915,6191,6413,6509,6687, 75,763,1791
2994,4080,4827,5515,5925,6200,6417,6513,6695, 91,793,1828
3032,4110,4852,5533,5935,6209,6421,6517,6703,107,823,1865
3070,4139,4877,5550,5945,6218,6425,6521,6712,124,854,1902
3108,4168,4902,5567,5955,6227,6429,6525,6721,141,885,1939
3146,4197,4927,5584,5964,6236,6433,6529,6730,158,917,1976
3184,4225,4952,5601,5973,6245,6436,6533,6739,176,949,2013
3222,4253,4976,5617,5982,6254,6439,6537,6748,194,981,2050
3260,4281,5000,5633,5991,6263,6442,6542,6758,213,1013,2087
3298,4309,5024,5649,6000,6272,6445,6547,6768,232,1047,2124
3335,4336,5048,5664,6009,6281,6448,6552,6778,251,1080,2161
3372,4363,5072,5679,6018,6289,6451,6557,6788,271,1114,2198
3409,4390,5096,5694,6027,6297,6454,6562,6799,291,1148,2235
3446,4417,5119,5709,6036,6305,6457,6567,6810,312,1182,2272
3482,4443,5142,5723,6045,6313,6460,6572,6821,333,1217,2310
3518,4469,5165,5737,6054,6321,6463,6578,6832,354,1252,2348
3554,4495,5188,5751,6062,6329,6466,6584,6844,376,1287,2386
3590,4521,5211,5764,6070,6337,6468,6590,6856,398,1322,2424
3625,4547,5233,5777,6078,6344,6470,6596,6868,421,1357,2462
3660,4573,5255,5790,6086,6351,6472,6602,6880,444,1393,2500
3695,4599,5277,5803,6094,6358,6475,6608,6893,468,1429,2538
3729,4625,5299,5815,6102,6365,6478,6614,6906,492,1465,2576
3763,4651,5320,5827,6110,6371,6481,6621,6919,517,1501,2614
3797,4676,5341,5839,6119,6377,6484,6628,6932,542,1537,2652
3830,4701,5362,5851,6128,6383,6487,6635,6946,568,1573,2690
3863,0 ,5382,5862,6137,6389,6490,6642,6960,594,1609,2728
3895,0 ,5402,0 ,6146,0 ,6493,6649,0 ,621,0 ,2766

APPENDIX C

SELECT BY NUMBER PLEASE
(Version 3.01)

```
0  = END PROGRAM (Or hit return)
1  = RECORD LOW TEMPERATURES . . . . . RECL.CLI
2  = RECORD LOW YEARS . . . . . MINYR.CLI
3  = RECORD HIGH TEMPERATURES . . . . . RECH.CLI
4  = RECORD HIGH YEARS . . . . . MAXYR.CLI
5  = NORMAL DAILY HDD . . . . . HDD.CLI
6  = NORMAL DAILY CDD . . . . . CDD.CLI
7  = NORMAL DAILY HIGH TEMPERATURES . . . . . NMAX.CLI
8  = NORMAL DAILY LOW TEMPERATURES . . . . . NMIN.CLI
9  = NORMAL DAILY AVERAGE TEMPERATURES . NRMT.CLI
10 = NORMAL DAILY PRECIPITATION . . . . . PCPN.CLI
11 = DAILY SUNRISE LOCAL STANDARD TIME . . . . SUNR.CLI
12 = DAILY  SUNSET LOCAL STANDARD TIME . . . . SUNS.CLI
13 = MONTHLY NORMAL HDD, CDD, & PCPN . . . SEASON.CLI
14 = ADDRESS, TIME ZONE, OUTPUT SELECTION  CLIDAT.CLI
15 = COMMUNICATION PARAMETERS . . . . . COMMS.CLI
16 = WATER YEAR ACCUMULATIVE PRECIPITATIONWTRYR.CLI
17 = DAILY, MONTHLY, YEARLY TOTALS EDITOR  TOTALS.CLI
18 = TIDE HEADINGS AND CORRECTIONS . . . . . TIDE.CLI
   ***  YOU ARE USING SUBDIRECTORY ... CLI    ***

WHAT'S YOUR PLEASURE?
```

CLISETUP.EXE should be used to produce the files needed for the CLI program rather than other text editors. If other editors are used then each of these files should be individually loaded into the CLISETUP edit mode and then restored. This has been a proven help in eliminating many initial setup problems.

CLISETUP.EXE is menu driven and specific instructions appear on the screen in each of the different options. You will find that the user has final control over storage of files, i.e., you should never find yourself "locked" into a situation that you cannot eventually get out of.

This utility program also displays the version number at the top right-hand corner of the menu (beginning with version 3.00). The latest of each of the programs (CLI.EXE & CLISETUP.EXE) should to be used together. You will run into problems trying to use older CLISETUP programs such as version 2.0 and prior versions with version 3.00 or higher CLI files.

CLI.EXE

PART A: PROGRAM INFORMATION AND INSTALLATION

PROGRAM NAME: CLI.EXE and Utility CLISETUP.EXE
(Revised May 1991)

PURPOSE: The CLI program will produce a daily climatic summary from any office for any city. If it is run on a computer containing current MAPSO subdirectories AND the default subdirectory CLI is accessed for program information, the MAPSO files will be accessed for the data needed to produce the summary. If MAPSO files are not present, the user will be prompted for input data. If a program subdirectory other than CLI is specified, however, existing MAPSO files will always be ignored. The intent of this program is to produce an output similar to AFOS applications program SUMMARY.SV (CRCP #14, T. Schwein, December 1985) since it is no longer necessary to make climate entries for the F6.SV program at the AFOS dasher.

PROGRAM INFORMATION:

Development Programmer:
Joe L. Johnston
Location: WSO Astoria
Phone: (503) 861-1552
System: IBM-PC or Compatible
Language: Microsoft QuickBASIC
Compiler: Microsoft QuickBASIC 4.5
Program Creation Date: 3/22/1991
Run time: 60 to 80 seconds on XT's
Disk Space: Approx 150K total

Maintenance Programmer:
Joe L. Johnston
Location: WSO Astoria
Phone: (503) 861-1552

PROGRAM REQUIREMENTS:

Files	Location	Comments
CLI.EXE	C:\CLI	CLI.EXE should be in a subdirectory
CLISETUP.EXE	C:\	Utility program (called from anywhere)
COMI.COM	C:\	The ABT communications port interrupt
ABTINT.SYS	C:\	Installed by CONFIG.SYS for the RTA
CLI.BAT	C:\	Batch file to call C:\CLI then COMI
RECL.CLI	C:\dir	*Record Low Temperatures
MINYR.CLI	C:\dir	*Record Low Years
RECH.CLI	C:\dir	*Record High Temperatures
MAXYR.CLI	C:\dir	*Record High Years
HDD.CLI	C:\dir	*Normal Daily HDD
CDD.CLI	C:\dir	*Normal Daily CDD
NMAX.CLI	C:\dir	*Normal Daily High Temperatures
NMIN.CLI	C:\dir	*Normal Daily Low Temperatures
NRMT.CLI	C:\dir	*Normal Daily Average Temperatures
PCPN.CLI	C:\dir	*Normal Daily Precipitation
SUNR.CLI	C:\dir	*Daily Sunrise in Local Standard Time
SUNS.CLI	C:\dir	*Daily Sunset in Local Standard Time

SEASON.CLI	C:\dir	*Monthly Normal HDD, CDD & PCPN
CLIDAT.CLI	C:\dir	*AFOS/RTA PIL, Time Zone, Switches, etc.
COMMS.CLI	C:\dir	*Communications Parameters
WTRYR.CLI	C:\dir	*Water Year Accumulative Precipitation
TOTALS.CLI	C:\dir	*Updated Daily by CLI.EXE
SUMMARY.CLI	C:\dir	Output Disk File by CLI.EXE
DATES.CLI	C:\dir	Updated Daily by CLI.EXE
MOON.DST	C:\dir	Moonrise/Moonset in Daylight Time
MOON.STD	C:\dir	Moonrise/Moonset in Standard Time
TIDExx.CLI	C:\dir	Tide File xx= Current Year
TIDE.CLI	C:\dir	*Additional Tide File

* Created/Edited with CLISETUP.EXE prior to running CLI.EXE
dir = subdirectory name (Default name is CLI)

To avoid daily manual input of temperature and precipitation data, current MAPSO files should be present.

PROGRAM INSTALLATION:

For users with older versions already installed and in use:

Replace both CLI.EXE and CLISETUP.EXE with the new versions. Then CLISETUP MUST be run for options 14 and 16 if you are converting to version 3.00 or higher for the first time. FIXTOTAL.EXE should be run **ONLY ONCE** when upgrading from version 2.0 to 3.00 or higher. This is to convert an existing TOTALS.CLI file from a 4 digit HDD to a 5-digit HDD total. Also, notice there is a new special editor for TOTALS.CLI and CLIDAT.CLI files introduced with version 3.00.

For first time users:

It is best to get started by using the utility program CLISETUP.EXE. Go through each option one by one and create the files. See APPENDIX C of WRCP No. 58 (Revised April 1991) for additional information.

CLI.EXE must be copied to and run from a subdirectory (usually CLI). The reason for this is the comms interrupts on the ABT need to be reset after running CLI with the ABT program COMI.COM. This can only be conveniently done with a batch file. Batch (.BAT) files of the same name will compete with .EXE files so relocating CLI.EXE to the subdirectory is the best answer.

CLISETUP.EXE can be called from anywhere. If you are using an ABT system, COMI.COM should already reside on disk, and the ABTINT.SYS driver should already be included in CONFIG.SYS. If this is not the case, the program will still run, but the ABT system is probably not functioning as it should with the AFOS or the RTA.

CLISETUP.EXE should be used to create all the utility files marked with the * in PROGRAM REQUIREMENTS. There have been problems when other text editors have been used.

If you are installing files for a climate summary for which you do not want to access MAPSO files, create another subdirectory and call that directory with the command CLISETUP [dir].

CLISETUP will both create and edit files. During the creation option, you may quit and store part way through and resume working with this file at a later date. To do this, you select the same option with CLISETUP and choose (C)reate. You will be given the choice to enter a month number and day number in order to resume where you left off in this file. However, once you have completely entered the data you can proofread, recall, and then select (E)dit for correcting mistakes.

As you are using CLISETUP, the program will always indicate, at least near the bottom of the main menu screen, the name of the subdirectory you are working in. THIS IS IMPORTANT to be aware of since file names will be identical from one subdirectory to another. This provision is available if you are using a second subdirectory to produce a summary for an additional city or just to use a second subdirectory to create updated files when new normals become available.

If you plan to access MAPSO files for input data, you must create the default subdirectory CLI on the root directory C:. CLISETUP is started by entering CLISETUP [dir]. If dir is omitted, the default CLI is used.

Most entries for these data files are in whole numbers. A sunrise of 6:02 is entered as 602, sunset is 502 NOT 1702, and a daily normal .24 for precipitation is entered as 24 MAXYR.CLI and MINYR.CLI contain the years the record highs and lows occurred. The last three numbers of the year are entered, e.g., 1990 is entered as 990.

If the record occurred on multiple years subtract 200 so that a 1990 entry then becomes 790. This is tracked by the main program and used to print the additional phrase "AND PREVIOUS YEARS" in the output when and where it is appropriate to do so.

SEASON.CLI contains the accumulative normals for HDD, CDD, and PCPN. This file should be created using CLISETUP since entries of monthly normals for the three categories are accumulated and arranged in proper format by the setup program. The precipitation entries must be in hundredths of inches. SEASON.CLI is not written to by the main program; it is there for reading only.

WTRYR.CLI is the water year accumulative precipitation from October 1. If you choose to use this as a part of the CLI output, the file can be created for you from your PCPN.CLI file by simply running CLISETUP and selecting option number 16. But remember, you must have an accurate and complete PCPN.CLI file FIRST!

A batch file named CLI.BAT should be installed on the root directory C with at least the following commands:

```
CD\
C:\CLI\CLI
COMI
```

If you are doing an additional summary, say for Butte, Montana, create another subdirectory, and, for convenience, call it BTM. Then create all those files with CLISETUP.EXE using the command line CLISETUP BTM. Then install another batch file on the root directory called BTM.BAT. In this file place the commands:

```
CD\
C:\CLI\CLI BTM
COMI
```

PART B: PROGRAM EXECUTION AND ERROR CONDITIONS

PROGRAM NAME: CLI.EXE and Utility CLISETUP.EXE
(Revised April 1991)

PROGRAM EXECUTION: CLISETUP.EXE

CLISETUP.EXE can be called from a floppy or from any directory. The command line is CLISETUP [dir] where dir is any created subdirectory on root directory C. If dir does not exist, an error will result. If dir is omitted, CLISETUP will default to subdirectory CLI. When CLISETUP begins, you see the following menu options:

SELECT BY NUMBER PLEASE

0 = END PROGRAM (Or hit return)
1 = RECORD LOW TEMPERATURES . . . . . RECL.CLI
2 = RECORD LOW YEARS . . . . . MINYR.CLI
3 = RECORD HIGH TEMPERATURES . . . . . RECH.CLI
4 = RECORD HIGH YEARS . . . . . MAXYR.CLI
5 = NORMAL DAILY HDD . . . . . HDD.CLI
6 = NORMAL DAILY CDD . . . . . CDD.CLI
7 = NORMAL DAILY HIGH TEMPERATURES . . . . . NMAX.CLI
8 = NORMAL DAILY LOW TEMPERATURES . . . . . NMIN.CLI
9 = NORMAL DAILY AVERAGE TEMPERATURES . . . . . NRMT.CLI
10 = NORMAL DAILY PRECIPITATION . . . . . PCPN.CLI
11 = DAILY SUNRISE LOCAL STANDARD TIME . . . . . SUNR.CLI
12 = DAILY SUNSET LOCAL STANDARD TIME . . . . . SUNS.CLI
13 = MONTHLY NORMAL HDD, CDD, & PCPN . . . . . SEASON.CLI
14 = ADDRESS, TIME ZONE, OUTPUT SELECTION . . . . CLIDAT.CLI
15 = COMMUNICATIONS PARAMETERS . . . . . COMMS.CLI
16 = WATER YEAR ACCUMULATIVE PRECIPITATION . . . WTRYR.CLI
17 = DAILY, MONTHLY, YEARLY TOTALS EDITOR . . . . TOTALS.CLI
18 = TIDE HEADINGS AND CORRECTIONS . . . . . TIDE.CLI
*** YOU ARE USING SUBDIRECTORY ... dir ***

WHAT'S YOUR PLEASURE?

Enter a number from the left column and follow the instructions that appear on the screen. Initial installation requires you go through all the CLISETUP options, otherwise CLI.EXE will not run. Do not use option 17, however, until the file PCPN.CLI (option 10) has been created and the data verified as correct.

PROGRAM EXECUTION: CLI.EXE

The command line is CLI [dir] where dir is the subdirectory containing the files needed to run the program. If dir is omitted, the default subdirectory is CLI. If dir is missing or you enter the wrong dir, the program will end and tell you what was entered on the command line.

If MAPSO is running, you must first EXIT and hit ESC until you arrive at a DOS prompt. Then invoke the CLI program by typing the appropriate batch file you installed according to the instructions in Part A. The following are examples of what you will see when running CLI:

TO RETRANSMIT THE CLI CREATED __/__
(Based on __/__ data) enter Y

Note: The above only appears when valid data exists.

THIS SUMMARY IS FOR (City name)

DATE/TIME ENTRIES ARE FOR THE DATA DAY (Yesterday)
CAUTION!!! THE MAPSO MIDNIGHT COMMAND MUST
HAVE BEEN COMPLETED FIRST BEFORE RUNNING CLI!

REMEMBER...INPUT IS YESTERDAY'S DATE! MONTH # ? __
FOR WHAT DAY OF THE MONTH (should be yesterday)? __
IS THIS CORRECT? Y/N OR S(top) __

Once you make this entry, the program checks to see if it has been run on this day in order to maintain accurate records and totals. If you are not using an old TOTALS.CLI file, first time users will see the following messages prompting them on the options to generate this file:

CLI PROGRAM HAS NOT BEEN RUN FOR __/__

EITHER START WITH THAT DAY OR
UPDATE DATA FILES. A RETURN
WILL ABORT THIS ROUTINE!

THIS IS A ROUTINE TO CREATE/UPDATE TOTALS.CLI
TO ABORT THIS ROUTINE HIT RETURN

```
**************************************************
*  YOU PROBABLY SHOULD NOT BE DOING THIS         *
*  YOU SHOULD GO BACK AND RE-RUN THE DAY         *
*  THAT WAS MISSED.  BE SURE TO THEN             *
*  SELECT (T) AND TRANSMIT TO AFOS/RTA           *
**************************************************
```

If you want to CREATE/EDIT this file enter (Y) ___

Notice the warning message! This is here because during the normal running of the program, an operator will occasionally enter the wrong date. Thus, a person is reminded to go back and run the date indicated. This message is just a little insurance to keep the data files current. Keeping accurate records and totals depends on running the program on a daily basis.

When running the program for the first time, you should enter a Y to input the following information:

ENTER MONTH NUMBER? ___ (enter your starting month)
FOR WHICH DAY? ___ (and starting day)

The following data are UP TO BUT NOT INCLUDING the above date!

Monthly total HDD? ___
Seasonal total HDD? ___
Monthly total CDD? ___
Seasonal total CDD? ___

*** This entry is if the MONTHLY SNOWFALL is ONLY a Trace.
ENTER (T) if a Trace (otherwise hit return)? ___

MONTHLY TOTAL SNOWFALL IN TENTHS? ___
SEASONAL TOTAL SNOWFALL IN TENTHS? ___

*** This entry is if the MONTHLY PRECIP is ONLY a Trace.
ENTER (T) if a Trace (otherwise hit return)? ___

MONTHLY TOTAL PRECIPITATION IN HUNDREDTHS? ___
ANNUAL TOTAL PRECIPITATION IN HUNDREDTHS? ___
TOTAL PRECIP SINCE OCT 1 IN HUNDREDTHS? ___

NOTICE! If you WANT these changes STORED enter Y ___

Once you make these entries (for example February 5) you will see:

TOTALS.CLI UPDATED! PROGRAM CAN BE RUN FOR 2/5

RESTART CLI PROGRAM
C:\>

THIS IS VERY IMPORTANT!!! If you make a mistake entering TOTALS data, DON'T restart the program. Instead, use CLISETUP and select option number 17. This is an editor for the TOTALS.CLI file once it exists. You can change your starting values very easily with the CLISETUP program.

ERROR CONDITIONS:

If the program finds missing or no MAPSO data and your entry date is valid, you will be given prompts to enter the climate data from the screen.

You will not be allowed to run the same day twice. If a future day is entered, the program will now ask you if climate data are REALLY available for that date. You will be given the opportunity to continue. Under unusual circumstances, you may need this option but the NORMAL response should be NO!

If any of the program files are missing, the program will stop and the problem file will be listed to the screen.

When you transmit to AFOS, the program assumes AFOS is working properly. It's best to alert your output and verify it got there and use the REXMIT option if it didn't. For RTA sites, the RTA will give you a message if the file was not received properly.

The only changes made to data files prior to a successful running of the program are record highs and record lows. These four files are RECH.CLI, MAXYR.CLI, RECL.CLI & MINYR.CLI. You will have to watch this while you are getting started if record temperatures occurred during any of the days you are using to experiment and setup the program. Otherwise, all other files, totals, etc., are not updated until an output summary is completed.

IT IS THE ABT OPERATOR'S RESPONSIBILITY TO MAKE SURE ALT-F1=LPT1:AFOS IS SELECTED BEFORE CHOOSING THE TRANSMIT OPTION FROM THE CLI PROGRAM, OR PRODUCTS MAY ONLY GO TO THE PRINTER. ALSO, A PROPER RETURN TO MAPSO MUST BE MADE USING THE ABT MENU.

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