Conversion Utility for P8 Version 2.0 Precipitation Files

prepared for

**Wisconsin Department of Natural Resources
and
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by

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This report describes a utility for translating hourly precipitation data files into a format which is compatible with Version 2.0 of P8. This utility replaces the routine for converting NOAA files included in P8 Version 1.0. The file format required for Version 2.0 is different from that required for Version 1.0. Accordingly, any storm files created for use with P8 Version 1.0 must be converted before they can be used with P8 Version 2.0.

The utility 'P8CONV' can be used to translate ASCII data files in the following formats:

1   P8 Version 1.0 (Event-Based)
2   Earth-Info Compressed Format
3   NOAA Release B/Condensed or Basic Sequential Format

File structures are illustrated in Table 1. The Version 2.0 file (output from the utility) has one record per day in the following format:

　　　　YYYY MM DD P1 P2 ..... P24

where,
　　　　YYYY =　　Year
　　　　MM　 =　　Month
　　　　DD　 =　　Day
　　　　Pi　 =　　Precipitation for Hour i in hundreths of an inch

Each record has a free format (columns not significant) with fields separated by spaces. One record is required for each day in the simulation (including days with no precipitation).

The utility is executed from the DOS prompt. A sample session follows. User entries are *underlined*.

```
>P8CONV

Utility for Converting P8 Precip Files

Returns File in "YYYY MM DD P1 P2 ... P24" Format
  where Pi = Hourly Precip in Hundreths of Inch

Enter Input File Name or Blank Line to Quit
?  madison.pre

Enter Input File Format Type:
1 = P8 Version 1 Storm File
2 = Earth Info. Format File
3 = NOAA Release B/Condensed or Basic Sequential Format
?  2

Enter Output File Name:
?  madison.pcp

Enter Output File Description:
?  Madison Airport 1985-1994

Number of Missing Dates (Filled with 0's) =     2290

File Conversion Complete
Date Range = 19850101 to 19941231
Number of Records =    3652
```

Missing daily records in Earth Info files are assumed to be days with no precipitation.   The output file is padded with zero's on these days (2290 in the above example).

Table 1 - File Formats for Hourly Precipitation Data

Input Type 1: P8 Version 1.0 Format (Sample = 'prov6987.stm')

```
providence airport 1969-1987
69010622  6  59
2
14
8
8
14
2
69010909   3 224
1
0
1
```

Input Type 2: Earth Info Compressed Format (Sample = 'madison.pre')

```
WI|4961|8|in|01/01/1985|0.10||0.14||0.08||0.13||0.05||0.03||0.03||0.01||0.02||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||0.59||
WI|4961|8|in|01/06/1985|.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||0.01||.||0.01||.||.||.||.||0.02||
WI|4961|8|in|01/09/1985|.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||0.01||0.01||0.02||
WI|4961|8|in|01/10/1985|0.02||0.01||0.01||0.01||0.02||0.02||.||.||.||0.01||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||0.10||
WI|4961|8|in|01/14/1985|.||.||.||.||.||.||.||0.02||.||.||.||.||.||.||0.01||.||.||.||.||.||.||.||.||.||.||.||.||.||0.03||
WI|4961|8|in|01/16/1985|.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||.||0.03||0.01||0.03||0.03||0.02||0.02||0.01||0.01||0.01||.||0.17||
...
```

Input Type 3: NOAA Release B/Condensed or Basic Sequential Format (Sample = 'hp90770a.prn')

```
1,"HPD"
2,"BOSTON, MA        "
3,190770,190770,0,0,0,0,0,0,0,0
4,1954,01,1958,12
5,"HPCP"," "," "," "," "
8,954,1,1,"HI",6
9,1,0,"0","0"
9,10,1,"0","0"
9,11,1,"0","0"
9,12,2,"0","0"
9,13,1,"0","0"
9,25,5,"0","0"
8,954,1,3,"HI",7
9,19,1,"0","0"
...
```

Output: P8 Version 2.0 Format (Sample = 'prov6987.pcp')

```
Providence Airport 1969-1987
1969 1 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 14 8
1969 1 7 8 14 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1969 1 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1969 1 9 0 0 0 0 0 0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0
...
```