



# SMEX02 Rain Gauge Network, Walnut Creek, Iowa, Version 1

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## USER GUIDE

### How to Cite These Data

As a condition of using these data, you must include a citation:

Prueger, J. 2004. *SMEX02 Rain Gauge Network, Walnut Creek, Iowa, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. <https://doi.org/10.5067/CL64ZTGOS892>. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT [NSIDC@NSIDC.ORG](mailto:NSIDC@NSIDC.ORG)

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/NSIDC-0236>



National Snow and Ice Data Center

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# 1 DETAILED DATA DESCRIPTION

## 1.1 Format

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Data are ASCII tab-delimited text files.

## 1.2 Spatial Coverage

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Southernmost Latitude: 41.94°N

Northernmost Latitude: 41.99°N

Westernmost Longitude: 93.8°W

Easternmost Longitude: 93.4°W

## 1.3 Temporal Coverage

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Data were collected from 1 June 2002 to 19 August 2002.

### 1.3.1 Temporal Resolution

Data were gathered every hour.

## 1.4 Parameter or Variable

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The following table describes the columns in the data file.

Column/Parameter	Unit	Description
Site_ID		Rain gauge identifier
Latitude	degrees	WGS84
Longitude	degrees	WGS84
UTM_Easting	meters (m)	WGS84, Zone 15
UTM_Northing	meters (m)	WGS84, Zone 15
Date	mm/dd/yyyy	Date measurement was taken
Hour	0 to 23	Hour measurement was taken (0 is midnight Central Standard Time)

Column/Parameter	Unit	Description
Precip	millimeters (mm)	Amount of precipitation measured (missing data are represented by -99)

### 1.4.1 Sample Data Record

The following table shows a small sample of the data file.

SITE_ID	lat	lon	Easting	Northing	DATE	hour	precip
703	41.9792	-93.6582	445452	4647680	6/1/2002	0	0
703	41.9792	-93.6582	445452	4647680	6/1/2002	1	0
...							
703	41.9792	-93.6582	445452	4647680	6/2/2002	5	3.6
703	41.9792	-93.6582	445452	4647680	6/2/2002	6	0.8
703	41.9792	-93.6582	445452	4647680	6/2/2002	7	0
703	41.9792	-93.6582	445452	4647680	6/2/2002	8	1.3

## 2 DATA ACQUISITION AND PROCESSING

### 2.1 Theory of Measurements

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Rain gauges are intended to provide continuous measurements of the precipitation at a single point, with many gauges distributed throughout the watershed.

### 2.2 Sensor or Instrument Description

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The sources are twenty rain gauges placed in crop fields in the study area. A Texas Electronics model TE525 tipping bucket rain gauge measured precipitation. The device consists of small cones that fill up and tip when a specific amount of rain falls into the cone. The number of tips is converted to a calculated rainfall amount. These data are logged to a Campbell Scientific CR10 datalogger.

## 3 REFERENCES AND RELATED PUBLICATIONS

Please see the [SMEX02](#) site for more information, and the [AMSR-E](#) site to access data.

## 4 CONTACTS AND ACKNOWLEDGMENTS

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## 5 DOCUMENT INFORMATION

### 5.1 Publication Date

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May 2004

### 5.2 Date Last Updated

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