

SOFTWARE RELEASE NOTICE

1. SRN Number: GHGC-SRN- <del>187190</del> <i>187190</i>		
2. Project Title: Unsaturated and Saturated Flow under Isothermal Conditions		Project No. 20-1402-861
3. SRN Title: USCLIMATE version 1, 3/95		
4. Originator/Requestor: Randy Fedors		Date: 6-8-99
5. Summary of Actions		
<input checked="" type="checkbox"/> Release of new software <input type="checkbox"/> Release of modified software: <input type="checkbox"/> Enhancements made <input type="checkbox"/> Corrections made <input type="checkbox"/> Change of access software <input checked="" type="checkbox"/> Software Retirement		
<i>E.C. Percy 12/5/2001</i>		
6. Persons Authorized Access		
Name	Read Only/Read-Write	Addition/Change/Delete
Randy Fedors	RO	A
Jim Winterle	RO	A
David Farrell	RO	A
Amit Armstrong	RO	A
7. Element Manager Approval: English Percy <i>E.C. Percy</i>		Date: <i>6/8/99</i>
8. Remarks:		

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SOFTWARE SUMMARY FORM

01. Summary Date: 6-8-99		02. Summary prepared by (Name and phone) Randy Fedors (210) 522-6818		03. Summary Action:  New	
04. Software Date: 3/95		05. Short Title: USCLIMATE			
06. Software Title: USCLIMATE.BAS version 1, 3/95				07. Internal Software ID:	
08. Software Type:  <input type="checkbox"/> Automated Data System <input checked="" type="checkbox"/> Computer Program <input type="checkbox"/> Subroutine/Module		09. Processing Mode:  <input checked="" type="checkbox"/> Interactive <input type="checkbox"/> Batch <input type="checkbox"/> Combination		10. Application Area  a. General: <input checked="" type="checkbox"/> Scientific/Engineering <input type="checkbox"/> Auxiliary Analyses <input type="checkbox"/> Total System PA <input type="checkbox"/> Subsystem PA <input type="checkbox"/> Other  b. Specific:    Estimating Precipitation	
11. Submitting Organization and Address:  CNWRA/SwRI 6220 Culebra Road San Antonio, TX 78228			12. Technical Contact(s) and Phone: David Woolhiser 1631 Barnwood Dr. Fort Collins, CO 80525 (970) 482-7810		
13. Software Application: Uses parameters from existing weather stations across U.S. to predict precipitation at any locale using a Markov chain-mixed exponential type model for number of dry days and precipitation on wet days.					
14. Computer Platform PC		15. Computer Operating System: MS-DOS		16. Programming Language(s): Basic	
17. Number of Source Program Statements: 855		18. Computer Memory Requirements: 1MB		19. Tape Drives: N/A	
20. Disk Units: N/A		21. Graphics: graphics card needed; i.e., VGA card			
22. Other Operational Requirements  Requires "basic" compiler; "qbasic" on WinNT works fine					
23. Software Availability: <input checked="" type="checkbox"/> Available <input type="checkbox"/> Limited <input type="checkbox"/> In-House ONLY			24. Documentation Availability: <input checked="" type="checkbox"/> Available <input type="checkbox"/> Preliminary <input type="checkbox"/> In-House ONLY		
25. Software Developer: <i>Austin Gunn Mathis</i> Date: <i>6/8/99</i>					

Key Staff Person *Randy W Fedors* *6/8/99*

TO: Bruce Mabrito  
FROM: R. Fedors  
SUBJECT: TOP-018 for USCLIMATE  
DATE: June 8, 1999

*R Fedors*

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USCLIMATE is an off-the-shelf *basic* program used to provide precipitation probabilities and to simulate daily precipitation, temperature, and solar radiation for any locale in the contiguous United States. It uses a database of parameters for a Markov chain - mixed exponential model developed from existing weather stations that may be used directly or interpolated. Daily precipitation, temperature, and solar radiation can be simulated for an n-year period for use in stochastic-based modeling.

The USCLIMATE program and database is documented in: Hanson, C.L., K.A. Cumming, D.A. Woolhiser, and C.W. Richardson, July 1994, Microcomputer Program for Daily Weather Simulation in the Contiguous United States, ARS-114, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). Hanson et al. (1994) is included in the TOP-018 folder. The program is distributed in the *basic* computer language, although a Fortran version may be requested from the Northwest Watershed Research Center, USDA-ARS, 800 Park Blvd, Plaza IV, Suite 105, Boise ID 83712-7716 and telephone number of (208)334-1363. Since there was no version number associated with the USDA-ARS distribution of USCLIMATE, it was decided that this version would be called version 1 and associated with the date of March 1995 in the TOP-018 paperwork. The program and database are contained on a 1.4 MByte floppy diskette that is enclosed in the TOP-018 folder.

The installation test for USCLIMATE followed the example given on pages 12-18 in Hanson et al. (1994). The theory and implementation in the program are described in the remainder of the documentation. To run the program, start *qbasic* under a DOS emulator in WinNT. USCLIMATE.BAS was loaded and run with no difficulties. All of the results and screen displays of the example problem illustrated in Figures 2 to 17 were exactly reproduced using the WinNT machine "bubo" (Pentium 450 MHz) at the CNWRA. Thus, the installation test was successful.

enclosures (2):  
floppy diskette (USCLIMATE.BAS, 3/95)  
documentation (Hanson et al., 1994)

Information on Pages 4 through 47 contains Microcomputer Program for Daily Weather Simulation in the Contiguous United States copyright information and is therefore not included in this file.