

SUBROUTINE SFWGHT

Description

This routine computes grid point, Thiessen, 1/d**power or 1/d**2 weights.

See Table 1 for station weight computation processing information.

Calling Sequence

CALL SFWGHT (IRTYPE, AREAID, IPARM, ITYPE, NSEGS, LFACTR, IY, IXB, IXE, MSTAS, XC, YC, POWER, STMNWT, NSTAS, STAID, STAWT, ISTAPT, STACC, ISTAT)

Argument List

<u>Argument</u>	<u>Input/ Output</u>	<u>Type</u>	<u>Dimension</u>	<u>Description</u>
IRTYPE	I	I*4	1	Indicator for type of weighting to be done: 1 = for stations 2 = for areas
AREAID	I	A8	1	Area identifier
IPARM	I	I*4	1	Indicator for type of weight: 1 = PCPN or MAP timing 2 = PCPN or MAP station 3 = MAT 4 = maximum/minimum temperature 5 = instantaneous temperature 6 = future temperature 7 = MAPE -2 = no limit on number of weights
ITYPE	I	I*4	1	Indicator for weighting scheme: 1 = Grid point 2 = Thiessen 3 = 1/d**power 4 = 1/d**2
NSEGS	I	I*4	1	Number of NWSRFS/HRAP segments used to define the basin
LFACTR	I	I*4	1	Density factor for the grid point definition
IY	I	I*4	NSEGS	Array of rows of grid points within defined basin

<u>Argument</u>	<u>Input/ Output</u>	<u>Type</u>	<u>Dimension</u>	<u>Description</u>
IXB	I	I*4	NSEGS	Array of columns of leftmost grid points within defined basin
IXE	I	I*4	NSEGS	Array of columns of rightmost grid points within defined basin
MSTAS	I	I*4	1	Dimension of arrays containing the grid point definitions
XC	I	R*4	1	X coordinate of the area centroid
YC	I	R*4	1	Y coordinate of the area centroid
POWER	I	R*4	1	Exponent in 1/d**power
STMNWT	I	R*4	1	Minimum weight of stations to be kept when doing station weighting
NSTAS	O	I*4	1	Number of stations with computed weights
STCID	O	A8	MSTAS	Identifiers of weighted stations
STAWT	O	R*4	MSTAS	Computed station weights
ISTAPT	O	I*4	MSTAS	Array of pointers to weighted stations in common block SNTWKX
STACC	O	R*4	(2,MSTAS)	Array of coordinates for weighted stations
ISTAT	O	I*4	1	Status code: 0 = normal return 1 = system error

Table 1. Station Weight Computations

<u>Weight Type</u>	<u>IPARM</u>	<u>ITYPE</u>	<u>Maximum Stations</u>	<u>Normalize?</u>	<u>1% Cutoff?</u>
MAP timing	1	3	10	yes	yes
MAP timing	1	4	1/quadrant	no	no
PCPN	1	4	3/quadrant	no	no
MAP station	2	1	99	yes	yes
MAP station	2	2	99	yes	yes
MAP station	2	3	20	yes	yes
PCPN	2	4	5/quadrant	no	no
MAP station	-2	1	n/a	yes	no
MAP station	-2	2	n/a	yes	no
MAP station	-2	3	n/a	yes	no
MAT station	3	1	50	yes	yes
MAT station	3	3	10	yes	yes
MXMN TEMP	4	4	3/quadrant	no	no
INST TEMP	5	4	3/quadrant	no	no
FUT TEMP	6	4	2/quadrant	no	no
MAPE	7	3	5	yes	yes