

SEQUOYAH NUCLEAR PLANT

NOWCAST MANUAL

SEPTEMBER 1982

Air Resources Program
Tennessee Valley Authority
Muscle Shoals, Alabama

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Introduction

The radiological emergency plan (REP) for the Sequoyah Nuclear Plant (SQN) requires input of the following meteorological data:

- A. A measure of atmospheric stability in the layer between the potential vent heights and about 10 meters.
- B. Wind direction at about 46 meters.
- C. Wind speed at about 46 and 10 meters.

For the REP, the atmospheric stability class is derived from the temperature difference between sensors at 45.99 and 9.25 meters, the wind direction from a sensor at 45.65 meters, and the wind speed from sensors at 45.65 and 9.73 meters on the Sequoyah tower. For convenience, the heights for stability values are given as 46 and 9 meters, and for wind velocity values as 46 and 10 meters.

If one or more of the input data are missing or invalid, "reasonably representative" values may be estimated from selected "reference parameters," with varying degrees of success. These reference parameters include: stability class derived from the temperature difference between simultaneous measurements at 90.79 and 45.99 m, or 90.79 and 9.25 m; and wind velocity measurements at 91.40 m on the Sequoyah tower. (The 90.79 and 91.40 m sensor heights are given as 91 m in the manual). Other reference parameters from the meteorological facility at the Watts Bar Nuclear Plant (WBN) (about 52 km north-northeast of Sequoyah) include: stability class derived from simultaneous temperature differences between 45.63 and 9.51 m, 91.20 and 45.63 m, or 91.20 and 9.51 m; and wind velocity at 9.72, 46.36, or 93.33 m. In the manual, the heights for WBN stability values are given as 10, 46 and 91 m, and for wind velocity values as 10, 46, and 93 meters. Time of day and month are also used as reference parameters.

In general, dose estimators have indicated that they would like limits assigned to estimated values which support a 90 percent confidence factor. An attempt has been made to provide this degree of confidence. Where such confidence was not attainable, the actual confidence factor (in percent) is provided.

The manual is in two parts. The first part provides parameter-specific procedures. The second part provides backup material on which the selection of procedures was based. In general, during a radiological emergency, only the first part will be used.

There is also a fruitless file, which is not included in the manual. This includes procedures investigated which showed little promise and were considered to be unusable.

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General Directions

This manual provides procedures for estimating missing values of:

- 9 to 46 meter stability class
- 46 meter wind direction
- 46 meter wind speed
- 10 meter wind speed

There is a separate section for each of these parameters. The first page of each section is a table of contents for that section. This table lists the reference parameters on which each procedure is based. Also listed, to the right, are the table numbers of the procedures for estimating the missing parameter, based on the reference parameters available. The procedures are arranged in the order of effectiveness, with the most effective listed first.

To estimate a missing parameter, turn to the table of contents of the appropriate section. Read down the list to the first parameter(s) that is (are) available. Turn to the procedure using the available parameter(s) as indicated in the right-hand column. Follow the given procedure to obtain an estimated value of the missing parameter. Note: The procedures are based on hourly reference parameter values given for the end of the hour. For example, the 1200 value is for the hour ending at 1200. Missing 15-minute values should be estimated from the reference parameter values for the hour immediately following. For example, the missing 1114 value should be estimated from the reference parameter value for 1200.

The procedures include the precision limits (as \pm values) that must be assigned in order to reach a 90 percent confidence level, if this level of confidence has been attained. If not, the expected percent of success (the confidence level) is also given. These confidence factors (\pm values and confidence levels) must be provided to the dose estimators with the estimated (nowcast) value.

Missing Parameter - Stability Class 46-9 m ΔT

Read down the table to locate the first reference parameter(s) for which data are available. Read across to locate the appropriate procedure to use.

Reference Parameter	Table No.	Column No.
1. Sequoyah 91-9 m ΔT	2-1	1
2. Watts Bar 46-10 m ΔT	2-1	2
3. Sequoyah 10 m wind speed (WS), Time of day, Month . . .	2-2	
WS \leq 2.2 m/s (5 mi/h) Block 1		
2.2 m/s < WS \leq 4.5 m/s (10 mi/h) Block 2		
WS > 4.5 m/s Block 3		
4. Watts Bar 91-10 m ΔT	2-1	3
5. Sequoyah 91-46 m ΔT	2-1	4
6. Watts Bar 91-46 m ΔT	2-1	5
7. Time of Day	2-3	

Table 2-1 Estimated Sequoyah Stability Class (46-9 m ΔT)*

Reference Parameter Stability Class	Reference Parameter				
	Sequoyah 91-9 m ΔT	Watts Bar 46-10 m ΔT	Watts Bar 91-10 m ΔT	Sequoyah 91-46 m ΔT	Watts Bar 91-46 m ΔT
A	A \pm 0	B \pm 1	A \pm 1	B \pm 1/80%	A \pm 0
B	A \pm 0	B \pm 1	B \pm 1	B \pm 1	C \pm 1/70%
C	B \pm 1	B \pm 1/85%	B \pm 1	B \pm 1	B \pm 1/65%
D	D \pm 1	D \pm 1/85%	D \pm 1/75%	D \pm 1/75%	D \pm 1/70%
E	E \pm 1	E \pm 1	E \pm 1	E \pm 1	E \pm 1
F	F \pm 1	F \pm 1	F \pm 1	F \pm 1	F \pm 1
G	G \pm 1	F \pm 1	G \pm 1	F \pm 1	F \pm 1

*Following the estimated stability class is the number of stability classes on either side of the estimated class needed to give a confidence level of 90 percent, if that level of confidence was attained. If not, the actual confidence level is indicated. A maximum limit of \pm one stability class was imposed.

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

Month JANUARY						Month FEBRUARY											
Block 1 WS < 2.2 m/s			Block 2 WS > 2.2 m/s WS < 4.5 m/s			Block 3 WS > 4.5 m/s			Block 1 WS < 2.2 m/s			Block 2 WS > 2.2 m/s WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
Time	Sta. Cl.	See a	See b	See c	See d	Time	Sta. Cl.	See a	See b	See c	See d	Time	Sta. Cl.	See a	See b	See c	See d
01	E	+1				01	E	+1				01	E	+1			
02	E	+1				02	E	+1				02	E	+1			
03	E	+1				03	E	+1				03	E	+1			
04	E	+1				04	E	+1				04	E	+1			
05	E	+1				05	E	+1				05	E	+1			
06	E	+1				06	E	+1				06	E	+1			
07	E	+1				07	E	+1				07	E	+1			
08	E	+1				08	E	+1				08	E	+1			
09	D	+1				09	D	+1				09	D	+1	80		
10	D	+1	85			10	D	+1	85			10	D	+1	75		
11	D	+1	75			11	D	+1	75			11	D	+1	70		
12	D	+1	70			12	D	+1	70			12	D	+1	70		
13	D	+1	70			13	D	+1	75			13	D	+1	75		
14	D	+1	70			14	D	+1	65			14	D	+1	65		
15	D	+1	85			15	D	+1	75			15	D	+1	75		
16	E	+1				16	D	+1				16	D	+1			
17	E	+1				17	D	+1				17	D	+1			
18	E	+1				18	E	+1				18	E	+1			
19	E	+1				19	E	+1	85			19	E	+1	85		
20	E	+1				20	E	+1	85			20	E	+1	85		
21	E	+1				21	E	+1				21	E	+1			
22	E	+1				22	E	+1				22	E	+1			
23	E	+1				23	E	+1	85			23	E	+1	85		
24	E	+1				24	E	+1	85			24	E	+1	85		

a: + number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph
4.5 m/s = 10 mph

Sta. Cl. - Stability Class

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

Month MARCH				Month APRIL													
Block 1 WS < 2.2 m/s				Block 2 WS > 2.2 m/s WS < 4.5 m/s				Block 3 WS > 4.5 m/s									
Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b						
01	F	+1	85	E	+1			01	F	+1		D	+1	E	+0		
02	F	+1		D	+1			02	F	+1		D	+1	E	+1		
03	F	+1	85	D	+1			03	F	+1		D	+1	D	+0		
04	F	+1	85	D	+1			04	F	+1		D	+1	D	+0		
05	E	+1	85	D	+1			05	F	+1		E	+1	D	+0		
06	E	+1		D	+1			06	F	+1		E	+1	D	+1		
07	E	+1		D	+1			07	E	+1		D	+1	D	+0		
08	E	+1		D	+1			08	D	+1	85	C	+1	70	B	+0	
09	D	+1		C	+1	70		09	C	+1	70	A	+1	60	D	+1	50
10	D	+1	80	D	+1	60		10	B	+1	80	B	+1	60	D	+	65
11	C	+1	75	D	+1	60		11	B	+1	65	B	+1	70	B	+1	55
12	C	+1	70	C	+1	70		12	C	+1	75	B	+1	65	B	+1	70
13	C	+1	75	B	+1	80		13	B	+1	60	B	+1	80	A	+0	60
14	C	+1	70	B	+1	60		14	C	+1	55	B	+1	60	A	+0	60
15	D	+1	75	C	+1	70		15	D	+1	70	B	+1	60	B	+1	65
16	D	+1	85	C	+1	85		16	C	+1		C	+1	70	C	+1	80
17	D	+1		D	+1			17	D	+1		D	+1		D	+1	
18	E	+1		E	+1			18	E	+1		E	+1		D	+1	
19	F	+1		E	+1			19	F	+1		E	+1		D	+0	
20	F	+1		E	+1			20	F	+1		E	+1		E	+1	
21	F	+1		E	+1			21	F	+1		E	+1		E	+0	
22	F	+1		E	+1			22	F	+1		E	+1		D	+1	75
23	F	+1		E	+1			23	F	+1		E	+1		D	+0	
24	F	+1		E	+1			24	F	+1		E	+1		E	+1	

a: + number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph
4.5 m/s = 10 mph

Sta. Cl. - Stability Class

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

				Month MAY							Month JUNE								
Block 1				Block 2			Block 3			Block 1				Block 2			Block 3		
WS < 2.2 m/s				WS > 2.2 m/s			WS > 4.5 m/s			WS < 2.2 m/s				WS > 2.2 m/s			WS > 4.5 m/s		
				WS < 4.5 m/s										WS < 4.5 m/s					
Time	Sta.	See	See	Sta.	See	See	Sta.	See	See	Time	Sta.	See	See	Sta.	See	See	Sta.	See	See
	Cl.	a	b	Cl.	a	b	Cl.	a	b		Cl.	a	b	Cl.	a	b	Cl.	a	b
01	F	+1		E	+1		E	+0		01	F	+1		D	+1		-		
02	F	+1		E	+1		E	+1		02	F	+1		D	+1		-		
03	E	+1		E	+1		E	+0		03	E	+1		D	+1		-		
04	E	+1		E	+1		-			04	E	+1		D	+1		E	+0	
05	E	+1		E	+1		-			05	E	+1		E	+1		-		
06	E	+1		E	+1		E	+0		06	E	+1		E	+1		-		
07	E	+1		E	+1		-			07	E	+1		D	+1		-		
08	D	+1		D	+1		-			08	D	+1		D	+1		C	+0	
09	D	+1		C	+1	85	-			09	C	+1		C	+1	65	B	+0	
10	C	+1	80	B	+1	65	-			10	C	+1	75	B	+1	85	A	+0	
11	C	+1	80	B	+	65	A	+0	65	11	B	+1	70	B	+1	85	A	+0	
12	C	+1	85	B	+1	75	A	+0	75	12	B	+1	75	B	+1		A	+0	
13	C	+1	75	B	+1	75	D	+1	60	13	A	+1	75	B	+1		A	+0	
14	C	+1	65	B	+1	70	A	+0	65	14	B	+1	70	B	+1		A	+0	
15	C	+1	75	B	+1	65	D	+1	65	15	C	+1	70	B	+1	85	A	+0	
16	D	+1	80	C	+1	70	D	+1		16	D	+1	80	B	+1	70	-		
17	D	+1	85	D	+1		D	+1		17	D	+1		C	+1	85	B	+0	
18	D	+1		D	+1		D	+1		18	E	+1		D	+1		D	+0	
19	E	+1		E	+1		-			19	E	+1		D	+1		D	+0	
20	E	+1		E	+1		-			20	E	+1		D	+1		-		
21	F	+1		E	+1		-			21	F	+1		E	+1		-		
22	F	+1		E	+1		-			22	F	+1		D	+1		D	+0	
23	F	+1		E	+0		-			23	F	+1		E	+1		D	+0	
24	F	+1		E	+0		D	+0		24	F	+1		D	+1		D	+0	

a: ± number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph

4.5 m/s = 10 mph

Sta. Cl. - Stability Class ("-" in this column indicates that there were no data values in the data set for this wind speed category.)

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

Month <u>JULY</u>				Month <u>AUGUST</u>							
Block 1 WS < 2.2 m/s				Block 2 WS > 2.2 m/s WS < 4.5 m/s				Block 3 WS > 4.5 m/s			
Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b
01	E	+1		01	E	+1		01	E	+1	
02	E	+1		02	E	+1		02	E	+0	
03	E	+1		03	D	+1		03	E	+1	
04	E	+1		04	D	+1		04	E	+1	
05	E	+1		05	D	+1		05	E	+1	
06	E	+1		06	D	+1		06	E	+1	
07	E	+1		07	D	+0		07	E	+1	
08	D	+1		08	D	+1		08	D	+1	
09	C	+1		09	C	+1	85	09	C	+1	85
10	B	+1	65	10	B	+1	80	10	C	+1	70
11	B	+1	75	11	B	+1	80	11	B	+1	75
12	B	+1	75	12	B	+1		12	B	+1	70
13	B	+1	70	13	B	+1	85	13	B	+1	70
14	B	+1	70	14	B	+1	80	14	B	+1	85
15	B	+1	60	15	B	+1	80	15	B	+1	75
16	B	+1	55	16	B	+1	75	16	B	+1	65
17	D	+1	65	17	D	+1	65	17	D	+1	70
18	D	+1	80	18	D	+1	75	18	D	+1	80
19	D	+1		19	D	+1		19	E	+1	
20	E	+1		20	D	+1		20	E	+1	
21	E	+1		21	E	+0		21	E	+1	
22	E	+1		22	E	+1		22	E	+1	
23	E	+1		23	E	+1		23	E	+1	
24	E	+1		24	E	+1		24	E	+1	

a: + number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph

4.5 m/s = 10 mph

Sta. Cl. - Stability Class

("-" in this column indicates that there were no data values in the data set for this wind speed category.)

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

Month SEPTEMBER				Month OCTOBER							
Block 1 WS < 2.2 m/s		Block 2 WS > 2.2 m/s WS < 4.5 m/s		Block 3 WS > 4.5 m/s		Block 1 WS < 2.2 m/s		Block 2 WS > 2.2 m/s WS < 4.5 m/s		Block 3 WS > 4.5 m/s	
Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b	Time	Sta. Cl.	See a	See b
01	E	+1		01	F	+1		01	E	+1	-
02	E	+1		02	F	+1		02	E	+1	-
03	E	+1		03	F	+1		03	E	+1	-
04	E	+1		04	F	+1		04	E	+1	-
05	E	+1		05	F	+1		05	D	+1	-
06	E	+1		06	E	+1		06	D	+1	-
07	E	+1		07	E	+1		07	D	+1	-
08	E	+1		08	E	+1		08	D	+1	-
09	D	+1		09	D	+1		09	D	+1	85
10	C	+1	80	10	D	+1	80	10	B	+1	70
11	B	+1	75	11	C	+1	75	11	B	+1	85
12	B	+1	75	12	B	+1	75	12	B	+1	
13	B	+1	70	13	B	+1	75	13	B	+1	85
14	B	+1	80	14	B	+1	75	14	B	+1	85
15	B	+1	70	15	B	+1	75	15	B	+1	
16	C	+1	65	16	B	+1	80	16	B	+1	65
17	D	+1		17	C	+1	75	17	D	+1	
18	D	+1		18	D	+1		18	D	+1	
19	E	+1		19	E	+1		19	E	+1	
20	E	+1		20	E	+1		20	E	+1	
21	E	+1		21	E	+1		21	E	+1	
22	E	+1		22	E	+1		22	E	+1	
23	E	+1		23	E	+1		23	E	+1	
24	E	+1		24	D	+1		24	E	+1	

a: + number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph
4.5 m/s = 10 mph

Sta. Cl. - Stability Class ("-" in this column indicates that there were no data values in the data set for this wind speed category.)

Table 2-2

Estimated Sequoyah Stability Class (46-9 m ΔT)
Reference Parameters - Sequoyah 10 m Wind Speed, Month, and Time of Day

Month <u>NOVEMBER</u>												Month <u>DECEMBER</u>											
Block 1 WS < 2.2 m/s				Block 2 WS > 2.2 m/s WS < 4.5 m/s				Block 3 WS > 4.5 m/s				Block 1 WS < 2.2 m/s				Block 2 WS > 2.2 m/s WS < 4.5 m/s				Block 3 WS > 4.5 m/s			
Time	Sta.	See	See	Sta.	See	See	Sta.	See	See	Time	Sta.	See	See	Sta.	See	See	Time	Sta.	See	See	Sta.	See	See
	Cl.	a	b	Cl.	a	b	Cl.	a	b		Cl.	a	b	Cl.	a	b		Cl.	a	b	Cl.	a	b
01	F	+1		D	+1		D	+1		01	F	+1		E	+1		01	F	+1		D	+1	
02	F	+1		D	+1		D	+0		02	F	+1		D	+1		02	F	+1		D	+0	
03	E	+1		D	+1		D	+1		03	F	+1		E	+1		03	F	+1		D	+0	
04	E	+1		D	+1		D	+0		04	F	+1		E	+1		04	F	+1		D	+0	
05	E	+1		D	+1		D	+0		05	E	+1		E	+1		05	E	+1		D	+1	
06	E	+1		D	+1		D	+0		06	E	+1		E	+1		06	E	+1		D	+1	
07	E	+1		D	+1		E	+0		07	E	+1		D	+1		07	E	+1		D	+1	
08	E	+1		D	+1		D	+0		08	E	+1		D	+1		08	E	+1		D	+1	
09	D	+1		D	+1		D	+1		09	D	+1		D	+1		09	D	+1		D	+1	
10	D	+1	85	C	+1	85	D	+0	80	10	D	+1		C	+1		10	D	+1	65	D	+1	65
11	D	+1	85	C	+1	75	D	+1	80	11	D	+1		D	+1	70	11	D	+1	70	B	+1	70
12	D	+1	85	B	+1	65	D	+1	85	12	C	+1		C	+1	75	12	C	+1		B	+1	
13	C	+1	65	B	+1	70	D	+0	50	13	C	+1	85	C	+1	65	13	C	+1	85	B	+1	70
14	C	+1	85	C	+1	60	B	+1	65	14	C	+1	80	B	+1	70	14	C	+1	80	C	+1	65
15	D	+1		C	+1		D	+1	85	15	D	+1		C	+1		15	D	+1		D	+1	
16	D	+1		D	+1		E	+1		16	D	+1		D	+1		16	D	+1		D	+1	
17	E	+1		E	+1		E	+0		17	E	+1		E	+1		17	E	+1		E	+1	
18	F	+1		E	+1		-			18	F	+1	85	E	+1		18	F	+1	85	-		
19	F	+1		E	+1		E	+1		19	F	+1		E	+1		19	F	+1		E	+1	
20	F	+1		E	+1		E	+0		20	F	+1		E	+1		20	F	+1		E	+1	
21	F	+1		E	+1		E	+1		21	F	+1		E	+1		21	F	+1		E	+1	
22	F	+1		E	+1		E	+0		22	F	+1		E	+1		22	F	+1		D	+1	
23	F	+1		D	+1		E	+0		23	F	+1		E	+1		23	F	+1		D	+1	85
24	F	+1		D	+1		E	+1		24	F	+1		E	+1		24	F	+1		D	+1	85

a: + number of stability classes to give confidence of at least 90%, if attained.
b: Associated confidence factor, if less than 90%.

2.2 m/s = 5 mph
4.5 m/s = 10 mph

Sta. Cl. - Stability Class ("-" in this column indicates that there were no data values in the data set for this wind speed category.)

Table 2-3 Estimated Sequoyah Stability Class (46-9 m ΔT)*
 Reference Parameter - Time of Day

<u>Hour</u>	<u>Stability Class</u>
0100	E <u>+1</u>
0200	E <u>+1</u>
0300	E <u>+1</u>
0400	E <u>+1</u>
0500	E <u>+1</u>
0600	E <u>+1</u>
<hr/>	
0700	E <u>+1</u>
0800	D <u>+1</u>
0900	D <u>+1/85%</u>
1000	C <u>+1/70%</u>
1100	B <u>+1/70%</u>
1200	B <u>+1/70%</u>
<hr/>	
1300	B <u>+1/70%</u>
1400	B <u>+1/70%</u>
1500	C <u>+1/65%</u>
1600	D <u>+1/75%</u>
1700	D <u>+1</u>
1800	D <u>+1</u>
<hr/>	
1900	E <u>+1</u>
2000	E <u>+1</u>
2100	E <u>+1</u>
2200	E <u>+1</u>
2300	E <u>+1</u>
2400	E <u>+1</u>

*Following the estimated stability class is the number of stability classes on either side of the estimated class needed to give a confidence level of 90 percent, if that level of confidence was attained. If not, the actual confidence level is indicated. A maximum limit of +1 stability class was imposed.

Missing Parameter - Sequoyah 46 m Wind Direction

Read down the table to locate the first reference parameter(s) for which data are available. Read across to locate the appropriate procedure to use.

Reference Parameter	Table No.	Column No.
Reference Parameter WS > 2.2 m/s (5 mi/h)		
1. SQN 10 m WD and WS	3-3	2
2. SQN 91 m WD and WS	3-3	1
3. WBN 10 m WD and WS	3-3	5
4. WBN 46 m WD and WS	3-3	4
5. WBN 93 m WD and WS	3-3	3
Reference Parameter WS ≤ 2.2 m/s		
6. SQN 10 m WD and WS	3-2	2
7. SQN 91 m WD and WS	3-2	1
8. WBN 46 m WD and WS	3-2	4
9. WBN 93 m WD and WS	3-2	3
10. WBN 10 m WD and WS	3-2	5
All Wind Speeds		
11. SQN 91 m WD	3-1	1
12. SQN 10 m WD	3-1	2
13. WBN 93 m WD	3-1	3
14. WBN 46 m WD	3-1	4
15. WBN 10 m WD	3-1	5

WD = Wind Direction
 WS = Wind Speed

Table 3-1 Estimated Sequoyah 46 m Wind Direction Sector*
 Reference Parameter Wind Speed > 2.2 m/s (5 mi/h)

Reference Parameter Wind Direction (Sector)	Reference Parameter		Reference Parameter		
	SQN 91 m	SQN 10 m	WBN 93 m	WBN 46 m	WBN 10 m
N	N <u>+1</u>	N <u>+1</u>	N <u>+2</u>	N <u>+1</u>	N <u>+1</u>
NNE	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>
NE	NE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>
ENE	ENE <u>+1</u>	ENE <u>+1</u>	NE <u>+2/84%</u>	NE <u>+2/85%</u>	NE <u>+2/84%</u>
E	ENE <u>+2</u>	ESE <u>+0</u>	ENE <u>+2/72%</u>	ENE <u>+2/74%</u>	ENE <u>+2/82%</u>
ESE	E <u>+2</u>	-**	E <u>+2/59%</u>	E <u>+2/64%</u>	SE <u>+2/60%</u>
SE	SE <u>+2</u>	SE <u>+0</u>	S <u>+2/80%</u>	S <u>+2/78%</u>	S <u>+2/78%</u>
SSE	SSE <u>+1</u>	SSE <u>+1</u>	S <u>+2/88%</u>	S <u>+2</u>	S <u>+2</u>
S	S <u>+1</u>	S <u>+1</u>	S <u>+2</u>	S <u>+2</u>	SSW <u>+2</u>
SSW	SSW <u>+1</u>	SSW <u>+1</u>	SSW <u>+1</u>	SSW <u>+1</u>	SSW <u>+1</u>
SW	SW <u>+1</u>	SW <u>+1</u>	SW <u>+2</u>	SW <u>+2</u>	SW <u>+2</u>
WSW	WSW <u>+1</u>	WSW <u>+1</u>	WSW <u>+2/87%</u>	WSW <u>+2/89%</u>	WSW <u>+2</u>
W	W <u>+1</u>	W <u>+1</u>	W <u>+2/83%</u>	W <u>+2/85%</u>	WNW <u>+2/87%</u>
WNW	WNW <u>+1</u>	WNW <u>+1</u>	NW <u>+2/85%</u>	NW <u>+2/88%</u>	WNW <u>+2/88%</u>
NW	NW <u>+1</u>	NW <u>+1</u>	NNW <u>+2</u>	NW <u>+2</u>	NW <u>+2</u>
NNW	NNW <u>+1</u>	NNW <u>+1</u>	N <u>+2</u>	N <u>+2</u>	N <u>+2</u>

*Following the estimated wind direction sector is the number of sectors on either side of the estimated sector needed to give a confidence level of 90 percent, if that level of confidence was attained. If not, the actual confidence level is indicated. A maximum limit of + two wind direction sectors was imposed.

**There were no values in this sector in the data set.

Table 3-2 Estimated Sequoyah 46 m Wind Direction Sector*
 Reference Parameter Wind Speed \leq 2.2 m/s (5 mi/h)

Reference Parameter Wind Direction (Sector)	SQN 91 m	SQN 10 m	WBN 93 m	WBN 46 m	WBN 10 m
N	NNE <u>+2</u> /88%	N <u>+2</u>	NNE <u>+2</u> /78%	N <u>+2</u> /80%	N <u>+2</u> /82%
NNE	NNE <u>+2</u>	NNE <u>+1</u>	NE <u>+2</u> /86%	NNE <u>+2</u> /86%	NNE <u>+2</u> /81%
NE	NE <u>+2</u>	NE <u>+2</u>	NE <u>+2</u> /82%	NE <u>+2</u> /81%	NE <u>+2</u> /80%
ENE	NE <u>+2</u>	NE <u>+2</u> /70%	NE <u>+2</u> /70%	NE <u>+2</u> /72%	NE <u>+2</u> /72%
E	ENE <u>+2</u> /86%	ENE <u>+2</u> /65%	NE <u>+2</u> /54%	NE <u>+2</u> /61%	NE <u>+2</u> /66%
ESE	E <u>+2</u> /74%	ESE <u>+2</u> /53%	ENE <u>+2</u> /47%	NE <u>+2</u> /51%	S <u>+2</u> /46%
SE	SE <u>+2</u> /71%	SSE <u>+2</u> /73%	S <u>+2</u> /49%	S <u>+2</u> /53%	S <u>+2</u> /50%
SSE	SE <u>+2</u> /63%	S <u>+2</u> /82%	S <u>+2</u> /61%	S <u>+2</u> /65%	S <u>+2</u> /64%
S	S <u>+2</u> /71%	SSW <u>+2</u>	S <u>+2</u> /72%	SSW <u>+2</u> /77%	SSW <u>+2</u> /73%
SSW	SSW <u>+2</u> /86%	SSW <u>+1</u>	SSW <u>+2</u> /79%	SSW <u>+2</u> /81%	SSW <u>+2</u> /83%
SW	SSW <u>+2</u> /85%	SW <u>+2</u>	SW <u>+2</u> /75%	SW <u>+2</u> /73%	SSW <u>+2</u> /75%
WSW	SW <u>+2</u> /75%	SW <u>+2</u>	SSW <u>+2</u> /61%	SW <u>+2</u> /61%	SW <u>+2</u> /63%
W	WSW <u>+2</u> /65%	WSW <u>+2</u> /83%	SW <u>+2</u> /53%	SW <u>+2</u> /54%	SW <u>+2</u> /57%
WNW	WNW <u>+2</u> /51%	WNW <u>+2</u> /71%	N <u>+2</u> /49%	SW <u>+2</u> /41%	SSW <u>+2</u> /45%
NW	NW <u>+2</u> /52%	NW <u>+2</u> /74%	N <u>+2</u> /51%	N <u>+2</u> /58%	N <u>+2</u> /53%
NNW	N <u>+2</u> /74%	N <u>+2</u> /87%	N <u>+2</u> /66%	N <u>+2</u> /73%	N <u>+2</u> /70%

*Following the estimated wind direction sector is the number of sectors on either side of the estimated sector needed to give a confidence level of 90 percent, if that level of confidence was attained. If not, the actual confidence level is indicated. A maximum limit of +2 wind direction sectors was imposed.

Table 3-3 Estimated Sequoyah 46 m Wind Direction Sector*
All Wind Speeds

Reference Parameter Reference Parameter Wind Direction (Sector)	SQN 91 m	SQN 10 m	WBN 93 m	WBN 46 m	WBN 10 m
N	N <u>+1</u>	N <u>+1</u>	N <u>+2</u>	N <u>+2</u>	N <u>+2</u>
NNE	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+1</u>	NNE <u>+2</u>	NNE <u>+2</u>
NE	NE <u>+1</u>	NE <u>+2</u>	NE <u>+2/89%</u>	NE <u>+2/87%</u>	NE <u>+2/86%</u>
ENE	NE <u>+2</u>	NE <u>+2/71%</u>	NE <u>+2/77%</u>	NE <u>+2/75%</u>	NE <u>+2/74%</u>
E	ENE <u>+2/89%</u>	ENE <u>+2/65%</u>	NE <u>+2/59%</u>	NE <u>+2/63%</u>	NE <u>+2/67%</u>
ESE	E <u>+2/79%</u>	SE <u>+2/61%</u>	ENE <u>+2/46%</u>	ENE <u>+2/51%</u>	S <u>+2/47%</u>
SE	SE <u>+2/79%</u>	S <u>+2/75%</u>	S <u>+2/59%</u>	S <u>+2/59%</u>	S <u>+2/54%</u>
SSE	S <u>+2/85%</u>	S <u>+2/85%</u>	S <u>+2/73%</u>	S <u>+2/72%</u>	S <u>+2/68%</u>
S	S <u>+2</u>	SSW <u>+2</u>	S <u>+2/87%</u>	SSW <u>+2/84%</u>	SSW <u>+2/80%</u>
SSW	SSW <u>+1</u>	SSW <u>+1</u>	SSW <u>+2</u>	SSW <u>+2</u>	SSW <u>+2</u>
SW	SW <u>+1</u>	SW <u>+1</u>	SW <u>+2</u>	SW <u>+2/87%</u>	SW <u>+2/81%</u>
WSW	SW <u>+2</u>	SW <u>+2</u>	SW <u>+2/76%</u>	SW <u>+2/74%</u>	SW <u>+2/68%</u>
W	WSW <u>+2</u>	WSW <u>+2</u>	W <u>+2/70%</u>	WSW <u>+2/67%</u>	WSW <u>+2/59%</u>
WNW	W <u>+2</u>	WNW <u>+2/83%</u>	NW <u>+2/73%</u>	NW <u>+2/69%</u>	NNW <u>+2/49%</u>
NW	NNW <u>+2</u>	NNW <u>+2/89%</u>	NNW <u>+2/81%</u>	NNW <u>+2/76%</u>	N <u>+2/63%</u>
NNW	N <u>+2</u>	N <u>+2</u>	N <u>+2/87%</u>	N <u>+2/88%</u>	N <u>+2/80%</u>

*Following the estimated wind direction sector is the number of sectors on either side of the estimated sector needed to give a confidence level of 90 percent, if that level of confidence was attained. If not, the actual confidence level is indicated. A maximum limit of + two wind direction sectors was imposed.

Missing Parameter - Sequoyah 46 m Wind Speed

Read down the table to locate the first reference parameter(s) for which data are available. Read across to locate the appropriate procedure to use.

Reference Parameter		Table No.
<u>Current Data</u>	<u>Past Data</u>	
1. SQN 10 m WS	1 hr old SQN 46 & 10 WS	4-1
2. SQN 91 m WS	1 hr old SQN 91 & 46 m WS	4-2
3. SQN 10 m WS	2 hr old SQN 46 & 10 m WS	4-1
4. SQN 91 m WS & 46-9 m ΔT	. . . . .	4-3
5. SQN 10 m WS	3 hr old SQN 46 & 10 m WS	4-1
6. SQN 91 m WS	2 hr old SQN 91 & 46 m WS	4-2
7. SQN 91 m WS	. . . . .	4-3*
8. SQN 10 m WS & 46-9 m ΔT	. . . . .	4-4
9. SQN 10 m WS	4 hr old SQN 46 & 10 m WS	4-1
10. SQN 91 m WS	3 hr old SQN 91 & 46 m WS	4-2
11. SQN 10 m WS	. . . . .	4-4*
12. SQN 91 m WS	4 hr old SQN 91 & 46 m WS	4-2
13. WBN 93 m WS & SQN 46-9 m ΔT	. . . . .	4-5
14. WBN 46 m WS & SQN 46-9 m ΔT	. . . . .	4-6
15. WBN 46 m WS	. . . . .	4-6*
16. WBN 93 m WS	. . . . .	4-5*
17. WBN 10 m WS & SQN 46-9 m ΔT	. . . . .	4-7
18. WBN 10 m WS	. . . . .	4-7*

WS = Wind Speed

*Use column with heading "All."

Table 4-1 Estimated Sequoyah 46 m Wind Speed*
 Reference Parameters - Current 10 m Wind Speed
 Last Available 10 m and 46 m Wind Speeds

1. Extract the last available concurrent values of wind speed at 46 m (U_1) and 10 m (U_2), and the current wind speed at 10 m (U_0).
2. Calculate the first estimate of the 46 m wind speed (U_e) using the following equation, with wind speed in m/s:

$$U_e = U_0 (4.79)^{0.64 \ln (U_1/U_2)} \quad (\text{m/s})$$

3. If $U_e \geq 22$ m/s, STOP. DO NOT USE THIS TECHNIQUE.
4. If $U_e < 22$ m/s, apply the regression equation from the following set which corresponds to the time elapsed since the observation in Step 1. If the last available observation does not fall on the hour, use the regression equation for the next hour. For example, if the time elapsed is 1 hour and 30 minutes, use the second hour regression equation.

1st hour: $U_p = 0.09 + 0.94 U_e \quad (\pm 0.5 \text{ m/s})$

2nd hour: $U_p = 0.18 + 0.89 U_e \quad (\pm 0.6 \text{ m/s})$

3rd hour: $U_p = 0.25 + 0.85 U_e \quad (\pm 0.8 \text{ m/s})$

4th hour: $U_p = 0.31 + 0.82 U_e \quad (\pm 0.9 \text{ m/s})$

*Following the equations for the estimated wind speed (U_e) is the number of meters per second on either side of the estimated wind speed needed to give a confidence level of 90 percent.

Table 4-2 Estimated Sequoyah 46 m Wind Speed^{*}
 Reference Parameters - Current 91 m Wind Speed
 Last Available 46 m and 91 m Wind Speeds

1. Extract the last available concurrent values of wind speed at 46 m (U_1) and 91 m (U_2), and the current wind speed at 91 m (U_0).
2. Calculate the first estimate of the 46 m Wind Speed (U_e) using the following equation, with wind speeds in m/s:

$$U_e = U_0 (0.51)^{-1.48 \ln (U_1/U_2)} \quad (\text{m/s})$$

3. If $U_e \geq 22$ m/s, STOP. DO NOT USE THIS TECHNIQUE.
4. If $U_e < 22$ m/s, apply the regression equation from the following set which corresponds to the time elapsed since the observation in Step 1. If the last available observation does not fall on the hour, use the regression equation for the next hour. For example, if the time elapsed is 1 hour and 30 minutes, use the second hour regression equation.

$$\text{1st hour: } U_p = 0.11 + 0.93 U_e \quad (\pm 0.6 \text{ m/s})$$

$$\text{2nd hour: } U_p = 0.23 + 0.87 U_e \quad (\pm 0.8 \text{ m/s})$$

$$\text{3rd hour: } U_p = 0.34 + 0.81 U_e \quad (\pm 0.9 \text{ m/s})$$

$$\text{4th hour: } U_p = 0.42 + 0.77 U_e \quad (\pm 1.0 \text{ m/s})$$

*Following the equations for the estimated wind speed (U_e) the number of meters per second on either side of the estimated wind speed needed to give a confidence level of 90 percent.

Table 4-3 Estimated Sequoyah 46 m Wind Speed (m/s)*
 Reference Parameters-Sequoyah 91 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN 91 m Wind Speed m/s	SQN Stability Class							
	A	B	C	D	E	F	G	All
0.5	0.7	0.6	0.6	0.4	0.3	0.6	0.5	0.4
1.0	1.1	1.1	1.0	0.9	0.7	0.9	0.8	0.8
1.5	1.5	1.5	1.4	1.3	1.1	1.2	1.1	1.2
2.0	2.0	1.9	1.8	1.7	1.5	1.5	1.4	1.6
2.5	2.4	2.3	2.3	2.1	1.9	1.9	1.7	2.0
3.0	2.8	2.8	2.7	2.6	2.3	2.2	2.0	2.4
3.5	3.2	3.2	3.1	3.0	2.7	2.5	2.3	2.8
4.0	3.7	3.6	3.6	3.4	3.1	2.8	2.7	3.3
4.5	4.1	4.0	4.0	3.9	3.5	3.2	3.0	3.7
5.0	4.5	4.5	4.4	4.3	3.9	3.5	3.3	4.1
5.5	4.9	4.9	4.8	4.7	4.3	3.8	3.6	4.5
6.0	5.4	5.3	5.3	5.2	4.7	4.1	3.9	4.9
6.5	5.8	5.7	5.7	5.6	5.1	4.5	4.2	5.3
7.0	6.2	6.2	6.1	6.0	5.5	4.8	4.5	5.7
7.5	6.6	6.6	6.5	6.4	5.9	5.1	4.8	6.1
8.0	7.1	7.0	7.0	6.9	6.3	5.4	5.1	6.6
8.5	7.5	7.5	7.4	7.3	6.7	5.8	5.4	7.0
9.0	7.9	7.9	7.8	7.7	7.1	6.1	5.7	7.4
9.5	8.4	8.3	8.2	8.2	7.5	6.4	6.0	7.8
10.0	8.8	8.7	8.7	8.6	7.9	6.7	6.3	8.2
10.5	9.2	9.2	9.1	9.0	8.3	7.1	6.6	8.6
11.0	9.6	9.6	9.5	9.4	8.7	7.4	6.9	9.0
11.5	10.1	10.0	9.9	9.9	9.1	7.7	7.2	9.5
12.0	10.5	10.4	10.4	10.3	9.5	8.0	7.5	9.9
	+ 0.5	+ 0.5	+ 0.5	+ 0.5	+ 0.7	+ 0.9	+ 1.0	+ 0.8

*At the bottom of each column is the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 4-4 Estimated Sequoyah 46 m Wind Speed (m/s)*
 Reference Parameters-Sequoyah 10 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN 10 m Wind Speed m/s	SQN Stability Class							
	A	B	C	D	E	F	G	All
0.5	0.4	0.3	0.3	0.7	1.2	1.1	1.2	1.1
1.0	1.2	1.1	1.1	1.5	2.0	2.1	2.2	1.9
1.5	2.0	1.9	1.9	2.4	2.9	3.2	3.2	2.6
2.0	2.8	2.7	2.7	3.2	3.7	4.2	4.1	3.4
2.5	3.6	3.5	3.5	4.0	4.6	5.3	5.1	4.1
3.0	4.4	4.3	4.3	4.8	5.4	6.3	6.1	4.9
3.5	5.2	5.1	5.1	5.6	6.3	7.4	7.1	5.6
4.0	6.0	5.9	6.0	6.4	7.1	8.5	8.1	6.3
4.5	6.8	6.7	6.8	7.2	8.0	9.5	9.1	7.1
5.0	7.6	7.5	7.6	8.0	8.8	10.6	10.1	7.8
5.5	8.4	8.3	8.4	8.8	9.7	11.6	11.0	8.6
6.0	9.2	9.1	9.2	9.6	10.6	12.7	12.0	9.3
6.5	9.9	9.9	10.0	10.4	11.4	13.7	13.0	10.1
7.0	10.7	10.7	10.8	11.2	12.3	14.8	14.0	10.8
7.5	11.5	11.5	11.6	12.0	13.1	15.9	15.0	11.6
8.0	12.3	12.3	12.4	12.8	14.0	16.9	16.0	12.3
8.5	13.1	13.1	13.3	13.6	14.8	18.0	17.0	13.0
9.0	13.9	13.9	14.1	14.5	15.7	19.0	17.9	13.8
9.5	14.7	14.7	14.9	15.3	16.5	20.1	18.9	14.5
10.0	15.5	15.5	15.7	16.1	17.4	21.2	19.9	15.3
10.5	16.3	16.3	16.5	16.9	18.2	22.2	20.9	16.0
11.0	17.1	17.1	17.3	17.7	19.1	23.3	21.9	16.8
11.5	17.9	17.9	18.1	18.5	19.9	24.3	22.9	17.5
12.0	18.7	18.7	18.9	19.3	20.8	25.4	23.8	18.2
	+ 0.8	+ 0.8	+ 0.8	+ 0.8	+ 0.8	+ 0.9	+ 1.2	+ 1.1

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 4-5 Estimated Sequoyah 46 m Wind Speed (m/s)*
 Reference Parameters-Watts Bar 93 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 93 m Wind Speed m/s	A	B	C	D	E	F	G	All
	0.5	1.6	1.3	1.2	1.4	1.3	1.4	1.3
1.0	2.0	1.7	1.6	1.8	1.6	1.6	1.6	1.6
1.5	2.3	2.1	2.0	2.1	2.0	1.9	1.8	2.0
2.0	2.7	2.5	2.3	2.5	2.3	2.1	2.1	2.3
2.5	3.1	2.8	2.7	2.8	2.6	2.4	2.3	2.7
3.0	3.4	3.2	3.1	3.2	2.9	2.6	2.5	3.0
3.5	3.8	3.6	3.5	3.6	3.2	2.9	2.8	3.4
4.0	4.2	4.0	3.8	3.9	3.5	3.1	3.0	3.7
4.5	4.6	4.3	4.2	4.3	3.9	3.4	3.3	4.1
5.0	4.9	4.7	4.6	4.6	4.2	3.6	3.5	4.4
5.5	5.3	5.1	4.9	5.0	4.5	3.9	3.7	4.8
6.0	5.7	5.4	5.3	5.4	4.8	4.1	4.0	5.1
6.5	6.0	5.8	5.7	5.7	5.1	4.4	4.2	5.5
7.0	6.4	6.2	6.0	6.1	5.5	4.6	4.5	5.8
7.5	6.8	6.6	6.4	6.4	5.8	4.9	4.7	6.2
8.0	7.1	6.9	6.8	6.8	6.1	5.1	4.9	6.5
8.5	7.5	7.3	7.2	7.2	6.4	5.4	5.2	6.9
9.0	7.9	7.7	7.5	7.5	6.7	5.6	5.4	7.2
9.5	8.3	8.0	7.9	7.9	7.0	5.8	5.7	7.5
10.0	8.6	8.4	8.3	8.2	7.4	6.1	5.9	7.9
10.5	9.0	8.8	8.6	8.6	7.7	6.3	6.2	8.2
11.0	9.4	9.2	9.0	9.0	8.0	6.6	6.4	8.6
11.5	9.7	9.5	9.4	9.3	8.3	6.8	6.6	8.9
12.0	10.1	9.9	9.7	9.7	8.6	7.1	6.9	9.3
	± 1.6	± 1.7	± 1.6	± 1.9	± 1.8	± 1.4	± 1.5	± 1.8

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 4-6 Estimated Sequoyah 46 m Wind Speed (m/s)*
 Reference Parameters-Watts Bar 46 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 46 m Wind Speed m/s	SQN Stability Class							All
	A	B	C	D	E	F	G	
0.5	1.5	1.3	1.2	1.6	1.7	1.8	1.8	1.6
1.0	1.9	1.7	1.6	2.0	2.1	2.1	2.1	2.0
1.5	2.3	2.1	2.0	2.4	2.5	2.4	2.4	2.4
2.0	2.8	2.6	2.5	2.8	2.9	2.7	2.7	2.8
2.5	3.2	3.0	2.9	3.3	3.2	3.1	3.0	3.2
3.0	3.6	3.4	3.3	3.7	3.6	3.4	3.3	3.6
3.5	4.0	3.9	3.8	4.1	4.0	3.7	3.7	4.0
4.0	4.5	4.3	4.2	4.5	4.4	4.0	4.0	4.4
4.5	4.9	4.7	4.6	4.9	4.8	4.3	4.3	4.8
5.0	5.3	5.1	5.0	5.3	5.1	4.6	4.6	5.2
5.5	5.7	5.6	5.5	5.7	5.5	4.9	4.9	5.6
6.0	6.1	6.0	5.9	6.2	5.9	5.2	5.2	6.0
6.5	6.6	6.4	6.3	6.6	6.3	5.5	5.5	6.4
7.0	7.0	6.9	6.8	7.0	6.7	5.8	5.9	6.8
7.5	7.4	7.3	7.2	7.4	7.0	6.1	6.2	7.2
8.0	7.8	7.7	7.6	7.8	7.4	6.4	6.5	7.6
8.5	8.3	8.2	8.1	8.2	7.8	6.7	6.8	8.0
9.0	8.7	8.6	8.5	8.7	8.2	7.0	7.1	8.4
9.5	9.1	9.0	8.9	9.1	8.6	7.4	7.4	8.8
10.0	9.5	9.5	9.4	9.5	8.9	7.7	7.7	9.2
10.5	9.9	9.9	9.8	9.9	9.3	8.0	8.1	9.6
11.0	10.4	10.3	10.2	10.3	9.7	8.3	8.4	10.0
11.5	10.8	10.8	10.6	10.7	10.1	8.6	8.7	10.4
12.0	11.2	11.2	11.1	11.1	10.5	8.9	9.0	9.0
	± 1.6	± 1.7	± 1.7	± 1.9	± 1.8	± 1.5	± 1.5	± 1.8

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 4-7 Estimated Sequoyah 46 m Wind Speed (m/s)*
 Reference Parameters-Watts Bar 10 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For referenced parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 10 m Wind Speed m/s	A	B	C	D	E	F	G	All
	0.5	1.2	1.0	0.9	1.7	2.1	2.1	2.1
1.0	1.7	1.6	1.5	2.3	2.6	2.6	2.6	2.4
1.5	2.3	2.2	2.1	2.8	3.1	3.0	3.1	2.9
2.0	2.9	2.8	2.7	3.3	3.6	3.4	3.6	3.4
2.5	3.5	3.3	3.3	3.9	4.1	3.9	4.1	3.9
3.0	4.1	3.9	3.9	4.4	4.6	4.3	4.6	4.4
3.5	4.7	4.5	4.5	5.0	5.1	4.8	5.1	4.9
4.0	5.2	5.1	5.1	5.5	5.6	5.2	5.6	5.4
4.5	5.8	5.7	5.7	6.0	6.1	5.6	6.1	5.8
5.0	6.4	6.3	6.3	6.6	6.6	6.1	6.6	6.3
5.5	7.0	6.9	6.9	7.1	7.1	6.5	7.1	6.8
6.0	7.6	7.5	7.5	7.6	7.6	7.0	7.6	7.3
6.5	8.1	8.1	8.1	8.2	8.1	7.4	8.1	7.8
7.0	8.7	8.7	8.6	8.7	8.6	7.9	8.6	8.3
7.5	9.3	9.3	9.2	9.3	9.1	8.3	9.1	8.8
8.0	9.9	9.8	9.8	9.8	9.6	8.7	9.6	9.3
8.5	10.5	10.4	10.4	10.3	10.1	9.2	10.1	9.8
9.0	11.0	11.0	11.0	10.9	10.6	9.6	10.6	10.6
9.5	11.6	11.6	11.6	11.4	11.1	10.1	11.1	10.7
10.0	12.2	12.2	12.2	12.0	11.6	10.5	11.6	11.2
10.5	12.8	12.8	12.8	12.5	12.1	10.9	12.1	11.7
11.0	13.4	13.4	13.4	13.1	12.6	11.4	12.6	12.2
11.5	13.5	14.0	14.0	13.6	13.1	11.8	13.1	12.7
12.0	14.5	14.6	14.6	14.1	13.6	12.3	13.6	13.2
	+ 1.6	+ 1.7	+ 1.8	+ 2.0	+ 2.0	+ 1.6	+ 1.6	+ 1.9

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Missing Parameter - Sequoyah 10 m Wind Speed

Read down the table to locate the first reference parameter(s) for which data are available. Read across to locate the appropriate procedure to use.

Reference Parameter		Table No.
<u>Current Data</u>	<u>Past Data</u>	
1. SQN 46 m WS & SQN 46-9 m ΔT	. . . . .	5-1
2. SQN 91 m WS & SQN 46-9 m ΔT	. . . . .	5-2
3. SQN 46 m WS	. . . . .	5-1*
4. SQN 46 m WS	1 hr old SQN 46 & 10 m WS	5-3
5. WBN 93 m WS & SQN 46-9 m ΔT	. . . . .	5-4
6. WBN 46 m WS & SQN 46-9 m ΔT	. . . . .	5-5
7. SQN 91 m WS	. . . . .	5-2*
8. WBN 10 m WS & SQN 46-9 m ΔT	. . . . .	5-6
9. SQN 46 m WS	2 hr old SQN 46 & 10 WS	5-3
10. WBN 10 m WS	. . . . .	5-6*
11. WBN 46 m WS	. . . . .	5-5*
12. SQN 46 m WS	3 hr old SQN 46 & 10 m WS	5-3
13. WBN 93 m WS	. . . . .	5-4*
14. SQN 46 m WS	4 hr old SQN 46 & 10 m WS	5-3

WS = Wind Speed

*Use column with heading "All."

Table 5-1 Estimated Sequoyah 10 m Wind Speed (m/s)*
 Reference Parameters-Sequoyah 46 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN 46 m Wind Speed m/s	SQN Stability Class							
	A	B	C	D	E	F	G	All
0.5	0.8	0.8	0.8	0.5	0.2	0.5	0.5	0.3
1.0	1.0	1.1	1.1	0.8	0.5	0.6	0.7	0.6
1.5	1.3	1.4	1.4	1.1	0.8	0.8	0.8	0.9
2.0	1.6	1.6	1.6	1.4	1.0	1.0	1.0	1.2
2.5	1.9	1.9	1.9	1.7	1.3	1.2	1.1	1.5
3.0	2.2	2.2	2.2	1.9	1.6	1.4	1.3	1.8
3.5	2.5	2.5	2.5	2.2	1.8	1.5	1.4	2.1
4.0	2.8	2.8	2.8	2.5	2.1	1.7	1.6	2.4
4.5	3.0	3.1	3.1	2.8	2.4	1.9	1.7	2.7
5.0	3.3	3.3	3.3	3.1	2.7	2.1	1.9	2.9
5.5	3.6	3.6	3.6	3.4	2.9	2.3	2.0	3.2
6.0	3.9	3.9	3.9	3.7	3.2	2.5	2.2	3.5
6.5	4.2	4.2	4.2	4.0	3.5	2.6	2.4	3.8
7.0	4.5	4.5	4.5	4.2	3.8	2.8	2.5	4.1
7.5	4.7	4.8	4.7	4.5	4.0	3.0	2.7	4.4
8.0	5.0	5.1	5.0	4.8	4.3	3.2	2.8	4.7
8.5	5.3	5.3	5.3	5.1	4.6	3.4	3.0	5.0
9.0	5.6	5.6	5.6	5.4	4.8	3.6	3.1	5.3
9.5	5.9	5.9	5.9	5.7	5.1	3.7	3.3	5.6
10.0	6.2	6.2	6.2	6.0	5.4	3.9	3.4	5.9
10.5	6.4	6.5	6.4	6.3	5.7	4.1	3.6	6.2
11.0	6.7	6.8	6.7	6.5	5.9	4.3	3.7	6.4
11.5	7.0	7.0	7.0	6.8	6.2	4.5	3.9	6.7
12.0	7.3	7.3	7.3	7.1	6.5	4.6	4.1	7.0
	± 0.5	± 0.5	± 0.5	± 0.5	± 0.4	± 0.4	± 0.5	± 0.7

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 5-2 Estimated Sequoyah 10 m Wind Speed (m/s)*
 Reference Parameters-Sequoyah 91 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN 91 m Wind Speed m/s	SQN Stability Class							
	A	B	C	D	E	F	G	All
0.5	0.8	0.9	0.8	0.5	0.1	0.5	0.6	0.3
1.0	1.1	1.1	1.1	0.7	0.3	0.6	0.6	0.6
1.5	1.3	1.3	1.3	1.0	0.6	0.7	0.7	0.8
2.0	1.6	1.6	1.6	1.2	0.8	0.8	0.8	1.0
2.5	1.8	1.8	1.8	1.4	1.0	1.0	0.9	1.2
3.0	2.1	2.1	2.0	1.7	1.2	1.1	1.0	1.5
3.5	2.3	2.3	2.3	1.9	1.4	1.2	1.1	1.7
4.0	2.6	2.6	2.5	2.2	1.6	1.3	1.2	1.9
4.5	2.8	2.8	2.8	2.4	1.8	1.4	1.2	2.2
5.0	3.0	3.0	3.0	2.7	2.1	1.5	1.3	2.4
5.5	3.3	3.3	3.2	2.9	2.3	1.6	1.4	2.6
6.0	3.5	3.5	3.5	3.1	2.5	1.7	1.5	2.9
6.5	3.8	3.8	3.7	3.4	2.7	1.9	1.6	3.1
7.0	4.0	4.0	4.0	3.6	2.9	2.0	1.7	3.3
7.5	4.3	4.3	4.2	3.9	3.1	2.1	1.8	3.5
8.0	4.5	4.5	4.4	4.1	3.4	2.2	1.8	3.8
8.5	4.8	4.8	4.7	4.4	3.6	2.3	1.9	4.0
9.0	5.0	5.0	4.9	4.6	3.8	2.4	2.0	4.2
9.5	5.2	5.2	5.2	4.8	4.0	2.5	2.1	4.5
10.0	5.5	5.5	5.4	5.1	4.2	2.6	2.2	4.7
10.5	5.7	5.7	5.7	5.3	4.4	2.8	2.3	4.9
11.0	6.0	6.0	5.9	5.6	4.6	2.9	2.4	5.2
11.5	6.2	6.2	6.1	5.8	4.9	3.0	2.5	5.4
12.0	6.5	6.5	6.4	6.1	5.1	3.1	2.5	5.6
	± 0.6	± 0.6	± 0.6	± 0.6	± 0.7	± 0.5	± 0.6	± 1.0

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 5-3 Estimated Sequoyah 10 m Wind Speed*
 Reference Parameters - Current 46 m Wind Speed
 Last Available 10 m and 46 m Wind Speeds

1. Extract the last available concurrent values of wind speed at 10 m (U_1) and 46 m (U_2), and the current wind speed at 46 m (U_0).
2. Calculate the first estimate of the 10 m wind speed (U_e) using the following equation, with wind speeds in m/s:

$$U_e = U_0 (0.21)^{-0.64 \ln (U_1/U_2)} \quad (\text{m/s})$$

3. If $U_e \geq 22$ m/s, STOP. DO NOT USE THIS TECHNIQUE.
4. If $U_e < 22$ m/s, apply the regression equation from the following set which corresponds to the time elapsed since the observation in Step 1. If the last available observation does not fall on the hour, use the regression equation for the next hour. For example, if the time elapsed is 1 hour and 30 minutes, use the second hour regression equation.

$$\text{1st hour: } U_p = 0.17 + 0.95 U_e \quad (\pm 0.8 \text{ m/s})$$

$$\text{2nd hour: } U_p = 0.31 + 0.91 U_e \quad (\pm 1.0 \text{ m/s})$$

$$\text{3rd hour: } U_p = 0.44 + 0.87 U_e \quad (\pm 1.2 \text{ m/s})$$

$$\text{4th hour: } U_p = 0.56 + 0.83 U_e \quad (\pm 1.3 \text{ m/s})$$

*Following the equations for the estimated wind speed (U_e) is a figure to indicate the number of meters per second on either side^p of the estimated wind speed needed to give a confidence level of 90 percent.

Table 5-4 Estimated Sequoyah 10 m Wind Speed (m/s)*
 Reference Parameters-Watts Bar 93 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 93 m Wind Speed m/s								
	A	B	C	D	E	F	G	All
0.5	1.3	1.2	1.2	1.0	0.7	0.8	0.7	0.8
1.0	1.5	1.4	1.4	1.2	0.8	0.9	0.8	1.0
1.5	1.8	1.6	1.6	1.4	1.0	1.0	0.9	1.2
2.0	2.0	1.9	1.8	1.6	1.2	1.0	1.0	1.4
2.5	2.2	2.1	2.0	1.8	1.4	1.1	1.1	1.6
3.0	2.4	2.3	2.2	2.0	1.5	1.2	1.1	1.8
3.5	2.6	2.5	2.5	2.3	1.7	1.3	1.2	2.0
4.0	2.9	2.8	2.7	2.5	1.9	1.4	1.3	2.2
4.5	3.1	3.0	2.9	2.7	2.0	1.5	1.4	2.4
5.0	3.3	3.2	3.1	2.9	2.2	1.6	1.5	2.6
5.5	3.5	3.4	3.3	3.1	2.4	1.7	1.5	2.8
6.0	3.7	3.6	3.5	3.3	2.6	1.8	1.6	3.0
6.5	4.0	3.9	3.7	3.5	2.7	1.9	1.7	3.2
7.0	4.2	4.1	4.0	3.7	2.9	2.0	1.8	3.4
7.5	4.4	4.3	4.2	3.9	3.1	2.0	1.9	3.6
8.0	4.6	4.5	4.4	4.1	3.3	2.1	1.9	3.8
8.5	4.8	4.8	4.6	4.4	3.4	2.2	2.0	4.0
9.0	5.0	5.0	4.8	4.6	3.6	2.3	2.1	4.2
9.5	5.3	5.2	5.0	4.8	3.8	2.4	2.2	4.4
10.0	5.5	5.4	5.2	5.0	4.0	2.5	2.3	4.6
10.5	5.7	5.6	5.4	5.2	4.1	2.6	2.3	4.8
11.0	5.9	5.9	5.7	5.4	4.3	2.7	2.4	5.0
11.5	6.1	6.1	5.9	5.6	4.5	2.8	2.5	5.2
12.0	6.4	6.3	6.1	5.8	4.6	2.9	2.6	5.4
	+ 1.0	+ 1.0	+ 1.0	+ 1.2	+ 1.1	+ 0.6	+ 0.6	+ 1.3

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 5-5 Estimated Sequoyah 10 m Wind Speed (m/s)*
 Reference Parameters-Watts Bar 46 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For reference parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 46 m Wind Speed m/s	A	B	C	D	E	F	G	All
	0.5	1.3	1.2	1.1	1.1	0.9	0.9	0.9
1.0	1.5	1.4	1.4	1.3	1.1	1.0	1.0	1.2
1.5	1.8	1.7	1.6	1.6	1.3	1.2	1.1	1.4
2.0	2.0	1.9	1.9	1.8	1.5	1.3	1.2	1.7
2.5	2.3	2.2	2.1	2.1	1.7	1.4	1.3	1.9
3.0	2.5	2.4	2.4	2.3	1.9	1.5	1.5	2.2
3.5	2.8	2.7	2.6	2.6	2.1	1.6	1.6	2.4
4.0	3.0	3.0	2.9	2.8	2.3	1.8	1.7	2.7
4.5	3.3	3.2	3.1	3.1	2.6	1.9	1.8	2.9
5.0	3.5	3.5	3.4	3.3	2.8	2.0	1.9	3.2
5.5	3.8	3.7	3.6	3.6	3.0	2.1	2.0	3.4
6.0	4.0	4.0	3.9	3.8	3.2	3.2	2.2	3.7
6.5	4.3	4.2	4.1	4.0	3.4	2.4	2.3	3.9
7.0	4.5	4.5	4.4	4.3	3.6	2.5	2.4	4.2
7.5	4.8	4.8	4.6	4.5	3.8	2.6	2.5	4.4
8.0	5.0	5.0	4.9	4.8	4.0	2.7	2.6	4.7
8.5	5.3	5.3	5.2	5.0	4.2	2.8	2.8	4.9
9.0	5.5	5.5	5.4	5.3	4.5	3.0	2.9	5.2
9.5	5.8	5.8	5.7	5.5	5.7	3.1	3.0	5.4
10.0	6.0	6.0	5.9	5.8	4.9	3.2	3.1	5.7
10.5	6.3	6.3	6.2	6.0	5.1	3.3	3.2	5.9
11.0	6.5	6.6	6.4	6.3	5.3	3.4	3.3	6.2
11.5	6.8	6.8	6.7	6.5	5.5	3.6	3.5	6.4
12.0	7.0	7.1	6.9	6.8	5.7	3.7	3.6	6.7
	± 1.0	± 1.0	± 1.1	± 1.2	± 1.0	± 0.6	± 0.6	± 1.1

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table 5-6 Estimated Sequoyah 10 m Wind Speed (m/s)*
 Reference Parameters-Watts bar 10 m Wind Speed and
 Sequoyah Stability Class (46-9 m ΔT)

Note: For referenced parameter wind speeds which fall between the indicated values, "eyeball" interpolation should be used to obtain the estimated wind speed value.

SQN Stability Class WBN 10 m Wind Speed m/s								
	A	B	C	D	E	F	G	All
0.5	1.1	1.0	1.0	1.1	1.1	1.0	1.0	1.0
1.0	1.4	1.3	1.3	1.5	1.3	1.2	1.2	1.4
1.5	1.8	1.7	1.7	1.8	1.6	1.4	1.4	1.7
2.0	2.1	2.0	2.0	2.1	1.9	1.6	1.6	2.0
2.5	2.4	2.4	2.4	2.4	2.2	1.8	1.8	2.3
3.0	2.8	2.7	2.7	2.8	2.5	2.0	2.0	2.7
3.5	3.1	3.1	3.1	3.1	2.8	2.1	2.2	3.0
4.0	3.5	3.5	3.4	3.4	3.1	2.3	2.4	3.3
4.5	3.8	3.8	3.8	3.7	3.3	2.5	2.6	3.7
5.0	4.2	4.2	4.1	4.1	3.6	2.7	2.9	4.0
5.5	4.5	4.5	4.5	4.4	3.9	2.9	3.1	4.3
6.0	4.8	4.9	4.8	4.7	4.2	3.1	3.3	4.7
6.5	5.2	5.2	5.1	5.0	4.5	3.3	3.5	5.0
7.0	5.5	5.6	5.5	5.4	4.8	3.4	3.7	5.3
7.5	5.9	5.9	5.8	5.7	5.1	3.6	3.9	5.7
8.0	6.2	6.3	6.2	6.0	5.3	3.8	4.1	6.0
8.5	6.5	6.6	6.5	6.4	5.6	4.0	4.3	6.3
9.0	6.9	7.0	6.9	6.7	5.9	4.2	4.5	6.6
9.5	7.2	7.3	7.2	7.0	6.2	4.4	4.7	7.0
10.0	7.6	7.7	7.6	7.3	6.5	4.6	5.0	7.3
10.5	7.9	8.0	7.9	7.7	6.8	4.7	5.2	7.6
11.0	8.3	8.4	8.3	8.0	7.1	4.9	5.4	8.0
11.5	8.6	8.7	8.6	8.3	7.3	5.1	5.6	8.3
12.0	8.9	9.1	8.9	8.6	7.6	5.3	5.8	8.6
	+ 1.0	+ 1.0	+ 1.1	+ 1.2	+ 1.1	+ 0.7	+ 0.7	+ 1.1

*At the bottom of each column is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

General Directions

Sections A.2 through A.5 contain background materials for Sections 2 through 5. This includes the more detailed material from which the procedures were developed as well as historical data comparisons used to develop some of the procedures.

The first page of each section is a table of contents for that section. The backup material is arranged with corresponding table numbers (e.g., table A.2-1 contains backup material for the procedures given in table 2-1.)

On several of the tables, the Sequoyah stability class (46-9 m ΔT) is given as I-L, which stands for intermediate minus lower. Also, the headings on some of the computer products incorrectly list the Sequoyah 9 m and Watts Bar 91 m temperature sensor heights as 10 and 93 meters, respectively (Tables A.2-1a through A.2-1e). In Table A.2-3, the Sequoyah 9.73 m wind speed sensor height is incorrectly given as 9.25 m (which is the temperature sensor height). These values will be corrected when the manual is revised.

Sequoyah Stability Class (46-9 m ΔT)

This section contains background material for the procedures in section 2, with corresponding table numbers.

<u>Reference Parameter</u>	<u>Table No.</u>
1. Sequoyah 91-9 m ΔT	A.2-1a
2. Watts Bar 46-10 m ΔT	A.2-1b
3. Sequoyah 10 m wind speed (WS), Time of day, Month	A.2-2
WS \leq 2.2 m/s (5 mi/h)	Block 1
2.2 m/s < WS \leq 4.5 m/s (10 mi/h)	Block 2
WS > 4.5 m/s	Block 3
4. Watts Bar 91-10 m ΔT	A.2-1c
5. Sequoyah 91-46 m ΔT	A.2-1d
6. Watts Bar 91-46 m ΔT	A.2-1e
7. Time of Day	A.2-3

Table A.2-1a Estimated Sequoyah I-L Stability Class

SEQUOYAH (T46-T10) VS SEQUOYAH (T91-T10)
 JANUARY 1, 1977 - DECEMBER 31, 1980

8:25 WEDNESDAY, JULY 22, 1981 1

TABLE OF STAB BY STAC

STAB	T46-T10		STAC					TOTAL	
	T46-T10	STAC	T91-T10						
FREQUENCY	COL PCT	A	B	IC	ID	IE	IF	IG	
A		353	890	1215	350	2	0	0	2818
		100.00	97.69	74.95	3.42	0.02	0.00	0.00	
B		0	17	317	707	2	0	0	1043
		0.00	1.87	19.56	6.76	0.02	0.00	0.00	
C		0	4	83	1390	0	0	0	1477
		0.00	0.44	5.12	13.29	0.00	0.00	0.00	
D		0	0	6	7027	514	12	0	7559
		0.00	0.00	0.37	67.20	5.86	0.40	0.00	
E		0	0	0	975	6805	395	15	8190
		0.00	0.00	0.00	7.32	77.56	13.13	1.43	
F		0	0	0	0	1450	1980	255	3685
		0.00	0.00	0.00	0.00	16.53	65.80	24.31	
G		0	0	0	0	1	622	779	1402
		0.00	0.00	0.00	0.00	0.01	20.67	74.26	
TOTAL		353	911	1621	10457	8774	3009	1049	26174

Table A.2-1b Estimated Sequoyah I-L Stability Class

SEQUOYAH (T46-T10) VS WATTS LAK (WB46-WB10)
 JANUARY 1, 1977 - DECEMBER 31, 1980

9:12 WEDNESDAY, JULY 22, 1981 1

TABLE OF STAB BY STAC

STAB	T46-T10		STAC					TOTAL	
	T46-T10	STAC	WB46-WB10						
FREQUENCY	COL PCT	A	B	IC	ID	IE	IF	IG	
A		574	444	841	800	18	1	0	2678
		73.42	60.82	50.03	8.05	0.27	0.03	0.00	
B		88	120	253	510	9	1	0	989
		10.88	16.44	15.05	5.21	0.13	0.03	0.00	
C		72	94	298	921	23	0	0	1408
		8.90	12.88	17.73	9.26	0.34	0.00	0.00	
D		48	68	272	5952	758	48	5	7351
		5.93	9.32	16.18	59.40	14.22	1.33	0.30	
E		7	2	13	1651	4630	1363	189	7895
		0.87	0.27	0.77	16.30	68.71	37.90	11.22	
F		0	2	3	65	1029	1809	602	3510
		0.00	0.27	0.18	0.65	15.27	50.31	35.73	
G		0	0	1	7	71	374	889	1342
		0.00	0.00	0.06	0.07	1.05	10.40	52.75	
TOTAL		809	730	1681	9944	6738	3596	1605	25133

Table A.2-1c Estimated Sequoyah I-L Stability Class

SEQUOYAH (T46-T10) VS WATTS BAR (WB93-WB10)
 JANUARY 1, 1977 - DECEMBER 31, 1980

10115 WEDNESDAY, JULY 22, 1981 1

TABLE OF STAB BY STAC

STAB	T46-T10	STAC	WB93-WB10					TOTAL	
FREQUENCY	COL PCT	IA	IB	IC	ID	IE	IF	IG	
A	15	72	345	2264	27	0	0	2723	
	88.24	77.42	77.35	17.63	0.38	0.00	0.00		
B	2	8	38	943	15	1	0	1007	
	11.76	8.60	8.52	7.34	0.21	0.03	0.00		
C	0	8	34	1348	31	0	0	1421	
	0.00	8.60	7.62	10.50	0.44	0.00	0.00		
D	0	4	25	6254	1018	48	2	7351	
	0.00	4.30	5.61	48.70	14.39	1.33	0.16		
E	0	1	4	1945	4690	1199	70	7909	
	0.00	1.08	0.90	15.15	66.32	33.34	5.64		
F	0	0	0	82	1198	1908	353	3541	
	0.00	0.00	0.00	0.64	16.94	53.06	28.42		
G	0	0	0	5	93	440	817	1355	
	0.00	0.00	0.00	0.04	1.32	12.24	65.78		
TOTAL	17	93	446	12841	7072	3596	1242	25307	

Table A.2-1d Estimated Sequoyah I-L Stability Class

SEQUOYAH (T46-T10) VS SEQUOYAH (T91-T46)
 JANUARY 1, 1977 - DECEMBER 31, 1980

11100 THURSDAY, SEPTEMBER 17, 1981 1

TABLE OF STAB BY STAC

STAB	T46-T10	STAC	T91-T46					TOTAL	
FREQUENCY	COL PCT	IA	IB	IC	ID	IE	IF	IG	
A	11	50	193	3134	33	1	0	3422	
	68.75	73.53	75.98	19.47	0.31	0.04	0.00		
B	0	8	26	1169	19	0	0	1222	
	0.00	11.76	10.24	7.26	0.18	0.00	0.00		
C	2	5	22	1715	53	0	0	1797	
	12.50	7.35	8.66	10.66	0.49	0.00	0.00		
D	1	5	12	7304	1233	47	10	8612	
	6.25	7.35	4.72	45.38	11.49	1.75	0.86		
E	2	0	1	2689	6312	626	108	9738	
	12.50	0.00	0.39	16.71	58.84	23.34	9.29		
F	0	0	0	77	2539	1417	555	4588	
	0.00	0.00	0.00	0.48	23.67	52.83	47.76		
G	0	0	0	7	539	591	489	1625	
	0.00	0.00	0.00	0.04	5.02	22.04	42.08		
TOTAL	16	68	254	16095	10748	2682	1162	31005	

Table A.2-1e Estimated Sequoyah I-L Stability Class

SEQUOYAH (T46-T10) VS WATTS BAR (WB93-WB46)
 JANUARY 1, 1977 - DECEMBER 31, 1980

10132 WEDNESDAY, JULY 22, 1981 1

TABLE OF STAB BY STAC

STAB	T46-T10	STAC	WB93-WB46							TOTAL
FREQUENCY										
	COL	PCT	IA	IB	IC	ID	IE	IF	IG	
A	1		1	13	2627	59	0	0		2701
	100.00		33.33	39.37	19.45	0.77	0.00	0.00		
B	0		0	4	950	34	2	0		998
	0.00		0.00	12.12	7.04	0.45	0.07	0.00		
C	0		1	4	1334	69	0	0		1408
	0.00		33.33	12.12	9.88	0.91	0.00	0.00		
D	0		1	11	6063	1181	65	3		7324
	0.00		33.33	33.33	44.89	15.50	2.35	0.25		
E	0		0	1	2358	4473	910	136		7873
	0.00		0.00	3.03	17.46	58.70	32.86	11.19		
F	0		0	0	150	1550	1357	428		3493
	0.00		0.00	0.00	1.17	20.34	49.01	35.23		
G	0		0	0	8	254	435	648		1345
	0.00		0.00	0.00	0.06	3.13	15.71	53.33		
TOTAL	1		3	33	13506	7620	2769	1215		25147

January

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	48	96	D	68	100	D	100	100
0200	E	47	97	D	67	100	D	67	100
0300	E	56	96	D	72	100	D	100	100
0400	E	57	96	D	75	100	D	100	100
0500	E	63	98	D	67	97	D	100	100
0600	E	57	100	D	77	100	D	100	100
0700	E	60	100	D	78	100	D	100	100
0800	D	48	90	D	69	100	D	100	100
0900	D	64	91	D	68	95	D	75	100
1000	D	57	86	D	38	73	D	43	57
1100	D	44	76	D	47	58	D	33	67
1200	D	60	71	D	46	61	B	43	86
1300	D	50	69	D	46	54	B	29	71
1400	D	53	70	D	39	54	A	57	57
1500	D	58	87	D	43	70	D	38	63
1600	D	79	92	D	72	100	D	75	100
1700	D	55	90	D	79	100	D	75	100
1800	E	54	98	D	68	100	D	75	100
1900	E	56	95	D	64	100	E	60	100
2000	E	56	95	D	50	96	D	100	100
2100	E	60	93	D	68	100	E	75	100
2200	E	60	95	D	61	100	E	67	100
2300	E	54	93	D	69	100	E	75	100
2400	E	53	93	D	81	100	D	75	100

- A: The first column is the estimated stability class.
 B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
 C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

February

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	44	89	D	70	96	D	100	100
0200	E	45	93	D	67	96	D	100	100
0300	E	48	90	D	72	97	D	100	100
0400	E	50	98	D	58	97	D	100	100
0500	E	60	90	D	74	96	D	100	100
0600	E	49	98	D	71	100	D	100	100
0700	E	57	100	D	71	91	D	100	100
0800	E	49	100	D	80	100	D	75	100
0900	D	73	92	D	46	80	D	43	71
1000	D	61	76	D	36	59	D	50	50
1100	D	51	69	A	48	65	A	40	50
1200	D	57	71	A	40	51	A	57	71
1300	D	56	76	A	64	69	A	58	58
1400	D	44	66	A	65	67	A	50	58
1500	D	57	74	D	38	54	D	45	64
1600	D	67	94	D	53	82	D	80	100
1700	D	71	97	D	100	100	D	86	100
1800	E	66	96	D	65	100	D	50	100
1900	E	51	87	D	70	100	D	100	100
2000	E	55	84	D	65	100	D	100	100
2100	E	44	89	D	62	100	D	100	100
2200	E	55	90	D	76	100	D	100	100
2300	E	47	84	D	60	100	D	100	100
2400	E	52	86	D	75	96	D	100	100

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

March

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	F	29	84	D	46	89	D	50	100
0200	E	37	78	D	59	96	D	67	100
0300	F	32	86	D	48	93	D	80	100
0400	E	34	78	D	70	100	D	67	100
0500	E	41	86	D	65	100	D	100	100
0600	F	41	86	D	63	100	D	75	100
0700	E	53	89	D	69	100	E	67	100
0800	D	45	90	D	61	94	D	63	75
0900	D	62	93	D	44	59	D	63	75
1000	D	44	78	D	45	62	A	36	64
1100	D	41	59	D	42	62	B	33	75
1200	D	30	61	D	40	60	A	43	50
1300	D	31	59	A	36	60	A	53	65
1400	D	36	64	A	36	41	A	60	60
1500	D	55	77	D	40	60	D	42	68
1600	D	65	85	D	51	78	D	59	71
1700	D	68	97	D	73	100	D	44	100
1800	E	63	100	D	47	92	D	83	100
1900	E	41	82	E	64	100	E	80	100
2000	E	41	69	E	47	100	E	50	100
2100	E	39	66	E	55	97	D	67	100
2200	G	34	62	E	52	100	E	67	100
2300	E	40	71	E	57	96	D	80	100
2400	E	34	72	D	53	90	D	67	100

- A: The first column is the estimated stability class.
 B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
 C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

April

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	G	35	63	D	50	94	E	100	100
0200	G	38	69	D	56	94	E	67	100
0300	F	40	94	D	59	100	D	100	100
0400	F	37	93	D	58	95	D	100	100
0500	F	41	96	E	69	100	D	100	100
0600	E	38	71	E	67	100	D	60	100
0700	E	43	88	D	53	100	D	100	100
0800	D	46	83	D	38	53	A	67	67
0900	D	50	67	A	54	59	A	50	50
1000	A	32	56	A	49	55	D	33	67
1100	A	33	58	A	52	62	D	23	62
1200	C	29	76	A	48	58	A	29	47
1300	A	42	50	A	63	68	A	61	61
1400	D	32	57	A	46	56	A	58	58
1500	D	35	68	A	38	54	A	47	58
1600	D	59	86	D	29	57	D	37	68
1700	D	49	91	D	65	94	D	71	100
1800	E	60	100	E	53	100	D	57	100
1900	E	47	83	E	63	100	D	100	100
2000	F	40	94	E	63	100	E	75	100
2100	G	42	64	E	58	95	E	100	100
2200	G	42	67	E	55	100	D	75	100
2300	G	41	65	E	53	100	D	100	100
2400	G	38	65	D	47	88	E	50	100

- A: The first column is the estimated stability class.
- B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
- C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

May

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	F	49	96	E	75	100	E	100	100
0200	F	46	99	E	71	100	E	50	100
0300	E	51	93	E	67	100	E	100	100
0400	E	55	93	E	71	100	-	-	-
0500	E	56	96	E	86	100	-	-	-
0600	E	58	97	E	82	100	E	100	100
0700	E	70	100	E	67	100	-	-	-
0800	D	66	99	D	63	94	-	-	-
0900	D	66	90	D	42	71	-	-	-
1000	D	55	73	A	37	53	-	-	-
1100	D	37	63	A	40	48	A	67	67
1200	C	39	85	A	47	58	A	75	75
1300	D	43	68	A	39	61	A	40	40
1400	D	29	57	A	51	64	A	67	67
1500	D	59	67	A	43	51	D	33	67
1600	D	51	81	D	40	66	D	50	100
1700	D	68	84	D	64	91	D	33	100
1800	D	60	100	D	63	93	E	50	100
1900	E	75	100	E	52	100	-	-	-
2000	E	59	95	E	67	100	-	-	-
2100	F	44	97	E	69	100	-	-	-
2200	F	46	99	E	90	100	-	-	-
2300	F	44	99	E	100	100	-	-	-
2400	F	46	99	E	100	100	D	100	100

- A: The first column is the estimated stability class.
- B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
- C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

June

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	F	55	96	D	57	100	-	-	-
0200	F	53	95	D	86	100	-	-	-
0300	E	56	100	D	71	100	-	-	-
0400	E	57	96	D	83	100	E	100	100
0500	E	47	97	E	63	100	-	-	-
0600	E	50	99	E	57	100	-	-	-
0700	E	76	100	D	86	100	-	-	-
0800	D	76	97	D	40	50	C	100	100
0900	D	44	71	D	50	56	B	100	100
1000	D	32	60	A	48	66	A	100	100
1100	A	35	58	A	62	74	A	100	100
1200	A	39	55	A	68	75	A	100	100
1300	A	32	61	A	49	69	A	100	100
1400	A	70	73	A	71	75	A	100	100
1500	A	36	48	A	61	78	A	100	100
1600	D	29	53	A	29	54	-	-	-
1700	D	52	79	D	44	80	B	100	100
1800	D	73	98	D	58	94	D	100	100
1900	E	68	99	E	50	100	D	100	100
2000	E	65	100	D	54	100	-	-	-
2100	F	51	99	E	56	100	-	-	-
2200	F	57	100	D	57	100	D	100	100
2300	F	50	100	E	44	100	D	100	100
2400	F	55	99	D	57	100	D	100	100

- A: The first column is the estimated stability class.
- B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
- C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

July

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	55	98	E	57	100	-	-	-
0200	E	63	99	E	57	100	-	-	-
0300	E	58	100	D	60	100	-	-	-
0400	E	62	99	D	67	100	-	-	-
0500	E	58	99	D	60	100	-	-	-
0600	E	62	100	D	50	100	-	-	-
0700	E	67	99	D	100	100	D	100	100
0800	D	80	98	D	89	100	D	100	100
0900	D	48	74	C	38	83	D	100	100
1000	A	36	49	A	48	70	D	100	100
1100	A	40	60	A	53	56	B	100	100
1200	A	50	61	A	79	83	D	50	50
1300	A	42	58	A	65	82	D	50	50
1400	A	48	59	A	70	78	-	-	-
1500	A	36	48	A	62	74	A	100	100
1600	A	37	47	A	55	66	-	-	-
1700	D	45	64	A	29	34	-	-	-
1800	D	57	82	D	51	74	-	-	-
1900	D	56	94	D	61	100	-	-	-
2000	E	71	100	D	56	100	-	-	-
2100	E	49	98	E	90	100	-	-	-
2200	E	53	91	E	80	100	-	-	-
2300	E	45	91	E	71	100	-	-	-
2400	F	43	88	E	56	100	-	-	-

- A: The first column is the estimated stability class.
- B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.
- C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

August

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	67	97	E	75	100	-	-	-
0200	E	65	98	E	100	100	-	-	-
0300	E	68	100	D	60	100	-	-	-
0400	E	65	100	D	80	100	-	-	-
0500	E	70	100	D	75	100	-	-	-
0600	E	66	99	D	100	100	-	-	-
0700	E	65	100	D	75	100	-	-	-
0800	D	59	99	D	88	100	-	-	-
0900	D	54	78	D	58	75	-	-	-
1000	D	38	63	A	47	59	B	100	100
1100	A	44	56	A	63	75	B	100	100
1200	A	42	58	A	64	72	-	-	-
1300	A	47	61	A	62	69	-	-	-
1400	A	57	65	A	70	79	-	-	-
1500	A	46	63	A	57	69	-	-	-
1600	C	27	63	A	33	54	-	-	-
1700	D	48	69	D	28	69	E	100	100
1800	D	66	96	D	52	80	-	-	-
1900	E	63	100	D	56	100	-	-	-
2000	E	63	100	E	40	100	-	-	-
2100	E	61	96	E	63	100	-	-	-
2200	E	51	94	E	90	100	-	-	-
2300	E	64	99	E	57	100	-	-	-
2400	E	57	99	E	75	100	-	-	-

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	64	96	E	73	100	D	100	100
0200	E	66	97	E	50	100	-	-	-
0300	E	54	96	D	73	100	-	-	-
0400	E	60	95	D	83	100	-	-	-
0500	E	64	100	E	54	100	-	-	-
0600	E	59	100	D	91	100	E	100	100
0700	E	68	100	D	80	100	E	100	100
0800	E	68	99	D	73	100	D	100	100
0900	D	72	88	D	57	76	D	100	100
1000	D	45	63	D	35	54	E	100	100
1100	A	37	54	A	50	59	-	-	-
1200	A	50	66	A	59	63	-	-	-
1300	A	39	57	A	51	63	-	-	-
1400	A	63	69	A	56	71	-	-	-
1500	A	38	60	A	58	70	-	-	-
1600	D	38	60	A	37	51	-	-	-
1700	D	59	89	D	38	68	-	-	-
1800	D	58	100	D	84	96	E	100	100
1900	E	67	100	E	65	94	E	100	100
2000	E	51	89	E	54	100	E	100	100
2100	E	47	93	E	54	100	E	100	100
2200	E	43	94	E	62	100	E	100	100
2300	E	57	96	D	60	100	D	100	100
2400	E	59	94	E	71	100	D	100	100

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

October

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	F	47	99	E	53	100	-	-	-
0200	F	45	97	D	57	93	-	-	-
0300	F	51	96	E	59	100	-	-	-
0400	F	46	96	D	46	85	-	-	-
0500	F	48	98	D	54	100	-	-	-
0600	E	45	94	E	50	100	-	-	-
0700	E	48	98	E	50	100	-	-	-
0800	E	67	99	D	67	100	-	-	-
0900	D	57	97	D	62	86	-	-	-
1000	D	49	81	A	41	62	D	100	100
1100	D	31	73	A	65	76	D	50	50
1200	A	39	48	A	67	79	D	100	100
1300	A	47	72	A	54	65	C	25	75
1400	A	60	77	A	75	79	A	75	75
1500	A	39	59	A	72	80	D	50	83
1600	D	36	62	A	37	45	D	80	80
1700	D	65	94	D	61	95	D	100	100
1800	E	74	97	E	70	100	-	-	-
1900	F	51	96	E	88	100	E	100	100
2000	F	36	99	E	42	100	E	100	100
2100	F	47	97	E	54	100	E	100	100
2200	F	51	99	D	50	92	E	100	100
2300	F	59	97	E	63	100	E	100	100
2400	F	49	99	E	63	100	-	-	-

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	F	40	90	D	52	100	E	50	100
0200	E	43	86	D	58	100	D	100	100
0300	E	48	89	D	65	100	E	50	100
0400	E	53	94	D	60	100	D	100	100
0500	E	49	90	D	63	100	D	100	100
0600	E	66	95	D	54	96	D	100	100
0700	E	64	95	D	56	96	D	100	100
0800	E	57	95	D	88	100	D	100	100
0900	D	60	94	D	74	94	D	83	100
1000	D	47	85	D	42	63	D	80	80
1100	D	66	86	D	42	60	D	60	80
1200	D	55	84	A	36	54	D	83	83
1300	D	28	64	A	38	55	D	50	50
1400	D	41	75	D	29	56	B	33	67
1500	D	63	95	D	61	93	D	33	83
1600	D	73	100	D	86	100	E	67	100
1700	E	70	96	E	53	100	E	100	100
1800	E	37	77	E	50	100	-	-	-
1900	F	38	75	E	48	100	E	50	100
2000	F	41	92	E	52	100	E	100	100
2100	F	38	97	E	54	100	E	50	100
2200	F	44	93	D	46	88	E	100	100
2300	F	41	93	D	61	100	E	100	100
2400	F	39	92	D	52	91	E	50	100

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

Table A.2-2 Estimated Sequoyah I-L Stability Class By Time of Day and 10 m Wind Speed (m/s)

Hour	Block 1 WS < 2.2 m/s			Block 2 2.2 m/s < WS < 4.5 m/s			Block 3 WS > 4.5 m/s		
	A	B	C	A	B	C	A	B	C
0100	E	45	85	E	48	100	D	83	100
0200	E	44	86	D	54	92	D	100	100
0300	E	49	86	E	46	96	D	100	100
0400	E	44	86	E	50	100	D	100	100
0500	E	40	89	E	55	100	D	80	100
0600	E	48	89	E	50	100	D	75	100
0700	E	44	93	D	60	100	D	75	100
0800	E	50	94	D	70	100	D	75	100
0900	D	50	91	D	69	93	D	40	90
1000	D	58	92	D	64	72	D	38	83
1100	D	54	95	D	43	67	A	43	57
1200	L	66	86	D	37	67	B	38	88
1300	D	50	76	D	37	61	B	43	71
1400	D	44	53	A	44	58	B	33	58
1500	D	77	97	D	50	89	D	50	100
1600	D	79	100	D	81	100	D	67	100
1700	E	78	100	E	60	100	E	67	100
1800	F	37	87	E	68	100	-	-	-
1900	F	34	90	E	62	100	E	50	100
2000	F	35	89	E	58	96	E	75	100
2100	E	35	70	E	62	100	E	50	100
2200	F	37	93	E	64	96	D	80	100
2300	E	41	76	E	54	100	D	83	100
2400	E	48	76	E	45	100	D	83	100

A: The first column is the estimated stability class.

B: The second column is the percentage of time that the estimated stability class was the same as the actual stability class.

C: The third column is the percentage of time that the estimated value was within ± 1 stability class.

Note: A "-" in columns A-C indicates that there were no data values in the data set for this wind speed category for this hour.

Table A.2-3 Estimated Sequoyah I-L Stability Class

SEQUOYAH NUCLEAR PLANT

19:00 FRIDAY, J

MARCH 1, 1977 - FEBRUARY 28, 1978

WIND SPEEDS MEASURED AT 45.99 AND 9.25 METERS

TABLE OF TIME BY STB1

TIME	STB1	STABILITY CLASS								TOTAL
FREQUENCY	ROW PCT	LR	IA	IB	IC	ID	IE	IF	IG	
100	8	0	0	0	0	64	171	90	32	357
	.	0.00	0.00	0.00	0.00	17.93	47.90	25.21	8.96	
200	11	0	0	0	0	69	165	91	29	354
	.	0.00	0.00	0.00	0.00	19.49	46.61	25.71	8.19	
300	9	0	0	0	0	62	174	97	23	356
	.	0.00	0.00	0.00	0.00	17.42	48.08	27.25	6.46	
400	10	0	0	0	0	63	175	97	20	355
	.	0.00	0.00	0.00	0.00	17.75	49.30	27.32	5.63	
500	10	0	0	0	0	60	169	100	18	355
	.	0.00	0.00	0.00	0.00	19.15	47.61	28.17	5.07	
600	12	0	0	0	0	83	163	88	19	353
	.	0.00	0.00	0.00	0.00	23.51	46.18	24.93	5.38	
700	12	0	0	0	0	98	191	56	3	353
	.	0.00	0.00	0.00	0.00	27.76	54.11	15.86	2.27	
800	11	1	0	12	210	113	16	2	354	
	.	0.28	0.00	3.39	59.32	31.92	4.52	0.56		
900	12	35	14	46	222	33	3	0	353	
	.	9.92	3.97	13.03	62.89	9.35	0.85	0.00		
1000	7	89	34	79	136	18	2	0	358	
	.	24.86	9.50	22.07	37.99	5.03	0.56	0.00		
1100	12	134	39	66	99	14	1	0	353	
	.	37.96	11.05	18.70	28.05	3.97	0.28	0.00		
1200	8	142	45	66	87	15	2	0	357	
	.	39.78	12.61	18.49	24.37	4.20	0.56	0.00		
1300	9	154	32	56	92	21	1	0	356	
	.	43.26	8.99	15.73	25.84	5.90	0.28	0.00		
1400	9	173	26	48	87	22	0	0	356	
	.	48.60	7.30	13.48	24.44	6.18	0.00	0.00		
1500	8	101	43	71	119	21	2	0	357	
	.	28.29	12.04	19.89	33.33	5.88	0.56	0.00		
1600	11	60	21	67	167	34	3	2	354	
	.	16.95	5.93	18.93	47.18	9.60	0.85	0.56		
1700	11	24	13	25	204	82	6	0	354	
	.	6.78	3.67	7.06	57.63	23.16	1.69	0.00		
1800	8	1	6	15	141	165	25	4	357	
	.	0.28	1.68	4.20	39.50	46.22	7.00	1.12		
1900	7	0	0	0	97	190	47	24	358	
	.	0.00	0.00	0.00	27.09	53.07	13.13	6.70		
2000	6	0	0	0	59	185	81	34	359	
	.	0.00	0.00	0.00	16.43	51.53	22.56	9.47		
2100	7	0	0	0	54	164	97	43	358	
	.	0.00	0.00	0.00	15.08	45.81	27.09	12.01		
2200	6	0	0	0	55	158	107	39	359	
	.	0.00	0.00	0.00	15.32	44.01	29.81	10.86		
2300	8	0	0	1	53	165	100	38	357	
	.	0.00	0.00	0.28	14.85	46.22	28.01	10.64		
2400	9	0	0	0	54	172	97	33	356	
	.	0.00	0.00	0.00	15.17	48.31	27.25	9.27		
TOTAL	.	914	273	552	2443	2780	1209	368	8539	

Sequoyah 46 m Wind Direction

This section contains background material for the procedures in section 3, with corresponding table numbers.

Reference Parameter	Table No.
All Wind Speeds	
1. SQN 91 m WD	A.3-1a
2. SQN 10 m WD	A.3-1b
3. WBN 93 m WD	A.3-1c
4. WBN 46 m WD	A.3-1d
5. WBN 10 m WD	A.3-1e
Reference Parameter WS \leq 2.2 m/s	
6. SQN 10 m WD and WS	A.3-2b
7. SQN 91 m WD and WS	A.3-2a
8. WBN 46 m WD and WS	A.3-2d
9. WBN 93 m WD and WS	A.3-2c
10. WBN 10 m WD and WS	A.3-2e
Reference Parameter WS $>$ 2.2 m/s (5 mi/h)	
11. SQN 10 m WD and WS	A.3-3b
12. SQN 91 m WD and WS	A.3-3a
13. WBN 10 m WD and WS	A.3-3e
14. WBN 46 m WD and WS	A.3-3d
15. WBN 93 m WD and WS	A.3-3c
16. Time of Day	A.3-4

WD = Wind Direction
 WS = Wind Speed

Estimated Sequoyah 46 m Wind Direction Using Sequoyah
91 Wind Direction

Sequoyah 91 m Wind Direction	Table A.3-1.a All Wind Speeds			Table A.3-2.a WS \leq 2.2 m/s			Table A.3-3.a WS $>$ 2.2 m/s		
	A	B	C	A	B	C	A	B	C
N	N	61	91	NNE	29	78	N	66	95
NNE	NNE	73	98	NNE	47	87	NNE	77	100
NE	NE	60	94	NE	49	87	NE	66	98
ENE	ENE	38	82	NE	37	71	ENE	58	94
E	E	35	61	E	32	54	E	42	79
ESE	ESE	31	63	ESE	25	56	ESE	49	83
SE	SE	42	66	SE	31	53	SE	58	86
SSE	SSE	53	81	SSE	20	50	SSE	70	96
S	S	62	89	S	31	63	S	70	96
SSW	SSW	72	96	SSW	37	80	SSW	77	99
SW	SW	59	92	SW	39	73	SW	64	97
WSW	WSW	50	83	SW	25	56	WSW	61	94
W	W	60	83	W	24	46	W	69	92
WNW	WNW	63	87	WNW	22	43	WNW	72	96
NW	NW	66	87	NW	18	38	NW	74	96
NNW	NNW	63	89	N	20	53	NNW	70	95
Overall		64	92		35	69		71	97

- A. The first column is the estimated 46 m wind direction sector.
- B. The second column is the percentage of time that the estimated wind direction sector was the same as the actual wind direction sector.
- C. The third column is the percentage of time that the estimated value was within ± 1 sector.

Estimated Sequoyah 46 m Wind Direction Using Sequoyah
10 m Wind Direction

Sequoyah 10 m Wind Direction	Table A.3-1.b All Wind Speeds			Table A.3-2.b WS \leq 2.2 m/s			Table A.3-3.b WS $>$ 2.2 m/s		
	A	B	C	A	B	C	A	B	C
N	N	57	90	N	44	84	N	75	100
NNE	NNE	65	94	NNE	61	91	NNE	74	100
NE	NNE	43	87	NNE	40	83	NNE	54	98
ENE	ENE	24	56	ENE	22	53	ENE	68	100
E	E	24	48	E	24	48	ESE	100	100
ESE	ESE	17	40	ESE	17	40	-	-	-*
SE	SE	27	46	SE	26	46	SE	100	100
SSE	SSE	33	71	S	24	60	SSE	65	99
S	S	51	87	S	40	81	S	71	98
SSW	SSW	71	96	SSW	63	97	SSW	84	100
SW	SW	52	92	SW	43	87	SW	67	99
WSW	WSW	38	80	SW	35	77	WSW	59	98
W	W	48	78	W	28	61	W	68	98
WNW	WNW	53	76	WNW	37	59	WNW	75	98
NW	NW	62	83	NW	41	66	NW	81	100
NNW	NNW	57	88	NNW	41	77	NNW	73	99
Overall		54	88		46	82		71	98

- A. The first column is the estimated 46 m wind direction sector.
- B. The second column is the percentage of time that the estimated wind direction sector was the same as the actual wind direction sector.
- C. The third column is the percentage of time that the estimated value was within ± 1 sector.

*There were no data values in this sector in the data set.

Estimated Sequoyah 46 m Wind Direction Using Watts Bar
93 m Wind Direction

Watts Bar 93 m Wind Direction	Table A.3-1.c All Wind Speeds			Table A.3-2.c WS \leq 2.2 m/s			Table A.3-3.c WS $>$ 2.2 m/s		
	A	B	C	A	B	C	A	B	C
N	N	40	80	NNE	35	70	N	48	89
NNE	NNE	61	90	NNE	47	81	NNE	67	94
NE	NNE	51	84	NNE	40	75	NNE	59	90
ENE	NNE	31	65	NNE	31	59	NE	36	75
E	NE	18	46	NNE	17	38	NE	25	56
ESE	NE	19	34	NE	20	35	SE	20	29
SE	S	14	38	SSW	14	36	SSE	27	63
SSE	S	22	55	S	18	40	SSE	29	62
S	S	31	71	SSW	25	63	S	37	83
SSW	SSW	53	89	SSW	31	71	SSW	58	93
SW	SSW	38	80	SW	28	61	SSW	42	85
WSW	SW	21	59	SSW	22	49	WSW	29	67
W	W	21	51	SW	16	37	W	28	65
WNW	NW	30	60	NNE	15	36	NW	36	71
NW	NNW	32	71	NNE	17	40	NNW	38	84
NNW	N	33	75	NE	21	43	NNW	41	85
Overall		41	77		30	61		49	81

- A. The first column is estimated 46 m wind direction sector.
- B. The second column is the percentage of time that the estimated wind direction sector was the same as the actual wind direction sector.
- C. The third column is the percentage of time that the estimated value was within + 1 sector.

Estimated Sequoyah 46 m Wind Direction Using Watts Bar
46 m Wind Direction

Watts Bar 46 m Wind Direction	Table A.3-1.d All Wind Speeds			Table A.3-2.d WS \leq 2.2 m/s			Table A.3-3.d WS $>$ 2.2 m/s		
	A	B	C	A	B	C	A	B	C
N	N	42	82	NNE	36	71	N	52	91
NNE	NNE	59	89	NNE	53	82	NNE	62	93
NE	NNE	54	82	NNE	49	76	NNE	63	92
ENE	NNE	34	68	NNE	35	65	NE	40	72
E	NE	24	53	NE	23	51	NE	28	62
ESE	NE	19	38	NE	19	39	NE	19	36
SE	SSW	15	41	SSW	16	43	SSE	26	61
SSE	SSW	21	54	SSW	24	55	SSE	33	65
S	SSW	31	72	SSW	32	68	S	37	81
SSW	SSW	51	86	SSW	40	74	SSW	58	93
SW	SSW	38	78	SSW	29	65	SSW	43	86
WSW	SW	28	58	SSW	20	50	WSW	31	71
W	WNW	18	44	SW	18	40	WNW	28	65
WNW	NW	26	54	SSW	14	31	NW	36	73
NW	NNW	28	66	NNE	17	42	NNW	38	84
NNW	NNW	33	71	N	24	58	NNW	45	87
Overall		40	74		34	65		49	86

- A. The first column is the estimated 46 m wind direction sector.
- B. The second column is the percentage of time that the estimated wind direction sector was the same as the actual wind direction sector.
- C. The third column is the percentage of time that the estimated value was within ± 1 sector.

Estimated Sequoyah 46 m Wind Direction Using Watts Bar
10 m Wind Direction

Watts Bar 10 m Wind Direction	Table A.3-1.e All Wind Speeds			Table A.3-2.e WS \leq 2.2 m/s			Table A.3-3.e WS $>$ 2.2 m/s		
	A	B	C	A	B	C	A	B	C
N	N	41	82	NNE	37	72	N	53	92
NNE	NNE	57	86	NNE	50	77	NNE	63	92
NE	NNE	52	81	NNE	49	75	NNE	56	91
ENE	NNE	40	68	NNE	41	67	NE	41	77
E	NNE	30	57	NNE	30	57	NE	28	69
ESE	SSW	17	38	SSW	17	39	SE	33	53
SE	SSW	15	40	SSW	17	40	SSE	27	63
SSE	SSW	22	55	SSW	24	56	SSE	34	65
S	SSW	34	70	SSW	34	66	S	34	80
SSW	SSW	50	86	SSW	43	77	SSW	55	93
SW	SSW	31	72	SSW	31	68	SW	44	90
WSW	SSW	21	49	SSW	24	54	WSW	40	80
W	SSW	17	36	SSW	22	46	W	30	69
WNW	NW	16	33	SSW	19	38	NW	30	73
NW	NNW	16	39	NNE	21	43	NNW	38	85
NNW	N	26	68	NNE	27	57	NNW	41	85
Overall		34	66		32	60		49	87

- A. The first column is the estimated 46 m wind direction sector.
- B. The second column is the percentage of time that the estimated wind direction sector was the same as the actual wind direction sector.
- C. The third column is the percentage of time that the estimated value was within ± 1 sector.

Sequoyah 46 m Wind Speed

This section contains background material for the procedures in Section 4, with corresponding table numbers.

<u>Reference Parameter</u>	<u>Table No.</u> *
1. SQN 91 m WS & 46-9 ΔT	A.4-3
2. SQN 91 m WS	A.4-3
3. SQN 10 m WS & 46-9 m ΔT	A.4-4
4. SQN 10 m WS	A.4-4
5. WBN 93 m WS & SQN 46-9 m ΔT	A.4-5
6. WBN 46 m WS & SQN 46-9 m ΔT	A.4-6
7. WBN 46 m WS	A.4-6
8. WBN 93 m WS	A.4-5
9. WBN 10 m WS & SQN 46-9 m ΔT	A.4-7
10. WBN 10 m WS	A.4-7

WS = Wind Speed

*No background material is provided for tables A.4-1 and A.4-2.

Table A.4-3 Estimated Sequoyah 46 m Wind Speed Using Sequoyah
91 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 46 m wind speed (U_e) in m/s, using the Sequoyah 91 m wind speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 0.243 + 0.854 U_o$ (± 0.5 m/s)
B	$U_e = 0.201 + 0.853 U_o$ (± 0.5 m/s)
C	$U_e = 0.145 + 0.852 U_o$ (± 0.5 m/s)
D	$U_e = 0.021 + 0.847 U_o$ (± 0.5 m/s)
E	$U_e = -0.099 + 0.802 U_o$ (± 0.7 m/s)
F	$U_e = 0.235 + 0.650 U_o$ (± 0.9 m/s)
G	$U_e = 0.212 + 0.610 U_o$ (± 1.0 m/s)
All Classes	$U_e = -0.045 + 0.826 U_o$ (± 0.8 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.4-4 Estimated Sequoyah 46 m Wind Speed Using Sequoyah
10 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 46 m wind speed (U_e) in m/s, using the Sequoyah 10 m wind speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = -0.353 + 1.585 U_o$ (<u>± 0.8 m/s</u>)
B	$U_e = -0.468 + 1.596 U_o$ (<u>± 0.8 m/s</u>)
C	$U_e = -0.545 + 1.624 U_o$ (<u>± 0.8 m/s</u>)
D	$U_e = -0.062 + 1.612 U_o$ (<u>± 0.8 m/s</u>)
E	$U_e = 0.335 + 1.703 U_o$ (<u>± 0.8 m/s</u>)
F	$U_e = -0.005 + 2.115 U_o$ (<u>± 0.9 m/s</u>)
G	$U_e = 0.204 + 1.970 U_o$ (<u>± 1.2 m/s</u>)
All Classes	$U_e = 0.398 + 1.487 U_o$ (<u>± 1.1 m/s</u>)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated values needed to give a confidence level of 90 percent.

Table A.4-5 Estimated Sequoyah 46 m Wind Speed Using Watts Bar
93 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 46 m Wind Speed (U_e) in m/s, using the Watts Bar 93 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 1.218 + 0.741 U_o$ (+ 1.6 m/s)
B	$U_e = 0.975 + 0.744 U_o$ (+ 1.7 m/s)
C	$U_e = 0.860 + 0.740 U_o$ (+ 1.7 m/s)
D	$U_e = 1.042 + 0.720 U_o$ (+ 1.9 m/s)
E	$U_e = 0.997 + 0.637 U_o$ (+ 1.8 m/s)
F	$U_e = 1.134 + 0.496 U_o$ (+ 1.4 m/s)
G	$U_e = 1.088 + 0.482 U_o$ (+ 1.4 m/s)
All Classes	$U_e = 0.940 + 0.695 U_o$ (+ 1.8 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.4-6 Estimated Sequoyah 46 m Wind Speed Using Watts Bar
46 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 46 m Wind Speed (U_e) in m/s, using the Watts Bar 46 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 1.083 + 0.844 U_o$ (± 1.6 m/s)
B	$U_e = 0.823 + 0.865 U_o$ (± 1.7 m/s)
C	$U_e = 0.746 + 0.860 U_o$ (± 1.7 m/s)
D	$U_e = 1.173 + 0.831 U_o$ (± 1.9 m/s)
E	$U_e = 1.333 + 0.760 U_o$ (± 1.8 m/s)
F	$U_e = 1.514 + 0.615 U_o$ (± 1.5 m/s)
G	$U_e = 1.460 + 0.628 U_o$ (± 1.5 m/s)
All Classes	$U_e = 1.234 + 0.794 U_o$ (± 1.8 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.4-7 Estimated Sequoyah 46 m Wind Speed Using Watts Bar
10 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 46 m Wind Speed (U_e) in m/s, using the Watts Bar 10 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 0.587 + 1.161 U_o$ (+ 1.6 m/s)
B	$U_e = 0.396 + 1.181 U_o$ (+ 1.7 m/s)
C	$U_e = 0.346 + 1.186 U_o$ (+ 1.7 m/s)
D	$U_e = 1.176 + 1.079 U_o$ (+ 2.0 m/s)
E	$U_e = 1.605 + 0.995 U_o$ (+ 2.0 m/s)
F	$U_e = 1.676 + 0.882 U_o$ (+ 1.7 m/s)
G	$U_e = 1.581 + 1.003 U_o$ (+ 1.6 m/s)
All Classes	$U_e = 1.439 + 0.978 U_o$ (+ 1.9 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Sequoyah 10 m Wind Speed

This section contains background material for the procedures in section 5, with corresponding table numbers.

<u>Reference Parameter</u>	<u>Table No.</u> *
1. SQN 46 m WS & SQN 46-9 m ΔT	A.5-1
2. SQN 91 m WS & SQN 46-9 m ΔT	A.5-2
3. SQN 46 m WS	A.5-1
4. WBN 93 m WS & SQN 46-9 m ΔT	A.5-4
5. WBN 46 m WS & SQN 46-9 m ΔT	A.5-5
6. SQN 91 m WS	A.5-2
7. WBN 10 m WS & SQN 46-9 m ΔT	A.5-6
8. WBN 10 m WS	A.5-6
9. WBN 46 m WS	A.5-5
10. WBN 93 m WS	A.5-4

WS = Wind Speed

*No background material is provided for table 5-3.

Table A.5-1 Estimated Sequoyah 10 m Wind Speed Using Sequoyah
46 m Wind Speed and Sequoyah I-L Stability Class.

This procedure uses the following linear regression equations to estimate the Sequoyah 10 m Wind Speed (U_e) in m/s, using the Sequoyah 46 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 0.482 + 0.568 U_o$ (± 0.5 m/s)
B	$U_e = 0.504 + 0.568 U_o$ (± 0.5 m/s)
C	$U_e = 0.515 + 0.564 U_o$ (± 0.5 m/s)
D	$U_e = 0.210 + 0.576 U_o$ (± 0.5 m/s)
E	$U_e = -0.058 + 0.545 U_o$ (± 0.5 m/s)
F	$U_e = 0.272 + 0.365 U_o$ (± 0.4 m/s)
G	$U_e = 0.356 + 0.308 U_o$ (± 0.5 m/s)
All Classes	$U_e = 0.033 + 0.583 U_o$ (± 0.7 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.5-2 Estimated Sequoyah 10 m Wind Speed Using Sequoyah
91 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 10 m Wind Speed (U_e) in m/s, using the Sequoyah 91 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 0.598 + 0.490 U_o$ (± 0.5 m/s)
B	$U_e = 0.612 + 0.487 U_o$ (± 0.6 m/s)
C	$U_e = 0.594 + 0.482 U_o$ (± 0.6 m/s)
D	$U_e = 0.234 + 0.485 U_o$ (± 0.6 m/s)
E	$U_e = -0.080 + 0.429 U_o$ (± 0.7 m/s)
F	$U_e = 0.399 + 0.224 U_o$ (± 0.5 m/s)
G	$U_e = 0.475 + 0.172 U_o$ (± 0.6 m/s)
All Classes	$U_e = 0.098 + 0.460 U_o$ (± 1.0 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.5-4 Estimated Sequoyah 10 m Wind Speed Using Watts Bar
93 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 10 m Wind Speed (U_e) in m/s, using the Watts Bar 93 m Wind Speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 1.103 + 0.438 U_o$ (+ 1.0 m/s)
B	$U_e = 0.984 + 0.444 U_o$ (+ 1.0 m/s)
C	$U_e = 0.968 + 0.427 U_o$ (+ 1.0 m/s)
D	$U_e = 0.790 + 0.420 U_o$ (+ 1.2 m/s)
E	$U_e = 0.485 + 0.357 U_o$ (+ 1.1 m/s)
F	$U_e = 0.686 + 0.181 U_o$ (+ 0.6 m/s)
G	$U_e = 0.663 + 0.160 U_o$ (+ 0.6 m/s)
All Classes	$U_e = 0.581 + 0.406 U_o$ (+ 1.3 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.5-5 Estimated Sequoyah 10 m Wind Speed Using Watts Bar
46 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 10 m wind speed (U_e) in m/s, using the Watts Bar 46 m wind speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 1.022 + 0.500 U_o$ (± 1.0 m/s)
B	$U_e = 0.893 + 0.516 U_o$ (± 1.0 m/s)
C	$U_e = 0.881 + 0.502 U_o$ (± 1.1 m/s)
D	$U_e = 0.838 + 0.494 U_o$ (± 1.2 m/s)
E	$U_e = 0.645 + 0.424 U_o$ (± 1.0 m/s)
F	$U_e = 0.798 + 0.241 U_o$ (± 0.6 m/s)
G	$U_e = 0.751 + 0.235 U_o$ (± 0.6 m/s)
All Classes	$U_e = 0.651 + 0.501 U_o$ (± 1.1 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

Table A.5-6 Estimated Sequoyah 10 m Wind Speed Using Watts Bar
10 m Wind Speed and Sequoyah I-L Stability Class

This procedure uses the following linear regression equations to estimate the Sequoyah 10 m wind speed (U_e) in m/s, using the Watts Bar 10 m wind speed (U_o) in m/s, and the Sequoyah I-L Stability Class.

SQN I-L Stability Class	Equation*
A	$U_e = 0.737 + 0.683 U_o$ (± 1.0 m/s)
B	$U_e = 0.634 + 0.705 U_o$ (± 1.0 m/s)
C	$U_e = 0.647 + 0.692 U_o$ (± 1.1 m/s)
D	$U_e = 0.809 + 0.652 U_o$ (± 1.2 m/s)
E	$U_e = 0.766 + 0.572 U_o$ (± 1.1 m/s)
F	$U_e = 0.837 + 0.372 U_o$ (± 0.7 m/s)
G	$U_e = 0.764 + 0.419 U_o$ (± 0.7 m/s)
All Classes	$U_e = 0.691 + 0.662 U_o$ (± 1.1 m/s)

Period of Record: January 1, 1977-December 31, 1980

*To the right of each equation is a figure to indicate the number of meters per second on either side of the estimated value needed to give a confidence level of 90 percent.

ATTACHMENT