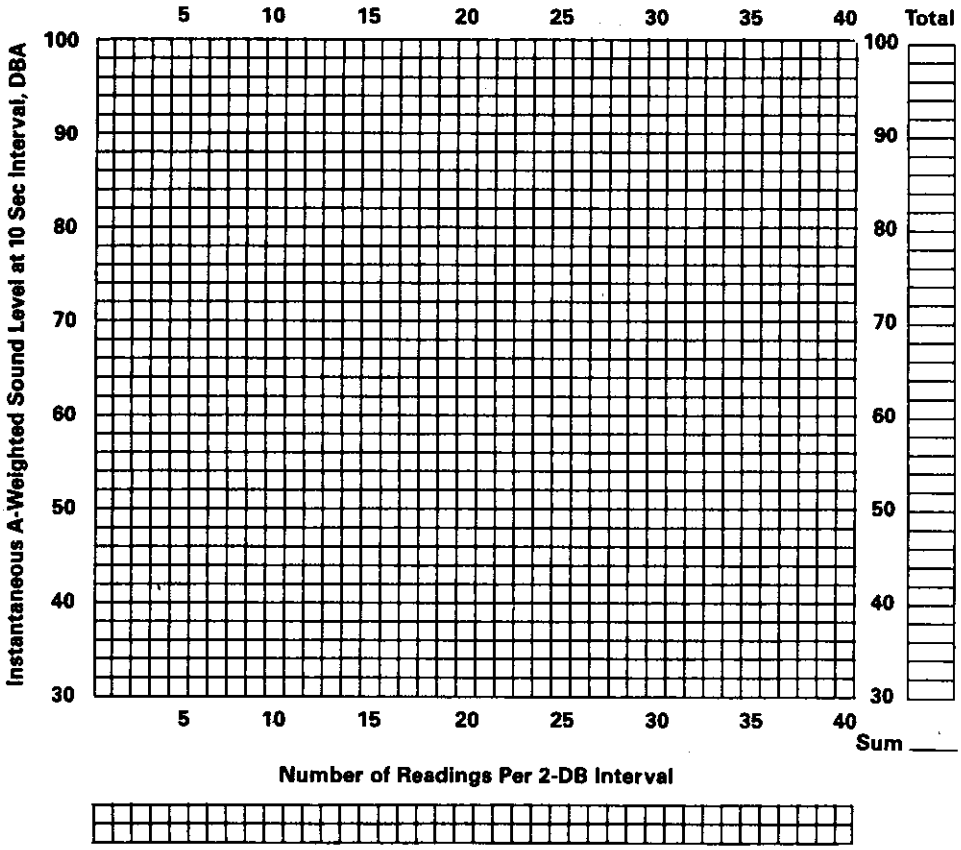
Appendix F Guide for Noise Levels

Appendix F–1
Community Noise Measurement Data Sheet

Site No. _____ **Packet No.** _____ **Cluster** _____ **Area** _____



Location _____

Operators _____

Date _____ Day: M Tu W Th F Sat Sun

Time _____ am/pm to _____ am/pm

Wind Speed _____ km/h (_____ mph)

Air Temperature _____ °C (_____ °F)

Master Check ( )

Battery: OK _____ Replaced _____

Settings: A _____ Slow _____

Calibrations: Set to _____ DB. End _____ DB

Miscellaneous (after data coll.)

Background Noise Sources _____

Unusual Situations or Interferences: _____

Comments _____

Description	**Evaluation**
_____ V. Quiet	_____ V. Accept.
_____ Quiet	_____ Acceptable
_____ M. Quiet	_____ M. Acceptable
_____ Noisy	_____ Unacceptable
_____ V. Noisy	_____ V. Unaccept.

Code for identifiable simple noise sources

Transportation	**Machinery**
E—Emer. Veh.	C—Construction
G—Gen. Avia.	Y—Yard Maint.
J—Jet	F—Factory
H—Helicopter	Q—Household
R—Railroad	**Other**
T—Truck	D—Door
A—Auto	P—People Noise
B—Bus	X—Unidenti-
M—Motorcycle	fiable
S—Service Veh.	
V—Off-Rd. Veh.	

Further Comments: _____

Appendix F-2
Computational Work Sheet to Hand-Calculate L_{eq} from Sound Level Meter Measurements Recorded on Data Log

A	B		C		D
Noise Level Band, dB	**Count**		**Relative Noise Energy**		**Relative Total Noise Energy**
100		×		=	
98		×	79,400	=	
96		×	50,100	=	
94		×	31,600	=	
92		×	20,000	=	
90		×	12,600	=	
88		×	7,910	=	
86		×	5,010	=	
84		×	3,160	=	
82		×	2,000	=	
80		×	1,260	=	
78		×	794	=	
76		×	501	=	
74		×	316	=	
72		×	200	=	
70		×	126	=	
68		×	79.4	=	
66		×	50.1	=	
64		×	31.6	=	
62		×	20.0	=	
60		×	12.6	=	
58		×	7.94	=	
56		×	5.01	=	
54		×	3.16	=	
52		×	2.00	=	
50		×	1.26	=	
48		×	.79	=	
46		×	.501	=	
44		×	.316	=	
42		×	.200	=	
40		×	.26	=	
38		×	.0294	=	
36		×	.0501	=	
34		×	.0316	=	
32		×	.0200	=	
30		×	.0126	=	

SUM B = _____ SUM D = _____

SUM D/SUM B = _____ L_{eq} = _____

Data Requirements:

- Each noise reading must be taken at a standard time interval between measurements.
- Each noise level recorded is the instantaneous level.

Step	Procedure
1	Enter number of counts per noise level in Column B.
2	Multiply the counts in Column B by the number in Column C and enter the result in Column D.
3	Add all values in Column B to determine Sum B, add all values in Column D to determine Sum D, and divide Sum D by Sum B.
4	Locate the value in Column C that is approximately equal Sum D/Sum B. The corresponding value in Column A is equal to L_{eq}. Interpolate to the nearest 0.5 dB.

Example

Given the following count data, find L_{eq}

Noise Level	Number of Occurrences
81	
82	2
80	—
78	5
76	11
74	4
72	—

Using Steps 1—4 gives:

A	B		C		D
81					
82	2	×	2,000	=	4,000
80	0	×	1,260	=	0
78	5	×	794	=	3,970
76	11	×	501	=	5,511
74	4	×	316	=	1,264
72	0	×	200	=	0

Sum B = 22; Sum D = 14,745

Sum D/Sum B = 670

L_{eq} = 70 dB

- by linear interpolation in Column C and Column A