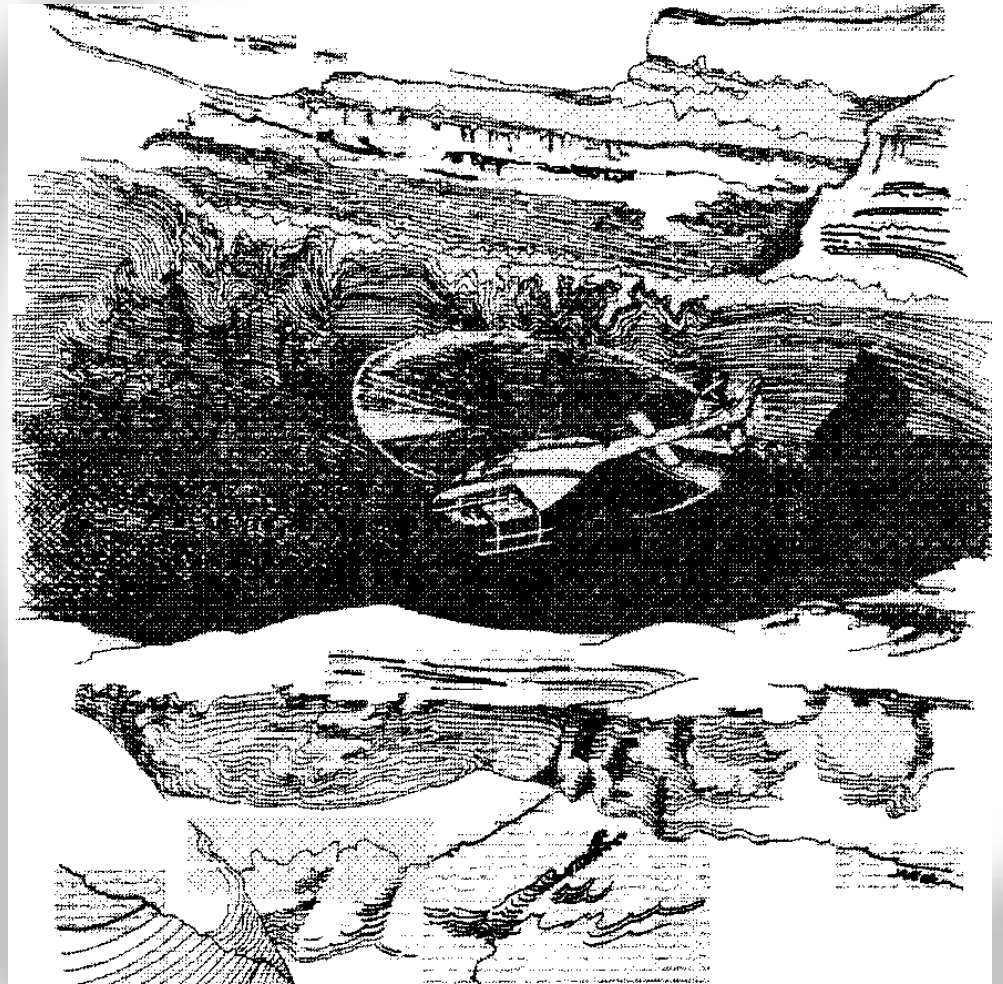# Flightseeing Noise Assessment Study

Public Meeting

September 21, 2000

Presentation Outline

- ❑ Review of goals of study
- ❑ Review of noise metrics
- ❑ Review of noise measurement methodology
- ❑ Measurement results
- ❑ What to do with the data
- ❑ Mitigation options

Goals of the Study

- ❑ Quantify flightseeing noise using a variety of noise measures
- ❑ Quantify other sources of noise
- ❑ Identify factors that are important
- ❑ Develop Model to allow prediction of noise from future actions
- ❑ Identify potential mitigation options
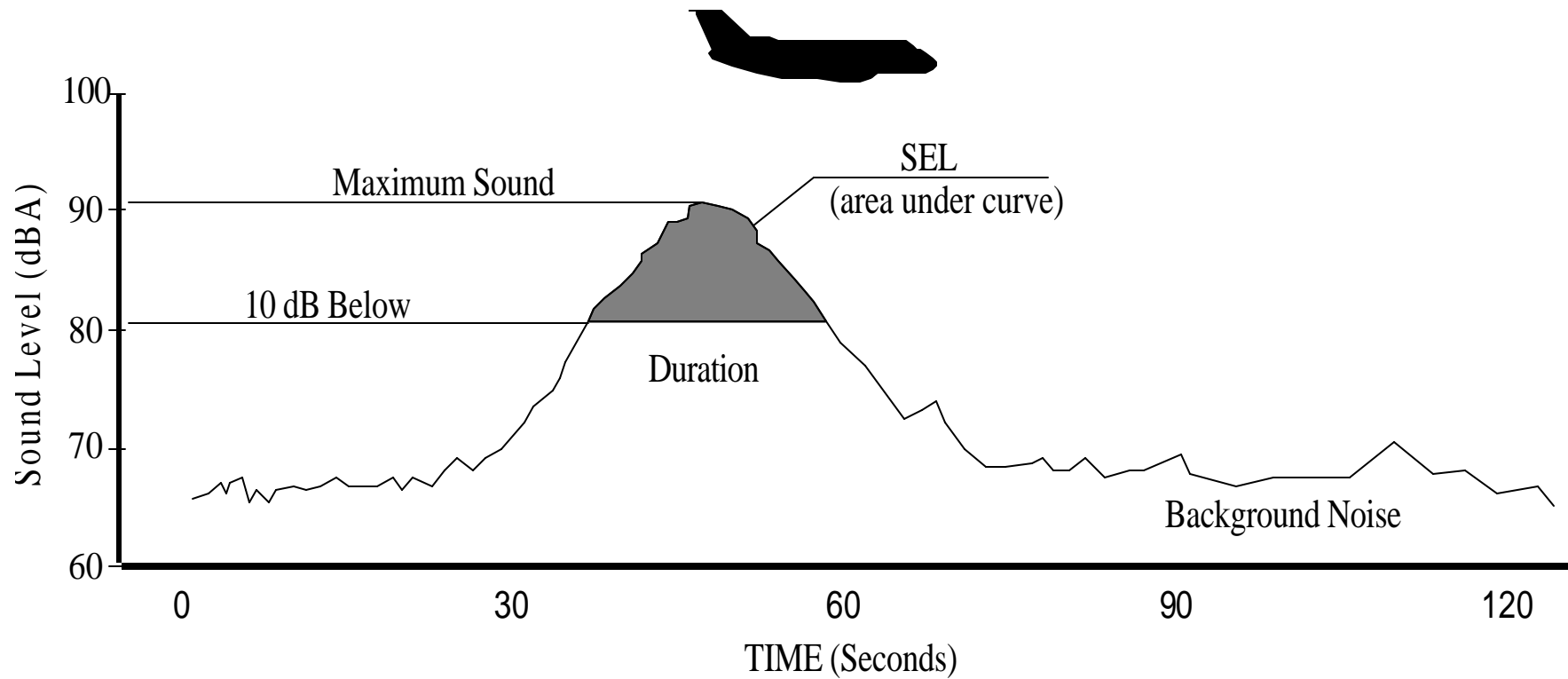
Review of Noise Metrics

□ **Single Event Metrics**

- Maximum Noise Level (Lmax)
- Sound Exposure Level (SEL)
- Spectral Content of the Noise

□ **Cumulative Noise Metrics**

- Hourly LEQ Noise Level
- Time Above Noise Level
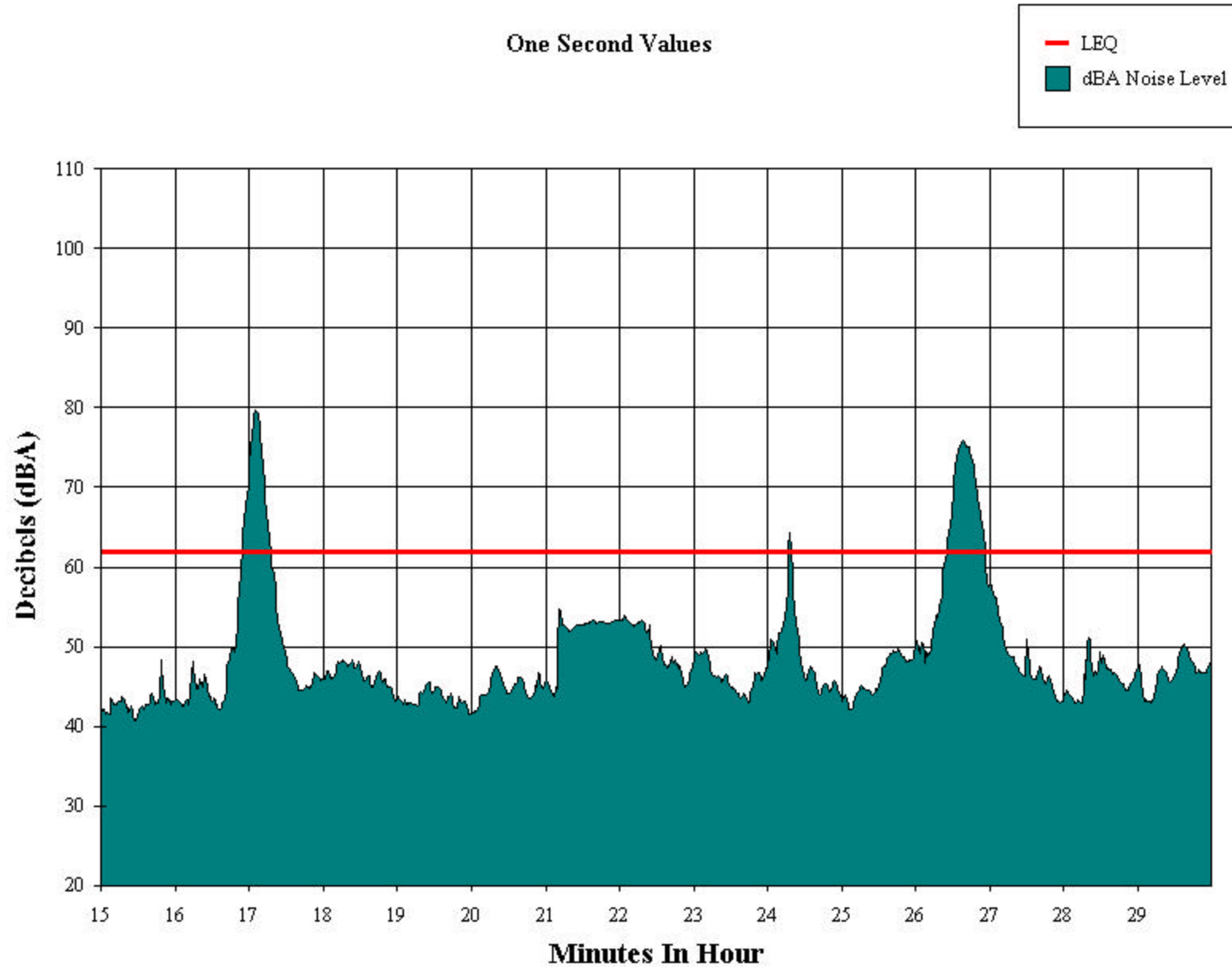- DNL Noise Level
- Modified DNL Noise Level (8 am to 9 pm)

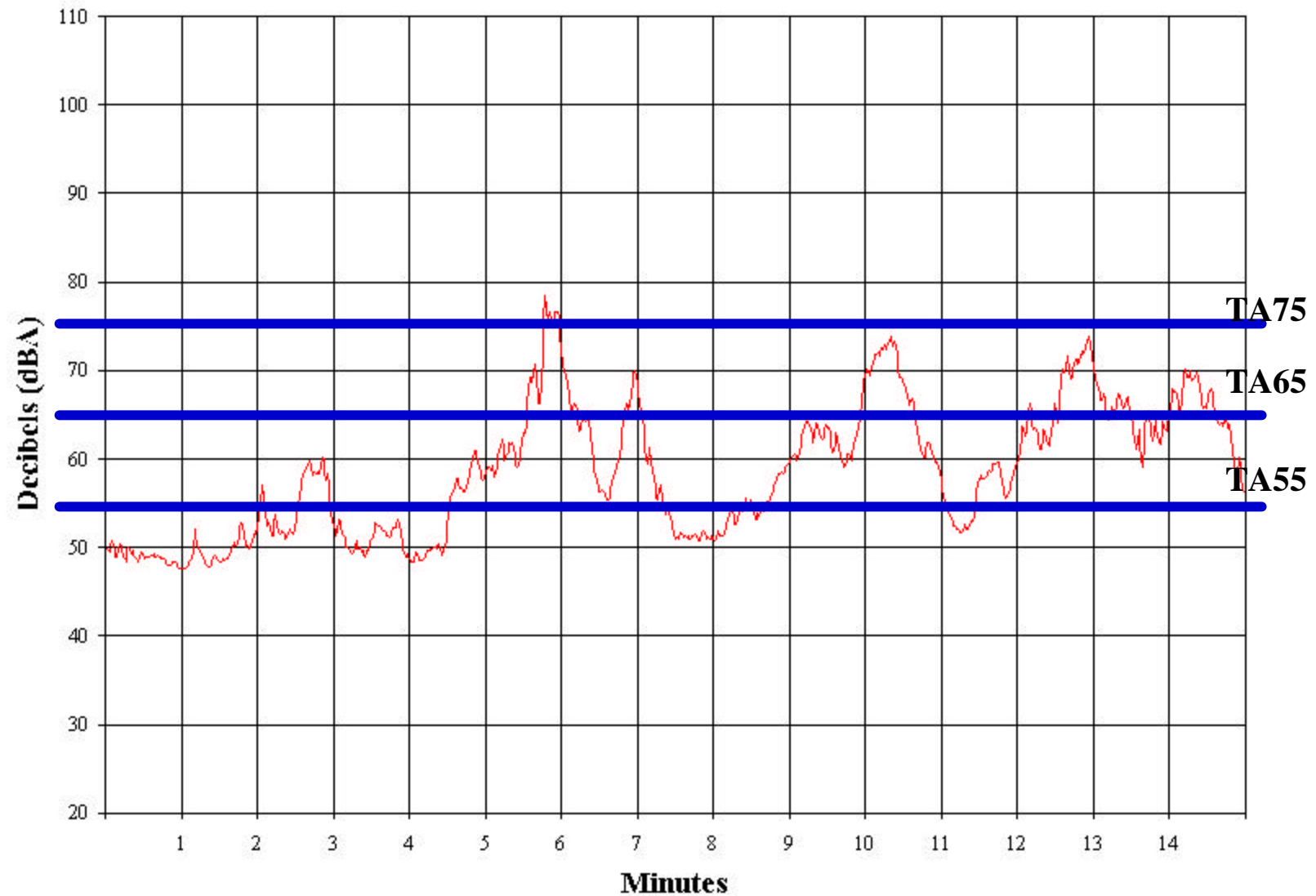# Single Event Noise Metrics
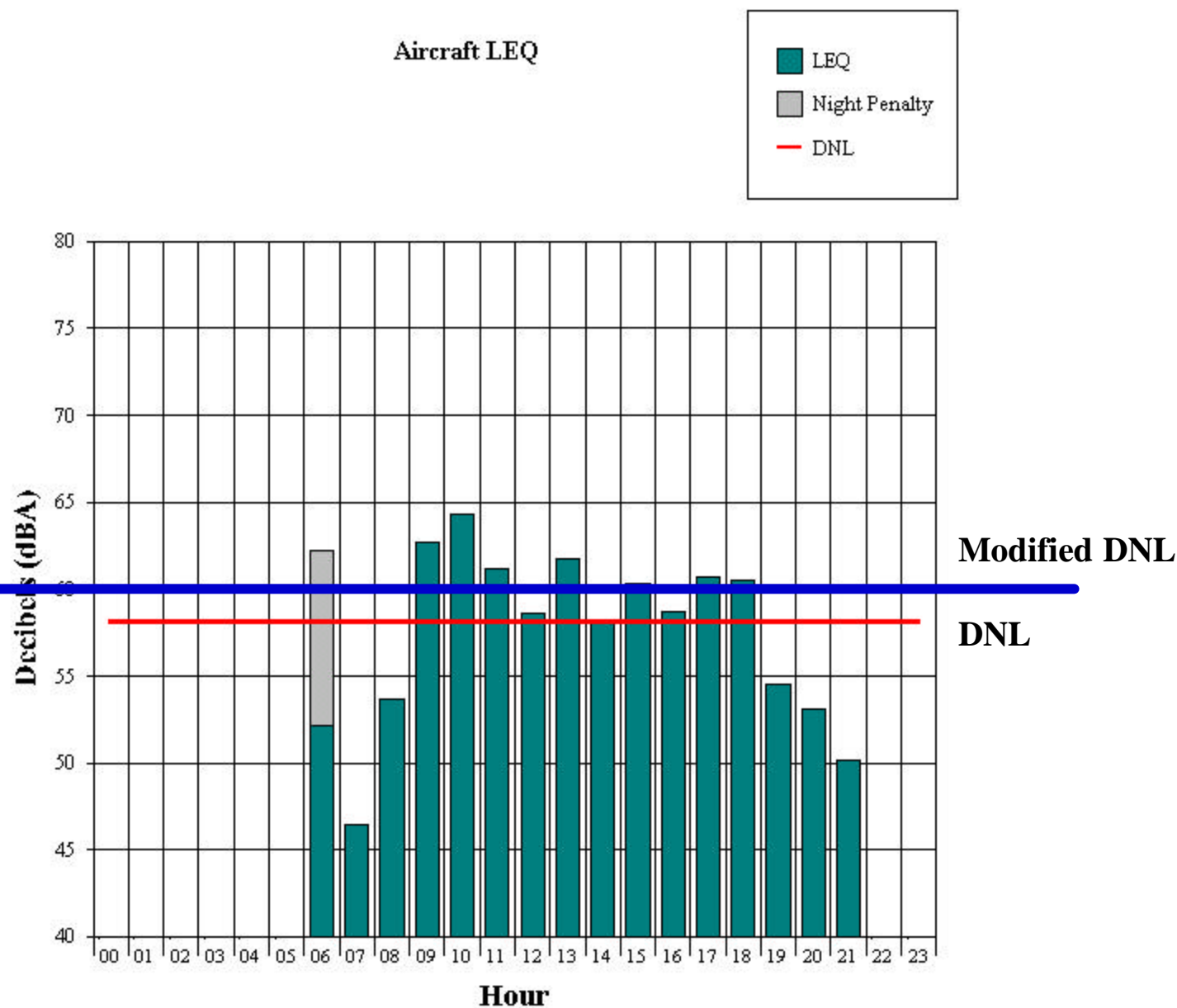
LEQ Noise Level

Bonnie Brae

One Second Values

Legend:
- LEQ
- dBA Noise Level

Time Above Noise Level
Douglas 2th

DNL Noise Level

Aircraft LEQ

Legend:
- LEQ
- Night Penalty
- DNL

Modified DNL

DNL

Decibels (dBA)

Hour

Noise Monitoring Methodology

- ❑ Noise Measurement locations
- ❑ Measurement methodology
- ❑ Measurement Data to be collected

Measurement Data

❑ Acoustic Data

- Continuous 1-second dBA noise data
- Sample periods of frequency-weighted data

❑ Aircraft Flight Information

- Aircraft Flight Information
- Aircraft Flight Paths

❑ Weather Data

- Hourly Weather Reports
  - Wind, Temp, Humidity, Press, Cover

❑ Correlate Data

Measurement Sites

❑ Longer-term Sites

- 16 sites

- Continuous measurement of all noise

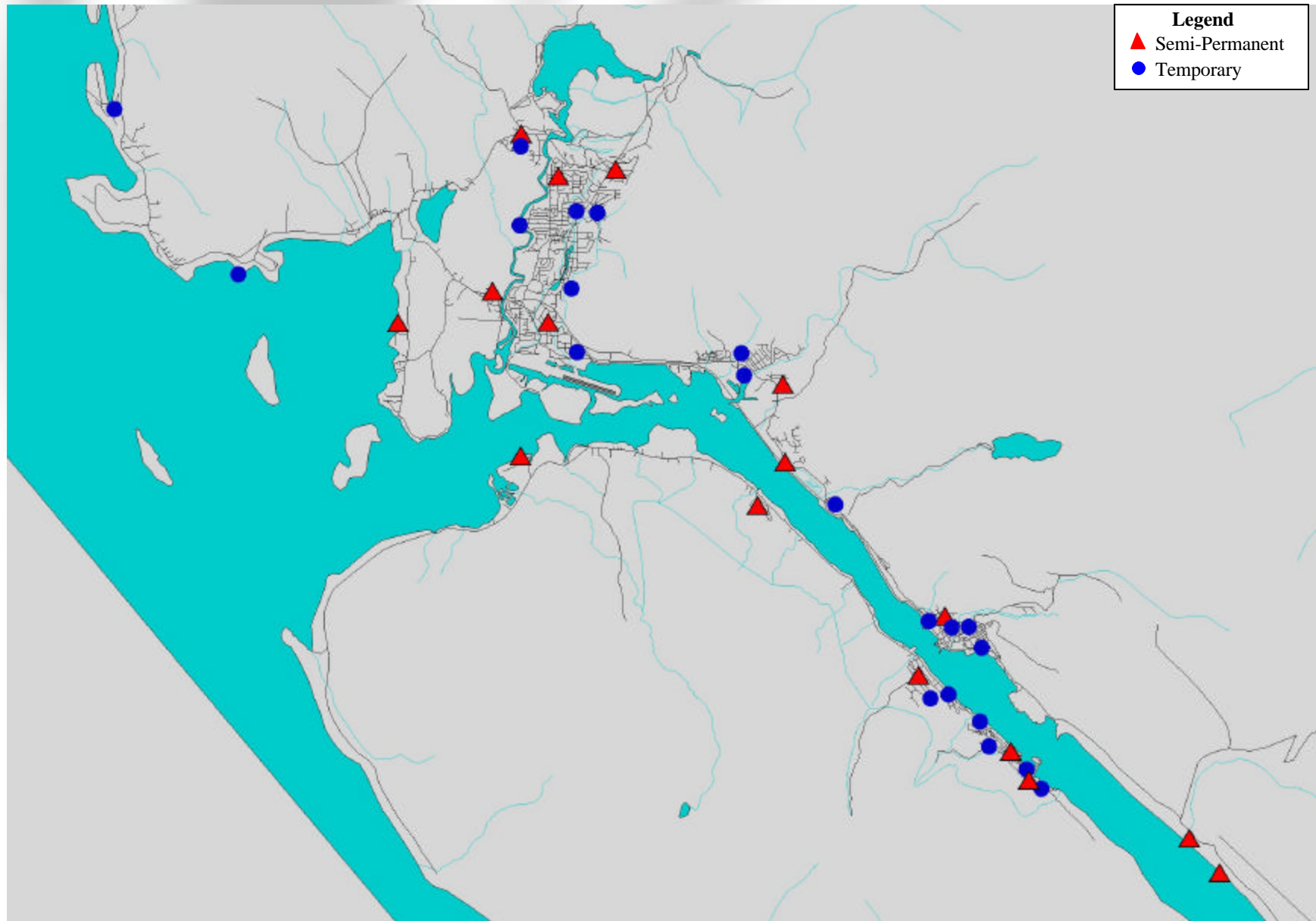- Computer DNL, LEQ Single Event and Time Above

❑ Short-term and Background Sites

- 15 sites

- Continuous measurement of all noise for short-term periods

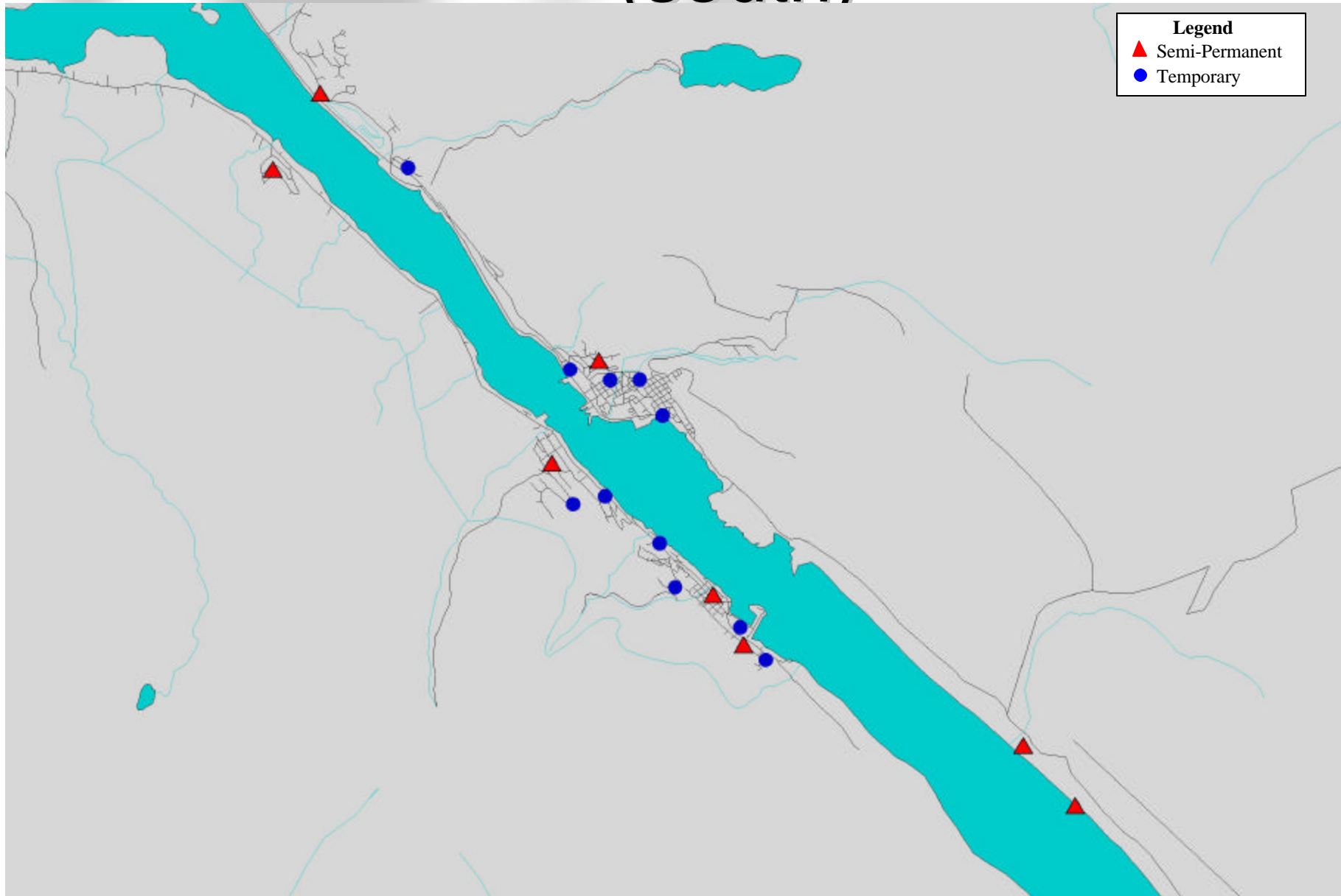- Computer LEQ, Single Event and Time Above

❑ Indoor Sites

- 4 sites
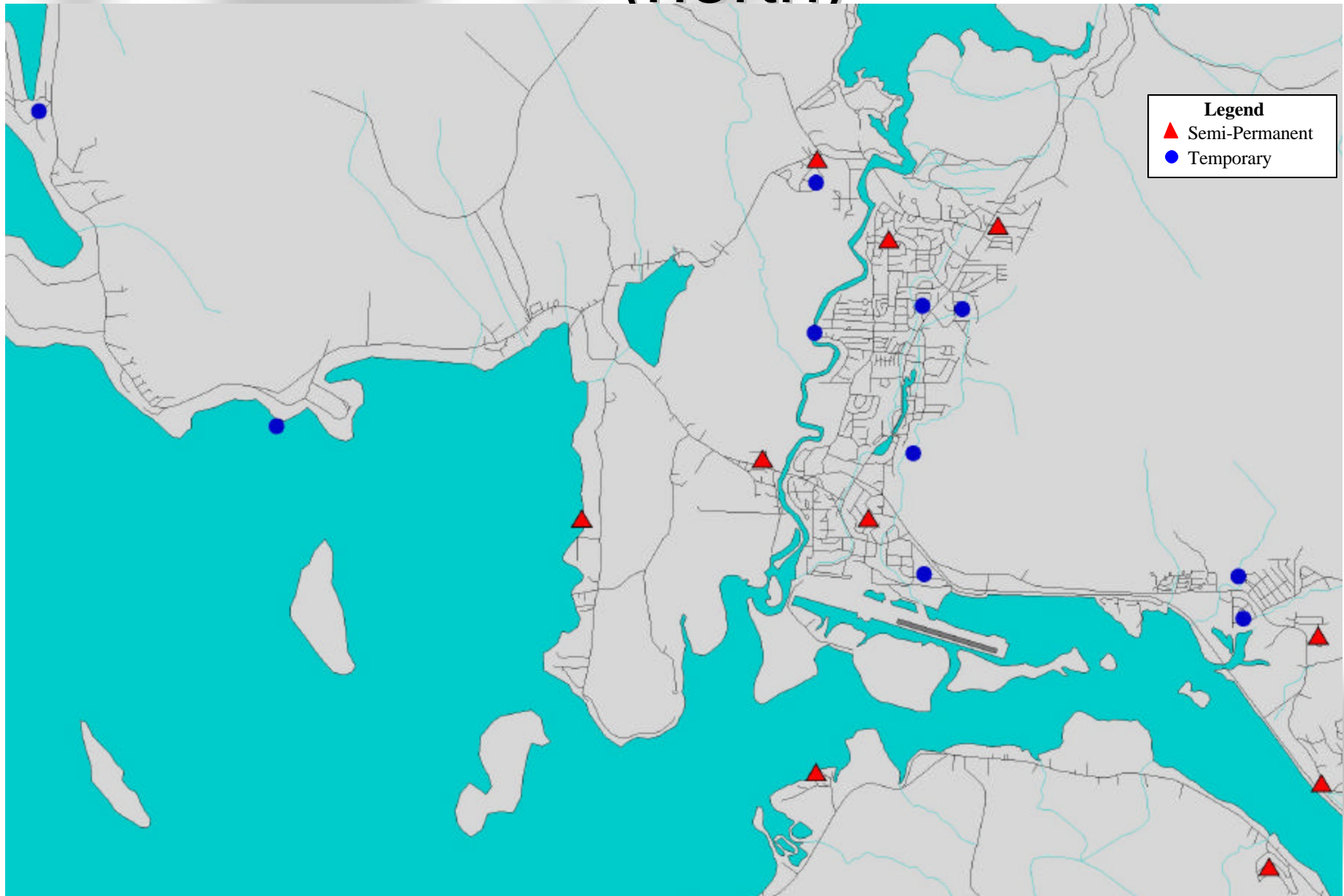
- Outdoor to indoor noise reduction

Noise Monitoring Locations
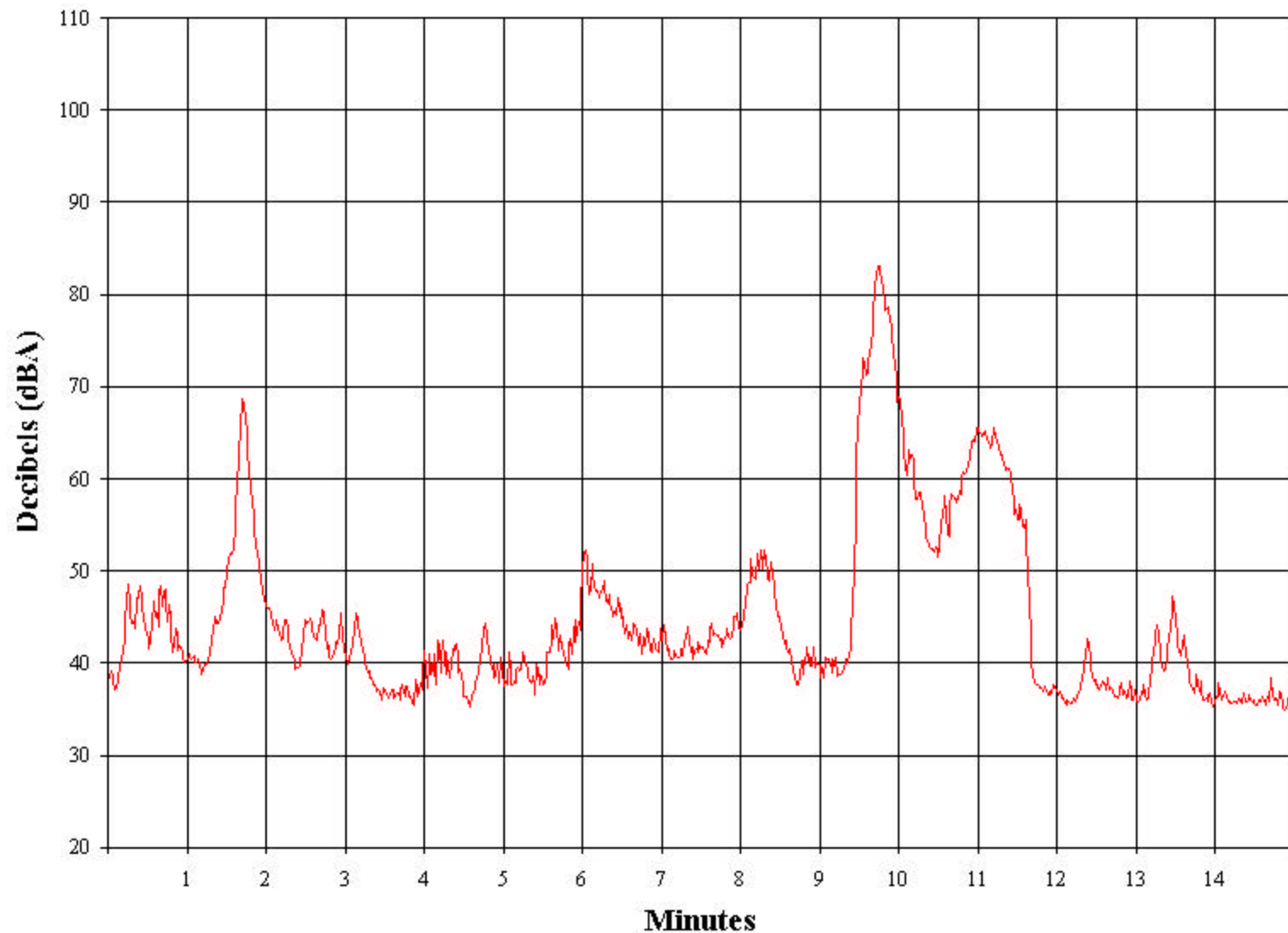
Noise Monitoring Locations (south)

Legend
- ▲ Semi-Permanent
- ● Temporary

Noise Monitoring Locations (north)

Legend
▲ Semi-Permanent
● Temporary

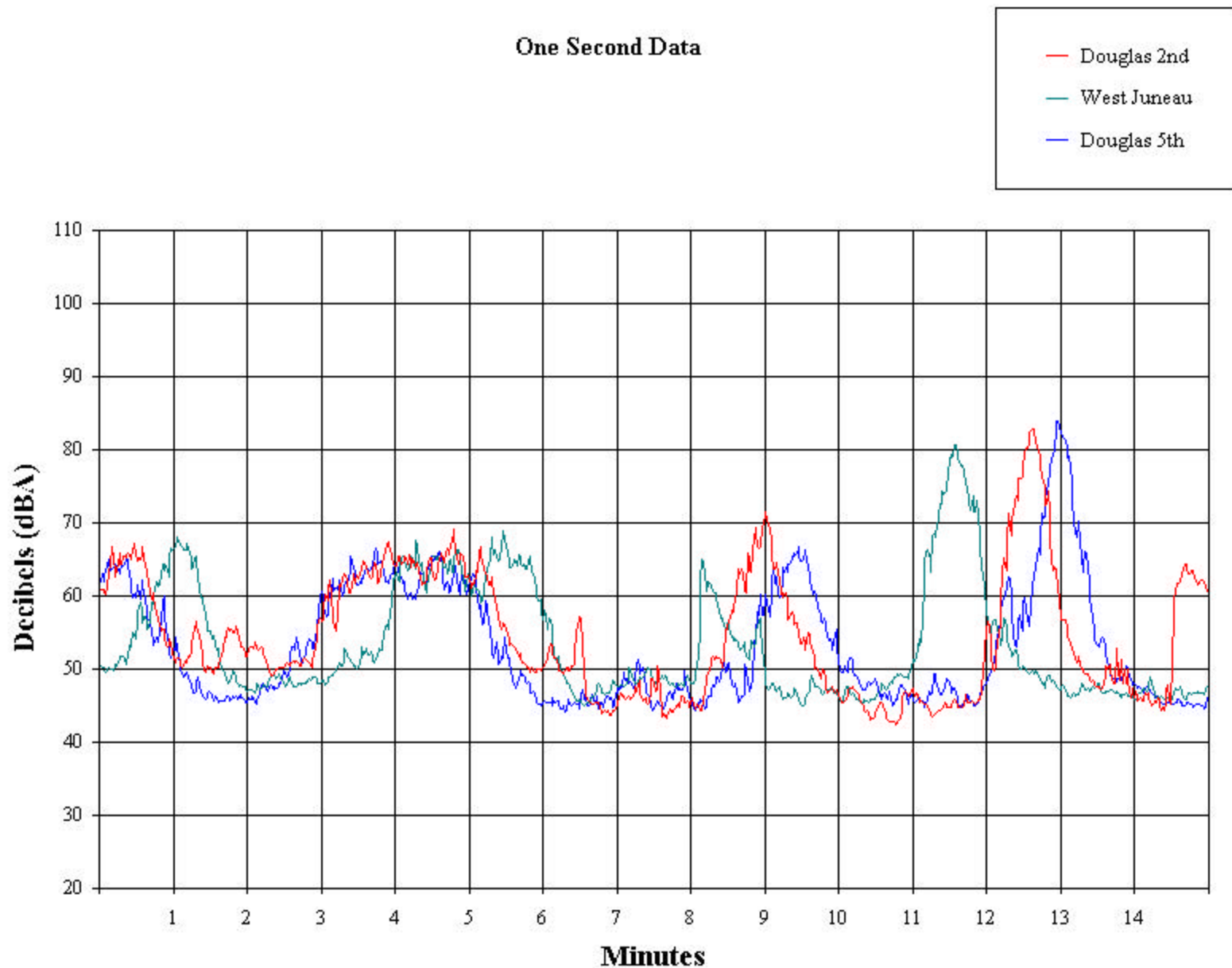# Continuous Measurement of Noise
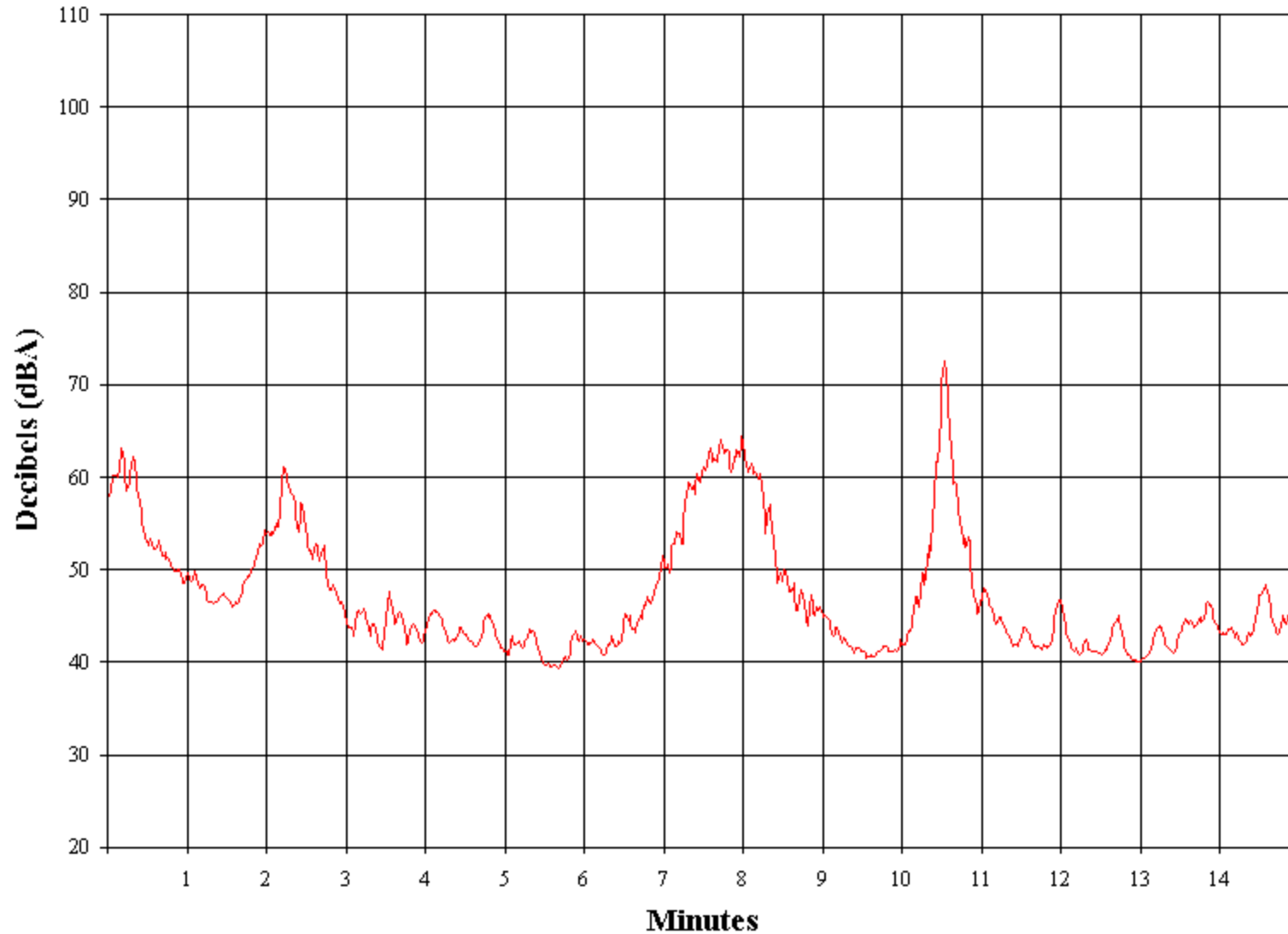
Fritz Cove Rd

Sequence of Noise Measurement

AVI 1

Measurement Results
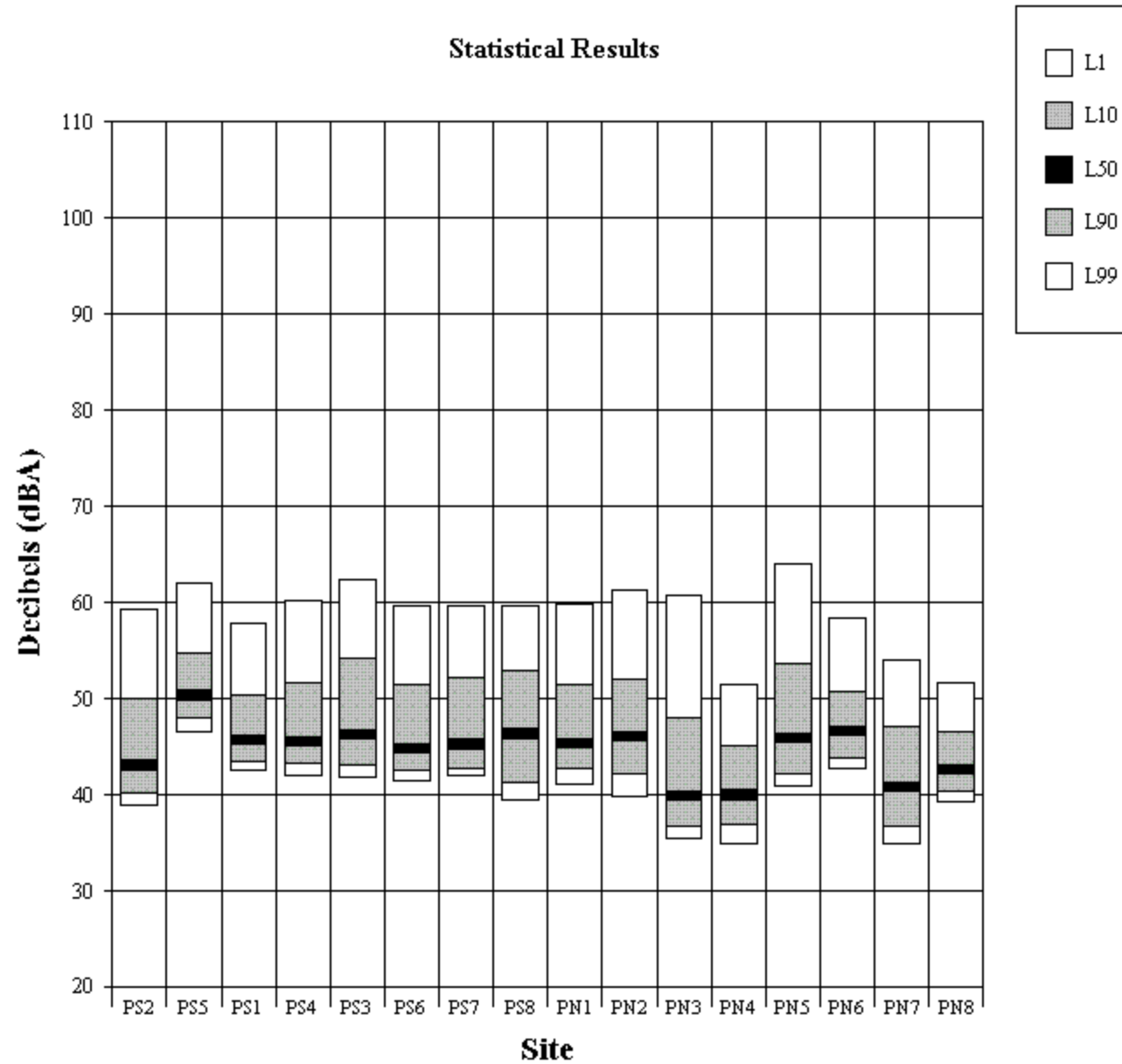
- Ambient or Background Noise Levels
- Single Event Noise Levels
- Time Above Noise levels
- DNL and Modified DNL noise levels
- Frequency Characteristics

Ambient Noise
How quiet is it when aircraft are not present?

Ambient Noise Levels (by Site)

Ambient Noise Levels (by Day)