NOISE

ELEMENT

OF THE
FERNDALE
GENERAL
PLAN

circa 1978

NOISE ELEMENT

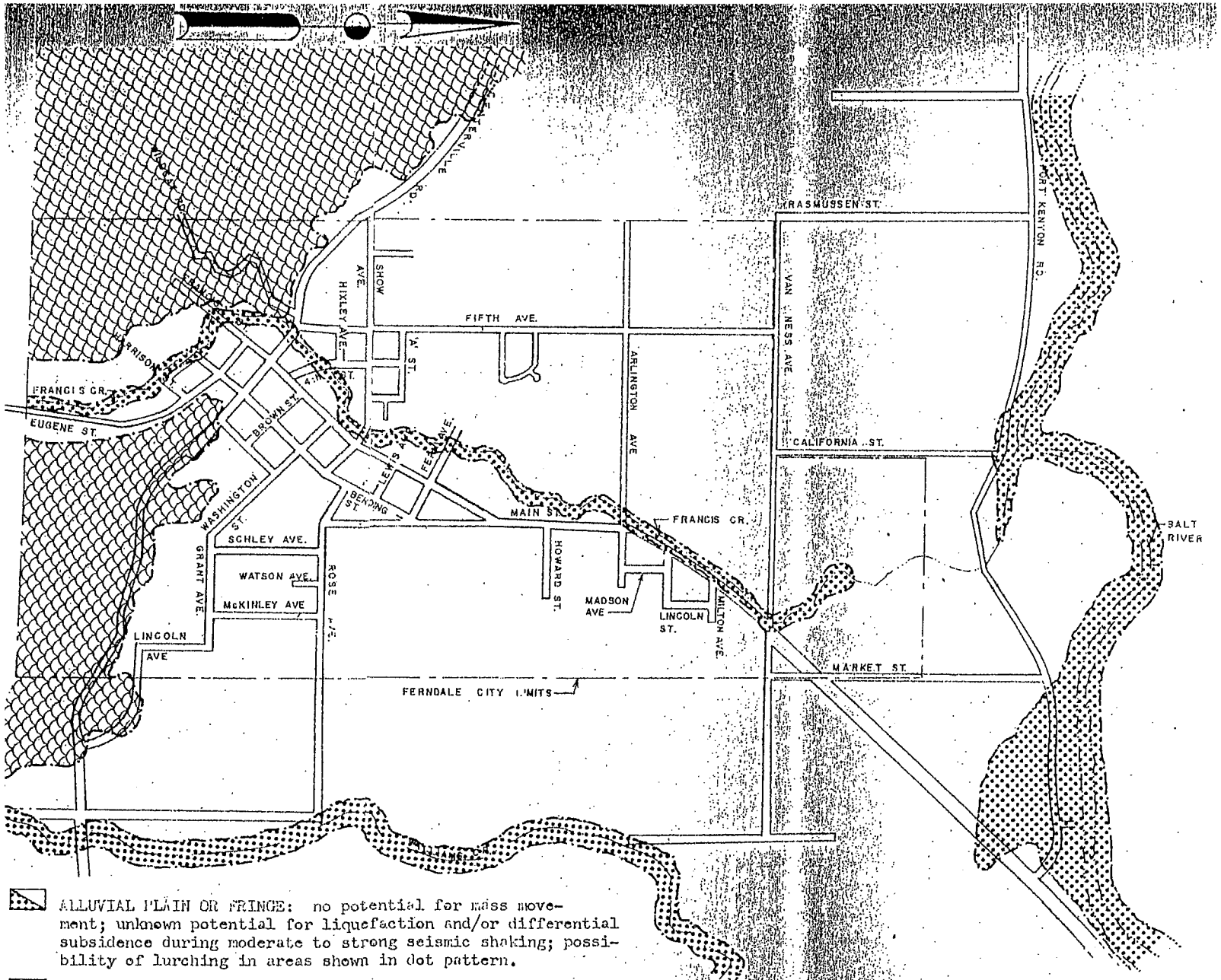
As described in the Government Code the Noise Element of a General Plan should include noise contours of present and projected noise levels associated with all existing and proposed major transportation elements such as highways and freeways, ground rapid transit systems, and ground facilities associated with airports. Appendix D discusses what noise is, how it can damage the ear and cause other ailments, describes ambient noise and single event noises, discusses how noise is being controlled by various agencies and what the local government role can be, and explains why projection of noise levels for the future is impractical.

State Highway 1 and local roads are the only surface transportation facilities in the Ferndale planning area. The volume of traffic is low enough on all of the streets that passing vehicles represent single event noise sources. The one exception is Main Street during peak traffic periods when the constant vehicle noise increases the general sound level to near 70 decibels.

Single Event Noises. Logging and diesel delivery trucks generate the loudest single event noises in the planning area. At 50 feet a truck generates a noise level of 88 decibels and at 100 feet the level is 82 decibels. Several residents along Main Street commented on the noise of logging trucks during the summertime, and improperly muffled vehicles driven by high school students. Plate 4 shows the 75 to 85 decibel, and the 85 or higher decibel, impact areas adjacent to the primary truck routes within the city. Single event sounds in the 75 to 85 decibel range are distracting to most people and sounds over 85 decibels are often disturbing and can cause hearing loss if exposure is frequent. For persons inside a building, these noise levels would be perceived at about 20 decibels less with the windows closed and 10 decibels less with them open. Single event impacts from other sources which generate noises of above 75 decibels, such as chain saws, lawn mowers and barking dogs, could not be mapped because they occur at random or in scattered locations.

Field measurements of a chain saw that registered 108 dB(A) at the operator and a tractor which registered at 93 dB(A) at the driver suggests that Ferndale experiences the usual occurances of loud single event noises.

The Circulation Plan of the Ferndale General Plan shows two alternative bypass routes connecting Highway 1 north of town with Wildcat Road to the south. This proposal was developed in conjunction with plans to extend Highway 1 through the Mattole area connecting with Highway 1 in Mendocino County. A bypass around Ferndale would effectively reduce the amount of logging truck noise through the town, however, this Highway extension proposal has been dropped by the State. Whether a bypass route utilized existing roads or a new alignment, the costs of constructing a road capable of carrying heavy truck loads is considerable and it is unlikely that the city and county would undertake such a project without considerable financial assistance. Such a bypass would also subject rural areas to increased noise.



ALLUVIAL PLAIN OR FRINGE: no potential for mass movement; unknown potential for liquefaction and/or differential subsidence during moderate to strong seismic shaking; possibility of lurching in areas shown in dot pattern.

HILLSLOPES: moderate to low slope stability which will vary depending upon slope steepness, composition, and direction. Construction, timber removal, or moderate to strong seismic shaking could result in slope failures.

TE: This map is intended to present a generalized picture of stability conditions within the rndale Planning Area. The map is considered tentative and relies heavily on subjective aluation of geologic and geomorphic data, including analysis of aerial photog s. It ould be up d better data become available.

FERNDALE
GENERAL PLAN

SOIL STABILITY

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APPROX. SCALE 1"=1000' | PLATE NO.

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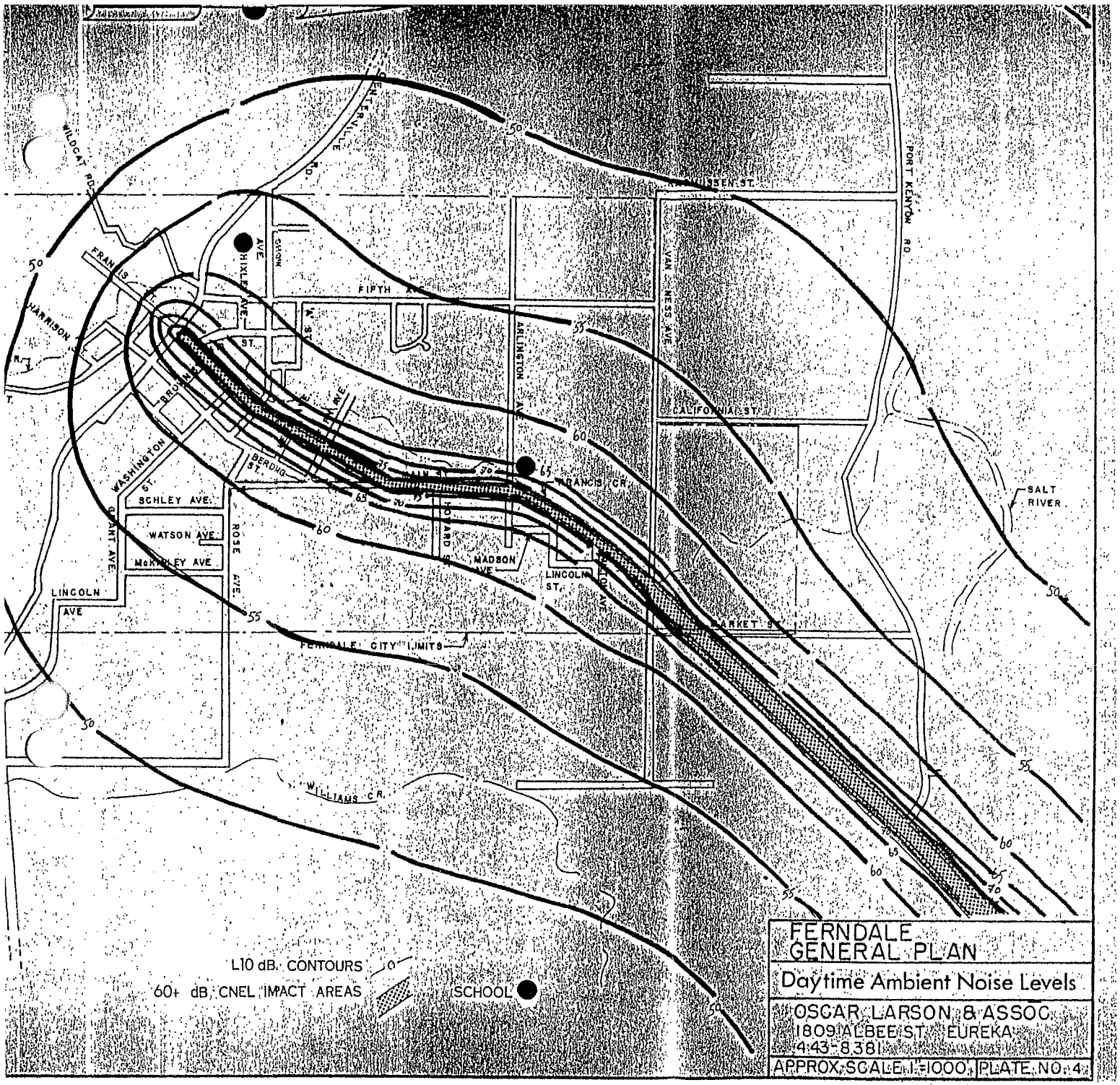

FERNDALE GENERAL PLAN

Daytime Ambient Noise Levels

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APPROX. SCALE 1"=1000' | PLATE NO. 4

It appears that any reduction of truck noise on Main Street will come about as a result of reduced logging activity and as a result of State and Federal requirements for quieter trucks.

Ambient Noise Levels. Using the methodology described in the appendix, and the noise contour data supplied by the State Department of Transportation for Highway 1 (Main Street), a daytime ambience contour map has been prepared for the planning area (See Plate 4). These contours do not take into account the shielding effect of buildings, and in Ferndale the continuous stretch of buildings along Main Street seems to shield the sound very well.

In actuality there are at least three different ambience conditions in Ferndale. Plate 4 illustrates the ambience during peak morning and late afternoon traffic. The second ambience level is during the remaining daylight hours of the day. This is when field measurements of ambience were taken, and it was found that the ambient level on Main Street was about 52 dB(A) which is at least 20 dB(A) lower than during the peak traffic flow. At 5th and Shaw Streets the reading was 45 dB(A) - about 15 dB(A) lower than the peak traffic period ambience level. In outlying areas the peak traffic and normal daytime levels differ very little. Developing contours of the usual daytime ambience would be difficult since the lowest and highest readings were 45 and 52 decibels respectively which is very quiet for a community during the day. The third ambience level is during the night when ambience levels are approximately 10 dB(A) lower than the usual daytime levels.

The very low level of background noise in the community increases the contrast with loud single event noises and single event noise is consequently more noticeable and objectionable. A log truck on Main Street or climbing up Wildcat Road in the early morning hours increases the sound level from 35 to 75 or more decibels and it is no wonder the noise disturbs those sleeping in the area.

A recently adopted State regulation (Title 25 Article 4 of the California Administrative Code) applies to new construction along Highway 1. Essentially it provides that when hotels, motels, or multiple family residences are proposed near highways that acoustical studies must be made to ensure that noise levels inside the buildings will not exceed the established standard. The area affected by this provision lies within the 60 dB(A) Community Noise Equivalent Level contour which is shown on Plate 4. This regulation does not cover single family residences.

Environmental Assessment. The impacts of implementing the following recommendations are generally indirect and restricted to the social and economic categories of the environmental impact assessment process. In general, the impacts are considered long term and beneficial. There is a possibility that improving the quality of life through noise abatement and related planning effects will increase the attractiveness of the community as a residential area and thus have a growth inducing aspect. Implementation of the recommendations will have no unavoidable, direct, adverse impacts nor call for any irretrievable commitment of resources or expenditure of energy. Appendix D includes a discussion of the social, economic, and environmental impacts of noise in general.

Recommendation #1. The State Vehicle Code establishes maximum decibel levels for trucks, automobiles and motorcycles. The city should consult with Highway Patrol staff and local judicial officers to develop a vehicle noise monitering program that will effectively cite violators and reduce noise from vehicles traveling within the planning area. Acquisition of a decibel meter should be considered. Enforcement of speed limits along Main Street also has a beneficial noise reduction impact.

Recommendation #2. If non-vehicular noises become a problem, the city should consider adopting a noise ordinance. The model noise ordinance developed by the League of California Cities can be used as a starting point (See Appendix D for a discussion of what it covers).

Environmental Assessment. Implementation of the above recommendations will not have any direct impact upon the community resources but will give the authorities a mechanism for quickly and effectively mitigating the impacts of an unwanted noise. Offenders will react unfavorably to a supposed infringement of their personal license to do as they please. Some social friction can be expected from implementation of these recommendations.

Recommendation #3. The Ferndale School Districts should develop an educational unit on noise and include it in the teaching program at the appropriate age level. Educating the next generation to the hazards of excessive noise is one of the most important weapons in the fight against deafness and increased noise pollution.

APPENDIX D

TECHNICAL CONSIDERATIONS IN THE NOISE ELEMENT

When energy is expended it causes vibrations in the air, water, land or man-made objects. These vibrations are transmitted through the air and are perceived by the ear as sound. The frequency of the vibrations can vary considerably - short frequencies produce high pitched sounds and long frequencies generate low pitched sounds. The undamaged human ear is capable of detecting many but not all tones. Certain animals are noted for being able to hear higher pitched sounds than humans.

The human ear does not respond equally to sounds of different pitches. Moderately high sounds, such as those produced in the uppermost register of a piano are heard better than either very high or very low pitches. If the ear were as sensitive to the lower end of the register as it is at the higher end, sounds like the roaring of the wind, or the beating of the heart would be unbearably loud. High pitched sounds such as the scratching of a fingernail on a blackboard are the most disturbing.

The intensity or loudness of sound is related to the amount of energy utilized in generating the vibrations. The more energy expended the louder the sound seems, and bombarding the ear with very loud sounds for extended periods can cause physical deterioration of the delicate parts of the ear mechnaism. The combination of high pitch and extreme loudness is the most damaging.

The effects of noise are insidious because they are undetectable by the victim until after irreversible damage has occurred. It is possible to sustain noise levels sufficient to produce permanent hearing impairment without any accompanying sensation of pain. The only symptom of the damage is a need on the part of the victim for a progressively higher noise level to produce the original stimulus to the brain. Thus noise confers a "tolerance", like a narcotic, but in the form of progressive deafness.

The ear is able to adjust somewhat to loud noises, but not sufficiently to cope with the constancy and loudness experienced in industrialized societies. Two limitations of the ear are its delayed adjustment to sharp sounds and its inability to withstand continued loud noise for extended periods of time. When the ear first perceives a loud sound it takes about .2 seconds for it to adjust and turn down the volume. During this moment when the sound is not dampened serious damage can occur. Someone who had a firecracker explode 15 inches from his ear showed permanent hearing loss. During extended periods of loud noise the ear, like an automobile in an endurance race, begins to disintegrate due to the constant vibration.

The results of two studies substantiate the impact of noise in our society. Recently a study of more than 4,000 Tennessee college students showed that 33% failed the screening test on higher frequency tones. The following year the number failing rose to 61%. This loss was attributed to high-intensity recreational noise, such as live amplified music, sport shooting, motorcycling, etc. A study in 1962 of the Mabaan tribe in the Sudan showed that older

members of the tribe have hearing acuity comparable with that of young children in America.

Besides physical damage to the ear, noise produces stress on other parts of the body. To quote the Environmental Protection Agency Publication EPA-335: "Even a sound of moderate volume and short duration such as a heavy truck passing on the other side of the street (rated about 80 decibels), produces a remarkable number of physical changes. Blood vessels in the brain dilate while blood vessels in other parts of the body constrict. Blood pressure rises, and the heart rhythm changes. The pupils of the eyes dilate. The blood cholesterol level rises. Various endocrine glands pour additional hormones into the blood. Even the stomach changes its rate of acid secretion. While most of these reactions are only temporary, the modern environment presents such ever-changing noise levels that some of the 'temporary' effects become chronic".

In addition to the physiological impacts on the ear and the body there are the psychological reactions: frustration when noise interrupts conversation, or hampers concentration on work, or makes it difficult to relax and obtain needed rest. Although suffering from noise cannot be weighed only in economic terms, the cost of accidents occurring because the victim failed to hear the approaching danger, or arising from work inefficiency due to noise, or from treatment of related physical maladies must be staggering. If, as some experts claim, urban noise levels have been increasing by an average of 1 decibel per year for the past 30 years it becomes obvious that noise must be controlled and reduced wherever possible.

Defining Noise. Noise has been defined as unwanted sound. However, this definition does not give proper consideration to the tolerance of noise resulting from ear damage or the many imperceptible but undesirable effects of noise. Therefore it may be better to define noise as excessive sound.

In order to determine which sounds are excessive some means of measuring it are necessary. The unit of measurement most commonly used is called the decibel (dB) and is very near the "just perceptible difference" in loudness in the human ear. Since it takes a tremendous increase in energy to increase the loudness of sound the decibel scale is logarithmic - a sound measured at 40 decibels requires ten times as much energy as a sound at 30 decibels. The scale most commonly used is the A-weighted decibel scale which suppresses the bass response to better correspond to the response curve of the human ear. Figure 1 gives some typical examples of various decibel levels generated by familiar noise sources.

Ambience and Single Events. When measuring sound, it is possible to differentiate between what is termed the ambient sound level and louder peak noise levels generated by single events such as a passing truck. Essentially ambience is the undifferentiated background noise which is the resultant of thousands of events, either small or distant, which in combination constitute a steady accompaniment to the sound being measured. Ambiences of above 60 dB(A) are almost exclusively generated by heavily traveled streets and highways with an average daily traffic count of more than 2,000 vehicles.

FIGURE I

COMMON INDOOR AND OUTDOOR NOISE LEVELS

COMMON OUTDOOR NOISE LEVELS	NOISE LEVEL dB(A)	COMMON INDOOR NOISE LEVELS
	-110	------ Rock Band
Jet Flyover at 1,000 feet ----------		
	-100	
Gas Lawn Mower at 3 feet ----------		------ Inside Subway Train (New York)
	-90	
Diesel Truck at 50 feet ----------		------ Food Blender at 3 feet
Noisy Urban Daytime ----------80		------ Garbage Disposal at 3 feet Shouting at 3 feet
Gas Lawn Mower at 100 feet ----------70		------ Vacuum Cleaner at 10 feet
Commercial Area ----------		------ Normal Speech at 3 feet
	-60	------ Large Business Office
Quiet Urban Daytime	-50	------ Dishwasher Next Room
Quiet Urban Nighttime ----------	-40	------ Small Theatre, Large Conference Room (background)
Quiet Suburban Nighttime		------ Library
	-30	------ Bedroom at Night
Quiet Rural Nighttime ----------		------ Concert Hall (background)
	-20	------ Broadcasting and Recording Studio
	-10	
		------ Threshold of Hearing
	-0	

Source: "Guide on Evaluation and Attenuation of Traffic Noise", American Association of State Highway and Transportation Officials.

NOTE: A ten (10) decibel increase in sound level on dB(A) scale doubles the apparent loudness or annoyance of the sound.

An airplane landing at an airport, a truck traveling along a low traffic volume street, a motorcycle climbing a nearby hill are examples of single event noises. Such loud events stand out above the general ambience level and can be disturbing, startling, distracting, and even damaging to the ear if experienced repeatedly at close range. At 50 feet a diesel truck generates single event maximum of approximately 85 decibels, a diesel train - 88 decibels, a power lawn mower between 59 and 85 decibels depending on make, and a chain saw - 64 to 86 decibels. The operators of lawn mowers and chain saws are exposed to noise levels of 80-95 decibels and 103-115 decibels respectively ("Effects of Noise on People", Environmental Protection Agency).

Inventory Methodology. The estimates of ambience in the vicinity of major highways were developed by the California Department of Transportation utilizing a concept called L10, which can be defined as that noise level which will not be exceeded more than 10 percent of the time during the peak hour of traffic. Where traffic counts on county roads exceed 2,000 vehicles L10 data have been developed to supplement the State Highway information. The contours from 60 to 45 dB(A) were extrapolated from the highway data and checked by random field measurements.

These data do not consider variations due to buildings, barriers, or vegetation. Some adjustment has been made where major topographical features affect sound dispersion over significant stretches of highway; otherwise, terrain variations have not been considered. Contours are subject to an error range of plus or minus 3 dB(A). All field measurements were taken on a General Radio Sound Level Meter, type 1551B.

In addition to the L10 contours the 60 decibel Community Noise Equivalent Level (CNEL) contour has been supplied on the ambience map (Plate 4). This is a noise measurement which gives added weight to the noises occurring during the evening (3x) and nighttime (10x). This weighting reflects the relative increase in levels of annoyance. Although this methodology (developed by Wiley Laboratories) has been widely used near airports, it has only recently been employed to report noise levels near highways and railroads. In order to determine the 60 CNEL contours, estimates of typical highway situations developed only recently were used. When better data and more experience with this methodology has been obtained, it should be possible to develop a complete set of CNEL ambience contours for the planning area. For the purpose of implementing the State Administrative Code requirements, the CNEL 60 line shown on Plate 4 is adequate (see discussion below).

Noise Control. There are several ways in which noise can be controlled. Redesign of equipment and use of sound absorbing materials has been effective. Where dampening the sound at the source is impractical or technologically infeasible

protective devices for the ear have proven effective if the number of people exposed to the noise is limited. New techniques are being used to reduce sound transmission through the walls of residences. And, in some cases sound barriers or just increased distance between the source and observer have been used. Any of these can be encouraged or required by federal, state, or local governments through the adoption of standards, guidelines, and ordinances.

The Department of Transportation has adopted federal standards which are generally applicable to highway design in the state of California. These standards relate the L10 noise levels to four general land use categories and represent the highest desirable noise level conditions.

FEDERAL HIGHWAY DESIGN STANDARDS

Land Use Category	Design Noise Level (L10)
A. Unique and unusual tracts of land in which serenity and quiet are of extraordinary significance and preservation of those qualities is essential if the area is to continue to serve its intended purpose.	60 dB(A) (Exterior)
B. Residential areas, schools, churches, libraries, hospitals, and so forth.	70 dB(A) (Exterior)
C. Other developed land not included in (A) and (B) and generally constituted by urbanized business or industrialized areas.	75 dB(A) (Exterior)
D. Special condition site, areas, or activities. The design noise level should be established, based on the merit of the specific case and an analysis of the acceptable level.	(Exterior or Interior)

These same standards also identify the impact of noise on various types of buildings and window openings. The factors indicated in the table below are used in highway design to ensure that the noise level inside adjacent buildings does not exceed 55 dB(A).

Building Type	Window Condition	Noise Reduction Due to Exterior of the Structure
All	Open	10 dB(A)
Light frame	Ordinary Sash (closed with storm windows)	20 dB(A)
		25 dB(A)
Masonry	Single Glazed	25 dB(A)
Masonry	Double Glazed	35 dB(A)

The Department of Housing and Urban Development has also established noise level standards which are utilized by HUD and FHA in approving financing of residential housing. They are:

General External Exposures dB(A)

1. Unacceptable:
   a. Exceeds 80 dB(A), 60 minutes per 24 hours
   b. Exceeds 75 dB(A), 8 hours per 24 hours

2. Discretionary, Normally Unacceptable:
   a. Exceeds 65 dB(A), 8 hours per 24 hours
   b. Loud repetitive sounds on site

3. Discretionary, Normally Acceptable: Does not exceed 65 dB(A) more than 8 hours per 24 hours

4. Acceptable: Does not exceed 45 dB(A) more than 30 minutes per 24 hours.

The U. S. Government also has jurisdiction over all noises occurring under conditions of employment, even if interstate commerce is not involved. The maximum level for an eight hour day is presently 90 dB(A) but consideration is being given to reducing this level. While most people agree that this level is too high the cost to employers of reducing the level to 85 decibels is considerable. These regulations are administered by the Occupational Safety and Health Administration. Another program is the efforts of the Environmental Protection Agency. It works with manufacturers of equipment and appliances to develop designs that generate less noise. Noise level standards have been adopted in several categories to encourage progress in noise reduction.

The State of California Vehicle Code establishes maximum decibel levels for all vehicles based on the year of their manufacture. These requirements are projected into the future and gradually reduce the permissible noise level as illustrated below:

Year of Manufacture	Maximum Noise Level in Decibels (dBA)	
	Automobiles	Vehicles Over 6,000 Pounds
1968 - 72	86	88
1973 - 74	84	86
1975 - 77	80	83
1978 - 87	75	80
after 1987	70	70

The Vehicle Code (Section 27151) makes it unlawful to operate a vehicle which is emitting noise levels above those applicable when it was first sold. Off-road vehicles are subject to established dB(A) levels also, but they are exempt if used only on the owner's property. Enforcement of off-road noise violations is hampered because Highway Patrol vehicles are not equipped to engage in off-road pursuit.

The State has also adopted "Noise Insulation Standards" (see Chapter 1, Article 4 of Title 25 of the California Administrative Code). Their purpose is to "establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single family dwellings from the effects of excessive noise...".

Requirements for interior airborne sound insulation and impact sound insulation are established for wall and floor-ceiling assemblies utilizing the sound insulation ratings incorporated in the Uniform Building Code.

For exterior noises the requirement specifies that with windows closed, the community noise equivalent level (CNEL) attributable to exterior sources shall not exceed an annual CNEL of 45 dB in any habitable room. An acoustical analysis of the proposed design is required when the proposed structure will be located within the 60 dB CNEL contour line around any airport, the select system of county roads and city streets, freeways, state highways, railroads, rapid-transit lines and industrial areas. Suggested means of noise reduction include orientation of the structure, set-backs, shielding, and sound insulation of the building.

Noise also can be subject to the nuisance laws of the state (state penal code) or a city. These codes require that the plaintiff demonstrate that the offending noise constitutes a nuisance. Because the burden of proof lies on the plaintiff and involves the time and expense of a jury trial, this method of control is seldom used. To facilitate legal recourse for private parties many cities have adopted noise ordinances which establish criteria for determining when a noise constitutes a violation. When a violation is recorded, usually in response to a complaint to the local police department, the violator can be cited and the police department handles the prosecution.

The League of California Cities model noise ordinance is a typical example. It regulates: (1) noises generated by radios, television, amplifiers and similar audio transmitters between the hours of 10 p.m. and 7 a.m., (2) equipment such as air conditioners and fans, (3) restricts construction activity within 500 feet of a residential zone; and, (4) makes it unlawful to generate disturbing noise near posted institutions such as schools, hospitals and churches.

Two basic problems have evolved in the administration of noise ordinances. First, although attempts have been made it has proved difficult to develop ordinance provisions for some types of noise, such as noise created by animals, special events, etc. In many cases only a small percentage of the potential noise sources are actually covered and this limits the effectiveness of the ordinance in controlling overall noise levels. Further, it means that some types of noise are treated more strictly than others because of administrative problems.

Secondly, measurement of noise levels is a technical task requiring fairly sophisticated equipment and technique. If the enforcement officers are not well trained the courts may dismiss the evidence as inadequate to support the charges. Another related difficulty is insuring that the noise level recording is an accurate representation of the offending noise. In fact,

the presence of other noise in the area can distort the recorder reading and in effect suggest a noise level higher than actually attributable to the specific noise source. Blowing of the wind, falling rain, or a barking dog - almost any noticeable noise will affect the readings and the operator must be aware of this and be able to compensate - or the evidence will be inaccurate. In spite of these limitations noise ordinances are still the best local means of attempting to control noise on a community-wide basis.

Land Use Classification Standards. Noise ordinances are based on ambient standards for general land use categories. The model noise ordinance includes standards recommended by the League of California Cities and another set (about 5 decibels higher) recommended by the Pacific Gas and Electric Company. The standards listed below were developed from the HUD standards reported above. Essentially they are slightly higher than the PG&E recommendations. These standards were used in evaluating ambient noise problems in the community and are recommended for adoption as the official standard. They can be incorporated in any noise ordinance that might be considered and used in reviewing zoning issues and environmental impact reports.

Land Use Classification	Desired Ambient Level, dB(A)	
Residential, rural-suburban	night	less than 40 - 45
	day	less than 45 - 50
Residential, suburban	night	less than 45 - 50
	day	less than 50 - 55
Residential, low-density urban	night	less than 50 - 55
	day	less than 55 - 60
Residential, medium/high density	night	less than 55 - 60
	day	less than 60 - 65
Commercial zones, districts	night	less than - 65
	day	less than - 70
Industrial zones, districts		less than - 75

It is evident that most of the noise control effort is being exerted at the state and federal levels where it undoubtedly has the widest impact. Control of noise related to motor vehicles, aircraft and railroad equipment is pre-empted by federal and state agencies. However, efforts to improve enforcement at the local level may be necessary. Otherwise there is little that can be done about such noise problems by local government.

At the local level noise reduction can be achieved in the design and location of local roads, the routing of local bus systems, the designation of truck routes, the separation of noisy commercial and industrial activities, outdoor assembly areas, and airports from residential areas, the provision of increased setbacks for dwellings along busy streets and through careful orientation and construction of dwellings.

Many of these situations are controllable through the zoning and subdivision ordinances. Others are public projects where consideration of noise impacts would be included as part of the environmental impact report. Noise impacts

must also be covered in environmental impact reports for large private developments and this enables the city and other affected agencies to consider ways to reduce noise impacts at the design stage. The standards included in the Noise Element of the General Plan provide a valuable yardstick in reviewing development proposals. A noise ordinance such as the model discussed above is another local option aimed at reducing noise levels.

Future Noise. Our society has become very tolerant of excessive sound and only in the last 10 years have serious efforts been undertaken to reduce noise pollution. The efforts by agencies at the federal, state, and local levels summarized above are having an effect. Public concern over preserving the "quality of life" is growing and this should sustain the momentum achieved unless the cost to the social and economic sectors of our society becomes unacceptable. The trend is toward quieter equipment and appliances. Limitations on fuel supplies will dampen the projected increase in usage of the automobile. And, young people may become aware of the ear damage potential in loud music and turn the volume down. On the other hand noise reduction efforts may be counteracted by an increase in the number of noise generating devices.

The impact of educational programs, noise reduction programs, and the social and economic condition of our society will all have a bearing on how much noise reduction will be accomplished. Because it is difficult to predict the outcome in any of these areas it is almost impossible to adequately support any projection of future noise levels. Therefore, no specific projection of ambient noise levels has been attempted. It is likely that the rate of increase in noise levels will be reduced, but noise levels will probably continue to increase in the future.

The State Department of Transportation has prepared L10 noise contours for state highways in the planning area for 1995. These contours are available at the local public works department. These projections were based on traffic flow estimates derived in 1973 - before shortages in fuel supplies and higher costs began having an impact on driving habits. Once these projections have been adjusted based on more recent experience more realistic long range noise projections will be possible, although their accuracy and consequent value as a planning tool will still be in question for the reasons cited above.