

FINAL REPORT

JUNEAU AD HOC NOISE ABATEMENT STUDY COMMITTEE

TO

THE CITY AND BOROUGH OF JUNEAU
ASSEMBLY

and

THE PEOPLE OF JUNEAU

January 1994

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SUMMARY

REPORT OF JUNEAU AD HOC NOISE
ABATEMENT STUDY COMMITTEE

EXECUTIVE SUMMARY

The subject of noise impact in Juneau is not new. It was addressed at some length in 1988-89, again in 1990 and on December 21, 1992, the City/Borough Assembly created the Juneau Ad Hoc Noise Abatement Study Committee, which was charged with the responsibility to investigate and report on noise issues and solutions in the City and Borough of Juneau, in recognition of heightened concerns regarding the increasing noise impacts on the citizens of Juneau. The majority of noise concerns have been identified as being directly related to the intensified tourist activity in Juneau.

Final Report format consists of overview narrative, identified sources of noise within the City and Borough of Juneau, proposed recommendations to the City and **Borough** Assembly, and an overview of the Juneau Fly Neighborly Program.

Specific recommendations are as follows:

AIRCRAFT

RECOMMENDATION NO. 1

Adoption of a Juneau Fly Neighborly Program.

CITY STREET OPERATIONS

RECOMMENDATION NO. 2

That a trial period for sweeping the downtown core problem streets be implemented (Franklin, from Marine Way to Front; Front, from Franklin to Main; and lower Seward, from Front to Egan Dr.) from 6 am to 7 am from May 1 to September 30, Monday through Friday. Include requirement that the downtown residents be advised through the media of the intent to implement the trial period.

RECOMMENDATION NO. 3

The City pursue grants for acquisition of quieter downtown street sweeper and pursue acquisition of a noise attenuating device/cancellation device for existing equipment, as well as new noise reduction technology for any new equipment purchased.

RECOMMENDATION NO. 4

The Assembly pursue placement of additional trash containers downtown to help alleviate the litter problem.

RECOMMENDATION NO. 5

The Assembly direct the City Manager to direct Public Works to explore moving what snow removal/dumping they can from midnight shift to day or swing shift, as traffic and conditions would permit; also to look into an alternate snow dumping site that would have a low noise impact on nearby residents.

NOISE IMPACT BY CRUISE SHIPS

RECOMMENDATION NO. 6

That the Mayor work with the Juneau Convention & Visitor's Bureau to have the Bureau implement an education program with cruise ships regarding whistles, horns, and PA announcements at the dock and while in the Channel to minimize noise impact.

TRUCK COMPRESSION BRAKES

RECOMMENDATION NO. 7

The Assembly add the prohibition of truck compression brake use within the downtown area to the existing noise ordinance (disturbing the peace) or to the traffic ordinance.

CONSTRUCTION STANDARDS, ZONING, EASEMENTS

RECOMMENDATION NO. 8

The Planning Commission establish appropriate noise attenuation construction standards for new construction within noise abatement corridors.

RECOMMENDATION NO. 9

The Planning Commission explore a mechanism to prohibit creation of new residential zoning within noise abatement corridors.

RECOMMENDATION NO. 10

The Planning Commission enact aviation easements for all new residential construction within (aircraft) noise abatement corridors.

RECOMMENDATION NO. 11

Recommend to the Planning Commission that the Airport Master Plan **Coffman** Noise Report be adopted as policy: specifically, one, the city reduce the zoning density in noise-affected areas that are undeveloped, **two**, "noise overlay zones" be created which would regulate land development; three, new residential development in areas above 65 Ldn be prohibited.

TOUR BUS AND CITY BUS IDLING

RECOMMENDATION NO. 12

Recommend to the Assembly that, through ordinance or enforceable operating guidelines, it maintain current parking and bus idling station south of ferry terminal for tour buses. Also, that City consider developing and implementing an optimal operating guideline for City buses at the downtown ferry terminal, with noise abatement and fuel efficiency being the reasons for the policy.

NOISE MANAGEMENT AGENCY

RECOMMENDATION NO. 13

Recommend to the Assembly that the noise hotline be continued, and that the City **Manager** assign management of the hotline to the appropriate agency.

NOISE STUDY

RECOMMENDATION NO. 14

In response to Section 2, Paragraphs (c), (d), and (e), of CBJ Resolution No. 1610am the Committee requests that the City fund a professional noise study to determine noise levels from downtown float plane and sightseeing helicopter flights and analyze these noise levels according to standards established by the federal government, the state government, or other jurisdictions, and using these noise levels and reasonable assumptions, establish a five-year growth projection for noise.

RECOMMENDATION NO. 15

The Assembly support the concept of long-term planning on tourism for Juneau.

RECOMMENDATION NO. 16

That the City, through the Airport Manager's office, remain apprised of new noise reduction technology and the appropriateness of requiring the placement of that technology on aircraft operating out of the Juneau Airport or in the Juneau area.

Additionally, six significant proposals were made that failed to gain consensus or majority support. Briefly, these were:

PROPOSAL 1

The Assembly, within a two-year transition period, prohibit all aircraft from landing and taking off in the Gastineau Channel between the area of the Union 76 Tank Farm and DIPAC Fish Hatchery, excepting emergency operations. (Failed **6:3**)

PROPOSAL, 2

The Assembly institute a curfew to restrict all float plane and helicopter operations between 8:00 p.m. and 8:00 a.m. from all residential areas throughout Juneau, except in emergency situations. (Failed **6:3**)

PROPOSAL 3

That if it is determined that the decibel (**dB**) levels are above the acceptable levels according to law from off-airport based flightseeing helicopters or downtown float planes, these operations should be moved from the areas to the airport. (Failed **6:3**)

PROPOSAL, 4

That the Committee recommend to the Assembly that all non-emergency commercial truck traffic be prohibited in the downtown area during the hours of 11:00 p.m. to 7:00 a.m. (**Motion Withdrawn**)

PROPOSAL 5

That the Committee recommend to the Assembly that there be established a limit within the City and Borough of Juneau on a) the number of daily tourist aircraft flights which create an adverse noise impact on residential areas; and b) the length of the season when such flights will be permitted. These limits would be established for the purposes of limiting the noise generated by such flights to 1993 summer season levels. (**Motion Withdrawn**)

PROPOSAL 6

Weather permitting, that all aircraft fly at a minimum of 2,000 feet from all residential areas throughout Juneau, except in emergency operations. [This issue was not formally discussed other than as part of the 'stand-off distances' in the Juneau Fly Neighborly Program (JFNP) (the proponent of a 2000' minimum did not feel the JFNP minimums were adequate or satisfactory).]

The above Committee recommendations and non-majority proposals address sources of noise identified by the Noise Committee. These noise sources are aircraft, cruise ships, street maintenance, and vehicular traffic, each of which are further addressed in the final report.

Additional Committee findings were that tourism in Juneau is conservatively estimated to grow at an average 3.4% annually, with much of this impact in the so-called shoulder seasons of April-May and October; the latter increasing at an average 20% per year rate. Means of tourist travel was also reviewed, revealing approximately 52% of Alaska visitors entered Alaska by air, 27% by cruise ship, and 4% by Alaska Marine Highway in 1992 (specific figures for Juneau are unavailable).

Federal noise standards and noise ordinances of other communities were also reviewed. In sum, the federal standards were found to be guidelines only, without site specific mandates. Other community noise ordinances relied on either decibel-specific limits and/or voluntary compliance programs involving local noise generating operators. Regarding the latter, no decibel specific ordinance is or was recommended for Juneau. A comprehensive Juneau Fly Neighborly Program is recommended.

The proposed **JFNP**, developed as a result of committee initiative, was coordinated with the primary aircraft operators producing most of the aircraft noise concerns in the community and is effectively a self-educating and self-policing agreement that should help reduce noise impact on residences. The concept of **JFNP** was unanimously endorsed by the Committee.

Fuller discussion of recommendations, minority proposals, tourism trends, and noise standards are contained in the final report. A draft copy of the **JFNP** is not enclosed, recognizing this is expected to be a continuously evolving document (a copy may be reviewed through the Airport Manager's Office).

JUNEAU AD HOC NOISE
ABATEMENT STUDY COMMITTEE

FINAL REPORT

It should be understood that noise in Juneau is not new and it was not the intent of this Committee, nor the resolution that created it, to eliminate community noise. Rather, the intent is, and has been, to mitigate such noise to improve community quality of life. It should again be stated that the effect and impact of noise is at best subjective. Any one person, depending on their sensitivity or circumstances can be more or less affected than another. When a person is negatively impacted by noise, they are no less bothered when others around them say they are not. Because of this, the committee has gone to great length to fairly represent and include minority opinion. Where we have reached consensus or majority support, we have made recommendations, which follow. Where we have not reached consensus nor majority support, we have tried to explain why by listing significant proposals made, with explanation, but not passed by the Committee. With both recommendations and proposals, an explanation of supporting and opposing views are included where consensus was not reached.

As explained in the Executive Summary, this report consists of a summary of noise sources and impacts in Juneau, an overview of transportation tourism trends for Alaska/Juneau, an overview of federal noise standards, and review of comparable community noise ordinances, and a listing of specific Committee recommendations to address both identified noise concerns, as well as satisfy Resolution 1610am directives (the December 21, 1991, Assembly resolution by which the Ad Hoc Noise Committee was formed). Additionally, a self-educating, self-policing Juneau Fly Neighborly Program was developed in concert with Committee efforts, and pursuit of this concept is recommended, as well.

SUMMARY OF NOISE SOURCES AND IMPACT IN JUNEAU

<u>Noise Source</u>	<u>Location</u>	<u>Degree of Noise Impact</u>
Aircraft		
Helicopters	Airport vicinity, Mend. Valley, BackLoop, Hospital, near-by recreation areas and North Douglas Island	Major noise source in some populated areas and recreational areas
Downtown Float Planes	Downtown harbor basin and vicinity, near-by recreation areas, Douglas, and North Douglas	Major noise source; objections received from both sides of channel
Small Aircraft Prop-driven	Airport vicinity	Minimal concern
Street Maintenance		
Mechanical Street Sweeper	Downtown grid streets	Very loud; high impact on residents and sleep disturbance; major noise source

<u>Noise Source</u>	<u>Location</u>	<u>Deegree of Noise Impact</u>
Snow Dumping and Hauling	Downtown ferry term., various areas throughout the City and Borough	Modest noise level during graveyard shift; sleep disturbance to nearby residents
Cruise Ships		
Outside PA Announcements	Downtown cruise ship dock, Gastineau Channel	Modest noise level; aggravating to nearby residents, especially in early morning
Cruise Ship Engines	Downtown cruise ship dock	Low noise level; disturbing to nearby residents from 6am to midnight
Departing Cruise Ship Horns	Downtown cruise ship dock	Extremely loud; major noise source; sleep disturbance
Vehicular Traffic		
Truck Compression Brakes	Downtown streets	Modest noise; sleep disturbance during sleep hours; aggravating during day
City Bus Idling	Downtown ferry terminal	Light noise
Early-hour Downtown Commercial Truck Traffic	Downtown streets	Modest to loud noise; sleep disturbing to nearby residents

Effectively, the two significant areas of concern were tourism transportation oriented sources and City street operations and maintenance related noise. An overview of the former reveals consistent tourism growth, as follows.

TOURISM TRENDS FOR ALASKA/JUNEAU

In 1985, the Alaska Division of Tourism initiated the ***Alaska Visitor Statistics Program***. This is a comprehensive research study designed to measure visitor volume, composition, opinions and attitudes, expenditures, and demographics. The complete study was done for a full year period June 1985/May 1986, again June 1989/May 1990 and is currently being done for the same period, 1993/94. Additionally, secondary arrival counts are done for all the interim years. (Expenditures, opinions and attitudes, and demographics are not collected during these secondary arrival counts.)

This research revealed that the total visitors arriving in Alaska during the summer months has increased by nearly 40% from 1985 to 1992. Preliminary numbers for 1993 indicate that, statewide, we experienced an approximate 4% increase over 1992. For the fall/winter/spring periods (October-May) the increase has been slightly over 20%.

The method of arrival is tracked through this research and this information is important to Juneau as the cruise ship numbers are a significant portion of the total arrivals into Juneau during the May-

September period. Figure 1 shows the number of arrivals into Alaska by entry mode. This is the transportation mode that the visitors use to get to Juneau; it does not reflect the total number of users of any particular mode. For example in 1992, 188,300 visitors arrived in Alaska on cruise ships, but the total number of visitors that used a cruise ship during some part of the trip was approximately 268,000. The difference is the visitors that flew into Anchorage or Juneau and then boarded a ship. Their mode of entry would have been recorded as domestic air.

Figure 1

Entry Mode Visitor Trends
Total Visitors Entering Alaska
 Summers 1985-1992

Entry Mode	Summer 1985	Summer 1986	Summer 1987	Summer 1988	Summer 1989	Summer 1990	Summer 1991	Summer 1992	Percent Change 1985 - 1992
Domestic Air	240,622	254,823	231,700	242,900	283,400	318,400	344,600	381,800	+50.4%
International Air	9,000	10,732	11,900	14,850	16,400	17,800	16,700	14,000	+55.6%
Cruise ship Total	139,949	163,444	163,300	160,800	143,800	175,200	174,400	188,300	+35.1%
Marine Highway Total	21,538	24,649	23,800	26,500	25,100	25,900	26,800	24,800	+15.3%
Highway Total									
Alcan/Taylor									
Personal Vehicle	49,766	54,310	44,100	48,400	45,200	47,900	45,500	49,500	-0.5%
Motorcoach	3,600	3,846	3,400	3,000	3,700	3,200	4,100	2,500	-35.3%
Skagway Personal Vehicle and Motorcoach	23,900	26,800	25,000	27,000	28,200	26,700	26,900	39,800	+66.5%
Other	11,800	12,602	12,000	12,800	13,700	14,600	12,600	13,800	+16.9%
Total Visitors	497,300	529,000	515,300	536,300	559,300	629,700	651,700	694,600	
% of Change		+11.1 %	-6.8 %	+3.9 %	+4.3 %	+12.6 %	+3.5 %	+6.6 %	+39.7 %

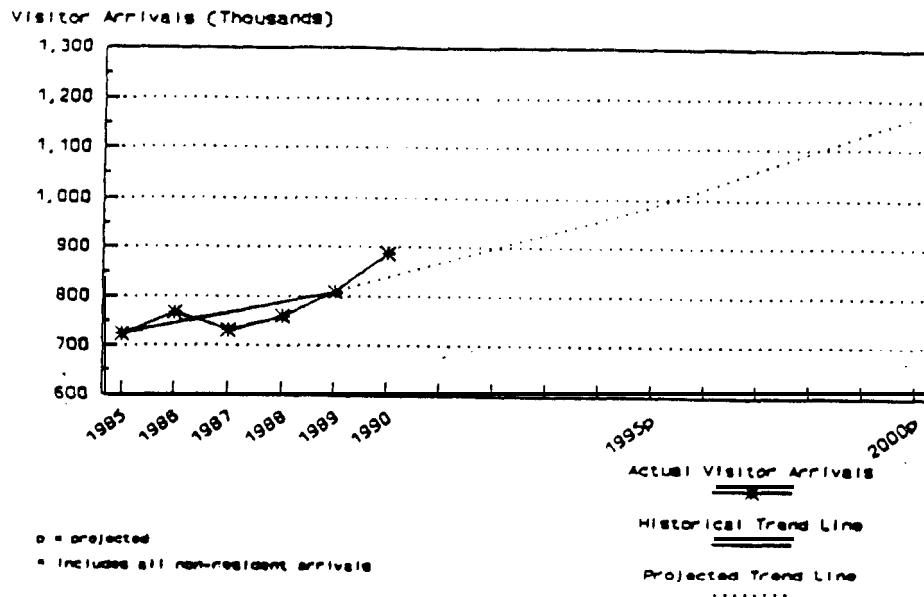
Skagway arrivals for 1985 through 1988 are not based on actual survey data. Instead, Skagway visitor arrivals for these years follow the trend of all other visitor arrivals.

Alaska, as we can see, has experienced steady growth, few peaks and valleys, since these studies were initiated. An average growth of 4-5% per year has been experienced, an excellent growth pattern when compared to many other competing destinations.

A study done by INTRA (International Tourism and Resort Advisors) in 1993, *DESTINATION: ALASKA; Strategies for the Visitor Industry*, indicate that an average growth rate through the year 2000 for this industry could be conservatively estimated at 3.4% per year. Juneau, during the first part of this period, 1994-96, may see somewhat higher growth rates due to the increased capacities of the cruise ships and the addition of more cruise ship companies into the marketplace. See Figure 2.

Figure 2

Visitor Arrivals at 3.6% Annual Growth Rate



It should be noted the increased capacities of the ships will not necessarily result in more cruise ship arrivals (number of ships in port) since the vessels are becoming larger. Each vessel will have more people on board, thus the harbor and docks will not necessarily be more crowded, although additional ground carrying capacity will be required, as well as development of more shore-based activities.

With the restrictions on vessel entries into certain areas, such as Glacier Bay, and with limited shore based accommodations in some communities, we may see more vessels going cross-gulf to Yakutat, Icy Bay, Bering Glacier, and Prince William Sound areas, spending less time in Southeast, perhaps even by-passing some of the traditional stops in this area.

An emphasis by both state and local agencies over the past number of years has been to expand the summer season into the shoulder *seasons*, May and October (see Figure 3). The reason for this effort is to spread the impact of the growth in visitations to the area by relieving the concentrations during the peak months. This will assist the local communities by distributing the number of visitors over a longer period of time and it will also increase the visitor's satisfaction with their experience in Alaska. These promotional efforts will continue in the future.

Figure 3

Entry Mode Visitor Trends Total Visitors Entering Alaska								
Fall/Winter/Spring 1985-86 to Fall/Winter/Spring 1991-92								
Entry Mod.	FWS 85-86	FWS 86-87	FWS 87-88	FWS 88-89	FWS 89-90	FWS 90-91	FWS 91-92	Percent Change FWS 1985-86 to 1991-92
Domestic Air	175,300	162,400	167,900	173,900	191,000	194,300	204,100	+16.4%
International Air	6,100	8,600	8,400	0,700	10,900	8,700	10,500	+72.1%
Cruise Ship	8,500	10,700	6,100	7,900	13,400	19,600	23,700	+279.0%
Marina Highway	7,600	8,700	9,600	10,100	8,600	9,300	8,000	+5.3%
Highway (Alcan & Taybr)	12,100	10,500	11,400	11,700	7,900	7,400	7,600	-37.2%
Other	9,000	3,700	3,700	3,800	9,200	9,200	10,300	+14.4%
Total Visitors Excluding Skagway	219,100	204,600	209,100	216,100	241,000	248,500	264,200	+20.6%
Highway (Skagway) ¹								
P/V & Motorcoach	7,300	6,800	7,000	7,200	8,300	8,600	9,300	+27.4%
Total Visitors Including Skagway	226,400	213,400	216,100	223,300	249,300	257,200	273,500	+20.8%
% Change		-5.8%	+3.3%	+3.3%	+11.6%	+3.2%	+6.3%	

¹ Skagway arrivals for FWS 1985-1989 not based on actual survey data. Instead, Skagway visitor arrivals for these years are assumed to follow the trend of all other visitor arrivals.

It would appear reasonable to assume that tourism will continue to grow in Alaska for the foreseeable future. There will probably be shifts in visitation patterns, attractions and communities visited, modes of transportation, etc., however, Juneau will probably continue to receive a significant number of these visitors.

DIRECT NOISE IMPACTS OF TOURISM IN JUNEAU. Tourism growth statistics suggest that noise impacts from tourism will continue, and potentially exacerbate, in Juneau, particularly if no corrective measures are undertaken. In this regard, it should be noted a significant noise reduction in downtown harbor aircraft noise occurred in 1993 compared to previous years' activities by virtue

of Wings of Alaska's acquisition and use of five lo-passenger de Havilland 'Otter' aircraft, plus use of 6-passenger de Havilland Beaver aircraft in the tour ship flightseeing market. These replacement aircraft substantially reduced usage of the previously predominantly Cessna 206 aircraft, which emit a particularly loud and irritating high pitch whine. (Although Wings continues to utilize C-206 aircraft in its fleet, only three such aircraft were used in the downtown harbor in 1993. C-206 seats made up only 15% of available seats in 1993, compared to nearly 80% in prior years.) All parties agree downtown harbor noise is appreciably better; many still contend it is an issue still needing address.

Temsco Helicopters tourist flight operations to and from the Mendenhall Glacier (32,000 passengers in CY '92) use different flight paths than historically. In 1993, helicopter operations changed significantly by gaining higher altitudes departing from the airport using the Heintzleman Ridge route; Temsco has, over the past several years, switched from 4-passenger Hughes 500's to quieter 6-passenger A-Star helicopters; thus, 4-passenger helicopter seats are now less than 5% of available seats compared to the previous 50%. Both these actions have helped reduce citizen complaints. Still, helicopter noise was specifically cited as a noise concern. In this regard, Noise Reduction Policies and procedures employed by other communities, which could be effective in Juneau, were explored.

REVIEW OF FEDERAL STANDARDS AND OTHER COMMUNITIES NOISE CONTROL EFFORTS. In looking at federal standards and procedures employed by other communities which could be effective in Juneau, the CBJ Ad Hoc Noise Committee identified noise sources in the City and Borough of Juneau (see summary on pages 5 and 6). Recognizing that noise is a form of pollution that can degrade the quality of life for the citizens of Juneau, the Committee has made recommendations that, if adopted, should effectively help create a community noise control program. Many of the recommendations are similar to ordinances, guidelines, and regulations included in noise abatement programs adopted by other municipalities.

In general, noise regulation policies are intended to protect the health, safety, and welfare of a community. Community noise abatement has often been addressed through nuisance laws such as "disturbing the peace" type ordinances; and/or comprehensive, decibel-specific noise control ordinances.

Most community noise ordinances limit maximum permissible noise levels. Levels considered acceptable usually vary for residential, commercial, and rural areas. Ordinances with quantitative levels often have specified maximum outdoor levels during the day, with a specified level reduction at night.

FEDERAL STANDARDS . . . OR A LACK THEREOF? There are a variety of reference sources for standards and guidelines for community noise control. They include the International Standards Organization (ISO), the Environmental Protection Agency (EPA), the Model Community Noise Ordinance, Housing and Urban Development (HUD) guidelines for housing areas, and the American National Standards Institute (ANSI). Noise control programs adopted by other communities may also be consulted to help establish a community position against excessive noise pollution.

The ISO community noise standard, entitled "Assessment of Noise With Respect to Community Response" (ISO Document R 1966), suggested a basic criterion for outdoor noise at residences.

This criterion served as a baseline from which adjustments could be made depending upon land use, e.g., suburban residential, urban residential, city (business, trade, administration), predominantly industrial area (heavy industry). Adjustments were also made for the time of day, with nighttime levels being less than daytime levels.

The Congressional Noise Control Act of 1972 directed the EPA to define acceptable noise levels under various conditions which protect public health and welfare with an adequate margin of safety. The EPA identified a range of yearly day-night sound levels sufficient to protect public health and welfare from the effects of environmental noise. So far, so good, as to a definitive national standard.

However, when the federal government EPA document entitled "Protective Noise Levels," published in November 1978, stated that the federal EPA standard should *not* be used as a source for standards for local noise abatement programs, the 'national standard' was effectively diffused, with the statement: "Since the protective levels were derived without concern for technical or economic feasibility, and contain a margin of safety to insure their protective value, they must not be viewed as standards, criteria, regulations, or goals . . ."

This document continued: "Perhaps the most fundamental misuse of the [EPA] Levels document is treatment of the identified levels as regulatory goals. They are not regulatory goals . . . The levels were developed . . . to protect the most sensitive portion of the American population, and include an additional margin of safety . . . Decisions about how much noise is too much noise for whom, for how long, and under what conditions demand consideration of economic, political, and technological matters far beyond the intent of the Levels Document . . . People who formulate local noise abatement programs cannot escape the responsibility of making such economic and political compromises for their constituencies. The Levels Document does not impose arbitrary Federal decisions about the appropriateness of noise environments upon any level of government, nor is it a source of prescriptions for solving local noise problems" (EPA 550/9-79-100).

General Guidance only is provided in dealing with noise issues, such as that provided in a Model Community Noise Control Ordinance developed by the EPA and the National Institute of Municipal Law Enforcement Officers (NIMLO). While providing wording and format in detail, and providing charts for distribution of noise levels for residential and commercial areas, this document did not recommend specific noise levels.

Similarly, HUD Housing Noise Guidelines and ANSI Standards also suggested noise level guidelines rather than a prescription for noise level standards for various activities and land use variables.

Concern for community health, safety, and welfare has also formed the basis for provision of exceptions to noise control ordinances. For example, most community ordinances have provided exceptions to specific noise sources, such as safety and warning signals, church bells, occasional musical recreational and athletic events sponsored by schools, local government, etc. Communities have issued special permits on an individual basis, e.g., undue hardship regarding noisy equipment use, construction, or community sanctioned events. Some communities have restricted heavy equipment use during specified nighttime curfew hours, typically with the exception of public works services. Ordinances have prohibited particular types of noises, e.g., peddler's raised voices, noisy transport of metal rails, use of unmuffled blowers, fans, or internal combustion engines, sounding of exhaust brakes except for emergency stops or to avoid collision. Excessive unnecessary and

avoidable noise in the operation of street railway cars is yet another example. Some communities have mandated that purchase of public equipment be of quieter rated models, as financially feasible.

Federal standards and regulations recognize that elevated noise levels may result in annoyance. "Average noise level" and variations in noise levels are key factors. Acceptable levels may be dependent upon protection of the public interest, economic, political, and technological issues. As indicated above, sources of guidance for community noise abatement have not provided prescriptions for solving local noise problems. They are "best viewed as a technical aid to local decision makers who seek to balance scientific information about effects of noise on people and other considerations, such as cost and technical feasibility" (EPA 550/9-79-100).

OTHER COMMUNITY NOISE ORDINANCE EXAMPLES. Outlined below are some examples of municipality adopted noise ordinances that refer to decibel-specific regulations.

1. Borough of Carlisle, Cumberland County, Pennsylvania, April, 1990:

Maximum permissible sound levels by zoning district are set and considered exceeded when one or more of the following occur:

- a. The sound level at any one point in time exceeds any of the established zone limits by a measured level of 15 dB(A); or
- b. The sound exceeds any of the established limits by a measured sound level of ten dB(A) for a total of one minute or more out of any ten-minute period; or
- c. The sound exceeds any of the established zone limits by a measured sound level of three dB(A) continually for a period of five minutes, or a total of five minutes out of any ten minutes.

Where ambient sound levels exceed the levels set forth in the zoning limits, the ambient level is to be substituted. Directives of where sound levels are to be measured, and by what means are noted.

2. Noise Control Code of Chapel Hill, North Carolina, 1987:

The following are established as maximum sound levels:

- a. Not to exceed 50 dB(A) between the hours of 11:00 p.m. and 8:00 a.m.
- b. Levels between 8:00 a.m. and 11:00 p.m. not to exceed 60 dB(A).

Exemptions are Thursday evening (5:00 p.m. to 11:00 p.m.), Friday evening (5:00 p.m. to midnight), and Saturday (10:00 a.m. to midnight) not to exceed 75 dB. Other exceptions regarding noise sources are noted, as well.

3. City of Hillsboro, Oregon, Nuisance Ordinance concerning "unnecessary noise" measurement:

Sound measurement is not required for the enforcement of the "unnecessary noise" ordinance. However, if sound measurements were made, the ordinance specified the type of meter required, personnel training and measurement procedures, as well as other specifics regarding measurement location, time, maximum dB levels acceptable, etc.

Curfew hours for ordinance exceptions varied, dependent upon the activity involved. For example, sounds caused by industrial, agricultural, or construction activities were allowed between 6:00 a.m. and 9:00 p.m. Sounds caused by demolition activities performed under authorized permit could occur between 8:00 a.m. and 6:00 p.m. Sounds caused by air, electrical, or gas driven domestic tools, including but not limited to lawn mowers, lawn edgers, radial arm, circular and table saws, and/or other similar lawn or construction tools, but not including tools used for vehicle repair, during the hours of 6:00 a.m. to 10:00 p.m., Monday through Friday, and 8:00 a.m. to 10:00 p.m. on Saturday and Sunday.

JUNEAU SPECIFIC NOISE. A September 7, 1989, memorandum from the **CBJ** Attorney to the Mayor and Assembly reviewed noise control ordinances followed by Juneau, as well as those adopted in Anchorage, the Kenai Peninsula Borough, and the cities of Kenai, Seward, Ketchikan, and Fairbanks. The memo also reviewed general municipal authority regarding general noise regulation, and municipal regulation of aircraft noise.

In sum, it found that aircraft noise has been identified as a significant noise source in the City and Borough of Juneau and that aircraft activity is largely regulated by the FAA. Federal regulations preempt municipal or state regulations. This was followed by an April 26, 1990, **CBJ** Attorney memorandum to the Mayor and the Airport Manager regarding float plane noise, which memo addressed jurisdiction to regulate aircraft noise. In both situations, nuisance theory and use of planning and zoning powers as a means of controlling float plane noise have been investigated, and determined to be potentially problematic, regulation enforcement-wise.

Regulation of float plane noise in the Lake Union area of Seattle was discussed in the September 7, 1989, memorandum. Seattle's approach was to adopt a voluntary compliance agreement based on a "Fly Neighborly Program." The Program sought to address noise abatement and public acceptance along with sensitivity to the concerns of the community. Included in this plan was a noise complaint hotline similar to that set up in Juneau. Voluntary compliance was the suggested option for Juneau in both memos. This is one of the recommendations of the Committee.

RECOMMENDATIONS

AIRCRAFT

RECOMMENDATION NO. 1

Adoption of a Fly Neighborly Program. (Passed 8:0) The Juneau Fly Neighborly Program is a proposed operator-supported, self-policing program intended to observe and improve existing voluntary noise abatement programs. This program was originally based on a successful Fly Neighborly Program developed by the Hawaii Helicopter Association and modified to fit Juneau operations. This program identifies flight paths and recommends minimum 'stand off distances' (aircraft distance, either laterally or vertically, from a particular object, such as a residence). It also provides for a progressive discipline program including pilot and company penalties, and a complaint review procedure, with specified five-day time-frame for response. Although, JFNP is to include all helicopter and fixed wing flight providers in Juneau, the expected primary benefit will be a better focus on tourism-oriented flight activities and mitigating the impact of those activities on residences.

CITY STREET OPERATIONS

RECOMMENDATION NO. 2

That a trial period for sweeping: the downtown core problem streets be implemented (Franklin, from Marine Way to Front; Front, from Franklin to Main; and lower Seward, from Front to Egan Dr.) from 6 am to 7 am from May 1 to September 30, Monday through Friday. Include requirement that the downtown residents be advised through the media of the intent to implement the trial period. (Passed 4:2) Discussion focused on earlier noise versus cleaner streets; the ability to sweep prior to commencement of street parking versus more strict parking regulations, and when such trial should be tried and for how long. Improved litter enforcement was also discussed. This recommendation would reduce area to be swept to the 'core downtown area' only, in order to minimize impact on residential areas, (this discussion involved downtown businesses and City Public Works). Member opposition to this recommendation noted a five-month trial period is too long (would cover the entire tourist season and would be very sleep disturbing to downtown residents), would require City to amend its 'disturbing the peace ordinance' (42.20.095), which reasonably establishes an 11:00 p.m. to 7:00 a.m. noise curfew; would be costly to re-sign; and if existing ordinances requiring downtown property owners to keep their sidewalk clean and not sweep trash into the street were enforced, there would be little need for mechanical street sweeping anyway. Also, options of alternate day parking on selected streets, manual street sweeping alternative, and extended current downtown no parking period to 8:00 a.m. (to allow mechanical sweeping from 7:00 a.m. to 8:00 a.m.) were not adequately considered.

RECOMMENDATION NO. 3

The City pursue grants for acquisition of quieter downtown street sweeper and pursue acquisition of a noise attenuating device/cancellation device for existing equipment, as well as new noise reduction technology for any new equipment purchased. (Passed 8:0) All recognized, however, that cost-effective, and/or even available, noise muffling/cancellation technology is desirable, but not necessary feasible (or even practically available).

RECOMMENDATION NO. 4

The Assembly pursue placement of additional trash containers downtown to help alleviate the litter problem. (Passed 8:0) This should help keep drink cartons, fast food containers, and cigarette butts off the street, all of which were cited as problems, reduction of which could mitigate street sweeping frequency.

RECOMMENDATION NO. 5

The Assembly direct the City Manager to direct Public Works to explore moving what snow removal/dumping they can from midnight shift to day or swing shift, as traffic and conditions would permit; also to look into an alternate snow dumping site that would have a low noise impact on nearby residents. (Passed 8:0) Recommendation is for the City to exploit evening hours when downtown streets carry a relatively light traffic load to relieve downtown residents of the noise associated with snow hauling and dumping during the midnight shift when most residents are sleeping. Operating snow hauling and dumping equipment during these periods should be distinguished from snow plowing, which still needs to be done on an as-needed basis due to road safety conditions.

Implementation of an alternative *snow* dumping site away from downtown residential areas would alleviate sleep-disturbing noise concerns of nearby residents who are subjected to the noise from dump back-up beepers, high diesel engine rpm associated with transport and raising of the payload, and banging of the truck tailgate to knock snow from the truck bed.

NOISE IMPACT BY CRUISE SHIP

RECOMMENDATION NO. 6

That the Mayor work with the Juneau Convention & Visitor's Bureau to have the Bureau implement an education program with cruise ships regarding whistles/horns, PA announcements at the dock and while in the Channel to minimize noise impact. (Passed 8:0) Recommendation is to have the City formally request compliance with reduced PA volumes and abstention of use of ship's horns next to the dock (except when required by U.S. Coast Guard regulations) to obtain compliance with managing noise from these sources. The Noise Committee is suggesting that the Juneau Convention and Visitor's Bureau be utilized for this purpose, with the weight of the Assembly or the Mayor requesting compliance. Previous shore-side agent efforts at voluntary compliance have been unsuccessful. Also, it is requested that the cruise ships be asked to provide their Juneau area attractions briefing prior to incursion in the Channel to positions seaward of residential areas.

TRUCK COMPRESSION BRAKES

RECOMMENDATION NO. 7

The Assembly add the prohibition of truck compression brake use within the downtown area to the existing noise ordinance (disturbing the peace) or to the traffic ordinance. (Passed 8:0) Juneau should eliminate increased vehicular noise associated with truck compression brakes ("Jake Brakes"), at least for the downtown area where residential areas are concentrated and close to commercial areas and main traffic arteries.

CONSTRUCTION STANDARDS, ZONING, EASEMENTS
RECOMMENDATION NO. 8

The Planning Commission establish appropriate noise attenuation construction standards for new construction within noise abatement corridors. (Passed 6:2) Discussion focused on best method of bearing burden of noise; be it the noise producer or the land-owner. The intent of this recommendation is to adopt a proactive approach to noise management in the City and Borough of Juneau. The most important overall consideration is to get the Planning Commission to adopt land use policies, regulations, and building standards that take into account existing and potential noise levels in areas such as the airport, adjacent to industrial zones, or other noise-producing locations, to minimize noise impacts. An example of this is a current situation where a low noise corridor has been developed by a helicopter tour operator, but shortly after its establishment, a developer began developing the area into what may become a subdivision. The consequences of this are that either future property owners will be subjected to objectionable noise, or that the helicopter operator will have to establish another flight corridor - and there are few, if any, flight corridors remaining in the City and Borough that do not have residential dwellings associated with them. This rationale also applies to Recommendations 9, 10, and 11.

RECOMMENDATION NO. 9

The Planning Commission explore a mechanism to prohibit creation of new residential zoning within noise abatement corridors. (Passed 8:0)

RECOMMENDATION NO. 10

The Planning Commission enact aviation easements for all new residential construction within (aircraft) noise abatement corridors. (Passed 8:0)

RECOMMENDATION NO. 11

Recommend to the Planning Commission that the Airport Master Plan Coffman Noise Report be adopted as policy: specifically, one, the city reduce the zoning density in noise-affected areas that are undeveloped; two, "noise overlay zones" be created which would regulate land development; three, new residential development in areas above 65 Ldn be prohibited. (Passed 8:0) The Coffman Noise Report study suggested several land-use alternatives. First, the City could reduce the zoning density in noise-affected areas that were undeveloped. Second, "noise-overlay zones" could be created which would regulate land development; for example, this might prohibit mobile homes in noise sensitive areas (which provide the least protection from noise) and require new homes to be sound insulated. Third, new residential development in areas above 65 Ldn could be prohibited.

TOUR BUS AND CITY BUS IDLING

RECOMMENDATION NO. 12

Recommend to the Assembly that, through ordinance or enforceable operating guidelines, it maintain current parking and bus idling station south of ferry terminal for tour buses. Also, that City consider developing and implementing an optimal operating guideline for City buses at the downtown ferry terminal, with noise abatement and fuel efficiency being the reasons for the policy. (Passed 7:1) Currently noise from City buses at idle at the downtown ferry terminal is disturbing

to nearby residents, as well as contributing to bus fuel inefficiencies. Nearby residents request that policies be explored by the City to reduce this noise, such as: 1) Implement a policy requiring operators to shut down the engine if the waiting time exceeds five minutes; 2) **Explore** the noise reduction potential of having the buses headed the opposite way than what they are now (heading north instead of south) to reduce the amount of engine noise transmitted to nearby residents, as the current orientation of parked buses promotes reflection of engine noise by the downtown ferry terminal building to hillside residents and businesses. Dissenting vote wanted a more restrictive and definitive recommendation.

NOISE MANAGEMENT AGENCY

RECOMMENDATION NO. 13

Recommend to the **Assembly** that the noise hotline be continued and that the **City Manager** assist management of the hotline to the **appropriate agency**. (Passed 7:1) Dissenting opinion was that a 'staffed' hotline be established instead of recording that is checked daily.

NOISE STUDY

RECOMMENDATION NO. 14

In response to Section 2, Paragraphs (c), (d), and (e), of CBJ Resolution No. 1610am the Committee requests that the **City** fund a professional noise study to determine noise levels from downtown float plane and sightseeing helicopter flights and **analyze** these noise levels according to standards established by the federal government, the state government, or other jurisdictions, and using these noise levels and reasonable assumptions, establish a **five-year growth projection** for noise. (Passed 6:2) Dissenting opinions were that a noise study would simply confirm known noise sources, would cost an estimated \$25,000, and would not be helpful.

RECOMMENDATION NO. 15

The Assembly support the concept of long-term planning on tourism for Juneau. (Passed 9:0) This recommendation is clarification of committee support for the concept of long-term planning on tourism, with emphasis on an overall comprehensive look at tourism impacts on Juneau, both pro and con. This discussion was precipitated by the so-called Charles Kelly proposal to address comprehensive tourism planning that may or may not result in actions to move the bases for helicopter or float plane sightseeing flights to other locations. (A copy of Charles Kelly's proposal is attached.)

RECOMMENDATION NO. 16

That the **City**, through the **Airport Manager's** office, remain apprised of new noise reduction technology and the appropriateness of requiring the placement of that technology on aircraft operating out of the Juneau Airport or in the Juneau area. (Passed 9:0.)

SIGNIFICANT PROPOSALS THAT DID NOT GAIN COMMITTEE MAJORITY SUPPORT

PROPOSAL 1

The Assembly, within a two-year transition period, prohibit all aircraft from landing and taking off in the Gastineau Channel between the area of the Union 76 Tank Farm and DIPAC Fish Hatchery, excepting emergency operations. (Failed 6:3)

Proponents contend it is unreasonable to expect year-round Juneau residents to forfeit peaceful enjoyment of their homes and property and experience adverse economic effects on these properties, just to accommodate float plane operations in the Gastineau Channel. They feel this recommendation for phasing out of all aircraft from landing and taking off from the Gastineau Channel would accomplish a major reduction in downtown float plane noise, albeit with a major impact on primary float plane operator Wings of Alaska and minimal effect on other local businesses and that alternate float plane operation areas could be conducted from tour ships prior to or after the Juneau port stop and/or relocation of activities to airport. Additional benefits would be safer boating in the channel.

Opponents of this recommendation argued this could only move aircraft noise from one area to another (thereby decreasing downtown noise impacts, but increasing airport vicinity noise impact, *plus* Gastineau Channel between airport and downtown would gain aircraft overflight not now experienced). Further, ground haul/transport of passengers would create logistic handling problems downtown for bus staging and more so at airport, which has no float plane bus staging area, physically nor security-wise. (If transferred to 'wheel planes' at airport terminal, Taku Lodge Salmon Bake' landing would no longer be feasible.) Plus, cost of transport (which has both direct bus cost as well as an in-direct opportune loss of downtown shopping time) could potentially overprice product for market. Additionally, the ability to close downtown harbor to all flight activity may or may not be within CBJ jurisdiction, as this area has been a historic use aerodrome for at least 60 years. 'Responsible ownership' of downtown harbor aerodrome is ill defined, as this area is U.S. navigable state water within **CBJ** limits.

PROPOSAL 2

The Assembly institute a curfew to restrict all float plane and helicopter operations between 8:00 p.m. and 8:00 a.m. from all residential areas throughout Juneau, except in emergency situations. (Failed 6:3)

Proponents noted residents have wanted flights to start later in the morning, and stop earlier in the evening; of particular concern was peaceful enjoyment of both indoor and outside activities disrupted by tourist flights operating almost until darkness **and** very early Sunday mornings. Opponents argued operators needed to accommodate passenger demands, noting the volatility of the market and how fickle cruise ship operators could be in marketing the **flight** option with their patrons, particularly considering some cruise ship arrivals were late afternoon, with limited time-in-port. Also, this proposed curfew would restrict numerous 'non-tour' operations; federal law dictates that interstate air commerce class discrimination is illegal; and typical national noise curfew standards are 11:00 p.m. to 7:00 a.m.

[Consideration of this issue is being addressed in the proposed Juneau **Fly** Neighborly Program, wherein a voluntary hours of operations and noise curfew are being pursued. Recognition was given

that float plane and helicopter departures are significantly noisier and more bothersome than arrivals, and that a fully loaded plane or helicopter is much noisier than a near empty one on take-off.]

PROPOSAL 3

That if it is determined that the decibel (**dB**) levels are above the acceptable levels according to law from off-airport based flightseeing helicopters or downtown float planes, these operations should be moved from the areas to the airport. (Failed **6:3**)

Proponents contended individuals experience noise differently and its description and quantification is very subjective; measuring **dB** levels is the only objective way to measure sound levels. Further, that the negative impacts to the community of tourist-generated air traffic noise outweigh the positive economic effects. These negative impacts include, but are not limited to, degraded quality of life, adverse economic impact on property values, and stress-related illnesses. The effects of noise on human beings are still being discovered and the case is getting stronger against this type of pollution to the human mind and body. If **dB** levels recorded in the residential areas are above lawful levels, it is only reasonable that the situation be remedied. A balance between monetary gain and accompanying losses should be struck.

Opponents contended lack of a specific uniform **dB** standard for non-airport flight patterns. Also that moving such traffic to the airport only creates additional noise impact on airport neighbors, plus increased aircraft operations at airport would/could adversely impact overall airport flight operations.

PROPOSAL 4

That the Committee recommend to the Assembly that all non-emergency commercial truck traffic be prohibited in the downtown area during the hours of 11:00 p.m. to 7:00 a.m. Emergency commercial truck traffic is interpreted to mean traffic associated with emergency fuel deliveries, emergency repair events, or commercial truck traffic associated with other events that, due to the nature of a need for a response, are necessary to prevent damage, property loss, or other similar hardship. (Motion Withdrawn)

Proponents contended that commercial truck traffic transiting through, entering into, or exiting from the downtown area between the hours of 11:00 p.m. and 7:00 a.m. is violating the intent of the current City Disturbing the Peace Ordinance (42.20.095) by producing objectionable and sleep depriving noise. Specifically cited was Lynden Transport (located on the south edge of town) which has a delivery policy that includes transporting cargo vans through downtown beginning at **4:30** a.m. every Monday. It was also noted that many of the company's barge shipments come in during reasonable hours the day before, allowing for transport of newly arrived vans on Sunday during reasonable hours. Contact with Lynden terminal manager did not produce an alteration of this schedule. It was the intent of this proposition to prevent noise produced from this and similar operations during the hours of **11:00** p.m. and 7:00 a.m.

Opponents contended the proposal was too broad and encompassed all delivery vehicles. This would have an unfair impact on multiple businesses that are not cited as problems needing address.. Further, no formal pursuit of enforcing existing City Disturbing the Peace Ordinance has been explored and formal recommendation of an additional too-broadly-defined-as-to-be-practicable

ordinance was uncalled for. After discussion, motion to recommend was withdrawn, however, specific problem of early morning Lynden Transport hauls remain a noise problem for those directly affected residents.

PROPOSAL 5

That the Committee recommend to the Assembly that there be established a limit within the City and Borough of Juneau on a) the number of daily tourist aircraft flights which create an adverse noise impact on residential areas; and b) the length of the season when such flights will be permitted. These limits would be established for the purposes of limiting the noise generated by such flights to 1993 summer season levels. (Motion Withdrawn)

Levels of tourists visiting Juneau are expected to increase in coming years and associated noise generated from tourist related aircraft flights adversely impacts many Juneau residents. The City needs to take action to keep this noise at a tolerable level, and to keep the length of the season, during which Juneau area residents are exposed to this noise, from growing. A possible mechanism to implement this concept would be a permit system. It is suggested that currently operating tourist flight operators be given preference in assignment of any quota of the number of daily flights available. This concept was first advanced in the 1988-89 Noise Committee, but was not adopted.

Concerns expressed focused on number of flights versus type of aircraft, both with the intent of being noise reductions; i.e., multiple 'Otter' flights versus a single C-206 flight would be preferred. Also, number of flights does not automatically correlate to number of passengers/tourists handled. Intent is to address this issue specifically with directly affected operators, to accommodate emergency operations with 'noisier' aircraft while establishing limits on overall operations. Post-committee report target is to work out a cap limit on C-206 and/or C-185 aircraft operations in downtown harbor.

PROPOSAL 6

Weather permitting, that all aircraft fly at a minimum of 2,000 feet from all residential areas throughout Juneau, except in emergency operations. (Motion Withdrawn) This issue was not formally discussed other than as part of the 'stand-off distances' in the Juneau Fly Neighborly Program. The proponent of a 2000' minimum did not feel the Juneau Fly Neighborly Program minimums were adequate or satisfactory.

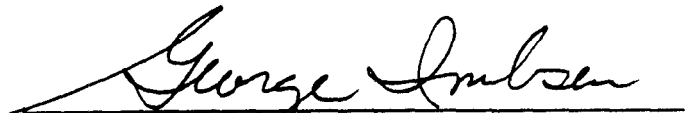
SUMMARY

This Ad Hoc Noise Committee Final Report culminates a year-long effort by a nine-member, City Manager-appointed committee', as established by Assembly Resolution **1610(am)**, December 21, 1992. Specific noise sources were identified via a well-publicized Public Hearing on Noise in April 1993, with ongoing public input at the Committee's twice monthly public meetings. A final public hearing was held January 26, 1994, to review Committee recommendations prior to submittal to Assembly. Specific noise generating activities were focused upon and specific recommendations resulted therefrom.

Consensus opinion of Committee members was reached on many issues (no small feat considering the divergent points of reference!). On issues where consensus was not reached, it is an indicator of the difficulty of reaching a compromise on those issues. There certainly are no easy answers and, in fact, may not be answers suitable to all. We found there is no nationally recognized federal noise standard that we could tie any program to. Of significant importance is the development of a workable Juneau Fly Neighborly Program, which is anticipated to have long-term positive impacts on mitigating community noise from aircraft.

Review of existing tourism development in Juneau demonstrates that market forces will react to needs, however, without some overall comprehensive plan, these forces will meet existing needs that may or may not satisfy community needs. It is the Committee's opinion that comprehensive planning, through long-term tourism management strategic planning, as well as addressing day-to-day land use and zoning planning, is essential for the long-term community benefit.

Respectfully submitted this 28th day of January, 1994.


George Imbsen, Chairman

Paul Bowers, Airport Staff
Pete **Carlson**, Public/Switzer
Bob Englebrecht, Helicopter Operator
Dick **Farnell**, Public/Town
Marcus Graves, **Public/North** Douglas
George **Imbsen**, Public/Douglas, Chair
Robert Jacobsen, **Fixed** Wing Aircraft Operator
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Jeannie **D'Aurora**, Public/Town (Resigned)
Margaret Smoker, **Public/Auke** Bay (Resigned)

