


# MEMORANDUM

CITY/BOROUGH OF JUNEAU  
155 South Seward Street, Juneau, Alaska 99801

**DATE:** June 8, 2011  
**TO:** Planning Commission  
**FROM:** Ben Lyman, Senior Planner  
Community Development Department   
**FILE NO.:** TXT2009-00003

**PROPOSAL:** Discussion of An Ordinance Relating to Noise, and Providing for a Penalty.

The City and Borough of Juneau Code states in CBJ §49.10.170(d) that the Commission shall make recommendations to the Assembly on all proposed amendments to this title, zonings and re-zonings, indicating compliance with the provisions of this title and the Comprehensive Plan.

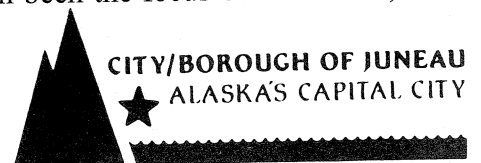
## ATTACHMENTS

- A. Common Environmental Noise Levels Factsheet, [www.chchearing.org](http://www.chchearing.org)\*
- B. Excerpts from *Guidelines for Community Noise*, World Health Organization\*
- C. Interoffice Memo on CBJ regulation of noise created by shipping activities, to John Hartle, City Attorney, and Dale Pernula, CDD Director, from Ben Lyman, Senior Planner dated April 26, 2011
- D. Public Comments received on June 1, 2011 DRAFT Ordinance from Rick Bierman and Mary Ann Dlugosch
- E. DRAFT Serial No. 2011-XX, June 6, 2011 Draft; *An Ordinance Relating to Noise, and Providing for a Penalty*
- F. Public Comment received on June 6, 2011 Draft Ordinance

\*Attachments A and B have been presented to the Planning Commission on several occasions in the past and are re-presented here as useful references. Please note that Attachment A lists "actual" noise levels created by given sources, while Attachment B discusses ideal limits to noise levels created by given sources.

## BACKGROUND

The Planning Commission, Community Development Department, and Law Department of the City and Borough of Juneau (CBJ) have been engaged in an effort to draft a comprehensive noise ordinance for the CBJ for over two years. During that time, multiple versions of draft ordinances have been presented to the Planning Commission and to the public, all with varying responses. Exceptions, restrictions, enforcement, and other details have often been the focus of discussion,



with conversation routinely returning to noise impacts from particular uses or activities and how to mitigate or otherwise address those impacts.

The Draft Ordinance accompanying this memorandum combines all direction provided by the Planning Commission to date into a single document. The January 25, 2011 staff report on this Draft Ordinance, available on-line at [http://www.juneau.org/plancom/documents/STF\\_TXT09-03\\_012511\\_001.pdf](http://www.juneau.org/plancom/documents/STF_TXT09-03_012511_001.pdf) or by request from the Community Development Department, contains additional background information, including minutes of relevant Planning Commission discussions. That information is, for the most part, not repeated in this memorandum or its attachments.

Although the Planning Commission has expressed that it has no desire to review aspects of the Draft Noise Ordinance that do not pertain to land use, and instead pertain only to acute noise sources that should be handled as disturbances to the peace by the Juneau Police Department, there is no clean way to present portions of the Draft Noise Ordinance when removed from the context of the entire draft. Staff therefore presents the entire Draft Noise Ordinance for consideration, but recommends that the Planning Commission and public not take up discussion of DRAFT CBJ 42.20.340 *Nuisance Noises* at the Planning Commission level. With that said, some topics that have arisen in Planning Commission discussions in the past are addressed in the *Discussion* portion of this memorandum for informational purposes.

## **DISCUSSION**

The discussion of the Draft Noise Ordinance has spanned several years, and would require pages to reiterate here, but can be summarized as a list of concerns that have led to the need to draft a new Noise Ordinance, and a list of issues that must be considered in drafting the ordinance.

### **Concerns:**

1. Noise from Heating, Ventilation, and Cooling (HVAC) systems, including refrigeration units;
2. Noise from aircraft;
3. Noise from loading and unloading activities related to marine shipping, fishing, cruise ships, and other marine uses;
4. Noise from on-road vehicles, including loud pipes and stereo systems;
5. Noise from off-road vehicles, especially as it pertains to multi-vehicle sources;
6. Noise from construction projects;
7. Noise from fireworks; and,
8. Noise from other land uses.

### **Considerations:**

1. Ambient noise levels compared to proposed limits;
2. Restrictions in Federal law against local regulation of particular noise sources that is more restrictive than Federal regulations;

3. Enforceability of adopted ordinance;
4. Wide range of environments in which a wide variety of noises may be experienced;
5. Delineation between daytime and nighttime hours for noise regulation thresholds;
6. Limits on noise levels;
7. Exceptions to noise limits; and,
8. Permits to exceed noise limits.

### **Concerns**

**Concern 1, Noise from Heating, Ventilation, and Cooling (HVAC) systems, including refrigeration units:** Although it has been suggested that these noises could be regulated at the time of building permit review, when reviewers could determine if a given piece of equipment met certain UL or other certification standards for noise emissions, the Building Code Advisory Committee has recommended against this approach, as maintenance or a lack thereof will have a dramatic effect on the noise emitted by the equipment, so this review would be largely irrelevant to the amount of noise actually emitted by the equipment. Applying the standard noise limits to this type of equipment is recommended. In particular, DRAFT CBJ 42.20.330(a)(1) addresses steady, continuous noises emitted by mechanical devices other than generators.

**Concern 2, Noise from aircraft:** Previous research by CBJ staff indicates that state and local jurisdictions are pre-empted from enforcing noise regulations regarding aircraft that are more restrictive than federal regulations. Although some Juneau residents maintain that this determination was in error, and that the CBJ should push the federal government on this issue, staff has not taken up this issue during the drafting of the ordinance under consideration based on the determination that we cannot place effective restrictions on this noise source. DRAFT CBJ 42.20.350(d) explicitly exempts noises that cannot be regulated by the CBJ due to Federal pre-emption, such as aircraft noise, from the draft ordinance.

**Concern 3, Noise from loading and unloading activities related to marine shipping, fishing, cruise ships, and other marine uses:** See Attachment C for background and discussion of this issue. The CBJ Law Department has made progress in identifying Federal regulations that apply, but at the time that this memorandum was drafted, CDD staff had not had sufficient time to become completely familiar with those regulations. Further information on this concern will be forwarded to the Planning Commission at or prior to the meeting of June 14, 2011 for consideration. Staff anticipates amending DRAFT CBJ 42.20.350(d) before the Planning Commission forwards the draft ordinance to the Assembly for adoption in order to accommodate the findings of this research.

**Concern 4, Noise from on-road vehicles, including loud pipes and stereo systems:** This concern is addressed in part by state law at 13 AAC 04.215., the language of which is included in the draft ordinance at DRAFT CBJ 42.20.340(c)(3) so as to be adopted locally. Subsections (c)(1) and (c)(2) of this section address other vehicular noises such as stereos and jake brakes. This concern is not, however, a land-use issue, and does not warrant Planning Commission review.

**Concern 5, Noise from off-road vehicles, especially as it pertains to multi-vehicle sources:** This concern is addressed through the development of a Land Use Noise Permit process at DRAFT CBJ 49.15.910(a) that would be required for noise sources such as Off-Highway Vehicle (OHV) parks and similar land uses in distinct locations.

**Concern 6, Noise from construction projects:** This concern is addressed through a revised Construction Noise Permit process at DRAFT CBJ 49.15.910(b) that requires public notice, whereas the existing process does not require public notice.

**Concern 7, Noise from fireworks:** The Planning Commission has indicated in the past that members do not want to inadvertently legalize personal fireworks through a Noise Ordinance; staff investigation has found that fireworks have already been legalized in Juneau unintentionally through changes to the Building Code. Fireworks sales stands have applied for permits or are in the process of applying to operate in several locations in Juneau, and the Fire Marshall indicates that he will take this issue up through a separate code modification that would restrict or prohibit fireworks in Juneau once again. However, as the issue of firework noise is not related to land use, it is not an appropriate topic for Planning Commission consideration. Furthermore, as the issue is much larger than just noise, the Noise Ordinance would be an inappropriate place to restrict the use or sale of fireworks.

**Concern 8, Noise from other land uses:** The draft ordinance contains a section that creates a Land Use Noise Permit process at DRAFT CBJ 49.15.910(a) that would be required for noisy land uses. This process allows the Planning Commission, after considering staff's recommendation and public comment, to consider potential impacts, make findings, and place conditions on permits for noisy land uses.

### **Considerations**

**Consideration 1, Ambient noise levels compared to proposed limits:** There are many periods of time when wind, rain, or other natural forces create ambient noise levels that are above any reasonable noise limit that might be adopted; the draft ordinance provides at DRAFT CBJ 42.20.340(a)(2) that noise limits be increased by a specified amount when the ambient noise level is equal to or higher than the noise limit. This provision applies to nuisance noises only, as land use noises can be measured when ambient noise is not affected by wind, rain or other natural forces, and therefore does not require Planning Commission review.

**Consideration 2, Restrictions in Federal law against local regulation of particular noise sources that is more restrictive than Federal regulations:** Concerns 2 and 3, above, are affected by this consideration. Please refer to the discussion of those concerns and Attachment C for more information on this consideration.

**Consideration 3, Enforceability of adopted ordinance:** Juneau Police Department (JPD) administrative staff and patrol officers have submitted comments on the draft ordinance. The majority of the concerns from JPD are that the use of noise meters in enforcement will require:

- Equipment, both the noise meter(s) and calibration equipment;
- Training in noise measurement and calibration;
- Responding Officers to know the zoning (or EDNA, defined in the draft ordinance at DRAFT CBJ 42.20.380) of properties;
- Responding Officers to wait at complaint sites for an hour or more to determine if a violation of the impulsive sounds provisions of the ordinance are violated; and,
- Responding Officers to make a judgment call as to whether the complainant is a “reasonable person of normal sensitivity.”

Equipment and training will need to be provided to all enforcement staff who are expected to use that equipment, so the first two points are both given.

The third point is easily addressed, as an EDNA map layer can be added to the JPD CAD system, according to the CBJ Cartographer.

The City Attorney has stated that the responding officer will not need to wait for an hour to see if a violation of the intermittent noise provision (DRAFT CBJ 42.20.330(b) and DRAFT CBJ 42.20.340(b)) has occurred. The word of one or more witnesses that an intermittent noise is occurring, and verification by the officer that an intermittent noise that exceeds the noise limit is occurring, is enough to write a citation—the officer does not need to witness an hour’s worth of violation in order to issue a citation.

The current Disturbing the Peace code (CBJ 42.20.095(a)(1)) uses the same language as DRAFT CBJ 42.20.320(a), “reasonable person of normal sensitivity,” as do most noise ordinances adopted by municipalities nation wide. The responding police officer may be uncomfortable making this judgment, but it is nevertheless within their purview to do so. Without this provision, a noise meter would need to be used for all enforcement of the noise ordinance, which would be an even more burdensome requirement for responding officers.

**Consideration 4, Wide range of environments in which a wide variety of noises may be experienced:** The City and Borough of Juneau is a vast area, with 1616 square miles of land, 928 square miles of ice field, and 704 square miles of water within its boundaries. The 3248 square miles of the CBJ contain wilderness, urban development, and nearly every combination of rural, suburban, commercial, and industrial development conceivable.

Beyond the myriad ways in which noises from one type of land use can affect other proximate land uses, it is simply unrealistic to expect the same type of enforcement in remote parts of the CBJ as in developed areas within the Urban Service Area Boundary. Rick Bierman, a resident of Shelter Island, has commented to staff on several occasions that because of the impossibility of enforcing noise limits on or near Shelter Island and other remote areas with current resources, the

noise ordinance should not apply to those remote or un-roaded areas (see Attachment D). Although Mr. Bierman is doubtless right that enforcement will be rare if it ever occurs in remote areas, excluding remote areas from application of the noise ordinance would effectively allow unlimited noise generation in those areas; staff is not convinced that the ability to enforce noise restrictions should not be taken away from the police, in the event that an especially loud noise source begins operation in a remote area.

**Consideration 5, Delineation between daytime and nighttime hours for noise regulation thresholds:** Comments have been received from members of the public, the Juneau Police Department, and staff of other CBJ Departments that the hours delineating day- and night-time hours in the draft ordinance at DRAFT CBJ 42.20.320(c) Table 1 are unrealistic for Juneau; however, each set of comments indicated that the hours were inappropriate in different ways. One member of the public has suggested that night-time hours begin at 6 pm; JPD has commented that summer and winter hours should be different, as residents are active much later into the night during summer months than during the winter. Ruth Danner commented that she could not understand why the transition from day to night occurs later during the week than on weekends, "when most residents have more flexibility and may be staying up later." She went on to raise concerns regarding the late time of transition during the week, and the effect that this might have on children who need to go to bed earlier on weekdays; another concern she raises pertains to early-shift workers who need to get up early in the morning, and therefore must go to bed earlier as well. "I strongly feel that 10 pm is not early enough to end day-time noise levels. I support 8 pm."

Whatever particular times are settled upon by the Planning Commission, the hours listed at DRAFT CBJ 42.20.320(c) Table 1 do not reflect traditional patters of work and play, with weekdays being "school nights," when children and workers must retire earlier than on weekends, and weekends being the traditional time for barbeques, parties, and other later-night activities. Staff therefore recommends that the Planning Commission re-visit the time limits determined during past meetings before moving the draft ordinance to the Assembly for adoption.

**Consideration 6, Limits on noise levels:** The Planning Commission has spent large amounts of time determining what limits should be placed on noise levels, and the draft limits at DRAFT CBJ 42 Article II are within the range of limits recommended by model ordinances, the World Health Organization, and other agencies involved in regulating noise. Although some small modifications to the limits listed in the draft ordinance may be considered reasonable, the limits are not themselves unreasonable and do not warrant extended discussion at this time.

**Consideration 7, Exceptions to noise limits:** The topic of which types of noises should be exempted from the noise limits imposed by the draft ordinance has been a contentious one, with hours of Planning Commission discussion and public testimony on various exceptions. The draft accompanying this memorandum contains fewer exceptions (listed at DRAFT CBJ 42.20.350) than previous drafts, largely due to the creation of a draft Land Use Noise Permit (listed at DRAFT CBJ 49 Article IX) that would allow public and Planning Commission review of proposed uses that are expected to create noises that may violate the limits established in the

draft ordinance. Those exceptions that remain have been fairly thoroughly vetted, although the Planning Commission has indicated that it may not recommend that all of those exceptions remain in the draft that they forward to the Assembly for adoption.

**Consideration 8, Permits to exceed noise limits:** The existing Building Official's Noise Permit, which resides within the Penal Code at CBJ 42.20.095(a)(1), would be replaced under the draft ordinance with a new Construction Noise Permit at DRAFT CBJ 49.15.910(b) that requires public notice and written findings before the permit can be issued. The draft ordinance also includes a new Land Use Noise Permit process at DRAFT CBJ 49.15.910(a) that would provide the public and Planning Commission with an opportunity to evaluate the proposed use and place conditions of approval on the permit to minimize or mitigate its noise impacts.

### **RECOMMENDATION**

Staff recommends that the Planning Commission discuss the Draft Noise Ordinance, recommend changes as needed to staff, and make recommendation to the Assembly on adoption of the Draft Ordinance if it is deemed ready to be forwarded to the Assembly for adoption.

## Common Environmental Noise Levels Factsheet

**How Loud is Too Loud?** Experts agree that continued exposure to noise above 85 dBA over time, will cause hearing loss. To know if a sound is loud enough to damage your ears, it is important to know both the loudness level (measured in decibels, dBA) and the length of exposure to the sound. In general, the louder the noise, the less time required before hearing loss will occur. According to the National Institute for Occupational Safety and Health (1998), the maximum exposure time at 85 dBA is 8 hours. At 110 dBA, the maximum exposure time is one minute and 29 seconds. If you must be exposed to noise, it is recommended that you limit the exposure time and/or wear hearing protection.

**Measure Up and Turn it Down:** Decibel Levels Around Us The following are decibel levels of common noise sources around us. These are typical levels, however, actual noise levels may vary depending on the particular item. Remember noise levels above 85 dBA will harm hearing over time. Noise levels above 140dBA can cause damage to hearing after just one exposure.

### Points of Reference \*measured in dBA or decibels

- 0 The softest sound a person can hear with normal hearing
- 10 normal breathing
- 20 whispering at 5 feet
- 30 soft whisper
- 50 rainfall
- 60 normal conversation
- 110 shouting in ear
- 120 thunder



Home	Work	Recreation
◦ 50 refrigerator	◦ 40 quiet office, library	◦ 40 quiet residential area
◦ 50 - 60 electric toothbrush	◦ 50 large office	◦ 70 freeway traffic
◦ 50 - 75 washing machine	◦ 65 - 95 power lawn mower	◦ 85 heavy traffic, noisy restaurant
◦ 50 - 75 air conditioner	◦ 80 manual machine, tools	◦ 90 truck, shouted conversation
◦ 50 - 80 electric shaver	◦ 85 handsaw	◦ 95 - 110 motorcycle
◦ 55 coffee percolator	◦ 90 tractor	◦ 100 snowmobile
◦ 55 - 70 dishwasher	◦ 90 - 115 subway	◦ 100 school dance, boom box
◦ 60 sewing machine	◦ 95 electric drill	◦ 110 disco
◦ 60 - 85 vacuum cleaner	◦ 100 factory machinery	◦ 110 busy video arcade
◦ 60 - 95 hair dryer	◦ 100 woodworking class	◦ 110 symphony concert
◦ 65 - 80 alarm clock	◦ 105 snow blower	◦ 110 car horn
◦ 70 TV audio	◦ 110 power saw	◦ 110 -120 rock concert
◦ 70 - 80 coffee grinder	◦ 110 leafblower	◦ 112 personal cassette player on high
◦ 70 - 95 garbage disposal	◦ 120 chain saw, hammer on nail	◦ 117 football game (stadium)
◦ 75 - 85 flush toilet	◦ 120 pneumatic drills, heavy machine	◦ 120 band concert
◦ 80 pop-up toaster	◦ 120 jet plane (at ramp)	◦ 125 auto stereo (factory installed)
◦ 80 doorbell	◦ 120 ambulance siren	◦ 130 stock car races
◦ 80 ringing telephone	◦ 125 chain saw	◦ 143 bicycle horn
◦ 80 whistling kettle	◦ 130 jackhammer, power drill	◦ 150 firecracker
◦ 80 - 90 food mixer or processor	◦ 130 air raid	◦ 156 capgun
◦ 80 - 90 blender	◦ 130 percussion section at symphony	◦ 157 balloon pop
◦ 80 - 95 garbage disposal	◦ 140 airplane taking off	◦ 162 fireworks (at 3 feet)
◦ 110 baby crying	◦ 150 jet engine taking off	◦ 163 rifle
◦ 110 squeaky toy held close to the ear	◦ 150 artillery fire at 500 feet	◦ 166 handgun
◦ 135 noisy squeeze toys	◦ 180 rocket launching from pad	◦ 170 shotgun

Excerpts from  
**GUIDELINES**

FOR  
**COMMUNITY NOISE**

Edited by

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This WHO document on the *Guidelines for Community Noise* is the outcome of the WHO- expert task force meeting held in London, United Kingdom, in April 1999. It bases on the document entitled "Community Noise" that was prepared for the World Health Organization and published in 1995 by the Stockholm University and Karolinska Institute.



**World Health Organization, Geneva**  
Cluster of Sustainable Development and Healthy Environment (SDE)  
Department of the Protection of the Human Environment (PHE)  
Occupational and Environmental Health (OEH)

**ATTACHMENT B**

The use of powered machines in leisure activities is increasing. For example, motor racing, off-road vehicles, motorboats, water skiing, snowmobiles etc., and these contribute significantly to loud noises in previously quiet areas. Shooting activities not only have considerable potential for disturbing nearby residents, but can also damage the hearing of those taking part. Even tennis playing, church bell ringing and other religious activities can lead to noise complaints.

Some types of indoor concerts and discotheques can produce extremely high sound pressure levels. Associated noise problems outdoors result from customers arriving and leaving. Outdoor concerts, fireworks and various types of festivals can also produce intense noise. The general problem of access to festivals and leisure activity sites often adds to road traffic noise problems. Severe hearing impairment may also arise from intense sound produced as music in headphones or from children's toys.

## 2.3. The Complexity of Noise and Its Practical Implications

### 2.3.1. The problem

One must consider many different characteristics to describe environmental noises completely. We can consider the sound pressure level of the noise and how this level varies over a variety of periods, ranging from minutes or seconds to seasonal variations over several months. Where sound pressure levels vary quite substantially and rapidly, such as in the case of low-level jet aircraft, one might also want to consider the rate of change of sound pressure levels (Berry 1995; Kerry et al. 1997). At the same time, the frequency content of each noise will also determine its effect on people, as will the number of events when there are relatively small numbers of discrete noisy events. Combinations of these characteristics determine how each type of environmental noise affects people. These effects may be annoyance, sleep disturbance, speech interference, increased stress, hearing impairment or other health-related effects.

Thus, in total there is a very complex multidimensional relationship between the various characteristics of the environmental noise and the effects it has on people. Unfortunately, we do not completely understand all of the complex links between noise characteristics and the resulting effects on people. Thus, current practice is to reduce the assessment of environmental noise to a small number of quite simple quantities that are known to be reasonably well related to the effects of noise on people (LAeq,T for continuing sounds and LAm<sub>ax</sub> or SEL where there are a small number of distinct noise events). These simple measures have the distinct advantage that they are relatively easy and inexpensive to obtain and hence are more likely to be widely adopted. On the other hand, they may ignore some details of the noise characteristics that relate to particular types of effects on people.

### 2.3.2. Time variation

There is evidence that the pattern of noise variation with time relates to annoyance (Berglund et al. 1976). It has been suggested that the equal-energy principle is a simple concept for obtaining a measure representative of the annoyance of a number of noise events. For example, the LAeq,T of the noise from a busy road may be a good indicator of the annoyance this noise may



cause for nearby residents. However, such a measure may not be very useful for predicting the disturbance to sleep of a small number of very noisy aircraft fly-overs. The disturbance caused by small numbers of such discrete events is usually better related to maximum sound pressure levels and the number of events.

While using LAeq,T measures is the generally accepted approach, it is still important to appreciate the limitations and errors that may occur. For example, some years ago measures that assessed the variation of sound pressure levels with time were popular. Subsequently, these have been shown not to improve predictions of annoyance with road traffic noise (Bradley 1978). However, it is possible that time variations may contribute to explaining the very different amounts of annoyance caused by equal LAeq,T levels of road-traffic noise, train noise and aircraft noise (*cf.* Miedema & Vos 1998).

More regular variations of sound pressure levels with time have been found to increase the annoying aspects of the noise. For example, noises that vary periodically to create a throbbing or pulsing sensation can be more disturbing than continuous noise (Bradley 1994b). Research suggests that variations at about 4 per second are most disturbing (Zwicker 1989). Noises with very rapid onsets could also be more disturbing than indicated by their LAeq,T (Berry 1995; Kerry et al. 1997).

LAeq,T values can be calculated for various time periods and it is very important to specify this period. It is quite common to calculate LAeq,T values separately for day- and night-time periods. In combining day and night LAeq,T values it is usually assumed that people will be more sensitive to noise during the night-time period. A weighting is thus normally added to night-time LAeq,T values when calculating a combined measure for a 24 hour period. For example, day-night sound pressure measures commonly include a 10 dB night-time weighting. Other night-time weightings have been proposed, but it has been suggested that it is not possible to determine precisely an optimum value for night-time weightings from annoyance survey responses, because of the large variability in responses within groups of people (Fields 1986; see also Berglund & Lindvall 1995). Night-time weightings are intended to indicate the expected increased sensitivity to annoyance at night and do not protect people from sleep disturbance.

### 2.3.3. Frequency content and loudness

Noise can also be characterized by its frequency content. This can be assessed by various types of frequency analysis to determine the relative contributions of the frequency components to the total noise. The combined effects of the different frequencies on people, perceived as noise, can be approximated by simple frequency weightings. The A-weighting is now widely used to obtain an approximate, single-number rating of the combined effects of the various frequencies. The A-weighting response is a simplification of an equal-loudness contour. There is a family of these equal-loudness contours (ISO 1987a) that describe the frequency response of the hearing system for a wide range of frequencies and sound pressure levels. These equal-loudness contours can be used to determine the perceived loudness of a single frequency sound. More complicated procedures have been derived to estimate the perceived loudness of complex sounds (ISO 1975). These methods involve determining the level of the sound in critical bands and the mutual masking of these bands.

sleeping difficulties.

Questionnaire data indicate the importance of night-time noise on the perception of sleep quality. A recent Japanese investigation was conducted for 3 600 women (20–80 years old) living in eight roadside zones with different road traffic noise. The results showed that four measures of perceived sleep quality (difficulty in falling asleep; waking up during sleep; waking up too early; feelings of sleeplessness one or more days a week) correlated significantly with the average traffic volumes during night-time. An in-depth investigation of 19 insomnia cases and their matched controls (age, work) measured outdoor and indoor sound pressure levels during sleep (Kageyama et al. 1997). The study showed that road traffic noise in excess of 30 dB LAeq for nighttime induced sleep disturbance, consistent with the results of Öhrström (1993b).

Meta-analyses of field and laboratory studies have suggested that there is a relationship between the SEL for a single night-time noise event and the percentage of people awakened, or who showed sleep stage changes (e.g. Ollerhead et al. 1992; Passchier-Vermeer 1993; Finegold et al. 1994; Pearsons et al. 1995). All of these studies assumed that the number of awakenings per night for each SEL value is proportional to the number of night-time noise events. However, the results have been criticized for methodological reasons. For example, there were small groups of sleepers; too few original studies; and indoor exposure was estimated from outdoor sound pressure levels (NRC-CNRC 1994; Beersma & Altena 1995; Vallet 1998). The most important result of the meta-analyses is that there is a clear difference in the dose-response curves for laboratory and field studies, and that noise has a lower effect under real-life conditions (Pearsons et al. 1995; Pearsons 1998).

However, this result has been questioned, because the studies were not controlled for such things as the sound insulation of the buildings, and the number of bedrooms with closed windows. Also, only two indicators of sleep disturbance were considered (awakening and sleep stage changes). The meta-analyses thus neglected other important sleep disturbance effects (Öhrström 1993b; Carter et al. 1994a; Carter et al. 1994b; Carter 1996; Kuwano et al. 1998). For example, for road traffic noise, perceived sleep quality is related both to the time needed to fall asleep and the total sleep time (Öhrström & Björkman 1988). Individuals who are more sensitive to noise (as assessed by different questionnaires) report worse sleep quality both in field studies and in laboratory studies.

A further criticism of the meta-analyses is that laboratory experiments have shown that habituation to night-time noise events occurs, and that noise-induced awakening decreases with increasing number of sound exposures per night. This is in contrast to the assumption used in the meta-analyses, that the percentage of awakenings is linearly proportional to the number of night-time noise events. Studies have also shown that the frequency of noise-induced awakenings decreases for at least the first eight consecutive nights. So far, habituation has been shown for awakenings, but not for heart rate and after effects such as perceived sleep quality, mood and performance (Öhrström and Björkman 1988).

Other studies suggest that it is the difference in sound pressure levels between a noise event and background, rather than the absolute sound pressure level of the noise event, that determines the reaction probability. The time interval between two noise events also has an important influence

of the probability of obtaining a response (Griefahn 1977; *cf.* Berglund & Lindvall 1995). Another possible factor is the person's age, with older persons having an increased probability of awakening. However, one field study showed that noise-induced awakenings are independent of age (Reyner & Horne 1995).

For a good sleep, it is believed that indoor sound pressure levels should not exceed approximately 45 dB LA<sub>max</sub> more than 10–15 times per night (Vallet & Vernet 1991), and most studies show an increase in the percentage of awakenings at SEL values of 55–60 dBA (Passchier-Vermeer 1993; Finegold et al. 1994; Pearsons et al. 1995). For intermittent events that approximate aircraft noise, with an effective duration of 10–30 s, SEL values of 55–60 dBA correspond to a LA<sub>max</sub> value of 45 dB. Ten to 15 of these events during an eight-hour night-time implies an LA<sub>eq,8h</sub> of 20–25 dB. This is 5–10 dB below the LA<sub>eq,8h</sub> of 30 dB for continuous night-time noise exposure, and shows that the intermittent character of noise has to be taken into account when setting night-time limits for noise exposure. For example, this can be achieved by considering the number of noise events and the difference between the maximum sound pressure level and the background level of these events.

Special attention should also be given to the following considerations:

- a. Noise sources in an environment with a low background noise level. For example, night-traffic in suburban residential areas.
- b. Environments where a combination of noise and vibrations are produced. For example, railway noise, heavy duty vehicles.
- c. Sources with low-frequency components. Disturbances may occur even though the sound pressure level during exposure is below 30 dBA.

If negative effects on sleep are to be avoided the equivalent sound pressure level should not exceed 30 dBA indoors for continuous noise. If the noise is not continuous, sleep disturbance correlates best with LA<sub>max</sub> and effects have been observed at 45 dB or less. This is particularly true if the background level is low. Noise events exceeding 45 dBA should therefore be limited if possible. For sensitive people an even lower limit would be preferred. It should be noted that it should be possible to sleep with a bedroom window slightly open (a reduction from outside to inside of 15 dB). To prevent sleep disturbances, one should thus consider the equivalent sound pressure level and the number and level of sound events. Mitigation targeted to the first part of the night is believed to be effective for the ability to fall asleep.

(Berglund & Lindvall 1995; HCN 1994; Miedema 1996; Zeichart 1998; Passchier-Vermeer & Zeichart 1998). Therefore, caution should be exercised when trying to predict the adverse health effects of combined factors in residential populations.

The evidence on low-frequency noise is sufficiently strong to warrant immediate concern. Various industrial sources emit continuous low-frequency noise (compressors, pumps, diesel engines, fans, public works); and large aircraft, heavy-duty vehicles and railway traffic produce intermittent low-frequency noise. Low-frequency noise may also produce vibrations and rattles as secondary effects. Health effects due to low-frequency components in noise are estimated to be more severe than for community noises in general (Berglund et al. 1996). Since A-weighting underestimates the sound pressure level of noise with low-frequency components, a better assessment of health effects would be to use C-weighting.

✱ In residential populations heavy noise pollution will most certainly be associated with a combination of health effects. For example, cardiovascular disease, annoyance, speech interference at work and at home, and sleep disturbance. Therefore, it is important that the total adverse health load over 24 hours be considered and that the precautionary principle for sustainable development is applied in the management of health effects (see Chapter 5).

### 3.10. Vulnerable Groups

Protective standards are essentially derived from observations on the health effects of noise on "normal" or "average" populations. The participants of these investigations are selected from the general population and are usually adults. Sometimes, samples of participants are selected because of their easy availability. However, vulnerable groups of people are typically underrepresented. This group includes people with decreased personal abilities (old, ill, or depressed people); people with particular diseases or medical problems; people dealing with complex cognitive tasks, such as reading acquisition; people who are blind or who have hearing impairment; fetuses, babies and young children; and the elderly in general (Jansen 1987; AAP 1997). These people may be less able to cope with the impacts of noise exposure and be at greater risk for harmful effects.

Persons with impaired hearing are the most adversely affected with respect to speech intelligibility. Even slight hearing impairments in the high-frequency range may cause problems with speech perception in a noisy environment. From about 40 years of age, people typically demonstrate an impaired ability to understand difficult, spoken messages with low linguistic redundancy. Therefore, based on interference with speech perception, a majority of the population belongs to the vulnerable group.

Children have also been identified as vulnerable to noise exposure (see Agenda 21: UNCED 1992). The evidence on noise pollution and children's health is strong enough to warrant monitoring programmes at schools and preschools to protect children from the effects of noise. Follow up programmes to study the main health effects of noise on children, including effects on speech perception and reading acquisition, are also warranted in heavily noise polluted areas (Cohen et al. 1986; Evans et al. 1998).

The issue of vulnerable subgroups in the general population should thus be considered when developing regulations or recommendations for the management of community noise. This consideration should take into account the types of effects (communication, recreation, annoyance, etc.), specific environments (*in utero*, incubator, home, school, workplace, public institutions, etc.) and specific lifestyles (listening to loud music through headphones, or at discotheques and festivals; motor cycling, etc.).



### 4.3. Specific Environments

Noise measures based solely on LAeq values do not adequately characterize most noise environments and do not adequately assess the health impacts of noise on human well-being. It is also important to measure the maximum noise level and the number of noise events when deriving guideline values. If the noise includes a large proportion of low-frequency components, values even lower than the guideline values will be needed, because low-frequency components in noise may increase the adverse effects considerably. When prominent low-frequency components are present, measures based on A-weighting are inappropriate. However, the difference between dBC (or dBlin) and dBA will give crude information about the presence of low-frequency components in noise. If the difference is more than 10 dB, it is recommended that a frequency analysis of the noise be performed.

#### 4.3.1. Dwellings

In dwellings, the critical effects of noise are on sleep, annoyance and speech interference. To avoid sleep disturbance, indoor guideline values for bedrooms are 30 dB LAeq for continuous noise and 45 dB LAm<sub>ax</sub> for single sound events. Lower levels may be annoying, depending on the nature of the noise source. The maximum sound pressure level should be measured with the instrument set at "Fast".

To protect the majority of people from being seriously annoyed during the daytime, the sound pressure level on balconies, terraces and outdoor living areas should not exceed 55 dB LAeq for a steady, continuous noise. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound pressure level should not exceed 50 dB LAeq. These values are based on annoyance studies, but most countries in Europe have adopted 40 dB LAeq as the maximum allowable level for new developments (Gottlob 1995). Indeed, the lower value should be considered the maximum allowable sound pressure level for all new developments whenever feasible.

At night, sound pressure levels at the outside façades of the living spaces should not exceed 45 dB LAeq and 60 dB LAm<sub>ax</sub>, so that people may sleep with bedroom windows open. These values have been obtained by assuming that the noise reduction from outside to inside with the window partly open is 15 dB.

#### 4.3.2. Schools and preschools

For schools, the critical effects of noise are on speech interference, disturbance of information extraction (e.g. comprehension and reading acquisition), message communication and annoyance. To be able to hear and understand spoken messages in classrooms, the background sound pressure level should not exceed 35 dB LAeq during teaching sessions. For hearing impaired children, an even lower sound pressure level may be needed. The reverberation time in the classroom should be about 0.6 s, and preferably lower for hearing-impaired children. For assembly halls and cafeterias in school buildings, the reverberation time should be less than 1 s. For outdoor playgrounds, the sound pressure level of the noise from external sources should not exceed 55 dB LAeq, the same value given for outdoor residential areas in daytime.

World Health Organization: Guidelines for Community Noise  
1999

**Table 4.1: Guideline values for community noise in specific environments.**

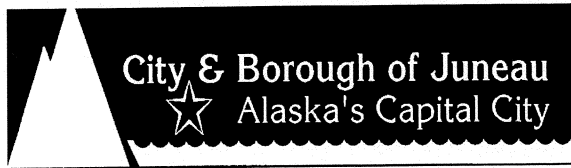
Specific environment	Critical health effect(s)	LAeq [dB]	Time base [hours]	LAm <sub>ax</sub> , fast [dB]
Outdoor living area	Serious annoyance, daytime and evening	55	16	-
	Moderate annoyance, daytime and evening	50	16	-
Dwelling, indoors	Speech intelligibility and moderate annoyance, daytime and evening	35	16	
Inside bedrooms	Sleep disturbance, night-time	30	8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60
School class rooms and pre-schools, indoors	Speech intelligibility, disturbance of information extraction, message communication	35	during class	-
Pre-school Bedrooms, indoors	Sleep disturbance	30	sleeping -time	45
School, playground outdoor	Annoyance (external source)	55	during play	-
Hospital, ward rooms, indoors	Sleep disturbance, night-time	30	8	40
	Sleep disturbance, daytime and evenings	30	16	-
Hospitals, treatment rooms, indoors	Interference with rest and recovery	#1		
Industrial, commercial, shopping and traffic areas, indoors and Outdoors	Hearing impairment	70	24	110
Ceremonies, festivals and entertainment events	Hearing impairment (patrons:<5 times/year)	100	4	110
Public addresses, indoors and outdoors	Hearing impairment	85	1	110
Music through headphones/ Earphones	Hearing impairment (free-field value)	85 #4	1	110
Impulse sounds from toys, fireworks and firearms	Hearing impairment (adults)	-	-	140 #2
	Hearing impairment (children)	-	-	120 #2
Outdoors in parkland and conservation areas	Disruption of tranquillity	#3		

#1: as low as possible;

#2: peak sound pressure (not LAm<sub>ax</sub>, fast), measured 100 mm from the ear;

#3: existing quiet outdoor areas should be preserved and the ratio of intruding noise to natural background sound should be kept low;

#4: under headphones, adapted to free-field values



# COMMUNITY DEVELOPMENT DEPARTMENT

230 South Franklin Street, Marine View Center, Fourth Floor  
Mailing Address: 155 South Seward Street, Juneau, Alaska 99801

## INTEROFFICE MEMO

**DATE:** April 26, 2011

**TO:** John Hartle, City Attorney  
Dale Pernula, Director, CDD

**FROM:** Ben Lyman, Senior Planner

**FAX #** (907)586-3365  
**VOICE #** (907)586-0758

**SUBJECT:** What can the CBJ regulate in regards to noise and noisy activities that occur as part of loading and unloading activities in the transfer of shipped materials between land and water carriers?

**FILE #:** TXT2009-000003

**PARCEL #:** 0 – Boroughwide

Both proceeding and during the development of the Draft Noise Ordinance, residents of particular areas of Juneau have complained about noise impacts resulting from the loading and unloading activities related to marine shipping; in particular, residents of Downtown Douglas and the Douglas Advisory Board have complained about noise from the Alaska Marine Lines/Lynden Transport facility on the Rock Dump, although this issue has also been raised in the past by neighbors of Northland Services, Inc., and CBJ harbor facilities.

There is clearly some extent to which the CBJ is prevented from regulating activities or the noises arising therefrom when those activities are part of interstate commerce, and when one or more Federal agencies have pre-empted local jurisdiction of an issue. Rather than washing our hands of the matter and simply stating that the CBJ cannot place local regulations on these activities and the noises that arise therefrom, the Planning Commission and staff desire to identify relevant federal regulations and to adopt them locally so as to enable local enforcement of those regulations. This memorandum chronicles my research and findings on the matter, both for the sake of reference in future discussions and research, and so as to enable the public and policy-makers to follow the reasoning that has led me to the conclusions that will be offered for incorporation into the Draft Noise Ordinance as local restrictions on activities and noises arising therefrom that are related to marine shipping, loading, and unloading.

### **Federal Laws, Regulations, and Definitions**

The first federal law reviewed is the *Noise Control Act of 1972* (42 United States Code [U.S.C.] 4910).

*Title 42, The Public Health and Welfare; Chapter 65, Noise Control; Section 4917. Motor carrier noise emission standards. (c) State and local standards and controls.*

(1) *Subject to paragraph (2) of this subsection but not withstanding any other provision of this chapter, after the effective date of a regulation under this section applicable to noise emissions resulting from the operation of any motor carrier engaged in interstate commerce, **no State or political subdivision thereof may adopt or enforce any standard applicable to the same operation of such motor carrier, unless such standard is identical to a standard applicable to noise emissions resulting from such operation prescribed by any regulations under this section.***

(2) *Nothing in this section shall diminish or enhance the rights of any State or political subdivision thereof to establish and enforce standards or controls on levels of environmental noise, or to control, license, regulate, or restrict the use, operation, or movement of any product if the Administrator, after consultation with the Secretary of Transportation, determines that such standard, control, license, regulation, or restriction is necessitated by special local conditions and is not in conflict with regulations promulgated under this section. [emphasis added]*

(d) defines “motor carrier” for the purposes of that section as “includ[ing] a motor carrier and motor private carrier as those terms are defined in section 13102 of title 49,” which brings us to:

(14) *Motor carrier. – The term “motor carrier” means a person providing commercial motor vehicle (as defined in section 31132) transportation for compensation.*

(15) *Motor private carrier. – The term “motor private carrier” means a person, other than a motor carrier, transporting property by commercial motor vehicle (as defined in section 31132) when –*

(A) *the transportation is as provided in section 13501 of this title;*

(B) *the person is the owner, lessee, or bailee of the property being transported; and*

(C) *the property is being transported for sale, lease, rent, or bailment or to further a commercial enterprise.*

These definitions beg the question of what other terms mean; beyond the obvious need to refer to section 31132 for the definition of “commercial motor vehicle,” the terms “person” and “transportation” require definition.

(18) *Person. – The term “person”, in addition to its meaning under section 1 of title 1, includes a trustee, receiver, assignee, or personal representative of a*

person.

- (23) *Transportation.* – The term “transportation” includes –
- (A) a motor vehicle, vessel, warehouse, wharf, pier, dock, yard, property, facility, instrumentality, or equipment of any kind related to the movement of passengers or property, or both, regardless of ownership or an agreement concerning use; and
  - (B) services related to that movement, including arranging for, receipt, delivery, elevation, transfer in transit, refrigeration, icing, ventilation, storage, handling, packing, unpacking, and interchange of passengers and property.

Although many new terms are used in these definitions, only a few appear to be relevant to the matter at hand; “motor vehicle” and “vessel” clearly both warrant definition.

(16) *Motor vehicle.* – The term “motor vehicle” means a vehicle, machine, tractor, trailer, or semitrailer propelled or drawn by mechanical power and used on a highway in transportation, or a combination determined by the Secretary, but does not include a vehicle, locomotive, or car operated only on a rail, or a trolley bus operated by electric power from a fixed overhead wire, and providing local passenger transportation similar to street-railway service.

(25) *Vessel.* – The term “vessel” means a watercraft or other artificial contrivance that is used, is capable of being used, or is intended to be used, as a means of transportation by water.

And finally, the term “highway” is defined:

(9) *Highway.* – The term “highway” means a road, highway, street, and way in a State.

There are also several other terms defined at 49 U.S.C. §13102 that appear to be relevant to the matter at hand, but they are not clearly referenced in any of the definitions above or in the original preemption of local regulation within the Noise Control Act of 1972. Terms that are used in one definition and that are themselves defined at 49 U.S.C. §13102, as well as the apparently relevant terms themselves, are defined below for reference:

(3) *Carrier.* – The term “carrier” means a motor carrier, a water carrier, and a freight forwarder.

(8) *Freight forwarder.* – The term “freight forwarder” means a person holding itself out to the general public (other than as a pipeline, rail, motor, or water carrier) to provide transportation of property for compensation and in the ordinary course of its business –

- (A) assembles and consolidates, or provides for assembling and consolidating, shipments and performs or provides for break-bulk and distribution operations of shipments;
- (B) assumes responsibility for the transportation from the place of

*receipt to the place of destination; and*

*(C) uses for any part of the transportation a carrier subject to jurisdiction under this subtitle.*

*The term does not include a person using transportation of an air carrier subject to part A of subtitle VII.*

*(17) Noncontiguous domestic trade. – The term “noncontiguous domestic trade” means transportation subject to jurisdiction under chapter 135 involving traffic originating in or destined to Alaska, Hawaii, or a territory or possession of the United States.*

*(26) Water carrier. – The term “water carrier” means a person providing water transportation for compensation.*

With all potentially relevant terms defined at 49 U.S.C. §13102, we may turn our attention back to the term “commercial motor vehicle (as defined in section 31132)”, originally encountered in the definitions of “motor carrier” and “motor private carrier” above:

*(1) “commercial motor vehicle” means a self-propelled or towed vehicle used on the highways in interstate commerce to transport passengers or property, if the vehicle –*

*(A) has a gross vehicle weight rating or gross vehicle weight of at least 10,001 pounds, whichever is greater;*

*(B) is designed or used to transport more than 8 passengers (including the driver) for compensation;*

*(C) is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation; or*

*(D) is used in transporting material found by the Secretary of Transportation to be hazardous under section 5103 of this title and transported in a quantity requiring placarding under regulations prescribed by the Secretary under section 5103.*

And finally, the question of jurisdiction raised by the definition of “noncontiguous domestic trade” refers us to chapter 135 to determine what aspect of transportation to or from Alaska is within or without of the Department of Transportation’s jurisdiction. As it will become relevant later in this discussion, the citation for this chapter is 49 U.S.C. subtitle IV, part B.

*Subchapter I, Motor Carrier Transportation, Sec. 13501. General Jurisdiction. The Secretary and the Board have jurisdiction, as specified in this part, over transportation by motor carrier and the procurement of that transportation, to the extent that passengers, property, or both, are transported by motor carrier –*

*(1) between a place in –*

*(A) a State and a place in another State;*

*(B) a State and another place in the same State through another State;*

- (C) *the United States and a place in a territory or possession of the United States to the extent the transportation is in the United States;*
- (D) *the United States and another place in the United States through a foreign country to the extent the transportation is in the United States; or*
- (E) *the United States and a place in a foreign country to the extent the transportation is in the United States; and*
- (2) *in a reservation under the exclusive jurisdiction of the United States or on a public highway.*

Subchapter I, Motor Carrier Transportation, Sec. 13502 speaks to “exempt transportation between Alaska and other States.” This section essentially provides that neither the Secretary nor the Board have jurisdiction over the conduct of the motor carrier while they are in a foreign country. It is inapplicable to the matter at hand, but is mentioned so as to ensure that no confusion results from there being a section so named.

*Subchapter I, Motor Carrier Transportation, Sec. 13503. Exempt motor vehicle transportation in terminal areas.*

- (a) *Transportation by Carriers. –*
  - (1) *In general. – Neither the Secretary nor the Board has jurisdiction under this subchapter over transportation by motor vehicle provided in a terminal area when the transportation –*
    - (A) *is a transfer, collection, or delivery;*
    - (B) *is provided by –*
      - (i) *a rail carrier subject to jurisdiction under chapter 105;*
      - (ii) *a water carrier subject to jurisdiction under subchapter II of this chapter; or*
      - (iii) *a freight forwarder subject to jurisdiction under subchapter III of this chapter; and*
    - (C) *is incidental to transportation or service provided by the freight forwarder that is subject to jurisdiction under chapter 105 of this title or under subchapter II or III of this chapter.*
  - (2) *Applicability of other provisions. – Transportation exempt from jurisdiction under paragraph (1) of this subsection is subject to jurisdiction under chapter 105 when provided by such a rail carrier, under subchapter II of this chapter when provided by such a water carrier, and under subchapter III of this chapter when provided by such a freight forwarder.*

Subsection (b) addresses transportation by agent, and contains nearly identical language to that in subsection (a), so it is not reproduced here, as the crucial phrase for our purposes is that water carriers are subject to jurisdiction under subchapter II of this chapter.

It is important to note that in the definition above, transportation provided by “motor vehicle” includes transportation provided by a “water carrier.” The definitions at section 13102 do not make this link clear, but the ramifications of the connection between these two terms as used above warrant scrutiny, a topic that will be further investigated later in this memorandum.

The section above also introduces a new term, that of “terminal area.” Since the exemption applies only in terminal areas, this term will be of critical importance to our understanding the matter at hand; the definition of “terminal area” is given below.

*Subchapter I, Motor Carrier Transportation, Sec. 13506. Miscellaneous motor carrier transportation exemptions.*

Subsection (a) of this section lists particular types of vehicles and transportation that are outside the jurisdiction of the Secretary and the Board; these exemptions include school buses, taxis, hotel shuttles, newspaper delivery vehicles, and many other specific vehicle types and purposes. It is not relevant to the matter at hand is therefore not reproduced here. Subsection (b), on the other hand, is of particular interest to the matter at hand, and is therefore reproduced in part below. Sections not reproduced are exceptions to the exemption from jurisdiction that do not apply to the matter at hand.

*(b) Exempt Unless Otherwise Necessary. – Except to the extent the Secretary or Board, as applicable, finds it necessary to exercise jurisdiction to carry out the transportation policy of section 13101, neither the Secretary nor the Board has jurisdiction under this part over –*

*(1) transportation provided entirely in a municipality, in contiguous municipalities, or in a zone that is adjacent to, and commercially a part of, the municipality or municipalities, except –*

*(A) when the transportation is under common control, management, or arrangement for a continuous carriage or shipment to or from a place outside the municipality, municipalities, or zone; or*

*(B) that in transporting passengers over a route between a place in a State and a place in another State, or between a place in a State and another place in the same State through another State, the transportation is exempt from jurisdiction under this part only if the motor carrier operating the motor vehicle also is lawfully providing intrastate transportation of passengers over the entire route under the laws of each State through which the route runs;*

*[subsections (2) and (3) omitted]*

As with the subsection above, portions of the following section are unnecessary or inapplicable to the matter at hand. Subsections referring to transportation by a combination of motor and water carriers, or between various combinations of places within the United States, States, and transshipment have been omitted as they do not apply to the matter at hand.



*Subchapter II, Water Carrier Transportation, Sec. 13521. General jurisdiction.*

*(a) General rules. – The Secretary and the Board have jurisdiction over transportation insofar as water carriers are concerned –*

*(1) by water carrier between a place in a State and a place in another State, even if part of the transportation is outside the United States; [subsections (2), (3), and (b) omitted]*

As mentioned previously, the exemptions at §13503 apply only to motor vehicle transportation that occurs within a terminal area. 49 C.F.R. Chapter III §372 Subpart C – Terminal Areas states at §372.301 that:

*The terminal area within the meaning of 49 U.S.C. 13503 of any motor carrier of property or freight forwarder subject to 49 U.S.C. subtitle IV, part B at any municipality authorized to be served by such motor carrier of property or motor carrier of passengers in the transportation of express or freight forwarder, within which transportation by motor carrier in the performance of transfer, collection, or delivery services may be performed by, or for, such motor carrier of property or freight forwarder without compliance with the provisions of 49 U.S.C. subtitle IV, part B consists of and includes all points or places which are:*

- (a) Within the commercial zone, as defined by the Secretary, of that municipality, and*
- (b) Not beyond the limits of the operating authority of such motor carrier of property or freight forwarder.*

Which in turn begs the question of what the Secretary defines as the “commercial zone” of the City and Borough of Juneau.

*49 C.F.R. Chapter III §372.241 Commercial zones determined generally, with exceptions.*

*The commercial zone of each municipality in the United States, with the exceptions indicated in the note at the end of this section, within which the transportation of passengers or property, in interstate or foreign commerce, when not under a common control, management, or arrangement for a continuous carriage or shipment to or from a point without such zone, is exempt from all provisions of 49 U.S.C. subtitle IV, part B shall be deemed to consist of:*

- (a) The municipality itself, hereinafter called the base municipality;*
- (b) All municipalities which are contiguous to the base municipality;*
- (c) All other municipalities and all unincorporated areas within the United States which are adjacent to the base municipality as follows:*

*[subsections (1) and (2) omitted as irrelevant]*

*(3) When the base municipality has a population of 25,000 but less than 100,000 all unincorporated areas within 6 miles of its corporate limits and all of any other municipality any part of which is within 6 miles of the corporate limits of the base municipality,*

[subsections (4)-(7) and (d) omitted as irrelevant]

*§372.243 Controlling distances and population data.*

*In the application of §372.241:*

- (a) Air-line distances or mileages about corporate limits of municipalities shall be used.*
- (b) The population of any municipality shall be deemed to be the highest figure shown for that municipality in any decennial census since (and including) the 1940 decennial census.*
- (c) Contraction of municipal boundaries will not alter the size of commercial zones.*

### **Discussion**

Having arrived at the end of the chain of definitions, exemptions, and other cross-references, I am left with the knowledge that something has indeed been described, but its exact form is anything but apparent. Accordingly, armed with the information documented above, I embark on a second process of discovery, this one in an attempt to understand how the various provisions listed above affect the City and Borough of Juneau and our regulation of marine shipping loading and unloading activities resulting in noise.

This portion of the chronicle starts in Juneau, Alaska, a municipality with a population of 30,711 in the 1990 decennial census. The terminal area for the municipality of Juneau is, therefore, all of the City and Borough of Juneau, all points within 6 air-line miles of the City and Borough of Juneau except those points within Canada (outside the United States), as well as all points within adjacent municipalities.

Within the terminal area neither the Secretary nor the Board of the Department of Transportation have jurisdiction when the transportation by motor vehicle is a transfer, collection, or delivery, or when it is provided by a water carrier (§13503(a)(1)(A) and (B)(ii)), except as provided at §13521(a), where the Secretary and Board are given jurisdiction over water carrier transportation between various States. This appears to provide that transfers, collections, and deliveries that are accomplished by a motor vehicle are outside the jurisdiction of the Secretary and the Board, while the transportation by water carrier – that is, the movement of goods on a vessel that is in motion, or at least that has not yet docked or anchored – is under the jurisdiction of the Secretary and Board.

This interpretation, if correct, leads us to understand that the City and Borough of Juneau may regulate activities related to transferring goods between a vessel and the land. Those regulations will, however, need to be carefully considered so as to ensure that they do not inadvertently violate the provisions of the Noise Control Act of 1972; that is, they will need to be identical to any regulations restricting noise that have been adopted under 42 U.S.C. 4917. Be that as it may, I have been unable to locate a single regulation adopted

under that section that is applicable to noise emissions; accordingly, it appears that the City and Borough of Juneau may regulate noise emissions from motor carriers without violating 42 U.S.C. 4917, as the restriction on state and local regulation of noise emissions from motor carriers only applies after the adoption of federal regulations under that section. In a nutshell, I interpret this to mean that unless and until the federal government adopts regulations under 42 U.S.C. 4917 that restrict noise emissions from motor carriers, the pre-emption of state and local regulation of such noise emissions does not occur. If this interpretation is correct, the rest of the discussion in this document is moot, but in case this interpretation is incorrect, my attention now turns to other aspects of the matter at hand.

The next question is in regard to the distinction between motor carriers and water carriers, and if such a distinction affects the City and Borough of Juneau's ability to regulate noise emissions from water carriers.

The Noise Control Act of 1972 specifies that "...after the effective date of a regulation under this section applicable to noise emissions resulting from the operation of any motor carrier engaged in interstate commerce, no State or political subdivision thereof may adopt or enforce any standard applicable to the same operation of such motor carrier..." Thus, if a water carrier is a motor carrier, then this provision applies to local standards affecting water carriers; if, on the other hand, a water carrier is not a motor carrier, then this provision would not apply to local standards affecting water carriers.

As was noted above, "the term 'motor carrier' means a person providing commercial motor vehicle (as defined in section 31132) transportation for compensation," and "'commercial motor vehicle' means a self-propelled or towed vehicle used on the highways in interstate commerce to transport passengers or property..." Additionally, "'highway' means a road, highway, street, and way in a State." Thus, unless a waterway was designated as a road, highway, street, or way, a water carrier could not be a motor carrier if these definitions were all that provided direction on this matter. However, *Subchapter I, Motor Carrier Transportation, Sec. 13503. Exempt motor vehicle transportation in terminal areas* provides a different link between motor carriers and water carriers:

- (a) *Transportation by Carriers. –*
  - (1) *In general. – Neither the Secretary nor the Board has jurisdiction under this subchapter over transportation by motor vehicle provided in a terminal area when the transportation –*
    - (B) *is provided by –*
      - (i) *a rail carrier...;*
      - (ii) *a water carrier...; or*
      - (iii) *a freight forwarder...*

Under this section, rail carriers, water carriers, and freight forwarders are all sub-types of transportation by motor vehicles, or "motor carriers." This section indicates that water carriers, as a type of motor carrier, are subject to the provisions of the Noise Control Act

of 1972, including the federal pre-emption of local standards differing from federal regulations. I am unsure which of these interpretations is correct, and am unable to discern which federal provision takes priority; therefore, I am unable to offer a recommendation on how the CBJ should proceed in this matter. Assistance in interpreting the many component parts of this puzzle is requested.

**Benjamin Lyman**

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**From:** Benjamin Lyman  
**Sent:** Friday, June 03, 2011 8:29 AM  
**To:** 'RICK BIERMAN'  
**Subject:** RE: DRAFT CBJ Noise Ordinance

Thank you, Rick-

There was certainly no intent to make hunting or (safe) target shooting illegal in the language of the DRAFT ordinance, but you are absolutely right that such a ban would result from the existing language. I will amend the DRAFT accordingly before it is re-released next week.

We have discussed your concerns about the geographic scope of the DRAFT ordinance in the past, and as before, I do understand your concerns, and will forward them to the Planning Commission for their consideration.

Ben Lyman  
 Senior Planner  
 City and Borough of Juneau, Alaska

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**From:** RICK BIERMAN [mailto:whaleseye@starband.net]  
**Sent:** Thursday, June 02, 2011 9:05 PM  
**To:** Benjamin Lyman  
**Subject:** Re: DRAFT CBJ Noise Ordinance

Dear Benjamin,

It looks to me that this will effectively ban fire arm hunting and target shooting in the CBJ except at areas discribed on page 12,13. I don't see how anyone can hunt or shoot a firearm on Shelter or Lincoln islands or up the Taku. I don't see a boundry for these activities. Living on Shelter Island, as I do, I see a new law being laid on us where there is no enforcment and no intent to inforce. Please keep this to the roaded ares of CBJ.

Yours,

Rick Bierman

On Thu, Jun 2, 2011 at 4:19 PM, Benjamin Lyman <[Ben\\_Lyman@ci.juneau.ak.us](mailto:Ben_Lyman@ci.juneau.ak.us)> wrote:

Good afternoon-

You are receiving this email because you have indicated that you are interested in following the development of a new CBJ Noise Ordinance, your email address is associated with a Neighborhood Association, you are a Planning Commissioner, or you are an interested CBJ department representative. If you do not desire to receive these emails in the future, please contact me and will remove you from the distribution list for future updates on this project.

The attached document is the most recent DRAFT Noise Ordinance, which will be presented to the Planning Commission for their consideration during their regular meeting on June 14, 2011 at 7:00 pm in Assembly Chambers, 155 S. Seward St. Public testimony will be accepted at this meeting.

Please note that the Planning Commission WILL NOT be considering or discussing the DRAFT section CBJ 42.20.340 *Nuisance Noises*, as it does not relate to land use or permitting. The entire DRAFT Ordinance is provided here for your review and consideration with as much lead time as possible; a staff report discussing the portions of the DRAFT Ordinance that will be reviewed by the Planning Commission will be sent to interested parties next week. Any comments on *Nuisance Noises* can be sent to me directly, and I will forward those comments to the Assembly or other relevant bodies for consideration.

Thank you for your continued interest in this important topic.

Ben Lyman  
Senior Planner  
Community Development Department  
City and Borough of Juneau  
907-586-0758

Mr. Lyman:

Thank you for forwarding the draft noise ordinance to me. I have some comments I would appreciate you forwarding to the Assembly and any committees working on this ordinance.

1. Section 42.20.350 should be deleted from this draft. This is unacceptably vague, and until you can specify exactly what federal law says about noises it should not be included. In addition, the city could choose to impose higher standards on noise either in decibel level or hours of operation than does the federal government, and we should not preclude that from happening by stating that all noises regulated by federal law are exempt from any limitations Juneau may wish to impose. As we have seen in the recent health reform debate, "interstate commerce" can be interpreted to include a vast array of activities. Juneau may well wish to take up again the flightseeing noise issue, or cruise ship noise. Could this possibly include mining noise? Freight loading docks? This section should be adopted separately and inserted into the ordinance when the community of Juneau knows specifically what it means.
2. Section 49.15.910 (b) should require individual notification of all households within a specified distance of proposed excessive construction noise. The distance should be adequate to cover all households which would be likely to experience excessive noise. The measurement of such distance should be made in a specified manner, e.g. Google Earth or other measuring device.
3. The city should specify in all construction contracts that compliance with the noise ordinance is required, or they will incur substantial fines commensurate with the size of the project. Contractors should also be required by law to use all standard means of reducing the noise emissions of their equipment, or be faced with significant fines.

Sincerely

Mary Ann Dlugosch

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Presented by:  
Introduced:  
Drafted by:

**ORDINANCE OF THE CITY AND BOROUGH OF JUNEAU, ALASKA**

**Serial No. 2011-XX - CDD STAFF DRAFT**

**June 6, 2011 DRAFT**

**An Ordinance Relating to Noise, and Providing for a Penalty.**

BE IT ENACTED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

**Section 1. Classification.** This ordinance is of a general and permanent nature and shall become a part of the City and Borough Code.

**Section 2. Fine Schedule.** CBJ 03.30.063 and .064 Land use and penal code fine schedules, are hereby amended to read:

**DIVISION 12.**

**LAND USE**

**03.30.063 *Land use fine schedule.***



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Pursuant to sections 03.30.010—03.30.015 of this chapter those of the following land use offenses which are amenable to disposition without court appearance may be disposed of upon payment of the fines listed to the municipal clerk of the court. If a person charged with one of these offenses appears in court and is found guilty, the penalty imposed for the offense may not exceed the fine amount for that offense listed in the following schedule:

LAND USE FINE SCHEDULE

CBJ	Offense	No. of Offenses	Fine
49.15.110 <i>or</i> 49.15.910 charged as infraction under CBJ 49.10.640	Permit Requirement	1 <sup>st</sup>	\$100.00
		2 <sup>nd</sup> within 2 years	200.00
		3 <sup>rd</sup> and subsequent within 2 years	MCA

\* "MCA" in the fine schedule means mandatory court appearance; fine schedule not applicable.

**03.30.065 Penal code fine schedule.**

Pursuant to sections 03.30.010--03.30.015 of this chapter, the following offense which is amenable to disposition without court appearance may be disposed of upon payment of the fine listed to the municipal clerk of the court. If a person charged with this offense appears in court and is found guilty, the penalty imposed for the offense may not exceed the fine amount for the offense listed in the following schedule:

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PENAL CODE FINE SCHEDULE

CBJ	Offense	No. of Offenses	Fine
42.20.095(f) 360	<del>Disturbing the peace</del> <i>Excessive Noise</i>	<i>Any 1st</i>	<del>\$300.00</del> <i>\$100.00</i>
		<i>2<sup>nd</sup></i>	<i>\$200</i>
		<i>3<sup>rd</sup></i>	<i>\$300</i>
		<i>4<sup>th</sup> and subsequent within 2 years</i>	<i>MCA*</i>
42.20.200	Panhandling restricted	Any	\$75.00
42.20.220	Truancy	1st 2nd 3rd and subseq.	100.00 MCA*
42.35.100(c)	Possession or use of synthetic cannabinoid	1st	\$100.00
		2nd	200.00
		3rd and subseq.	300.00

\* "MCA" in the fine schedule means mandatory court appearance; fine schedule not applicable.

**Section 3. Repeal of Section.** CBJ 42.20.095 Disturbing the peace, is hereby repealed.

**Section 4. Amendment of Chapter.** Chapter CBJ 42.20 Offenses Against Public Order, is amended by the addition of a new Article II Noise, including sections CBJ 42.20.300 - 380, to read:

1 **42.20.300 *Prohibition on excessive noises.***

2 (a) No person shall cause or permit any sound that exceeds the maximum  
3 permissible sound levels set forth in this chapter to emanate from property under that  
4 person's control in violation of this article.

5  
6 (b) In a prosecution under this section, it shall be a rebuttable presumption that  
7 the owner, tenant, or person in charge of real property, or the registered owner of the  
8 vehicle, from which noise emanates has caused or allowed to be caused the noise which  
9 violates this section.

10  
11 **42.20.310 *Sound measurement.***

12 (a) While sound measurements are not required for the enforcement of this article,  
13 should measurements be made, they shall be made with a sound level meter. The sound  
14 level meter:

15  
16 (1) Shall be an instrument in good operating condition, certified by ANSI as  
17 meeting the requirements of a Type I meter;

18  
19 (2) Shall contain at least an A-weighted scale, and both fast and slow meter  
20 response capability.

21  
22 (b) If measurements are made, the person making those measurements shall have  
23 completed training in the use of the sound level meter, and shall use measurement  
24 procedures consistent with that training.

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(c) Measurements shall be made from:

(1) Within any right-of-way or other property beyond the property line of the property from which the noise emanates, but not from any other real property owned or controlled by the owner, tenant, or person in charge of the real property from which the noise emanates; or,

(2) According to regulations adopted pursuant to CBJ 01.60.

**42.20.320 *Maximum permissible sound levels.***

Unless otherwise provided in sections .330, .340, or .350 of this Article it is unlawful for any person to produce, or permit to be produced, sound which:

(a) Interferes with normal spoken communication, disturbs sleep, or causes discomfort or annoyance to any reasonable person of normal sensitivity; except residents of the dwelling from which the sound is emanating; or

(b) If a noise meter is used to measure the sound, exceeds the maximum permissible sound levels set forth in this Title.

(c) Day-Time hours referenced in this Title are designated in Table 1; Night-Time hours are those hours not listed as Day-Time hours in Table 1:

1 *Table 1: Day-Time Hours*

2

<i>Monday-</i>				
<i>Friday</i>	<i>7:00</i>	<i>a.m. to</i>	<i>10:00</i>	<i>p.m.</i>
<i>Saturday</i>	<i>7:00</i>	<i>a.m. to</i>	<i>9:00</i>	<i>p.m.</i>
<i>Sunday</i>	<i>9:00</i>	<i>a.m. to</i>	<i>9:00</i>	<i>p.m.</i>

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7 **42.20.330 Land Use Noises**

8 (a) Steady, Continuous Noises

9

10 (1) If the sound source under investigation is a mechanical device other than a  
11 generator subject to subsection (2) of this section, and is emitting a sound with  
12 a steady tonal quality, that sound shall not exceed 48 dBA on a residential  
13 receiving property or 55 dBA on a non-residential receiving property during the  
14 night-time hours shown at CBJ.42.20.320(c) Table 1, or 58 dBA on a residential  
15 receiving property during the day-time hours shown at CBJ.42.20.320(c) Table  
16 1.

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18 (2) Emergency and backup electrical generators, as well as standby  
19 generators, shall not create sounds louder than 70 dBA on a residential  
20 receiving property without first being issued a Land Use noise permit as  
21 described at subsection (c) of this section.

22

23 (b) Impulsive Sounds

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1 (1) During the day-time hours listed at CBJ 42.20.320(c) Table 1, impulsive  
2 sounds occurring ten times or fewer in an hour shall not exceed 73 dBA on a  
3 residential receiving property.

4  
5 (2) During the night-time hours listed at CBJ 42.20.320(c) Table 1, impulsive  
6 sounds occurring four times or fewer in an hour shall not exceed 63 dBA on a  
7 residential receiving property or 70 dBA on a non-residential receiving  
8 property.

9  
10 (c) Noise Permits

11  
12 Land Use Noise Permits or Construction Noise Permits issued pursuant to the  
13 provisions of CBJ 49.15 Article IX may allow specific instances of noise emission  
14 that exceed the noise limits set in this Title.

15  
16 **42.20.340 Nuisance Noises**

17 (a) Noise Limit for Residential Receivers at Night.

18  
19 (1) During the night-time hours defined at CBJ 42.20.320(c) Table 1, no person  
20 shall cause sounds exceeding 53 dBA on a receiving residential property.

21  
22 (2) When the enforcement officer determines that the ambient or background  
23 sound level exceeds 53 dBA, the night-time noise limit shall be increased to 5  
24 dBA over ambient or background noise levels, but shall not in any case be

1 increased over 65 dBA.

2

3 (b) Impulsive Sounds

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5 (1) During the day-time hours listed at CBJ 42.20.320(c) Table 1, impulsive  
6 sounds occurring ten times or fewer in an hour shall not exceed 73 dBA on a  
7 residential receiving property.

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9 (2) During the night-time hours listed at CBJ 42.20.320(c) Table 1, impulsive  
10 sounds occurring four times or fewer in an hour shall not exceed 63 dBA on a  
11 residential receiving property or 70 dBA on a non-residential receiving  
12 property.

13

14 (c) Noise from motor vehicles.

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16 (1) No person shall play, continue to play, or allow to be played, any sound  
17 system from, within, or on any motor vehicle so that any sound, music, or  
18 vibration emanating therefrom can be heard at a distance of more than 100  
19 feet at any time, or at 30 feet during the night-time hours at 42.20.320(c) Table  
20 unless the vehicle is a sound truck operating pursuant to a permit issued under CBJ  
21 72.10.150.

22

23 (2) No person shall use or allow the use of exhaust back-pressure or “Jake”  
24 brakes at any time within the Urban Service Area shown in the

25 Page 8 of 24

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1 comprehensive plan adopted at CBJ 49.05.200(b)(1).

2  
3 (3) A motor vehicle must be equipped, maintained, and operated so as to  
4 prevent excessive or unusual noise and the escape of fumes into the vehicle.  
5 A motor vehicle must be equipped with a muffler or other effective noise-  
6 suppressing system in good working order and in constant operation. No  
7 person may use a muffler cutout, bypass, or similar device, or modify the  
8 exhaust system of a motor vehicle in a manner which amplifies or increases  
9 the noise emitted by the engine of the vehicle above that emitted by the  
10 muffler originally installed on the vehicle for use on the highway or a  
11 vehicular way or area. A person may not alter an exhaust particle emission  
12 system built into a motor vehicle to decrease its effectiveness.

13 [Source: 13 AAC 04.215. Noise prevention; mufflers]

14  
15 (d) No person shall allow or permit frequent, repetitive, or continuous noise made  
16 by any animal which unreasonably disturbs or interferes with the peace, comfort, and  
17 repose of property owners or possessors to emanate from property under that person's  
18 control, except that such sounds made by animal shelters, commercial kennels,  
19 veterinary hospitals, pet shops, or a pet kennel operating under and in compliance with  
20 a valid Land Use Noise Permit issued according to CBJ 49.15.910(a) may be exempted  
21 from this subsection as provided at CBJ 42.20350(l).

22  
23 **42.20.350 Exceptions.**

24 The following shall not be considered violations of this Article, even if the sound  
25 Page 9 of 24



1 limit specified in CBJ 42.20.330 or CBJ 42.20.340 is exceeded:

2

3 (a) Non-amplified sounds created by organized athletic or other group activities,  
4 when such activities are conducted on public property generally used for such purposes,  
5 such as stadiums, parks, schools, and athletic fields, during normal hours for such  
6 events, or from 7:00 AM to 11:00 PM Sun-Thurs or 7:00 AM to 12:00 AM Fri-Sat,  
7 whichever is more restrictive, provided that this exception is not extended to sounds  
8 produced by mechanical devices of any kind, including motorized vehicles, firearms, or  
9 noise makers other than acoustic instruments.

10

11 (b) Sounds caused by emergency work, or by the ordinary and accepted use of  
12 emergency equipment, vehicles and apparatus, regardless of whether such work is  
13 performed by a public or private agency, or upon public or private property;

14

15 (c) Sounds caused by bona fide use of emergency warning devices and alarm  
16 systems;

17

18 (d) Sounds regulated by federal law, including but not limited to sounds caused by  
19 aircraft or interstate commerce;

20

21 [CDD and Law Department staff are working to identify the Federal Regulations  
22 that we can adopt and enforce locally; this exception is a place-holder until those  
23 regulations are locally adopted.]

24

25 (e) Sounds caused by construction or demolition activities when performed under

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1 the applicable permits issued by appropriate governmental authorities and only during  
2 the Day-Time Hours listed in CBJ 42.20.320(c) Table 1, unless pursuant to a Noise  
3 Permit for construction or demolition activities issued under CBJ 49.15 Article IX that  
4 extends those hours;

5  
6 (f) Sounds caused by air-, electrical- or gas-driven domestic tools, including, but  
7 not limited to, lawn mowers, lawn edgers, radial arm, circular and table saws, chain  
8 saws, drills, leaf-blowers, and other similar lawn or construction tools used  
9 intermittently as an accessory or incidental use of a property during the Day-Time  
10 Hours listed in CBJ 42.20.320(c) Table 1, unless pursuant to a Noise Permit for  
11 construction activities issued under CBJ 49.15 Article IX that extends those hours;

12  
13 (g) Sounds created by community events, such as parades, public fireworks  
14 displays, street fairs, and festivals that the City Manager or designee has determined in  
15 writing to be community events for the purposes of this section. The City Manager's  
16 decision shall be based on the anticipated number of participants or spectators, the  
17 location of the event and other factors the City Manager determines to be appropriate  
18 under the circumstances;

19  
20 (h) Sounds made between midnight and 12:30 a.m. on January 1 of each year;

21  
22 (i) Sounds made by snow removal equipment or operations, provided that all snow  
23 removal equipment powered by an internal-combustion engine shall be equipped with a  
24 factory-installed or equivalent muffler in proper working order, and provided further

1 that this exception applies to the acts of plowing, scraping, and loading conducted in a  
2 reasonable manner, and that impulsive banging or hitting of snow removal equipment  
3 against concrete, asphalt, or other hard surfaces shall not be so exempted and shall be  
4 restricted to the provisions of CBJ 42.20.330(b) and CBJ 42.20.340(b). The collection  
5 and removal of gravel, sand, and other materials spread to increase traction during  
6 snowy or icy periods are likewise exempted from noise limits except those pertaining to  
7 impulsive sounds at CBJ 42.20.330(b) and CBJ 42.20.340(b).

8  
9 (j) Sounds made by solid waste collection or street sweeping equipment or  
10 operations during the hours of 6:00 a.m. to 7:00 p.m., provided that all solid waste  
11 removal equipment powered by an internal-combustion engine shall be equipped with a  
12 factory-installed or equivalent muffler in proper working order;

13  
14 (k) Sounds from uses existing or operating at the time ordinance becomes effective  
15 which exceed the standards contained in this article shall be exempt from these  
16 standards for a period of two years from \_\_\_\_, the date of adoption of this ordinance, after  
17 which time they must operate under a valid permit issued pursuant to CBJ 49.15 Article  
18 IX or comply with the standards in this article;

19  
20 (l) Sounds created by an activity for which a valid Noise Permit has been issued  
21 pursuant to CBJ 49.15 Article IX, when those sounds are created in accordance with the  
22 issued Noise Permit; and,

23  
24 (m) Sounds caused by firearms discharged at:

- 1 (1) The Hank Harmon Rifle Range from 7:00 AM to 9:00 PM or during  
2 daylight hours, whichever is shorter;
- 3 (2) At the Juneau Gun Club trap range from 8:00 AM to 9:00 PM;
- 4 (3) Within the Mendenhall Wetlands State Game Refuge when used in the  
5 course of legal hunting; or,
- 6 (4) Any other location and time where permitted by law.

7

8 **42.20.360 *Penalty.***

9 Violation of this Article is an infraction. Each day during which a violation occurs  
10 shall be deemed a separate infraction.

11

12 **42.20.370 *Enforcement.***

13 The chief of police, or the chief's designee, shall have the authority to enforce the  
14 provisions of this chapter and have the authority to issue citations for violations of this  
15 chapter. The code compliance officer or any other designee of the manager shall have  
16 the authority to enforce the provisions of CBJ 42.20.330(a) and have the authority to  
17 issue citations for violations of that section.

18

19 **42.20.380 *Definitions.***

20 As used in this Article:

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22 *EDNA* means Environmental Designation for Noise Abatement. The  
23 Environmental Designation for Noise Abatement (EDNA) of any property shall be based  
24 on the zoning of the property as follows:

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*Class A EDNA* means lands primarily designated for residential purposes or mixed use, including the RR, D-1, D-3, D-5, D-10, D-10sf, D-15, D-18, LC, GC, MU, and MU2 zoning districts.

*Class B EDNA* means lands involving activities of such a nature that higher noise levels than would be experienced in other EDNAs are normally to be anticipated, including the WC, WI and I zoning districts.

*Impulsive sound* means either a single pressure peak of a single burst or multiple pressure peaks having a duration of less than one second.

*Residential receiving property* means a property within a Class A EDNA that is developed with one or more dwelling units.

*Property line* means the surveyed line at ground surface separating the real property owned, rented, or leased by one or more persons from that owned, rented, or leased by one or more other persons, and its vertical extension, or, in the case of multifamily units such as duplexes, triplexes, apartment houses, and condominiums, the walls, ceilings, and floors of each separately owned, rented, or leased unit.

**Section 5. Amendment to Section.** CBJ 49.15, is amended to include Article IX, Noise Permits.

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## Article IX. Noise Permits

4 **49.15.900 Purpose.**

5 **49.15.910 Noise permit required.**

6 **49.15.920 Expiration.**

7 **49.15.930 Penalty.**

8 **49.15.940 Nonconforming development.**

9

10 **49.15.900 Purpose.**

11 A noise permit is required for a use that can reasonably be expected to create noise  
12 that exceeds the limits set forth in CBJ 42.20.330. The noise permit procedure is  
13 intended to afford the commission the flexibility necessary to make determinations  
14 appropriate to individual sites. The commission may attach to the permit those  
15 conditions listed in .910(a)(3) of this section as well as any further conditions it finds  
16 necessary to mitigate external adverse impacts of noise. If the commission  
17 determines that these impacts cannot be satisfactorily mitigated, the permit shall be  
18 denied.

19

20 For construction activities that must take place during the night-time hours set forth  
21 in CBJ 42.20.320(c) Table 1, a construction noise permit is required for activities  
22 using heavy machinery or processes that are likely to have adverse noise impacts on  
23 area residents. The construction noise permit procedure is intended to afford the  
24 public with notice of the proposed construction-related noise and allow for public

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1 input on its issuance while providing for an expedient permit review process that will  
2 not unduly restrict important construction activities.

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4 **49.15.910 Noise permit required.**

5  
6 (a) *Land use noise permit.* A land use noise permit is required for any land use  
7 that can reasonably be expected to create noises in excess of the limits set forth in  
8 CBJ 42.20.330. The permit shall be reviewed by the commission under this section.  
9 Use of the property shall be restricted to that set forth in the permit application and  
10 any conditions placed thereon by the commission.

11  
12 (1) *Public Notice.* Public notice shall be provided as prescribed in CBJ  
13 49.15.230, except that the sign at subsection (3) shall be on a yellow  
14 background and notice at subsection (4) shall be mailed to all property owners  
15 within 1,000 feet of the property subject to the permit; where the property  
16 subject to the permit is within 500 feet of a shoreline, notice shall also be  
17 provided to property owners within 500 feet of any shoreline within one-half  
18 mile of the subject property. Additionally, notice of application for a Land Use  
19 Noise Permit shall be provided to the Juneau Police Department. The  
20 applicant shall be responsible for paying the costs of providing mailed notice  
21 prior to the mailing of the notices, according to the schedule at CBJ  
22 49.85.100(3)(A)(vii).

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24 (2) *Review of director's determinations.*

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(A) At the hearing on the land use noise permit, the planning commission shall review the director's report to consider:

(i) Whether the proposed use is appropriate for the zone in which the use will be located;

(ii) Whether the application is complete; and

(iii) Whether the development as proposed will comply with the other requirements of this title.

(B) The commission shall adopt the director's determination on each item set forth in paragraph (A) of this subsection (2) unless it finds, by a preponderance of the evidence, that the director's determination was in error, and states its reasoning for each finding with particularity.

(3) *Specific conditions.* The commission may alter the director's proposed permit conditions, impose its own, or both. Conditions may include one or more of the following:

(A) *Mitigation.* On- or off-site mitigation, such as the construction and maintenance of sound-reducing berms, vegetative buffers, and installation of sound-dampening devices, may be required.



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(B) *Performance bonds.* The commission may require the posting of a bond or other surety or collateral approved as to form by the city attorney to guarantee the satisfactory completion of all improvements required by the commission, be they on- or off-site. The instrument posted may provide for partial releases.

(C) *Covenants.* The commission may require the execution and recording of covenants, servitudes, or other instruments satisfactory in form to the city attorney as necessary to ensure permit compliance by future owners or occupants.

(D) *Expiration.* The commission may set an expiration date for the noise permit that shall not be less than one year.

(E) *Time restrictions.* The commission may set limits to the time of day or the day of the week when the permit applies to the use or portion thereof.

(F) *Noise level restrictions.* The commission may set permitted maximum noise levels emanating from the use or portion thereof.

(G) *Type or source of noise.* The commission may limit the noise permit to apply to a particular source, excluding all other noises emanating from

1 the subject use or any portion thereof from the permit.

2  
3 (H) *Other conditions.* Such other conditions as may be reasonably  
4 necessary to mitigate external adverse impacts of noise emitted from  
5 the subject use or permitted portion thereof.

6  
7 (4) *Notice of issued permit.* Notice of the issuance of a Land Use Noise Permit,  
8 including any conditions placed thereon, shall be provided to the Juneau Police  
9 Department.

10  
11 (5) *Posting of issued permit.* A permit card issued by the department shall be  
12 posted on the site where the activity permitted by the Land Use Noise Permit takes  
13 place, in a location that is visible from an adjacent public right-of-way, or where the  
14 site is accessed if the site is not adjacent to a public right-of-way.

15  
16 (b) *Construction noise permit.* During the night-time hours listed at CBJ  
17 42.20.320(c) Table 1, it is unlawful to operate any pile driver, power shovel,  
18 pneumatic hammer, derrick, power hoist, rock crusher, asphalt plant, or similar  
19 heavy construction equipment, unless a construction noise permit shall first be  
20 obtained from the building official. Such permit shall be issued by the building  
21 official only upon a written determination that such operation during hours not  
22 otherwise permitted under this section is necessary and will not result in a  
23 disproportional level of disturbance to surrounding residents, given the public need  
24 for the project.

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(1) *Public Notice.* Notice of the construction noise permit application shall be published in a newspaper of general circulation in the City and Borough a minimum of three days prior to the issuance of a construction noise permit.

The developer shall post a sign on the site at least three days prior to the issuance of a construction noise permit. The sign shall be visible from a public right-of-way, shall be between four square feet and 32 square feet in area, shall have a yellow background, and shall indicate in 216-point or larger font, that a construction noise permit has been sought for the site, the date that the permit may be issued, and that further information is available from the director. The developer shall maintain the sign and shall remove it within 14 days after final action on the application. A copy of the issued noise permit shall be forwarded to the Juneau Police Department and shall be made available for public review during the construction project for which it was issued.

(2) *Revocation.* The building official shall revoke any noise permit after making written findings that the construction activity has resulted in unreasonable disturbance to surrounding residents or that operation during hours not otherwise permitted is not necessary.

**49.15.920 Expiration.**

1 (a) Land Use noise permits issued under CBJ 49.15.910(a) shall automatically  
2 expire ten years from the date of permit issuance unless an earlier expiration date is  
3 set as a condition of permit approval pursuant to CBJ 49.15.910(a)(3)(F).

4

5 (b) Construction noise permits issued under CBJ 49.15.910(b) shall expire at the  
6 completion of the permitted project or one calendar year after issuance, whichever is  
7 sooner.

8

9 **49.15.930 *Penalty.***

10

11 Violation of this section is an infraction.

12

13 **49.15.940 *Nonconforming development.***

14 Uses established prior to \_\_\_\_ [the effective date of this ordinance] shall be brought  
15 into conformance as provided at CBJ 49.30.900.

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17 ...

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19 **49.30.900 *Nonconforming noise levels.***

20 Uses established prior to \_\_\_\_ [the effective date of this ordinance] that emit noise in  
21 excess of the limits established at CBJ 42.20.330 must secure a Land Use Noise  
22 Permit issued under the provisions of CBJ 49.15.910 within two years of \_\_\_\_ [the  
23 effective date of this ordinance].

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3 **49.85.100 Generally.**

4

5 Processing fees are established for each development, platting and other land use  
6 action in accordance with the following schedule:

7

8 (1) Minor development.

9

10 (A) Staff review, \$25.00 if no building permit is required.

11

12 (B) Staff review, no charge if a building permit is required.

13

14 (C) Sign permit, \$50.00.

15

16 (D) *Construction Noise Permit, \$100 if no building permit is*  
17 *required.*

18

19 (E) *Construction Noise Permit, \$50 if a building permit is required.*

20

21 ...

22

23 (3) Major development, conditional use permits, allowable use permits,  
24 *land use noise permits, and wetlands permits. The fees for these land*

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26

1 use actions are based on classes of uses, and shall be paid upon  
2 application for permit issuance or modification as set forth in  
3 subsections (3)(A)--(E) of this section. The fee for an extension of a  
4 permit shall be \$200.00 for any class of use.

5  
6 (A) Class I uses, \$300.00. Class I uses are:

- 7  
8 (i) Mobile homes on single lots;  
9  
10 (ii) Agricultural uses of under 50,000 square feet;  
11  
12 (iii) Residential structures, four or fewer units;  
13  
14 (iv) Transient structures, 12 or fewer rooms for rent;  
15  
16 (v) Day care and child care homes;  
17  
18 (vi) Accessory or incidental recycling activities under section  
19 49.25.300, category 11.120 uses;  
20  
21 (vii) *Land use noise permits not applied for in conjunction*  
22 *with a conditional or allowable use permit;*  
23 *additional public notice preparation and mailing fees*  
24 *apply regardless of other permits applied for.*

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*1 – 99 properties: no additional fee*

*100 – 299 properties: \$125*

*300 – 499 properties: \$200*

*500 – 999 properties: \$325*

*1000 – 1499 properties: \$500*

*\$175 additional for each partial increment of 500  
properties;*

**Section 6. Effective Date.** This ordinance shall be effective 30 days after its adoption.

Adopted this      day of      2011.

\_\_\_\_\_  
Bruce Botelho, Mayor

Attest:

\_\_\_\_\_  
Laurie J. Sica, Clerk

**From:** Linda Shaw [mailto:lindarshaw@yahoo.com]  
**Sent:** Wednesday, June 08, 2011 1:53 PM  
**To:** Benjamin Lyman  
**Subject:** Noise Ordinance

Dear Mr. Lyman,

I was circulated a copy of the draft noise ordinance by Michelle Kaelke. I support this ordinance. My husband and I have lived on Moraine Way since 1991. I have normal hearing. My husband's hearing is diminished from military service. I have been disturbed by noise since living in our home in the following manners.

- 1) One of my neighbors had a rock band and practiced on Friday nights until 2-4 AM. When I complained to this individual he refused to stop. He has since moved from the neighborhood.
- 2) One of my neighbors sometimes leaves their dog outside all night and then the dog barks all night. We have complained to Animal Control repeatedly about this and over a long period of time they have gotten somewhat better.
- 3) Every New Year's Eve and 4th of July, many of my neighbors set off fireworks for up to two nights in a row around these holidays. The duration and intensity has increased from when we first moved to this house. I cannot identify exactly where the fireworks are coming from but they are extremely loud and go until 2-4 AM. They frighten my pets and both prevent me from sleeping and raise my stress levels, including heart palpitations. I have called the police to complain for several years now but nothing happens and the situation is getting worse from year to year. I have had to clear spent bottle rockets from my yard now as they have littered the area the next day. I have come to dread these holidays and may start trying to get out of Juneau during them. I get up at 4:30 - 5 AM during the week to walk my dogs and go to work and I try not to stay up to late, even on weekends because it is difficult to readjust for the work week. Having my sleep cycle disrupted in my own home in this stressful manner is extremely frustrating. I cannot imagine being an elderly or sick person having to endure this noise and stress, which could no doubt impair health or recovery from illness.

I skimmed the draft ordinance and it seems reasonable, although I am unable to judge the decibel limits. I would prefer that all night time noise cease at 9PM rather than 10 PM. Please encourage the assembly to pass a noise ordinance that protects residential areas from excessive noise.

Thank you for the opportunity to comment.

Linda Shaw  
9684 Moraine Way  
Juneau

**ATTACHMENT F**