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Date: April 23, 2001

FLIGHTSEEING NOISE IN JUNEAU

Mitigation Options and Recommendations Under Existing Law

Final Report

I. Problem Description and Historical Notes

Juneau is blessed and cursed with a location in one of the most scenic spots in the world. The city and its environs (the CBJ encompasses some 35,000 square miles of land) became a destination for tourism early in the last century as people from all over the world, but particularly the U.S., came to experience the wonders of the mountains and glaciers. The annual tourist pilgrimage results in significant income to Juneau citizens at the expense of annoyance and disruption to their own needs for recreation and peaceful enjoyment of their community. Several years of a booming U.S. economy have done nothing but increase the number of tourists who come to Juneau annually.

Since the 1920s, an important part of the trip to Juneau for many tourists has involved a flight over the area. Flights first took place in seaplanes that launched from the Gastineau Channel directly in front of downtown Juneau. There is now a seaplane lagoon at the Juneau International Airport, however, the vast majority, if not all, of the tourist seaplane flights still depart from the Channel in front of downtown Juneau. As technology changed the seaplanes were joined by helicopters, currently based at the airport and on private property near the north end of the Channel.

The problem is noise, mostly from “flightseeing” helicopters and seaplanes on and over the Gastineau Channel as well as the valleys approaching the Mendenhall and Herbert Glaciers. Two extensive noise surveys have been conducted, one, pursuant to the requirements of the Federal Aviation Regulations

(FARs) under 14 CFR Part 150 of the area surrounding the airport (the Miller study) and one by Michael Baker of the noise in the Channel and a portion of the valley (the Baker study). The Miller and Baker noise studies showed that the generated noise level in the Channel and valley is not loud enough to reach the level set out by the Federal Aviation Administration as incompatible with residential dwellings and is not high enough to cause a health hazard, yet it is still so pervasive during all daylight hours in decent flying weather as to be an annoyance to a portion of the citizens.

The noise levels giving rise to the complaints must be kept in perspective. The highest noise levels from aircraft operations anywhere in or near Juneau are immediately surrounding the airport, not over the Channel or the valley. The studies conducted of actual noise levels showed that there is only a small geographic area or “footprint” where the noise level is over the threshold that has been determined by research (and accepted by the FAA) to be unacceptable for housing. This “unacceptable for housing” footprint barely exceeds the boundaries of the airport itself. Only one house falls within the footprint and action was already being taken to either soundproof or buy that house at the time of my meeting with the CBJ. It must be clearly understood at the outset of this report that the noise levels in the valley and over the Channel are well below the standards established as a health hazard or incompatible with housing. The Baker report has an extensive discussion of noise levels and shows that, in the hierarchy of acceptable noise levels, the noise level considered acceptable for housing is the lowest. The noise levels recorded over the Channel and valley are below even that level. There is no other standard for what is an acceptable noise level for residential areas. The noise levels in the affected areas are not a health hazard, and, to the extent they are uncomfortable or an aggravation, the level of aggravation is purely subjective. This was repeatedly affirmed in my interviews of Juneau citizens. Those interviews elicited a variety of responses regarding flightseeing noise ranging from intense aggravation, the persons commenting said they disliked it and it substantially interfered with their enjoyment of solitude or the peace and quiet of the area, including one who said the sound was tied to tourism, something that was “frivolous,” to persons who commented that they liked the sound, one commented that the sound was relaxing because it was a “sound of summer,” another said it was a sound associated with tourists who brought that person (a bus driver) a seasonal income . That the noise levels over the Channel and valley are below all published, accepted, objective noise standards set by noise researchers and adopted by the FAA for noise abatement was a source of concern for the helicopter operators I interviewed, particularly because they have invested in flying some of the quietest helicopters available and are following “fly quiet” programs, yet complaints about noise continue. Because there are no other objective guidelines, the subjective nature of the situation made it impossible for the operators to come up with a strategy to further reduce noise because there was no way of determining if such a plan would be satisfactory. I was told by one operator that pilots are used to flying in circumstances where acceptable behavior can be measured objectively. He, himself, wanted to fly in a

manner that did not bother his neighbors but he had no objective yardstick that would allow him to know how to do so before he departed on a flight.

A. Development of Aircraft Noise Law, Statutes and Regulations

The question presented is what can be done by the CBJ to compel or encourage noise reduction under the law. The issue is particularly difficult in the Juneau area because the take off point for the aircraft generating the noise is not just at the community owned airport but also from a privately owned heliport and the open water of the Channel, plus the areas of noise concern include locations well away from the point where the aircraft take off.

There are a large number of cases involving interpretation of the law on aircraft noise. Some of the more significant in the development of the current status of the law, in chronological order, are: Griggs v. Allegheny County, 369 US 84, 82 S.Ct. 531, 76 L.Ed.2d 585 (1962) where noise from aircraft taking off from the nearby community airport constituted a “taking” of an aviation easement over the plaintiff’s property, requiring payment to the property owner by the community, thus establishing the basis for the cases that followed on local control of noise of community owned airports; City of Burbank v. Lockheed Air Terminal, Inc., 411 US 624, 93 S.Ct 1854, 36 L.Ed.2d 547 (1973), in which it was reaffirmed that the federal government has full control over aircraft noise, preempting state and local control but that control is not intended to alter respective legal responsibilities of federal government and local airport proprietors for the control of aircraft noise. While the federal government preempts *all* police powers a municipality would ordinarily have, the authority a municipality has as a proprietor or landlord of an airport is not necessarily congruent with police power and therefore it may control aircraft noise to a limited extent; British Airways Bd. v. Port Authority of NY and NJ., (Concorde I), 558 F.2d. 75 (1977) holding that municipalities that are proprietors of local airports may regulate the airport’s noise in a “reasonable, non-arbitrary and non-discriminatory manner”; British Airways Bd. v. Port Authority of NY and NJ, (Concorde II), 564 F.2d 1002 (1977) ruling that regulations by an airport proprietor must avoid even the appearance of irrational or arbitrary action; Santa Monica Airport Ass’n. v. City of Santa Monica, 659 F.2d. 100 (1981), upholding the establishment of maximum allowable noise emissions from individual aircraft at an airport not served by airlines; Global International Airways v. Port Authority of NY and NJ, 727 F.2d. 246 (1984); Air Cal. Inc. v. City and County of San Francisco, 865 F.2d. 1112 (1989); and National Helicopter v. City of N.Y., 137 F3d. 81 (1998) prohibiting the airport proprietor from establishing routes for sightseeing helicopters.

It is very important to note that each of the noise cases published deals with what amounts to a noise “footprint” area around an airport. This is because, at virtually all airports in the world, aircraft normally climb out and disperse so as to reduce the noise impact rather rapidly as the distance from the airport increases. A succinct statement of the proprietary authority to regulate aircraft noise but only

within some, unspecified, distance of an airport was contained in Santa Monica, supra, at page 104: “a municipal operator of an airport . . . can govern the noise levels of planes which have taken off from it both before and for a reasonable distance after the wheels have left the ground.” Federal statutes regarding community regulation of aircraft noise have generally tracked the case law and have become law regarding community regulation of airport noise. The reality of the law of local control of aircraft noise is that it is actually the law of local control of noise in the area around an airport. Federal preemption of operation in navigable air space is set forth in 49 USC § 40103; federal control of aircraft noise is partially set out in 49 USC §44715, noise abatement in 49 USC § 47501 et. seq. (which seeks to reduce exposure of individuals to noise in areas surrounding an airport), airport improvements including noise issues in 49 USC § 47101 et. seq. and the National Aviation Noise Policy in 49 USC § 47521 et. seq. The Federal Aviation Regulations have been implemented to give effect to much of the case and statutory law, and have, as far as can be determined from extensive research, only been applied to noise in areas immediately surrounding airports, see 14 CFR Part 150, Airport Noise Compatibility Planning; 14 CFR Part 151, Federal Aid to Airports; and 14 CFR Part 161, Notice and Approval of Airport Noise and Access Restrictions (implementing 49 USC § 47521).

The unique nature of Juneau’s terrain and the weather frequently combine to cause a bunching of aircraft, at relatively low altitude (the problem seems to be limited to over flight at less than about 1,500 feet), over the Gastineau Channel in front of Juneau and Douglas as well as the populated valleys to the northwest rather than just around the airport. Due to the distance from other communities and other airports outside the Juneau area, virtually all of the aircraft generated noise in the affected areas comes from aircraft that departed from one of the sites in Juneau. This combination of factors requires a more creative approach to find a solution as well as a good faith prediction as to how existing law (and Federal Aviation Regulations) would be interpreted when applied to the unique situation found in Juneau, Alaska.

B. Federal Preemption and Control of Aircraft Noise

Historically, it was well accepted that the federal government absolutely controlled the movement of aircraft in navigable airspace as well as the noise emanating from aircraft. “Federal control is intensive and exclusive,” Northwest Airlines v. Minnesota, 322 U.S. 292 (1944). “The United States Government has exclusive sovereignty of airspace of the United States,” 49 USC §40103. Indeed it would be difficult to visualize a more comprehensive scheme of continued regulation, subsidization, and operational participation than that which Congress has provided in the field of aviation,” American Airlines v. Hempstead, 272 F. Supp. 226 (1967). Virtually all of the cases on aircraft noise have involved the definition of the exclusion carved into what had been absolute federal preemption by the Burbank case, supra. There the Supreme Court recognized that a community may be liable for damages for a taking of aviation easements of

property adjacent to an airport because of noise from low flying aircraft and therefore a community, as proprietor of an airport, had some power to regulate noise at the airport and its environs. The community must be the owner of the airport to have such power. (In that case the City of Burbank did not own the airport and therefore it was ruled to have no authority to regulate aircraft noise at all. Burbank subsequently purchased the airport and imposed aircraft noise regulations.) Burbank made it clear that a community may not regulate aircraft noise through its police power, that power is completely preempted by the federal government.

The law in the area of federal preemption versus local control of aircraft noise has been evolving for some thirty years, but the line of cases, the federal statutes and Federal Aviation Regulations are consistent: federal preemption with a small exception allowed for communities to control noise surrounding airports they owned. Contrary to some information that has been provided to the CBJ by persons interested in the noise issue, cases interpreting aircraft noise dealt with virtually all manner of aircraft as noise sources, jet and piston powered airplanes as well as jet and piston powered helicopters. The cases are not limited to noise from airliners. The leading case on a community's establishment of a maximum allowable noise level output from an aircraft on takeoff as a method of regulating noise, came from an airport that had no airline service at all, Santa Monica, California, see Santa Monica, supra.

In commentary from an interested party to the CBJ and to me, it was asserted that the federal government no longer preempted the area of aerial sightseeing or tourist flights because of the nature of language in the bill funding the FAA and the recent Supreme Court case, Solid Waste Agency of Northern Cook County v. U. S. Army Corps of Engineers, 121 S.Ct. 675 (2001). My research did not support such a conclusion. The Solid Waste case examined an agency rule and found inappropriately extended a definition in an attempt to obtain jurisdiction for that federal agency over an area where jurisdiction and control had not been claimed previously. The cases, statutes and rules on federal preemption of aircraft and navigable airspace are not similar. There are no cases in which the federal government sought to increase its scope of control of the regulation of aviation. All sought to define the extent to which it had actually relaxed its jurisdiction and control by allowing communities some leeway to regulate aircraft (airport) noise. Federal courts have recognized federal preemption over the regulation of aircraft and airspace, subject to a complementary though more "limited role for local airport proprietors in regulating noise levels at their airports," City and County of San Francisco v. FAA, 942 F.2d. 1391. Under the divided authority between the federal government and the power granted to municipalities that own airports, the proprietor exception to federal preemption allows municipalities to promulgate "reasonable, nonarbitrary and non-discriminatory" regulations of noise and other environmental concerns at the local level, Concorde I, supra.

The FAA has taken no action to relax its control over commercial sight seeing operators, it still regulates them under 14 CFR Part 135. In 14 CFR Part 161.5 the FAA specifically regulates how airport noise regulations affect sightseeing operators that are certified under 14 CFR Part 135. I was asked how the federal government could claim to preempt local control of flights that begin and end at the same airport. That issue has been resolved for some years, as pointed out in Northwest Airlines, supra, due to the pervasive nature of federal regulation of the certification of the aircraft used, the requirements that each and every part installed on every aircraft comply with federal regulations, that the pilots hold certificates issued by the federal government and regularly pass checkrides pursuant to federal regulation and take federally-mandated medical examinations and that the operator of the aircraft hold a federally issued air taxi certificate and comply with its terms no matter if a particular flight is to be local or to another geographic location. In addition, the aircraft all operate within navigable airspace (“airspace above the minimum altitudes of flight prescribed by regulations under this subpart and subpart III of this part, including airspace needed to ensure safety in the takeoff and landing of aircraft” 49 USC §40102(a)(30)) which has been expressly claimed under the exclusive sovereignty of the United States (49 USC §40103(a)(1)) and a citizen of the United States has a public right of transit through the navigable airspace (49 USC §40103(a)(2)).

The courts have made it clear that the federal government has preempted local control even over such a purely recreational activity as skydiving at community owned airports (another aeronautical activity in which persons depart and return to the same airport). See The Skydiving Center of Greater Washington, D.C. v. St. Mary’s county Airport Commission, 823 F.Supp. 1273 (Maryland 1993) and Blue Sky Entertainment, Inc. v. Town of Gardiner, 711 F. Supp. 678 (New York 1989), which relied in part on United States v. City of Blue Ash, 487 F.Supp. 135 (Ohio 1978), affirmed 621 F.2d 227 (1980) where the court pointed out that federal law in the area of aviation is so pervasive that it preempts a municipal ordinance which attempts to govern the flight paths of aircraft using an airport which has no control tower, is not served by a certified carrier and has no regularly scheduled flights.

Many people who spoke to me regarding flightseeing noise referenced the Seaair case. (Seaair NY, Inc., v. City of New York 2000 WL 1201 379 (2000)) In that case a federal district court upheld New York City’s prohibition of sightseeing helicopter flights from a heliport owned by the city and for which, apparently, the city had received no federal funds. The case, frankly, is an anomaly. It cites no case law, ignores a case from the appellate court for the same district which also arose in New York City, involved helicopter sightseeing, is on point and reached an opposite result on the issue of controlling helicopter sightseeing routes, National Helicopter Corp. of America v. City of New York, 137 F.3d. 81 (1998). The Seaair court ruled that the sightseeing flights were not under federal preemption because they were not transportation under a dictionary definition. The case does not indicate whether the operator was certified as an air taxi under

14 CFR Part 135 by the FAA and thus its flights clearly regulated by the FAA, as are the operators in Juneau. As a district court case, the Seaair does not overrule the National Helicopter case and cannot be considered precedent. It is further suspect in that it has not yet been published in the Federal Supplement as one would expect, and is only available on Westlaw. (Westlaw is a computer-based service that records most opinions issued by federal court judges. A judge may designate that an opinion is not to be published. If it is to be published it will be printed in the official, bound reports of the Federal District Courts known as the Federal Supplement.) If it is to become an unpublished decision, its precedential value will diminish even further.

It is recognized that flightseeing constitutes the majority of the aircraft noise generated in the affected areas of Juneau. Among the solutions advanced to reducing such noise was to ban flightseeing flights, pass an ordinance to reduce the number, or establish a curfew limiting the time in which the flights could be conducted. The cases, statutes and regulations regarding local control of noise are such that any such discriminatory restrictions would probably not withstand judicial scrutiny and could lead to loss of all federal funds to the Juneau Airport pursuant to provisions of 14 CFR Parts 151 and 161. Any noise regulation must be reasonable and nondiscriminatory, see City and County of San Francisco, supra. Because a U.S. citizen has a right to travel through navigable airspace, 49 USC §40102, banning flightseeing flights without an available alternate location for them is probably a violation of that right. Santa Monica, supra, allowed a prohibition of certain types of activities on the airport at certain times, partially because there were alternative times and locations at which they could be conducted. (The court did not allow banning all operations of any one kind of aircraft. That case, and others, found that such bans were discriminatory because, in all of the cases, some of the banned airplanes were quieter than some that were not banned.) In Juneau, a ban, reduction in number of flights or curfew could only be undertaken at the international airport or, via zoning (discussed in more detail below) of takeoffs in the Channel, but the CBJ has no authority to establish such controls for flights departing from the private heliport, unduly discriminating against the operators on the Channel and at the airport. Curfews at airports have been upheld, but only where there were other airports nearby that could be used at night. Unfortunately, simplistic approaches to noise in the Juneau area suffer from illegality.

It is my opinion, based on the complexity of the issues, that a solution requires simultaneously addressing the types of aircraft involved and dealing with the points from which each departs.

II. Potential Solutions for Helicopter Noise

A. Fly Quiet(ly) or Fly Neighborly Programs

Such programs are currently in use, operators are complying with them and they have been effective in reducing noise levels overall, but complaints continue. They are voluntary, and, by themselves will not solve the problem. So long as helicopters are flying low over the Channel, frequently, when the cloud bases are low, the noise problem will persist. However, the educational aspect of such programs is very beneficial because it helps maintain the awareness of the need for each helicopter pilot to operate his or her aircraft so as to respect the people affected by its noise. Such programs will need to be a part of the eventual solution. Adherence to the programs cannot be compelled in any area outside of the traffic pattern of an airport owned by the CBJ via ordinance due to the limitations on the power of a local government to control operation of aircraft (an area of absolute federal preemption). However, they would be very appropriate to any negotiated agreement regarding noise reduction. (Under the terms of the FAA's Airport Compliance Handbook, a locality has the authority, within reason, to designate the traffic pattern around an airport it owns. When doing so, procedures in Fly Quiet programs may be referenced and, if applicable, incorporated into the published traffic pattern for the airport/heliport.)

B. New Technology

I believe the CBJ has virtually no power to require new technology helicopters by ordinance but it can encourage the use of such aircraft via financial incentives. To keep things in perspective, the current helicopters in use are at least in full compliance with all federal noise guidelines, if they do not exceed such guidelines. The current helicopters are significantly quieter than ones used in the past or other types that might be used. I recommend that the CBJ explore financial incentives for implementation of even newer, quieter helicopters, but it must recognize the realities of the cost of such helicopters and the current lack of availability.

As pointed out by the Baker noise study, the reduction in noise from new technology is expected to be in the three to five dB(A) range. This is a significant reduction in the noise level as perceived by humans because the dB scale is logarithmic so a five dB(A) reduction means perceived noise drops by nearly half. New technology will help with the situation; however, it is my opinion that the solution must involve getting the aircraft away from low altitude flight over the Channel.

C. Legislation

I was advised that some citizens believe that the CBJ should lobby for the passage of federal legislation (due to federal preemption it is the only level

at which flight paths may be controlled) to control flights over the Channel area.

Federal law now restricts routes and altitudes of flights over the Grand Canyon National Park for noise purposes. It is unique among National Parks and Forests. (There are no such laws restricting flight for noise reduction over any city or town in the U.S.) It was enacted after extensive and intensive fighting and marks the only time the Federal Aviation Administration has given up its historic control over airspace. The current law and supporting regulations are not well crafted and the subject of ongoing problems because the recent route changes proved to be unworkable. Efforts are continuing to find something that will reduce noise without reducing safety.

Such legislation must come from the federal level as flight routes in navigable airspace have been absolutely preempted by the Federal government. It is my considered opinion that it would be virtually impossible to pass such legislation for the CBJ area within the next ten years, if ever. I cannot recommend such an approach, particularly in that no one can predict what the outcome will be if such effort is crafted thousands of miles away from the problem being addressed.

D. Noise Ordinance

It is my opinion that enacting a noise control ordinance (or regulation, the terms are used interchangeably here) that would be effective and comply with Federal Aviation Regulations, statutes and case law would be extremely difficult, expensive and time consuming. Because the entire history of noise regulation has been for dealing with noise around airports so communities may protect themselves against the “taking” of adjacent property due to de facto, noise created, aviation easements, I believe that an ordinance regulating noise some distance from an airport, for aircraft within navigable airspace, that could survive legal challenges, would be extremely difficult to craft. It is my opinion that it would be necessary to first work with the FAA under 14 CFR Part 161 (which would probably be unsuccessful) and then go through extensive litigation on the issue of the viability of any ordinance that the CBJ might pass regarding aircraft noise over the Channel and the valley. One of the parties to the inevitable lawsuit, in my opinion, would be the FAA because the FAA would probably not approve the sort of ordinance that would involve noise some distance from an airport. The FAA has not dealt with the situation nor, to my knowledge, has it approved any noise restrictions proposed under Part 161 to date. Other parties to litigation would include the flightseeing operators who would be affected by an aircraft noise control ordinance. I also believe any ordinance would face a determined assault from various groups opposed to it.

With the above as a cautionary note, for an aircraft noise ordinance to be enforceable, it would have to comply with the following guidelines at the very least:

1. Any noise ordinance would only be effective on aircraft departing from an airport/heliport owned by the CBJ. It must be reasonable, nondiscriminatory and not interfere with air transportation (a curfew in daylight hours would probably not withstand such scrutiny because there are no alternative airports nearby).
2. Based on the cases regarding aircraft noise control ordinances or local regulation, a maximum single event noise limit level (SENEL) for aircraft departing a CBJ owned heliport would be the least intrusive method of controlling noise (see Santa Monica, supra). The issue is how far from an airport might such a regulation be legitimate under the law, given that it affects helicopters in navigable airspace? Here the desire for control of noise would, in my opinion, tend to lead to a maximum SENEL for aircraft flying over the Gastineau Channel at a level of approximately 65-70 dB(A) (this is only an estimate). It is a level that is recognized as an annoyance, and can be met by aircraft flying at a reasonable altitude, and does not affect the published instrument approach and departure procedures used by Alaska Airlines over the Channel. It would require, that when the ceilings are low, that aircraft not fly down the Channel, but go around Douglas Island. I would anticipate that such a regulation would also be challenged as be an attempt to control “routes” of aircraft, something clearly preempted by the federal government. The countervailing argument is the “unique” status of terrain and noise in the Juneau area, plus the fact that the noise generators depart from the Juneau area, and the language of the cases that reference the unique nature of noise and the need for localities to control it rather than have it controlled at the federal level. I cannot predict how a court would rule on this issue as it is simply too close to call. (As to a noise limit over the valleys nearer the airport, it could be much harder to implement because the area is outside the 65 dB(A) circle (as found 14 CFR Part 150 Miller study) the FAA generally allows for noise restrictions, and because it may affect a very involved instrument approach and departure procedure that was worked out for Alaska Airlines by the FAA.)
3. A part of the process of creating an enforceable ordinance would be the need to move all helicopter operators to facilities owned by the CBJ. Only at community owned airports/heliports can noise ordinances be enforced. (Zoning may provide a viable alternative, should heliports not owned by the CBJ be desired. Zoning of a private facility may allow the CBJ to establish arrival and departure routes as

well as altitudes for some distance from the facility. There are no cases on point.)

4. In order to compel ERA helicopters to move to a CBJ owned facility (or alternative site) where it would be compelled to comply with noise restrictions, it will be necessary to strictly enforce the nonconforming use restrictions of Juneau's zoning ordinance. Alaska law is clear that doing so immediately would be a "taking" that must be compensated, however, I tend to agree with Robert Reges who asserts that Alaska zoning law does provide for a zoning law that provides for a period of years to phase out a nonconforming use, so as to allow the landowner to depreciate the value of the land over the time, thus the CBJ would not be obligated to pay compensation. While I tend to agree with his position, neither he nor I have cases that support it.
5. It is my opinion that the process of developing an aircraft noise control ordinance (or regulations) for a CBJ owned heliport is not the best way to solve the helicopter portion of the noise problem (due to the difficulty in drafting one that complies with the law and the cost of the litigation it would entail). However, an ordinance/regulation is not to be dismissed entirely because the potential for the CBJ to enact an aircraft noise control ordinance would have to be considered by the flightseeing operators during any negotiations that may be undertaken toward reaching an agreement between the CBJ and the operators on noise. (See below)

E. Agreement

My recommendation is that the most expedient method for solving the noise issue is for the CBJ to enter into negotiations with the operators (helicopter and fixed wing, the latter to be discussed below) to reach a noise reduction operating agreement, in the form of a contract enforceable by each party. It would be necessary to include the FAA in the process (although not necessarily as a signatory to the agreement) as it currently has operating agreements with the operators as to arrival and departure routes from the airport for safety purposes. By having the FAA involved, any agreed upon routes would be known to the FAA so air traffic controllers would be able to assist with compliance as part of normal operations.

Such an agreement, in general, would establish one or two heliports, well away from the city, for all helicopter operations, and would set out flightseeing departure and arrival routes and altitudes to get flightseeing helicopters to and from locations at or near the ice fields and away from human habitation (with the intent that no flightseeing route would pass through the Gastineau Channel and would minimize flight over the valley

area-but recognizing that it will be impossible to find routes away from all recreational trail areas). An agreement could provide for the circumstance that if a flightseeing route would otherwise pass down the Channel, and if an agreed upon altitude could not be maintained due to weather, the flight would divert and go around Douglas Island. The consideration for the agreement would provide, among other things, that the CBJ would zone the land under the agreed routes so that no residences can be built on it and that should the zoning ever change to allow residential development, that the operators need no longer comply with any agreed upon routes and altitudes to be flown. It is possible that the agreement would include a procedure for diversion around Douglas Island rather than flying through the Channel in low weather for the operators' non-flightseeing flights. (While controlling noise in the fashion via ordinance or zoning may be extremely difficult, it can be done by agreement. Such an agreement is in place with seaplane operators in Seattle.)

The CBJ would enter negotiations with the power to pass an aircraft noise ordinance and zoning compelling the result it wants as a stick. (While it is not a perfect weapon, the operators must consider the cost of fighting such an ordinance.) It has some carrots: as a municipality it can set up what amounts to a permit system for commercial sightseeing operators, limiting entry to the business (although the cost of helicopters does that fairly effectively by itself). The FAA currently gives a great deal of latitude to municipalities in setting minimum standards that must be met by persons or companies that seek to be approved as operators on municipal airports. I found no cases in which a court held that a permitting system for operators on a municipal airport was inappropriate. Further, under the Federal Aviation Regulations, the CBJ has the authority to establish a minimum size for structures on a heliport it owns (or via zoning on a privately owned heliport). By using those tools the CBJ can effectively limit entry to the flightseeing business so as to assure the current operators occupy the available space on the heliport(s). Should an existing operator leave the business and a new flightseeing operator seek to obtain approval to establish its business at the heliport, a condition of the minimum standards the operator must meet (or the terms of the zoning for a privately owned heliport) would be to become a signatory to the noise reduction operating agreement. The CBJ can provide some form of tax relief for the cost of moving the helicopter bases of operation to new heliports. The most important carrot held out by the CBJ is that it would also contractually agree that the area around the new heliport(s) will be zoned so that NO residential development within the sound footprint of the flight paths in the noise reduction operating agreement will EVER take place, and that if any such zoning change to allow residential development takes place the operators will no longer be obligated to abide by any terms of the noise reduction operating agreement, including flyover noise restrictions.

III. Potential Solutions for Seaplane Noise

A. Fly Quiet/Fly Neighborly

The Baker noise study and comments from residents indicate that annoyance from seaplane noise is generally limited to takeoffs in the Gastineau Channel as opposed to flyovers of the Channel and elsewhere. Depending on wind direction, takeoffs may cause the aircraft to climb out over residences in Douglas at fairly low altitude while at a high power level. The existing operator has changed from using a more noisy piston-engined series of airplanes to the slightly quieter DeHaviland Otter airplanes, also powered by piston engines. (Airplane noise is largely a combination of engine exhaust noise and propeller blade tip noise.) Some of this noise can be mitigated by the takeoff route and by reduction in propeller rpm as much as is safe for the conditions, loading of the airplane and limitations of the engine, however, it appears this is currently being done and the problem still exists. The operator is following quiet flying procedures, but the nature of the aircraft themselves cannot completely be overcome by pilot technique. It is my opinion that such procedures, by themselves, will not provide the reduction in noise desired in the community.

B. New Technology

It is my opinion that current technology exists to reduce the takeoff noise to an acceptable level. By converting to turbine engines the noise level on takeoff would be significantly reduced. This can be done with conversions of the existing airplanes or with the use of the Cessna Caravan or "Turbine Otter". It must be kept in mind that such action is costly.

C. Segregation.

The commercial seaplane activity on the surface of the Gastineau Channel is extremely long standing. To the extent that an historic use of what is public land (water) could ever be asserted to be a property right in the user, it may be argued here. It is not unlike the cattle grazing on public lands (for a small fee) in the western lower 48. However, despite historic use, the CBJ still retains the ability to control the use. Based on the limited case law regarding the power of a community to control seaplane activities on lakes it owns or controls, the CBJ probably has the power to zone activities in the Gastineau Channel even though it is not a lake. The CBJ has the authority to limit noise emissions of boats and aircraft on the surface of the Channel and may prohibit commercial (or all) seaplane operations. There is one case directly on point, Gustafson v. City of Lake Angelus, 76 F.3d. 778 (1996). The court pointed out that the federal

government has not preempted the “designation of landing sites, which involves local control of land (or in the present case, water) use.” The FAA clearly defers to local zoning ordinances, in the regulations it requires the establishment of an airport in compliance with a municipality’s land use plan, 14 CFR Part 157.7(a). See also Blue Sky Entertainment, supra, where the court explained that land use under a local ordinance is not preempted by federal regulation of aviation. Population pressure and changing societal opinions in the form of diminished tolerance for long established activities have resulted in pressures to restrict, terminate or move such established activities to locations farther away from the center of a community. If there were some sort of property right on the part of an operator to continue using land or water as an airport, it would be impossible to close or move an airport or seaplane landing facility. A seaplane facility currently exists at the Juneau Airport.

While it is my opinion that the CBJ has fairly great flexibility in what control it may exert over operations on the surface of the Channel, it is my obligation to point out that I would not recommend doing more than establishing a maximum noise emission level for such operations. The only case involving seaplane operations, Gustafson, cited above, was decided in the state of Michigan where seaplane operation is almost purely recreational. The response of the state, through its Department of Aeronautics, was to severely limit the power of communities to take any action to control seaplane operations on lakes owned or controlled by those communities. Based on my review of Alaska law, and my research into the history of seaplane operations within Alaska and the fact there is a state law limiting the power of individuals to sue over noise from a private airport (AS §34.75.010), it is my opinion that any further action to limit seaplane activity on the Gastineau Channel would lead to state action to overturn the limitation.

As a note, the noise level from airplanes in level flight over the affected areas currently was not felt to be nearly as noticeable as that from helicopters and other than for takeoff and landing, was not mentioned by persons commenting nor was it significant in the Baker study. As to the future, one can predict that the number of airplanes transiting the Channel will continue to increase, so, such potential noise problems should be addressed now, if possible.

D. Ordinance

It is my opinion that it is within the power of the CBJ to enact an ordinance, via zoning, for takeoff noise on the Channel, that could reduce the noise level to that which is acceptable or simply ban seaplanes from the Channel, depending on the desire of the Assembly. The cases cited

above are consistent with the power of a community to regulate where it is going to have an airport/seaplane base.

Should there be a desire for an aircraft noise control ordinance that would apply to seaplane operator(s) departing from the Juneau Airport seaplane lagoon, the problem of noise over the valley and Channel might be moot as the noise level from airplanes may already be below the threshold desired. If it is not, most of the comments regarding noise reduction via ordinance and agreement for helicopters, above, are generally valid for seaplanes and will not be repeated here.

E. Agreement

I am of the opinion that the CBJ has the authority to regulate noise from seaplanes departing the Channel via zoning without any difficulty of nonconforming prior use because the operator does not own the Channel. For the sake of a comprehensive plan, one that defines routes and noise levels, in cooperation with the FAA, the CBJ and the seaplane operator(s), I recommend it be reached via negotiation. The CBJ can enter negotiations with the understanding it has the power to impose some fairly stringent regulations in some, but not all areas, so it behooves everyone to get the problem solved via agreement.