



DATE: August 11, 2016
TO: Susan Gemmill – Carillon Properties
FROM: Adam C. Jenkins, PE(OR), INCE Bd. Cert.
RE: Seaplane Scenics – Noise Measurements

Transmitted by: Mail Delivery Fax E-mail

Susan:

The intent of this memorandum is to present the results of noise measurements of seaplane operations conducted during the day on July 28, 2016, to fulfill conditional use permit application requirements for the City of Kirkland.

Results

Normal seaplane operations recorded from three locations surrounding the Carillon property generated a maximum of 62 dBA (LAF_{max}). Figures 1 and 2 show seaplane activity measured over time, including other ambient noise events during the operation periods. The seaplane was most audible from the northern end of the property (Figure 1), barely audible from the southern end (Figure 2), and inaudible adjacent to Lake Washington Blvd. Tables 2 and 3 summarize measured sound levels during periods of seaplane operation.

It should be noted that an engine backfire was measured at 77 dBA before takeoff at the northern monitoring location, however, it is our understanding that this event is very rare, so it was excluded from our assessment of typical operations.

Definitions

- A-weighted Decibel, dBA

The human ear has a unique response to sound pressure. It is less sensitive to those sounds falling outside the speech frequency range. Sound level meters utilize a filtering system to approximate human perception of sound. Measurements made utilizing this filtering system are referred to as “A weighted” and are called “dBA”.

- Maximum Sound Level, LAF_{max}

LAF_{max} is the maximum recorded root mean square (rms) A-weighted sound level for a given time interval with a 125-millisecond time constant.

Figure 1. Sample Time Series Recorded from the Northern End of the Property (dB re: 20 μ Pa)

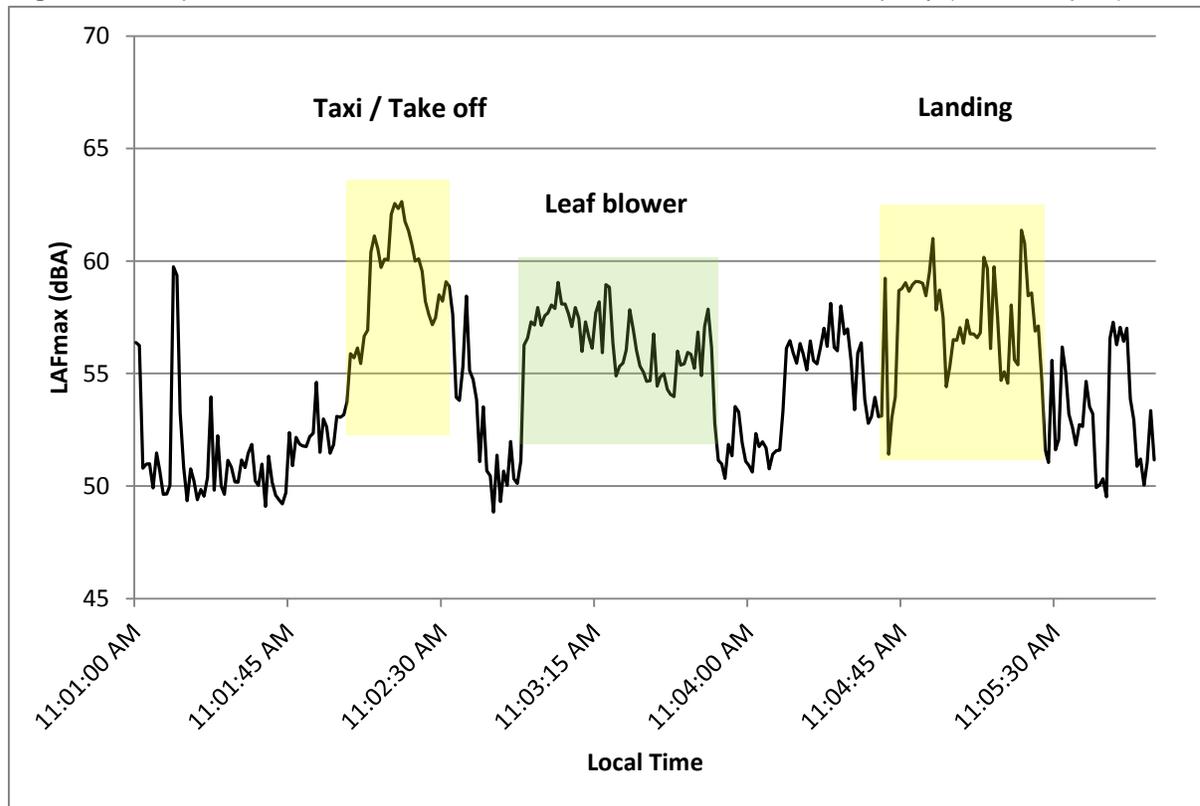
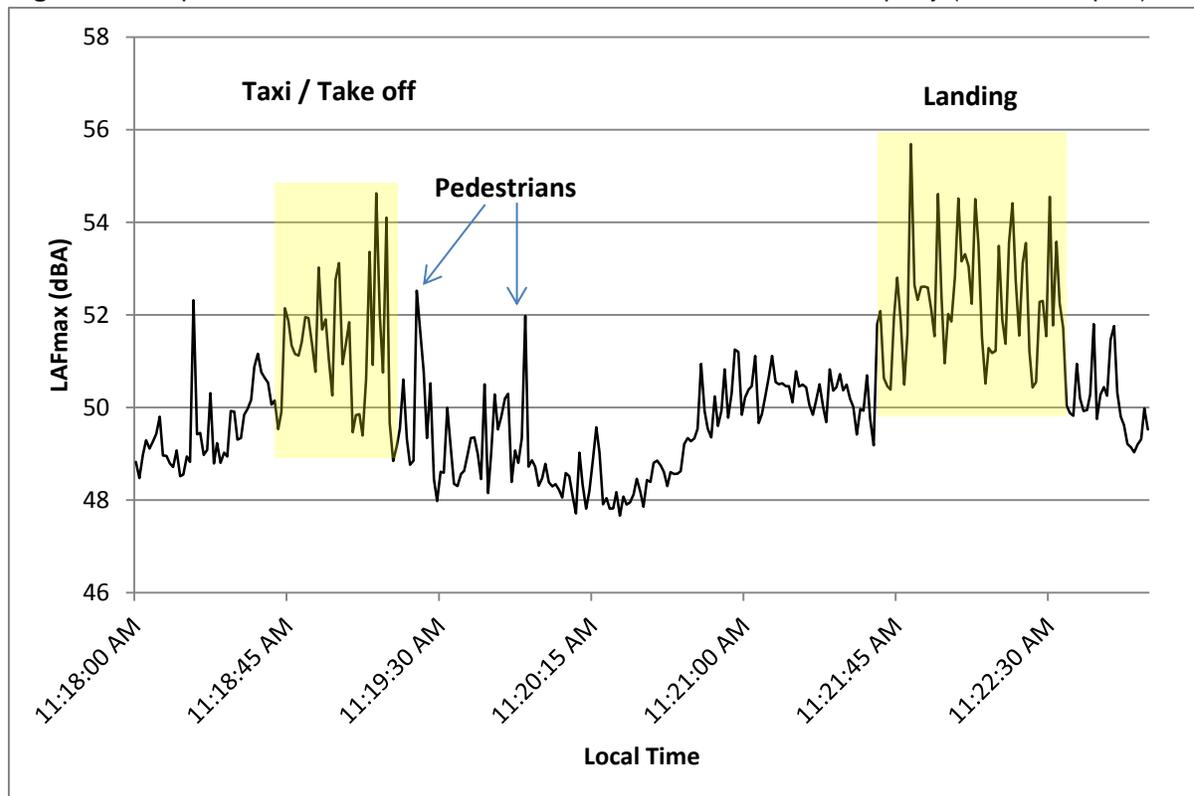


Figure 2. Sample Time Series Recorded from the Southern End of the Property (dBA re: 20 μ Pa)



August 11, 2016
Page 3
Seaplane Scenics

Measurements

Sound levels were measured on July 28, 2016 between 10:30 AM and 11:30 AM from three monitoring sites surrounding the Carillon property, as shown in Figure 3. The north site was lakeside on the northern boundary of the Carillon property, which consist of a variety of commercial uses, included restaurants, recreational watercraft, and hospitality.

The north site was lakeside near One Carillon Point Condominiums (5505 Lake Washington Boulevard NE), the south site was also lakeside near the Yarrow Bay marina (5207 Lake Washington Boulevard NE)The street site was near the Villas at Carillon Condominiums (5306 Lake Washington Boulevard NE).

Land use zoning of the Carillon property and adjacent properties to the North and South is "Office" (PLA 15A), zoning to the East at the street site is "Medium Density Residential" (PLA 15B).

Two flight operations were conducted, each including taxi, takeoff, and landing. The flight track to the North was measured at the north monitoring site, the flight track to the South was measured at the south monitoring site, both operations were also measured at the street monitoring site.

Figure 3. Measurement Locations (North towards top of page)

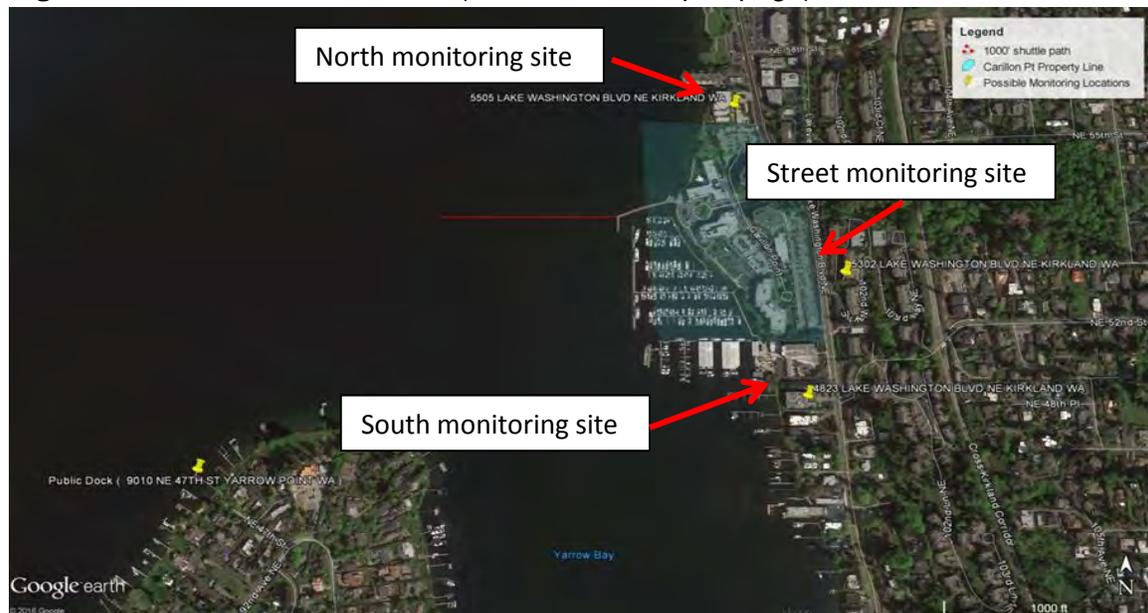


Figure 4. Flight Tracks and Monitoring Locations



Measured sound levels during taxi, take off, and landing from the north and south sites are shown in Tables 1 and 2. Manual calculations of the underlying data were performed to determine maximum and average sound levels during each phase of flight operation.

Noise from the street site was dominated by traffic on Lake Washington Boulevard NE, rendering seaplane activity inaudible, therefore no data is reported.

Table 1. Summary of Measured Sound Levels, North Site (dBA re: 20 µPa)

Source	Start Time	Duration	LAF _{max}	LA _{eq}
Taxi and Take off	11:02 AM	40 seconds	63	58
Landing	11:04 AM	45 seconds	60	56

Table 2. Summary of Measured Sound Levels, South Site (dBA re: 20 µPa)

Source	Start Time	Duration	LAF _{max}	LA _{eq}
Taxi and Take off	11:18 AM	43 seconds	52	50
Landing	11:21 AM	47 seconds	56	51

Equipment used during the testing is described in Table 3 and Figures 5-6.

Table 3. Measurement Equipment

Equipment	Description	Serial #	Last Laboratory Calibration	Classification
Brüel & Kjær Type 2250	Sound Level Analyzer	3009751	6/20/16	IEC Class 1, ANSI Type 1
	ZC0032 Preamplifier	24198		
	4189 Microphone	3036571		
Brüel & Kjær Type 4231	Acoustic calibrator	3001160	12/15/15	IEC, ANSI
RION NL-32	Sound Level Analyzer	00161681	05/18/16	IEC Class 1
	RION NH-21 Preamplifier	18454	05/18/16	
	RION UC-53A Microphone	309751	05/18/16	
LD CAL200	Acoustic Calibrator	5463	05/18/16	IEC Class 1

Figure 5. North Location



Figure 6. South Location



Figure 7. Street Location





Adam C. Jenkins, PE(or), INCE Bd. Cert.

Associate Principal

Adam Jenkins is an Associate Principal with The Greenbusch Group, Inc., providing acoustical consulting services for a wide range of projects such as environmental noise monitoring, mitigation and measurement for water and wastewater facilities. Adam has worked closely with mechanical engineers to develop noise and vibration control approaches for HVAC equipment in industry and utility, higher education, health care, residential and commercial spaces. He utilizes reality-grounded 3-D computer modeling to evaluate complex acoustical environments, provoking efficient and optimized mitigation approaches for challenging environmental noise issues.

Employment History

2006-Present

Associate Principal: The Greenbusch Group, Inc.

2004 - 2006

Engineer & assembler of solid state electronic professional audio products: THD Electronics, Ltd.

Education

The Pennsylvania State University, MEng Acoustics, *Present*

Seattle Pacific University
BS Electrical Engineering & Physics, *2004*

Licenses

Professional Engineer, Acoustics: Oregon, 84419PE

Relevant Experience

Center City Connector Streetcar Noise and Vibration	Seattle, WA
Elliott Bay Seawall Replacement Project Construction Noise	Seattle, WA
Elliott Bay Seawall Replacement Hydroacoustic Monitoring	Seattle, WA
Fairview Avenue North Bridge Replacement Noise and Vibration	Seattle, WA
Mercer Corridor Improvements Construction Noise - East Phase	Seattle, WA
Mercer Corridor Improvements Construction Noise - West Phase	Seattle, WA
Mercer Corridor Improvements Construction Vibration - East Phase	Seattle, WA
Sound Transit East Link Segment A Construction Noise	Seattle, WA
Sound Transit N112 Construction Noise and Vibration Monitoring	Seattle, WA
Sound Transit Northgate Link Construction Noise	Seattle, WA
Sound Transit University Link Construction Noise	Seattle, WA
SR99 Deep Bore Tunnel Design-Build Noise and Vibration	Seattle, WA

Professional Affiliations

Acoustical Society of America, Member
Institute of Noise Control Engineering, Board Certified Member
National Council of Acoustical Consultants, Firm Representative
Pacific Northwest Clean Water Association, Firm Representative
Washington Public Ports Association, Firm Representative

Papers and Presentations

“Design Criteria and Noise Control Approaches for “Minimal Impact” Facilities”, PNCWA Conference, September 2008
“Summary of North Portland Environmental Noise Data Collection and Abatement Recommendation Project”, 157th ASA Meeting, May 2009
“Addressing Odor Nuisance Without Creating a Noise Nuisance”, PNCWA Conference, Sept 2011
“The Process and Politics of Permitting Nighttime Construction Noise in Seattle, Washington”, Inter-Noise, New York, NY, August 2012





**WILDLIFE HABITAT ASSESSMENT
PROPOSED SEAPLANE OPERATION—CARILLON POINT
INCORPORATED CITY OF KIRKLAND, WASHINGTON**

PREPARED FOR:

Carillon Properties
(Attn: Sue Gemmill, Property Manager)
4100 Carillon Point
Kirkland, WA 98033

PREPARED BY:

Wetlands & Wildlife, Inc.
7721—153rd Street SE
Snohomish, WA 98296
(425) 337-6450

April 4, 2016

TABLE OF CONTENTS

BRIEF SITE DESCRIPTION AND DISCUSSION REGARDING PROPOSED PROJECT	1
STATEMENT OF QUALIFICATIONS TO CONDUCT THE WILDLIFE HABITAT ASSESSMENT	1
METHODOLOGIES OF THE WILDLIFE HABITAT ASSESSMENT	2
RESULTS AND FINDINGS OF THE WILDLIFE HABITAT ASSESSMENT	2
NOISE ANALYSIS AMONG PROPOSED PROJECT VICINITY	5
DISCUSSION REGARDING NO NET LOSS AND PROJECT'S WILDLIFE IMPACT DETERMINATION	6
LIMITATIONS AND USE OF THIS REPORT	7
REFERENCES AND LITERATURE REVIEWED	8

BRIEF SITE DESCRIPTION AND DISCUSSION REGARDING PROPOSED PROJECT

The subject property is located in the incorporated City of Kirkland, Washington, and the nearest address follows: 1200 Carillon Point. The subject property is in an urban environment that has been heavily developed with commercial, residential, and office use. A frequently-used boat marina and moorage facility that provides space for 200 boats is located west of the subject property, along with a guest pier that provides public access. Common activities that take place at the project site and among the project vicinity include the use of passenger boats, jet skis, speed boats, paddle boards, and kayaks.

Carillon Properties is proposing to obtain a Conditional Use Permit to provide *Seaplane Scenics, LLC* the ability to provide commercial seaplane flights which would be centered at the guest pier west of 1200 Carillon Point. Based on information from *Carillon Properties*, the Carillon Point Marina is currently used for commercial passenger terminal uses, and is equipped with all necessary facilities to accommodate the proposed seaplane operation. Therefore, the applicant will not need to upgrade or modify any on-site or nearby infrastructure to accommodate the proposed seaplane operation. *Wetlands & Wildlife, Inc.* was retained by *Carillon Properties* to conduct a Wildlife Habitat Assessment of the subject property and surrounding project vicinity. The primary purpose of our evaluation for this site was to determine if the proposed sea plane operation will have any adverse impacts related to wildlife habitat and / or special-status wildlife species.

STATEMENT OF QUALIFICATIONS TO CONDUCT THE WILDLIFE HABITAT ASSESSMENT

The following provides a brief overview of my experience and credentials to conduct this wildlife habitat assessment related to this project in accordance with the City of Kirkland's code requirements. I am the Founder, Owner, and Principal Wetland and Wildlife Ecologist of *Wetlands & Wildlife, Inc.* I attended the University of Montana where I graduated cum laude with a degree in Wildlife Biology. As of 2016, I have 15 years of direct experience as a professional Biologist / Ecologist in western Washington and 19 years of overall experience completing natural resource assessments among many different ecosystems across the western United States. I have worked as a professional Biologist/Ecologist for federal, state, and county environmental agencies, as well as several private environmental consulting firms with specialties in wetlands, streams, rivers, lakes, and wildlife habitat. In my 19 years of experience, I have specialized in review of proposed land use and building development permit applications as they pertain to Critical Areas (wetlands, rivers, streams, lakes, and habitats of protected fish and wildlife species). Much of that experience came as a Senior Reviewing Ecologist for King County DDES and a Regulatory Biologist for Snohomish County PDS.

I received certifications from the Washington Department of Fish and Wildlife for terrestrial wildlife habitat assessments and wildlife surveys of special-status wildlife species in Washington. I have 19 years of direct experience evaluating wildlife habitat and conducting surveys of special-status wildlife species (protected per federal and state laws) in the western United States. I have been selected as the technical expert by local jurisdictions to provide 3rd-party reviews of the adopted FEMA Floodplain Habitat Assessments and applicable Critical Areas Regulations. Over the past 19 years, I have conducted literally over 1,500 different

biological / ecological assessments on properties with many habitat types and zoning designations, from small, urban properties (0.25 acres) to large, rural properties (up to 2,000 acres in size).

METHODOLOGIES OF THE WILDLIFE HABITAT ASSESSMENT

The primary purpose of our wildlife habitat assessment for this project site and vicinity was to determine if the proposed sea plane operation will have any adverse impacts related to wildlife habitat and / or special-status wildlife species. Please note that this assessment was related to potential wildlife habitat and was not intended to represent a wildlife survey for any one particular species.

Wetlands & Wildlife, Inc. investigated a variety of on-line resources in order to garner a representation of local wildlife, wildlife habitat, and ecosystems. *Wetlands & Wildlife, Inc.* examined aerial photographs and topographical data (elevation contours) on King County's interactive mapping system (iMAP), National Wetlands Inventory (NWI) maps produced by the U.S. Fish and Wildlife Service (USFWS), SalmonScape fish distribution maps produced by the Washington Department of Fish and Wildlife (WDFW), StreamNet fish distribution maps produced by Pacific States Marine Fisheries Commission, and Priority Habitats and Species (PHS) maps produced by WDFW.

Wetlands & Wildlife, Inc. completed field investigations on two different days (March 18, 2016 and March 24, 2016) in order to confirm the on-line research findings and observe present use. We used a spotting scope with a 10-60 times magnification lens, in addition to binoculars. We examined species use and visually searched for habitats of primary association while standing on the guest pier west of 1200 Carillon Point. *Wetlands & Wildlife, Inc.* also conducted a detailed visual scan of the Yarrow Bay wetland area from all available public access points to determine if any current nest locations of special-status species are present among the Yarrow Bay wetland area.

NOISE ANALYSIS AMONG PROPOSED PROJECT VICINITY

Wetlands & Wildlife, Inc. determined the common noise levels at the project site (guest pier) by estimating the distance at which local noise sources would attenuate to the project site. This was accomplished by using the following determining factors associated with this specific project: 1) estimated noise levels associated with commonly found uses in the area 2) estimated background (ambient) sound level; 3) soft site vs. hard site conditions; 4) noise point source vs. line source; and 5) develop noise attenuation table for computing distance to project site from nearby roads. Please see the project-specific tables below which were used to derive the common noise levels within the project site location.

ESTIMATED BACKGROUND (AMBIENT) NOISE LEVELS

<i>Estimation of Ambient Noise Based on Population Density</i>	
Estimated Background Noise level at guest pier (due to the urban nature of the project vicinity)	55 dBA

<i>Estimation of Ambient Noise Based of Uses on Lake Washington</i>	
Passenger Boat	72 - 90 dBA
Personal Watercraft (Jet Ski)	76 - 81 dBA
Racing Boat (Speed Boat)	105 - 109 dBA

<i>Estimation of Ambient Noise Based on Traffic Noise From Lake WA Blvd</i>	
Estimated Background Noise 50 feet from Lake WA Blvd	63.2 dBA
Estimated Background Noise 100 feet from Lake WA Blvd (-3 dBA)	60.2 dBA
Estimated Background Noise 200 feet from Lake WA Blvd (-3 dBA)	57.2 dBA
Estimated Background Noise 400 feet from Lake WA Blvd (-3 dBA)	54.2 dBA
Estimated Background Noise 800 feet from Lake WA Blvd (-3 dBA)	51.2 dBA
Estimated Background Noise 1,600 feet from Lake WA Blvd (-3 dBA)	48.2 dBA
Estimated Background Noise level at project site due to traffic from Lake WA Blvd being located ~950' from end of guest pier	48.2 dBA

<i>Estimation of Ambient Noise Based on Traffic Noise From I-405</i>	
Estimated Background Noise 50 feet from I-405	80.5 dBA
Estimated Background Noise 100 feet from I-405 (-4.5 dBA)	76 dBA
Estimated Background Noise 200 feet from I-405 (-4.5 dBA)	71.5 dBA
Estimated Background Noise 400 feet from I-405 (-4.5 dBA)	67 dBA
Estimated Background Noise 800 feet from I-405 (-4.5 dBA)	62.5 dBA
Estimated Background Noise 1,600 feet from I-405 (-4.5 dBA)	58 dBA
Estimated Background Noise 3,200 feet from I-405 (-4.5 dBA)	53.5 dBA
Estimated Background Noise 6,400 feet from I-405 (-4.5 dBA)	49 dBA
Estimated Background Noise level at project site due to traffic from I-405 being located ~4,670' from end of guest pier	49 dBA

<i>Estimation of Ambient Noise Based on Traffic Noise From HWY-520</i>	
Estimated Background Noise 50 feet from HWY-520	80.5 dBA
Estimated Background Noise 100 feet from HWY-520 (-3 dBA)	77.5 dBA
Estimated Background Noise 200 feet from HWY-520 (-3 dBA)	74.5 dBA
Estimated Background Noise 400 feet from HWY-520 (-3 dBA)	71.5 dBA
Estimated Background Noise 800 feet from HWY-520 (-3 dBA)	68.5 dBA
Estimated Background Noise 1,600 feet from HWY-520 (-3 dBA)	65.5 dBA
Estimated Background Noise 3,200 feet from HWY-520 (-3 dBA)	62.5 dBA
Estimated Background Noise 6,400 feet from HWY-520 (-3 dBA)	59.5 dBA
Estimated Background Noise level at project site due to traffic from HWY 520 being located ~4,783' from end of guest pier	59.5 dBA

Notes:

1. Environmental background noise levels obtained from WSDOT Biological Assessment Preparation Assessment Advanced Training Manual (Tables 7-6).

- <http://www.city-data.com/city/Kirkland-Washington.html> shows that the population density of the City of Kirkland to be 7,909 people per square mile equates to an ambient noise level of 55 dBA as shown above.
2. Estimated background noise level derived from <http://www.kirklandwa.gov/Assets/Public+Works/Public+Works+PDFs/Transportation/2015+Average+Daily+Traffic.pdf> at Carillon Point along Lake Washington Boulevard (~950 feet away from project site) is shown as 5,021 vehicles per day. Per WSDOT Biological Assessment Preparation Assessment Advanced Training Manual, 10% of the ADT (501) is used to determine the approximate worst case number of vehicles per hour. http://product.itoworld.com/map/124?lon=-122.19799&lat=47.64722&zoom=13&open_sidebar=clickthrough_wrapper shows that the speed limit along Lake Washington Boulevard in that location is 35 mph. Using these figures for Table 7-3 of the training manual, the noise level at 50 feet from the noise source (Lake Washington Boulevard) equals approximately 63.2 dBA, as shown above.
 3. Estimated background noise level derived from WSDOT 2014 Annual Traffic Report. Average Daily Traffic (ADT) at I-405 (~4,670 feet away from project site) is shown as 183,000 vehicles per day. Per WSDOT Biological Assessment Preparation Assessment Advanced Training Manual, 10% of the ADT (18,300) is used to determine the approximate worst case number of vehicles per hour. http://product.itoworld.com/map/124?lon=-122.19799&lat=47.64722&zoom=13&open_sidebar=clickthrough_wrapper shows that the speed limit along I-405 in that location is 60 mph. Using these figures for Table 7-3 of the training manual, the noise level at 50 feet from the noise source (I-405) equals approximately 80.5 dBA, as shown above.
 4. Estimated background noise level derived from WSDOT 2014 Annual Traffic Report. Average Daily Traffic (ADT) at HWY 520 (~4,783 feet away from project site) is shown as 75,000 vehicles per day. Per WSDOT Biological Assessment Preparation Assessment Advanced Training Manual, 10% of the ADT (7,500) is used to determine the approximate worst case number of vehicles per hour. http://product.itoworld.com/map/124?lon=-122.19799&lat=47.64722&zoom=13&open_sidebar=clickthrough_wrapper shows that the speed limit along HWY-520 in that location is 60 mph. Using these figures for Table 7-3 of the training manual, the noise level at 50 feet from the noise source (HWY 520) equals approximately 80.5 dBA, as shown above.
 5. The traffic noise created from the roads mentioned above is considered a line source noise. The standard reduction for line source noise is 3 dBA per doubling distance from the source. The noise-receiving area located between the I405 and the project site is considered a soft site due to existing vegetation and is absorptive of noise energy. Absorptive ground results in an additional 1.5 dBA reduction per doubling of distance as noise spreads from the source. Therefore, the reduction of 4.5 dBA per doubling distance was used to determine the approximate noise level at the project site from I-405. However, the noise-receiving area between Highway 520, Lake Washington Boulevard, and the project site is not absorptive of noise energy due to structures and open lake water surfaces. Non-absorptive ground results in no additional reduction per doubling distance. Therefore, the reduction of 3 dBA per doubling distance was used to determine the approximate noise level at the project site from Highway 520 and Lake Washington Boulevard.
 6. Noise volume information for boats was derived from <http://www.pwia.org/sound/level.aspx>. Data from NUI Report No. 8077.1, New Jersey State Police-Marine Division. Nov. 1, 1995. <https://www.usbr.gov/uc/envdocs/ea/navajo/appdx-E.pdf>.

ESTIMATED NOISE LEVEL AT PROJECT SITE COMPARISON SUMMARY

Estimated Background Noise at Project Site from Lake WA Blvd	48.2 dBA
Estimated Background Noise at Project Site from I-405	49 dBA
Estimated Background Noise at Project Site from HWY-520	59.5 dBA
Estimated Background Noise level at Project Site (due to the urban nature of the project vicinity)	55 dBA
Passenger Boat	72 - 90 dBA
Personal Watercraft (Jet Ski)	76 - 81 dBA
Racing Boat (Speed Boat)	105 - 109 dBA
Proposed Seaplane Operation	75 dBA (short duration at this dBA; during take-off only)

RESULTS AND FINDINGS OF THE WILDLIFE HABITAT ASSESSMENT

Based on our research, Lake Washington is mapped as providing habitat to several fish species, including Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), steelhead trout (*Oncorhynchus mykiss*), sockeye salmon (*Oncorhynchus nerka*), and bull trout (*Salvelinus confluentus*). According to NWI and PHS maps, two lake-fringe wetlands are located along the shore of the developed Carillon Point. In addition, a large wetland complex (Yarrow Bay Wetlands) is located approximately 2,800 feet from the southern edge of the guest pier west of 1200 Carillon Point. Yarrow Creek, a mapped fish-bearing stream, is located among the Yarrow Bay wetland area. The PHS maps also depict bald eagle (*Haliaeetus leucocephalus*) and great blue heron (*Ardea herodias*) nest locations being located within the Yarrow Bay wetland area.

We did not find any indication of the presence or use of the PHS-mapped nest sites by bald eagles during either of our site visits, nor was there any evidence of unmapped nest sites currently used by bald eagles. Bald eagles were observed soaring over the project vicinity on March 24, 2016, but no active nest sites were located. However, we did locate and identify an active great blue heron rookery which is located along the eastern portion of the Yarrow Bay wetland complex. Although full visual observations of this heron rookery were difficult due to lack of public access and very dense vegetation, this heron rookery was observed to support at least three great blue heron pairs with three separate nesting sites. According to Table 1 of WDFW's Management Recommendations for Washington's Priority Habitats and Species - great blue heron, the recommended year-round management buffer for great blue heron rookeries among an urban setting equals a 197-foot radius. The WDFW recommended buffers between a heron rookery and extremely loud activities like blasting equal 1,320 feet between February and September. The observed heron rookery is located approximately 3,300 linear feet southeast of the guest pier which is west of 1200 Carillon Point. Therefore, the observed active heron rookery is much farther away from the proposed sea plane activities than the WDFW management recommendations among an urban setting.

DISCUSSION REGARDING NO NET LOSS AND PROJECT'S WILDLIFE IMPACT DETERMINATION

Based on the detailed site evaluation and review of the proposed use on the property, no significant adverse impacts are expected to occur to wildlife species, wildlife habitat, or ecological process as a result of this proposed use by seaplanes. The proposed use adheres to the requirements outlined in Kirkland Zoning Code Section 83.360 (No Net Loss Standard and Mitigation Sequencing). The information below describes how the proposed use will avoid and minimize impacts to wildlife and ecological functions, in accordance with City of Kirkland's Shoreline Management regulations.

1. The proposed seaplane operation is a water-dependent use, and therefore the applicant is not able to avoid conducting this activity altogether on a Shoreline of the State (Lake Washington). However, the applicant is proposing to utilize an existing project site (guest pier) that does not require being retrofitted to allow for the use of a seaplane. This proposed location (Carillon Marina) is currently highly developed and provides all the necessary facilities to accommodate the proposed use by a seaplane, due to its current commercial and public use. No new infrastructure will be required in order to accommodate the proposed use by seaplanes, thus avoiding any above or in-water work. Therefore, the project will avoid any new disturbances to local fish species or water-dependent mammals from construction of infrastructure.

2. Per KZC 83.210 (Shoreline Management: Commercial Uses), "Use of piers or docks for commercial float plane service shall be allowed only in public or private marinas and shall be subject to a conditional use permit." One of the code requirements listed in KZC 83.210 is that float plane taxiing patterns will be designed in a way to minimize noise impacts on area wildlife. Per the figures provided to us by the applicant, the taxiing and flight patterns are designed in a way that will avoid and minimize disturbance to area wildlife. Based on information from the applicant, the seaplanes will taxi out to a point that is at least 1,000 feet from the guest pier before proceeding to take-off. The taxiing pattern and flight take-off paths have also been designed in a way to be located away from the nearby wetland complex and heron rookery. As previously mentioned, the above heron rookery is located approximately 3,300 feet southeast of the project site where the seaplane will dock. The actual point of take-off for the seaplanes will be located an additional 1,000 feet away from the guest pier, thereby creating an even greater separation from the rookery and the peak dBA noise level associated with the seaplane take-off. In addition, as noted earlier, the maximum recommended radius for a management buffer for herons is 1,320 feet during the breeding season. Therefore, the loudest noise associated with the proposed seaplane use will be greater than 3 times the width of the widest management buffer for great blue herons, ensuring no disturbance created by the proposed sea plane use.

3. Per research about noise levels associated with seaplanes and our site-specific noise analysis, the loudest dBA associated with seaplanes is during take-off (75 dBA), and this dBA level associated with seaplanes is only present for a very short duration (approximately 20 seconds). As outlined in the noise analysis tables above, the maximum 75 dBA during seaplane take-off is less than ambient noises associated with some of the common uses found on Lake Washington and within the project site (commercial passenger boat, personal watercraft such as jet ski, and speed boat) and the dBA levels associated with those water vehicles last for a much longer duration (continuous noise). Therefore, the proposed use of seaplanes within this project area will not change the level of noise typically produced by other watercraft in this vicinity. Due to the 200-slip Carillon Marina, the project vicinity experiences regular disturbances from loud watercrafts.

Based on the information contained in this report, it is our professional opinion that the proposed seaplane operation among this project area has been specifically designed in a way that avoids and minimizes adverse impacts to wildlife species, wildlife habitat, and ecological processes. In accordance with KZC section 83.360, no net loss of shoreline ecological functions related to wildlife habitat are expected to occur due to the proposed seaplane operation as described in this report and project activities as presented to us by *Carillon Properties*.

LIMITATIONS AND USE OF THIS REPORT

This Wildlife Habitat Assessment is supplied to *Carillon Properties* as a means of determining any impacts associated with the new use of an existing pier. Please note that the purpose and focus of this assessment was to identify documented or potential wildlife, with an emphasis on potential impacts associated with new seaplane use. The report and field work are intended as a habitat assessment, including vegetative conditions and landscape context, among the subject property which may provide habitat conditions for special-status wildlife species. A wildlife survey was not completed and this report and associated field work are not intended to represent a wildlife survey for any particular species or individuals of a particular species.

The work for this report has conformed to the standard of care employed by professional ecologists in the Puget Sound region. No other representation or warranty, expressed or implied, is made concerning the work or this report. This report is based largely on readily observable conditions and no attempt has been made to determine hidden or concealed conditions. If hidden or concealed conditions arise, the information contained in this report may change based upon those conditions.

Wetlands & Wildlife, Inc. did not evaluate the site for the presence, extent, classification, or regulatory implications of any other Critical Areas types (e.g. wetlands, streams, or geologic hazard areas) which are also regulated by the City of Kirkland Zoning Code. Similarly, *Wetlands & Wildlife, Inc.* did not provide detailed analysis of other permitting requirements not discussed in this report (i.e. architectural, structural, drainage, geotechnical, or engineering requirements).

While *Wetlands & Wildlife, Inc.* upheld professional industry standards when completing this review, the information included in this report does not guarantee approval by any federal, state, and/or local permitting agencies. Therefore, *Wetlands & Wildlife, Inc.* does not recommend commencing any activity which requires a permit on the property until all appropriate permits have been obtained. If any questions arise regarding this habitat assessment or report, please contact me directly at (425) 337-6450.

Regards,



Scott Spooner
Owner / Principal Wetland & Wildlife Ecologist
Wetlands & Wildlife, Inc.

REFERENCES AND LITERATURE REVIEWED

Azerrad, J. M. 2012. Management recommendations for Washington's priority species: Great Blue Heron. Washington Department of Fish and Wildlife, Olympia, Washington.

City of Kirkland Population Data. <http://www.city-data.com/city/Kirkland-Washington>.

City of Kirkland Traffic Count Data. www.kirklandwa.gov/Assets/Public+Works/Public+Works+PDFs/Transportation/2015+Average+Daily+Traffic.pdf.

King County iMAP: Interactive Mapping Tool. Administered by the King County GIS Center. <http://www.kingcounty.gov/operations/gis/Maps/iMAP.aspx>.

Kirkland Zoning Code. Chapter 90 -- Drainage Basins. City of Kirkland, Washington. http://kirklandcode.ecitygov.net/CK_KZC_Search.html.

Peterson, R.T. 1990. Peterson Field Guide to Western Birds. Houghton Mifflin Company, New York, NY.

SalmonScape. Interactive Mapping website administered by the Washington Department of Fish and Wildlife. <http://wdfw.wa.gov/mapping/salmonscape/index.html>.

StreamNet. Fish Data for the Northwest. Administered by the Pacific States Marine Fisheries Commission. <http://www.streamnet.org/>.

Washington State Department of Fish and Wildlife. Priority Habitats and Species map (PHS on the Web). <http://wdfw.wa.gov/mapping/phs/>.

Washington State Department of Transportation. Biological Assessment Preparation for Transportation Projects - Advanced Training Manual. (Version 02-2010). <http://www.wsdot.wa.gov/Environment/Biology/BA/BAguidance.htm#Manual>.

Washington State Department of Transportation. 2014 Annual Traffic Report. Page 176. http://www.wsdot.wa.gov/mapsdata/travel/pdf/Annual_Traffic_Report_2014.pdf.



CITY OF KIRKLAND
Planning and Building Department
123 Fifth Avenue, Kirkland, WA 98033
www.kirklandwa.gov ~ 425.587.3600

DETERMINATION OF NON-SIGNIFICANCE (DNS)

Case No.: SEP16-00804

DATE ISSUED: November 17, 2016

Project Name: Carillon Point Float Plane Proposal

Project Location: 4100 Carillon Point Drive

Project Description: Shoreline Conditional Use Permit for proposed Sea Plan operation at Carillon Point private marina, located along the shoreline of Lake Washington.

Proponent: Sue Gemmill with Carillon Properties, and James Young with SeaPlane Scenics

Project Planner: Christian Geitz

Lead agency is the City of Kirkland

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

This DNS is issued after using the Optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

Responsible official:

November 17, 2016

Eric R. Shields, AICP, Planning Director
City of Kirkland
Planning & Building Department
123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

Date

You may appeal this determination to the Planning & Building Department at City of Kirkland, 123 Fifth Avenue, Kirkland, WA 98033 no later than **5:00 PM on December 1, 2016** by a Written Notice of Appeal. You should be prepared to make specific factual objections and reference case number SEP16-00804. Contact Christian Geitz, project planner in the Planning & Building Department at (425) 587-3246 to ask about the procedures for SEPA appeals. See also KMC 24.02.230 Administrative Appeals.

Distribute this notice with a copy of the Environmental Checklist to:

GENERAL NOTICING

- Department of Ecology - Environmental Review
- Muckleshoot Tribal Council - Environmental Division, Tribal Archeologist
- Muckleshoot Tribal Council - Environmental Division, Fisheries Division Habitat
- Cascade Water Alliance – Director of Planning
- Lakeview Neighborhood Association
- Lake Washington School District No. 414: Budget Manager and Director of Support Services
- Houghton Community Council

AGENCIES WITH JURISDICTION, AFFECTED AGENCIES, AND/OR INTERESTED PARTIES

- Department of Ecology - Environmental Review
- Department of Fish and Wildlife – Olympia
- Department of Natural Resources – SEPA Center
- Muckleshoot Tribal Council - Environmental Division, Fisheries Division Habitat Program
- U.S. Army Corps of Engineers - Seattle District
- Eastside Audubon Society
- Parties of Record
- Interested Citizens

cc: Applicant
Planning Department File, Case No. SHR16-00803

Distributed by:  November 17, 2016
(Karin Bayes, Office Specialist) Date



CITY OF KIRKLAND
Planning & Building Department
123 5th Avenue, Kirkland, WA 98033
425.587.3600 ~ www.kirklandwa.gov

MEMORANDUM

To: Eric R. Shields, AICP, SEPA Responsible Official

From: Christian Geitz, Planner

Date: November 15, 2016

File: SEP16-00804 and SHR16-00803

Subject: STATE ENVIRONMENTAL POLICY ACT (SEPA) DETERMINATION
FOR CARILLON POINT FLOAT PLANE OPERATION PROPOSAL

GENERAL

The subject property is located at 4100 Carillon Point Drive (see Attachment 1, 2 and 3) and currently contains the Carillon Point development which supports retail, office, commercial and marina uses developed under Master Plan file SD-111-86-75. The applicant, James Young with SeaPlane Scenics, along with Sue Gemmill with Carillon Properties, has proposed to operate a commercial scenic float plane business out of the Carillon Point Marina. The applicant proposes to operate a maximum of two aircraft, with no more than one plane moored at Carillon Point at a time. Moorage is proposed to be located at the western end of pier E, utilizing the existing pier infrastructure (see Attachment 2). Operation is proposed at one scenic flight per hour between the hours of 9:00 a.m. to one hour prior to sunset. Each flight will begin with the aircraft taxiing from the Carillon Point Marina to a point on the lake approximately 1000 feet from the shoreline (see Attachment 3). The aircraft will take off to the northwest or west, out and away from the shoreline. Planes will land from the west or northwest, and taxi in the remaining 1000 feet (see Attachment 2). Overnight moorage and fueling are proposed to take place at an offsite location outside the City of Kirkland. Environmental considerations of the proposal include noise, fueling concerns, and impacts to the shoreline and nearby wetland environment of Yarrow Bay.

ANALYSIS

The SEPA "threshold determination" is the formal decision as to whether the proposal is likely to cause a significant adverse environmental impact for which mitigation cannot be identified. If it is determined that a proposal may have a significant adverse impact that cannot be mitigated, an Environmental Impact Statement (EIS) would be required.

Many environmental impacts are mitigated by City codes and development regulations. For example, the Kirkland Zoning Code has regulations that protect sensitive areas, limit noise, provide setbacks, establish height limits, etc. Where City regulations have been adopted to address an environmental impact, it is presumed that such regulations are adequate to achieve sufficient mitigation [WAC 197-11-660(1)(e) and (g)].

I have had an opportunity to visit the subject property and review the following documents:

- Environmental Checklist dated 3/29/2016 (see Attachment 4)

- Wildlife Habitat Assessment dated April 4, 2016 (see Attachment 5)
- Noise Study dated August 11, 2016 (see Attachment 6)
- Public comment letters/emails (see Attachment 7)

It will be necessary to further analyze certain aspects of the proposal to determine if the project complies with all the applicable City codes and policies. That analysis is most appropriately addressed within the staff advisory report, which will be presented at the public hearing.

Below is an analysis of key SEPA elements identified by staff and/or brought up by the general public (see Attachment 7).

Wildlife

Several comments were received concerning impacts of the proposed float plane operation on wildlife. The concerns were focused mainly on the potential impacts from noise and aircraft activity on the aquatic and bird populations in Lake Washington and the nearby Yarrow Bay Wetlands. The wetlands are located approximately 2200 feet to the south of the closest taxiing point and approximately 3000 feet to the south of the proposed takeoff and landing areas of the Float Plane Operation (see Attachment 2 and 3).

The wildlife study prepared for the applicant by Wetlands & Wildlife Environmental Consulting (see Attachment 5) examined the potential impacts of the float plane operation on the surrounding environment. The study reviewed the potential impacts on birds, fish, and mammals that inhabit the lake and nearby wetland environments. The study discussed noise and the short duration of the taxi and take off process, which is significantly shorter than the continuous noise levels produced by boats and other watercraft. It concluded that the proposed float plane operation was designed to avoid and minimize adverse environmental impacts and will have no significant adverse impacts on surrounding wildlife species, wildlife habitat, and ecological processes.

Noise

More than 100 opposition comments were submitted regarding the proposed project. The majority of those public comments were concerned with the noise produced by the proposed float plane operation. The concerns covered all aspects of the operation including taxi, takeoff, landing, and inflight noise. Many of the objections to the proposal identified noise as a major nuisance, producing a negative impact and affecting the use of their property.

At the request of the City, the applicant produced a noise study to accompany the application. The study was completed by a licensed acoustic engineer (see Attachment 6). The study recorded the noise of the plane from taxi and takeoff to landing. The noise was recorded and measured from three points around the subject property. While the study was completed with the aircraft moorage located at the northern end of the marina, the results are still applicable with the proposed southern moorage location and can be used to understand the sound levels that will be produced and heard along the parcel boundary. Even though the proposed moorage location is different than what was used for the study, the takeoff and landing position on the lake remains the same. The engineer quantified the noise produced from taxiing, takeoff, inflight, and landing as standard decibels (dBA), charting the results in a table as part of the study. The maximum decibels were recorded during the takeoff portion of the flight, from the northernmost point of the subject property. The maximum decibel level recorded was 63 dBA.

The City of Kirkland has adopted, pursuant to KZC 115.95, the state standards for maximum environmental noise levels listed in Washington Administrative Code section 173-60 (see Attachment 8). The discussion below covers two elements related to the proposed float plane operation; Maximum Environmental Noise Levels addressed in the WAC and the Float Plane Landing and Mooring Facilities regulations located in the **City's** Shoreline Master Program (KZC 83.210).

WAC Maximum Environmental Noise Levels (WAC 173-60): This state statute establishes the maximum environmental noise levels that may be transmitted from a commercial property to an adjoining residential parcel, based on the use classification. Based on the chart in WAC section 173-60-40, the maximum decibels allowed at any hour of the day or night being transmitted from a commercial property to a residential property is 57 dBA. This 57 dBA may be exceeded by a certain decibel level for various periods of time. The application proposes a maximum of one flight per hour. The flexibilities provided in the state standards would allow an hourly increase above the 57 dBA level by 10 dBA for a duration of 5 minutes. The recorded noise levels of 63 dBA for 40 seconds during taxi and take off and 60 dBA for 45 seconds during landing are below the maximum allowed hourly occurrence of 67 dBA.

Float Plane Landing and Mooring Facilities (KZC 83.210): The proposed application is being reviewed pursuant to the City's Shoreline Master Program, which incorporates standards for a Float Plane operation. The standards identify the need for taxiing patterns to be followed in order to minimize noise impacts on area residents and wildlife. Additionally, the SMP standards identify that the hours of operation may be limited to minimize impacts on residents. The applicant has provided a plan showing the taxi and takeoff patterns (see Attachment 2). The plan shows the plane will taxi out away from shore to a distance of 1000 feet before taking off to the west or northwest, continuing out away from shore and residential properties of Kirkland and nearby Yarrow Point. In accordance with this section of the SMP and based on the comments submitted, the staff advisory report for the Shoreline Conditional Use Permit will include recommendations for hours of operation, to be presented at the public hearing.

Fuel Spills

Comments were submitted regarding the potential for fuel spills associated with the proposed float plane facility. These comments were primarily concerned with fuel spills occurring during the fueling of aircraft at the subject property. Concerns included the need for a spill response plan and the potential to contaminate the waters of Lake Washington.

The application does not include a proposal to fuel aircraft at the site. Fueling will occur where the planes are moored overnight at an offsite location in Renton. No fueling will occur at the Carillon Point Marina. The Carillon Point Marina has established a spill response plan to protect against fuel leaks or similar accidents. The plan was required as a condition of approval for the Carillon Point Master Plan.

Navigation Safety

It is important that the proposed operation of planes taxiing, taking off, and landing, take into consideration the potential navigational safety of lake users such as boaters, kayaks, paddle boarders, and swimmers.

The applicant has proposed to taxi out 1000 feet from the Carillon Point pier to a takeoff point. Takeoff will occur out into the lake in a westerly and northerly direction, away from the shoreline. Landing approach will be from the west and will occur out past the 1000 foot distance from shore. The pilot will then taxi back into the Carillon Point pier. The applicant/pilot will be responsible to operate the plane in accordance with US Coast Guard, FAA standards and the Harbor Patrol safe navigational standards.

CONCLUSION

Based on my review of all available information and adopted policies of the City, I have not identified any significant adverse environmental impacts. Therefore, I recommend that a Determination of Non-Significance be issued for this proposed action.

ATTACHMENTS

1. Vicinity Map
2. Application Plans
3. Proximity Plans
4. Environmental Checklist
5. Wildlife Habitat Assessment
6. Noise Study
7. Public Comments
8. WAC 173-60 Standards

I concur I do not concur

Comments: _____



Eric R. Shields, Planning & Building Director Date November 15, 2016

cc: Applicant - James Young, SeaPlane Scenics
 Sue Gemmill, Carillon Properties
 Parties of Record (SHR16-00803 and SEP16-00804)



CITY OF KIRKLAND
Planning and Community Development Department
123 Fifth Avenue, Kirkland, WA 98033
425.587.3225 - www.kirklandwa.gov

SEPA ENVIRONMENTAL DOCUMENTS

If an application for a land use or building permit is subject to environmental review under Chapter 43.21C RCW, all SEPA environmental documents must be submitted with the filing of a land use permit or building permit application or the City will not accept the application.

The following is a list of the environmental documents that must be submitted with the land use or building permit application:

1. **Environmental Checklist.** The checklist form can be obtained from the Kirkland Planning Department.
2. **Road concurrency test decision memo.** Applicants must pass road concurrency *before* submitting for a land use or building permit and the environmental documents. Concurrency application forms are available from Public Works or the Planning Departments. If the application passes road concurrency, the Public Works Department's Transportation Engineer will provide the applicant or applicant's traffic engineer with a concurrency test decision memo and traffic information that needs to be included in the Traffic Impact Analysis. A copy of this memo must be submitted to show that road concurrency has been passed.
3. **Traffic Impact Analysis.** Traffic Impact Analysis Guidelines can be obtained from the Planning or Public Works Departments. The Traffic Impact Analysis is to be completed after the road concurrency test has been successfully passed. Information from the City's Transportation Engineer is to be included in the Traffic Impact Analysis along with all other information specified in the guidelines.
4. **Other supplemental environmental information.** Ask the assigned planner at the pre-application meeting what other environmental information will be required with the environmental submittal. All studies and reports must be prepared by a licensed and qualified specialist in the field and approved by the City. Supplemental impact assessment reports or studies that may be required include, but not be limited to the following:
 - Lighting
 - Environmental health hazard
 - Historic
 - Wetland and/or stream delineation and analysis, prepared or reviewed by the City's consultant
 - Hydrology
 - Wildlife
 - Views
 - Noise
 - Geotechnical soils analysis

YOU ARE ENCOURAGED TO MEET WITH A PLANNER FROM THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO AND DURING PROJECT DESIGN TO DISCUSS PROJECT DESIGN AND PROJECT COMPLIANCE WITH CITY REGULATIONS AND TO OBTAIN GUIDANCE ON THE ENVIRONMENTAL MATERIALS THAT YOU MUST SUBMIT.



CITY OF KIRKLAND ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant requiring preparation of an EIS. Answer the questions briefly with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the City staff can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of Checklist for Non-project Proposals:

Complete this checklist for non-project proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS (Part D).

For non-project actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: Carillon Point Seaplane tours
2. Name of applicant: Carillon Properties

- 3. Address and phone number of applicant and contact person: Sve Sommiel, Carillon Properties
4100 Carillon Point, Kirkland 98033
- 4. Date checklist prepared: March 31, 2014
- 5. Agency requesting checklist: City of Kirkland
- 6. Proposed timing or schedule (including phasing, if applicable): Summer 2014
- 7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

NO

- 8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Biologist wildlife Habitat assessment

- 9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

N/A

- 10. List any government approvals or permits that will be needed for your proposal, if known.

City of Kirkland - Conditional use Permit

- 11. Give brief, complete description of your proposal, including the proposed uses, the size and scope of the project and site including dimensions and use of all proposed improvements. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Operate Seaplane tours from the Carillon Point Guest Pier

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

1200 Carillon Point, Guest Pier on Lake Washington, Kirkland
Waterfront

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt, buildings)?

N/A -
existing structures to remain

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

N/A

2. AIR

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

on site none as the aircraft will not be running during docking at West Pier

b. Are there any offsite sources of emissions or odor that may affect your proposal? If so, generally describe.

aircraft takeoff + landing \approx 1,000 feet off shore

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

3. WATER

a. Surface

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

lake Washington
Casillan creek

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

NO

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

N/A - none

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

N/A - none

- 5) Does the proposal lie within a 100-year flood plain? If so, note location on the site plan.

NO

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

NO

b. Ground

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

NO

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

None

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

NO

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

N/A

4. PLANTS

- a. Place an "X" next to the types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture

_____ crop or grain
 _____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
Y _____ water plants: water lily, eelgrass, milfoil, other
 _____ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

_____ none

c. List threatened or endangered species known to be on or near the site.

_____ unknown

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

_____ none

5. ANIMALS

a. What kinds of birds and animals have been observed on or near the site or are known to be on or near the site?

birds: hawk, heron, eagle, songbirds, other
 mammals: deer, bear, elk, beaver, other
fish: bass, salmon, trout, herring, shellfish, other

b. List any threatened or endangered species known to be on or near the site.

_____ unknown

c. Is the site part of a migration route? If so, explain.

_____ unknown

d. Proposed measures to preserve or enhance wildlife, if any:

6. ENERGY AND NATURAL RESOURCES

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

N/A

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

NO

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

N/A

7. ENVIRONMENTAL HEALTH

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

NO

1) Describe special emergency services that might be required.

Oil Spill / Gas Kits available
at marina facility

2) Proposed measures to reduce or control environmental health hazards, if any:

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Typical waterfront / urban noises
exist

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

only brief aircraft noise

3) Proposed measures to reduce or control noise impacts, if any:

1,000 ft away for take off + landing

8. LAND AND SHORELINE USE

a. What is the current use of the site and adjacent properties?

urban mixed use commercial property with a full service marina

b. Has the site been used for agriculture? If so, describe.

NO

c. Describe any structures on the site.

office buildings / marina / streets + parking structures

d. Will any structures be demolished? If so, what?

NO

e. What is the current zoning classification of the site? PLA-15

f. What is the current comprehensive plan designation of the site?

g. If applicable, what is the current shoreline master program designation of the site?

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

NO

i. Approximately how many people would reside or work in the completed project?

2 pilot

j. Approximately how many people would the completed project displace?

none

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

City of Kirkland Conditional use permit

9. HOUSING

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. AESTHETICS

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

N/A

b. What views in the immediate vicinity would be altered or obstructed?

none

c. Proposed measures to reduce or control aesthetic impacts, if any:

N/A

11. LIGHT AND GLARE

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

none

b. Could light or glare from the finished project be a safety hazard or interfere with views?

none

c. What existing off-site sources of light or glare may affect your proposal?

none

d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

12. RECREATION

a. What designated and informal recreational opportunities are in the immediate vicinity?
walkings, marina, waterfront boating, fishing, etc.

b. Would the proposed project displace any existing recreational uses? If so, describe.

NO - it would add more use

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

N/A

13. HISTORICAL AND CULTURAL PRESERVATION

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

N/A

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

N/A

c. Proposed measures to reduce or control impacts, if any:

N/A

14. TRANSPORTATION

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show onsite plans, if any.

Take Washington Boulevard as main access
Road to Casella Point

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

yes

c. How many parking spaces would the completed project have? How many would the project eliminate?

1,600 parking spots on Property

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

NO

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Aircraft / seaplane

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None

g. Proposed measures to reduce or control transportation impacts, if any:

N/A

15. PUBLIC SERVICES

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

no

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

16. UTILITIES

a. What utilities (e.g.: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other) are currently available at the site?

none

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

name

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

n/a

3. How would the proposal be likely to deplete energy or natural resources?

n/a

Proposed measures to protect or conserve energy and natural resources are:

n/a

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

this is an existing use on lake Washington - will not affect

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

provide access to the waterfront
enhance public use

Proposed measures to avoid or reduce shoreline and land use impacts are:

Best Practices for take up, landing
+ approach to mitigate noise

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

N/A

Proposed measures to reduce or respond to such demand(s) are:

N/A

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

[Statutory Authority: RCW 43.21C.110, 84-05-020 (Order DE 83-39), § 197-11-960, filed 2/10/84, effective 4/4/84.]

Notice of Appeal SEP16-00804

Carillon Point Float Plane Proposal

Submitted December 1, 2016



Statement of matter being appealed

The No Seaplane Group, comprising 98 members and growing, is appealing the Determination of Non-Significance of SEP16-00804, Shoreline Conditional Use Permit for proposed seaplane operation at Carillon Point private marina, located along the shoreline of Lake Washington.

Specific components or aspects being appealed

We believe the sound study is inherently flawed:

- The street measurement location is too far from the water's edge and from the flight path to accurately measure the noise that waterfront residents and users are exposed to.
- The study did not measure noise in front of the waterfront homes and businesses that are most affected by the noise.
- The study did not measure the noise farther north along the waterfront, where there are heavily-used parks and walkways.
- The study did not measure the noise on the slope above the waterfront, where sound travels unimpeded off the water.

Rationale or contentions of appeal

We believe that seaplane noise does cause "a significant adverse environmental impact for which mitigation cannot be identified." (Per the SEPA threshold determination.) Numerous studies indicate that the health effects of noise pollution are medically and socially significant. (See supplemental information.) Noise pollution and psychological and physical damage result from the cumulative effects of the various noises that comprise an urban environment. Introducing a hitherto unpermitted noise source will exacerbate this cumulative effect.

The City of Kirkland staff report states that "It will be necessary to further analyze certain aspects of the proposal to determine if the project complies with all the applicable City codes and policies." We believe these analyses should have been conducted prior to issuing a DNS, and that the staff report is therefore incomplete.

We believe that if the sound study had measured noise in front of the homes, parks, and trails along the flight path, that the decibel levels would have exceeded the allowances in WAC section 173-60-40.

We believe that allowing noise levels to exceed the WAC maximum for five minutes every hour (8% of the time) is unreasonable, and is not in keeping with the intentions of the exception clause allowing 67 dBA for "various periods of time."

The sound study measured only two flights. One of these flights generated an engine backfire measured at 77 dBA. The noise study company was told that this event is "very rare," and the db

reading was thus excluded from the study. We contend that a backfire occurring in such a small flight sampling is statistically significant, and should have been included in the noise study.

Statement demonstrating standing to appeal

The appellant comprises Kirkland citizens who live on or near, or use the Kirkland waterfront, and will be directly affected by seaplane noise.

Supplemental information - the Public Health Effects of Noise

Numerous studies indicate the harmful effects of noise in our daily lives. In 1973, at the International Congress on Noise as a Public Health Hazard, then-Surgeon General Dr. William Stewart stated, **“Calling noise a nuisance is like calling smog an inconvenience. Noise must be considered a hazard to the health of people everywhere.”**

In their position paper, **The American Noise Pollution Epidemic** (https://www.noisefree.org/ONAC_2010.pdf), the Noise Free America Coalition states: “A Census Bureau report indicates that noise is Americans' number one complaint about their neighborhoods, and the most significant reason why they wish to move.”

In their publication in the Southern Medical Journal, **Noise Pollution: A Modern Plague** (<http://www.medscape.com/viewarticle/554566>), Lisa Goines, RN and Louis Hagler, MD state:

- The potential health effects of noise pollution are numerous, pervasive, persistent, and medically and socially significant. **The aim of enlightened governmental controls should be to protect citizens from the adverse effects of [noise] pollution.**
- Noise pollution has profound public health implications.
- Noise is a stressor on the human body. It causes the “fight or flight” syndrome, releasing cortisol and other harmful chemicals into the blood stream. Over time, these chemicals build up in the body, leading to a host of health problems, including cardiovascular disease, aggression, chronic fatigue, headaches, high blood pressure, mental illness, and anxiety.
- Noise, **even at levels that are not harmful to hearing**, is perceived subconsciously as a danger signal, even during sleep.
- Excessive noise is very **harmful to children**. Noise pollution creates developmental delays in fetuses and cognitive delays in toddlers. Noise can cause or worsen learning disabilities and hearing loss in children.
- Noise pollution causes and contributes to anxiety, stress, nervousness, nausea, headache, emotional instability, argumentativeness, sexual impotence, change in mood, increase in social conflicts, neurosis, hysteria, and psychosis.
- Noise is a major cause of chronic fatigue.
- According to the American Speech-Language-Hearing Association, noise has many physical effects, including increased blood pressure, heightened breathing rate, ulcers, and fetal development disruption.

Appellant

No Seaplanes Group, including the following named members:

Karen Story, Chair
9017 Slater Ave NE
Kirkland WA 98033

Fred and LouAnn Freeburg
4823 Lake WA Blvd NE #6
Kirkland, WA 98033

Maureen Kelly
6201 Lake Washington Blvd NE #102
Kirkland, WA 98033

Mark and Betty Taylor
6202 Lake Washington Blvd NE
Kirkland, WA 98033

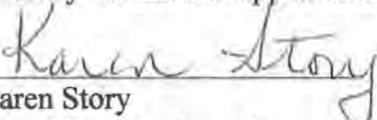
The Villas @ Carillon
Scott Myhre, board member
Virginia Rhode, board member
Kellie Murray, board member
Judith Weismann, owner
PO Box 3080
Bellevue WA 98009

John Barnett
4823 Lake Wash. Blvd. NE, #5
Kirkland WA 98033

Shawn Etchevers
4119 107th Pl. NE
Kirkland WA 98033

Signature and Acknowledgement of Accuracy

I hereby submit this appeal and acknowledge that I believe its content to be accurate and true.


Karen Story
Chair, No Seaplanes Group

Date: 12-1-16

115.95 Noise Regulations

1. Maximum Environmental Noise Levels
 - a. State Standard Adopted – The City of Kirkland adopts by reference the maximum environmental noise levels established pursuant to the Noise Control Act of 1974, Chapter 70.107 RCW. See Chapter 173-60 WAC.
2. Noise – Public Nuisance – Any noise which injures; endangers the comfort, repose, health or safety of persons; or in any way renders persons insecure in life, or in the use of property, is a violation of this code. The operation of power equipment, including but not limited to leaf blowers, shall be deemed a public nuisance if such operation occurs during the following hours: before 8:00 a.m. or after 8:00 p.m. Monday through Friday, or before 9:00 a.m. or after 6:00 p.m. Saturday, Sunday, or the following holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
3. See KZC 115.25 for requirements related to development activity (construction work that requires a permit).
4. Exceptions – Sounds created by emergency generators are exempt from the provisions of this section when:
 - a. Operating as necessary for their intended purpose during periods when there is no electrical service available from the primary supplier due to natural disaster or power outage;
 - b. Conducting periodic testing, as required by the manufacturer. Testing shall be limited to the hours after 8:00 a.m. and before 8:00 p.m.
5. Bonds – The City may require a bond under Chapter 175 KZC to insure compliance with the provisions of this section.

(Ord. 4437 § 1, 2014; Ord. 4286 § 1, 2011; Ord. 4121 § 1, 2008; Ord. 4072 § 1, 2007)

WAC 173-60-040

Maximum permissible environmental noise levels.

(1) No person shall cause or permit noise to intrude into the property of another person which noise exceeds the maximum permissible noise levels set forth below in this section.

(2)(a) The noise limitations established are as set forth in the following table after any applicable adjustments provided for herein are applied.

	EDNA OF RECEIVING PROPERTY		
	Class A	Class B	Class C
EDNA OF NOISE SOURCE			
CLASS A	55 dBA	57 dBA	60 dBA
CLASS B	57	60	65
CLASS C	60	65	70

(b) Between the hours of 10:00 p.m. and 7:00 a.m. the noise limitations of the foregoing table shall be reduced by 10 dBA for receiving property within Class A EDNAs.

(c) At any hour of the day or night the applicable noise limitations in (a) and (b) above may be exceeded for any receiving property by no more than:

- (i) 5 dBA for a total of 15 minutes in any one-hour period; or
- (ii) 10 dBA for a total of 5 minutes in any one-hour period; or
- (iii) 15 dBA for a total of 1.5 minutes in any one-hour period.

[Order 74-32, § 173-60-040, filed 4/22/75, effective 9/1/75.]



Figure SA-1: Shoreline Environment Designations Map

PART 7

MARINA DESCRIPTION

Part 7.1 **General Description of the Marina**

The Carillon Point Marina was constructed in 1989 and is currently managed by Carillon Point Properties.

The Marina is located at 7000 Carillon Point on the west side of the Carillon Point Campus.

The Marina is principally constructed of wood and concrete.

The Marina consists of five main docks and one guest pier. Docks 'A', 'B', and 'C' are served by one entrance gate. Docks 'D' and 'E' each have a dedicated entrance gate. Each entrance gate is locked, and requires a key card for access. The gates unlock upon alarm activation.

The Marina has a designated Incident Command Post located at the sidewalk between the north and south turnarounds, from which a response to an emergency may be coordinated by the Marina Incident Commander, provided that area is still safe. There is a Campus Incident Command Post inside the main entrance lobby on the 1st Floor of Building 3000.



Part 7.2 Fire Alarm System

The Marina is protected by the fire alarm system of Building 2000 (docks 'A', 'B' and 'C') and Building 5000 (docks 'D' and 'E').

There is no remote annunciation present within the Marina.

The Marina contains the following equipment:

- Three pull stations (one at each gate)



- One alarm light and one alarm horn at each gate



Upon activation of a pull station, a continuous general alarm will sound throughout the Marina. This will not sound an alarm throughout the corresponding building, however, a trouble will signal at the corresponding fire alarm panel.

The alarm system is monitored by NW Alarm Monitoring, who in turn is instructed to notify the Fire Department.

Part 7.3 Exit System

If the occupants evacuate because of fire, they are required to proceed to the recommended assembly area located at the north Marina turnaround (docks 'A', 'B', and 'C') or at the south Marina turnaround (docks 'D' and 'E'). If evacuation is required because of a bomb threat, the recommended assembly area will be dependent upon whether a device was found, how large it is and where it is located. The recommended assembly area for an internal hazmat incident would be upwind. The recommended assembly area for an external hazmat event would be determined by the nature of the hazardous material and wind direction.



The dock entrance gates unlock upon alarm activation.

Part 7.4 Communications

2-Way Communications Devices

Facilities, Management, Parking and Marina Staff are equipped with two-way communications devices that can be utilized in the event of a fire emergency.

Part 7.5 Fire Equipment

ATTACHMENT 12
SHR16-00803

Standpipes

Class II standpipe connections are located throughout Marina.



Fire Department Connections

Fire Department connections are located on a concrete half wall at the west portion of the Carillon Plaza (behind the wood benches), in the bushes south of the dock 'D' and 'E' entrance gate, and in the grass area at the southwest corner of Building 2000.



Fire Extinguishers

The Marina is equipped with multiple ABC dry chemical fire extinguishers. The extinguishers have labels with instructions describing how to operate them, their age, serial number and the type of fire against which they can be used.



Part 7.6 **Utilities**

Electrical

Docks 'D' and 'E' have a main electrical shut off in the bushes, just southeast of the dock 'D' and 'E' entrance gate. Docks 'A', 'B' and 'C' have main electrical shut off in the bushes southeast of their entrance gate. Each dock has an electrical shut-off sub panel.



Part 7.7 **Occupancy / Staffing Levels**

During normal operating hours, the numbers of staff members in the Marina is approximately 2. Before or after normal operating hours, there is a roaming security guard on duty.

The Marina contains a variable number of occupants.

CARILLON POINT
7000 CARILLON POINT, KIRKLAND, WA

EVACUATION PLAN



RECOMMENDED
ASSEMBLY
AREA

CARILLON POINT
7000 CARILLON POINT, KIRKLAND, WA



- LEGEND**
- KEYBOX
 - FIRE DEPARTMENT CONNECTION
 - ELECTRICAL SHUT-OFF



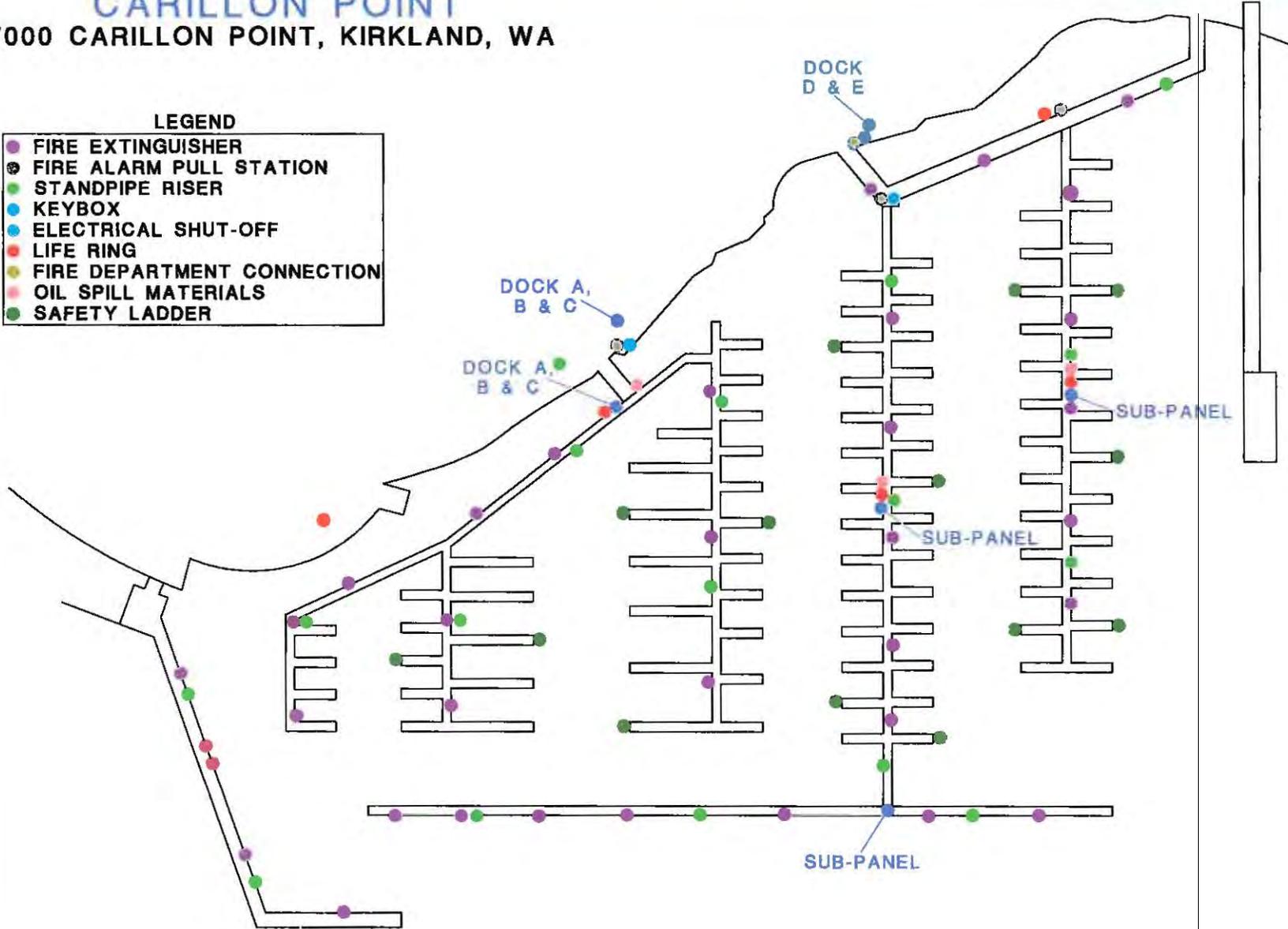
(C) WPS 2016-10-17

CARILLON POINT

7000 CARILLON POINT, KIRKLAND, WA

LEGEND

- FIRE EXTINGUISHER
- ⊕ FIRE ALARM PULL STATION
- STANDPIPE RISER
- KEYBOX
- ELECTRICAL SHUT-OFF
- LIFE RING
- FIRE DEPARTMENT CONNECTION
- OIL SPILL MATERIALS
- SAFETY LADDER



Christian Geitz

From: Jennifer.Kandel@faa.gov
Sent: Thursday, July 21, 2016 5:05 PM
To: Christian Geitz; Cayla.Morgan@faa.gov
Subject: RE: Seaplane Bases

Hi Christian,

I can't find anything in our system for the address you provided. If the applicant had filed with the FAA, there would be a Location or Site ID. With regards to your first question – based on the level of activity conducted, the proponent is required to officially notify the Federal Aviation Administration under Title 14 CFR Part 157. Our agency will evaluate the facility with regards to the surrounding airspace, and if deemed appropriate, issue a letter of determination of no hazard.

As I mentioned on the phone, notification to the FAA does not waive the requirements of any other government agency.

Cayla – can you answer Christian's question on noise?

Thanks, Jen

From: Christian Geitz [mailto:CGeitz@kirklandwa.gov]
Sent: Tuesday, July 19, 2016 1:23 PM
To: Kandel, Jennifer (FAA)
Subject: RE: Seaplane Bases

Jennifer,

Thank you for the information. I have started to look it over and have a couple of initial questions related to the documents you sent and one related to decibel measurements listed in a separate circular.

First, the notice for construction document appears to indicate the proposal I am reviewing would need to file a notice for construction. The application is proposing continued use for the foreseeable future, with up to 12 flights per day. Can you confirm they need to still file a notice with the FAA for their activity? The address is 4100 Carillon Point, Kirkland, WA 98033. In reading through the notice, it seems like they need to gain approval from the FAA still, but are and have been operating for over a year. The City is currently in enforcement proceedings with the property owner and pilot for operating without the necessary Land Use approvals.

My second question is related to AC 36-3H. The Advisory Circular that covers estimated airplane noise levels. I have located in the chart, the two planes they are proposing to use for the sightseeing operation, but have questions on how the decibels listed were measured. It looks like the takeoff measurement was done from a distance of 6500 meters. Can you confirm or elaborate on this for me? Noise is a significant issue for neighbors and I want to make sure the dBAs I reference and have from the applicant are consistent. Below is a snapshot from the excel file I found on the FAA website.

	A	B	C	D	E	F
1	ESTIMATED MAXIMUM A-WEIGHTED SOUND LEVELS					
2	MEASURED IN ACCORDANCE WITH PART-36 APPENDIX -C- PROCEDURES					
3	(AC 36-3H Update; April 5, 2012)					
4						
5						
6				TOGW	MLW	TO
7	MANUFACTURER	AIRPLANE	ENGINE	1000 LB	1000 LB	dBA
999	CESSNA	172	O-320-E2D	2.3	2.3	61.
1005	CESSNA	185F	I0-520-D	3.4	3.4	66.
1006	CESSNA	441	I0-520-D	3.4	3.4	70.0

I think that is it so far. If you are not the right person to contact on this, do you have someone I can talk to?

Thanks for any assistance. I appreciate the help on this. Quite the learning curve for me.

Christian

Christian Geitz
Planner
Planning and Building Department
City of Kirkland
p: 425.587.3246



From: Jennifer.Kandel@faa.gov [<mailto:Jennifer.Kandel@faa.gov>]
Sent: Thursday, June 16, 2016 3:17 PM
To: Christian Geitz <CGeitz@kirklandwa.gov>
Subject: Seaplane Bases

Hi Christian,

As discussed, I am attaching two documents. The first is an FAA Advisory Circular that provides guidance in planning, designing and constructing a seaplane base. The second is a form to notify the FAA for the construction, alteration and deactivation of airports.

If you have any further questions, give me a ring.

Thanks!

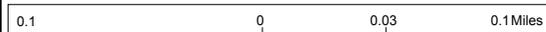
[Jennifer I. Kandel](#)

Airport Planner (WA)
Federal Aviation Administration | Northwest Mountain Region
Seattle Airports District Office
1601 Lind Avenue SW - Suite 250, Renton, WA 98057
425.227.1654 | jennifer.kandel@faa.gov



- Legend**
- Address
 - Other Address
 - Current Address
 - Current ADU
 - ◆ Pending Address
 - City Limits
 - Grid
 - QQ Grid
 - Cross Kirkland Corridor
 - Regional Rail Corridor
 - Streets
 - Parcels
 - Place Names
 - Buildings
 - Schools
 - Olympic Pipeline Corridor

1: 1,675



NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet

Produced by the City of Kirkland. © 2016 City of Kirkland. All rights reserved. No warranties of any sort, including but not limited to accuracy, fitness, or merchantability, accompany this product.

Notes

