

# **Appendix A8**

## **Literature Review Process**

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Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Abel SM. The extra-auditory effects of noise and annoyance: an overview of research. <i>J Otolaryngol.</i> 1990;19 Suppl 1:1-13.	Dahlgren Report	No	Not available	Not available	Not available	No	Review of research on extra-auditory effects of exposure to noise	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Akbayir N, Calis AB, Alkim C, Sokmen HM, Erdem L, Ozbal A, et al. Sensorineural hearing loss in patients with inflammatory bowel disease: a subclinical extraintestinal manifestation. <i>Dig Dis Sci.</i> 2005;50(10):1938-45.	Dahlgren Report	No	no	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Alimohammadi I, Sandrock S, Gohari MR. The effects of low frequency noise on mental performance and annoyance. <i>Environ Monit Assess.</i> 2013;185(8):7043-51.	Dahlgren Report	Urban noise that included aircraft	Yes	50-70 dBA	Not available	No	Low frequency noise compared to silence increased the accuracy and test performance speed.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Aparicio-Ramon DV, Morales Suarez-Varela MM, Garcia GA, Llopis Gonzale A, Ruano L, Sanchez AM, et al. Subjective annoyance caused by environmental noise. <i>J Environ Pathol Toxicol Oncol</i> 1993 Oct-Dec;12(4):237-43. 1993.	Dahlgren Report	No	Yes	Not assessed	Not available	No	40% of those interviewed considered environmental noise to cause considerable distress.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Argalasova-Sobotova L, Lekaviciute J, Jeram S, Sevcikova L, Jurkovicova J. Environmental noise and cardiovascular disease in adults: research in Central, Eastern and South-Eastern Europe and Newly Independent States. <i>Noise Health.</i> 2013;15(62):22-31.	Dahlgren Report	No	Yes	N/A; meta-analysis including over 20 papers all with varying exposures	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W BBSMKNIH. Traffic Noise and Risk of Myocardial Infarction. <i>Epidemiology (Cambridge, Mass).</i> 2005;16(1):33-40.	Dahlgren Report	No	Yes	65-70 dB	Yes	No	Not jet related	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W, Houthuijs D, Pershagen G, Cadum E, Katsouyanni K, Velonakis M, et al. Annoyance due to aircraft noise has increased over the years--results of the HYENA study. <i>Environ Int.</i> 2009;35(8):1169-76.	Dahlgren Report/ Washington Department of Health	Yes	Yes	Not available	Not available	Already in analysis	Annoyance ratings due to aircraft noise were higher than predicted in the EU	Already in analysis	Study specific to Europe and Lden, and no evidence provided that the trend found would apply to the US and DNL.	Previously included in analysis and Draft Environmental Impact Statement
Babisch W, Kamp I. Exposure-response relationship of the association between aircraft noise and the risk of hypertension. <i>Noise Health.</i> 2009;11(44):161-8.	Dahlgren Report	Yes	NA	NA	NA	No	This is a review article. Does not provide new information	No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Babisch W, Pershagen G, Selander J, et al. Noise annoyance--a modifier of the association between noise level and cardiovascular health? <i>Sci Total Environ.</i> 2013;452-453:50-57. doi:10.1016/j.scitote.2013.02.034.	Dahlgren Report/ Washington Department of Health	Yes	Yes	Not available	Not available	Already in analysis	Noise annoyance acts as an effect modifier of the relationship between the noise level and hypertension	Already in analysis	Already in noise study and referenced but listed slightly differently as:  Babisch, W., G. Pershagen, J. Selander, D. Houthuijs, O. Breugelmans, E. Cadum, F. Vigna-Taglianti, K. Katsouyanni, A.S. Haralabidis, K. Dimakopoulou, P. Sourti, S. Floud, and A.L. Hansell. 2013. Noise annoyance – A modifier of the association between noise level and cardiovascular health? <i>Science of the Total Environment</i> , Volumes 452-453, pp. 50-57, May.	Previously included in analysis and Draft Environmental Impact Statement
Babisch W, Swart W, Houthuijs D, Selander J, Bluhm G, Pershagen G, et al. Exposure modifiers of the relationships of transportation noise with high blood pressure and noise annoyance. <i>The Journal of the Acoustical Society of America.</i> 2012;132(6):3788-808.	Dahlgren Report	Not the main focus of the article	Yes, but ecologic	Unknown	Yes	No	Does not provide information on the environment under consideration.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W, Wolf K, Petz M, Heinrich J, Cyrus J, Peters A. Associations between Traffic Noise, Particulate Air Pollution, Hypertension, and Isolated Systolic Hypertension in Adults: The KORA Study. <i>Environmental health perspectives.</i> 2014;122(5):492-8.	Dahlgren Report	No	Yes, but ecologic	31-80 dBA	Yes	No	Traffic noise and ambient noise levels typical in industrial cities	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. Cardiovascular effects of noise. <i>Noise Health.</i> 2011;13(52):201.	Washington Department of Health					No	Prospective research proposal	No	This reference wouldn't add significant value to the analysis. However, several of the source citations may provide added value but each is reviewed directly (e.g., WHO)	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. ROAD TRAFFIC NOISE AND CARDIOVASCULAR RISK. <i>Noise &amp; Health.</i> 2008;10(38):27-33.	Dahlgren Report	No	Yes	They vary (it was a meta-analysis), but for the most part: <=60; 61-65; 66-70; 71-75; 76-80 dB	No	No	Not jet related	No	Study associations for road noise not readily applied to aircraft noise due to the differences in nature (constant vs. intermittent)	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. Stress hormones in the research on cardiovascular effects of noise. <i>Noise Health.</i> 2003;5(18):1-11.	Dahlgren Report	No	Yes	Not reported	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. The Noise/Stress Concept, Risk Assessment and Research Needs. <i>Noise Health.</i> 2002;4(16):1-11.	Washington Department of Health	No	Yes	No	None were given	No	Background/Informative only	No	Reference focuses more generally on trends, and although the concepts are all applicable to the analysis, no details are included that would aid the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. Traffic noise and cardiovascular disease : Epidemiological review and synthesis. <i>Noise &amp; Health.</i> 2000;2(8):9-32. 51 of 55	Dahlgren Report	Yes	Yes	>68 dB	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Babisch W. Updated exposure-response relationship between road traffic noise and coronary heart diseases: A meta-analysis. <i>Noise Health.</i> 2014	Dahlgren Report/ Washington Department of Health	No	Yes	Varies, but mostly 60-75 dB	No	No	Meta-analysis	No	This reference may add some value to the analysis of non-auditory health effects, specifically coronary heart disease, despite the relatively low correlation to noise exposure, but is meta-analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
BaliatsasC, van Kamp I, van Poll R, Yzermans J. Health effects from low-frequency noise and infrasound in the general population: Is it time to listen? A systematic review of observational studies. <i>Sci Total Environ</i> 2016	Washington Department of Health					No		No	This reference would not add significant value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Banbury SP, Macken WJ, Tremblay S, Jones DM. Auditory distraction and short-term memory: phenomena and practical implications. <i>Hum Factors.</i> 2001;43(1):12-29.	Dahlgren Report	No	No	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Bartels S, Marki F, Muller U. The influence of acoustical and non-acoustical factors on short-term annoyance due to aircraft noise in the field - The COSMA study. <i>The Science of the total environment.</i> 2015;538:834-43.	Dahlgren Report	Yes	Yes	Used residents living close to airport	Not available	No	Number of fly overs predicted annoyance better than sound pressure levels among 55 residents close to Cologne airport	No	No additional value beyond what is already in the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Basner M, Babisch W, Davis A, Brink M, Clark C, Janssen S, et al. Auditory and non-auditory effects of noise on health. <i>Lancet</i> . 2014;383(9925):1325-32.	Dahlgren Report/ Washington Department of Health	Yes (some info on airports)	Yes	<30 to >=55	N/A	Yes	Background Only	Yes	Would add some additional background information to the analysis. Analysis analyzes classroom learning effects using Leq and a 5 dB increase in Leq as significant if increased beyond threshold. However, did not consider significant for 5 dB increase when it doesn't reach threshold of concern. Might consider revisiting text discussion. -analysis does not analyze LAeq levels. Aircraft generated night levels much more variable over time than in this reference (road or commercial air traffic) so not clear how easily conclusions can be applied to analysis -WHO 55 dB LAeq night target identified in many references and original source should probably be added to analysis (if not already there). Key point is that this is a target, not necessarily the threshold for significant non-auditory health effects. Other papers by same authors already included in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Basner M, Brink et al. IC BEN review of research on the biological effects of noise 2011-2014. <i>Noise Health</i> . 2015;17(75):57-82. doi:10.4103/1463-1741.153373	Washington Department of Health							No	Original source reviewed regarding hypertension and diabetes. Hospitalization correlation to Ldn doesn't appear to isolate Ldn and cause; too many uncontrolled variables. Train-borne vibration not easily translated to aircraft-sourced vibrations due to ground generated vs air generated. Other papers by same author already included in analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Basner M, Griefahn S, Berg M van den. Aircraft noise effects on sleep: mechanisms, mitigation and research needs. <i>Noise Health</i> . 2010;12(47):95-109. doi:10.4103/1463-1741.63210.	Dahlgren Report/ Washington Department of Health	No	No	N/A	N/A	No	Used 200 ANE per night as the exposure	No	This reference is a review of studies and doesn't add significant value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Basner M, Muller U, Elmenhorst E-M. Single and combined effects of air, road, and rail traffic noise on sleep and recuperations. <i>Sleep</i> . 2011	Washington Department of Health					Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Becker V, von Delius S, Bajbouj M, Karagianni A, Schmid RM, Meinig A. Intravenous application of fluorescein for confocal laser scanning microscopy: evaluation of contrast dynamics and image quality with increasing injection-to-imaging time. <i>Gastrointest Endosc</i> . 2008;68(2):319-23.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Beloevic G S-TM. Prevalence of Arterial Hypertension and Myocardial Infarction in Relation to Subjective Ratings of Traffic Noise Exposure. <i>Noise Health</i> . 2002;4(16):33-7. 54 of 55	Dahlgren Report	No	Unknown	Qualitative	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Beutel ME, Jünger C, Klein EM, Wild P, Lackner K, Blettner M, et al. (2016) Noise Annoyance Is Associated with Depression and Anxiety in the General Population- The Contribution of Aircraft Noise. <i>PLoS ONE</i> 11(5): e0155357	Dahlgren Report/ Washington Department of Health/ Independent	Yes	Yes	Did not assess levels	Yes	No	Cross sectional nature of the surveys does not establish an association between mental health and noise exposures.; Noise annoyance was associated with a two fold higher prevalence of depression and anxiety in the general population. Could not relate annoyance to aircraft noise directly to depression and anxiety.	No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Bluhm G, Eriksson C. Cardiovascular effects of environmental noise: research in Sweden. <i>Noise Health</i> . 2011;13(52):212-6.	Dahlgren Report	Yes	Yes	>55	Yes	No		No	Nothing new beyond the HYENA study, which is already in the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Bodin T, Björk J, Öhrström E, Ardö J, Albin M. Survey context and question wording affects self reported annoyance due to road traffic noise: a comparison between two cross-sectional studies. <i>Environ Health</i> . 2012;11(1):1.	Washington Department of Health							No	Study focused on road traffic noise and annoyance. Does not provide significant additional value to add to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Brenner H, Oberacker A, Kranig W, Buchwalsky R. A field study on the immediate effects of exposure to low-altitude flights on heart rate and arrhythmia in patients with cardiac diseases. <i>International archives of occupational and environmental health</i> . 1993;65(4):263-8.	Dahlgren Report	Yes	Yes	>95 dB	No	No	Only studied effects in patients with pre-existing cardiovascular conditions	No	This study measured "startle" effect of MTR type flight on blood pressure. The "low-altitude military flights" consisted of events with sound level increases of up to 75 dB/s. Despite military jets operating at low altitudes, the sound level increase rate is typically an order of magnitude smaller, so this study does not apply to this analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Brisbane Airport Corporation. (2007). <i>New Parallel Runway Draft Environmental Impact Statement/Major Development Plan</i> . September 2007. Volume D—Airspace, Chapter 7: Human Impact Assessment. Retrieved May 7, 2018: <a href="https://bne.com.au/sites/default/files/docs/BNR_EIS_MDP_D7_Health_Impact_Assess.pdf">https://bne.com.au/sites/default/files/docs/BNR_EIS_MDP_D7_Health_Impact_Assess.pdf</a>	Independent									Reviewed and added to the analysis in the Final Environmental Impact Statement
Brunekeef B, Beelen R, Hoek G, Schouten L, Bausch-Goldbohm S, Fischer P, et al. Effects of long-term exposure to traffic-related air pollution on respiratory and cardiovascular mortality in the Netherlands: the NLCS-AIR study. Research report (Health Effects Institute). 2009(139):5-71; discussion 3-89.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
C.D. Francis, J.R. Barber. <i>A Framework for Understanding Noise Impacts on Wildlife: An Urgent Conservation Priority</i> . August 1, 2013. Boise State University Scholar Works, Department of Biological Sciences.	USEPA Reg 10	No	Yes; noise impacts on wildlife	N/A	This is not a study	Yes	Background/Informative only	No	Analysis already includes significant discussion on wildlife impacts from noise; no new information	Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Cappuccio FP, D'Elia L, Strazzullo P, Miller MA. Sleep duration and all-cause mortality: a systematic review and meta-analysis of prospective studies. <i>Sleep</i> . 2010;33(5):585-592.	Washington Department of Health					No	Meta analysis with little or no association to the causes of short or long sleep durations.	No	The analysis focuses on potential for awakening without a current method to estimate effect on sleep duration due to noise exposure. This reference may not add significant value to the analysis because of this practical limitation, particularly due to fairly small relative risk correlation	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Carter NL. Transportation noise, sleep, and possible after-effects. <i>Environ Int</i> . 1996;22(1):105-16.	Dahlgren Report	No	Yes	Not available	Not available	No	Chronic exposure to traffic noise during sleep may affect mood states	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Castle JS, Xing JH, Warner MR, Korsten MA. Environmental noise alters gastric myoelectrical activity: Effect of age. <i>World J Gastroenterol</i> . 2007;13(3):403-7.	Dahlgren Report	No	Yes	N/A	Yes	No	focuses on gastric myoelectrical activity and noise exposures include hospital noise, conversation babble and traffic noise	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Chang Ty STCLSYJRMCCC. Effects of occupational noise exposure on 24-hour ambulatory vascular properties in male workers. <i>Environmental health perspectives</i> . 2007;115(11):1660-4.	Dahlgren Report	No	Yes	>=85 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Chang TY, Hwang BF, Liu CS, Chen RY, Wang VS, Bao BY, et al. Occupational noise exposure and incident hypertension in men: a prospective cohort study. <i>American journal of epidemiology</i> . 2013;177(8):818-25.	Dahlgren Report	No	Yes	80->=85 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Chang TY, Liu CS, Huang KH, Chen RY, Lai JS, Bao BY. High-frequency hearing loss, occupational noise exposure and hypertension: a cross-sectional study in male workers. <i>Environmental health : a global access science source</i> . 2011;10:35.	Dahlgren Report	No	Yes	>=85 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Charakida M, Deanfield JE. Nighttime aircraft noise exposure: flying towards arterial disease. <i>Eur Heart J</i> . 2013;34(45):3472-4.	Dahlgren Report	Yes	Yes	N/A	N/A	No	Article on biological mechanism of noise exposure. No results	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Chengzhi C, Yan T, Xuejun J, Xiang L, Youbin Q, Baijie T. Recovery of chronic noise exposure induced spatial learning and memory deficits in young male Sprague-Dawley rats. <i>J Occup Health</i> . 2011;53(3):157-63.	Dahlgren Report	No	Yes	80 and 100 dBA continuous for 4 hrs per day	NA	No	Rat study and not related to exposures similar to airports and jet noise.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Chiovenda P, Pasqualetti P, Zappasodi F, Ercolani M, Milazzo D, Tomei G, et al. Environmental noise-exposed workers: event-related potentials, neuropsychological and mood assessment. <i>Int J Psychophysiol</i> . 2007;65(3):228-37.	Dahlgren Report	No	Yes	N/A	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Clark C, Crombie R, Head J, van Kamp I, van Kempen E, Stansfeld SA. Does traffic-related air pollution explain associations of aircraft and road traffic noise exposure on children's health and cognition? A secondary analysis of the United Kingdom sample from the RANCH project. <i>American journal of epidemiology</i> . 2012;176(4):327-37.	Dahlgren Report	Yes	Unknown	52-54 dBA	No	Yes		Yes	The predecessor studies (Clark, 2005; Clark, 2009) are already in analysis. This will provide update to the authors' work.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Clark C, Martin R, van Kempen E, Alfred T, Head J, Davies HW, et al. Exposure-effect relations between aircraft and road traffic noise exposure at school and reading comprehension: the RANCH project. <i>American journal of epidemiology</i> . 2006;163(1):27-37. 52 of 55	Dahlgren Report	Yes	Yes	30-77 dBA	Yes	Already in analysis		Already in analysis	This study was published in multiple journals a few months apart in both 2005 and 2006. The analysis references 2005.	Previously included in analysis and Draft Environmental Impact Statement
Cohen S, Evans GW, Krantz DS, Stokols D, Kelly S. Aircraft Noise and Children: Longitudinal and Cross-Sectional Evidence on Adaptation to Noise and the Effectiveness of Noise Abatement. <i>Journal of Personality and Social Psychology</i> . 1981;40(2). 53 of 55	Dahlgren Report	Yes	Yes	74 ave, 84 peak	Unknown	No	The article did not present data that could be readily evaluated.			Reviewed and added to the analysis in the Final Environmental Impact Statement
Cohen S, Evans GW, Krantz DS, Stokols D. Physiological, motivational, and cognitive effects of aircraft noise on children: moving from the laboratory to the field. <i>Am Psychol</i> . 1980;35(3):231-43.	Dahlgren Report	Yes	Yes	74 ave, 84 peak	Unknown	No	The article did not present data that could be readily evaluated.			Reviewed and added to the analysis in the Final Environmental Impact Statement
Cohen S, Krantz DS, Evans GW, Stokols D. Cardiovascular and Behavioral Effects of Community Noise: Evidence from field studies of schoolchildren supports laboratory findings that high-intensity noise adversely affects physical health and psychological functioning. <i>American Scientist</i> . 1981:528-35.	Dahlgren Report	Yes	Yes	None stated; just aircraft noise	No	No	Results not quantified.	No	The original Cohen 1980 study is already in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Crombie R, Clark C, Stansfeld SA. Environmental noise exposure, early biological risk and mental health in nine to ten year old children: a cross-sectional field study. <i>Environmental health : a global access science source</i> . 2011;10:39.	Dahlgren Report	Yes	No association found	30-77 dBA	Yes	Yes	Study found no association between aircraft noise and later mental health issues in children at risk at birth.	Yes	Study found no association between aircraft noise and later mental health issues in children at risk at birth.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Cui B, Wu M, She X. Effects of chronic noise exposure on spatial learning and memory of rats in relation to neurotransmitters and NMDAR2B alteration in the hippocampus. <i>J Occup Health</i> . 2009;51(2):152-8.	Dahlgren Report	No	Yes	100 dB white noise, 4 h/day x 30 days, from 8:00 to 12:00	NA	No	Rat study with no clear association with the environment in question			Reviewed and not added to the analysis in the Final Environmental Impact Statement
da Fonseca J, dos Santos JM, Branco NC, Alves-Pereira M, Grande N, Oliveira P, et al. Noise-induced gastric lesions: a light and scanning electron microscopy study of the alterations of the rat gastric mucosa induced by low frequency noise. <i>Cent Eur J Public Health</i> . 2006;14(1):35-8.	Dahlgren Report	No	No	NA; low-frequency noise only.	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Davies H, Van Kamp I. Noise and cardiovascular disease: A review of the literature 2008-2011. <i>Noise Health</i> . 2012	Dahlgren Report/ Washington Department of Health	No	Yes	80-95 dB	No	No	No new information	Yes	May add a little value to the analysis on non-auditory health effects.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Davies HW, Teschke K, Kennedy SM, Hodgson MR, Hertzman C, Demers PA. Occupational exposure to noise and mortality from acute myocardial infarction. <i>Epidemiology (Cambridge, Mass)</i> . 2005;16(1):25-32.	Dahlgren Report	No	Unknown	No	No	No	ecologic study	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Davis A, Rafeia EA. Epidemiology of tinnitus. <i>Tinnitus Handb</i> . 2000: 1-23.	Washington Department of Health	Yes	Not a study; an evidenced-based informative review	N/A	Doesn't provide	Yes	Background/Informative only	Yes	Evidence-based information review	Reviewed and added to the analysis in the Final Environmental Impact Statement

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Dawes P, Cruickshanks KJ, Moore DR, et al. Cigarette smoking, passive smoking, alcohol consumption, and hearing loss. J Assoc Res Otolaryngol. 2014;15(4):663-674.	Washington Department of Health					No		No	Reference does not address noise	Reviewed and not added to the analysis in the Final Environmental Impact Statement
de Kluizenaar Y, Gansevoort RT, Miedema HM, de Jong PE. Hypertension and road traffic noise exposure. Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine. 2007;49(5):484-92.	Dahlgren Report	No	Yes	>=55 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Department of the Navy. Environmental Impacts Statement for EA-18G "Growler" Airfield Operations at Naval Air Station Whidbey Island Complex. Volume 1.: 2016	Washington Department of Health							No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
DeWitt JC. Toxicological effects of perfluoroalkyl and polyfluoroalkyl substances: Springer; 2015.	Dahlgren Report	No	No	NA	Unknown	No	Article is related to an ingredient in fire-fighting foam and not noise exposure.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Di Nisi J, Muzet A, Ehrhart J, Libert JP. Comparison of cardiovascular responses to noise during waking and sleeping in humans. Sleep. 1990;13(2):108-20.	Dahlgren Report	No	Yes	Not available	Not available	No	Sleep pattern showed no significant modification in the night of noise disturbance.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Dreger S, Meyer N, Fromme H, Bolte G, Study Group of the GMEc. Environmental noise and incident mental health problems: A prospective cohort study among school children in Germany. Environmental research. 2015;143(Pt A):49-54.	Dahlgren Report	Yes	Yes	N/A	No	No		No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Dzhambov AM, Dimitrova DD, Mihaylova-Alakidi VK. Burden of Sleep Disturbance Due to Traffic Noise in Bulgaria. Folia Med (Plovdiv). 2015;57(3-4):264-9.	Dahlgren Report	Included road, railway, and aircraft traffic	Yes	55-59 dBA	No	No	No p-values or confidence intervals. 12% of those exposed to 55-59 dBA of noise were highly sleep disturbed	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Earshen JJ. Sound Measurement: Instrumentation and Noise Descriptors. In: The Noise Manual. Fifth. American Industrial Hygiene Association; 2000	Washington Department of Health							No	This reference is complimentary to the discussion of noise section, and all relevant topics are currently already addressed in the analysis. The addition of this reference to the analysis would not add significant value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Elmenhorst EM, Pennig S, Rolny V, Quehl J, Mueller U, Maass H, et al. Examining nocturnal railway noise and aircraft noise in the field: sleep, psychomotor performance, and annoyance. The Science of the total environment. 2012;424:48-56.	Dahlgren Report	No	Yes	35-80 dBA	Not available	Yes	Train noise at night in Germany was associated with higher awakening probability than seen with aircraft noise.	No	Potential for awakening attributable directly to aircraft noise, and associated studies, already discussed in analysis. This study would not add additional value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Elmenhorst EM, Quehl J, Muller U, Basner M. Nocturnal air, road, and rail traffic noise and daytime cognitive performance and annoyance. The Journal of the Acoustical Society of America. 2014;135(1):213-22.	Dahlgren Report	Included road, railway, and aircraft traffic	Yes	Not available	Not available	No	Aircraft noise annoyance ranked above railway and road for nocturnal exposure.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Emmett EA, Shofer FS, Zhang H, Freeman D, Desai C, Shaw LM. Community exposure to perfluorooctanoate: relationships between serum concentrations and exposure sources. Journal of occupational and environmental medicine/American College of Occupational and Environmental Medicine. 2006;48(8):759.	Dahlgren Report	No	No	NA	Unknown	No	Article is related to an ingredient in fire-fighting foam and not noise exposure.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
EPA U. Protective noise levels. 1978;550/9-79-100:1-28.	Dahlgren Report	NA	NA	NA	NA	No	Reference document that is too old for consideration.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Eriksson C RMPGHAOCGBG. Aircraft noise and incidence of hypertension. Epidemiology (Cambridge, Mass). 2005;18(6):716-21.	Dahlgren Report	Yes	Yes	50-70 dBA	Yes	No		No	A newer 2010 paper by the same author already in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Eriksson C, Bluhm G, Hilding A, Ostenson CG, Pershagen G. Aircraft noise and incidence of hypertension--gender specific effects. Environmental research. 2010;110(8):764-72.	Dahlgren Report	Yes	Yes	>=50dB	Yes	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Eriksson C, Rosenlund M, Pershagen G, Hilding A, Ostenson CG, Bluhm G. Aircraft noise and incidence of hypertension. Epidemiology (Cambridge, Mass). 2007;18(6):716-21.	Dahlgren Report	Yes	Yes	70->=70 dB	Yes	Already in analysis		Already in analysis	Follow-up study by the author already included in analysis (Eriksson, Bluhm & Hilding, 2010)	Previously included in analysis and Draft Environmental Impact Statement
Ettema Jh ZRL. Health effects of exposure to noise, particularly aircraft noise. International Archives of Occupational Environmental Health. 1977;40:163-84.	Dahlgren Report							No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Evans GW, Hygge S, Bullinger M. Chronic noise and psychological stress. Psychological science. 1995;6(6):333-8.	Dahlgren Report	No; ambient noise levels typical in industrial cities	Yes, but ecologic	Not available	Not available	No	Chronic noise exposure is associated with elevated neuroendocrine and cardiovascular measures, muted cardiovascular reactivity, deficits in standardized testing, poor long term memory, and low quality of life.	No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Evans GW, Lercher P, Meis M, Ising H, Kofler WW. Community noise exposure and stress in children. The Journal of the Acoustical Society of America. 2001;109(3):1023-7.	Dahlgren Report	No; ambient noise levels typical in industrial cities	Yes, but ecologic	Two groups: below 50 dBA and above 60 dBA	Yes, but interaction occurred.	No	Does not provide information that is useful to the environment under consideration.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Evrard AS, Bouaoun L, Champelovier P, Lambert J, Laumon B. Does exposure to aircraft noise increase the mortality from cardiovascular disease in the population living in the vicinity of airports? Results of an ecological study in France. Noise Health. 2015;17(78):328-36.	Dahlgren Report	Yes	Yes	Averages for the three airports: 45.3 dB, 45.7 dB, 51.6 dB	Yes	No		No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Evrard AS, Lefevre M, Champelovier P, Lambert J, Laumon B. Does aircraft noise exposure increase the risk of hypertension in the population living near airports in France? Occupational and environmental medicine. 2016.	Dahlgren Report	Yes	Yes	Measured in 10 dB increasing increments	Yes	Already in analysis		Already in analysis	This is already in the noise study but cited as 2015, which is correct:  Evrard AS, Bouaoun L, Champelovier P, Lambert J, Laumon B. 2015. Does exposure to aircraft noise increase the mortality from cardiovascular disease in the population living in the vicinity of airports? Results of an ecological study in France. Noise Health 2015;17:328-36	Previously included in analysis and Draft Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Fechter Ld GCFSCJFJNKCDN-MAMPPB. Promotion of noise-induced cochlear injury by toluene and ethylbenzene in the rat. Toxicological sciences : an official journal of the Society of Toxicology. 2007;98(2):542-51. 45 of 55	Dahlgren Report	No	Combined exposure to ethylbenzene and toluene with noise exposure	93-95 dB	Not available	No	Combined exposure of ethylbenzene and toluene with 93 dB exposure yielded loss in auditory function and hair cell death	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Fidell S, Barber OS, Schultz TJ. Updating a dosage-effect relationship for the prevalence of annoyance due to general transportation noise. J Acoust Soc Am. 1991;89(1):221-233.	Washington Department of Health					No	Report and only deals with modeling to predict annoyance.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Fidell S, Tabachnick B, Mestre V, Fidell L. Aircraft noise-induced awakenings are more reasonably predicted from relative than from absolute sound exposure levels. J Acoust Soc Am. 2013	Dahlgren Report/Washington Department of Health	Yes	Yes	Not available	Not available	Yes	Probabilities of awakening are closely related to sound exposure levels	Yes	The reference essentially supports the ANSI 2008 predictive function, utilized in the analysis, as the current best method but explains the limitations of this methodology due to habituation and self-selection in living choices. This reference would add some value to the analysis in respect to tempering the precision of the calculation as well as advising that increasing numbers of events, which populations are familiar with, may have minimal effect on awakenings.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Finegold LS. Sleep disturbance due to aircraft noise exposure. Noise Health. 2010;12(47):88-94. doi:10.4103/1463-1741.63208.	Washington Department of Health					Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Floud S, Vigna-Taglianti F, Hansell A, Blangiardo M, Houthuijs D, Breugelmans O, et al. Medication use in relation to noise from aircraft and road traffic in six European countries: results of the HYENA study. Occupational and environmental medicine. 2011;68(7):518-24.	Dahlgren Report	Yes	Yes	30-35 dBA	Yes	Already in analysis	Effect of aircraft noise on the use of antihypertensive medication, but not consistent across countries	Already in analysis	The analysis already includes the HYENA study focusing on heart disease and stroke (Floud, 2013)	Previously included in analysis and Draft Environmental Impact Statement
Foertsch K, Davies P. The number-of-events as a predictor variable in aircraft noise annoyance models. Partn Proj. 2013;24.	Washington Department of Health					No	This is a modeling report, not from a peer reviewed journal. The report proposes different ways to use noise data to predict annoyance.	No	This reference does not conflict with the analysis or use of DNL but does not add significant value either.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Fonseca J, Martins-dos-Santos J, Oliveira P, Laranjeira N, Aguas A, Castelo-Branco N. Noise-induced gastric lesions: a light and electron microscopy study of the rat gastric wall exposed to low frequency noise. Arquivos de gastroenterologia. 2012;49(1):82-8.	Dahlgren Report	No	Yes	Low-frequency noise	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Foraster M, Eze IC, Vienneau D, Brink M, Cajochen C, Caviezel S, et al. Long-term transportation noise annoyance is associated with subsequent lower levels of physical activity. Environ Int. 2016;91:341-9. 44 of 55	Dahlgren Report	Included road, railway, and aircraft traffic	No	Not used	Yes	No	Long term noise annoyance reduced physical activity.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Foraster M. Is it traffic-related air pollution or road traffic noise, or both? Key questions not yet settled. Int J Public Health. 2013;58:647-648.	Washington Department of Health					No	Editorial	No	This reference would not add significant value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Foud S, Vigna-Taglianti F, Hansell A, et al. Medication use in relation to noise from aircraft and road traffic in six European countries: results of the Hyena study. Occup Environ Med. 2011.	Washington Department of Health					No	Hypertension is related to exposure to noise. Use of hypertension drugs is related to hypertension. No real finding here. Same issues with collinearity as other HYENA studies.	Yes	Hard to draw strong conclusion of causal link between aircraft noise exposure and hypertension and/or anxiety from this reference. This reference would support a discussion in the analysis of this nature but could not lead it. If non-auditory health effects discussion is to be expanded, then this reference may provide some value; otherwise, much less so. Similar reference already in analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Franks JR, Merry C. Preventing Occupational Hearing loss: A Practical Guide. US Dept. of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Science, Physical Agents Effects Branch; 1996.	Washington Department of Health	No				Yes	Background/Informative only	No	The reference focus is for occupational hearing protection administration and doesn't add significant value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Franssen EA, van Wiechen CM, Nagelkerke NJ, Lebre E. Aircraft noise around a large international airport and its impact on general health and medication use. Occupational and environmental medicine. 2004;61(5):405-13.	Dahlgren Report	Yes	Yes	41-76 dBA	Yes	Yes	None of the health indicators were associated with aircraft noise exposure during the night. Tiredness and headaches associate with aircraft noise.		More recent studies with better applicability have already been included in the analysis (e.g. Haralabidis, 2008).	Reviewed and added to the analysis in the Final Environmental Impact Statement
Fruhstorfer B HH. Extra-auditory responses to long-term intermittent noise stimulation in humans. J Appl Physiol. 1980;49(6):985-93.	Dahlgren Report	No	No	100 dB	N/a	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Fyhri A KR. Road traffic noise, sensitivity, annoyance and self-reported health—a structural equation model exercise. Environ Int. 2009;35(1):91-7.	Dahlgren Report	No	Yes	Not available	Not available	No	No relationships between noise and health complaints in Norway. Health complaints were subjective.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Geerse GJ, van Gurp LC, Wiegant VM, Stam R. Individual reactivity to the open-field predicts the expression of cardiovascular and behavioural sensitisation to novel stress. Behav Brain Res. 2006;175(1):9-17.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Gille LA, Marquis-Favre C, Morel J. Testing of the European Union exposure-response relationships and annoyance equivalents model for annoyance due to transportation noises: The need of revised exposure-response relationships and annoyance equivalents model. Environ Int. 2016;94:83-94.	Dahlgren Report	Included road, railway, and aircraft traffic	Yes	Not available	Not available	No	Testing European Union exposure-response relationships to suggest revision.	No	Focused on updating EU DALY calculation by adjusting method for determining percent highly annoyed	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Goines, Lisa, RN and Hagler, Louis, MD. Noise Pollution: A Modern Plague. Southern Medical Journal, Volume 100: March 2007, pages 287-294.	USEPA Reg 10		No	No	No	Yes	Background/Informative only			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Griefahn BaM, A. Noise-Induced Sleep Disturbances and their Effects on Health. Journal of Sound and Vibration. 1978;59(1):99-106.	Dahlgren Report	No	Yes	Not available	Not available	Already in analysis	Acoustical stimuli causing disturbances of rest and sleep are extremely annoying.	Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Gue M, Fioramonti J, Frexinos J, Alvinerie M, Bueno L. Influence of acoustic stress by noise on gastrointestinal motility in dogs. Dig Dis Sci. 1987;32(12):1411-7.	Dahlgren Report	No	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Guoqing D, Xiaoyi L, Xiang S, Zhengguang L, Qili L. Investigation of the relationship between aircraft noise and community annoyance in China. Noise Health. 2012;14(57):52-7.	Dahlgren Report	Yes	Yes	Annoyance threshold was 73.7 dB. Range of 50-75	Yes	Yes	Annoyance threshold of aircraft noise was 73.7 dB, which is lower than the 75 dB standard limit for aircraft noise in the study area.	No	The 73.7 WECPNL correlates approximately to 60 DNL. US utilizes DNL, which is thoroughly discussed in analysis. This study focuses on annoyance using the metric LWECPN. Conclusions regarding LWECPN cannot be directly translated to DNL, so this study can't be utilized in the noise study beyond supporting the conclusion that greater noise levels result in greater annoyance	Reviewed and not added to the analysis in the Final Environmental Impact Statement
H. M.E. Miedema & H. Voss. "Noise sensitivity and reactions to noise and other environmental conditions," J. Acoust. Soc. Am. 113(3), March 2003, pp. 1492 to 1504.	Independent									Reviewed and added to the analysis in the Final Environmental Impact Statement
Haines MM, Stansfeld SA, Job RF, Berglund B, Head J. A follow-up study of effects of chronic aircraft noise exposure on child stress responses and cognition. International journal of epidemiology. 2001;30(4):839-45.	Dahlgren Report	Yes	Yes	>66 dB and <57 dB	No	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Hallback M, Jones JV, Bianchi G, Folkow B. Cardiovascular control in the Milan strain of spontaneously hypertensive rat (MHS) at "rest" and during acute mental "stress". Acta Physiol Scand. 1977;99(2):208-16.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hammersen F, Niemann H, Hoebel J. Environmental Noise Annoyance and Mental Health in Adults: Findings from the Cross-Sectional German Health Update (GEDA) Study 2012. Int J Environ Res Public Health. 2016;13(10):954.	Washington Department of Health					No	The findings were inconsistent with other studies and the entire basis is self-report.	No	High noise annoyance from environmental noise and mental health are not discussed in the analysis. This reference does not provide added value to the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hansell AL, Blangiardo M, Fortunato L, Floud S, de Hoogh K, Fecht D, et al. Aircraft noise and cardiovascular disease near Heathrow airport in London: small area study. BMJ. 2013;347:f5432.	Dahlgren Report/ Washington Department of Health	Yes	Yes	Daytime: <=51 and >63; Nighttime: <= 50, 50-55, >55	Some significant results	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Haralabidis AS, Dimakopoulou K, Velonaki V, et al. Can exposure to noise affect the 24 h blood pressure profile? Results from the HYENA study. J Epidemiol Community Health. 2011;65(6):535- 541.	Washington Department of Health					Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Haralabidis AS, Dimakopoulou K, Vigna-Taglianti F, Giampaolo M, Borgini A, Dudley ML, et al. Acute effects of night-time noise exposure on blood pressure in populations living near airports. Eur Heart J. 2008;29(5):658-64.	Dahlgren Report	Yes	Yes	>35 dB	Yes	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Hardoy MC, Carta MG, Marci AR, Carbone F, Cadeddu M, Kovess V, et al. Exposure to aircraft noise and risk of psychiatric disorders: the Elmas survey--aircraft noise and psychiatric disorders. Soc Psychiatry Psychiatr Epidemiol. 2005;40(1):24-6.	Dahlgren Report	Yes	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Harlan WR, Sharrett AR, Weill H, Turino GM, Borhani NO, Resnekov L. Impact of the environment on cardiovascular disease. Report of the American Heart Association Task Force on environment and the cardiovascular system. Circulation 1981 Jan;63(1):243A-246A. 1981.	Dahlgren Report									Reviewed and not added to the analysis in the Final Environmental Impact Statement
Heinonen-Guzejev M VHSR-RHHKMKJ. The association of noise sensitivity with coronary heart and cardiovascular mortality among Finnish adults. The Science of the total environment. 2007;372(2-3):406-12.	Dahlgren Report	No	Yes		No	No	Only found increased risk among noise-sensitive women	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Henderson D, Hamernik RP, Sitzer RW. Audiometric and histological correlates of exposure to 1-msec noise impulses in the chinchilla. The Journal of the Acoustical Society of America. 1974;56(4):1210-21.	Dahlgren Report	No	Yes	155, 161, or 166 dB	Not available	No	The chinchillas with 155 dB had no pTS, some of the chinchilla's with 161 dB had PTS, and the chinchillas with 166 dB had a median of 5-15 dB PTS	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Herbold M HHHWU. Effects of road traffic noise on prevalence of hypertension in men: results of the Luebeck Blood Pressure Study. Soz Praventivmed. 1989;;34(1):19-23. 48 of 55	Dahlgren Report	No	Yes	Categorized by high and low groups	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hessel Pa S-CGK. Occupational noise exposure and blood pressure: longitudinal and cross-sectional observations in a group of underground miners. Archives of environmental health. 1994;;49(2):128-34.	Dahlgren Report	No	Yes	<=85, 86-99, >=100 dB	No	No	non-significant results	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hohmann C, Grabenhenrich L, de Kluizenaar Y, et al. Health effects of chronic noise exposure in pregnancy and childhood: a systematic review initiated by ENRIECO. Intl Hyg Environ Health. 2013;216(3 ):217-2 29. doi:10.1016/j.ijheh.2012.06.001.	Washington Department of Health					No	Inconclusive findings of a meta-analysis. Individual papers with a rating of 2+ should be reviewed if this is a concern.	No	Currently, this topic is not included in the analysis because no link had been identified and may not be necessary.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Holt JB, Zhang X, Sizov N, Croft JB. Airport noise and self-reported sleep insufficiency, United States, 2008 and 2009. Prev Chronic Dis 2015	Dahlgren Report/Washington Department of Health	Yes	Yes	55-over 65 dBA	Yes	Yes	This paper provides another methods for assessing noise exposures and specific health outcomes. No significant differences between noise exposure zones and outside zones when controlling for socioeconomic status.	Yes	References suggest that sleep disturbance is not as sensitive to DNL as previously suggested, perhaps due to habituation. Candidate to add to analysis	Reviewed and added to the analysis in the Final Environmental Impact Statement
Huang D, Song X, Cui Q, Tian J, Wang Q, Yang K. Is there an association between aircraft noise exposure and the incidence of hypertension? A meta-analysis of 16784 participants. Noise Health. 2015;17(75):93-7.	Dahlgren Report	Yes	Yes	20->=75 dB	YEs	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Huang EI, Durrant JD, Boston JR. Will diminishing cochlear delay affect speech perception in noise? Int J Audiol. 2015;54(8):562-7.	Dahlgren Report	No	No	N/A	No	No	No statistical difference between delay conditions and speech treatments	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hume K. Sleep disturbance due to noise: current issues and future research. Noise Health. 2010;12(47):70-76. doi:10.4103/1463-1741.63206.	Washington Department of Health					No	Another review article from the same journal.	No	Document did not include sufficient specificity regarding noise analysis or other topics appropriate in the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement



Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Hume KI, Brink M, Basner M. Effects of environmental noise on sleep. <i>Noise Health</i> . 2012;14(61):297.	Washington Department of Health					No	Paper does not provide any new information and is more a commentary on the regulations and policies in Europe.	No	This references would not add significant value to the analysis, but a few of the sources may (e.g. WHO night guidelines). The value of these cited sources have been addressed separately.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Hurtley C. Night Noise Guidelines for Europe. WHO Regional Office Europe; 2009.	Washington Department of Health					Already in analysis		Already in analysis	Cited as WHO. (2009). "Night Noise Guidelines for Europe," World Health Organization.	Previously included in analysis and Draft Environmental Impact Statement
Hwang BF, Chang TY, Cheng KY, Liu CS. Gene-environment interaction between angiotensinogen and chronic exposure to occupational noise contribute to hypertension. <i>Occupational and environmental medicine</i> . 2012;69(4):236-42.	Dahlgren Report	Yes	Yes	30-130 dB	Yes	Yes		Yes		Reviewed and added to the analysis in the Final Environmental Impact Statement
Hygge S. Classroom experiments on the effects of different noise sources and sound levels on long-term recall and recognition in children. <i>Applied Cognitive Psychology</i> . 2003;17(8):895-914.	Dahlgren Report	Yes	Yes	66 dBA	No	no	Simulations were not realistic for jet noise expected at airports.	No	Appears to be based on the original (Hygge, S., G.W. Evans, & M. Bullinger, 2002.), which is already addressed in the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ishida A, Matsui T, Yamamura K. The effects of low-frequency ultrasound on the inner ear: an electrophysiological study using the guinea pig cochlea. <i>Eur Arch Otorhinolaryngol</i> . 1993;250(1):22-6.	Dahlgren Report	No	Yes	10 kHz to 28 kHz	Not available	No	Low frequency ultrasound below 100 dB induced significant changes in cochlear microphonic	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ising H, Kruppa B. <i>Health effects caused by noise: Evidence in the literature from the past 25 years</i> . <i>Noise Health</i> , 2004; 6: 5-13.	USEPA Reg 10		It's mentioned; a summary of the results of another study	maximum levels 55 dBA; mean 30 dBA	This is not a study	Yes	Background/Informative only	No	Several of the studies discussed in this document are already reviewed directly in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ising H, Rebentisch E, Babisch W, Curio I, Sharp D, Baumgärtner H. Medically relevant effects of noise from military low-altitude flights—results of an interdisciplinary pilot study. <i>Environ Int</i> . 1990;16(4):411-23.	Dahlgren Report	Yes	Yes	Unknown	Unknown	No		No	The "low-altitude military flights" consisted of events with sound level increases of up to 75 dB/s. NASWI operations-generated sound level increase is an order of magnitude smaller, so this study not readily applicable.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ising H, Rebentisch E, Poustka F, Curio I. Annoyance and health risk caused by military low-altitude flight noise. <i>Int Arch Occup Environ Health</i> . 1990;62(5):357-363.	Dahlgren Report/ Washington Department of Health	Yes. Military flight noise	Yes	Not available	Not available		Ear symptoms were only higher in areas with flight noise exceeding 115 dBA	No	This study appears to evaluate military-training-route-type aircraft noise, which typically includes significantly faster rise-time rates than other flight activity. Although the sound levels in the vicinity of NASWI are relatively high, the rise-time rate is slow and typical of that in areas surrounding a civil/commercial airfield. Due to this difference in rise-time, this reference would not be of particular applicability to the analysis and therefore would not significant value; The 'low-altitude military flights' consisted of events with sound level increases of up to 75 d B/s. NASWI operations generated sound level increase an order of magnitude smaller so this study not readily applicable.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Jakovljevic B, Paunovic K, Belojevic G. Road-traffic noise and factors influencing noise annoyance in an urban population. <i>Environ Int</i> . 2009;35(3):552-6.	Dahlgren Report	No	Yes	N/A	Yes	No	Increased annoyance with regard to orientation of rooms toward street, time in apartment during the day, noise sensitivity, and night traffic noise.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Jarup L BWHDPGKKCEDMLSPSISWBOBG. Hypertension and exposure to noise near airports: the HYENA study. <i>Environmental health perspectives</i> . 2008;116(3):329-33.	Dahlgren Report	Yes	Yes	Not provided	Yes	Yes	The Ors are quick low, though significant.	No	HYENA study already included in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Jarup L, Dudley M, Babisch W, Houthuijs D, Swart W, Pershagen G. Hypertension and exposure to noise near airports-the HYENA study. <i>Epidemiology</i> . 2007;18(5):S137.	Dahlgren Report/Washington Department of Health	Yes	Yes	<50, >60 dB	Yes	Already in analysis		Already in analysis	The 2008 publication of this reference is already in the analysis	Previously included in analysis and Draft Environmental Impact Statement
Job R. Community response to noise: A review of factors influencing the relationship between noise exposure and reaction. <i>J Acoust Soc Am</i> . 1988;83(3):991-1001.	Washington Department of Health							No	Doesn't add significant value to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Jonsson AHL. Prolonged exposure to a stressful stimulus (noise) as a cause of raised blood pressure in man. <i>The Lancet</i> . 1977:86-7.	Dahlgren Report	No	Yes	>=65 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kaltenbach M, Maschke C, Klinke R. Health consequences of aircraft noise. <i>Deutsches Arzteblatt international</i> . 2008;105(31-32):548-56.	Dahlgren Report	Yes	Yes	Daytime: 60 dB; nighttime: 45 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kalyoncu D, Urganci N, Calis AB, Ozbal A. Sensorineural hearing loss in pediatric patients with inflammatory bowel disease. <i>Dig Dis Sci</i> . 2010;55(1):150-2.	Dahlgren Report	No	no	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Karmody CS, Valdez TA, Desai U, Blevins NH. Sensorineural hearing loss in patients with inflammatory bowel disease. <i>Am J Otolaryngol</i> . 2009;30(3):166-70.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kasicka-Jonderko A, Jonderko K, Dolinski K, Dolinski M, Kaminska M, Szymaszal M, et al. Extracirculatory effects of noise of various frequency spectra in humans—effect of pink and blue noise on gastric myoelectrical activity and gastrointestinal passage of nutrients. <i>Journal of smooth muscle research = Nihon Heikatsukin Gakkai kikanishi</i> . 2007;43(1):25-42.	Dahlgren Report	No	No	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Katsouyanni K, Dadum E, Dudley M-L, et al. Hypertension and exposure to noise near airports: the HYENA study. <i>Environ Health Perspect</i> . 2008	Washington Department of Health					No	Authors acknowledge that there was collinearity (r = 0.8), but did not address how it was managed in the analysis; could really impact the validity of the analysis.	Yes	May add some value to more general discussion in the analysis regarding stress response to noise. Similar reference in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kavoussi N. The relationship between the length of exposure to noise and the incidence of hypertension at a silo in Terran. <i>Med Lavoro</i> . 1973;64(7-8):292-5.	Dahlgren Report	Yes	Yes	N/A	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Kawada T. Noise and health-Sleep disturbance in adults. J Occup Health. 2011;53(6):413-416.	Washington Department of Health					No	No a research paper. Summary of impressions using studies.	No	Consistent with analysis of potential for awakening, and doesn't add significant additional information	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kim CY, Ryu JS, Hong SS. Effect of air-craft noise on gastric function. Yonsei medical journal. 1968;9(2):149-54.	Dahlgren Report	No	no	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kim SJ, Chai SK, Lee KW, Park JB, Min KB, Kil HG, et al. Exposure-Response Relationship Between Aircraft Noise and Sleep Quality: A Community-based Cross-sectional Study. Osong public health and research perspectives. 2014;5(2):108-14.	Dahlgren Report/ Washington Department of Health	Yes. Military airfield exposure	Yes	Proximity to airfield.	Yes	Yes	Sleep disturbance was 2.6 fold higher in the low exposure group and 3.5 fold higher in the high exposure group.		Relationship between aircraft noise and sleep disturbance already established in analysis (includes Finegold, 1994), which found correlation between interior SEL and percent awakening. This study doesn't add any new information to the topic	Reviewed and added to the analysis in the Final Environmental Impact Statement
Klatte M, Bergstrom K, Lachmann T. Does noise affect learning? A short review on noise effects on cognitive performance in children. Front Psychol. 2013;4:578.	Dahlgren Report	Summary articles that included airport noise	Yes	Summary article	NA	Yes	Good summary of the literature.	Yes	Reference consistent with analysis of classroom learning, which considers both single-event disruptions as well as averaged sound levels.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Kmietowicz Z. Aircraft noise is linked to raised risk of cardiovascular disease. BMJ. 2013;347:f6082.	Dahlgren Report							No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Koch S, Haesler E, Tiziani A, Wilson J. Effectiveness of sleep management strategies for residents of aged care facilities: findings of a systematic review. J Clin Ntfs. 2006;15(10):1267-1275.	Washington Department of Health					No	Meta-analysis to find assessment methods, not to confirm injury.	No	This reference focuses on assessing and diagnosing sleep problems and is not directly relevant to the analysis, so would not add value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kraus KS, Canlon B. Neuronal connectivity and interactions between the auditory and limbic systems. Effects of noise and tinnitus. Hear Res. 2012;288(1-2):34-46.	Dahlgren Report	No; biologic response to noise	NA	biology paper	NA	No	Maybe. Not sure of value for the analysis as it is more background.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Krysa I. The effect of noise on learning and retention. Act Nerv Super (Praha). 1983;25(4):299-303.	Dahlgren Report	No	Yes	81-82 dBA	NA	No	Paper had a very small sample size and did not use exposures similar to airports.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Kwak KM, Ju YS, Kwon YJ, Chung YK, Kim BK, Kim H, et al. The effect of aircraft noise on sleep disturbance among the residents near a civilian airport: a cross-sectional study. Annals of occupational and environmental medicine. 2016;28(1):38.	Dahlgren Report/ Washington Department of Health	Yes	Yes	Not directly measured. Used noise maps publicly available	Yes	Yes	Insomnia and hypersomnia was higher in the aircraft noise exposure group		The use of the cumulative day and night metric (WECPNL) makes isolating the effects from nighttime flights difficult. The conclusion "higher WECPNL (or DNL)" increases prevalence of sleep disturbance is already addressed in the analysis, and this reference doesn't add any new information or value.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Lang T, Fouriaud C, Jacquinet-Salord MC. Length of occupational noise exposure and blood pressure. Int Arch Occup Environ Health 1992;63(6):369-72. 1992.	Dahlgren Report	No	Yes	>=85 dB	Yes	No	longitudinal study not relevant to acute noise	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Laszlo H, McRobie E, Stansfeld S, Hansell A. Annoyance and other reaction measures to changes in noise exposure-A review. Sci Total Environ. 2012;435:551-562.	Washington Department of Health					Yes	This paper addresses the primary issue with noise - annoyance and speaks to the lack of control the public perceives as a contributory factor.	Yes	May add value to discussion of Shultz curve update/validating, particularly regarding limitations of dose-response curve relationship, and provides insight when annoyance doesn't follow DNL	Reviewed and added to the analysis in the Final Environmental Impact Statement
Lee EY, Jerrett M, Ross Z, Coogan PF, Seto EY. Assessment of traffic-related noise in three cities in the United States. Environmental research. 2014;132C:182-9.	Dahlgren Report	No	No	NA	NA	No		No	Not applicable	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Lee Jh KWYSRCNLRC. Cohort study for the effect of chronic noise exposure on blood pressure among male workers in Busan, Korea. American journal of industrial medicine. 2009.	Dahlgren Report	No	Yes	<60 dB	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Lekaviciute J, Argalasoova-Sobotova L. Environmental noise and annoyance in adults: research in Central, Eastern and South-Eastern Europe and Newly Independent States. Noise Health. 2013;15(62):42-54.	Dahlgren Report	No	Yes	Varies	N/A	No	Review of articles mostly related to road traffic noise in Eastern Europe.	No	Analysis of health effects due to Lnight and Lden better addressed in other studies more directly. No significant value added	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Leon Bluhm G BNNERM. Road traffic noise and hypertension. Occupational and environmental medicine. 2007;64(2):122-6.	Dahlgren Report	No	Yes	<45 dB, >65dB	Yes	No	prolonged exposure to road noise for 10+ years	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Lepore GEaS. Nonauditory Effects of Noise on Children: A Critical Review. Children's Environments. 1993;10(1):31-51.	Dahlgren Report	No; summary article	Yes	NA	Unknown	Yes	Only for background.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Leventhall H. Low frequency noise and annoyance. Noise Health. 2004;6(23):59	Washington Department of Health					Yes	This paper provides another methods for assessing noise exposures and specific health outcomes.	Yes	Analysis may benefit from additional discussion of low-frequency noise and annoyance, which could occur beyond the 65 dB DNL; analysis would benefit from additional discussion regarding annoyance from low-frequency noise, which would occur outside the 65 DNL. This reference (particularly citations used) may be appropriate to include in the literature review section of the analysis. -People that suffer from hearing loss (age related or otherwise) tend to lose mid and higher frequency ranges first. May explain why the older age group is bother most by low frequency noise.	Reviewed and added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Lieberman MC. Noise-Induced Hearing Loss: Permanent Versus Temporary Threshold Shifts and the Effects of Hair Cell Versus Neuronal Degeneration. <i>Adv Exp Med Biol.</i> 2016;875:1-7. doi: 10.1007/978-1-4939-2981-8_1.	Washington Department of Health	No	No	N/A		Yes	Background/Informative only	Yes	Not clear how applicable the results of this study are to humans. If true, potential for hearing could be expanded to include decreases in speech discriminations. However, there are currently no methods to estimate this effect in occupational exposure settings nor standards for environmental assessments of aircraft noise exposure, so this reference would not change impact analysis. If other research supports the reference conclusion, then there may be some value of including in general background discussion.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Lilliy J. Whidbey Island Military Jet Noise Measurements.; 2013	Washington Department of Health							Yes	Aircraft measurements typically utilize fast response (0.125 second) vs slow response (1 second). The calculated Ldn in Table 4 appears to be based on incorrect assumptions that may need to be addressed directly in the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Liu C, Fuertes E, Tiesler CM, Birk M, Babisch W, Bauer CP, et al. The associations between traffic-related air pollution and noise with blood pressure in children: results from the GINIplus and LISAPLUS studies. <i>Int J Hyg Environ Health.</i> 2014;217(4-5):499-505.	Dahlgren Report	No	Yes	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Liu J, Xu M, Ding L, Zhang H, Pan L, Liu Q, et al. Prevalence of hypertension and noise-induced hearing loss in Chinese coal miners. <i>Journal of Thoracic Disease.</i> 2016;8(3):422-9.	Dahlgren Report	No	No	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Matsui T, Uehara T, Miyakita T, Hiramatsu K, Yamamoto T. Dose-response relationship between hypertension and aircraft noise exposure around Kadena airfield in Okinawa. 2004.	Dahlgren Report	Yes	Yes	60-72 dB	Yes	Already in analysis		Already in analysis	This is already in the noise study but cited as 2008, which is correct:  Matsui, T., T. Uehara, T. Miyakita, K. Hiramatsu and T. Yamamoto. 2008. "Dose-response relationship between hypertension and aircraft noise exposure around Kadena airfield in Okinawa", 9th International Congress on Noise as a Public Health Problem (ICBEN) 2008, Foxwoods, CT.	Previously included in analysis and Draft Environmental Impact Statement
McCann SMRABYEHSHA. Adrenalectomy and blood pressure of rats subjected to auditory stimulation. <i>American Journal Physiology.</i> 1948;155:128-31.	Dahlgren Report	No	No	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
McNamee R BGDWMCN. Occupational noise exposure and ischaemic heart disease mortality. <i>Occupational and environmental medicine.</i> 2006;63:813-9. 50 of 55	Dahlgren Report	Yes	Yes	<85 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Medoff HSBAM. Blood pressure in rats subjected to audiogenic stimulation. <i>American Journal of Physiology.</i> 1945;193:300-5.	Dahlgren Report	No	No	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Meline J, Van Hulst A, Thomas F, Chaix B. Road, rail, and air transportation noise in residential and workplace neighborhoods and blood pressure (RECORD Study). <i>Noise Health.</i> 2015;17(78):308-19.	Dahlgren Report	No	Yes	30-80 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Michalak R, Ising H, Rebentisch E. Acute circulatory effects of military low-altitude flight noise. <i>International archives of occupational and environmental health.</i> 1990;62(5):365-72.	Dahlgren Report	Yes	Yes	Lmax 99-114 dB	N/A	No	noise simulations used and study population was comprised of 70-89 year olds	No	This study analyzed fast rise-time sounds, consistent with MTR-type activity operating at high sub-sonic speeds, which are not applicable to any activity addressed in the analysis.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Miedema H, Oudshoorn C. Annoyance from transportation noise: relationships with exposure metrics DNL and DENL and their confidence intervals. <i>Environ Health Perspect.</i> 2001;109(4):409.	Washington Department of Health	Yes	Yes; annoyance from transportation noise, including airports	45-75 DENL, DNL	P-values are significant. There is a significant between-study variation for aircraft and road traffic, but the within-study variation is much larger	Yes	Only explores model of the distribution of noise annoyance with the mean varying as a function of noise exposure- Subjective. Study is not applicable to local, complaint type situations.	Yes	The analysis computes people exposed to various DNL ranges but doesn't clearly translate to counts of people HA. Regarding updating/validating the Shultz curve (annoyance vs DNL), this reference may add value to include briefly in the analysis, although it does not drastically conflict with existing methodologies.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Mintchev MP, Girard A, Bowes KL. Nonlinear adaptive noise compensation in electrogram recordings recorded from healthy dogs. <i>IEEE Trans Biomed Eng.</i> 2000;47(2):239-48.	Dahlgren Report	No	No	NA	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
More SR. Aircraft Noise Characteristics and Metrics; 2011	Washington Department of Health							No	This dissertation provides good background information on noise but would not add significant value to the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Morrell MJ, Finn L, Kim H, Peppard PE, Badr MS, Young T. Sleep fragmentation, awake blood pressure, and sleep-disordered breathing in a population-based study. <i>American journal of respiratory and critical care medicine.</i> 2000;162(6):2091-6.	Dahlgren Report	No	No	NA	Unknown	No				Reviewed and not added to the analysis in the Final Environmental Impact Statement
Moslehi A, Nabavizadeh-Rafsanjani F, Keshavarz M, Rouhbaksh N, Sotudeh M, Salimi E. Traffic noise exposure increases gastric acid secretion in rat. <i>Acta medica Iranica.</i> 2010;48(2):77-82.	Dahlgren Report	No	Yes	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Munzel T, Gori T, Babisch W, Basner M. Cardiovascular effects of environmental noise exposure. <i>Eur Heart J.</i> 2014;35(13):829-36.	Dahlgren Report/Washington Department of Health	Yes	Yes	55 dB	Borderline significant for ORs for risk of arterial hypertension and coronary heart disease from exposure to aircraft noise	Yes	Most useful summary report on cardiovascular effects		Several of the underlying studies supporting this document (i.e. Haralabidis, 2008 and WHO, 1999/2011) are already included in the analysis. Although the OR may have been statistically significant, a direct causal relationship is less clear. This reference may provide some value in a general sense to describe the current state of scientific study and research on the topic of non-auditory health effects, specifically CVD, due to environmental noise exposure.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Muzet A. Environmental noise, sleep and health. <i>Sleep Medicine Reviews.</i> 2007;11:135-42.	Dahlgren Report	No	No	N/A	N/A	Yes	Background information on environmental noise and health		Draws from studies already included in analysis directly, such as WHO, 2000, etc.	Reviewed and added to the analysis in the Final Environmental Impact Statement
N. Miller, N. Sizov, S. Lor, and D. Cantor, "New Research on Community Reaction to Aircraft Noise in the United States," 11 <sup>th</sup> International Congress on Noise as a Public Health Problem (ICBEN) 2014, Nara, Japan	Independent									Reviewed and added to the analysis in the Final Environmental Impact Statement
National Academies of Sciences, Engineering, and Medicine. 2017. <i>Assessing Aircraft Noise Conditions Affecting Student Learning-Case Studies</i> . Washington, DC: The National Academies Press. <a href="https://doi.org/10.17226/24941">https://doi.org/10.17226/24941</a> .	Independent							Yes		Reviewed and added to the analysis in the Final Environmental Impact Statement
Ndrepepa A, Twardella D. Relationship between noise annoyance from road traffic noise and cardiovascular diseases: a meta-analysis. <i>Noise Health.</i> 2011; 13(52):251	Washington Department of Health					No	meta-analysis of only 8 articles and the study types were varied.	No	Confirms the analysis conclusion that noise exposure may lead to stress, which may lead to additional health effects including CVD. This reference doesn't add additional or new value beyond others considered.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Neus H R H S W. Traffic noise and hypertension: an epidemiological study on the role of subjective reactions. <i>International archives of occupational and environmental health.</i> 1983;51:223-9. 47 of 55	Dahlgren Report	No	Yes	>73 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ni Ch CZYZYZJWPJLJLNWJLCKZZZZY. Associations of blood pressure and arterial compliance with occupational noise exposure in female workers of textile mill. <i>Chinese Medical Journal.</i> 2007;120(15):1309-13.	Dahlgren Report	No	Yes	80.1-113.5 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Nomura K, Nakao M, Morimoto T. Effect of smoking on hearing loss: quality assessment and meta-analysis. <i>Prev Med.</i> 2005;40(2):138-144.	Washington Department of Health					No	Meta-analysis or significant original studies.	No	Reference does not address noise so would not add value to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Orban E, McDonald K, Sutcliffe R, et al. Residential Road Traffic Noise and High Depressive Symptoms after Five Years of Follow-up: Results from the Heinz Nixdorf Recall Study. <i>Environ Health Perspect.</i> 2016;124(5):578-585.	Washington Department of Health					No	Road noise study.	No	The analysis does not discuss depression as a non-auditory health effect. This reference does not provide added value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Passchier-Vermeer W P W F. Noise exposure and public health. <i>Environ Health Perspectives.</i> 2000;108(1):123-31.	Dahlgren Report	No	Yes	Unknown	NA	No	review paper without much substance.	No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Passchier-Vermeer W, Passchier WF. Noise exposure and public health. <i>Environ Health Perspect.</i> 2000;108 Suppl 1:123-131.	Dahlgren Report/Washington Department of Health	Yes	Yes	Depends on health outcome looking at	Doesn't provide		Background/Informative only	Yes	PHL not inconsistent with analysis. Although DNL analysis of significant impact begins at 65 dB, supplemental metrics address areas outside of 65 DNL. This supports the display of 55 DNL as comparison for proposed action but not necessarily as a criteria for significant impact. Need to review source for 70 Ldn affecting hypertension to determine applicability; may need to include in analysis literature review section. -analysis sleep disturbance analyzes both the SEL and number of events occurring at each SEL using a curve fit. Reference does not conflict with analysis methodology although slight differences in thresholds found may exist. -analysis threshold for classroom Leq already lower than referenced 66 dBA -reference does not conflict with analysis PHL approach	Reviewed and added to the analysis in the Final Environmental Impact Statement
Pattenden S. Air traffic noise and hypertension in Stockholm County. <i>Occupational and environmental medicine.</i> 2001;58(12):761.	Dahlgren Report	Yes	Yes	N/A	N/A	No	Editorial paper	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Paunovic K, Stansfeld S, Clark C, Belojevic G. Epidemiological studies on noise and blood pressure in children: Observations and suggestions. <i>Environ Int.</i> 2011;37(5):1030-41.	Dahlgren Report	Yes	Yes	Varying exposure levels; some studies only used modeled effects	Some; meta-analysis included studies with non-significant results	Yes		No	Blood pressure changes in children due to aircraft noise not drastically different from correlations found in other studies for all people	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Pearson T, Campbell MJ, Maheswaran R. Acute effects of aircraft noise on cardiovascular admissions - an interrupted time-series analysis of a six-day closure of London Heathrow Airport caused by volcanic ash. <i>Spatial and spatio-temporal epidemiology.</i> 2016;18:38-43.	Dahlgren Report	Yes	Yes	55 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Perron S, Tetreault LF, King N, Plante C, Smargiassi A. Review of the effect of aircraft noise on sleep disturbance in adults. <i>Noise Health.</i> 2012;14(57):58-67.	Dahlgren Report/Washington Department of Health	Yes	Yes	N/A	N/A	Yes	Review of aircraft noise and sleep disturbance; Criteria for including articles in review was explicit. Findings were not speculative and centered on the studies themselves. Nothing new here.	Yes	Consistent with analysis of sleep disturbance discussion. May be worth a mention in analysis	Reviewed and added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Peters A, von Klot S, Heier M, Trentinaglia I, Hormann A, Wichmann HE, et al. Exposure to traffic and the onset of myocardial infarction. <i>The New England journal of medicine</i> . 2004;351(17):1721-30.	Dahlgren Report	No	Yes	N/A	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Pipkin A Ebey's Landing National Historical Reserve: Acoustical Monitoring Report. 2016	Washington Department of Health							Yes	The 35 dB level identified by the author as potentially causing adverse blood pressure effects while sleeping was referring to the Haralabidis study. However, the 35 dB level was simply the threshold for counting noise events and not necessarily a threshold of adverse effects. Many events exceeded this threshold significantly. Additionally, the Haralabidis study found no link between nighttime noise and aircraft events but instead with traffic noise. "The pooled estimates from all 4 centers show that the only noise indicator associated consistently with decrease in BP dipping is higher road traffic noise during the study night. The effect is statistically significant only on diastolic dipping and shows that a 5 dB increase in measured road traffic noise during the study night is associated with 0.8 % less dipping in diastolic BP." This difference could be due to the continuous vs intermittent nature of the sound sources. It is important to point out that the 45 dBA interior nighttime level identified by the author and in the WHO recommendation (Berglund, 1999) is not a threshold of significance for adverse health effects but merely a target to strive for by administrators. The author's background appears to be in biology and natural resource with limited noise experience which may explain why the above thresholds were selected. It is not clear whether the Ldn computed utilizes the DNL nighttime period or the NPS period. The above items may need to be addressed in the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Prieve BA, Yanz JL. Age-dependent changes in susceptibility to ototoxic hearing loss. <i>Acta Otolaryngol (Stockh)</i> 1984 Nov-Dec;98(5-6):428-38. 1984.	Dahlgren Report	No	No	N/A	N/A	No	Age-dependent changes in susceptibility to ototoxic hearing loss in mice exist	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Prior H. Effects of the acoustic environment on learning in rats. <i>Physiol Behav</i> . 2006;87(1):162-5.	Dahlgren Report	No; rat study with continuous noise levels	Yes	unknown	NA	No	Rat study with no clear association with the environment in question.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Pujol S, Levain JP, Houot H, Petit R, Berthillier M, Defrance J, et al. Association between ambient noise exposure and school performance of children living in an urban area: a cross-sectional population-based study. <i>Journal of urban health : bulletin of the New York Academy of Medicine</i> . 2014;91(2):256-71.	Dahlgren Report	No, but aircraft noise could be a contributor	Yes	38-71 dBA, at home and school	Yes	Yes	Only for background.	Yes	Brief mention in learning effects discussion	Reviewed and added to the analysis in the Final Environmental Impact Statement
Pyko A, Eriksson C, Oftedal B, et al. Exposure to traffic noise and markers of obesity. <i>Occup Environ Med</i> . 2015;72(8):594-601. doi:10.1136/oemed-2014-102516.	Washington Department of Health	Traffic noise: road traffic is the dominating source, followed by railway and aircraft noise	Yes	Road/Railway traffic noise: <45 dB->55 dB. Aircraft Noise around Stockholm's Arland Airport (range): 50-65 dB, to account for a decline in exposure preceding the follow-up survey (due to people moving), the exposure was estimated as an average for the time period. For participants who had changed their address between the baseline and follow-up surveys, a time-weighted average of exposure was calculated: avg: 48-49 db. A second airport in Stockholm City, used mainly for regional air traffic, only 13 participants in study were exposed to aircraft noise >=50 dB	No significant interactions were observed between exposure to road traffic noise and other risk factors in relation to central obesity, except for age. Sleep disturbances were not associated with central obesity in the fully adjusted model; data were not shown.	No	Sometimes with certain p-values that are significant they don't report CI's and in their tables they do not report p-values with confidence intervals, and those that do report confidence intervals throughout the results are not strong and close to 1.	No	Although relationship may be statistically significant, from a study standpoint, it doesn't appear to be correlated strongly enough to justify analyzing as a potentially significant effect of EIS action. Additionally, road noise characteristics can vary greatly from military airfield noise; particularly the durations of noise events are sporadic at NASWI, while road noise may be fairly constant. Suggest time-above comparison to confirm.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Rabinowitz PM. Noise-induced hearing loss. <i>Am Fam Physician</i> . 2000;61(9):2759-2760.	Washington Department of Health	No	This is not a study; it provides a short overview of two individual case studies	This is not a study	This is not a study	Yes	Background/Informative only	No	Does not add any additional value to the analysis that hasn't already been covered by existing references	Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Ragetti MS, Goudreau S, Plante C, Perron S, Fournier M, Smargiassi A. Annoyance from Road Traffic, Trains, Airplanes and from Total Environmental Noise Levels. <i>Int J Environ Res Public Health</i> . 2015	Dahlgren Report/Washington Department of Health	Include road, railway, and aircraft traffic	Yes	50.1 dBA-78.7 dBA	Yes	No	Montreal residents living near busy roads, main railway lines, as well as within and close to the Montreal airport are annoyed by transportation noise. Percentage of people disturbed by noise significantly decreased as distance to roads or airports increased.	No	Not particularly valuable regarding annoyance rates from noise exposure (highly annoyed vs Leq/Lden), so this reference would not add significant value to the analysis. Utilized the Land Use Regression (LUR) statistical model for sound exposure estimates. LUR is still in development and designed specifically for road noise. Insufficient evidence for applicability to aircraft noise.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Rathsam J, Loubeau A, Klos J. Effects of indoor rattle sounds on annoyance caused by sonic booms. <i>The Journal of the Acoustical Society of America</i> . 2015;138(1):EL43-8.	Dahlgren Report	Yes	Yes	Not available	Not available	No	Results provide community annoyance models that include the effects of indoor rattle sounds.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ray RI BJVEHH. Cardiovascular effects of noise during complex task performance. <i>International Journal of Psychophysiology</i> . 1984;1:335-40.	Dahlgren Report	No	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Regecova V, Kellerova E. Effects of urban noise pollution on blood pressure and heart rate in preschool children. <i>J Hypertens</i> . 1995;13(4):405-12.	Dahlgren Report	No; ambient noise levels typical in industrial cities	Yes	Only mentioned >60 dBA in abstract	NA	No				Reviewed and not added to the analysis in the Final Environmental Impact Statement
Reinis S. Acute changes in animal inner ears due to simulated sonic booms. <i>The Journal of the Acoustical Society of America</i> . 1976;60(1):133-8.	Dahlgren Report	Sonic booms	Yes	Not available	Not available	No	Mice exposed to sonic booms has bleeding in the inner ear	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Rhee MY, Kim HY, Roh SC, Kim HJ, Kwon HJ. The effects of chronic exposure to aircraft noise on the prevalence of hypertension. <i>Hypertension research : official journal of the Japanese Society of Hypertension</i> . 2008;31(4):641-7.	Dahlgren Report	Yes	Yes	88-115 dB	Yes	Yes		Yes	Compares exposure to helicopter noise and jet noise to control. Higher ORs for helicopter noise	Reviewed and added to the analysis in the Final Environmental Impact Statement
Ristovska G, Laszlo HE, Hansell AL. Reproductive outcomes associated with noise exposure-a systematic review of the literature. <i>Int J Environ Res Public Health</i> . 2014; 11(8):7931-7952.	Washington Department of Health	Yes; meta-analysis: 6 out of 23 studies evaluated aircraft noise; 14 studies were summaries of occupational noise exposure	Yes	<65dBA, 75-95 dBA, 75-100 dBA, >85 dBA etc. Mean value and standard deviation of individual exposure was 67.9 dBA (52.4 dBA-86.8 dBA)	No; not the studies pertaining to noise exposure and reproductive outcomes	No	A major limitation of the study investigated was the exposure assessment.	No	Outdoor noise levels in off-station areas in the vicinity of NASWI could potentially affect LBW. However, when building attenuation is taken into consideration, the indoor sounds would be sufficiently low (Leq(indoor)<65) to not cause LBW.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Ristovska G, Lekaviciute J. Environmental noise and sleep disturbance: research in Central, Eastern and South-Eastern Europe and Newly Independent States. <i>Noise Health</i> . 2013;15(62):6-11. doi:10.4103/1463-1741.107147.	Washington Department of Health					No	Review article with no real purpose.	No	Consistent with analysis potential for awakening, and doesn't add significant additional information	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Rosenlund M BNPGLBG. Increased prevalence of hypertension in population exposed to aircraft noise. <i>Occupational and environmental medicine</i> . 2001;58:769-73.	Dahlgren Report	Yes	Unknown	50-75 dBA	Yes	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Ryan AF, Kujawa SG, Hammill T, Le Prell C, Kil J. Temporary and Permanent Noise-induced Threshold Shifts: A Review of Basic and Clinical Observations. <i>Otol Neurotol Off Publ AM Otol Soc AM Neurotol Soc Eur Acad Otol</i> 2016	Washington Department of Health							No	Consistent with analysis PHL, and doesn't add significant additional value to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Rylander R. Noise, Stress, and Annoyance. <i>Noise &amp; Vibration Worldwide</i> . 2006.	Dahlgren Report	Sound in general	Yes	Not available	Not available	No	Noise is interpreted in the central nervous system, generating secondary and tertiary reactions that are not controlled by the brain cortex.	No	Summary of info on noise and annoyance, which are already covered in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Salomons EM, Jansses SA. Practical ranges of loudness levels of various types of environmental noise, including traffic noise, aircraft noise, and industrial noise. <i>Int J Environ Res Public Health</i> . 2011;8(6):1847-1864	Washington Department of Health					No		No	Provides useful information about the need to consider noise beyond A-weighted. Supports providing Growler frequency spectrum plot (C-weighted or unweighted) for comparison to other aircraft. Doesn't provide sufficient evidence to justify C-weighted contour computation or extensive analysis. Less value to add reference to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Sayapathi BS, Su AT, Koh D. The effectiveness of applying different permissible exposure limits in preserving the hearing threshold level: A systematic review. <i>J Occup Health</i> . 2014;56(1):1-11.	Washington Department of Health	No	Yes	≤85 dBA and >85 dBA	Systematic review; some were, but the majority--if they were significant--had wide confidence intervals			No	Consistent with analysis PHL methodology, reference would not add significant value to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Sbihi H DHWDPA. Hypertension in noise-exposed sawmill workers: a cohort study. <i>Occupational and environmental medicine</i> . 2008;65:643-6.	Dahlgren Report	No	Yes	>85 dB	Yes	No	the article covers prolonged noise exposure in a confined occupational environment	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Scheibe F, Haupt H, Ludwig C. Intensity-dependent changes in oxygenation of cochlear perilymph during acoustic exposure. <i>Hear Res</i> . 1992;63(1-2):19-25.	Dahlgren Report	No	Yes	85-90 dB SPL	Not available	No	Intracochlear oxygenation plays an important role in inner ear physiology during acoustic stimulation	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Scheibe F, Haupt H, Ludwig C. Intensity-related changes in cochlear blood flow in the guinea pig during and following acoustic exposure. <i>Eur Arch Otorhinolaryngol</i> . 1993;250(5):281-5.	Dahlgren Report	No	Yes	85-125 dB SPL	Not available	No	Intensity-related effects of acoustic exposure on the cochlear microcirculation in mice.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Schmidt F, Kollé K, Kreuder K, Schnorbus B, Wild P, Hechtner M, et al. Nighttime aircraft noise impairs endothelial function and increases blood pressure in patients with or at high risk for coronary artery disease. <i>Clin Res Cardiol</i> . 2015;104(1):23-30.	Dahlgren Report	Yes	Yes	39-46 dB	Yes	Yes		Yes		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Schmidt FP, Basner M, Kroger G, Weck S, Schnorbus B, Muttray A, et al. Effect of nighttime aircraft noise exposure on endothelial function and stress hormone release in healthy adults. <i>Eur Heart J</i> . 2013;34(45):3508-14a.	Dahlgren Report	Yes	Yes	60 dB	Yes	No	Focuses mostly on sleep disturbance and endothelial dysfunction	No	Not really applicable; one night of noise exposure to random individuals. Does not account for habituation effects found in other research	Reviewed and not added to the analysis in the Final Environmental Impact Statement

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Schneider A HRI-MAZWSGSRRCJPMBOGWGPM. Changes in deceleration capacity of heart rate and heart rate variability induced by ambient air pollution in individuals with coronary artery disease. Part Fibre Toxicol. 2010;7:29.	Dahlgren Report	No	No	N/A	N/A	No	Not related to noise or airports	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Schomer, Paul D. Criteria for Assessment of noise annoyance. Received 2004 March 31; revised 2005 January 16; accepted 2005 September 2002; Noise Control Eng J. 2005 July-Aug	Independent									Reviewed and added to the analysis in the Final Environmental Impact Statement
Schreckenber, M. Meis, C. Kahl, C. Peschel, and T. Eikmann, "Aircraft Noise and Quality of Life around Frankfurt Airport," Int. J. Environ. Res. Public Health, 2010, 7, pp. 3382-3405.	Independent									Reviewed and added to the analysis in the Final Environmental Impact Statement
Schulte W, Otten H. Results of a low-altitude flight noise study in Germany: long-term extraaural effects. Schriftenr Ver Wasser Boden Lufthyg. 1993;88:322-38.	Dahlgren Report	Yes	Yes	N/A	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Schultz TJ. Synthesis of social surveys on noise annoyance. The Journal of the Acoustical Society of America. 1978;64(2):377-405.	Dahlgren Report	Yes	Yes. Relationship for predicting community annoyance due to all kinds of transportation noise.	Not available	Not available	Already in analysis	Relationship for predicting community annoyance due to all kinds of transportation noise. Highly cited by others in the field.	Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Schwartz J, Litonjua A, Suh H, Verrier M, Zanobetti A, Syring M, et al. Traffic related pollution and heart rate variability in a panel of elderly subjects. Thorax. 2005;60(6):455-61.	Dahlgren Report	No	No	N/A	Yes	No	Not related to noise or airports and population is elderly	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Seabi J, Cockcroft K, Goldschagg P, Greyling M. The impact of aircraft noise exposure on South African children's reading comprehension: the moderating effect of home language. Noise Health. 2012;14(60):244-52.	Dahlgren Report	Yes	Yes	69 dBA average, 95 dBA peak	Yes	No	There were methodological problems with the study that the authors did not address.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Seabi J. An epidemiological prospective study of children's health and annoyance reactions to aircraft noise exposure in South Africa. Int J Environ Res Public Health. 2013;10(7):2760-77.	Dahlgren Report/Washington Department of Health	Yes	Yes	54-97 dB	No	No	Report is elementary in its analysis and some values are outside expected levels.	No	Although this study supports the idea that chronic noise exposure does not have any negative effects on health of children, the exposure levels were not high enough to cover all areas at NASWI. May not add significant value to analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Seidler A, Hegewald J, Seidler AL, et al. Association between aircraft, road and railway traffic noise and depression in a large case-control study based on secondary data. Environ Res. 2017;152:263- 271. doi:10.1016/j.envres.2016.10.017.	Washington Department of Health					No	Ecologic exposure assessment. Results not consistent for exposure to high noise levels.	No	Reference did not include any new information and wouldn't add significant value to the analysis. Several of the citations, which are included in this literature review, are candidates for inclusion in the analysis regarding non-auditory health effects	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Seidler A, Wagner M, Schubert M, Droge P, Pons-Kuhnemann J, Swart E, et al. Myocardial Infarction Risk Due to Aircraft, Road, and Rail Traffic Noise. Deutsches Arzteblatt international. 2016;113(24):407-14.	Dahlgren Report	Yes	Yes	Maximum noise level: >60 dB	No	Yes		Yes	Although this doesn't provide any new info beyond the EIS text (which includes Haralabidis, 2008), it is more recent so could be added to summary of "recent studies."	Reviewed and added to the analysis in the Final Environmental Impact Statement
Seidler A, Wagner M, Schubert M, Droge P, Romer K, Pons-Kuhnemann J, et al. Aircraft, road and railway traffic noise as risk factors for heart failure and hypertensive heart disease-A case-control study based on secondary data. Int J Hyg Environ Health. 2016;219(8):749-58.	Dahlgren Report	Yes	Yes	increasing 10 dB increments	Yes	Yes		Yes	Topic already covered in analysis, but this is a more recent study	Reviewed and added to the analysis in the Final Environmental Impact Statement
Selander J, Bluhm G, Theorell T, et al. Saliva cortisol and exposure to aircraft noise in six European countries. Environ Health Perspect. 2009	Washington Department of Health					No	Inconclusive paper.	Yes	May add some value to more general discussion in the analysis regarding stress response to noise. Similar reference in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Serrano S, Karr C, Beaudet N. Chronic Aircraft Noise Exposure and Children's Health: A Review of the Literature and Comparison to Whidbey Island Situation. Pediatric Environmental Health Specialty Unity, University of Washington: 2013	Washington Department of Health							Yes	The maximum permissible level cited (55 day/45 night) applies to a residential noise source received at a neighboring residential location. Report compares outdoor sound levels to indoor thresholds (learning, sleep, etc.) without adjustment for building attenuation. This is a Powerpoint slide and would not be considered peer reviewed research so not appropriate for inclusion in the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Shepherd D, Dirks K, Welch D, McBride D, Landon J. The Covariance between Air Pollution Annoyance and Noise Annoyance, and Its Relationship with Health-Related Quality of Life. Int J Environ Res Public Health. 2016;13(8):792.	Dahlgren Report	Yes	Yes. No significant difference between air pollution and noise annoyance ratings in New Zealand cities. Air pollution and noise impact (in New Zealand) health independently	~62 (Legislated to be below 75 dBA) in "Airport" sample	No	No	No significant difference between air pollution and noise annoyance ratings in New Zealand cities. Air pollution and noise impact (in New Zealand) health independently	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Singh Ap RRRMBMRNHS. Effect of chronic and acute exposure to noise on physiological functions in man. International archives of occupational and environmental health. 1982;50:169-74.	Dahlgren Report	No	Yes	88-107 dB	Yes	No	Occupational noise related	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Sorensen M. Aircraft noise exposure and hypertension. Occupational and environmental medicine. 2016.	Dahlgren Report	No	No	N/A, editorial commentary	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement

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Stansfeld S A, Haines M M, Burr M, Berry B, Lercher P. A review of environmental noise and mental health. <i>Noise Health</i> ; 2000; 2:1-8	Independent								Review paper with source papers already included in analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Stansfeld S, Clark C. Health Effects of Noise Exposure in Children. <i>Curr Environ Health Rep.</i> 2015;2(2):171-178	Dahlgren Report/Washington Department of Health	Yes, but the article is a summary of other articles	Yes	Unknown	NA	Yes	Good summary paper	Yes	In general, this reference found similar effects in children as in adults and doesn't add much value to analysis. One item worth considering to add to the analysis literature review is the "5dBA LAeq16 increase in aircraft noise associated with 2-month delay in reading age" (similar to analysis classroom learning analysis) by including the source document Stansfeld, Berglund Aircraft and road traffic noise and children's cognition and health...; The original papers discussed are, for the most part, already included. Can also add this as a citation.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Stansfeld S, Crombie R. Cardiovascular effects of environmental noise: research in the United Kingdom. <i>Noise Health</i> . 2011	Washington Department of Health/Dahlgren Report	Yes	Yes	Unknown (linear model suggests increased risk with every 10 dB increase of noise)	Borderline significance	Yes	Review article. Better to cite original research.	Yes	This reference may add some value to the analysis of non-auditory health effects in a more general sense and discussion, but no strong correlation was found.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Stansfeld S, Hygge S, Clark C, Alfred T. Night time aircraft noise exposure and children's cognitive performance. <i>Noise Health</i> . 2010	Washington Department of Health					No	No validation and more hypothesis generating	Yes	This reference and/or the two studies analyzed in this reference do provide additional value--specifically, that noise at school is a significant factor in child learning, while nighttime noise at home is not. May be a candidate to include in analysis, although similar publications already exist in the analysis	Reviewed and added to the analysis in the Final Environmental Impact Statement
Stansfeld S. Airport noise and cardiovascular disease. <i>BMJ.</i> 2013;347:f5752.	Dahlgren Report	Yes	Yes	45-70 dB	No	No	It goes into detail about the lack of studies around exposure to airport noise and poor health outcomes as well as the lack of evidence to link hypertension with airport noise.	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Stansfeld SA MMP. Noise pollution: non-auditory effects on health. <i>British Medical Bulletin.</i> 2003;68:243-57.	Dahlgren Report	Included aircraft and traffic	Yes	N/A	N/A	Yes	In children, chronic aircraft noise exposure impairs reading comprehension and long-term memory, and may be associated with raised blood pressure.	Yes	Adds some background info	Reviewed and added to the analysis in the Final Environmental Impact Statement
Stansfeld SA, Shipley M. Noise sensitivity and future risk of illness and mortality. <i>Sci Total Environ.</i> 2015;520: 114-119. doi:10.1016/j.scitotenv.2015.03.053.	Washington Department of Health					No	Good use of a cohort study to study changes over many years. But each phase was cross-sectional and unable to separate noise exposure to mental health outcomes: Is an anxious person more likely to be annoyed by noise, or does annoying noise make a person anxious?	No	Reference does not conflict with the analysis but doesn't add significant value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Summers RW, Harker L. Ulcerative colitis and sensorineural hearing loss: is there a relationship? <i>J Clin Gastroenterol.</i> 1982;4(3):251-2.	Dahlgren Report	No	no	NA	No	No	Case report of a single patient	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Sung JH, Lee J, Park SJ, Sim CS. Relationship of Transportation Noise and Annoyance for Two Metropolitan Cities in Korea: Population Based Study. <i>PLoS One.</i> 2016;11(12):e0169035.	Dahlgren Report	Included road, railway, and aircraft traffic. Transportation noise identified as aircraft and road traffic noise	Yes. Transportation noise levels (in two Korean cities) were significantly associated with annoyance in adults	55-65 dBA	Yes	No	Transportation noise levels (in two Korean cities) were significantly associated with annoyance in adults.	No	Correlation between transportation noise and annoyance thoroughly covered in analysis; this would not add any new information	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Swift H. <i>A Review of the Literature Related to Potential Health Effects of Aircraft Noise.</i> Partnership for Air Transportation Noise and Emissions Reduction Massachusetts Institute of Technology; 2010.	Washington Department of Health	Title is misleading, if the exposure is sleep disturbance and health effects	Not really; I feel like the article is insinuating that aircraft noise results in sleep disturbance	None were given	The only odds ratios presented in this study were odds ratios or relative risks for developing diabetes for various sleep patterns, not necessarily pertaining to noise or aircraft noise exposure.	Yes	Background/Informative only	Yes	SID and SFI could provide additional useful information on quality of sleep. May be particularly important since many of the non-auditory health effects are linked to decreases in sleep quality. Original source(s) of blood pressure increase may be applicable to include in analysis literature review text. Reference does not conflict with sleep analysis methodology. This reference was not published in a peer-reviewed journal, so it does not meet the criteria for inclusion.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Talbott EO, Gibson LB, Burks A, Engberg R, McHugh KP. Evidence for a dose-response relationship between occupational noise and blood pressure. <i>Archives of environmental health.</i> 1999;54(2):71-8.	Dahlgren Report	No	Yes	<= 83, >= 89 dB	Yes	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tanyel M, Lee KY, Chey WY, Chitrapu PR. Multistage enhancement of surface recordings of canine gastric electrical signals. <i>Ann Biomed Eng.</i> 1993;21(4):337-50.	Dahlgren Report	No	No	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Taylor J. Noise: a new cardiovascular risk factor. <i>Eur Heart J.</i> 2014;35(13):821-2.	Dahlgren Report							No	News article about politics of airport expansion; appears to use info from Munzel, 2014	Reviewed and not added to the analysis in the Final Environmental Impact Statement



Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
Tetreault I-F, Perron S, Smargiassi A. Cardiovascular health, traffic-related air pollution and noise: are associations mutually confounded? A systematic review. <i>Int J Public Health</i> . 2013;58(5):649-666.	Washington Department of Health					No	Review article of health effects that may be compounded by pollution. While little compounding was found, the exposure assessment limited the studies.	No	This reference would not add significant value to the analysis	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tetreault L-F, Plante C, Perron S, Goudreau S, King N, Smargiassi A. Risk assessment of aircraft noise on sleep in Montreal. <i>Can J public health Rev Can Sante Publique</i> . 2012	Washington Department of Health					No	Predictive study that did not offer any validation.	No	Not inconsistent with sleep disturbance analysis, and this reference wouldn't add any additional value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tiesler CM, Birk M, Thiering E, Kohlböck G, Koletzko S, Bauer C-P, et al. Exposure to road traffic noise and children's behavioural problems and sleep disturbance: Results from the GINIplus and LISAPlus studies. <i>Environmental research</i> . 2013;123:1-8.	Dahlgren Report	No	Yes	5-11.2 dBA	Yes	No	Road traffic noise at home may be related to increased hyperactivity and more emotional symptoms in children	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tomei F TEPBBTPAP. Study of some cardiovascular parameters after chronic exposure to noise. <i>International Journal of Cardiology</i> . 1991;33:393-400.	Dahlgren Report	No	Yes	N/A	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tomei F, De Sio S, Tomao E, Anzelmo V, Baccolo TP, Ciarrocca M, et al. Occupational exposure to noise and hypertension in pilots. <i>Int J Environ Health Res</i> . 2005;15(2):99-106.	Dahlgren Report	Yes	Yes	60-115 dB		No		No	Compared pilots of C130s to pilots of F104s. Are there other differences between the two work environments beyond noise level (stress, g-loads, etc.) that the study was unable to account for? Better studies of assessing aircraft overflight noise and hypertension exist in the analysis already.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Tomei F, Tomao E, Papaleo B, Baccolo TP, Alfi P. Study of some cardiovascular parameters after chronic exposure to noise. <i>Int J Cardiol</i> . 1991;33(3):393-9.	Dahlgren Report	No	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Trimmel M, Atzlsdorfer J, Tupy N, Trimmel K. Effects of low intensity noise from aircraft or from neighbourhood on cognitive learning and electrophysiological stress responses. <i>Int J Hyg Environ Health</i> . 2012;215(6):547-54.	Dahlgren Report	Yes	Yes	45 dBA peak, once per minute	Unknown	Yes	Sample size was very small.	Yes	Did simulate aircraft overflight events once per minute at 48 dBA--a rate much more frequent than NASWI but still adds to cognitive effects discussion	Reviewed and added to the analysis in the Final Environmental Impact Statement
Turnovska T, Staykova J, Petkov T. Health assessment of populations living close to the airport of Bourgas, Bulgaria. <i>Arhiv za Higijenu Rada I Toksikologiju/Archives of Industrial Hygiene and Toxicology</i> . 2004;55(1):5-10.	Dahlgren Report	Yes	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Valenti VE, Guida HL, Frizzo AC, Cardoso AC, Vanderlei LC, Abreu LC. Auditory stimulation and cardiac autonomic regulation. <i>Clinics (Sao Paulo)</i> . 2012;67(8):955-8.	Dahlgren Report	No	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
van Kamp I, Davies H. Noise and health in vulnerable groups: a review. <i>Noise Health</i> . 2013;15(64):153-159. doi:10.4103/1463-1741.112361.	Washington Department of Health					No	Summary article of studies already published.	No	Reference would not provide significant value to analysis	Reviewed and added to the analysis in the Final Environmental Impact Statement
Van Kempen E, Babisch W. The quantitative relationship between road traffic noise and hypertension: a meta-analysis. <i>Journal of hypertension</i> . 2012;30(6):1075-86.	Dahlgren Report	No	Yes	45-75 dB	Yes	No		No	Road traffic noise	Reviewed and not added to the analysis in the Final Environmental Impact Statement
van Kempen Emm KHBHCACBSBAMdHAEM. The association between noise exposure and blood pressure and ischemic heart disease: a meta-analysis. <i>Environ Health Perspectives</i> . 2002;110(3):307-17.	Dahlgren Report	No	Yes	50-116 dB	No	No		No		Reviewed and added to the analysis in the Final Environmental Impact Statement
Vera MN, Vila J, Godoy JF. Cardiovascular effects of traffic noise: the role of negative self-statements. <i>Psychol Med</i> . 1994;24(4):817-27.	Dahlgren Report	No	Yes	N/A	N/A	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Vienneau D, Perez L, Schindler C, Lieb C, Sommer H, Probst-Hensch N, et al. Years of life lost and morbidity cases attributable to transportation noise and air pollution: A comparative health risk assessment for Switzerland in 2010. <i>Int J Hyg Environ Health</i> . 2015;218(6):514-21.	Dahlgren Report	No	Yes	48 dB	No	No		No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
Vienneau D, Perez L, Schindler C, Probst-Hensch N, Rössli M, editors. The relationship between traffic noise exposure and ischemic heart disease: a meta-analysis'. 42nd International Congress and Exposition on Noise Control Engineering; 2013.	Dahlgren Report	No	Yes	risk estimates reported per 10 dB increase	Yes	Already in analysis		Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
Vienneau D, Schindler C, Perez L, Probst-Hensch N, Roosli M. The relationship between transportation noise exposure and ischemic heart disease: a meta-analysis. <i>Environ Res</i> . 2015	Washington Department of Health	No; meta-analysis	Yes	NA	Unknown	No	Meta-analysis	Yes	With a fairly weak correlation between IHD and noise exposure, it is unclear what value this reference would add to the analysis other than to describe the current state of scientific research on the topic, which may be of some value.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Westman Jc WJR. Noise and stress: A comprehensive approach. <i>Environmental health perspectives</i> . 1981;41:291-309.	Dahlgren Report	No	No	N/A	N/A	No	Comprehensive approach to noise and stress	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement
WHO (2010). <i>Burden of Disease from Environmental Noise: Quantification of Healthy Life Years Lost in Europe</i> . The World Health Organization (www.euro.who.int); at www.euro.who.int/_data/assets/pdf_file/0008/136466/e94888.pdf.	Dahlgren Report/ Washington Department of Health/USEPA Reg 10	It's mentioned	This is not a study; it is more like an evidence-based informational article on health effects due to environmental noise and how to quantify these effects	This is not a study	This is not a study	Already in analysis	Already in noise study but cited as the more recent:	Already in analysis		Previously included in analysis and Draft Environmental Impact Statement
							WHO. (2011). "Burden of Disease from Environmental Noise," World Health Organization			

Article	Source	Is the exposure related to jet noise or airports?	Is the outcome due to exposure to noise?	What are the average/range of noise levels ?	Are the risk estimates precise and significant?	Medical expert: should this paper be considered for the analysis?	Medical expert notes	Noise expert: should this paper be considered for the analysis?	Noise expert notes	Final resolution and notes
World Health Organization. Burden of disease from environmental noise-Quantification of healthy life years lost in Europe. <i>WHO Reg Off Eur Bonn</i> . 2011.	Washington Department of Health	It's mentioned	This is not a study; it is more like an evidence-based informational article on health effects of environmental noise and how to quantify these effects	This is not a study	This is not a study	Already in analysis		Already in analysis	This report focused on the calculation of disability-adjusted life years (DALYs) due to noise exposure, which is a methodology not currently used for noise impact analysis under NEPA.	Previously included in analysis and Draft Environmental Impact Statement
Wright B, Peters E, Ettinger U, Kuipers E, Kumari V. Understanding noise stress-induced cognitive impairment in healthy adults and its implications for schizophrenia. <i>Noise Health</i> . 2014;16(70):166- 176. doi:10.4103/1463-1741.134917.	Washington Department of Health					No	Summary article that does not represent original analysis.	No	This reference serves primarily to guide future research and would not add value to the analysis of potential for impacts due to noise.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Wu Tn KYCCPY. Study of noise exposure and high blood pressure in shipyard workers. <i>American journal of industrial medicine</i> . 1987;12:431-8. 46 of 55	Dahlgren Report	No	Yes	>85 dB	Yes	No		No	Assessed continuous sound exposure	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Wunderli JM, Pieren R, Habermacher M, Vienneau D, Cajoche C, Probst-Hensch N, et al. Intermittency ratio: A metric reflecting short-term temporal variations of transportation noise exposure. <i>Journal of exposure science &amp; environmental epidemiology</i> . 2016;26(6):575-85.	Dahlgren Report	Included road, railway, and aircraft traffic	Yes	30-70 dBA	No	No	In the presence of elevated background noise (road traffic), aircraft flyover events can be masked, resulting in a reduction of intermittency ratio.	No	The study reviews a proposed metric (Intermittency Ratio) that is defined as the ratio of the event-based sound energy to the overall sound energy. Insufficient evidence at this time to utilize IR for impact analysis in NEPA.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
YAMANAKA K W-N, f. KOBAYASHI, S. KANADA, M. TANAHASHI, T. MURAMATSU AND S. YAMADA. CRITERIA FOR ACCEPTABLE LEVELS OF THE SHINKANSEN SUPER EXPRESS TRAIN NOISE AND VIBRATION IN RESIDENTIAL AREAS. <i>Journal of Sotnd and Vibration</i> . 1982;84(4):573-91.	Dahlgren Report	No	Yes, but ecologic	Unknown	NA	No	Train noise was correlated to health conditions.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Zaharna M, Guillemainault C. Sleep, noise and health: review. <i>Noise Health</i> . 2010	Washington Department of Health						Medical article on the impact of noise on sleep and the health impact of less sleep.	Yes	The analysis focuses on direct effects of noise (sleep disturbance, speech interference, etc.), while this reference discusses secondary potential effect of sleep disturbance. This information could potentially be added to the analysis discussion, but additional review of the sources cited would be required.	Reviewed and added to the analysis in the Final Environmental Impact Statement
Zaporozhets O, Tokarev V, Attenborough K. Aircraft Noise: Assessment, Prediction and Control. CRC Press; 2011	Washington Department of Health							No	The types of noise controls addressed, for the most part, have either been done or are not practical at reducing noise from military overflights. This reference would not add significant value to the analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Zhang Y, Beeson S, Zhu L, Martin JW. Biomonitoring of perfluoroalkyl acids in human urine and estimates of biological half-life. <i>Environmental science &amp; technology</i> . 2013;47(18):10619-27.	Dahlgren Report	No	No	NA	Unknown	No	Article is related to an ingredient in fire-fighting foam and not noise exposure.			Reviewed and not added to the analysis in the Final Environmental Impact Statement
Zhao Y, Zhang S, Selvin S, Spear RC. A dose-response relationship for occupational noise-induced hypertension. <i>Schrifttenr Ver Wasser Boden Lufthyg</i> . 1993;88:189-207.	Dahlgren Report	No	No	unknown	no	no				Reviewed and not added to the analysis in the Final Environmental Impact Statement
Zhao YM, Zhang SZ, Selvin S, Spear RC. A dose response relation for noise induced hypertension. <i>Br J Ind Med</i> . 1991;48(3):179-84.	Dahlgren Report	No	Yes	75-104 dB	No	No		No	Studied industrial noise comprised of continuous SPLs, which are readily applied to intermittent aircraft noise. More applicable studies already included in analysis.	Reviewed and not added to the analysis in the Final Environmental Impact Statement
Zijlema WL, Morley DW, Stolk RP, Rosmalen JG. Noise and somatic symptoms: A role for personality traits? <i>Int J Hyg Environ Health</i> . 2015;218(6):543-9.	Dahlgren Report	No	Yes	N/A	N/A	No	Personality factors, hostility, and vulnerability to stress did not modify the relationship between road traffic noise exposure and somatic symptom reporting	No		Reviewed and not added to the analysis in the Final Environmental Impact Statement