
Buffalo Niagara International Airport
FAR Part 150 Noise Compatibility Program
Volume II – Noise Compatibility Study

November 2004

Niagara Frontier Transportation Authority

PB Aviation, A division of
Parsons Brinckerhoff Quade & Douglas, Inc.
312 Elm Street, Suite 2500
Cincinnati, OH 45202
(513) 639-2100

Statement of Certification and Public Notification

In accordance with Federal Aviation Regulations Part 150, these maps and accompanying documentation are submitted as the Existing and Future Baseline Noise Exposure Maps for Buffalo Niagara International Airport. To the best of my knowledge and belief, these maps were prepared with the best available information and on the basis of reasonable assumptions, are hereby certified as true, complete, and representative of future aircraft noise levels.

I also hereby certify that interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the Noise Compatibility Study and the accompanying description of aircraft operations. A copy of all written comments received during development of the maps is included in this document.

Signed

Date

TABLE OF CONTENTS

	Page Number
1.0 Introduction.....	1-1
1.1 NCP Elements.....	1-1
1.2 Consultation and Public Involvement.....	1-2
1.3 Study Documentation.....	1-4
2.0 Recommended Operational Strategies.....	2-1
2.1 Review of Future (2008) Baseline Noise Contour.....	2-1
2.2 Review of Noise Control Strategies.....	2-3
2.2.1 Airfield Improvements.....	2-3
2.2.2 Preferential Runway Use	2-5
2.2.3 Preferential Departure Corridors.....	2-7
2.2.4 Arrival Procedures	2-10
2.2.5 Modified Departure Procedures.....	2-11
2.2.6 Displaced Landing Threshold	2-13
2.2.7 Ground Noise	2-16
2.2.8 Quotas and Operating Restrictions	2-19
2.3 Identification of a Noise Control Alternative	2-20
2.4 Evaluation of the Noise Control Alternative	2-24
2.4.1 Evaluation Criteria.....	2-24
2.4.2 Assessment of Preferential Runway Use	2-26
2.4.3 Assessment of Noise Abatement Departure Corridors	2-27
2.4.4 Assessment of Arrival Procedures	2-32
2.4.5 Assessment of Quiet Time	2-33
2.4.6 Assessment of Operating Restrictions	2-33
2.5 Recommended Operational Measures	2-34
2.5.1 General.....	2-34
2.5.2 Preferential Runway Use	2-35
2.5.3 Preferential Departure Corridors.....	2-35
2.5.4 Arrival Procedures	2-37
2.5.5 Engine Maintenance Run-ups.....	2-37
2.5.6 Ground Movements	2-38
2.5.7 Recommended Future (2008) Noise Exposure Map (NEM)	2-38
3.0 Recommended Remedial Strategies	3-1
3.1 Review of Potential Remedial Strategies.....	3-1
3.1.1 Land Acquisition.....	3-2
3.1.2 Sound Insulation	3-3
3.1.3 Purchase Assurance	3-9
3.1.4 Sales Assistance.....	3-10
3.1.5 Avigation Easement Purchase.....	3-11
3.2 Recommended Remedial Measures	3-12
3.2.1 Land Acquisition Program.....	3-12
3.2.2 Sound Insulation Program.....	3-14
3.2.3 Avigation Easement Purchase.....	3-15

3.3	Funding Sources and Availability.....	3-16
3.3.1	FAA Airport Improvement Program Grants.....	3-17
3.3.2	PFC Funding.....	3-19
3.3.3	State Funding.....	3-22
3.3.4	Revenue Bonds.....	3-22
3.3.5	Other.....	3-23
3.3.6	Potential Funding for Noise Compatibility Program.....	3-23
4.0	Land Use Management Strategies.....	4-1
4.1	Review of Land Use Management Strategies.....	4-2
4.1.1	Regulatory Strategies.....	4-2
4.1.2	Policy Measures.....	4-11
4.1.3	Market Intervention Measures.....	4-13
4.2	Evaluation of Land Use Management Strategies.....	4-16
4.2.1	Cost to Implement Measure.....	4-16
4.2.2	Ease of Implementation.....	4-17
4.2.3	Clear and Legal Authority.....	4-18
4.2.4	Political Acceptability.....	4-18
4.3	Recommended Land Use Management Strategies.....	4-18
5.0	Implementation Plan.....	5-1
5.1	Implementation of Operational Strategy Recommendations.....	5-1
5.1.1	Designate Quiet Time at 10:00 p.m. to 6:00 a.m.....	5-5
5.1.2	Preferential Runway Use.....	5-5
5.1.3	Preferential Departure Corridors.....	5-6
5.1.4	Preferential Arrival Corridors.....	5-8
5.1.5	Engine Maintenance Run-Ups.....	5-9
5.1.6	Aircraft Taxiing in Cargo and General Aviation Areas.....	5-10
5.2	Implementation of Remedial Recommendations.....	5-10
5.2.1	Acquire Residential Uses in DNL 75 or Higher.....	5-11
5.2.2	Develop Sound Insulation Guidelines and Program.....	5-11
5.2.3	Sound Insulation for Noise Sensitive Public Facilities.....	5-11
5.2.4	Sound Insulation for Residential Uses.....	5-12
5.2.5	Avigation Easements.....	5-12
5.3	Implementation of Land Use Management Recommendations.....	5-12
5.3.1	Rezoning for Compatible Land Use.....	5-13
5.3.2	Establish Noise Overlay Zoning.....	5-13
5.3.3	Comprehensive Planning.....	5-14
5.3.4	Discretionary Project Review.....	5-14
5.3.5	Public Information.....	5-14
5.4	Program Cost.....	5-14
5.5	Phasing.....	5-15
5.6	FAR Part 150 Study Update.....	5-17
6.0	Public Hearing.....	6-1

List of Tables

	Page Number
2.3-1 Noise Control Alternatives for 2008.....	2-21
2.3-2 Area Within the Future Baseline and Alternative Noise Contours.....	2-22
2.3-3 Future Baseline and Alternative Noise Impact	2-22
2.4-1 Estimated Future Baseline and Alternative Noise Levels at Selected Grid Point Locations.....	2-30
3.2-1 Sound Insulation Program Estimated Cost	3-15
3.3-1 Funding Sources for the BNIA's Current CP	3-17
3.3-2 Federal and Local Participation in AIP Grants	3-18
3.3-3 Approved NFTA PFC Applications.....	3-21
4.1-1 Compatible Use Chart-Airport Noise Overlay Zoning Districts	4-8
4.2-1 Evaluation of Land Use Management Strategies.....	4-17
5.1-1 Implementation Plan Summary.....	5-2
5.4-1 Program Costs.....	5-15

List of Exhibits

	Page Number
2.1-1 Future Baseline Noise Contours in 2008	2-4
2.2-1 Preferred Jet and Prop Departure Corridors.....	2-8
2.2-2 Noise Abatement Departure Procedures.....	2-12
2.2-3 Comparative Benefit of NADP for B737-300 Aircraft.....	2-14
2.2-4 Comparative Benefit of NADP for A320 Aircraft.....	2-15
2.2-5 Designated Maintenance Run-Up Locations	2-18
2.3.1 Future Alternative Noise Contours in 2008	2-23
2.4-1 Grid Point Locations	2-29
3.1-1 Single and Multi-Family Uses Within the Recommended Future (2008) NEM	3-4
3.1-2 Median Year Homes Built by Census Block Group.....	3-6
3.1-3 Fully Assessed Property Value	3-7
3.1-4 Community Facilities Within the Recommended Future (2008) NEM.....	3-8
3.2-1 Recommended Acquisition.....	3-13
4.1-1 Potential Conventional Zoning Changes	4-4
4.1-2 Potential Noise Overlay Zoning District.....	4-7
5.5-1 Proposed Program Phasing	5-16