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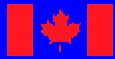
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AIRCRAFT NOISE AND LAND USE MANAGEMENT IN CANADA

ICAO - ACI/LAC SEMINAR ON BIRD HAZARD, ENVIRONMENTAL PROTECTION AND LAND USE

Miami, Florida
April 26, 2001

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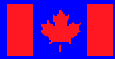


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AVIATION IN CANADA

- **CONTROLLED AT THE FEDERAL LEVEL**
- **AERONAUTICS ACT**
- **MINISTER OF TRANSPORT HAS THE POWER TO REGULATE AERONAUTICS**
- **NOISE EMANATING FROM AIRCRAFT AND AIRPORTS**



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CANADIAN NOISE REGULATIONS

- **THREE PRINCIPLE REGULATIONS**
 - **NOISE OPERATING CRITERIA**
 - **NOISE RESTRICTED RUNWAYS**
 - **TRANSITION TO AN ALL CHAPTER 3 FLEET**
- **PERIPHERAL REGULATIONS**
 - **LOW FLYING**



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NOISE OPERATING CRITERIA

- **EMPOWERS THE PROCEDURES AND RESTRICTION PUBLISHED IN THE FLIGHT PUBLICATIONS.**
- **THESE INCLUDE MEASURES RELATING TO:**
 - **PREFERENTIAL RUNWAYS**
 - **MINIMUM NOISE ROUTES**
 - **HOURS WHEN OPERATIONS ARE PROHIBITED OR RESTRICTED**
 - **ARRIVAL AND DEPARTURES PROCEDURES**



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NOISE OPERATING CRITERIA

- **DURATION OF FLIGHTS**
- **PROHIBITION OR RESTRICTION OF TRAINING FLIGHTS**
- **VFR OR VISUAL APPROACHES**
- **MINIMUM ALTITUDE FOR OPERATIONS IN THE VICINITY OF AIRPORTS**

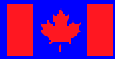


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NOISE RESTRICTED RUNWAYS

- **MANDATES THE REQUIREMENT FOR A NOISE CERTIFICATE**
- **PROHIBITS TAKEOFFS ON SPECIFIC RUNWAYS BY NOISY AIRCRAFT**
- **9 AIRPORTS WITH 27 RUNWAYS SPECIFIED**



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TRANSITION TO AN ALL CHAPTER 3 FLEET

- **CHAPTER 2 PHASE OUT**
- **STARTED IN 1995 - ENDS IN 2002**
- **GREATER THAN 90% CHAPTER 3 NOW**
- **HUSHKITTED AIRCRAFT MAKE UP
APPROXIMATELY 40% OF THE FLEET**
- **CARGO CARRIERS AND SMALL OPERATORS ARE
MAIN USERS OF HUSHKITTED AIRCRAFT**



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NOISE MANAGEMENT IN CANADA

- **NIGHT RESTRICTIONS IN PLACE AT 3 INTERNATIONALS**
- **SEVERAL SMALLER AIRPORTS HAVE SOME FORM OF NIGHT RESTRICTION**
- **NOISE ABATEMENT PROCEDURES IN PLACE AT MOST AIRPORTS THAT NEED THEM**



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ENFORCEMENT OF NOISE MEASURES

- **ESTABLISHMENT OF THE C.A.T.**
- **KNOWLEDGEABLE COURT**
- **FINE LEVELS**
 - **\$25,000 FOR A COMPANY AND \$5,000 FOR INDIVIDUALS**
 - **THESE ARE MAXIMUM LEVELS**
 - **FINES ARE PROGRESSIVE IN NATURE**



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DETECTION OF NOISE VIOLATIONS

- **WITNESS STATEMENTS**
- **NATIONAL RADAR SYSTEM MODIFICATION**
 - **SOFTWARE MODIFIED TO ALLOW FLIGHT TRACKING**
 - **USED AS AN INITIAL DETECTION MECHANISM**
 - **CASES TURNED OVER TO TRANSPORT CANADA FOR INVESTIGATION**
- **RADAR DISPLAY DATA USED FOR PROSECUTION**
- **VIOLATORS NAMES ARE PUBLISHED**



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LAND USE IN CANADA

- **CONTROL AT THE PROVINCIAL LEVEL**
- **AERONAUTICS ACT POWERS**
 - **HEIGHTS ON APPROACH SURFACES**
 - **NEAR NAVIGATIONAL AIDS**
 - **EMERGENCY COMPATIBLE USE PROVISIONS**



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COMPATIBLE LAND USE

- **NOISE EXPOSURE FORECAST SYSTEM (NEF)**
- **LAND USE GUIDANCE**
- **EFFORTS CONCENTRATE ON RESIDENTIAL DEVELOPMENT**
- **RECOMMEND NO BUILD INSIDE THE 30 NEF CONTOUR**



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NOISE EXPOSURE FORECAST SYSTEM

- **BASED ON ICAO RECOMMENDED SYSTEM**
- **RECENTLY VALIDATED BY NATIONAL RESEARCH COUNCIL**
- **COMPARES FAVORABLY TO OTHER SYSTEMS**
- **USES A NIGHT PENALTY AND PEAK DAY FORECAST**



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LAND USE GUIDANCE

- **NEF BASED**
- **ADOPTED IN PROVINCIAL LAND PLANNING LAWS**
- **TOWNS AND CITIES USE IT WHERE NOT PROVINCIALY ADOPTED**
- **CONTAINS COMPATIBLE USE TABLES**

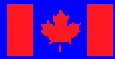


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GUIDANCE RECOMMENDATIONS

- **NO NEW HOUSING INSIDE 30 NEF**
- **IF CITY OR TOWN PERMITS THEN SATISFY ITSELF THAT DEVELOPMENT IS COMPATIBLE**
- **IF REQUIRED, THEN INSULATE**
- **NEW GUIDANCE ON ACOUSTIC INSULATION BEING PREPARED**



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