Agenda

• Noise Abatement Measures
• Land Use Mitigation Measures
  • Corrective
  • Preventative
• Program Management Measures
• NCP Recommendations & Costs
• Next Steps
• Neighborhood Environmental Survey (NES)
Polling Walkthrough

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Enter Code: 11 44 34 3
1. Noise Abatement Alternatives
Purpose: To abate noise levels in surrounding communities

2. Land Use Mitigation Alternatives
Purpose: To mitigate noise levels in surrounding communities

3. Program Management Alternatives
Purpose: To provide administrative and management actions to allow the airport to maintain land use compatibility in surrounding communities
• No recommended Noise Abatement Alternatives
  • Extension of Runway 03/21 was analyzed to determine noise reduction benefits
  • Abatement measure would not significantly reduce the number of impacts, while impacting properties that are not currently impacted south and north of the 03/21 runway ends.
Land Use Mitigation Alternatives (Corrective)

- **Measure M-A**: Sound insulate 64 eligible residential units within the 65+ DNL (NMPA #1) and (NMPA #2).

- **Measure M-B**: Acquire 7 single-family homes within 70+ DNL (NMPA#1).

- **Measure M-C**: Acquire 103 mobile homes within NMPA #1.

- **Measure M-D**: Offer avigation easement to owner-occupied single-family homes within NMPA #1 and NMPA #2 if acquisition and/or sound insulation is declined.

- **Measure M-E**: Offer avigation easement to 1 owner-occupied mobile home within NMPA #1 if acquisition is declined. No easements will be offered to the 102 mobile homes located in the Birchwood Mobile Estates.

- **Measure M-F**: Offer avigation easement to 2 owner-occupied mobile homes within NMPA #2.
Land Use Mitigation - Recommendations

- Noise Mitigation Program Areas (NMPA)
  - **NMPA #1** – Area inside 65+ DNL Noise Contour
    - NMPA #1 extended to include entire Birchwood Mobile Estate property
  - **NMPA #2** – Area outside of the 65+ DNL Contour w/ potential FAA funding for mitigation through block rounding
  - Not all properties will meet eligibility requirements during testing phases of the Sound Insulation Program
## Land Use Mitigation - Recommendations

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>NMPA1</th>
<th>NMPA2</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL HOUSING UNITS</td>
<td>POPULATION</td>
<td>TOTAL HOUSING UNITS</td>
</tr>
<tr>
<td>Single-Family Residential</td>
<td>45</td>
<td>93</td>
<td>17</td>
</tr>
<tr>
<td>Multi-Family Residential</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>103</td>
<td>193</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>290</td>
<td>19</td>
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</tbody>
</table>
• Proposed NMPA #1
  • 45 Single-Family Properties
    • Sound insulation or avigation easement recommended
    • 8 properties with build date after October 1998. May not be eligible for sound insulation, avigation easement recommended.
    • 7 properties within 70 DNL recommended for acquisition. May choose sound insulation/avigation easement instead.
  • 1 Multi-Family Property (2 units)
    • Build date after October 1998.
    • Avigation easement recommended.
  • 103 Mobile Homes
    • 102 Mobile Homes located in Birchwood Mobile Estates. Acquisition of entire parcel recommended.
    • 1 Mobile Home located to the east of Lavaque Bypass Rd. Acquisition or avigation easement recommended.
• Proposed NMPA #2.a
  • 15 Single-Family Properties
    • 8 properties with build dates after October 1998. May not be eligible for sound insulation, avigation easement recommended.
  • 2 Mobile Homes
    • Avigation easement recommended.
Land Use Mitigation - Recommendations

- Proposed NMPA #2.b
  - 2 Single-Family Home
  - Sound insulation or avigation easement recommended.
# Land Use Mitigation - Recommendations

<table>
<thead>
<tr>
<th>MEASURE</th>
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<tbody>
<tr>
<td><strong>CORRECTIVE LAND USE MITIGATION MEASURES</strong></td>
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<td></td>
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<tr>
<td><strong>(formerly 1997 NCP Measure M-1)</strong></td>
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<tr>
<td><strong>Measure M-A:</strong></td>
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<tr>
<td>Offer Residential Sound Insulation Program to Single- and Multi-Family Homes (47 units) within the 65+ DNL Noise Contour</td>
<td>DAA</td>
<td>It is estimated 47 homes are located within the 65+ DNL noise contour plus an additional 17 homes in the block rounding area outside the 65 DNL. If 100% of all homes participated the cost to insulate all homes is estimated at $4,000,000 which includes all hard costs (construction) and soft costs (administrative) Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>None</td>
<td>None</td>
<td>This is a measure that was never implemented from the 1997 NCP and should be continued with modification to include all properties identified within the 65+ DNL and the properties identified in the block rounding area outside the 65 DNL.</td>
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<td><strong>Measure M-B:</strong></td>
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<tr>
<td>Offer Land Acquisition Program to Single-Family Homes (7 homes) within the 70+ DNL Noise Contour</td>
<td>DAA</td>
<td>It is estimated at $2,450,000 if 100% of homes participated. Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>Loss of tax base</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td><strong>Measure M-C:</strong></td>
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<tr>
<td>Offer Land Acquisition Program to Mobile Homes within NMPA #1 (103 Mobile Homes)</td>
<td>DAA</td>
<td>It is estimated at $11,568,000 depending upon the level of participation. It includes the cost of the 102 mobile homes and loss of income for owner of the mobile home park (cost of mobile homes and mobile home park), and 1 mobile home property located to the east of Lavaque Bypass Road within the 65 DNL contour (cost of single mobile home and property). Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>Loss of tax base</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
</tbody>
</table>
### Land Use Mitigation - Recommendations

<table>
<thead>
<tr>
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<tr>
<td>Measure M-D: Offer avigation easement to owner occupied single-family homes within NMPA #1 and NMPA #2 if acquisition and/or sound insulation is declined.</td>
<td>DAA</td>
<td>The estimated cost of each avigation easement is up to $3,000 per home. Since the final cost of the measure is dependent on the number of property owners that decline acquisition and/or sound insulation an estimated overall total was not calculated. Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>None</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td>Measure M-E: Offer avigation easement to 1 owner occupied mobile home within NMPA #1 if acquisition is declined.</td>
<td>DAA</td>
<td>The estimated cost of each avigation easement is up to $3,000 per home. Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>None</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td>Measure M-F: Offer avigation easement to 2 owner occupied mobile homes within NMPA #2.</td>
<td>DAA</td>
<td>The estimated cost of each avigation easement is up to $6,000 ($3,000 max per mobile home). Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>None</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
</tbody>
</table>
Please provide level of support on each item

- **Measure M-A**: Residential sound insulation program (up to 64 residential units)
- **Measure M-B**: Residential acquisition program (up to 7 single-family units)
- **Measure M-C**: Mobile home acquisition program
- **Measure M-D**: Avigation easement of owner occupied residential units (# of units dependent on property owners participation in sound insulation and/or acquisition programs)
- **Measure M-E**: Avigation easement for owner occupied mobile home within NMPA #1 (up to 1 mobile home unit - dependent on owner participation in acquisition program)
- **Measure M-F**: Avigation easement for owner occupied mobile homes within NMPA #2 (up to 2 owner-occupied mobile homes)
Land Use Mitigation Alternatives (Preventative)

• **Measure M-G:** Review & Adopt Boundaries of ALUMD  
  • The ALUMD would encompass the area to implement Measures M-H, M-I and M-J.

• **Measure M-H:** Updated Subdivision Regulations  
  • Review of plats and site plans by public entities  
  • Increased open space  
  • Reduced development density  
  • Planned infrastructure

• **Measure M-I:** Improved Building Codes  
  • Update existing building codes to meet current sound insulation guidelines  
  • Reduces interior noise levels  
  • For new development or major remodeling

• **Measure M-J:** Voluntary Fair Disclosure Program  
  • Property sales subjected to notification  
  • Probability of safety or aircraft noise impacts  
  • Formal measure would require recording of a notice either on plat of new subdivisions or notice at time of sale  
  • Informal measure could be mailings of disclosure notices within community
Land Use Mitigation - Recommendations

- Proposed Airport Land Use Management District (ALUMD)
  - West Boundary – Vaux Rd. & Ext.
  - South Boundary – Arrowhead Rd.
  - East Boundary – Drake Rd. & Ext.
  - North Boundary – Nelson Rd. & Ext.
### Land Use Mitigation - Recommendations

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<tr>
<td><strong>PREVENTATIVE LAND USE MITIGATION MEASURES</strong></td>
<td></td>
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<tr>
<td><strong>(formerly 1997 NCP Measure M-1) Measure M-G:</strong> Develop an Airport Land Use Management District (ALUMD)</td>
<td>DAA, Cities of Duluth, Hermantown, Rice Lake, Saint Louis County</td>
<td>Minimal costs of up to $50,000</td>
<td>None</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td><strong>Measure M-H:</strong> Adopt Updated Subdivision Regulations</td>
<td>DAA, Cities of Duluth, Hermantown, Rice Lake, Saint Louis County</td>
<td>Minimal costs of up to $50,000</td>
<td>Loss of tax base</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td><strong>Measure M-I:</strong> Adopt Improved Building Codes</td>
<td>DAA, Cities of Duluth, Hermantown, Rice Lake, Saint Louis County</td>
<td>Minimal costs of up to $50,000</td>
<td>Minimal administrative costs</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
<tr>
<td><strong>Measure M-J:</strong> Develop a Voluntary Fair Disclosure Program</td>
<td>Duluth Board of Realtors, Lake Superior Area Realtors, Cities of Duluth, Hermantown, Rice Lake, Saint Louis County</td>
<td>Minimal costs of up to $50,000</td>
<td>Minimal administrative costs</td>
<td>None</td>
<td>This is a new measure</td>
</tr>
</tbody>
</table>
Please provide level of support on each item

• **Measure M-G**: Airport Land Use Management District (ALUMD)
• **Measure M-H**: Updated Subdivision Regulations
• **Measure M-I**: Improved Building Codes
• **Measure M-J**: Voluntary Fair Disclosure Program
<table>
<thead>
<tr>
<th>TYPE OF MEASURE</th>
<th>DIRECT COST (TOTAL)</th>
<th>DIRECT COST TO FAA (80% SHARE)</th>
<th>DIRECT COST TO AIRPORT (20% SHARE)</th>
<th>DIRECT COST TO LOCAL GOVERNMENT</th>
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<tbody>
<tr>
<td><strong>MITIGATION MEASURES (CORRECTIVE)</strong></td>
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</tr>
<tr>
<td>Sound insulate 64 eligible single &amp; multi-family housing units</td>
<td>$4,000,000</td>
<td>$3,200,000</td>
<td>$800,000</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Acquire 7 eligible single-family housing units</td>
<td>$2,450,000</td>
<td>$1,960,000</td>
<td>$490,000</td>
<td>Potential loss of tax base</td>
<td>None</td>
</tr>
<tr>
<td>Acquire 102 mobile homes located in Birchwood Mobile Estates</td>
<td>$8,017,200 (mobile homes)</td>
<td>$6,413,760 (mobile home property)</td>
<td>$1,603,440 (mobile homes)</td>
<td>Potential loss of tax base</td>
<td>None</td>
</tr>
<tr>
<td>Acquire 1 mobile home located east of Lavaque Bypass Road within NMPA #1</td>
<td>$130,800</td>
<td>$104,640</td>
<td>$26,160</td>
<td>Potential loss of tax base</td>
<td>None</td>
</tr>
<tr>
<td>Offer avigation easement to owner occupied single-family homes and 3 mobile homes if acquisition and/or sound insulation is declined</td>
<td>$3,000 per property</td>
<td>$2,400</td>
<td>$600</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>MITIGATION MEASURES (PREVENTATIVE)</strong></td>
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<tr>
<td>Develop an Airport Land Use Management District (ALUMD)</td>
<td>$50,000</td>
<td>$40,000</td>
<td>$10,000</td>
<td>Minimal</td>
<td>None</td>
</tr>
<tr>
<td>Adopt Updated Subdivision Regulations</td>
<td>$50,000</td>
<td>$40,000</td>
<td>$10,000</td>
<td>Minimal</td>
<td>None</td>
</tr>
<tr>
<td>Adopt Improved Building Codes</td>
<td>$50,000</td>
<td>$40,000</td>
<td>$10,000</td>
<td>Minimal</td>
<td>None</td>
</tr>
<tr>
<td>Develop a Voluntary Fair Disclosure Program</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
<td>None</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>$17,730,500 plus administrative costs (not including cost of easements)</td>
<td>$14,184,400 plus administrative costs (not including cost of easements)</td>
<td>$3,546,100 plus administrative costs (not including cost of easements)</td>
<td>Minimal administrative costs; plus loss of tax base</td>
<td>None</td>
</tr>
</tbody>
</table>
• **148<sup>th</sup> Fighter Wing & Noise Mitigation**
  - Advancements in technology have enabled a smaller noise footprint for the current F-16 Block 50 aircraft operated by the 148<sup>th</sup> at DLH, as compared to legacy aircraft operated by the 148<sup>th</sup> at DLH.
  - F-16 traffic patterns continue to have a predominant effect on the size and shape of the noise exposure contours at DLH.
  - Deployment of the F-35 Lightning has the potential to increase the noise footprint of the 148<sup>th</sup> aircraft operations.

• **DAA is actively seeking funding support from the 148<sup>th</sup> Fighter Wing**
  - Assistance in funding 20% local share if NCP measures are approved by FAA and awarded AIP funding at a later date.
  - 148<sup>th</sup> funding assistance is vital to fully implementing land use mitigation measures.
  - Assistance will likely have benefits in the form of increased public support of the 148<sup>th</sup> and the DAA.
Program Management Alternatives - Recommendations

• **Measure P-A**: Continued Logging of Noise Complaints
  • *Develop a more formal procedure for logging noise complaints by both airport and Minnesota Air National Guard (MnANG) staff to identify any potential noise issues*

• **Measure P-B**: Initiate Community Roundtable or Noise Abatement Committee
  • *Brings together all interested parties, on a regular basis, to discuss noise issues*

• **Measure P-C**: Perform Regular Updates to NEM and Review of NCP
  • *Ensures NEM/NCP remains up to date and adapts to changing conditions*
<table>
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<tr>
<td><strong>PROGRAM MANAGEMENT MEASURES</strong></td>
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<tr>
<td><strong>(formerly 1997 NCP Measure A-1)</strong>&lt;br&gt;Measure P-A: Continue Logging of Noise Complaints</td>
<td>DAA and MnANG</td>
<td>Minimal administrative costs to answer telephones and to log noise complaints</td>
<td>None</td>
<td>None</td>
<td>This is a continuation of the existing process with a slight modification to be undertaken by the DAA and MnANG</td>
</tr>
<tr>
<td><strong>(formerly 1997 NCP Measure A-2)</strong>&lt;br&gt;Measure P-B: Initiate Community Roundtable or Noise Abatement Committee</td>
<td>DAA</td>
<td>Minimal administrative costs to participate on a regular basis</td>
<td>Minimal administrative costs to participate on a regular basis</td>
<td>None</td>
<td>This is considered a new measure since it was never implemented in the previous NCP.</td>
</tr>
<tr>
<td><strong>Measure P-C:</strong>&lt;br&gt;Perform regular updates to the NEMs and review of NCP</td>
<td>DAA</td>
<td>NEM Update: $350,000 to $400,000&lt;br&gt;NEM/NCP Update: $650,000 to $750,000&lt;br&gt;Federal AIP funding likely available (80% FAA share/20% local airport share)</td>
<td>Minimal administrative costs to participate in study</td>
<td>None</td>
<td>This is a new measure</td>
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## Program Management Analysis - Costs

<table>
<thead>
<tr>
<th>TYPE OF MEASURE</th>
<th>DIRECT COST (TOTAL)</th>
<th>DIRECT COST TO FAA (80% SHARE)</th>
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<th>DIRECT COST TO LOCAL GOVERNMENT</th>
<th>DIRECT COST TO USERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue Logging of Noise Complaints</td>
<td>Minimal Administrative Costs</td>
<td>None</td>
<td>Minimal Administrative Costs</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Initiate Community Roundtable or Noise Abatement Committee</td>
<td>Minimal Administrative Costs</td>
<td>None</td>
<td>Minimal Administrative Costs</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Perform Regular Updates to the NEMs and Review of NCP</td>
<td>$350,000 to $400,000</td>
<td>$280,000 to $320,000</td>
<td>$70,000 to $80,000</td>
<td>None</td>
<td>None</td>
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<tr>
<td>- Update NEM ONLY Or</td>
<td>$650,000 to $750,000</td>
<td>$520,000 to $600,000</td>
<td>$130,000 to $150,000</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>- Update NEM &amp; NCP</td>
<td>$350,000 to $750,000 plus administrative costs</td>
<td>$280,000 to $600,000 plus administrative costs</td>
<td>$70,000 to $150,000 plus administrative costs</td>
<td>None</td>
<td>None</td>
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</table>

**SUBTOTAL**: $350,000 to $750,000 plus administrative costs

None

None
Committee Polling and Q&A

Please provide level of support on each item

- **Measure P-A**: Continued Logging of Noise Complaints
- **Measure P-B**: Initiate Community Roundtable or Noise Abatement Committee
- **Measure P-C**: Perform Regular Updates to NEM and Review of NCP
Next Steps

• Present Final DAA Recommendations to Public
  • Virtual Public Meeting Scheduled for February 17th from 6:00 p.m. – 8:00 p.m.
  • Registration link located on the project website
    • https://DuluthAirport.com/noise-study/#community-involvement

• Prepare Public Workshop Meeting materials
• Prepare Draft NEM and NCP documentation
Neighborhood Environmental Survey (NES)

**Purpose:** Develop an updated dose response curve for percent of population highly annoyed by aircraft noise (1992 Schultz Curve)

**Findings:** Greater number of people are highly annoyed by aircraft noise as compared to the 1992 Schultz Curve

**Recommendations:** There are no current recommendations for policy changes based on the findings of the NES. Any changes to FAA policy would require substantial time, additional studies and potentially an Act of Congress.

Potential Drivers behind increased annoyance:
- Urbanization
- Increased Telecommuting
- Social media, Internet and global information sources
Survey summary can be found at:
https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/

Public Comments submitted at:
https://www.federalregister.gov/documents/2021/01/13/2021-00564/overview-of-faa-aircraft-noise-policy-and-research-efforts-request-for-input-on-research-activities