

TECHNICAL STUDY WORKPLAN

Toronto Pearson is one of North America's fastest growing global hub airports and a significant contributor to the local and national economies. We also recognize that airports have impacts—such as noise on local communities. While airplane noise can't be eliminated entirely, Toronto Pearson wants to be a good neighbour to the surrounding communities. One way to do this is to lessen the impact of our operations on our neighbours by reducing aircraft noise where possible.

NAV CANADA and the GTAA are studying six ideas we think will have noise benefits for the communities surrounding Toronto Pearson. In July 2015, we started a three-phase noise mitigation consultation program to talk about these ideas with communities across the Greater Toronto Area:

- Phase 1 – Stakeholder Roundtables (Summer 2015)
 - This phase is now completed and a summary of reports and feedback are available on the website
- Phase 2 – Technical Study (Fall/Winter 2015-2016)
- Phase 3 – Public Consultation (2016)

Below is an overview of the Workplan for Phase 2:

Noise Mitigation Idea	Technical Analysis Workplan
1. New approaches for night-time operations	<p>Design new night-time RNAV approaches with transitions. (Note all runways.)</p> <p>Test in flight simulator to determine fly-ability.</p> <p>Identify potential for new flight patterns that could mean new noise impacts on the community.</p> <p>Noise modelling of new approach against base case of existing STAR procedure. This will include determining expected noise levels and traffic frequency.</p> <p>Identify expected noise benefits/impacts.</p> <p>Consultation with air operators to determine RNAV equipage rates for Toronto fleet and impact of prescribing RNAV equipage for night operations.</p> <p>Simulation of new arrival procedure at various traffic levels. Determine potential hours of use based on simulation results.</p>



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Stakeholder Roundtables 2015

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<p>2. New departure procedures for night-time operations</p>	<p>Noise modelling of new departure against base case of existing SID procedure.</p> <p>Modelling of traffic patterns over communities; identify potential for new flight patterns that could mean new noise impacts on the community. This will include determining expected noise levels and traffic frequency.</p> <p>Identify expected noise benefits/impacts.</p> <p>Simulation of new departure procedure at various traffic levels. Determine potential hours of use based on simulation results.</p>
<p>3. Increase downwind arrival speeds</p>	<p>Simulate change in STAR speed at various traffic levels to determine risk of overtake, potential impact on vectoring areas and sequencing capability and traffic flow.</p> <p>Consultation with air operators on likely impact of change of speed on operations given their fleet mix. Test in flight simulator to determine impact of a 40 knot differential between the downwind speed and the final approach portion of the approach.</p> <p>To be determined – is there a way to model noise benefit/impact from a change in speed?</p> <p>Identify expected noise benefits/impacts.</p>
<p>4. Use new technology to reduce the need for low altitude leveling by arriving aircraft</p>	<p>Develop safety case to support regulatory approval of separation standard for RNP parallel operations.</p> <p>Modelling of traffic patterns over communities. Identify potential for new flight patterns that could mean new noise impacts on the community.</p> <p>Identify expected noise benefits/impacts.</p> <p>Note: this is a longer-term initiative.</p>



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<p>5. Establish weekend runway alternation (referred to in the roundtable presentation as “Establish Weekend Preferential Runways”)</p>	<p>Assess noise benefit / impact of runway alternation options.</p> <p>Simulate procedure at various traffic levels. Determine potential hours of use based on simulation results.</p> <p>Design proposed operational options and rotation schedule.</p> <p>Identify expected noise benefits/impacts</p>
<p>6. Night-time preferential runway review</p>	<p>Assess noise impact of night-time flight procedures for all ten runways on communities.</p> <p>Noise modelling of runway combinations against base case of existing preferential runway system.</p> <p>Noise modelling of night-time preferential runway scenarios. This will include determining expected noise levels, traffic frequency and overall traffic levels.</p> <p>NEF modelling to identify any impacts on the noise contours and land use zoning.</p> <p>Assess historical wind conditions to determine likely impacts on adherence of options.</p> <p>Simulate runway combinations to assess safety on operations.</p>

Questions? Need more information?

- Visit our web site:
<http://www.torontopearson.com/en/NoiseMitigationInitiativesEngagementPlan>
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