
This report documents the series of full-scale tests conducted in the NRC 3 m x 6 m Open-Circuit Propulsion and Icing Wind Tunnel using a thin high-performance wing model to determine the flow-off characteristics of anti-icing fluid with and without mixed precipitation conditions with ice pellets.

Since 2009-10, a significant amount of work and analysis has been performed to support the development of the ice pellet allowance times. As the work has been ongoing, the reports were only compiled as “Interim” and therefore never officially published. The purpose of having this summary report with each of the previous interim reports included as volumes is to have an official documentation of the work completed; the individual projects are documented in detail in four separate reports included as Volumes to this report. This also requires a lesser level of effort as compared to a consolidated report; all interim reports have been included as volumes in “as-is” format. In the future, a report consolidating all the ice pellet work from 2005-06 onwards would be beneficial to provide a full-spectrum analysis of the data used to develop the ice pellet guidance material.

The documentation of this project has been divided into five separate volumes: one summary report, and four detailed reports on each of the respective testing years’ activities. The volumes are as follows:

Volume 1: Summary Report
Volume 2: 2009-10 Testing Report
Volume 3: 2010-11 Testing Report
Volume 4: 2011-12 Testing Report
Volume 5: 2012-13 Testing Report

Several research reports for testing of de/anti-icing technologies were produced for previous winters on behalf of Transport Canada. These are available from the Transportation Development Centre (TDC). Several reports were produced as part of this winter’s research program. Their subject matter is outlined in the preface. The work described in this report was, in part, co-sponsored by the Federal Aviation Administration (FAA).