

Background:

INTRODUCTION

The Greater Sudbury Airport (GSA) continues to go through a period of transition that has been spawn by an unprecedented growth rate.

For all intent and purposes, we anticipate that virtually every sector of our business will realize a substantial increase in activity. There is a notable correlation between the increase in passenger travel and the impact of this growth on the various ancillary support services at the Greater Sudbury Airport. As passenger and aircraft statistics increase, we have witnessed a proportionate increase in demands on the restaurant, car rental agencies, the parking lots, security processing, administration offices, air terminal facilities, apron areas, and the volume of meeters/greeters. The list goes on.

Commercial development at the Greater Sudbury Airport has been strong, and to a certain degree has been escalating at a rate that has outpaced scheduled air service growth. Job creation, lease revenue and other non-aeronautical revenues have increased appreciably and in proportion to the increase in activity. Looking out to the next 5 years, we are confident that commercial development will be strong and consistent with our recent experiences.

Building upon our commercial programs has led to our goal to be the “Centre for Excellence for Aviation Innovation”. Innovating new ideas, creative programs and transformational methods are on the radar at the Greater Sudbury Airport. Such innovation is taking place through the provision of more-effective products, processes, services, technologies or business methods.

Essential to successful innovation is building key partnerships with industry and developing market acceptance. The Greater Sudbury Airport is focused on sustainable and economically feasible innovation. These initiatives are still in the early stages but proper allocation and utilization of our resources is paramount to success.

BACKGROUND:

Reflecting back to when the new Board governance model was created (2003), the Board set out with a vision to make the Greater Sudbury Airport a special place of business and a catalyst for economic development.

It took time after the private Board structure was formed to be rewarded with results. To a certain extent the Board was starting from scratch, with no governance structure in place and facing a myriad of daunting challenges related to failing infrastructure, dilapidated equipment, declining passenger travel and insufficient operating surpluses. The challenges seemed insurmountable at times, but a clear vision was mapped for the GSA. The foundation was laid in the early years and slowly over time momentum was gained, exponentially pushing growth to new levels.

The passenger traffic growth at the Greater Sudbury Airport has almost doubled since 2005, with passenger traffic increasing by 94.4%.

Moving forward over the next few years, growth is anticipated to continue at a healthy rate. In order to continue to fulfill our role as a catalyst for economic development, the GSA must ensure its resources are sufficient to meet the demands created.

It is imperative that the GSA has a plan in place to address its work force requirements to satisfy immediate workload pressures, but as well to prepare the GSA for future projected growth. While first priority will be given to compliance of Transport Canada's regulatory requirements. The newest of such regulation being Global Reporting Format (GRF) for Runway Surface Condition Reporting and Canadian Aviation Regulations (Parts I and III - Airport Winter Maintenance). Two other regulations continue to place significant demand on our operation are the AFFS (Airport Fire Fighting Services) and Safety Management System (SMS). Both of these regulations have specific requirements for resource deployment and place particular demands for training and allocation.

Prior to City amalgamation the airport operated with a staff compliment of five (5) AFFS personnel per crew [one (1) Leadhand plus four (4) staff] and two (2) mechanics and a contract electrician service provider. During the amalgamation process, a staffing review was conducted and staff was cut to three (3) AFFS personnel per crew and one (1) mechanic. In 2012, we added an additional AFFS person per crew in order to meet the regulatory requirements of moving to provide a Category VI AFFS service.

The additional staffing did not provide any additional workers to the operational compliment for our maintenance program, although our overall footprint of the airport maintenance requirements had increased. The resource deployment was specific to the Category VI AFFS regulatory requirement.

The demands of today with increased frequency of scheduled carriers, medivacs, charters and the activities of the MNFR and other airport stakeholders has reduced our runway, taxiway and apron occupancy times. We have had to streamline processes, enhance staff training and become innovative in airside strategies.

The new Transport Canada Advisory Circular (300-019), dated July 31, 2019 for Airport Winter Maintenance and GRF (Runway Condition Reporting) has further increased demands on staffing and training requirements in order to comply with this regulation. Transport Canada continues to

refine and impose new regulations to support the technological advances of aircraft operations and new methods for surface maintenance.

The new regulation has Canadian Airports required to comply with the International Civil Aviation Organization (ICAO) standards for reporting the surface conditions of all movement areas at an airport, including runways and taxiways. The regulatory requirement has changed the methods for observation, measurement and reporting of the surface conditions at the airport. Airports will be required to identify key staff resources to support the correct and accurate reporting under the new regulatory reporting format.

Similar to the current regulation for AFFS program, we will have to have available staff resources to provide timely and correct condition reports, therefore not to affect air carrier operations. This is a significant change to our current practice.

New state of the art equipment has been purchased in order that we are able to meet the increased demands of the regulation, operator expectations and to reduce our runway and taxiway occupancy times. These purchases and changes to our operational winter program present new challenges and resourcing requirements.

On the mechanical side of our operations, we have continued to update and expand our fleet to meet the growing demands of the operations and the regulatory requirements. The new technology and fleet expansion are no longer manageable with a single mechanic. In order to maintain proper fleet maintenance and reduce equipment downtime it is essential that staffing in this area be augmented.

Advancement in equipment technology, equipment design and the incorporation of more multi-use methodology in equipment operations has had a tremendous influence on our maintenance program.

New technology with the computer-controlled systems requires special skills and training, not to mention specialized test equipment. In addition, some of the new equipment is now designed to operate year round, which presents challenges to schedule down time for preventative checks and vehicle assessment. As our fleet grows in size and complexity no longer, can a lone mechanic handle the volume of work or keep pace with the necessary training or skills upgrades.

Today's modern engines have superior environmental controls and advanced carbon-reducing technology which require regular preventative maintenance. More important than ever is the requirement to have a substantial proactive fleet maintenance program. Given the fact that winters are long and demanding on our equipment – use is very much constant, a healthy maintenance program is critical.

In years past, that strategy employed at airports was that of a reactive approach, with major equipment maintenance handled during the off-season. For example, winter equipment was maintained during the summer – barring a major breakdown during the winter. With new technology requirement, a more sustainable program with regular maintenance is vital. Additional pressures are brought to the vehicle maintenance program where airports are now employing equipment that can be used all year round.

Therefore, narrowing the window of opportunity for regular or major maintenance.

Contracting out does happen on occasion but this is costly and availability does not always match with our need. In most cases, we are challenged to maintain operations when a piece of equipment is not available. As a result, we require the support and immediate response of in-

house resources.

The Greater Sudbury Airport has invested considerably in our capital program to renew, modernize and upgrade our vehicle fleet. We must provide a high quality and proactive maintenance program to protect this investment.

(Supplementary to the above, our current mechanic has expressed his desire to retire in early 2020)

AIRPORT GROWTH AREAS:

A) Airside and Groundside Infrastructure

Threshold 30 land development project added approximately 1.5 km's of new groundside road surface, which has proportionately affected our maintenance of roadway infrastructure (pavement maintenance, snowplowing, etc.) by an estimated 93%. Similarly, on airside, the threshold 30 project has added 720 linear meters of taxiways (Charlie and Delta) which increased our airfield maintenance requirements on taxiways by an estimated 47%. Furthermore, over and above this increase was the addition of three taxi lanes, each 20 metres wide by 120 meters in length to provide access to the commercial development areas.

We have added approximately 27,310 square metres of apron space at the threshold 30 development area and at Apron III.

Groundside, we have added approximately 7,200 square metres of parking with the addition of the secondary passenger vehicle parking lot.

We have brought in-house over the years other programs, which were formerly outsourced and/ or contract work added. Regulatory changes have influenced our maintenance programs and/or how or when work can be completed.

A few of the tasks that have had impact on the airport workload are:

- asphalt crack sealing – airside and groundside
- line painting – airside and groundside
- building maintenance for MAG Aerospace/Porter MRO and T-Hangar facilities
- Porter MRO surface maintenance – apron/taxiways
- wildlife fence maintenance (brushing and repairs)
- new restricted area fence around threshold 30 development (ongoing maintenance)
- new modern potable water pump house
- two new standby generators (regular testing and maintenance)

- Safety Management System (SMS) program (quality control, quality assurance and auditing)
- new regulations for airfield lighting maintenance (enhanced maintenance program)
- heightened air carrier expectations of apron maintenance during winter operations
- augmented air ambulance service providers expanding our required winter surface maintenance program
- FedEx facility, changing our winter maintenance program surface clearing priorities.
- required frontline preventative, general maintenance and inspections of airport vehicle fleet

B) Regulated AFFS:

Currently, the GSA provides a Category VI Service Aircraft Fire Fighting Services (AFFS). The category of service is based on two criteria, which include the largest size aircraft providing scheduled service at the GSA and exceeding 180,000 passenger movements over a one-year period. Presently the largest aircraft providing service is Sunwing's B737-800, which is a Category VII aircraft. However, since it does not have 700 movements over three consecutive months we are able to down grade one category to operate as a Category VI.

It is important to understand that should Sunwing withdraw service, the GSA will still be required to maintain a Category VI service due to the fact that the Dash 8 Q400's that Air Canada and Porter utilize currently exceed the 700 movements over three consecutive months. In order to meet Transport Canada regulations of providing a Category VI service we are required to have in operation two trucks and two firefighters during our normal published hours of operation. Our current published hours are 0700-2300.

C) GRF/Winter Maintenance:

(Section with the most significant change and impact to resources)

GRF Regulation is the Canadian implementation of the International Civil Aviation Organization (ICAO) Global Reporting Format (GRF) for runway condition reporting. The Canadian implementation of GRF is based on the Take-off and Landing Performance Assessment (TALPA) methodology, which was developed by the United States Federal Aviation Administration (FAA).

The philosophy of the GRF is that the airport operator assesses the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway. From this assessment, a runway condition code (RWYCC) and a description of the runway surface are reported which can be used by the flight crew for aeroplane performance calculations. This format, based on the type, depth and coverage of contaminants is the best assessment of the runway surface condition by the airport operator. All other pertinent information should also be taken into consideration. When changes in conditions occur, they should be reported immediately.

The RWYCC reflects the expected braking capability as a function of the surface conditions. With this information, the flight crews can derive, from the performance information provided by the aeroplane manufacturer, the landing distance of an aeroplane under the existing conditions. When a RWYCC is not provided, pilots reference the reported runway surface conditions to determine expected landing performance.

Canadian implementation will meet the intent and important safety elements of the GRF and will provide some enhancements. One of the main differences from the ICAO format is the ability to report two contaminants per runway third. The option to report two contaminants will harmonize the reporting in North America. This approach provides more flexibility for airports or aerodromes, where RWYCCs will not be reported. It also gives pilots more detailed information for the purpose of making take-off performance calculations.

The requirements to conduct movement area inspections and report the surface conditions are described in AC 302-013 – Airport Winter Maintenance and Planning. We are governed and must have strict adherence to this regulation.

Training

Airport and aerodrome operators are responsible for ensuring that their personnel are adequately trained, so that they can perform their duties. This is reflected by Section 107.03(d) of the CARs – Safety Management System, which states, in part:

“A Safety Management System shall include... a process for ensuring that personnel are trained and competent to perform their duties.”

It is a requirement that airport operators develop a training program for all personnel who will maintain airport surfaces. Specific attention must be given to key personnel responsible for the assessment, measurement and reporting of surface condition at the Greater Sudbury Airport.

The key staff will have special technical expertise and knowledge to support the airports winter surface maintenance program but just as important will have the ability and expectation to complete year round surface assessment to ensure regulatory compliance.

Annual recurrent training is a fundamental component of the new regulation; ensuring staff are kept informed and have the essential knowledge and skill sets. While not completely a new requirement, the level of training that has been enhanced.

Winter Maintenance Regulation

Airport Winter Maintenance Plan

302.410

- (1) The operator of an airport shall have an airport winter maintenance plan that:
 - (a) was developed by the airport operator after consultations with a representative sample of the air operators that use the airport; and
 - (b) includes the items required under section 302.411.

- (2) The operator of the airport shall review its airport winter maintenance plan at least once a year as well as each time the operator does not clear a priority area in accordance with the plan.
- (3) If the operator of the airport determines, because of a review, that its airport winter maintenance plan should be amended, the operator shall consult a representative sample of the air operators that use the airport before amending the plan.
- (4) The operator of the airport shall keep at the airport:
 - (a) An up-to-date copy of its airport winter maintenance plan;
 - (b) A record of all consultations required under this section; and
 - (c) A record of each review required under this section.

302.411

An airport winter maintenance plan shall include:

- (a) procedures for identifying which airside areas are priority 1 areas, priority 2 areas or priority 3 areas during winter storm conditions;
- (b) a description of the winter maintenance operations to be carried out in an airside area once it is identified as a priority 1 area, priority 2 area or priority 3 area;
- (c) communication procedures that meet the requirements of subsection 322.411(2) of the Airport Standards – Airport Winter Maintenance;
- (c) procedures for publishing a NOTAM in the event of winter conditions that might be hazardous to air- craft operations or affect the use of movement areas and facilities used to provide services relating to aeronautics;
- (d) safety procedures for controlling the flow of ground vehicles during winter maintenance operations to ensure the safety of persons, vehicles and aircraft;
- (f) procedures for minimizing the risk of ice control chemicals - other than the ice control chemicals specified in subsection 322.415(1) of the Airport Standards - Airport Winter Maintenance - being tracked onto an airside area;
- (g) a description of the lines of authority and organizational relationships with respect to winter maintenance, including contact names and telephone numbers;
- (h) a description of how actions undertaken as part of winter maintenance will be coordinated;
- (i) a description of the arrangements for snow clearance;
- (j) a description of the process for reviewing and amending the plan;

- (k) a description of the administrative procedure for distributing the plan and its amendments; and
- (l) a list of all agreements respecting the provision of winter maintenance services for navigation aids at the airport, and signed copies of those agreements.

302.412

- (1) The operator of an airport who decides to operate the airport during winter storm conditions shall remove contaminants
 - (a) from priority 1 areas;
 - (b) from priority 2 areas to the extent that doing so does not compromise the operator's ability to keep priority 1 areas operational; and
 - (c) from priority 3 areas after the winter storm conditions have ended.
- (2) If the operator of the airport does not remove contaminants from a priority area in accordance with its airport winter maintenance plan, the operator shall make a record of that fact and the surrounding circumstances.
- (3) The operator of the airport shall keep the record for two years after the day on which the operator was required to remove the contaminants.

RECOMMENDATION

Considering the facts presented in the report the status quo is not a viable option and not beneficial to the airport, our key stakeholders and business partners. We need to provision sufficient resources for our AFFS/Service plan and for our fleet maintenance program.

Because of Transport Canada regulation enhancements and the increased demands on surface time availability for the GSA to perform maintenance duties, it is recommended that three (3) full time AFFS/Service persons and one (1) full time Technician III mechanic will be added to the existing staffing resource compliment.

The expanded compliment will reduce the current overtime expenses, which are at times, are at a critical level. Furthermore, as the current staff compliment gain years of dedicated experience, handling vacation entitlements becomes a significant challenge.

The recommendation to the Board is:

- Uplift three (3) permanent fulltime AFFS/Service persons.

Supplementing the current three AFFS crews with one (1) additional AFFS/Service person for each crew. The increase to crew staff resources will have the crew compliment of five (5) – one (1) lead hand plus four (4) staff. Therefore ensuring our daily regulatory compliance and giving the ability to complete or provide regulatory training

- Uplift one (1) permanent full time Technician III mechanic

BUDGET IMPACT

The City of Greater Sudbury's new collective agreement defines specific enhancements that have a direct impact to the Greater Sudbury Airports 2020 budget. The impact is approximately \$100K. However, the key improvements that were discussed and requested to be included in the new contract surrounding the availability and deployment of seasonal staff resources and improved work rules were not fulfilled. Several elements were critical to the airport operation to remain compliant with Transport Canada regulation but did not survive the negotiation process.

The staff increase will reduce the overtime budget by 60% (\$90K), along with some other reductions; these offset the impact of the budget impacts of the CBA. Additionally, we must safeguard our equipment with improved preventative maintenance.

Training requirements with the new regulation and that required to maintain our regulatory compliance must be met.

The airport overall salary forecast for the 2020 budget is estimated to increase 12% (\$355K) over the 2019 forecast. Our current 2019 actual salary budget is currently trending below forecast. To that end, we implemented our Regulatory Recovery Fee (RRF), which was designed to capture and compensate for the regulatory costs that we incur. The early indications have the fee structured to meet our target.

It is important to mention that our passenger traffic has increased by 94%, the air carrier schedules have increased frequency therefore reducing our runway occupancy time and the critical areas for service (priority 1 areas in our snow plan) of the airport have increased significantly and continue to expand as new business partners open for business.

The recent developments by Transport Canada to the airport winter plan of operations published in the advisory circular have increased accountability of airports for winter operations and reporting. This along with our regulatory requirement for fire service require dedicated staff resources.

As the Accountable Executive for the Airport Safety Management System program, we cannot accept the risk. The safety risk to operations, passengers and crew for the upcoming winter are significant without the staff resource increase.