

## Effects of Proposed NEF Contour Changes

### Introduction

The Calgary International Airport Vicinity Protection Area Regulation (AVPA) identifies uses that are prohibited within certain parts of Calgary based on the Noise Exposure Forecast (NEF) contour areas included in the regulation. The NEF contour areas describe forecasted noise impacts from aircraft flying over communities as they arrive or depart the Calgary International Airport.

As the existing NEF contours impact development in Calgary via AVPA Regulation, proposed changes to the NEF contours will modify the impacts on development in Calgary. Overall, the proposed changes would reduce the number of parcels and the total land area that is impacted under the current NEF contours. The current NEF contours impact 33,201 parcels (approximately 10,656 hectares) with some degree of development restrictions. The proposed contours would impact 12,309 parcels (approximately 7,777 hectares), resulting in a 63 per cent reduction in the number of parcels, and a 27 per cent reduction in the total land area affected.

Highlights of the proposed NEF contour changes include:

- A total of 22,921 parcels (approximately 3,058 hectares) spanning 19 communities and five wards that are affected by the current NEF contours, would not be touched by the proposed NEF contours and would no longer be subject to restrictions of uses associated with the NEF contour areas.
- A total of 7,473 parcels (approximately 4,230 hectares) would be unaffected by the NEF changes.
- A total of 2,752 parcels (approximately 3,320 hectares) would move to a less-restrictive NEF contour area.
- A total of 2,084 parcels (approximately 227 hectares) would move to a more-restrictive NEF contour area. Of these 2,084 parcels, 2,029 (97 per cent) would move from currently unrestricted by any NEF contour to the NEF 25 contour, where the only restricted use is for campgrounds.
- A total of 55 parcels (approximately 49 hectares) already affected by current NEF contours would move to a more-restrictive NEF contour area (either moving from NEF 25 to NEF 30, or from NEF 30 to NEF 35). To address these parcels, it is proposed to only prohibit the uses within these parcels current NEF contour in order to not further restrict potential uses. This is reflected within the proposed AVPA Regulation (Attachment 5).

Figure 1 shows the number of parcels that will experience a change in their NEF contour area due to the proposed update. While 2,084 parcels have moved to a more restrictive contour, the vast majority of these (2,029) will move into the NEF 25, resulting only in a restriction from operating an outdoor campground.

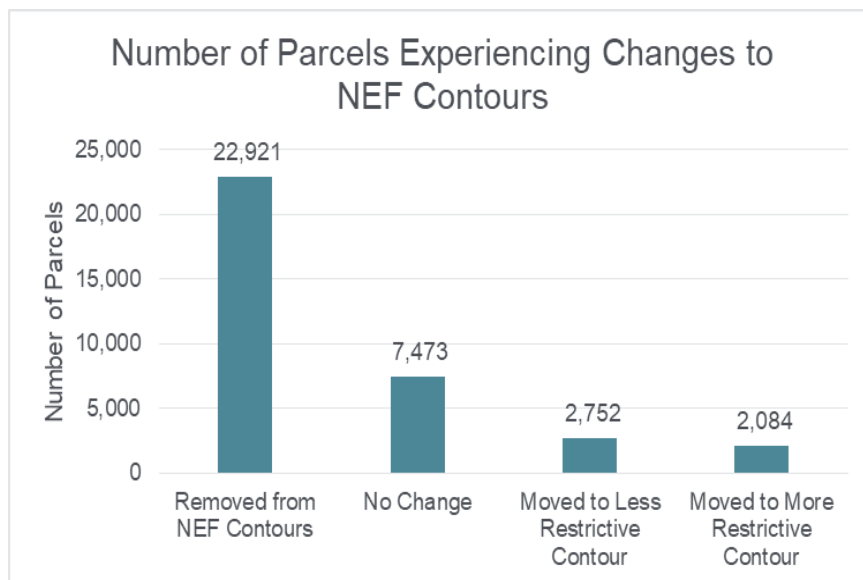


Figure 1: Summary of NEF Contour Changes, by Parcel

Figure 2 shows the same information expressed in hectares of land:

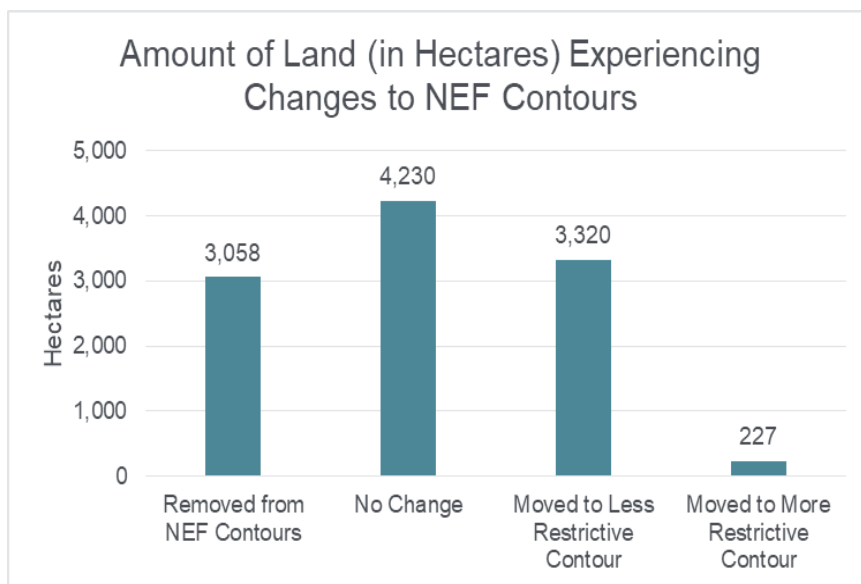


Figure 2: Summary of NEF Contour Changes, in Hectares

### Analysis: Shifting NEF Contours

The proposed changes to the NEF contours would result in a net total of 20,892 fewer parcels affected by any NEF contour. These results are shown by major land use categories Table 1 below.

Major Land Use Category	Removed from NEF contours	Added to NEF contours	Net Effect
Residential	20,934	1,975	18,959 fewer parcels
Direct Control	1,118	5	1,113 fewer parcels
Parks, Recreation and Public Education	401	25	376 fewer parcels
Industrial	263	3	260 fewer parcels
Commercial	74	10	64 fewer parcels
Future Urban Development	51	1	50 fewer parcels
Transportation and Utility Corridor	37	0	37 fewer parcels
Major Infrastructure	26	1	25 fewer parcels
Institutional	16	0	16 fewer parcels
Mixed Use	1	9	8 additional parcels
<b>TOTAL</b>	<b>22,921</b>	<b>2,029</b>	<b>20,892 fewer parcels</b>

Table 1: Summary of Parcel Removals and Additions based on Updated NEF Contours

### NEF Changes by Community and Major Land Use Category

While, in general, the proposed changes would significantly reduce the number of parcels affected by a NEF contour, there are some communities in which the proposed changes to the NEF contours would cause increased restrictions. Areas that see an increase were based on the findings of the consultant's report that considered such assumptions of the use of differing aircraft types and runway usage patterns. Table 2 below shows, by community, the number of parcels now impacted by a NEF contour that were not previously, as well as the number of parcels that would become affected by a more restrictive NEF contour.

Nearly the entirety (97 percent) of these use restrictions are occurring on parcels previously outside of a NEF contour that are being added to the 25 NEF contour. Campgrounds are the only prohibited use for parcels within the 25 NEF contour, resulting in minimal impact to these parcels.

A total of 55 parcels are moving to either the 30 or 35 NEF contour. In order to not adversely impact development on these parcels, it is being proposed to only prohibit uses that are currently prohibited on these parcels.

Overall, these proposed changes result in minimal impact to any parcel increasing in NEF contour.

Parcels Shifting into Higher NEF Contour, by Community				
COMMUNITY	25 NEF (Additions)	30 NEF	35 NEF	TOTAL
WHITEHORN	710	10	0	720
RUNDLE	502	0	0	502
DOVER	257	0	0	257
ALBERT PARK/RADISSON HEIGHTS	232	0	0	232
SOUTHVIEW	177	0	0	177
MARLBOROUGH	147	0	0	147
NORTH AIRWAYS	0	14	9	23
WESTWINDS	0	8	1	9
HORIZON	0	5	0	5
MCCALL	0	0	4	4
FRANKLIN	2	1	0	3
STONEY 3	0	0	3	3
MERIDIAN	1	0	0	1
GREENVIEW INDUSTRIAL PARK	1	0	0	1
<b>TOTAL</b>	<b>2,029</b>	<b>38</b>	<b>17</b>	<b>2,084</b>

Table 2: Parcels Shifting into Higher NEF Contour, by Community

Table 3 shows, by major land use category, the number of parcels currently unaffected by a NEF contour that would become affected, as well as the number of parcels that would become affected by a more restrictive NEF contour.

Parcels Shifting into Higher NEF Contour, by Major Land Use Category				
Major Land Use Category	25 NEF (Additions)	30 NEF	35 NEF	TOTAL
Residential - Low Density	1,850	10	0	1,860
Residential - Medium Density	125	0	0	125
Industrial	3	10	16	29
Parks, Recreation and Public Education	25	0	0	25
Commercial	10	6	0	16
Direct Control	5	8	0	13
Mixed Use	9	0	0	9
Major Infrastructure	1	4	1	6
Future Urban Development	1	0	0	1
<b>TOTAL</b>	<b>2,029</b>	<b>38</b>	<b>17</b>	<b>2,084</b>

Table 3: Parcels Shifting into Higher NEF Contour, by Major Land Use Category