

5.0 Comparison of No Build Conditions (Scenario 1) to Preferred Alternative (Scenario 4)

The noise analysis for the Preferred Alternative found that the 65 and 70 dB DNL contours extend beyond the airport property as illustrated in Figure 4-5. As described earlier, the 65 and 70 dB DNL contours extend north of the OSUA property boundary at approximately a ninety degree angle off the Runway 9R runway end. The 65 dB DNL contour also extends beyond the airport boundary to the southeast of the airport at a forty-five degree angle behind the Runway 27L runway end.

Figure 5-1 illustrates the comparison of the No Build Conditions and the Preferred Alternative using; (1.) the 65 dB DNL contours for the two cases, and (2.) a color gradient indicating the change in noise levels of 1.5 dB and greater.

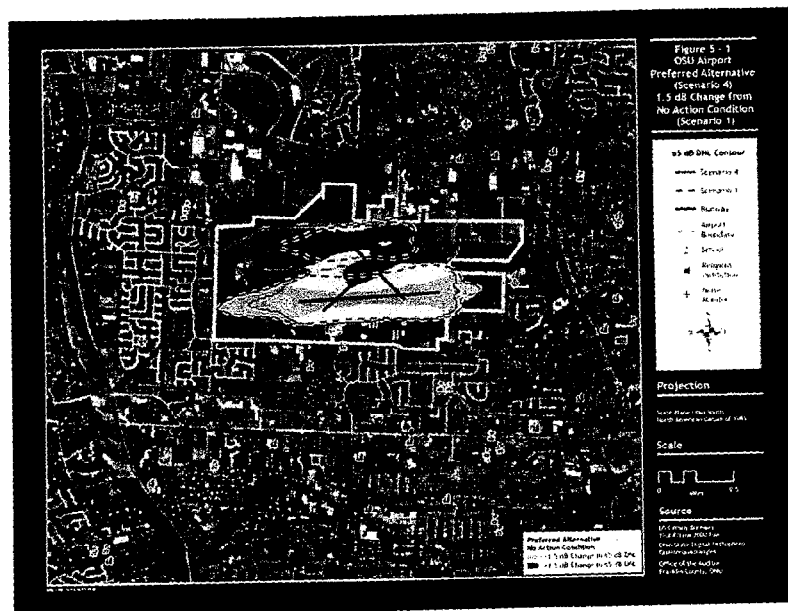


Figure 5-1. OSU Airport Preferred Alternative (Scenario 4) 1.5 dB Change from No Build Condition (Scenario 1)

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When comparing the 65 dB DNL contour for the No Build Conditions to the Preferred Alternative it is apparent that some areas outside the 65 dB DNL contour for the No Build Conditions, will be within the 65 dB and higher DNL contour levels along the extended centerlines of Runway 9L/27R under the Preferred Alternative.

At the same time, areas that are exposed to a DNL of 65 dB and higher under the No Build Conditions along Runway 9R/27L have been reduced in size under the Preferred Alternative and would no longer experience a significant noise impact. The No Build Conditions include 2.3 acres within the 65 dB DNL (Table 3-6) and the Preferred Alternative includes 12 acres within the 65 dB DNL contour (Table 4-12). While there is a substantial increase in the acreage exposed to a significant level of aircraft noise under the Preferred Alternative. Most of that area remains on airport property. Some of the areas newly exposed to 65 dB DNL are off airport to the north of the boundary.

The color gradient in Figure 5-1 indicates in red the areas where an increase in noise level is predicted under the Preferred Alternative, and in green, the areas where a decrease in noise level is anticipated. The area to the north and outside the OSUA boundary exposed to 65 dB DNL or higher increases by 1.5 dB or more over an industrial area.

Table 5-1 presents a comparison of the population, housing units and acreage within the two noise zones for the Existing Conditions and each of the analyzed alternatives. The assessment of adverse noise impacts is based on whether there are more people and homes in the study alternatives relative to the No Build case, which is represented by Scenario 1. A review of the data in Table 5-2 shows that, when comparing the Preferred Alternative (Scenario 4) to the No Build Conditions (Scenario 1), the Preferred Alternative has fewer people and homes impacted, and that this difference is even more substantial when comparing the Preferred Alternative to the Existing Conditions.

Table 5-1. Comparison of the Population, Housing Units and Acreage within the Two Noise Zones for the Existing Conditions and Each of the Analyzed Alternatives

Conditions	Population		Housing Units		Area (Sq. Acres)	
	65 - 70 dB	70 - 75 dB	65 - 70 dB	70 - 75 dB	65 - 70 dB	70 - 75 dB
	DNL	DNL	DNL	DNL	DNL	DNL
Existing Conditions	456	0	213	0	34.7	0.1
Scenario 1 - No Build	7	0	3	0	2.3	0.0
Scenario 2	34	0	16	0	5.3	0.0
Scenario 3	1	0	0	0	9.7	0.4
Scenario 4 - Pref. Alt.	3	0	1	0	12.0	1.0
Scenario 5	16	0	7	0	15.6	1.8

Table 5-2. Comparison of the Preferred Alternative (Scenario 4) to the No Build Conditions (Scenario 1)

	DNL (dB)	Population	Housing Units	Area (Acres)
No Build Conditions (Scenario 1)	65 - 70	7	3	2
	70 - 75	0	0	0
Preferred Alternative (Scenario 4)	65 - 70	3	1	12
	70 - 75	0	0	1
Preferred Alternative Relative to No Action Conditions	65 - 70	-57%	-67%	422%
	70 - 75	-	-	-

The FAA has determined that a significant noise impact occurs if the proposed action will cause noise sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the No Build alternative for the same timeframe (FAA Orders 5050.4 and 1050.1e).

Using this criteria the area north of OSUA where the 65 dB and higher DNL contour extends beyond the airport boundary under the Preferred Alternative would result in no significant noise impact, as the area is an industrial area, which is not considered noise sensitive.