

6.6 NOISE

6.6.1 Affected Environment

No noise monitoring data are available for DMR. The dominant noise sources include general aviation aircraft, vehicle traffic, limited military aircraft traffic, military vehicle traffic, and limited use of blank ammunition during Army exercises. No live-fire training occurs at DMR.

6.6.2 Environmental Consequences

Summary of Impacts

Noise sources associated with project alternatives at DMR include construction activity, ordnance use, military vehicle traffic, and military aircraft operations. Noise impacts from these sources would be less than significant under all project alternatives.

Construction projects at DMR would be far enough from noise-sensitive areas to avoid significant noise impacts under both the Proposed Action and the RLA Alternative. There would be no construction noise impacts under No Action. The use of blank ammunition would continue at DMR under all alternatives. The quantity of blank ammunition used at DMR would probably increase somewhat under the Proposed Action or the RLA Alternative. Noise-sensitive land uses are far enough from DMR so that noise from blank ammunition would be a less than significant impact under all alternatives. Training activities at DMR are expected to employ fewer than 75 vehicles at a time under any of the alternatives. Resulting hourly average traffic noise levels along the Dillingham Trail and vehicle noise from activity at DMR would be a less than significant impact under all alternatives. Limited aircraft and helicopter flight operations would continue at DMR under all alternatives. UAV flights would not be launched from or recovered at DMR under the Proposed Action and the RLA Alternative, but some UAV flight activity may occur in the R-3110B and R-3110C restricted airspace areas south of DMR or in the offshore W-189 Warning Area north of DMR. Noise generated by the UAV flight activity near DMR would be a less than significant impact.

Table 6-12 summarizes the significance of noise impacts at DMR under the Proposed Action, RLA, and No Action.

Proposed Action

Less than Significant Impacts

Noise from construction activities. The construction projects associated with DMR are three FTI antennas and Dillingham Trail. Construction activities would occur from 2005 through early 2007. Individual items of construction equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet (15 meters). With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime, at locations within several hundred feet of active construction sites. The zone of relatively high construction noise levels typically extends to distances of 400 to 800 feet (122 to 244 meters) from the site of major equipment operations. Locations more than 1,000 feet (305 meters) from construction sites seldom experience significant levels of construction noise.

Table 6-12
Summary of Potential Noise Impacts at DMR

| Impact Issues | Proposed Action | Reduced Land Acquisition | No Action |
|--|-----------------|--------------------------|-----------|
| Noise from construction activities | ⊙ | ⊙ | ○ |
| Noise from ordnance use | ⊙ | ⊙ | ⊙ |
| Noise from military vehicle use | ⊙ | ⊙ | ⊙ |
| Noise from aircraft operations | ⊙ | ⊙ | ⊙ |
| Noise from added personnel vehicle traffic | ○ | ○ | ○ |

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

| | |
|--|-----------------------|
| ⊗ = Significant | + = Beneficial impact |
| ⊙ = Significant but mitigable to less than significant | N/A = Not applicable |
| ⊙ = Less than significant | |
| ○ = No impact | |

Table 6-13 summarizes the estimated minimum distance between the sites for proposed construction projects and the nearest noise-sensitive land uses.

Table 6-13
Estimated Minimum Distance Between Construction Sites and Noise-Sensitive Land Uses

| Proposed Project | Distance to Closest Noise-Sensitive Receptor | Noise-Sensitive Land Use Type |
|-----------------------------|--|--|
| S7. Fixed Tactical Internet | Not evaluated | Construction activities too limited to create noise issues |
| D1. Dillingham Trail | 3,900 feet | Residential (Waiialua Beach) |
| | 6,300 feet | Waiialua High and Intermediate Schools |
| | 1,500 feet | Residential (Kamo'oloa area) |

Source: Tetra Tech staff analyses

Construction of the FTI antennas would require minimal equipment and minimal site preparation activities, so there would be minimal associated noise. Most construction noise would be associated with construction of Dillingham Trail. These construction activities would generate average daytime noise levels of about 90 dBA at a distance of 50 feet (15 meters) from the construction activity, and about 70 dBA at a distance of 500 feet (152 meters). Average daytime noise levels would be less than 65 dBA at distances of 700 feet (213 meters) or more. The Ldn increment generated by construction activities would drop below 65 dBA at distances of 550 feet (168 meters) or more. No nighttime construction activity is expected. Because incremental Ldn contributions from construction activities would be less than 65 dBA at the nearest noise-sensitive areas, construction noise would be a less than significant impact.

Noise from ordnance use. Blank ammunition and ground-based smoke generating items are the only types of ordnance that would be used at DMR. Small arms firing with blank

ammunition can produce relatively high peak noise levels at distances of up to 3,000 feet (915 meters) and might remain audible at distances of up to 1.5 miles (2.4 kilometers). The 1/8 second L_{max} noise level from blank ammunition is typically about 71 to 78 dBA at 2,000 feet (610 meters) and 50 to 57 dBA at 1 mile (1.6 kilometers). Noise levels from firing blank small arms ammunition typically drop below levels that cause significant annoyance at distances of 2,500 to 3,000 feet (760 to 915 meters). The closest residential areas are more than 2 miles (3 kilometers) from the areas where blank ammunition would be used at DMR. Consequently, noise impacts from ordnance use at DMR would be less than significant under the Proposed Action.

Noise from military vehicle use. Most military vehicle travel to and from DMR would occur on Dillingham Trail. In addition, vehicle maneuver training would occur at DMR. Estimated peak pass-by noise levels and average traffic noise levels for military vehicles were discussed in Chapter 5, Section 5.6.2. During an individual training activity at DMR, fewer than 75 vehicles are operating at any one time. Generally, fewer than 60 vehicles would travel in a convoy to DMR on the Dillingham Trail per hour. Resulting hourly average traffic noise levels along Dillingham Trail would be about 65 dBA at a distance of 100 feet (30 meters) from the vehicle trail. Vehicle activity within DMR would produce comparably low noise levels. Consequently, noise from military vehicle use at DMR would be a less than significant impact under the Proposed Action.

Noise from aircraft operations. The Proposed Action would not result in any meaningful changes in helicopter or fixed-wing aircraft flight operations at DMR. The only added military flight activity would involve UAV flight operations in nearby restricted airspace. UAV flights would not be launched from or recovered at DMR under the Proposed Action and the RLA Alternative, but some UAV flight activity may occur in the R-3110B and R-3110C restricted airspace areas south of DMR or in the offshore W-189 Warning Area north of DMR. The Shadow 200 UAV produces a noise level of 85 dBA at a distance of about 70 feet when the engine is at an idle power setting, and a noise level of 85 dBA at a distance of about 342 feet when the engine is at a high power setting (US Army 2001a). In most cases, the UAV is expected to operate at relatively high altitudes to avoid conflict with other helicopter and aircraft flight activity. As noted in Chapter 5, Section 5.6.2, the addition of UAV flight activity to current patterns of aircraft and helicopter flight activity would not result in any noticeable change in noise levels from aircraft flight operations. Consequently, noise from aircraft operations at DMR would be a less than significant impact under the Proposed Action.

No Impact

Noise from added personal vehicle traffic. No Army personnel are based at DMR, and none of the personnel added under the Proposed Action would be based at DMR; consequently, there would be no noise from added personal vehicle traffic at DMR under the Proposed Action.

Reduced Land Acquisition

Noise-related impacts at DRM under the RLA Alternative would be the same as under the Proposed Action.

No Action**Less than Significant Impacts**

Noise from ordnance use. Existing training exercises using blank ammunition would continue at DMR under No Action. Annual ordnance use at DMR probably would be slightly less than that under the Proposed Action or the RLA Alternative. As discussed for the Proposed Action, use of blank training ammunition would have a less than significant noise impact under No Action.

Noise from military vehicle use. Military vehicle use associated with DMR would be less under No Action than under the Proposed Action or the RLA Alternative. No Stryker vehicles would be used under No Action. Noise levels produced by a continuation of existing vehicle use patterns at DMR would have a less than significant noise impact under No Action.

Noise from aircraft operations. Existing patterns of aircraft and helicopter use of DMR would continue under No Action. No UAV activity would be added at DMR. Noise levels produced by a continuation of existing aircraft operations at DMR would have a less than significant noise impact under No Action.

No Impact

Noise from construction activities. No specific construction projects are proposed under No Action. Consequently, there would be no construction noise impacts under No Action.

Noise from added personal vehicle traffic. There would be no change in personnel numbers at DMR under No Action. Consequently, there would be no noise impact from added personal vehicle traffic.