

5.0 SECONDARY AND CUMULATIVE IMPACTS

This section of the draft EA identifies and assesses the potential for secondary and cumulative impacts that could cause or add to environmental impacts associated with this project after implementing the proposed action. Secondary impacts are generally induced by the proposed action, but may occur later than the more direct or immediately observable impacts. Cumulative effects are impacts that may result from the incremental consequences of the proposed action when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.7).

5.1 SECONDARY IMPACTS

In accordance with CEQ, secondary effects are “caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable” (40 CFR 1508.8). CEQ further explains that secondary (indirect) impacts may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

The analysis of secondary (indirect) impacts from Alternatives 1, 2, and 3 concentrates on reasonably foreseeable future actions that could contribute to impacts on key environmental conditions and resources such as land use, socioeconomics, air, prime and unique farmlands, and biological resources. No secondary impacts are expected for visual resources, cultural resources, or hazardous materials.

5.1.1 Land Use

According to Maricopa County, City of Glendale, City of Peoria, and City of El Mirage comprehensive and general plans, development of land within the study area is expected to continue over the years, regardless of the new facility. As the population increases, there is likely to be an increase in residential, commercial, and industrial development. However, the new facility is likely to accelerate a change in land use primarily in the western portion and would contribute to an increase in urban growth within and near the study area. Based on inquiries from potential developers and adjacent landowners, Northern parkway has created increased interest in the area adjacent to the corridor in the development community.

5.1.2 Socioeconomic Conditions

Along the western portion of the study area, the new facility would pass through and be adjacent to large undeveloped parcels that could be converted to urban uses, based on comprehensive and general plans from Maricopa County, City of Glendale, City of Peoria, and City of El Mirage. Therefore, the new facility could provide a beneficial secondary impact by allowing access to

undeveloped parcels that could be developed in the support of the local, regional, state, and national tax base.

5.1.3 Air Quality

Impacts on air quality from Alternatives 1, 2, or 3 would be minimized through NAAQS and improved vehicle emission standards. However, all three alternatives would have the effect of moving some traffic closer to nearby homes, schools and businesses and increase traffic volumes; therefore, there may be localized areas where ambient concentrations of MSATs could be higher than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections. However, the magnitude and the duration of these potential increases compared to the No Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models. When a roadway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs would be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, would over time cause substantial reductions that, in almost all cases, will cause regional MSAT levels to be lower than today.

5.1.4 Prime and Unique Farmlands

The total acreage of farmlands within the study area would be reduced due to increased residential and commercial development plans regardless if the proposed action is implemented. Most of the farmland along the western portion of the study area, where the majority of the farmland is located, is already designated for residential, commercial, and/or industrial uses. Therefore, Alternatives 1, 2, or 3 are not likely to accelerate an adverse change in farmland use and would not contribute to secondary impacts. Farmland acreage lost under Alternative 3 would be approximately 22 acres greater than that lost under Alternatives 1 and 2. All action alternatives would potentially incur loss of prime farmland, if irrigated.

5.1.5 Water Resources

Because permits are required by the USACE and the ADEQ for any impacts on waters of the United States, Alternatives 1, 2, or 3 would not adversely contribute to secondary impacts on water resources. In addition to planned developments, all three alternatives could stimulate a rate of change for land uses, and Alternative 3 could generate the largest amount of change because it is less and will be less developed than Alternatives 1 and 2. Additional land uses and developments could contribute to increased sedimentation and runoff from stormwater.

5.1.6 Biological Resources

The implementation of the new facility would result in secondary impacts on wildlife habitat loss from surface disturbance associated with the construction of the new facility and associated facilities. The effects would be expected to decrease with completion of the construction phase because of the onset of reclamation efforts on many of the disturbed areas. In addition, some wildlife species would be affected indirectly by displacement from habitats in the vicinity of the study area due to the increased human activity associated with the construction of Alternative 1, 2, or 3.

5.1.7 Summary

The implementation of Northern Parkway could be the catalyst for development which would have localized secondary impacts to the area.

5.2 CUMULATIVE IMPACTS

Cumulative impacts include the direct and indirect impacts of a project together with other past, present, and reasonably foreseeable future actions of others (40 CFR 1508.7). Analysis of cumulative impacts concentrates on other current and future actions that could contribute to cumulative impacts on key resources with the proposed action such as land use, socioeconomics, air, prime and unique farmlands, and biological resources. Resources or environmental conditions not impacted by Alternatives 1, 2, or 3 as listed in Chapter 4 are not discussed in this section as they are not applicable. Past, present, and reasonably foreseeable future actions considered in this analysis are the result of planned projects represented in MAG's 2006 RTP.

For this cumulative impacts assessment, other past, present, and reasonably foreseeable future transportation projects and non transportation-related projects are considered and are shown in Table 5-1 below. Cumulative impacts from Alternatives 1, 2, or 3 are derived from (1) impacts associated with the alternatives, (2) a geographic area of influence, (3) a design-year time frame between 2009 and 2025, and (4) the magnitude of change (e.g., negligible, minor, moderate, or major) resulting from the new facility.

**Table 5-1
Past, Present, and Reasonably Foreseeable Projects**

Project	Status	Location
<i>Past Actions/Completed Projects</i>		
Constructed eight grade separations	Completed in 2000	Grand Avenue between SR 101L and I-17
Widened Northern Avenue from two lanes to five lanes	Completed in 2000	SR 101L to US 60
Installed a traffic signal and associated roadway widening	Completed in 2000	107 th and Northern avenues
<i>Ongoing/Present Actions</i>		
Construct Parke West	Planned	99 th Avenue to SR 101L
Construct a water reclamation facility	Planned	Near New River (City of Peoria)
Install a traffic signal and associated roadway widening	Planned	El Mirage Road and Northern Avenue
<i>Reasonably Foreseeable Future Actions</i>		
Construct SR 303L improvements	Proposed	I-10 to US 60
Construct dual left turn lanes	Proposed	Grand Avenue and Myrtle Avenue
Construct access control and beautification	Proposed	Grand Avenue from SR 101L to McDowell Road
Construct three grade separation structures	Proposed	US 60
Widen Olive Avenue	Proposed	Dysart Road and the White Tank Regional Park
Widen SR 101L	Proposed	I-10 to US 60
Widen and realign Sarival Avenue	Proposed	Northern Avenue to Olive Avenue
Widen and connect	Proposed	Grand Avenue from Northern Avenue to Loop 303
Widen 99 th Avenue	Proposed	Northern Avenue to Olive Avenue
Improve 91 st Avenue	Proposed	Northern Avenue to Olive Avenue
Improve 83 rd Avenue	Proposed	Northern Avenue to Olive Avenue
Channelize the Agua Fria River	Proposed	Agua Fria River
<i>Planned New Developments</i>		
Equipment rental facility	Planned	East of 70 th Avenue, south side
Prevention pest control facility	Planned	Southeast corner of 71 st Avenue
Northern Gateway Commerce Park	Planned	Southwest corner of 71 st Avenue
Northern Oaks Commerce Center	Planned	Southeast corner of 73 rd Avenue
Residential/commercial	Planned	Southeast corner of 83 rd Avenue
Commercial	Planned	Northeast corner of 87 th Avenue
Residential	Planned	Southeast corner of 87 th Avenue
Glendale Self Storage	Planned	West of New River, south side
Office/retail	Planned	Southeast corner of 103 rd Avenue
Office/retail	Planned	Southwest corner of 103 rd Avenue
Employment	Planned	Southwest corner of Dysart Road
Calabria	Planned	South side from Dysart Road to El Mirage Road
Woolf Industrial Park	Planned	0.25 mile west of Reems Road to 143 rd Avenue, both sides
Woolf Crossing (residential)	Planned	Sarival Avenue to 0.25 mile west of Reems Road, both sides
Woolf Crossing (commercial)	Planned	SR 303L to Sarival Avenue, both sides

NOTES: SR 101L = State Route 101L
I-10, I-17 = Interstate 10, Interstate 17
US 60 = U.S. Highway 60

5.2.1 Land Use

As stated in Section 5.2, development of land within the study area is already planned and is expected to continue over the years. Improvements to arterial streets that intersect Northern Parkway would further accelerate development in the area. These effects would be greater on Alternative 3 since it is currently less developed.

5.2.2 Socioeconomics

As stated before, development of land within the study area would contribute to a larger tax base with more opportunities for employment. Therefore, Alternatives 1, 2, or 3 would contribute to moderate cumulative effects on the existing population. Similar to land use impacts, Alternatives 1 and 2 would have the greatest impacts because of existing developments, and Alternative 3 would have similar impacts aside from the central portion, which would have less socioeconomic impact.

5.2.3 Air

With increased development and population growth, the number of sources producing emissions is likely to increase. However, future projects along the new facility, regardless of alternative, would have to comply with NAAQS and improved vehicle emission standards.

5.2.4 Water Resources

As stated above, permits are required by the USACE and the ADEQ for impacts on waters of the United States. Improvements to the new facility would likely continue over time; however, Alternatives 1, 2, or 3 would limit fragmented roadway improvements and would lessen overall impacts on waters of the United States. Therefore, all alternatives would make a negligible contribution to cumulative impacts on water resources.

5.2.5 Prime and Unique Farmlands

As stated above, most of the farmland along the western portion of the study area, where most of the farmland is located, is already designated for planned residential and/or commercial uses. Therefore, throughout the study area, it is anticipated that the acreages of prime and unique farmlands would decrease regardless of a new facility. Consequently, the resultant loss of farmland would be minor and would occur under all three alternatives; however, farmland acreage lost under Alternative 3 would be approximately 22 acres greater than that lost under Alternatives 1 and 2. All action alternatives would potentially incur a cumulative loss of prime farmland.

5.2.6 Biological Resources

Regardless of a new facility, increased human activity in the study area would indirectly displace some wildlife species from their habitats. Over time, the remaining native vegetation within the study area is likely to be removed through development. Cumulative impacts from a new facility would be greatest on the central portion of Alternative 3 because it would cross the New River closer to areas of riparian and wetland habitats within the channel than does the central portion of Alternatives 1 and 2.