

Air Quality Technical Memorandum

North Sheridan Interchange

Sheridan County

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Wyoming Department of Transportation

and

Federal Highway Administration

Prepared by:

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North Sheridan Interchange Environmental Assessment

Air Quality Technical Memorandum

Section 1: Project Background

Project Overview

The Wyoming Department of Transportation (WYDOT), in coordination with the Federal Highway Administration (FHWA), is studying improvements to the North Main Street/Interstate 90 (I-90) Interchange, also known as the North Sheridan Interchange. The project is located along I-90 in the City of Sheridan in Sheridan County, Wyoming.

The proposed project includes reconstructing and potentially relocating the North Sheridan Interchange, improvements to I-90, and improvements to North Main Street. This is the first interchange serving Sheridan for eastbound vehicles on I-90. The project is needed to improve traffic operations and safety at the interchange and along the corresponding segments of I-90 and North Main Street. The existing interchange has sharp curves, steep ramps, and limited space for traffic to merge with I-90 traffic, all of which result in safety and operational issues on the interchange, along I-90, and along North Main Street. The selected location of the North Sheridan Interchange must be consistent with the FHWA access requirements for another interchange between the proposed North Sheridan Interchange and the port-of-entry interchange.

The project is being proposed to provide safe, direct regional access from I-90 to the north Sheridan area in support of local land use plans, to improve deteriorating segments of I-90 and North Main Street, and to comply with the FHWA's interstate access policy.

Study Area

Three distinct study areas were defined to correspond with the three types of improvements associated with the North Sheridan Interchange project.

The study area for improving or relocating the existing interchange extends from the center of the existing interchange to a point along I-90 approximately 1.5 miles west. The width of this area is one half mile on each side of I-90. This study area includes an area for the potential realignment of Decker Road, which is under consideration. The study area for improvements to the mainline of I-90 extends to approximately 1.5 mile east of the existing interchange and to approximately 3.25 miles west, within existing I-90 right-of-way. The study area for improvements along North Main Street includes the existing interchange south to Fort Road within existing WYDOT right-of-way. The limits were selected to represent the areas that could be directly or indirectly affected by potential improvements.

The City of Sheridan has identified the north Sheridan area as a primary growth area, and a large tract of land west of Decker Road was annexed into the City. The City has developed plans for The Sheridan High-Tech Business Park, and a subdivision plat for Phase I of the Wrench Ranch development area has been approved. Additionally, the West Corridor is a planned north-south transportation facility that will

traverse the western part of Sheridan. The West Corridor was proposed in a citywide traffic study conducted by the City in 2001. It is intended to provide new roadway capacity independent of the proposed North Sheridan Interchange improvements. Funding for the West Corridor has not been identified.

Proposed Alternatives

WYDOT developed and screened a range of alternatives as part of the North Sheridan Interchange environmental assessment (EA). As described in the *Alternatives Technical Memorandum* (HDR Engineering 2012),¹ after screening WYDOT has two remaining build alternatives—Alternative 2 and Modified Alternative 4—in addition to the No-Build Alternative that will be carried through the EA for further analysis. More information on these alternatives, including location figures, can be found in the *Alternatives Technical Memorandum*.

Alternative 1: No-Build: This alternative represents the conditions if major improvements are not completed as a result of this study. This alternative would not improve the existing geometric deficiencies, regional connectivity shortcomings, or deteriorating roadway segments within the three study areas.

Alternative 2: Rebuild at the Existing Interchange: This alternative would construct a tight diamond interchange about 750 feet north of the existing interchange and within the same general interchange footprint. The crossroad would connect with Decker Road using a free-flow T-intersection. The existing interchange would be demolished in order to build the new interchange. This alternative would include demolition of residences (including rental properties) and, potentially, relocation of a small business. This alternative would necessitate acquisition of land from the KOA tent site as well.

Modified Alternative 4: Diamond Interchange Close to Decker Road: This alternative would construct a diamond interchange about 2,300 feet west of existing Decker Road and about 4,560 feet northwest of the existing interchange. The “straight through” alignment of Decker Road would be eliminated and traffic would flow along a realigned North Main Street/Decker Road that would cross perpendicular to I-90. The existing North Sheridan Interchange would continue to carry traffic until construction of the proposed interchange is complete. Right-of-way would be required from currently undeveloped land. There would be no residential or commercial relocations.

Section 2: Existing Conditions

An air quality analysis was conducted as a part of the environmental assessment of the North Sheridan Interchange project in Sheridan, Wyoming. The purpose of this analysis was to evaluate the air quality impact of the proposed project in compliance with Federal transportation conformity rules found in 40 Code of Federal Regulations (CFR) 93, Subpart A.

¹ Alternatives at Decker Road and farther north of Modified Alternative 4 were considered but were screened out because they did not meet purpose and need. These interchange locations were not considered in the air quality analysis.

A portion of Sheridan County is designated by the U.S. Environmental Protection Agency (EPA) under 40 CFR 81 as an air quality nonattainment area for particles under 10 microns in diameter (PM₁₀) with respect to National Ambient Air Quality Standards (NAAQS). When a portion of a county is designated nonattainment for a pollutant, a description of the boundaries of the nonattainment area typically appears in 40 CFR 81. In this case, however, the nonattainment area is identified only as the City of Sheridan. The nonattainment area does not have specific, physical, and unchanging geographical boundaries. For the purpose of this analysis, it is assumed that some or all of the project is within the designated nonattainment area. Federal conformity rules (40 CFR 93) and guidance have been established to help ensure that federal actions or approvals do not impede state or local agency plans to attain or maintain compliance with the NAAQS. The entire study area is and always has been an attainment area for all pollutants other than PM₁₀.

In addition to a qualitative PM₁₀ analysis, this technical memorandum also includes a section on Mobile Source Air Toxics (MSATs).

Methodology

The affected environment was characterized in terms of its attainment status for all criteria pollutants, described in the following section. Monitoring data were reviewed to provide a historical record of the air quality within the study area. This air quality analysis is qualitative, for reasons explained further in this document.

Regulatory Overview

Transportation Conformity rules have two primary requirements for a project in a nonattainment or a maintenance area. One requirement is that a project must not adversely affect, or must be in conformity with, the emissions budget for the nonattainment or maintenance area. If a project is listed in the currently applicable Long-Range Transportation Plan or Transportation Improvement Program (TIP), the project is automatically assumed to be in conformance with the emissions budget. A second requirement under transportation conformity rules is that a project must not cause or contribute to existing localized or hot-spot concentrations greater than the NAAQS. The localized hot-spot analysis is sometimes a quantitative analysis involving emissions and dispersion modeling (e.g., in carbon monoxide [CO] nonattainment or maintenance areas). A qualitative analysis is currently required for PM₁₀ and PM_{2.5} nonattainment or maintenance areas, except that quantitative PM₁₀ and PM_{2.5} analysis is required for projects involving significant increases in diesel traffic.

The North Sheridan Interchange project is listed in the 2012 Wyoming State Transportation Improvement Plan (STIP) (dated September 19, 2011), which is a 6-year approved program spanning fiscal years 2012 through 2017². As a listed project within an approved STIP, transportation conformity requirements regarding emissions budgeting are met for PM₁₀. Because the area is a nonattainment area for PM₁₀, the project must not cause or contribute to any new localized PM₁₀ violations or increase the frequency or severity of any existing PM₁₀ violations within the nonattainment area. However, while EPA has issued guidance for quantitative PM₁₀ analysis, quantitative analyses are not required during a 2

² The Project is identified in the STIP under the heading Proposed Construction Fiscal Year: Future Year.

year grace period ending in December 2012. PM₁₀ is therefore addressed qualitatively in this report, in accordance with transportation conformity requirements.

FHWA has issued guidance on the analysis of MSATs for highway projects in relation to the National Environmental Policy Act (NEPA) process (FHWA 2009). The guidance describes a tiered approach for analyzing MSATs depending on specific project circumstances. A quantitative analysis is recommended for projects involving the creation or alteration of a major intermodal freight facility or projects that would affect roadways with projected annual average daily traffic (AADT) in the range of 140,000 or higher in the design year and would be in close proximity to concentrations of vulnerable populations (e.g., schools, nursing homes, hospitals, etc.). A qualitative analysis is recommended for projects that do not meet the above criteria but have a lesser potential for MSAT effects. No analysis is recommended for projects that have no meaningful impact on traffic volume or vehicle mix. Because the North Sheridan Interchange project is being proposed in part to support local land use plans that could have minor impacts on traffic volume or vehicle mix, a qualitative analysis is included in this report. (See Section 3 for more detail.)

Description of the Existing Condition

The study area is located in a designated attainment area with respect to NAAQS for ozone, which is affected by volatile organic compounds (VOCs), also referred to as hydrocarbons, nitrogen dioxide (NO₂), CO, sulfur dioxide (SO₂), and PM_{2.5} as identified by EPA under 40 CFR 81. The study area is located adjacent to a designated nonattainment area with respect to NAAQS for PM₁₀. The PM₁₀ nonattainment area has been in effect since 1990.

Table 1 provides a summary of air quality monitoring data for PM₁₀ in Sheridan County, taken from EPA's Air Quality System database (USEPA 2012). The data show that there have been two exceedances of the PM₁₀ 24-hour standard in the most recent 5 years of complete data. However, the EPA determines attainment for a region based on a 3-year average of data. Although the second-highest 24-hour concentration in 2007 is higher than the NAAQS, the standard allows for one exceedance per year, on average, over 3 years. The highest average of the second-high values over any three years of the 5 most recent years of available data (2006-2010) is approximately 111 microgram per cubic meter (µg/m³), which occurred in 2007-2009. Therefore, the monitoring data indicate compliance with the NAAQS over the period of these monitoring data. However, the area will officially remain designated as nonattainment until the state submits to EPA a demonstration of attainment and a plan to continuously maintain compliance, and EPA approves the demonstration and plan.

Table 1. Monitored Particulate Matter Under 10 Microns in Diameter in Sheridan County

Year	Location	Number of Observations	24-Hour H2H Concentration ^a	24-Hour NAAQS
2006	45 West 12th Street	216	82	150
2007	45 West 12th Street	237	158	
2008	45 West 12th Street	363	83	
2009	45 West 12th Street	361	92	
2010	45 West 12th Street	365	61	

^a High, Second High (H2H) value is shown. One exceedance of the 24-Hour NAAQS is allowed per year on average over 3 years. Concentrations shown are in $\mu\text{g}/\text{m}^3$.

There is one additional active PM_{10} monitor in Sheridan, located at 1301 Avon Street. The project is closer to the monitor shown in Table 1, and for all years, the concentrations at the monitor at 1301 Avon Street are lower than those at 45 West 12th Street.

In addition to PM_{10} , EPA's AirData database was queried for available monitoring data for all other criteria pollutants (CO, NO_2 , Ozone, SO_2 , $\text{PM}_{2.5}$, and lead) for the same years of data. The only other pollutant for which monitoring data are available is $\text{PM}_{2.5}$, which shows no exceedances of the 24-hour or annual $\text{PM}_{2.5}$ NAAQS in the last 5 years of monitored data.

Existing average daily traffic (ADT) volumes shown in Table 2 were taken from the *Purpose and Need Technical Memorandum* produced for the EA.

Table 2. Existing (2008) ADT

Road Segment	Existing ADT
I-90 (North of North Sheridan Interchange)	3,700
I-90 (South of North Sheridan Interchange)	3,800
North Main (North of Canfield Street)	6,400
North Main (South of Canfield Street)	8,000
Decker Road (North of Canfield Street)	1,700
Decker Road (North of I-90 Bridge)	1,700

Section 3: Project-Related Impacts

Methodology

The pollutant of concern in this analysis is PM_{10} . Other criteria pollutants, including VOCs, NO_x , CO, SO_2 , and $\text{PM}_{2.5}$, are not of serious concern for the project because the area is designated as attainment or unclassifiable/attainment for these pollutants. For roadway projects in nonattainment or maintenance areas, transportation conformity rules apply and hot-spot analyses are required for CO. Sheridan County is an attainment area with respect to CO and, therefore, is exempt from a quantitative CO hot-spot analysis. Therefore, the only required analysis is a qualitative hot-spot analysis for PM_{10} .

PM₁₀ Evaluation for all Alternatives – Qualitative Hot-Spot Analysis

The project is near a federally designated air quality nonattainment area for PM₁₀, but the area is being treated as though it is within the nonattainment area for reasons described in Section 1. Federal conformity rules (40 CFR 93) and guidance have been established to help ensure that federal actions or approvals do not impede state or local agency plans to attain or maintain compliance with NAAQS. At the time of analysis (February 2012), EPA has issued guidance for quantitative PM₁₀ analysis; however, quantitative analyses are not required during a 2-year grace period ending in December 2012. PM₁₀ is therefore addressed qualitatively in this report, in accordance with transportation conformity requirements.

The most recent PM₁₀ monitoring data (refer to Table 1) near the study area indicate concentrations within NAAQS, although the area monitors do reflect high concentrations occasionally. Although the project is being proposed, in part, to support local land use plans that could have minor impacts on traffic volume or vehicle mix, it is not intended or expected to bear the burden of significant traffic increases. The West Corridor project, proposed in 2001, is a planned north-south transportation corridor through the western part of Sheridan and is intended to provide city traffic roadway capacity independent of the proposed North Sheridan Interchange project, although funding has not been identified for construction of the West Corridor project.

Table 3. Future (2035) ADT – All Alternatives

Road Segment	Existing (2008)	No-Build		Alternative 2		Modified Alternative 4	
		With West Corridor	Without West Corridor	With West Corridor	Without West Corridor	With West Corridor	Without West Corridor
<i>I-90 – North of NSI*</i>	3,700	18,100	17,400	19,200	19,200	19,200	19,200
<i>I-90 – South of NSI*</i>	3,800	17,900	16,100	17,900	16,300	18,300	16,900
<i>North Main/Decker Road – South of I-90</i>	6,400	11,100	16,700	18,300	16,700	19,200	17,600
<i>North Main – South of Canfield Street</i>	8,000	16,200	18,800	14,900	18,900	15,800	17,200
<i>Decker Rd – North of Canfield Street</i>	1,700	10,000	11,400	17,300	18,700	18,300	19,300
<i>Decker Road – North of I-90 Bridge</i>	1,700	5,900	3,300	3,700	3,700	3,700	3,700

* North Sheridan Interchange

As shown in Table 3, most listed road segments show an increase in ADT between the No-Build and Build Alternatives while other road segments show a decrease, with or without including the West Corridor. Presumably, this is because improvement of the interchange will cause more drivers to use this interchange rather than other Sheridan interchanges for access to and from I-90. Regardless of whether the West Corridor is built, the highest individual ADT by road segment occurs under a Build scenario and, therefore, higher maximum hot-spot PM₁₀ concentrations would occur under a Build scenario, regardless of the alternative chosen. While ADT values for Alternative 2 and Modified Alternative 4 are similar, the Modified Alternative 4 Build scenario would result in an increase in vehicle miles travelled (VMT), due to a more indirect route compared to either the No-Build Alternative or Alternative 2. Additionally, the more direct route associated with Alternative 2 would result in a decrease in VMT, compared to the No-Build Alternative. Given that emission factors from mobile sources are on a gram per mile basis, the highest total PM₁₀ emissions would occur under a Modified Alternative 4 Build scenario, and the lowest total PM₁₀ emissions would occur under an Alternative 2 Build scenario.

The primary contributor to the PM₁₀ problem in the City of Sheridan is the resuspension of sand used on roadways during the winter to promote a safe driving environment. An implementation plan for PM₁₀ control strategies for Sheridan, including the general study area, was approved by the EPA (Federal Register, 1994). Because the project is at or beyond the northern extreme of the nonattainment area with a lower number of possible sanded roadways than in the middle of the nonattainment area, the PM₁₀ concentrations due to resuspension of sand would also be expected to be lower. Therefore, the highest PM₁₀ concentrations after project completion are not expected to be measurably different than they are today.

During project construction, some fugitive dust and construction equipment exhaust would contribute to very localized PM₁₀ concentrations. However, any fugitive dust from earth moving operations can be minimized by application of water or other dust-suppression materials (see Section 4).

Conformity Requirements and Summary of Criteria Met

Under 40 CFR 93.109, Table 1, the transportation conformity rules summarize conformity criteria for a “project from a conforming plan and TIP.” The criteria listed in this portion of Table 1 must be met to determine that the project is in conformity with Clean Air Act requirements. The applicable criteria from Table 1 of 40 CFR 93.109, and a brief description of how each are met, follows:

- 1) 93.114 – Currently conforming plan and TIP – Under 93.114, it states, “there must be a currently conforming transportation plan and currently conforming TIP at the time of project approval, or a project must meet the requirements in 93.104(f) during the 12-month lapse grace period.” The 2012 Wyoming STIP is a 6-year approved program spanning fiscal years 2012 through 2017 that was signed on September 19, 2011. Additionally, State Implementation Plan (SIP) submittals for Wyoming that have been approved by the EPA include the most recent approval on July 25, 2011 (Federal Register, 2011) relating to 8-hour ozone standards and an approval on June 23, 1994 (Federal Register, 1994) relating to PM₁₀ control strategies within an air quality maintenance plan for the City of Sheridan.

- 2) 93.115 – Projects from a transportation plan and TIP – The project is considered to be from a conforming program if it is included in a conforming TIP and the scope and budget of the project were adequate at the time of the TIP conformity determination to assess its contribution to the TIP’s regional emissions, and the project concept and scope have not changed significantly. As stated in Section 1, the project is included in Wyoming’s STIP; the scope and budget of the project has not changed since its inclusion in the STIP. A conditional requirement of 93.115 relating to the inclusion of project-related emission mitigation or control measures is not applicable.
- 3) 93.116 – CO and PM₁₀ hot spots – PM₁₀ quantitative hot-spot analysis is not required during a 2-year grace period ending in December 2012. A qualitative PM₁₀ evaluation has been completed as described above. A CO hot-spot analysis is not required because the area is attainment with respect to CO.
- 4) 93.117 – PM₁₀ control measures – PM₁₀ control measures included in the enforceable SIP for the area would continue to apply if the proposed project is implemented.

Thus, the project is in conformity with the current SIP and the Clean Air Act requirements. This addresses all applicable conformity requirements in 40 CFR 93.

Mobile Source Air Toxics (MSATs)

In recent years, there has been an increase in concern over pollutants classified as MSATs, in particular on some large highway projects. MSATs of greatest concern from motor vehicles include benzene, toluene, and other organic compounds that are emitted from vehicle exhausts when there is incomplete combustion of all fuel components. While concern over MSATs has been rising, emissions of these compounds have probably fallen substantially over the past couple decades, much in the way that other mobile source pollutant emissions (such as CO) have fallen. There are no long-term measurements to demonstrate this in the study area, but the same techniques of more complete combustion and catalytic oxidation that are being used to reduce CO emissions would also tend to reduce MSAT emissions. Nevertheless, FHWA has developed guidance for assessing MSAT impacts in light of recent concerns.

The FHWA guidance identifies three levels of analysis:

1. no analysis for projects with no potential for meaningful MSAT effects,
2. qualitative analysis for projects with low potential MSAT effects, and
3. quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

No analysis is needed for small projects such as those that might involve intersection improvements or other projects that do not significantly alter traffic patterns. Quantitative analysis is recommended for projects that would create heavy traffic volume and a concentrated location for diesel truck emissions, such as a new intermodal terminal or a freeway with AADT levels of 140,000 or more vehicles in the design year. Qualitative analysis is appropriate for other medium-to-large projects that do not reach the criterion for a quantitative analysis.

The project clearly does not require a quantitative analysis, as future ADT values shown in Table 2 are a fraction of the 140,000 threshold identified by FHWA. An argument could be made for no analysis, as much of the project's purpose is providing safe access to I-90, replacing deteriorating segments of I-90 and local streets, and complying with FHWA's interstate access policy. However, given that another project purpose is to support local land use plans, minor impacts on traffic volume or vehicle mix could occur. Therefore, a qualitative analysis using FHWA recommended language follows.

For each alternative in this EA, the amount of MSAT emitted would be generally proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. Alternative 2 would be relocated approximately 750 feet west of the existing interchange and Modified Alternative 4 would be relocated approximately 4,560 feet west of the existing interchange. This means shorter or longer travel distances to and from I-90 and destinations in the study area depending on direction of travel and intended travel location. For example, someone traveling from I-90 to the Wrench Ranch area would see a decrease in travel distance whereas someone traveling from I-90 to north Main Street area would see an increase in travel distance. Annually, travelers would see a reduction in the overall VMT of 369,147 with Alternative 2 from the No-Build Alternative and an increase in overall VMT of 1,395,711 with Modified Alternative 4 from the No-Build Alternative.

Because the VMT estimated for the No-Build Alternative would be higher than for Alternative 2, higher levels of MSATs are not expected from Alternative 2 compared with the No-Build. However, because the VMT estimated for the No-Build Alternative would be lower than for Modified Alternative 4, higher levels of MSATs are anticipated from Modified Alternative 4 compared with either the No-Build or Alternative 2.

Regardless of the alternative chosen, emissions would likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by 72 percent from 1999 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after considering any VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

Under each alternative, there may be localized areas where VMT would increase and other areas where VMT would decrease. Therefore, it is possible that localized increases and decreases in MSAT emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along the realignments of North Main Street and Decker Road under either Alternative 2 or Modified Alternative 4. The travel lanes associated with Alternative 2 and Modified Alternative 4 would provide better access for planned development in the Wrench Ranch area. Modified Alternative 4 would move some traffic away from homes and KOA along Decker Road (north of I-90) and Therefore, under each alternative there may be localized areas where ambient concentrations of MSAT would be higher under one alternative than the other, and especially in areas that result in new construction businesses near where the proposed project would be built. However, the magnitude and the duration of these potential increases cannot be reliably quantified because of incomplete or unavailable information in forecasting project-specific MSAT health impacts. Further, under all alternatives, overall future MSAT emissions are

expected to be substantially lower than today because of the implementation of EPA's vehicle and fuel regulations.

In summary, MSAT emissions in the study area are generally related directly to VMT, which is projected to be highest under Modified Alternative 4 and lowest under Alternative 2 as compared to the No-Build Alternative. Some localized areas could experience an increase in MSAT levels while other areas could experience a decrease in MSAT levels. However, EPA's vehicle and fuel regulations will bring about significantly lower MSAT levels for the area in the future than today (FHWA, 2009).

Section 4: Mitigation Measures

During construction, there is potential to generate windblown particulate matter called fugitive dust. Fugitive dust is generated during construction activities such as grading, scraping, and operation of the heavy equipment. The amount of fugitive dust generated depends on the total area of surface disturbance, soil type, and the amount of moisture in the soil. According to the Wyoming Air Quality Standards and Regulations, steps must be taken to minimize fugitive dust during construction activities. Frequent watering and/or chemical stabilization would be used to minimize fugitive dust (as recommended in Wyoming Air Quality Standards and Regulations, Chapter 3, Section 2f).

A hot mix asphalt plant may be needed during construction. WYDOT and/or their construction contractor would be responsible for obtaining the necessary permit. The temporary plant would need to conform to state regulations and would not substantially degrade air quality.

Section 5: Summary of Findings

A qualitative project-level air quality analysis for PM₁₀ has been conducted for the North Sheridan Interchange project, based on federal conformity guidance for highway projects. Projections of VMT indicate a decrease in VMT for Alternative 2 (compared to the No-Build) and an increase in VMT for Modified Alternative 4 (compared to the No-Build or Alternative 2). However, based on the project's location at the extreme north end of the nonattainment area where a lower number of possible sanded roadways exist, and the expected mitigation of fugitive dust during construction, it can be concluded that, under either Alternative, the project is not expected to cause or contribute to violations of the ambient air quality standards as a result of PM₁₀ emissions.

Even if the area near the proposed project (under either Alternative) is built out more than what currently exists, causing an increase in the number of possible sanded roadways, the number of possible sanded roadways is unlikely to match the density and number of possible sanded roadways farther south towards the center of the city. Recent monitoring data in Table 1 indicate compliance with the PM₁₀ NAAQS at a monitor location closer to the center of the City of Sheridan than the project, and presumably closer to areas with more possible sanded roadways. Based on these monitoring data, it is likely that an area of less possible sanded roadways would also indicate compliance with the PM₁₀ NAAQS. Although localized increases in MSAT levels may occur, EPA's vehicle and fuel regulations will bring about significantly lower MSAT levels for the area in the future than today.

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