

CHAPTER 12

AIR QUALITY

12.1 AFFECTED ENVIRONMENT

12.1.1 Introduction/Region of Influence

Santa Cruz County is in the North Central Coast Air Basin (NCCAB), which is designated Unclassified/ Attainment for the federal 8-hour ozone standard, Nonattainment Transitional for the state 1-hour ozone standard, and Nonattainment for the state PM₁₀ standard. The area is unclassified or attainment for the remainder of the state ambient air quality standards.

12.1.2 Regulatory Considerations

Ambient Air Quality Standards. The US Environmental Protection Agency (EPA) has established ambient air quality standards for several different pollutants, which are often referred to as criteria pollutants (ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, fine and inhalable particulate matter [PM_{2.5} and PM₁₀], and lead). Federal ambient air quality standards are based primarily on evidence of acute and chronic health effects.

Some states, including California, have adopted ambient air quality standards that are more stringent than the comparable federal standards or that address pollutants not covered by federal ambient air quality standards. Most state ambient air quality standards are based primarily on health effects data but can reflect other considerations, such as protection of crops and materials or avoidance of nuisance conditions (such as objectionable odors). Federal and state ambient air quality standards are presented in Table 12-1, including the new 8-hour ozone and PM_{2.5} standards. The EPA adopted the new ozone standard to protect more vulnerable populations, such as children and the elderly, from the effects of ozone. The Air Resources Board approved the 8-hour standard on April 28, 2005, and it became effective in early 2006 (CARB 2005).

The new PM_{2.5} standard was adopted based on research showing that regulating PM₁₀ did not adequately protect the population from cardiopulmonary and other health risks, nor did it adequately protect visibility. Sources of particulate matter include diesel emissions from large construction equipment and fugitive dust. While areas have not yet been designated as

**Table 12-1
Federal and State Ambient Air Quality Standards**

Pollutant	Symbol	Averaging Time	Standard, as parts per million		Standard, as micrograms per cubic meter		Violation Criteria	
			California	National	California	National	California	National
Ozone	O ₃	1 Hour	0.09	0.12	180	235	If exceeded	If exceeded on more than 3 days in a 3-year period
		8 hours	---	0.08	---	160	---	If exceeded by the mean of annual 4 th highest daily values for a 3-year period.
Carbon Monoxide	CO	8 Hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 Hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
		(Lake Tahoe only) 8 Hours	6	---	7,000	---	If exceeded	---
Inhalable Particulate Matter	PM ₁₀	Annual Geometric Mean	---	---	30	---	If exceeded	---
		Annual Arithmetic Mean	---	---	---	50	---	If exceeded as a 3-year single station average
		24 Hours	---	---	50	150	If exceeded	If exceeded by the mean of annual 99th percentile values over 3 years
Fine Particulate Matter	PM _{2.5}	Annual Arithmetic Mean	---	---	---	15	---	If exceeded as a 3-year spatial average of data from designated stations
		24 Hours	---	---	---	65	---	If exceeded by the mean of annual 98th percentile values over 3 years
Nitrogen Dioxide	NO ₂	Annual Average	---	0.053	---	100	---	If exceeded
		1 Hour	0.25	---	470	---	If exceeded	---
Sulfur Dioxide	SO ₂	Annual Average	---	0.03	---	80	---	If exceeded
		24 Hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year
		3 Hours	---	0.5	---	1,300	---	If exceeded on more than 1 day per year
Lead Particles	Pb	1 Hour	0.25	---	655	---	If exceeded	---
		Calendar Quarter 30 Days	---	---	---	1.5	---	If exceeded or exceeded
Sulfate Particles	SO ₄	24 Hours	---	---	25	---	If equaled or exceeded	---
Hydrogen Sulfide	H ₂ S	1 Hour	0.03	---	42	---	If equaled or exceeded	---
Vinyl Chloride	C ₂ H ₃ Cl	24 Hours	0.010	---	26	---	If equaled or exceeded	---

Source: California Air Resources Board 1991; 40 CFR §§ 50, 53, and 58.

Notes: All standards except national PM₁₀ and PM_{2.5} standards are based on measurements corrected to 25 degrees Celsius and 1 atm pressure. The national PM₁₀ and PM_{2.5} standards are based on direct flow volume data without correction to standard temperature and pressure. Decimal places shown for standards reflect the rounding precision used for evaluating compliance. Except for the 3-hour sulfur dioxide standard, the national standards shown are the primary (health effects) standards; the national 3-hour sulfur dioxide standard is a secondary (welfare effects) standard. US EPA promulgated the 8-hour ozone and revised particulate matter standards in July 1997. After legal challenges, the standards were upheld by a Supreme Court decision in February 2001 and by subsequent final action on remanded issues by the Court of Appeals, DC Circuit, in March 2002. The national 1-hour ozone standard will be rescinded for an area when EPA determines that the standard has been achieved in that area. Previous national PM₁₀ standards (which had different violation criteria than the September 1997 standards) will remain in effect for existing PM₁₀ nonattainment areas until EPA takes actions required by Section 172(e) of the Clean Air Act or approves emission control programs for the relevant PM₁₀ state implementation plan. Violation criteria for all standards except the national annual standard for PM_{2.5} are applied to data from individual monitoring sites. Violation criteria for the national annual standard for PM_{2.5} are applied to a spatial average of data from one or more community-oriented monitoring sites representative of exposures at neighborhood or larger spatial scales, 40 C.F.R. Part 58. The "10" in PM₁₀ and the "2.5" in PM_{2.5} are not particle size limits but identify the particle size class (aerodynamic equivalent diameters in microns) collected with 50 percent mass efficiency by certified sampling equipment. The maximum particle size collected by PM₁₀ samplers is about 50 microns aerodynamic equivalent diameter; the maximum particle size collected by PM_{2.5} samplers is about 6 microns aerodynamic equivalent diameter, 40 CFR Part 53.

nonattainment for the new 8-hour ozone and PM_{2.5} standards, California has been collecting monitoring data for these pollutants, as discussed in Section 12.1.3, below.

The Clean Air Act (CAA) requires federal agencies to comply with state and local air quality regulations. Section 176(c) of the act requires that federal agencies evaluate their proposed actions before proceeding to ensure consistency of such actions with the act and with applicable state air quality implementation plans. Proposed federal actions must not cause or contribute to new air quality standard violations, must not increase the frequency or severity of any existing violations, and must not delay the timely attainment of air quality standards.

The EPA has promulgated rules establishing conformity analysis procedures for transportation-related actions and for other (general) federal agency actions. The EPA general conformity rule requires preparation of a formal conformity determination document for federal actions, including federally funded actions and federally licensed or permitted actions, in federal nonattainment or maintenance areas, when the total direct and indirect emissions of nonattainment pollutants (or their precursors) exceed specified thresholds. Because the federal 1-hour standard for ozone was revoked in 2005, the NCCAB is classified as in attainment for all federal standards, and no conformity analysis is required in the NCCAB.

California Air Resources Board. California established air pollution control programs prior to the enactment of federal requirements. Responsibility for air quality management programs in California is divided between the California Air Resources Board (CARB), as the primary state air quality management agency, and air pollution control districts, as the primary local air quality management agencies. Federal CAA legislation in the 1970s resulted in a gradual merger of local and federal air quality programs.

Monterey Bay Unified Air Pollution Control District. Santa Cruz County falls under the jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). The MBUAPCD is responsible for developing regulations governing emissions of air pollution, permitting and inspecting stationary sources, and monitoring air quality. The MBUAPCD adopted air quality management plans in 1991, 1994, and 1997 to address attainment of the state air quality standards. The MBUAPCD published its most recent air quality management plan in 2004.

12.1.3 Existing Air Quality Conditions

The CAA requires each state to identify geographic areas that have ambient air quality in violation of federal standards. The status of areas with respect to federal standards is categorized as nonattainment, attainment (better than national standards), unclassifiable, or attainment/cannot be classified. Areas that violate a federal air quality standard are designated as nonattainment areas. Nonattainment designations for ozone, carbon monoxide, and PM₁₀ include subcategories indicating the severity of the air quality problem. Areas that comply with federal air quality standards are designated as attainment areas. Areas that have been reclassified from nonattainment to attainment are designated as attainment/maintenance areas. Areas that lack monitoring data to demonstrate attainment or nonattainment status are designated as unclassified areas and are treated as attainment areas for various regulatory purposes. California

uses a similar classification system for identifying areas with ambient air quality in violation of state standards.

Santa Cruz County is within the North Central Coast Air Basin, which also includes San Benito and Monterey counties, and is regulated by the MBUAPCD, which operates a network of monitoring sites throughout the district, including two in Santa Cruz. The Scotts Valley Drive station, located approximately seven miles upcoast of the project area, measures ozone only. In 2003 three violations of the state 1-hour standard, and two violations for the federal 8-hour standards were recorded for the North Central Coast Air Basin. No violations were recorded for 2004 (CARB 2006). The nearest monitoring site for PM₁₀ and PM_{2.5} is the Soquel Avenue monitoring site, located over two miles (three kilometers) upcoast of the project area. One violation of the PM₁₀ was recorded in 2004. No violations were recorded for the federal PM_{2.5} in 2004 and 2003 (McDonnell 2006).

12.1.4 Sensitive Receptors

The young, old, and infirm are more vulnerable to respiratory infections and other air quality-related health problems than the general population. For that reason, users and occupants of schools, hospitals, and nursing facilities are more sensitive to poor air quality conditions. Additionally, residential areas are considered sensitive receptors because people who are home all day, including the young and old, would be exposed to poor air quality conditions over a longer period. Receptors sensitive to air quality conditions in the project area include children and elderly residents near the project site and recreational users, such as joggers, who exercise near the proposed construction activities.

12.2 ENVIRONMENTAL CONSEQUENCES

Impact Methodology

Potential impacts from the projects described in Chapter 2 include construction and operational impacts. The level of impact is determined by comparing air pollutant emissions from each alternative to guidelines published by MBUAPCD. The MBUAPCD has established thresholds of significance to be used to evaluate air quality impacts during project construction and operation.

Thresholds of Significance

The threshold of significance for construction impacts is 82 pounds (37 kilograms) per day or greater of PM₁₀. Construction activity may result in a significant impact if the emissions exceed this level. According to the MBUAPCD CEQA guidelines, assuming 21.75 working weekdays per month and daily site watering, construction activities would result in significant impacts if 8.1 acres (3.2 hectares) per day were disturbed with minimal earthmoving; a significant impact also would result if grading and excavation were to occur over 2.2 acres (.9 hectare) per day.

The thresholds of significance for direct and indirect operational impacts are as follows. The MBUAPCD has published no specific threshold of significance for PM_{2.5}.

- Reactive organic gases (ROG): 137 pounds (62 kilograms)/day;
- Nitrogen oxides (NO_x): 137 pounds (62 kilograms)/day;

- Particulate matter (PM₁₀): 82 pounds (37 kilograms) /day;
- Carbon monoxide (CO): 550 pounds (250 kilograms)/day; and
- Sulfur oxides (SO_x): 150 pounds (68 kilograms) /day.

In this analysis, an alternative is considered to have a significant impact on air quality if it were to result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan; or
- Produce emissions that would violate state or federal ambient air quality standards or otherwise expose people to a significant health risk.

12.2.1 Full Bluff Armoring (Alternative 1)

The primary source of emissions under Alternative 1 is short-term construction emissions. Bluff stabilization, restroom demolition, stairway construction and replacement, and removal of concrete rubble and rock riprap would occur first under project 1. Improvements to drainage, road, parking, pedestrian and bicycle lanes (in the area between 32nd Avenue and Larch Lane), and improvements to Pleasure Point Park would occur second under project 2. Remaining improvements to drainage, road, parking, pedestrian and bicycle lanes would occur in The Hook area, with the construction of The Hook bluff protection structure under project 3. Construction of projects 1 and 2 would generate the highest level of construction emissions.

As discussed below, this alternative would result in a minor or no direct increase in air emissions. There likely would be minor decreased road and bluff maintenance requirements and minor increased landscaping maintenance requirements in Pleasure Point Park and along bicycle and pedestrian paths. Implementing this alternative may result in a minor indirect increase in vehicle traffic to the area if improvements attract more visitors to the area from outside the region.

Nonsignificant Impacts

Impact 12.1 Short-Term Construction Emissions

The air quality issues associated with construction include fugitive dust emissions from site grading and surface disturbance, emissions from construction equipment, and vehicle emissions associated with transport of rubble and riprap. Demolition of the abandoned restroom also would be a minor source of dust emissions. Construction-related emissions would be short-term and intermittent, occurring only during times of construction.

As discussed above, the MBUAPCD considers construction impacts to be significant if any of the projects were to generate 82 pounds per day or greater of PM₁₀. According to the MBUAPCD CEQA guidelines, a project would generate less than this level of PM₁₀ if less than 8.1 acres per day were disturbed with minimal earthmoving or less than 2.2 acres per day were disturbed with grading and excavation (assuming 21.75 working weekdays per month and daily site watering).

The most extensive earthwork would occur with construction of projects 1 and 3, during construction of the bluff protection structures and rubble/riprap removal. If the entire project

area were disturbed each day, which is unlikely, 1.6 acres (.64 hectare) of beach would be disturbed each day (1,400 feet [427 meters] long by 50 feet [15 meters] wide). An additional small acreage would be minimally disturbed atop the bluff from construction equipment operation. Because less than 2.2 acres (.89 hectare) would be disturbed with grading and excavation, construction would not result in significant air quality impacts. Subsequent construction of project 2 would result in less disturbance than under projects 1 and 3; therefore, construction of project 2 also would not have significant air quality impacts.

The major emissions from construction equipment and vehicle exhaust are nitrogen oxides, PM₁₀, and PM_{2.5}; almost all direct engine emissions of PM₁₀ would be in the PM_{2.5} size range. Exhaust emissions under this alternative would be minor because of the low numbers of construction equipment items operating at any one time, the nature of the construction activities proposed, and the relatively small size of areas being actively worked at any one time.

Mitigation 12.1

While not significant, fugitive dust emissions could be minimized by including standard dust control measures in detailed construction plans or the final grading plan, and including them in the construction contract for the firm hired to construct the projects. Such dust control measures may include the following:

- Sufficiently water all areas to be excavated or graded to prevent windblown dust and dust generation by vehicle traffic;
- Halt all clearing, grading, earthmoving, and excavating during periods of sustained strong winds (hourly average wind speeds of 15 mph [24 kph] or greater);
- During construction projects 2 and 3, water down all exposed earthen surfaces each day it does not rain at a frequency that prevents a significant amount of dust from leaving the construction zone;
- Sweep paved portions of the construction site at a frequency that controls wind-blown dust and dust generation by vehicle traffic;
- Use tarpaulins or other effective covers for piles stored on-site and for haul trucks that travel on streets;
- Keep equipment in good condition and well-tuned to minimize exhaust emissions; and
- Post a sign that is clearly visible to users on East Cliff Drive that provides the phone number for the public to call to register complaints about construction-related air quality problems. A single “disturbance coordinator” would be assigned to log in and respond to all calls. All verified problems would be resolved within 24 hours of registering the complaint.

In addition, it might be necessary to reduce diesel emissions, depending on the specific construction equipment used. Consequently, the following measure shall be included in detailed construction plans and in the contract for the firm hired to construct the projects:

Before construction begins on the wall portions of the project, the County DPW or its general contractor shall provide MBUAPCD with information on the number and types of equipment to be used, the ages and sizes of diesel engines, and the anticipated frequency of equipment use during construction. The MBUAPCD shall use this information to determine whether a diesel risk analysis is necessary. If so, and it is established that mitigation is necessary to reduce diesel emissions, the measures listed below shall be implemented to ensure compliance with MBUAPCD thresholds of significance and state health standards, unless MBUAPCD approves of comparable alternate mitigation:

- All pre-1994 model year and older diesel equipment shall be retrofitted with EPA-certified diesel oxidation catalyst filters, or the entire construction and demolition equipment fleet shall be fueled with B20 biodiesel fuel.
- The DPW or its general construction contractor shall maintain records of all purchases of diesel oxidation catalyst filters or B20 biodiesel fuel identified in the preceding bullet until all construction and demolition work has concluded.
- MBUAPCD shall have the right to inspect the construction and demolition equipment, as well as the records specified in the previous bullet at any time during construction or demolition.

Long-Term Operational Emissions

Implementing these projects would not result in a significant increase in operational emissions. While the amount and use of maintenance equipment for landscaping is not known, it likely would not be at a much greater level than current maintenance equipment. The addition of 10 more parking spaces would accommodate additional vehicles driving to the area each day. Table 12-2 summarizes the estimated emissions associated with the added vehicle traffic, assuming that each added parking space is used by three different vehicles each day.

As shown in Table 12-2, operational emissions would be less than the MBUAPCD thresholds of significance discussed above and less than the federal CAA conformity de minimis levels of 100 tons per year each of reactive organic compound and nitrogen oxide emissions. Therefore, operational impacts would be less than significant.

Effects on Sensitive Receptors

Short-term and long-term emissions would have no significant effect on sensitive receptors in the project area. Project emissions would be minor, and available monitoring data show no evidence of violations of federal ozone or PM_{2.5} standards.

Consistency with MBUAPCD Air Quality Management Plan

All three projects under this alternative are population-serving rather than population-generating; therefore, the projects would be consistent with the MBUAPCD Air Quality Management Plan.

**Table 12-2
Project-Related Vehicle Emissions and Thresholds of Significance**

	Vehicle Emissions				
	ROG	NO _x	CO	SO _x	PM ₁₀
Vehicle Emissions (per day)	0.74 lbs/ 0.33 kg	0.80 lbs/ 0.36 kg	7.36 lbs/ 3.33 kg	0.01 lbs/ 0.004 kg	2.38 lbs/ 1.07 kg
MBUAPCD threshold (per day)	137 lbs/ 62 kg	137 lbs/ 62 kg	550 lbs/ 250 kg	150lbs/ 68 kg	82 lbs/ 37 kg
Vehicle Emissions (per year)	0.14 tons/ 0.12 metric tons	0.14 tons/ 0.12 metric tons	1.34 tons/ 1.21 metric tons	0.01 tons/ 0.009 metric tons	0.43 tons/ 0.39 metric tons
CAA Conformity de minimis levels (per year)	100 tons/ 91 metric tons	100 tons/ 91 metric tons	NA	NA	NA

Notes: NA=Not Applicable

Most of the PM₁₀ emissions from vehicle engines will fall into the PM_{2.5} size range.

Calculations based on EMFAC7F vehicle emission rate model and the following assumptions:

10 added spaces, 3 turnovers per day, 365 days per year; average trip length for added vehicle trips of 10.65 miles (17.14 kilometers); average trip duration for added vehicle trips 16.38 minutes; speed distribution of added trips: 10% time at 15 mph (24 kph), 20% time at 25 mph (40 kph), 25% time at 35 mph (56 kph), 20% time at 45 mph (72 kph), 15% time at 55 mph (89 kph), 10% time at 65 mph (105 kph).

12.2.2 Partial Bluff Armoring with Full Improvements (Alternative 2)

Alternative 2 would provide a decreased level of bluff protection, compared to Alternative 1, in that the bluff would be armored to a lesser height but along the same length. Other improvements would be the same as those described for Alternative 1, subject to bluff stability.

Nonsignificant Impacts

Short-Term Construction Emissions

Construction impacts would be the same or slightly less than those described under Alternative 1. The amount of surface disturbance would be the same; therefore, fugitive dust emissions would be the same. As described in Alternative 1, these emissions would be less than the MBUAPCD threshold of significance for construction and thus would not be significant. Fugitive dust control measures and construction equipment emission reduction measures, such as those detailed in Alternative 1, should be implemented to further reduce fugitive dust emissions.

Long-Term Operational Emissions

Operational impacts under Alternative 2 would be similar to those described under Alternative 1. This alternative would require the same level of landscape maintenance equipment, though the decreased bluff stabilization may result in higher bluff maintenance than under Alternative 1. The same number of parking spaces would be developed, subject to bluff stability, so vehicle emissions would be the same or less than those shown in Table 12-2. These emissions would be well below the MBUAPCD thresholds of significance and well below federal CAA conformity de minimis levels. Therefore, this alternative would not result in any significant operational impacts.

Effects on Sensitive Receptors

Short-term and long-term emissions would have no significant effect on sensitive receptors in the project area. Project emissions would be minor, and available monitoring data show no evidence of violations of federal ozone or PM_{2.5} standards.

Consistency with MBUAPCD Air Quality Management Plan

All three projects under this alternative are population-serving rather than population-generating; therefore, the projects would be consistent with the MBUAPCD Air Quality Management Plan.

12.2.3 Partial Bluff Armoring with Limited Improvements (Alternative 3)

Alternative 3 would provide a decreased level of bluff protection compared to alternatives 1 and 2 in that the bluff would be armored to a lesser height but along the same length. No retaining wall improvements or reinforced backfill for build-out areas would be made; therefore, road and utilities may eventually fail. Other improvements would be the same as alternatives 1 and 2 except that one instead of two paths would be constructed, and fewer groundwater drainage improvements would occur.

Nonsignificant Impacts

Short-term Construction Emissions

Construction impacts would be slightly less than those described under alternatives 1 and 2. The amount of surface disturbance would be similar; therefore, fugitive dust emissions would be similar. As described in alternatives 1 and 2, these emissions would be less than the MBUAPCD threshold of significance for construction and thus not significant. Fugitive dust control measures and construction equipment emission reduction measures, such as those detailed in Alternative 1, should be implemented to further reduce fugitive dust emissions.

Long-term Operational Emissions

Operational impacts under Alternative 3 would be similar to those described under alternatives 1 and 2. Under this alternative, however, the bluff could fail and the road could be closed as a result of the lesser degree of bluff reinforcement and protection provided; if the road were closed, longer vehicle trips may be required to travel around this area, which may result in slightly higher vehicle exhaust emissions. This alternative would require the same level of landscape maintenance equipment, though the decreased bluff stabilization may result in higher bluff maintenance than under alternatives 1 and 2. The same number of parking spaces would be developed, subject to bluff stability, so vehicle emissions would be the same or less than shown in Table 12-2. These emissions would be well below the MBUAPCD thresholds of significance and well below federal CAA conformity de minimis levels. Therefore, this alternative would not result in any significant operational impacts.

Effects on Sensitive Receptors

Short-term and long-term emissions would have no significant effect on sensitive receptors in the project area. Project emissions would be minor, and available monitoring data show no evidence of violations of federal ozone or PM_{2.5} standards.

Consistency with MBUAPCD Air Quality Management Plan

All three projects under this alternative are population-serving rather than population-generating; therefore, the projects would be consistent with the MBUAPCD Air Quality Management Plan.

12.2.4 Groins and Notch Infilling (Alternative 4)

Alternative 4 would result in a lesser degree of construction than the other three alternatives. No bluff protection structures would be constructed, though three subtidal groins would be constructed to trap sand and form protective beaches, and undercut areas would be filled with shotcrete. All of the rubble not used would be removed from the beach, so similar levels of grading would occur as described under alternatives 1, 2, and 3. Other improvements would be the same as Alternative 3.

Nonsignificant Impacts

Short-term Construction Emissions

Construction impacts would be less than those described under the other alternatives. The amount of surface disturbance would be somewhat less; therefore, fugitive dust emissions would be less. As described in Alternative 1, these emissions would be less than the MBUAPCD threshold of significance for construction and thus not significant. Fugitive dust control measures and construction equipment emission reduction measures, such as those detailed in Alternative 1, should be implemented to further reduce fugitive dust emissions.

Long-term Operational Emissions

Operational impacts under Alternative 4 would be similar to those described under the other alternatives. This alternative would require less landscape maintenance equipment, while the lack of bluff protection structures may result in higher bluff maintenance than under the other alternatives. The same number of parking spaces would be developed, subject to bluff stability, so vehicle emissions would be the same or less than shown in Table 12-2. These emissions would be well below the MBUAPCD thresholds of significance and well below federal CAA conformity de minimis levels. Therefore, this alternative would not result in any significant operational impacts.

Effects on Sensitive Receptors

Short-term and long-term emissions would have no significant effect on sensitive receptors in the project area. Project emissions would be minor, and available monitoring data show no evidence of violations of federal ozone or PM_{2.5} standards.

Consistency with MBUAPCD Air Quality Management Plan

All three projects under this alternative are population-serving rather than population-generating; therefore, the projects would be consistent with the MBUAPCD Air Quality Management Plan.

12.2.5 No Action Alternative

The No Action Alternative would not result in any direct impacts on air quality because there would be no change in air quality emissions over current conditions. The No Action Alternative could have minor indirect air quality impacts if the bluff failed and the road was closed as a result

of not reinforcing and protecting the bluff. Closing the road could result in longer vehicle trips to travel around this area, which could result in slightly higher vehicle exhaust emissions.

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