

Grazing Yak Solar Project Air Quality Management Plan

The purpose and intent of this Air Quality Management Plan for the Grazing Yak Solar Project (Project) is to ensure that the Project complies with the air quality standards as described in the El Paso County Land Development Code Section 6.3.1 and all applicable state and federal air quality standards. The Environmental Protection Agency (EPA) sets forth the National Ambient Air Quality Standards (NAAQS) pursuant to the Clean Air Act. The standards identify six pollutants that are considered harmful to people's health in excess of the NAAQS (**Table 1: National Ambient Air Quality Standards**). The Project is located in the Colorado Springs air quality monitoring region as identified by the Colorado Department of Public Health and Environment (CDPHE). Multiple air quality monitoring stations are located within the Colorado Springs area; however, no monitoring stations are located further east of the City of Colorado Springs limits. As of October 1, 2018, the air quality within the Colorado Springs region was considered "Good" (CDPHE 2018). In addition, data reported on the EPA Green Book did not indicate that El Paso County was considered a non-attainment area as of October 1, 2018. Therefore, current air quality of the Project and general vicinity can be considered "Good" at this time.

Air quality impacts associated with construction projects generally arise from fugitive dust generation during the operation of heavy equipment. Large earth-moving equipment, skid loaders, trucks, and other mobile sources may be powered by diesel or gasoline and are sources of combustion emissions, which include nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM), small amounts of sulfur dioxide (SO₂), trace amounts of hazardous air pollutants (HAPs), and greenhouse gas (GHG). Seasonal winds have the potential to move emissions outside of the Project area; however, emissions will be minimal and transient in nature during the period of construction (six to eight months) and will not significantly contribute to the ozone levels in El Paso County.

It is anticipated that construction will result in additional particulate matter in the Colorado Springs airshed in the form of dust. Water will be applied regularly during construction to prevent the addition of particulate matter into the local air shed in the form of dust. Seasonal patterns will have minimal impacts on emissions and fugitive dust emission. During construction, water will be applied more regularly in the spring and summer months since evaporative rates, and sometimes winds, are greater during the warmer seasons. Water will be applied according to best management practices (BMPs) as outlined in the Project Stormwater Management Plan (SWMP).

Colorado administers the NAAQS through issuance of the Air Pollutant Emission Notice (APEN). The Project will not exceed the NAAQS and will follow BMPs to ensure that the production of dust during construction will be controlled by the regular application of water to the Project area. The Project will obtain an APEN permit prior to construction during the site development plan stage.

It is anticipated that the Project will have a minimal net effect on ambient air quality. Large earth-moving equipment, skid loaders, and other heavy equipment will emit negligible amounts of diesel exhaust during construction; however, emissions will not exceed NAAQS. The amount of diesel exhaust emissions will not vary throughout the period of construction. The Project will mitigate impacts to air quality per the El Paso County Land Development Code Section 6.3.1(4)(b) Dust Control Measures. Dust will result from the movement of heavy equipment over areas composed of dirt and/or gravel. Dust will not vary throughout the period of construction; however, more dust could potentially be created during hotter drier days throughout the summer months. Dust will be controlled throughout the period of construction through regular water applications by water trucks to minimize the production of dust. Water will be obtained from a private well nearby the Project.

Table 1. National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3-month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide (NO ₂)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean
Ozone (O ₃)		primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	annual mean, averaged over 3 years

		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO ₂)		primary	1 hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect. **(2)** The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level. **(3)** Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards. **(4)** The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

LITERATURE CITED

CDPHE (Colorado Department of Health and Environment). 2018. Species Profiles for Texas. Accessed October 2018. Available online at: <https://www.colorado.gov/airquality/default.aspx>