

RULE 214.2 PAVING UNPAVED PUBLIC ROADS EMISSION REDUCTION
CREDITS (PERC²s)
(Adopted 04/18/2017)

A. Rule Purpose and Applicability

A.1 Purpose

- A.1.a To establish a recognized procedure for quantifying and certifying emission reductions for the voluntary paving of unpaved public roads, and issuing the resulting Paving Emission Reduction Credit (PERC) certificates.
- A.1.b To provide the process by which PERC certificates, which are issued for emission reductions resulting from the voluntary paving of unpaved public roads, may be issued to meet new source review Offset requirements.
- A.1.c To define eligibility standards, quantitative procedures, and administrative practices to ensure that PERCs are Real, Permanent, Quantifiable, Enforceable, and Surplus.

A.2 Applicability

- A.2.a This regulation shall apply to all applicants subject to the requirements of District Rule 207, New and Modified Stationary Source Review, who elect to generate PERCs resulting from the voluntary paving of unpaved public roads, when such paving has occurred after 04/18/2017.
- A.2.b This regulation shall apply to all transactions involving PM₁₀ PERCs resulting from the voluntary paving of unpaved public roads.

B. Definitions

Terms applicable to this Rule are defined below. Terms not found below are defined in Rule 207(B), Definitions.

- B.1 Degraded: a Roadway Segment with a pavement condition score of less than 30% according to the pavement condition analysis criteria listed in the American Association of State Highway and Transportation Officials (AASHTO) Pavement Management Guide, 2012, as determined by a state or local government with maintenance jurisdiction over the Roadway Segment.

- B.2 Paving Emissions Reduction Credits (PERCs): Emissions Reduction Credits issued pursuant to this Rule for the voluntary paving of unpaved public roads and subject to the use limitations contained in Subsection C.14 herein.
 - B.3 Roadway Segment: a section of roadway between two definitive points, including but not limited to intersections, road ends or other demarcation points, which define a change in the roadway structure. The length of such segment shall be expressed in miles and tenths of miles.
- C. PERCs Application Procedures
- C.1 Applications

All applications for PERCs shall contain all of the information required in the Imperial County Air Pollution Control District General Permit Application form:

 - C.1.a The name of applicant, responsible person (the responsible person will be the addressee of all official correspondence regarding the application and PERCs), title, mailing address, telephone number, and type of organization (corporation, government, individual, etc.).
 - C.1.b A brief description of the project/activity (generation of PERCs to offset emissions for a specific project), location of the project/activity (identify the unpaved roads targeted for paving), property owner (county, city, other), person in charge, title, telephone number, anticipated date of construction, and anticipated life of the project.
 - C.1.c Estimated PM₁₀ emission reductions: uncontrolled (unpaved public road) and controlled (after paving).
 - C.1.d Request for confidential handling of attached (all documents which are requested to be maintained as confidential shall be clearly and visibly labeled as CONFIDENTIAL).
 - C.1.e Date and signature of responsible person.
 - C.2 All applications for PERCs shall also include a PERC Generation Plan that consists of the following:
 - C.2.a Information identifying the particular new or modified facility or emissions unit(s) requiring Offsets pursuant to District Rule 207, New and Modified Stationary Source Review;

- C.2.b Information sufficient to identify the source of the proposed PERCs;
- C.2.c Information sufficient to allow for the performance of the calculations specified within this rule;
- C.2.d A statement from the applicant that the unpaved public road(s) will be paved according to local government paving standards, as applicable. For Imperial County specific paving projects, the unpaved public road(s) shall be paved according to Imperial County road paving standards;
- C.2.e A letter of agreement from the appropriate state or local government stating that each Roadway Segment:
- i. Has been inspected;
 - ii. Has been described as being either gravel- or non-gravel-surfaced;
 - iii. Will be adopted into the local transportation network, if not already part of the network;
 - iv. Will be maintained; and
 - v. A statement from the applicant indicating that any necessary environmental review for the paving of each Roadway Segment required pursuant to the California Environmental Quality Act (CEQA) has been performed. The applicant shall provide a copy of such CEQA review upon District request, including a copy of any CEQA required environmental review of the construction and operation of a new or modified stationary source. The statement shall include the applicant's certification that the CEQA review considered the cumulative effects of other approved road paving projects including a review of the record of completed road paving projects maintained by the District pursuant to C.11.
- C.2.f PERC²s Generation Plan shall contain all of the following additional information:
- i. A list of unpaved public roads that are proposed for paving, including: location; length(s); Roadway Segment

identification(s); a map, diagram or aerial photograph with the specific segment(s) indicated;

- ii. Calculations that quantify vehicle miles traveled (VMT) for each Roadway Segment, including all supporting data from traffic counts performed pursuant to Section C.3; and,
- iii. Calculations that quantify emissions from each Roadway Segment before and after paving, including all results and supporting data from any source-specific testing performed pursuant to Section E.
- iv. A statement of whether the roadway or roadway segment to be paved is subject to Rule 805, Paved and Unpaved Roads, Section E.1 (Unpaved Haul/Access Roads) or Section E.2 (Unpaved Roads). Roadways or roadway segments not in compliance with Rule 805 shall not be considered for PERC generation.
- v. If the roadway or roadway segment to be paved is subject to Rule 805, Section E.1 or E.2, whether the roadway or roadway segment is in compliance with Rule 805, Section F, Best Available Control Measures. Identify the specific measures used to control fugitive dust that are currently applied.

No application for PERCs will be acceptable until the applicable District fees are paid.

C.3 Determination of Vehicle Miles Traveled (VMT)

VMT information required by subsection C.2.f.ii shall be calculated using two separate traffic counts for each Roadway Segment, as follows:

- C.3.a Each traffic count shall measure vehicular traffic over a 48-hour period, which may consist of two non-consecutive 24-hour periods. For averaging within a traffic count, vehicular traffic shall be considered zero for each hour not monitored continuously during any given 24-hour period.
- C.3.b Traffic count shall be a representative sample of the traffic count experienced by the Roadway Segment(s). One traffic count shall be conducted on non-holiday weekdays, and one traffic count shall be conducted on a non-holiday weekend.

C.3.c The VMT for each Roadway Segment shall be calculated by multiplying the time weighted average of the two separate traffic counts for the Roadway Segment by the Roadway Segment's length in miles to the nearest 1/10 of a mile.

C.4 Determination of Emissions

Emissions from unpaved and paved public roads required by subsection C.2.f.iii shall be calculated using the equations in Section D, and as follows:

C.4.a The equations in Section D shall be used to determine the PM₁₀ emission factor (in terms of pounds per VMT) for each Roadway Segment in an unpaved and paved condition;

C.4.b Any default values contained in Section D shall be used to calculate PM₁₀ emission factors. Source-specific values for material silt and moisture content (*s* and *M*) shall be obtained by the applicant in accordance with the test methods of Section E;

C.4.c The annual quantity of PM₁₀ emissions emitted from each Roadway Segment shall be calculated by multiplying the PM₁₀ emission factor by the annual VMT for each Roadway Segment as determined pursuant to subsection C.3; and,

C.4.d The PM₁₀ emission reduction associated with paving an unpaved public Roadway Segment shall be calculated as the difference, in tons per year, between the emissions from the road in the unpaved condition and the emissions from the road in the paved condition. Vehicle exhaust, brake wear and tire wear emissions cancel and are ignored for the purposes of this calculation.

C.5 The District shall determine whether the PERC Application and the PERC Generation Plan are complete no later than 30 calendar days following receipt of these documents, or after a longer time period agreed upon in writing by both the applicant and the District.

C.6 If the District determines that the PERC Application and the PERC Generation Plan are not complete, the applicant shall be notified in writing of the decision, specifying the additional information that is required. The applicant shall have 90 days to submit the requested information. Upon receipt of all requested information, the District shall have 30 days to determine completeness. If no data is submitted or the application is still incomplete, the District may cancel the PERC Application and the PERC

Generation Plan with written notification to the applicant. Upon determination that the PERC Application and the PERC Generation Plan are complete, the District shall notify the applicant in writing.

- C.7 Withdrawal of a PERC Application and a PERC Generation Plan by an applicant shall result in the cancellation of the application; any re-submittal shall be evaluated using a new emission calculation as on the date of the re-submittal.
- C.8 Upon acceptance of a Complete PERC Application and a PERC Generation Plan, the District shall have 60 days to perform an initial assessment of the application. Upon completion of this initial assessment, the District shall provide notice of approval of the PERC Application and the PERC Generation Plan to the United States Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), all persons who are included on a list of persons requesting notice, and in a newspaper of local circulation. The notice shall specify the applicant; a list of unpaved roads proposed for paving pursuant to the PERC Generation Plan including location(s) and length(s) of Roadway Segment(s); the quantity of emission reductions requested; and the name, address and telephone number of a person from whom additional information may be obtained. Publication of the notice shall commence a 30-day public comment period during which the District shall accept written comments on the merits of the PERC Application and the PERC Generation Plan.
- C.9 Upon conclusion of the 30-day public review period, after review and response of comments, if any, and upon payment of the appropriate analysis fee, if any, the District shall have 30 days to approve or disapprove the PERC Application and the PERC Generation Plan.
- C.10 The District shall provide written notice of the final action to the applicant, USEPA, and CARB and shall publish such notice on the District's website or a newspaper of general circulation within the District. The District shall make available for public inspection at the District office a copy of the notice submitted for publication and all supporting documents.

C.11 Demonstration of Completion of Paving Proposed Roadway Segments.

Upon the completion of the paving of any Roadway Segment(s) specified in a PERC Generation Plan, the applicant shall submit a summary report to the District that identifies the Roadway Segment(s) paved, the date paving was completed, and include a copy of the local or state government report evaluating the post-paving condition of each paved Roadway Segment. The District shall maintain publicly accessible record of all such completed paved Roadway Segments, including on the District's website.

C.12 Issuing PERC Certificates

C.12.a The District may grant a PERC Certificate only after the emission reductions have actually occurred.

C.12.b After the applicant demonstrates the completion of the paving of all Roadway Segments contained in the PERC Generation Plan, the District shall issue the PERCs by including the appropriate information on the PERC bank and issuing a PERC Certificate. Title to such PERC Certificate shall be made available for public inspection.

C.12.c Each PERC Certificate shall be numbered consecutively, bear the date of issuance, be signed by a District official, and bear the seal of the District. One copy of the PERC Certificate shall be retained by the District and the original shall be delivered to the owner or party acting on behalf of the owner. The record of issued PERC shall be retained by the District. Delivery by the District of a PERC to an owner shall be accomplished in Person or by registered mail. The Person accepting the PERC must sign a receipt and provide such proof of identity as the District shall require.

C.12.d PERCs may be used by the owner of the PERC Certificate to compensate for emission increases resulting from the operation of the new or modified Source(s) of air pollution specified in the PERC Generation Plan. Their ultimate value will be determined based on the program under which they will be used and the attainment/nonattainment status of an area at the time of their use.

C.13 Standards for Granting PERCs

C.13.a The District shall issue PERCs pursuant to this Rule only if the emission reductions are Real, Quantifiable, Permanent, Enforceable and Surplus.

- C.13.b PERCs may be used as Offsets in accordance with applicable District, state, and federal rules and regulations.
 - C.13.c PERCs shall not be used to offset increases in Toxic Air Contaminants.
 - C.13.d The District shall issue PERCs pursuant to this Rule only for a particular new or modified facility or emission unit requiring PM₁₀ Offsets pursuant to Rule 207, New and Modified Stationary Source Review, in the amount determined necessary for construction of the new or modified facility.
 - C.13.e The District shall independently verify that the CEQA review for the road paving projects used to generate PERCs fully considered the cumulative effects on other approved PERC generating public health.
- C.14 Use of PERCs
- C.14.a PERCs may be used by the applicant to provide Offsets only for a new or modified facility or emissions unit requiring Offsets pursuant to Rule 207, New and Modified Stationary Source Review.
 - C.14.b PERCs may be used by the applicant to provide Offsets only if the location of the Roadway Segment generating the PERCs is in an area which has a PM₁₀ attainment status designation that has an equal or higher nonattainment classification than the location of the new or modified stationary source.
 - C.14.c If the amount of PERCs granted is greater than the amount of Offsets required for the new or modified facility or emissions unit, the excess PERCs shall be retired no more than one (1) year after the startup of the new or modified facility or emissions unit.
 - C.14.d If the amount of PERCs granted is less than the amount of Offsets required for the new or modified facility or emissions unit, then prior to the issuance of the Permit to Operate, the applicant shall either:
 - i. Obtain additional ERCs or PERCs pursuant to the provisions of this Rule and Rule 214, sufficient to make up for the shortfall; or

- ii. Accept operational limitations such that the permitted emissions of the new or modified facility or emissions unit(s) are equivalent to the amount of Offsets surrendered.

C.15 Maintenance of PERCs

C.15.a After paving a given Roadway Segment(s), the applicant shall, no less frequently than once every five years, obtain a copy of the local or state government's report evaluating the condition of the paved Roadway Segment(s), and determine if the report indicates that the Roadway Segment(s) is Degraded. The applicant shall submit a copy of the report, and a statement identifying any and all Degraded Roadway Segments, to the District within 60 days of receipt of the report. Failure to submit the periodic reports required by this section shall result in the Roadway Segment being classified as Degraded.

C.15.b Within 12 months of the submittal to the District of a statement identifying a Degraded Roadway Segment(s), or failure of such submittal, the applicant shall provide replacement emission reductions by:

- i. Repaving the Degraded Roadway Segment(s) identified in Subsection C.15.a; or
- ii. Surrendering PERC certificates issued pursuant to this Rule or generating additional PERCs pursuant to the provisions of this Rule equivalent to the total emission reductions approved by the District for the Degraded Roadway Segment(s).

D. Emission Calculation Equations

D.1 Equation 1 (from USEPA AP-42 §13.2.2, November 2006) shall be used to estimate the quantity of PM₁₀ emissions from unpaved roads, using the default values provided below and a Roadway Segment-specific value for *s* and *M*, as determined by the applicable method specified in Section E:

Equation 1:

$$Eu = \frac{(k) \left(\frac{s}{12}\right)^a \left(\frac{S}{30}\right)^d}{\left(\frac{M}{0.5}\right)^c} - C$$

Where:

- Eu = the unpaved road PM_{10} emission factor with units of pounds per vehicle mile traveled.
- k = empirical constant (1.8 for PM_{10}) for units of lbs per VMT.
- s = the surface material silt content with units percent. Material Silt content shall be determined by the applicable method specified in Section E.
- a = empirical constant (1 for PM_{10}).
- S = the mean vehicle speed with units of miles per hour (a default value equal to 20 mph for all unpaved roads).
- d = empirical constant (0.5 for PM_{10}).
- M = surface material moisture content with units percent. Moisture content shall be determined by the applicable method specified in Section E.
- c = empirical constant (0.2 for PM_{10}).
- C = emission factor for current vehicle fleet exhaust, brake wear and tire wear from USEPA MOVES model.

- D.2 Equation 2 (from USEPA AP-42 §13.2.1) shall be used to estimate the quantity of PM_{10} emissions from re-suspension of loose material on a road surface due to vehicle travel on a dry paved Roadway Segment after paving:

Equation 2:

$$Ep = k(sL)^{0.91}W^{1.02}$$

Where:

- Ep = the paved road PM_{10} emission factor with units pounds per vehicle mile traveled.
- k = empirical constant (0.0022 for PM_{10}) for units of lbs per VMT.
- sL = the road surface silt loading with units of grams per square meter (a default value equal to 2.4 for all paved roads).
- W = average weight of vehicles traveling the road with units of tons (a default value equal to 3.0 for all paved roads).

- D.3 Calculation of Quantity of PM_{10} Emission Reductions

The PM_{10} emission reductions associated with paving an unpaved Roadway Segment shall be calculated as the difference, in tons per year, between the emissions from the road in the unpaved condition and the emissions from the road in the paved condition pursuant to Section C.4.

- E. Test Methods

Roadway Segment surface material silt and moisture content shall be determined by using the methodologies specified in Appendices C.1 and C.2 of USEPA AP-42 "Compilation of Air Pollutant Emission Factors" – Fifth Edition or any other method approved by USEPA and/or CARB.

F. Recordkeeping

The owner or operator shall maintain any and all records required by this Rule for at least thirty (30) years after the date of each entry, and required records shall be provided to the District, state or federal personnel upon request.