EPA Form No. 5900-340 EPA ICR No. 1230.27 OMB Control No. 2060-0003 Approval expires 4/30/2017



United States Environmental Protection Agency General Air Quality Permit for New or Modified Minor Sources of Air Pollution in Indian Country

https://www.epa.gov/tribal-air/tribal-minor-new-source-review

Request for Coverage under the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing, and Screening Facilities in Indian

Country

Last Modified: January 4, 2017 Version 1.0

Prior to construction or modification, complete this application and submit it to your reviewing authority. A list of reviewing authorities, their areas of coverage, and contact information can be found in Attachment D to the General Air Quality Permit for Minor Source Stone Quarrying, Crushing, and Screening Facilities or visit: <u>https://www.epa.gov/tribal-air/5-source-categories-stone-quarrying-crushing-and-screening-facilities-final-rule</u>.

For questions regarding this application please contact your reviewing authority.

For instructions on completing this application please see the document "Instructions for Requesting Coverage under the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing, and Screening Facilities in Indian Country."

Section 1: Contact Information

1. Business Name: CPM Development Corporation	2. Date: November 18, 2020
3. Site Address(es): 73569 McKay Lane, Pendleton, OR 97801	4. County(ies): Umatilla County
5. Name of Operator at Site(s) (if different from owner): Cary Gornick	6. Phone of Operator or Contact at Site(s) (if different from owner): (509) 202-0309
7. Owner: Jana McDonald	8. Telephone Number of Owner: (509) 534-6221
9. Owner's Mailing Address: CPM Development Corporation P.O. Box 3366 Spokane, WA 99220	10.Send all correspondence regarding this application to:Company Name:CPM Development Corporationc/o:Jana McDonaldAddress:P.O. Box 3366Spokane, WA 99220
 11. Authorized contact regarding this permit application: Name: Beth Fifield Hodgson, P.E. Title: Principal Engineer Phone: (509) 328-7500 	Email: beth@springenvironmental.com FAX: (509) 328-7501

Section 2: Facility Information for Requesting Coverage under the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing and Screening Facilities

12. Please list all of the site locations for which you want approval to locate your stone quarrying, crushing, and screening facility. Include the site name (if any), street address, city, state, and name of the Indian Reservation. If needed, use additional paper. You may seek approval for additional locations in the future.

Site Name	Street Address	City/Town	Area of Indian Country
Pendleton Mission	73569 McKay Lane	Pendleton	Umatilla Reservation

13. This application is for (check all that apply):

Construction/relocation of a new stone quarrying, crushing, and screening facility in Indian country (please describe the proposed new source).

Add a new location for your stone quarrying, crushing, and screening facility already covered by the GeneralPermit. (Please describe the proposed new location.)

Modification of an existing stone quarrying, crushing, and screening facility. Please describe the modification below. The definition of "modification" can be found at 40 CFR 49.152(d), and in the "Instructions" document.

A stone quarrying, crushing, and screening operation co-located with a hot mix asphalt operation and seeking to limit combined PTE to less than 100 tpy for NSR-regulated pollutants. You must comply with Conditions 16. and 19.e in the General Permit. This option is not available in serious, severe, or extreme ozone nonattainment areas and serious CO nonattainment areas. (Please describe the proposed source.)
 <u>This crushing plant is currently operating outside Indian Country. The purpose of this application is to extend operation onto the Umatilla Reservation.</u>

Stationary (fixed) stone quarrying, crushing, and screening facility

\underline{X} Portable stone quarrying, crushing, and screening facility								
Relocation of an existing stone quarrying, crushing, and screening facility								
14. North American Industry Classification System/Standard Industrial Classification Code and/or description of the facility: 212321 NAICS (Construction Sand and Gravel Mining) / 1442 SIC (Construction Sand and Gravel)								
15. Will your new or modified facility be located in an ozone nonattainment area? Information on the ozone attainment status of the area where your facility is or will be located can be found at: <u>https://www.epa.gov/green-book</u> .								
Yes X No								
If you answered 'Yes,' specify the classification of the ozone nonattainment area:								
Marginal Moderate Serious Severe Extreme								
16. Will your new or modified facility be located in a particulate matter (PM ₁₀ /PM _{2.5}) nonattainment area? Information on the attainment status of the area where your facility is or will be located can be found at: https://www.epa.gov/green-book								
Yes X No								
If you answered 'Yes,' specify the classification of the $PM_{10}/PM_{2.5}$ nonattainment area:								
Moderate Serious								

17. Will the PTE of your new facility or the increase in potential emissions from your modified existing facility be equal to or above the applicable minor NSR thresholds listed below for ANY of the listed pollutants, both in tpy? Emissions from your facility may be calculated using the PTE calculator available online at: https://www.epa.gov/tribal-air/5-source-categories-stone-quarrying-crushing-and-screening-facilities-final-rule.

Be sure to include all new or modified emission units at your facility.

Pollutant	Attainment Area	Nonattainment Area
СО	10 tpy	5 tpy
Particulate Matter (PM)	10 tpy	5 tpy
Particulate Matter		
(PM ₁₀)	5 tpy	1 tpy
Particulate Matter		
(PM _{2.5})	3 tpy	0.6 tpy
Sulfur Dioxide (SO ₂)	10 tpy	5 tpy
Nitrogen Oxides (NO _x)	10 tpy	5 tpy
Volatile Organic		
Compounds (VOC)	5 tpy	2 tpy



If you answered **'No,'** your source is likely exempt from the minor NSR program. Please contact your reviewing authority to confirm that your facility will not need a permit. If you answered **'Yes,'** continue on to the next question.

18. If located in an attainment, attainment/unclassifiable or unclassifiable area, will the PTE of your new or modified facility be less than 250 tpy for PM, PM₁₀, PM_{2.5}, VOC, NO_x, CO, and SO₂ each individually? Be sure to include all existing, new, and modified emission units at the facility.



If you answered **'No,'** your source does not qualify for the General Permit. Please contact your reviewing authority to apply for a site-specific permit. If you answered **'Yes,'** continue on to the nextquestion.

19. If located in a nonattainment area, will the PTE of your facility for the particular nonattainment pollutant be less than the NSR major source thresholds below for ALL pollutants? Be sure to include all existing, new, and modified emission units at the facility.

Pollutant	Nonattainment Classification	NSR Major Source Threshold
Ozone	Marginal	100 tpy of VOC or NO _X
	Moderate	100 tpy of VOC or NO_X
	Serious	50 tpy of VOC or NO _X
	Severe	25 tpy of VOC or NO_X
	Extreme	10 tpy of VOC or NO_X
PM ₁₀	Moderate	100 tpy
	Serious	70 tpy
CO	Moderate	100 tpy
	Serious	50 tpy
SO ₂ , NO ₂ , PM _{2.5}	No nonattainment classification	100 tpy

No

X N/A - Not located in any nonattainment area

If you answered **'No,'** your source does not qualify for the General Permit. Please contact reviewing authorityto apply for a site-specific permit. If you answered **'Yes' or 'N/A,'** continue on to the next question.

20. What is the projected monthly throughput of rock, stone, sand, gravel, and aggregate (in tons) to be processed atyour new or modified facility?

730,000 tons per month

Yes

21. What is the projected monthly usage of diesel fuel (in gallons) for all stationary combustion sources (e.g., boilers) at your new or modified facility?

18,275 gallons per month

Section 3: Technical Information for Requesting Coverage under the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing and Screening Facilities

Information regarding the emission units at your facility is required by 40 CFR 49.154 and 40.160. Please provide the information below for all equipment at your facility. For each emissions unit, include supporting documentation for the PTE of the unit with your Request for Coverage. In addition, for existing emissions units, include the most recent actual annual emissions. See 40 CFR 49.154(a)(2). (For more information on how to calculate actual emissions, go to: https://www.epa.gov/tribal-air/registration-existing-true-minor-sources-air-pollution-indian-country.) As needed, please include other relevant information with your Request for Coverage (including any equipment not identified below).

22. Facility Equipment

List all equipment at the site that is or will be owned, leased or operated by the applicant, as well as the maximum rated capacity in tons per hour, Btu, or horsepower. If needed to list all equipment, additional pages may be photocopied and added after this one.

Unit ID #			Type Descript	ion	Maximum Rated Capacity	Make/ Model	Date of Construction (mm/dd/yyyy)	
	Crusher	Screener	Internal	Other	Other	Tons per Hour		
			Engine	Exnaust Unit	(please specify)	(tph) for		
			U			and Btu or		
						Horsepower		
						for engines		
CR1	X					550	Cedarapids J	aw 1994
CR2	\mathbf{X}					550	Gator Impact	or 2014
S1		X				550	Terex/Cedara	pids Screen 2018
L1					Loader	16 cy	CAT Loader	980M 2017
C1					Conveyor	550	Spomac - U	nder Jaw
C2					Conveyor	550	Spomac - S	creen Feed
C3					Conveyor	550	Spomac - U	nder Screen
C4					Conveyor	550	Spomac - U	nder Impact
C5					Conveyor	550	Spomac - R	ecirc
C6					Conveyor	550	Spomac - Pa	ay 1
C7					Conveyor	550	Spomac - Pa	ny 2
C8					Conveyor	550	Spomac - P	ay 3
С9					Conveyor	550	Spomac - Se	cale Belt
C10					Conveyor	550	Spomac - C	ross Conveyor

Notes:

In the column labeled Unit ID # please give unique identifiers for all of the equipment at the site. You may use an existing facility numbering system or emissions inventory ID #. This unique identifier will differentiate between the different emission units at the facility.

In subsequent sections of this permit application, please use the same Unit ID #'s already provided for the equipment listed here.

It is recommended—but not required— that you include an identifying letter specific to the equipment type, e.g., 'C' for crusher, followed by an identifying number of your choice.

22. Facility Equipment

List all equipment at the site that is or will be owned, leased or operated by the applicant, as well as the maximum rated capacity in tons per hour, Btu, or horsepower. If needed to list all equipment, additional pages may be photocopied and added after this one.

Unit ID #			Type Descript	Maximum Rated Capacity	Make/ Model	Date of Construction (mm/dd/yyyy)		
	Crusher	Screener	Internal	Other	Other	Tons per Hour		
			Combustion	Exhaust	(please	(tph) for		
			Engine	Unit	specify	Equipment		
						and Btu or		
						Horsepower		
						for engines		
C11					Conveyor	550	Spomac - C	hip Conveyor
C12					Conveyor	550	Spomac - St	acker
G1			X			1105 HP	CAT SR4B	2007
G2			X			1105 HP	Back Gense	t
G3			X			65 HP	Rental as ne	eded
T1					Diesel Tank	600 gal		2007

Notes:

In the column labeled Unit ID # please give unique identifiers for all of the equipment at the site. You may use an existing facility numbering system or emissions inventory ID #. This unique identifier will differentiate between the different emission units at the facility.

In subsequent sections of this permit application, please use the same Unit ID #'s already provided for the equipment listed here.

It is recommended—but not required— that you include an identifying letter specific to the equipment type, e.g., 'C' for crusher, followed by an identifying number of your choice.

Unit ID #	Process Rate				Тур	e			Controls	
	tph	Annual hours of operation	tpy (tph x annual hours)	Primary	Secondary	Tertiary	Fines	Average Moistur e Content	Controls Used (Please specify)	Efficiency
CR1	550	8760	4,818,000					2.0	Water spray	78%
CR2	550	8760	4,818,000		X			2.0	Water spray	78%
Totals:	1,100	17,520	9,636,000							

23. **Crushing** (Please use same ID #'s identified above in this permit application)

24. Screening (Please use same Unit ID #'s identified above in this permit application)

Unit ID #	Process Rate			Ту	pe of Scree	ning		Controls	
	tph	Annual hours of operation	tpy (tph x annual hours)	Regular	Fines	Wet Screening*	Average Moistur e Content	Controls Used (Please specify)	Efficiency
S 1	550	8760	4,818,000	\mathbf{X}			2.0	Water spray	92%
Totals:	550	8760	4,818,000						

* Wet screening refers to screening processes that are accomplished with water as the carrier of the sand/aggregate or where the aggregate is saturated with water.

25. Material Handling – Transferring, Loading, Unloading, Conveyors, and Dropping (Please use same Unit ID #'s identified above in this permit application)

Unit ID #	Description	Maximum Material Transferred (tpy)	Average Moisture Content	Control Technology					
	e.g., truck dump, conveyor drop, truck loading	Per point	%	None	Water Spray	Chemical Additive	Conveyor with ½ cover	Conveyor with ¾ cover	Cover with full cover
L1	CAT Loader 980M	4,818,000	2.0						
C1 - C12	Conveyor drops (12)	4,818,000	2.0		X				
Totals:		62,634,000							

26. Internal Combustion Engines (including emergency generators)

Unit ID #	Unit Description	Maximum Rated Capacity (HP)	Types of Fuel(s) Used ¹	Manufactured Date (mm/dd/yyyy)	Model year
G1	CAT SR4B	1105	Diesel	2007	
G2	Back Genset	1105	Diesel		
G3	Rental for heaters and	65	Diesel		
	lights as needed				

27. Volatile Liquid Storage Tanks

This section applies to storage tanks used to store liquid materials. Please provide the following information for each storage tank.

Unit ID#	Type of Liquid	Capacity (gallons)	Vapor Pressure of Liquid (psi)	Is the tank above or underground?	Date of Installation (if existing)
T1	Diesel	600	0.0056	Above ground	2007

Section 4: Information on Completing Screening Processes that Have to Be Satisfied to Request Coverage under the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing and Screening Facilities

28. Threatened or Endangered Species

Have you demonstrated that you meet one of the criteria listed in Appendix A with respect to the protection of any and all species that are federally listed as threatened or endangered under the ESA or of habitat that is federally designated as "critical habitat" under the ESA? If you answer **'No,'** you cannot request coverage under this permit.



If you answered **'Yes,'** then you need to provide the appropriate documentation to the EPA to qualify for coverage under this permit. Please indicate under which criterion in Appendix A you are satisfying this requirement:



29. Historic Properties

Have you completed the screening process in Appendix B to determine if the construction, modification or operation of your new or modified minor source of air pollutants has the potential to cause effects to historic properties (pursuant to the NHPA)? If you answer **'No**,' you cannot request coverage under this permit.

Х	Yes	No No
---	-----	-------

If you answered **'Yes,'** then provide the appropriate documentation to the EPA to qualify for coverage under this permit. See Attachment #2, Environmental and Cultural Assessment

Section 5: Additional Information about the General Air Quality Permit for New or Modified Minor Source Stone Quarrying, Crushing and Screening Facilities

This section provides information on the sizes of sources in terms of emissions that are eligible for the General Permit. The emission limitations and standards in this permit are expected to ensure that source-wide emissions are below the rates shown in the following table:

Pollutant of Concern	Attainment, Unclassifiable or Attainment/Unclassifiable Areas	Nonattainment Areas
со	19 tpy	19 tpy (moderate and serious areas)
PM_{10}	63 tpy	63 tpy (moderate areas and serious areas)

Pollutant of Concern	tant of Concern Attainment, Unclassifiable or Attainment/Unclassifiable Areas	
PM _{2.5}	63 tpy	63 tpy
NOx	88 tpy	88 tpy (marginal and moderate ozone areas) 45 tpy (serious ozone areas) 22.5 tpy (severe ozone areas)
		9 tpy (extreme ozone areas)
VOC	7 tpy	7 tpy (ozone areas)

For a stone quarrying, crushing and screening operation co-located with a hot mix asphalt operation the emission limitations and standards in Conditions 16. and 19.e of the General Permit are expected to ensure the source-wideemissions are below the rates shown in the following table:

Pollutant of Concern	Attainment, Unclassifiable or Attainment/Unclassifiable Areas	Nonattainment Areas
		78 tpy
00	78 tnv	(moderate areas)
60	78 tpy	Not applicable
		(serious areas)
PM	86 tpy	Not applicable
		63 tpy
		(moderate areas)
PINI ₁₀	63 tpy	63 tpy
		(serious areas)
PM _{2.5}	30 tpy	30 tpy
SO ₂	18 tpy	18 tpy
		Not applicable
		(serious and above ozone areas)
		90 tpy
NO _X	90 tpy	(marginal and moderate ozone
		areas)

Pollutant of Concern	Attainment, Unclassifiable or Attainment/Unclassifiable Areas	Nonattainment Areas	
		Not applicable (serious and above ozone areas)	
VOC	27 tpy	27 tpy (marginal and moderate ozone areas)	

You should contact your reviewing authority if you intend to rely on the emission limitations and standards in this General Permit to prevent having to obtain a Title V permit.

Applicant's Statement (to be signed by the applicant)

I certify that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate,

Name: Name: (Signature)	_Name:_	Michael McBreen (Print or Type)	Date: 11/20/2120
Title: Vice President		-	

Attachment 1 PTE Calculations

Potential To Emit Calculator for Stone Quarrying, Crushing, and Screening Plants

8/23/2016

This workbook is designed to calculate the potential to emit of a sand, gravel, rock crushing, and screening facility without control devices. Directions - Enter the facility's information below in the yellow highlighted cells.

For the rock processing operations, input the number of machines in each category that are used in your operations.

For the conveying operations, enter the number of drop points associated with each crushing/screening operation. For the truck loading and transport offsite, enter the number 1.

For the engines, input the total horsepower rating of all the stationary engines on site.

The potential to emit for the facility will be displayed under the "Output" tab. The criteria pollutant emission rate is calculated depending on the equipment used and the maximur rating of any stationary engines. The effect of any control devices is not considered.

Facility Profile

Rock Processing Equipment	Number of Operations	Maximum Capacity (tons/hr)*	Number of Conveyor Drop Points	Description
Truck Unloading/Grizzly Feeder	1	550		Fragmented rock delivered to site and dumped into grizzly or crusher feeder
Primary Crusher (Output is 3 - 12 inches) and Screening	1	550	3	Rock that passes through the primary crusher. This rock is 3 to 12 inches in diameter after this step. Rock is screened, conveyed to a pile, and shipped offsite or conveyed to another processing step.
Secondary Crusher (Output is 1 - 3 inches) and Screening	1	550	3	Rock that passes through the secondary crusher. This rock is 1 to 3 inches in diameter after this step. Rock is screened, conveyed to a pile, and shipped offsite or conveyed to another processing step.
Tertiary Crusher (Output is 3/16 - 1 inches) and Screening	0	0	0	Rock that passes through the tertiary crusher. This rock is 3/16 to 1 inches in diameter after this step. Rock is screened, conveyed to a pile, and shipped offsite or conveyed to another processing step.
Fines Crusher (output is less than 3/16 inches) and Screening	0	0	0	Rock that passes through the fines crusher. This rock is less than 3/16 inches in diameter after this step. Rock is screened, conveyed to a pile, and shipped offsite.
Dry Sand and Gravel Screening**	1	550	6	Dry sand and gravel that passes through the screener. Dry sand and gravel is excavated, screened, classified for size, conveyed to a pile, and shipped offsite.
Truck Loading and Transport Offsite	1	550		Rock product that is shipped offsite.

* If the maximum capacity of a piece of equipment is bottlenecked (reduced) by another piece of equipment operating in a 'train', enter the bottlenecked capacity.

** If your sand and gravel screening operation processes saturated material, and uses wet processing methods, enter zero (0) for the inputs in this row.

Power Generation Equipment	Generator/EngineSulfur Content ofSize (Hp) (total)Diesel Fuel (%)		Description
Stationary Diesel Electrical Generators w/ Rating Less Than or Equal to than 600 Hp			A stationary engine is an engine that is used in a fixed location, or a nonroad
Stationary Diesel Electrical Generators w/ Rating Greater than 600 Hp	1,105 0.15%		(portable) engine that remains in one location for at least a full year.
Storage Piles			Description
Rock Product in Storage Piles (tons)	92,400		Average Amount of Crushed Rock Product Stored in Storage Piles During the Year (tons). Default value is one week's production.
Moisture Content of Storage Piles (%)	content of Storage Piles (%) 2.0%		Moisture content of the storage piles. If operations are controlled with water sprays, include this in your estimate. Default value for uncontrolled operations is 0.7%. Default value for controlled operations is 2%.
Mean Wind Speed (mph) 8.20		20	Average wind speed at the site, per data from Midwestern Regional Climate Center for 1940-2020.

Potential To Emit Calculator for Stone Quarrying, Crushing, and Screening Plants 8/23/2016

Facility Potential to Emit (PTE) Summary

OR DETERMINING IF YOU NEED A PERMIT (does not include controls):							
		Pollutant					
Process	PM	PM PM ₁₀ PM _{2.5} SO ₂ NO _X CO VOC					
Sand, Gravel, Rock Crushing, Screening, Conveying	864.63	225.58	0.00	-	-	-	-
Storage Piles	0.21	0.10	0.01	-	-	-	-
Engine/Generator	1.50	1.5025	1.50	2.60	51.52	11.81	1.51
Total Potential to Emit (tons/year)	866.34	227.18	1.52	2.60	51.52	11.81	1.51

FOR DETERMINING PTE IF USING GENERAL PERMIT (includes controls in General Permit):

Process	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _X	CO	VOC
Sand, Gravel, Rock Crushing, Screening, Conveying	19.14	9.22	0.38				
Storage Piles	0.21	0.10	0.01	-	-	-	-
Engine/Generator	1.50	1.50	1.50	2.60	51.52	11.81	1.51
Total Potential to Emit (tons/year)	20.85	10.82	1.89	2.60	51.52	11.81	1.51

Maximum Throughputs, Based on Equipment Capacity				
Operation Description	tons/year			
Truck Unloading - Fragmented Stone	4,818,000			
Primary Crushing and Screening	4,818,000			
Secondary Crushing and Screening	4,818,000			
Tertiary Crushing and Screening	0			
Fines Crushing and Screening	0			
Dry Sand and Gravel Screening	4,818,000			
Conveyor Transfer Points (total)	57,816,000			
Truck Loading - Conveyor, crushed stone	4,818,000			

Maximum Fuel Usage, Based on Engine Size						
Operation Description	gal/year	gal/month				
Diesel Engine (<= 600 hp)	0	0				
Diesel Engine (> 600 hp)	219,300	18,275				

Potential To Emit Calculator for Stone Quarrying, Crushing, and Screening Plants

8/23/2016

Emissions from Sand, Gravel, Rock Crushing, and Screening Operations

1. Emission Factors for PM, PM10 , and PM2.5

		Emission Factors (lb/ton)			
Type of Operation	SCC	PM °	PM10	PM2.5 °	
Primary Crushing ^a	3-05-020-01	1.4E-03	6.0E-04		
Primary Crushing (controlled) ^a	3-05-020-01	3.0E-04	1.4E-04		
Secondary Crushing ^a	3-05-020-02	2.7E-03	1.2E-03		
Secondary Crushing (controlled) ^a	3-05-020-02	6.0E-04	2.7E-04		
Tertiary Crushing	3-05-030-03	5.4E-03	2.4E-03		
Tertiary Crushing (controlled)	3-05-020-03	1.2E-03	5.4E-04	1.0E-04	
Fines Crushing	3-05-020-05	3.9E-02	1.5E-02		
Fines Crushing (controlled)	3-05-020-05	3.0E-03	1.2E-03	7.0E-05	
Screening of Primary Crusher Output ^b		6.3E-03	2.2E-03		
Screening of Primary Crusher (controlled) ^b		5.5E-04	1.9E-04		
Screening of Secondary Crusher Output ^b		1.3E-02	4.4E-03		
Screening of Secondary Crusher Output (controlled) ^b		1.1E-03	3.7E-04		
Screening (Tertiary Crushing)	3-05-020-02-03	2.5E-02	8.7E-03		
Screening (Tertiary Crushing) (controlled)	3-05-020-02-03	2.2E-03	7.4E-04	5.0E-05	
Fines Screening	3-05-020-21	3.0E-01	7.2E-02		
Fines Screening (controlled)	3-05-020-21	3.6E-03	2.2E-03		
Conveyor Transfer Point	3-05-020-06	3.0E-03	1.1E-03		
Conveyor Transfer Point (controlled)	3-05-020-06	1.4E-04	4.6E-05	1.3E-05	
Truck Unloading - Fragmented Stone	3-05-020-31	1.6E-05	1.6E-05		
Truck Loading - Conveyor, crushed stone	3-05-020-32	1.0E-04	1.0E-04		

Emission factors are from AP 42, Chapter 11.19.2, Tables 11.19.2-2 and 11.19.2-4 (1/95), except as noted.

^a AP 42 emission factors for primary crushing and secondary crushing are not available. Emission factors are estimated based on the assumption that emissions are proportional to the relative surface area of the product emerging from the crusher. Secondary crushing emissions are conservatively estimated at 50% of tertiary crushing emissions, and primary crushing emissions are conservatively estimated at 50% of secondary crushing emissions.

^b AP 42 emission factors for screening of rock output from primary crushing are not available. Emission factors are estimated based on the assumption that emissions are proportional to the relative surface area of the product emerging from the crusher. Secondary screening emissions are conservatively estimated at 50% of tertiary crushing emissions, and primary screening emissions are conservatively estimated at 50% of secondary screening emissions. ^c Where there is no data for an emission factor, a blank cell is shown in the emission factor table.

CPM Development Corporation CDC Recycle Crusher - Pendleton Mission Quarry

2. Potential to Emit from Rock Crushing and Screening Operations

Purple values are from the inputs page Blue values are results

Turne of Operation	Maximum Throughput						
Type of Operation	(tons/yr)	Emissio	ed)	Emissions (tons/yr) (controlled)		
		PM	PM10	PM2.5	PM	PM10	PM2.5
Truck Unloading - Fragmented Stone	4,818,000	0.0385	0.0385	0.0000	0.0385	0.0385	0.0000
Primary Crushing	4,818,000	3.2522	1.4454	0.0000	0.7227	0.3252	0.0000
Screening of Primary Crusher Output	4,818,000	15.0563	5.2396	0.0000	1.3250	0.4457	0.0000
Conveyor Transfer Point	14,454,000	21.6810	7.9497	0.0000	1.0118	0.3324	0.0940
Secondary Crushing	4,818,000	6.5043	2.8908	0.0000	1.4454	0.6504	0.0000
Screening of Secondary Crusher Output	4,818,000	30.1125	10.4792	0.0000	2.6499	0.8913	0.0000
Conveyor Transfer Point	14,454,000	21.6810	7.9497	0.0000	1.0118	0.3324	0.0940
Tertiary Crushing	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Screening of Tertiary Crusher Output	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Conveyor Transfer Point	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fines Crushing	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fines Screening	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Conveyor Transfer Point	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dry Sand and Gravel Screening	4,818,000	722.7000	173.4480	0.0000	8.6724	5.2998	0.0000
Dry Sand and Gravel Conveying	28,908,000	43.3620	15.8994	0.0000	2.0236	0.6649	0.1879
Truck Loading - Conveyor, crushed stone	4,818,000	0.2409	0.2409	0.0000	0.2409	0.2409	0.0000
	Total	864.629	225.581	0.000	19.1419	9.2217	0.3758

Methodology

Maximum Throughput (tons/yr) = Number of Operations x Maximum Capacity (tons/hr) x 8,760 hr/yr Emissions (tons/yr) = Maximum Throughput (tons/yr) x Emission factor (lb/ton) x 1 ton/2,000 lbs

Potential To Emit Calculator for Stone Quarrying, Crushing, and Screening Plants

8/23/2016

Emissions from Storage Piles

92,400	Average Annual Product in Piles (ton/yr)
2	Agg. Moisture (%)
8.20	Mean Wind Speed (MPH)

Purple values are pulled from the inputs worksheet Blue values are results

According to AP42, Chapter 13.2.4 - Aggregate Handling and Storage Piles (updated 11/06), the particulate emission factors for storage piles can be estimated from the following equation:

$$Ef = \frac{k \times 0.0032 \times (U/5)^{1.3}}{(M/2)^{1.4}}$$

where:

Ef = Emission Factor (lbs/ton)

- k = Particle size multipliers =
- U = Mean wind speed (MPH) =

M = Moisture content (%) =

0.74 for PM, 0.35 for PM_{10} , and 0.053 for $PM_{2.5}$ 8.2 MPH (provided by the facility)

2 % (provided by the facility)

	Emission Factor	Potential to Emit
Pollutant	(lb/ton)	(tons/yr)
PM	0.00450	0.208
PM ₁₀	0.00213	0.098
PM _{2.5}	0.00032	0.015

Methodology

Potential to Emit (ton/yr) = Max. Annual Production (ton/yr) x 1/52 x EF (lb/ton) x 1 ton/2000 lb

Assume that storage piles contain one week's production, on average.

Potential To Emit Calculator for Stone Quarrying, Crushing, and Screening Plants

8/23/2016

Emissions from Generator/Engine(s)

				Total Engine	PTE (ton/yr)					
Diesel Engine <= 600 Hp:	0	total hp		PM	PM ₁₀	PM _{2.5}	SO ₂	NO _X	CO	
Diesel Engine > 600 Hp:	1,105	total hp		1.50	1.50	1.50	2.60	51.52	11.81	
Engine Type:	Diesel Engine	(<= 600 hp)	Used [.]	No						
	g	(0000				Pollutant			

			Pollutant			
PM ²	PM ₁₀	PM _{2.5} ²	SO ₂	NO _X	CO	VOC ³
0.0022	0.0022	0.0022	0.00205	0.031	0.00668	0.00251
0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note:

1. Emission factors are from Chapter 3.3, Table 3.3-1 (updated 10/96).

2. Assume PM and $\rm PM_{2.5}$ emissions are equal to $\rm PM_{10}$ emissions.

3. Assume TOC (total organic compounds) emissions equal to VOC emissions.

Methodology

Emission Factor¹ (lbs/hp-hr) Potential to Emit (ton/yr)

Potential to Emit (ton/yr) = total horsepower (hp) x Emission Factor (lb/hp-hr) x 8,760 hr/yr x 1 ton/2000 lb

Diesel Engine (> 600 hp)	Used:	Yes		Sulfur Conten	t:	0.15	%	
		Pollutant						
		PM	PM ₁₀	PM _{2.5} ²	SO ₂	NO _X	СО	VOC ³
Emission Factor ¹ (lbs/hp-hr)		0.0007	0.0007	0.0007	0.0012135	0.024	0.0055	0.000705
Potential to Emit (ton/yr) ⁴		1.50	1.50	1.50	2.60	51.52	11.81	1.51
	Diesel Engine (> 600 hp) Emission Factor ¹ (lbs/hp-hr) Potential to Emit (ton/yr) ⁴	Diesel Engine (> 600 hp)Used:Emission Factor1 (lbs/hp-hr)Potential to Emit (ton/yr)4	Diesel Engine (> 600 hp) Used: Yes PM PM Emission Factor ¹ (lbs/hp-hr) 0.0007 Potential to Emit (ton/yr) ⁴ 1.50	Diesel Engine (> 600 hp) Used: Yes PM PM ₁₀ Emission Factor ¹ (lbs/hp-hr) 0.0007 0.0007 Potential to Emit (ton/yr) ⁴ 1.50 1.50	Diesel Engine (> 600 hp) Used: Yes Sulfur Contention PM PM ₁₀ PM _{2.5} ² Emission Factor ¹ (lbs/hp-hr) 0.0007 0.0007 Potential to Emit (ton/yr) ⁴ 1.50 1.50	Diesel Engine (> 600 hp) Used: Yes Sulfur Content: PM PM_{10} PM_{2.5} ² SO ₂ Emission Factor ¹ (lbs/hp-hr) 0.0007 0.0007 0.0007 0.0012135 Potential to Emit (ton/yr) ⁴ 1.50 1.50 1.50 2.60	Diesel Engine (> 600 hp) Used: Yes Sulfur Content: 0.15 PM PM_{10} PM_{2.5}^2 SO_2 NO_X Emission Factor ¹ (lbs/hp-hr) 0.0007 0.0007 0.0007 0.0012135 0.024 Potential to Emit (ton/yr) ⁴ 1.50 1.50 1.50 2.60 51.52	Diesel Engine (> 600 hp) Used: Yes Sulfur Content: 0.15 % $POllutant$ $POllutant$ $POllutant$ $POllutant$ $POllutant$ PM PM_{10} $PM_{2.5}^2$ SO_2 NO_X CO Emission Factor ¹ (lbs/hp-hr) 0.0007 0.0007 0.0007 0.0012135 0.024 0.0055 Potential to Emit (ton/yr) ⁴ 1.50 1.50 1.50 2.60 51.52 11.81

Note:

1. Emission factors are from Chapter 3.4, Tables 3.4-1 and 3.4-2 for Large Stationary Diesel and Dual Fuel Engines (updated 10/96).

2. Assume $PM_{2.5}$ emissions are equal to PM_{10} emissions.

3. Assume TOC (total organic compounds) emissions equal to VOC emissions.

4. Potential to Emit (ton/yr) = EF lb/hp-hr * Fuel Usage (gal/yr) * 7.1 lb/gal * 19,300 BTU/lb fuel ÷ 7000 BTU/hp-hr ÷ 2000 lb/yr

Methodology

Potential to Emit (ton/yr) = total horsepower (hp) x Emission Factor (lb/hp-hr) x 8,760 hr/yr x 1 ton/2000 lb

Fuel Usage (gal/yr)	219,300

Methodology:

Fuel Usage (gal/yr) = Total Engine Horsepower (hp) x 8,760 hr/yr x 7,000 Btu/hp-hr x 1 lb fuel/19,300 Btu x 1 gal/7.1 lb

VOC 1.51

Attachment 2 Environmental and Cultural Assessment

Including

Appendix A – Site Maps

Appendix B - Threatened or Endangered Species Information

Appendix C – Historic Properties

EPA GENERAL PERMIT APPLICATION – SITE INFORMATION Environmental and Cultural Assessment

A. Background

1. Name of proposed project, if applicable:

Pendleton Mission – rock crushing

2. Location of facility(s) [provide address and GPS coordinates, topographical map depicting surface waters within or adjacent to the site and property boundaries]:

73569 McKay Lane Pendleton, OR 97801 Umatilla County Umatilla Reservation See Appendix A for site maps

Lat/long: 45.671749, -118.729584

3. Choose the type of permit(s) applying for:

□ Concrete Batch Plant
 □ Hot Mix Asphalt Plant
 ☑ Stone Quarrying, Crushing, and Screening Facility

4. Name of applicant:

CPM Development Corporation

5. Address and phone number of applicant and contact person:

Jana McDonald, Environmental Manager CPM Development Corporation P.O. Box 3366 Spokane, WA 99220 (509) 534-6221

6. Date checklist prepared:

November 18, 2020

7. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

EPA Tribal General Air Permit

8. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Yes. Central Washington Concrete and Interstate Concrete and Asphalt are also submitting an application for coverage under the general permit for stone quarrying, crushing, and screening facilities to operate at Pendleton Mission Quarry.

B. Environmental Elements

1. Earth

a. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)?

Agricultural soils, sand, and gravel.

b. Please explain the extent to which you will expand the previously disturbed portion of the site to conduct operations. If you will not be expanding the currently disturbed portions or disturb new soil at the site please state that and provide the necessary documentation to support your statement(s).

No expansions to current land disturbances; there will be no changes to current land use as this site is already an operational quarry. See the site boundary maps in Appendix A for the footprint of the operating site.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Pollutants will include:

- I. Particulate matter (PM, PM10, PM2.5) from aggregate storage, crushing, conveying, and screening activities
- II. Carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic compounds from the combustion of fuels for the portable generators
- b. Proposed measures to reduce or control emissions or other impacts to air, if any:

Application of water on unpaved roads to prevent dust emissions, and wet spray for crushing, screening, and other aggregate handling operations.

3. Water

a. For changes in water quality/quantity (both surface and groundwater) include effects that may extend far beyond the footprint of the facility. An example may be stormwater runoff from impervious surfaces (containing sediments or other contaminants) on the site that may reach water bodies (including ditches that empty into water bodies) some distance from the facility. All receiving water bodies that could receive pollutants from the facility's construction, maintenance, or operation should be included in the action area. If there will be no dischages to waters of the United States, please state that and provide the necessary documentation to support your statement(s).

No change from current land use because the site is already a materials pit/quarry; there will be no discharges to waters of the United States. Stormwater runoff off property will be prevented by existing berms around the site boundary, and will infiltrate into the ground.

The nearest water body, the Umatilla River, is approximately 50 feet north of the quarry site and will remain unaffected by quarry operations due to property berming.

- b. Surface Water:
 - 1) Is there any surface water body on or in the immediate vicinity of the site (including yearround and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Umatilla River is the nearest water body and is located approximately 50 feet north of the quarry site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, work will occur adjacent to the Umatilla River. See the site boundary maps in Appendix A for the footprint of the operating site.

3) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. See Appendix A for a map of the 100-year floodplain zone.

4) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

- c. Ground Water:
 - 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground.

3) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

No stormwater runoff will be discharged into the Umatilla River. Berms constructed around the quarry will prevent stormwater runoff from leaving the site; stormwater will infiltrate into the ground.

4. Environmental Health

- a. Noise
 - 1) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Traffic and surface mining operations (e.g., quarrying, crushing, screening) will create noise. Operations will be limited to run from 7:00 AM to 7:00 PM, Monday through Friday.

2) Proposed measures to reduce or control noise impacts, if any:

Operations will be limited to run from 7:00 AM to 7:00 PM, Monday through Friday.

- b. Light and Glare
 - 1) What type of light or glare will the proposal produce? What time of day would it mainly occur?

Mobile equipment headlights will occur during the daytime hours of 7:00 AM to 7:00 PM, Monday through Friday. Yard lights will operate during dawn and dusk.

- Could light or glare from the finished project be a safety hazard or interfere with views?
 No.
- 3) Proposed measures to reduce or control light and glare impacts, if any:

None.

5. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Current use of the site is for surface mining operations. Adjacent properties are agricultural or residential use. The proposal will not affect current land uses on nearby or adjacent properties as the site already exists as a quarry.

b. What is the current comprehensive plan designation of the site?

Umatilla County Comprehensive Plan 1983, Amended – Unknown site designation

c. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

d. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No.

e. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

No measures are necessary. This is an existing mining operation.

6. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. See Appendix A

The entrance to the Pendleton Mission site is located on McKay Lane. From Pendleton: head east on US-30 East for 0.3 miles. Take a slight right onto Pendleton Highway and continue for 0.8 miles. Turn left onto Memory Lane, then immediately turn right onto Mytinger Lane.

Continue for 0.2 miles and turn left onto McKay Lane, which will take you to the Pendleton Mission site.

b. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No improvements are required for the existing infrastructure.

c. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Railroad tracks are located less than 50 feet south of the existing quarry site. The quarry site does not directly utilize the railroad tracks.

d. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The number of vehicular trips ranges from 20 to 80, depending on product demand and types of commercial vehicles used. Vehicular trips only occur during 7:00 AM to 7:00 PM, Monday through Friday, and consist of commercial and personal vehicles.

e. Proposed measures to reduce or control transportation impacts, if any:

Operate during normal business hours. Vehicular trips only occur during 7:00 AM to 7:00 PM, Monday through Friday.

C. Endangered Species Questionnaire

- 1. Determine if previous or separate assessments have already addressed your source.
 - a. Has a consultation between a Federal Agency and the Service(s) under section 7 of the ESA been concluded? This consultation must have, for all federally-listed endangered species, and all federally-designated critical habitat in the project's action area, addressed the following:
 - effects of construction
 - modification of the source
 - operation of the source
 Fish & Wildlife was consulted for issuance of the 2013 non-Title V permit and is copied on this application as well. See Appendic B.

If no, proceed to Section 2: Meeting Criterion E.

- b. If yes, was the result of the consultation either of the options below?
 - 1) A biological opinion stating that the construction, modification, and operation of the new or modified source would not likely have adverse effects on listed species or critical

habitat. – Must include effects of facilities emissions on all listed species and critical habitat.

2) Letter of concurrence from the applicable service(s) stating that the construction, modification, and operation of the new or modified source would not likely have adverse effects on all listed species or critical habitat.

*Y*es □No

c. Is the consultation current? This means that there is no new information about listed species or critical habitat or the potential effects of the facility on either.

⊻Yes □No

If yes was answered for all three questions in section 1, Criterion D may be selected. Provide a description of the basis for the criterion. Also, provide the Biological Opinion (or Public Consultation Tracking System number) or concurrence letter, and any supporting documents.

- 2. Meeting Criterion E:
 - a. Have you obtained an incidental take permit under section 10 of the ESA, which addresses the effects of the construction/modification and operation of your new or modified source on federally-listed species and designated critical habitat in the facilities action area?

 \Box Yes \Box No \Box NA

b. If yes, does the section 10 permit address the construction, modification, and operation of the new or modified source and all federally-listed species and critical habitat in your action area?

 \Box Yes \Box No \checkmark NA

If yes was answered for both questions in section 2, you may select Criterion E. You must provide a description of the basis for the criterion selected. You must also provide a copy of the section 10 permit in your submittal.

3. Determine if listed threatened or endangered species or their designated critical habitat(s) are likely to occur within the action area of your minor source. The *Action area* means all areas to be affected directly or indirectly by your project and may be broader than the immediate project area [See, e.g., 50 CFR 402.02].

Are there any listed species or critical habitat areas expected to exist within the counties where your action area is located?

✓Yes □No □NA See Appendix B for species profile

Pendleton Mission Quarry: ESA Critical Habitat Location						
Category	Name	Population Description	Status	Distance from Action Area to Critical Habitat (miles)		
Mammals	Gray Wolf	U.S.A. (OR)	Endangered	Range overlays action area. Critical habitat: approx. 1,200 miles (NE Minnesota)		
Birds	Yellow-billed Cuckoo	U.S.A. (OR)	Threatened	Range overlays action area. Critical habitat: approx. 350 miles (Eastern Idaho)		
Fish	Bull Trout	U.S.A. (OR)	Threatened	Range overlays Umatilla River, adjacent to action area. Critical habitat: approx. 0.1 miles (Umatilla River)		

If no, you may select Criterion A. You must provide a description of the basis for the criterion selected, and supporting documents.

- 4. If there are listed species or critical habitat in the counties your action area is in, contact FWS or NMFS to determine if the listed species or critical habitat exist within the specific action area. If FWS or NMFS indicates that listed species or critical habitat may exist in your action area you should do one or both of the following:
 - Conduct visual inspections.
 - Conduct a formal biological survey.

Were you able to determine that no listed species and or critical habitat are likely to exist within your action area?

 \Box Yes \Box No \Box NA

If yes, you may select criterion A. You must also provide a description of the basis for the criterion selected and provide documentation supporting the criterion selected in your submittal. Site is already an active quarry, so gray wolves, yellow-billed cuckoos, and bull trout are not likely to exist in this area. See Appendix B for species information and determination of critical areas.

- 5. Determine if the construction/modification or operation of your new or modified minor source is likely to adversely affect listed threatened or endangered species or designated critical habitat. You must now assess whether or not the construction, modification, or operation of the minor source is likely to negatively impact the listed species and/or critical habitat. Negative impacts include:
 - Habitat disturbance
 - Increased traffic, noise, or light

- Water-related impacts
- Air emission impacts

Is construction, modification, or operation likely to cause adverse effects on listed species and/or critical habitat?

 \Box Yes \Box No \Box NA

EPA issued a non-Title V Permit to Pioneer Asphalt August 22, 2013 for hot mix asphalt operations within this quarry; the permit was transferred to Interstate Asphalt & Concrete September 24, 2019 (See Appendix B).

The Pendleton Mission Quarry operations are not likely to cause any adverse effects to the listed endangered and threatened species, nor their critical habitat. The proposed site for these operations is already an active quarry, and no registered species or critical habitats have been observed on the operating site or the access roads. There will be no significant changes in the existing:

- Ground disturbance
- Operation of the source
- Water usages or discharges
- Air emissions
- Noise
- Traffic
- Light pollution

If no, you may select criterion B. If Criterion B is selected, you must include the following in your submittal:

- a. The federally listed species and/or designated habitat that are located within the action area of your minor source.
- b. The distance between your site and the listed species or designated critical habitat (in miles).
- c. Any other information necessary to show that the construction/modification and operation of your source are not likely to cause any adverse effects to the listed threatened or endangered species or their critical habitat.
- 6. Determine if measures can be implemented to avoid adverse effects. Can measures be taken to avoid or eliminate the likelihood of adverse effects on listed species and/or critical habitat? These measures could be as simple as re-routing construction to avoid areas where species are located.

 \Box Yes \Box No $\overline{\Box}$ NA

If yes, you may select Criterion B. If Criterion B is selected, you must include the following in your submittal:

- a. The federally listed species and/or designated habitat that are located within the action area of your minor source.
- b. The distance between your site and the listed species or designated critical habitat (in miles).

- c. Steps that will be taken to avoid the likelihood of adverse effects.
- 7. Coordinate with the service(s). Contact the applicable Service(s) and address the potential effects of construction, modification, and operation of the minor source on listed species and/or critical habitat. Obtain written concurrence stating that the construction, modification, and operation of your source is not likely to adversely affect listed species or critical habitat.

Were you able to obtain written concurrence from applicable Service(s)?

 \Box Yes \Box No \heartsuit NA

If yes, you may select Criterion C. As part of your submittal, you must provide a description of the basis for the criterion selected and must include copies of the correspondence between you and the applicable Service(s).

8. **Result – Criterion:**

 $\Box A \qquad \boxtimes B \qquad \Box C \qquad \Box D \qquad \Box E$

D. Historic Properties Questionnaire

1. Have prior professional cultural resource surveys or other evaluations determined whether historic properties exist in the area of your proposed source? Or, have prior earth disturbances precluded the existence of historic properties in the area of your proposed source?

⊻Yes □No

If yes, then you may submit the appropriate documentation of "no historic properties affected" with your submittal, and no further screening steps are necessary.

- 2. You must assess whether the activities related to the construction, modification, or operation of your new or modified minor source will have an effect on historic properties. Activities that could have an adverse effect on historic properties could include, for example:
 - Excavations
 - Demolitions of existing buildings
 - Construction of Foundations (e.g. for buildings, tanks, or stacks)
 - Installations of underground tanks
 - Addition of impervious surfaces
 - Increase of truck traffic during excavation, demolition, or construction

Pendleton Mission Quarry is an existing, operating surface mine site where the nearest historic property is 2 miles away. Therefore, the proposed project will not affect any historic properties.

According to the National Register of Historic Places, there are numerous historic properties within a 10-mile radius of the proposed site, most of which are located within the city of Pendleton (see table below). Since the current uses of the pit are consistent with the proposed uses, the proposed SQCS plant will not affect the nearby historic properties.

NDUD			Distance
Reference	Resource	Location	(miles)
86000299	Joseph Vey House	1304 S.E. Court Pl., Pendleton, OR	2.0
86002909	Ellis-Hampton House	711 S.E. Byers Ave, Pendleton, OR	2.4
80003382	Edgar Sommerville House	104 SE 5 th St., Pendleton, OR	2.5
86003260	South Main Street Commercial Historic District	Roughly bounded by Dorion Ave., SE First St., Union Pacific RR, and SW Second St.	2.5
92001381	LaDow Block	201 – 239 SE Court Ave, Pendleton, OR	2.6
82003749	Hamley and Company Leather Goods Store	30 SE Court Ave., Pendleton, OR	2.7
82003753	Milarkey Building	203 S. Main St., Pendleton, OR	2.7
97000848	Umatilla County Library	214 N. Main St., Pendleton, OR	2.8
97000576	William J. and Lodema Clarke House	203 NW Despain Ave., Pendleton, OR	2.9
88001041	Greasewood Finnish Apostolic Lutheran Church	77402 Enbysk Rd., Pendleton, OR	7.8

See Appendix C for maps of these historic properties.

Did you determine that the activities related to the construction, modification, or operation of your new source will not affect historic properties?

 \blacksquare Yes \square No \square NA

If you answered yes, then you may submit the appropriate documentation of "no historic properties affected" with your submittal, and no further screening steps are necessary.

- 3. Contact and consult with the appropriate historic preservation authorities.
 - a. You must contact the relevant SHPO, THPO, or other tribal representative to request their views as to the likelihood that historic properties may be adversely affected by the construction, modification or operation of your new or modified minor source. Upon request for information, did you receive a receipt by the SHPO, THPO, or other tribal representative?

Image: YesImage: A tribal representative was consulted for issuance of the 2013
non-Title V permit and is copied on this application as well.

b. If no, submit another request. If yes, did you receive a response within 15 days of receipt?

□Yes □No

If No, then you may submit the appropriate documentation of "no adverse effects" with your submittal, and no further screening steps are necessary. If yes, and the SHPO, THPO, or other tribal representative requests more information, you must reply to the request and proceed to step 4.

4. Consult the proper tribal representative to determine impacts and appropriate measures to mitigate such impacts to historic properties that may be caused by the construction, modification or operation of your new or modified minor source site.

Did you complete this step?

✓Yes □No

A tribal representative was consulted for issuance of the 2013 non-Title V permit and is copied on this application as well.

E. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Beth Fifield Hodgson

Name of signee: Beth Fifield Hodgson

Position and Agency/Organization: Principal Engineer, Spring Environmental, Inc.

Date Submitted: November 18, 2020

Appendix A Site Maps

Map 1 – General Vicinity	A-1
Map 2 – Quarry Site	A-2
Map 3 – Floodplain Map	A-3

Map 1 - General Vicinity

Pendleton Mission Quarry, Umatilla Reservation, 73569 McKay Lane

endleton

Legend

.

4

Pendleton Mission Quarry

1 mi

a 132 -

Pendleton

Pendleton Mission Quarry

Google Earth CPM Development Corporation CDC Recycle Crusher - Pendleton Mission Quarry

October 2020 Appendix A-1





CPM Development Corporation CDC Recycle Crusher - Pendleton Mission Quarry November 2020 Appendix A-3
Appendix B Threatened or Endangered Species Information United States Environmental Protection Agency Region 10, Air & Radiation Division 1200 Sixth Avenue, Suite 155, 15-H13 Seattle, Washington 98101-3123 Permit Number: R10NT502401 Issued: August 22, 2013 Revised: September 24, 2019 AFS Plant ID Number: 41059E0002

Non-Title V Air Quality Operating Permit

Is issued in accordance with the provisions of the Federal Air Rules for Reservations (FARR), 40 CFR § 49.139, and applicable rules and regulations to

Interstate Concrete & Asphalt - Pendleton

for operations in accordance with the conditions in this permit at the following location:

Umatilla Indian Reservation 73569 McKay Lane Pendleton, OR 97801

Local Individual Responsible for Compliance:

Terry L. Clark Interstate Concrete & Asphalt P.O. Box 38 Pendleton, Oregon 97801 Phone: 541-276-7885 Fax: 541-276-7886 Email: terry@pioneerasphaltinc.com

A technical support document that describes the bases for conditions contained in this permit is also available.

Kelly McFadden, Branch Chief Air & Radiation Division U.S. Environmental Protection Agency, Region 10

Date

1. General Conditions

- 1.1. For purposes of this permit, the permitted source includes a hot mix asphalt plant and aggregate handling and crushing activities.
- 1.2. The permittee shall comply with all conditions of this permit and any site-specific approval conditions. Any permit noncompliance constitutes a violation of the Clean Air Act.
- 1.3. Compliance with all conditions in this permit and any site-specific approval conditions allows the permitted source to operate at the following location:

Umatilla Indian Reservation 73569 McKay Lane Pendleton, Oregon 97801

1.4. Compliance with the terms of this permit does not relieve or exempt the permittee from compliance with other applicable federal, tribal, state or local laws or regulations.

2. Emission Limits and Work Practice Requirements

- 2.1. <u>Permitted Source Carbon Monoxide (CO) Emission Limit</u>. Source-wide CO emissions shall not exceed 80 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) calculated for the previous 11 months. Monthly CO emissions shall be determined by multiplying appropriate emission factors (lb/unit) by the actual monthly operation/production rates (units/month) and dividing by 2000 lb/ton.
- 2.2. <u>Permitted Source Particulate Matter (PM) Emission Limit</u>. Source-wide PM emissions shall not exceed 200 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) calculated for the previous 11 months. Monthly PM emissions shall be determined by multiplying appropriate emission factors (lb/unit) by the actual monthly operation/production rates (units/month) and dividing by 2000 lb/ton.
- 2.3. <u>Permitted Source Particulate Matter < 10 micrometers (PM10) Emission Limit</u>. Source-wide PM10 emissions shall not exceed 80 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) calculated for the previous 11 months. Monthly PM10 emissions shall be determined by multiplying appropriate emission factors (lb/unit) by the actual monthly operation/production rates (units/month) and dividing by 2000 lb/ton.
- 2.4. <u>Permitted Source Particulate Matter < 2.5 micrometers (PM2.5) Emission Limit</u>. Source-wide PM2.5 emissions shall not exceed 80 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) calculated for the previous 11 months. Monthly PM2.5 emissions shall be determined by multiplying appropriate emission factors (lb/unit) by the actual monthly operation/production rates (units/month) and dividing by 2000 lb/ton.
- 2.5. <u>Fuel Limitation.</u> The permittee is limited to combusting only propane or natural gas fuel in the asphalt drum dryer and asphalt tank heater.

2.6. <u>Good Operation</u>. All fuel burning equipment and the drum dryer baghouse control device shall be maintained in good operating condition. The drum dryer exhaust shall be routed to the baghouse control device at all times. The drum dryer baghouse control device shall be operated at all times that the drum dryer operates.

3. Monitoring and Recordkeeping Requirements

- 3.1. <u>Visible Emission Monitoring and Recordkeeping.</u> The permittee shall monitor and record visible emissions of particulate matter as described in Conditions 3.2 through 3.5.
- 3.2. Once each day, the permittee shall visually survey the drum dryer baghouse stack for the presence of visible emissions of particulate matter.
 - 3.2.1. The observer conducting the visual survey must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting and wind, and the presence of uncombined water on the visibility of emissions (see 40 CFR part 60, Appendix A, Test Method 22).
 - 3.2.2. For the surveys, the observer shall select a position that enables a clear view of the emission point to be surveyed, that is at least 15 feet, but not more than 0.25 miles, from the emission point, and where the sunlight is not shining directly in the observer's eyes.
 - 3.2.3. The observer shall observe emissions from the emission point for at least 15 seconds.
 - 3.2.4. Any visible emissions of particulate matter other than uncombined water shall be recorded as a positive reading associated with the emission unit.
 - 3.2.5. Surveys shall be conducted while the drum dryer is operating and during daylight hours.
- 3.3. If the survey conducted under Condition 3.2 identifies any visible emissions of particulate matter, the permittee shall:
 - 3.3.1. Immediately upon conclusion of the visual observation in Condition 3.2, investigate the source and reason for the presence of visible emissions; and
 - 3.3.2. As soon as practicable, take appropriate corrective action.
- 3.4. If the corrective actions undertaken pursuant to Condition 3.3.2 do not eliminate the visible emissions, the permittee shall within 24 hours of the initial survey conduct a visible emissions observation of the emission source in question for thirty minutes using EPA Test Method 9 (see 40 CFR part 60, Appendix A).
- 3.5. The permittee shall maintain records of the following:
 - 3.5.1. Details of each visual survey and visible emissions observation, including date, time, observer and results;
 - 3.5.2. Date, time and type of any investigation conducted pursuant to Condition 3.3.1;
 - 3.5.3. Findings of the investigation, including the reasons for the presence of visible emissions;
 - 3.5.4. Date, time and type of corrective actions taken pursuant to Condition 3.3.2;
 - 3.5.5. Complete documentation of any Method 9 visible emissions observations conducted pursuant to Condition 3.4.

- 3.6. <u>Baghouse Inspection and Recordkeeping</u>. At least once each year during which the permitted source operates, the permittee shall inspect and keep records of the physical condition of the baghouse internals.
- 3.7. <u>Operation and Production Records</u>. The permittee shall track and record the source's operation and production such that source-wide emissions can be calculated on a daily, monthly and 12-month rolling basis. Records shall include, but not be limited to:
 - 3.7.1. Daily hot mix asphalt production (tons);
 - 3.7.2. Daily rock extracted on-site (tons), daily rock, concrete rubble and recycled asphalt pavement (RAP) received from off-site at this facility (tons), daily crushed aggregate produced on-site (tons) by type (i.e., rock, concrete rubble and RAP);
 - 3.7.3. Daily amount of propane (gallons) or natural gas (cubic feet) combusted by the asphalt drum dryer;
 - 3.7.4. Daily amount of propane (gallons) or natural gas (cubic feet) combusted by the asphalt tank heater;
 - 3.7.5. Pressure drop (inches) across the baghouse, recorded at least once per day while operating;
 - 3.7.6. Documentation of any time periods when the drum dryer is producing hot mix asphalt and the baghouse is not fully operational, the baghouse is not in good operating condition, or the drum dryer exhaust is not being routed to the baghouse; and
 - 3.7.7. Daily water and dust suppressant usage for roads, aggregate crushing, and material handling including type and application technique, amount and frequency.
- 3.8. <u>Equipment Installation</u>. The permittee shall install, calibrate, maintain and operate equipment or systems for recording the operation and production records required by this permit.
- 3.9. <u>Emissions Calculations</u>. Within 20 days after each month, the permittee shall calculate and record the source-wide monthly emissions (tons/month) and the rolling 12-month total emissions (tons/year) for CO, PM, PM10 and PM2.5 using the calculation techniques required in Condition 2.
- 3.10. <u>Records Retention</u>. Copies of all required records of emission calculations and parameters used to calculate emissions, monitoring records, notifications and reports required by this permit shall be kept with the asphalt plant for a period of five years and shall be made available to the EPA upon request.

4. Reporting Requirements

- 4.1. <u>Notification of Deviations</u>. The permittee shall notify the EPA:
 - 4.1.1. By telephone (describing the situation) within 24 hours and in writing within 10 days of determining that the drum dryer is producing hot mix asphalt and the baghouse is not fully operational, the baghouse is not in good operating condition, or the drum dryer exhaust is not being routed to the baghouse; and

- 4.1.2. In writing (describing the exceedance) within 10 days of determining that the rolling 12-month total emissions, calculated pursuant to Condition 3.9, exceed an emission limit in Condition 2.
- 4.2. <u>Annual and Final Emission Report</u>. Annually, within 45 days after the end of any calendar year in which the permitted source operated, the permittee shall submit to the EPA a report that includes the_monthly and rolling 12-month total emissions required by Condition 3.9 for the reporting period including all assumptions and calculations used. The final report shall only include monthly and rolling 12-month total emissions, including all assumptions and calculations, not previously reported in an annual report.
- 4.3. <u>Mailing Addresses and Telephone Numbers</u>. All original notifications and reports shall be sent to the EPA at the address below and all telephone notifications shall be made to the telephone number below. A copy of each notification required in Condition 4.1 and each emission report required in Condition 4.2 that does not contain confidential business information shall be sent to the Tribal Environmental Contact at the address below.
- 4.4. <u>EPA Mailing Address</u>. All submittals, notifications and reports to the EPA shall be sent to:

Original Documents go to the EPA at:

Tribal Air Permits Coordinator U.S. EPA – Region 10, 15-H13 1200 Sixth Avenue, Suite 155 Seattle, WA 98101

For telephone notifications: Call (206) 555-1331 (mention the "FARR")

Copies go to Tribal Environmental Contact at:

Department of Science and Engineering Confederated Tribes of the Umatilla Indian Reservation 46411 Timine Way Pendleton, OR 97801 , ,

•

United States Environmental Protection Agency Region 10, Air & Radiation Division 1200 Sixth Avenue, Suite 155, 15-H13 Seattle, Washington 98101-3123

• ()

Technical Support Document Non-Title V Air Quality Operating Permit

Interstate Concrete & Asphalt - Pendleton

Purpose of Owner-Requested Non-Title V Operating Permit And Technical Support Document

Title 40 Code of Federal Regulations Section 49.139 establishes a permitting program to provide for the establishment of Federally-enforceable requirements for air pollution sources located within Indian reservations in Idaho, Oregon and Washington. The owner or operator of an air pollution source who wishes to obtain a Federally-enforceable limitation on the source's actual emissions or potential to emit must submit an application to the Regional Administrator requesting such limitation. The United States Environmental Protection Agency (EPA) then develops the permit via a public process. The permit remains in effect until it is modified, revoked or terminated by the EPA in writing.

This document, the technical support document, fulfils the requirement of 40 CFR § 49.139(c)(3) by describing the proposed limitation and its effect on the actual emissions and/or potential to emit of the air pollution source. Unlike the Operating Permit, this Technical Support Document is not legally enforceable. The permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the permittee from the requirements of the permit.

Table of Contents

C	over Pa	ge	
1.	EPA	AUTHORITY TO ISSUE NON-TITLE V PERMITS	3
2.	PRC	DJECT DESCRIPTION	3
	2.1 2.2	Background Request Description	3 3
3.	FAC	CILITY INFORMATION	3
	3.1 3.2 3.3	Ownership & Location Facility Description Local Air Quality	3 3 6
4.	REG	GULATORY ANALYSIS AND PERMIT CONTENT	6
	4.1 4.2 4.3	Evaluation of Request Other Federal Requirements Permit Conditions	6 .8 .9
5.	PEF	RMIT PROCEDURES 1	2
	5.1 5.2	Permit Revisions, Termination and Reissuance1 Public Notice and Comment1	2 3
6.	ABI	BREVIATIONS AND ACRONYMS 1	3

Appendix A – Emission Inventory

, 5

s t

1. EPA Authority to Issue Non-Title V Permits

On April 8, 2005 the United States Environmental Protection Agency (EPA) adopted regulations (70 FR 18074) codified at 40 CFR Parts 9 and 49, establishing Federal Implementation Plans under the Clean Air Act for Indian reservations in Idaho, Oregon and Washington. One Federal Implementation Plan, commonly referred to as the Federal Air Rules for Reservations (FARR), put in place basic air quality regulations to protect health and welfare on Indian reservations located in the Pacific Northwest. This permit has been developed pursuant to 40 CFR § 49.139 which creates a non-Title V permitting program for establishing Federally-enforceable requirements for air pollution sources on Indian reservations.

2. **Project Description**

2.1 Background

Three federal air quality programs exist that apply to primarily major sources of air pollution: Prevention of Significant Deterioration (PSD) construction permits; Title V operating permits; and Maximum Achievable Control Technology (MACT) standards. The definition of "major source" is slightly different in each program, but is generally based on the amount of pollutants emitted by a source. A source that would otherwise be major can avoid these programs by voluntarily limiting emissions of the regulated pollutants to less than the thresholds for applicability in each program. The EPA's non-Title V permit program, created in the FARR, can be used by sources to establish limits for avoiding PSD permitting, Title V permitting and MACT standards.

2.2 Request Description

On September 7, 2010, the EPA Region 10 received an application from Pioneer Asphalt, Inc. requesting emission limits be established for their plant on the Umatilla Indian Reservation, to avoid being subject to the PSD and Title V permitting programs. The applicant has indicated that their facility's potential to emit is less than the MACT thresholds.

On July 10, 2019, the EPA Region 10 received an application requesting a Change of Ownership. The new facility name was changed to Interstate Concrete & Asphalt – Pendleton (permittee).

3. Facility Information

3.1 Ownership & Location

The hot mix asphalt plant and aggregate handling and crushing activities are owned and operated by Interstate Concrete & Asphalt. This non-Title V permit establishes emission limits on the operation of the permittee's plant on the Umatilla Indian Reservation in Oregon.

3.2 Facility Description

The permittee's stationary hot mix asphalt (HMA) and aggregate handling and crushing plant produces aggregate and hot mix asphalt. On March 1, 2010, in a letter to the permittee, the EPA determined that the aggregate and hot mix asphalt production processes constituted one source for purposes of air permitting.

Aggregate Handling and Processing - Raw Products and Handling

Aggregates and recyclable aggregate products are picked up off-site and hauled to this facility. Raw products are segregated into like products; i.e., natural gravels, quarried rock, concrete rubble, and

recycled asphalt pavement (RAP). Stockpiling of raw products involves the use of front-end loaders and/or dozers to consolidate stockpiles and conserve space. The permittee performs no rock or aggregate extraction (i.e. mining) on-site.

Aggregate processing is dependent on the type of raw product and desired finished product. However, quarried rock, concrete rubble and recycled asphalt pavement are generally all processed through the crushing plant. Natural gravels are generally processed through a combination of the crushing plant (aggregate sized over 1.5 inches) and the aggregate washing plant for aggregates sized less than 1.5 inches.

Aggregate Crushing Plant

The crushing plant is fed with a rubber-tired, front-end loader and/or dozer depending upon the materials being processed and availability of equipment. The Belt Feeder discharges to a belt leading to the Scalp Screen. The Scalp Screen is elevated to allow it to discharge passing material to either a bypass belt or Coarse Material Washer. The Scalp Screen sizes material for the Jaw Crusher. Materials generally sized larger than 3 inches in diameter are processed through the Jaw Crusher, and the remaining material is bypassed via the bypass belt. The Jaw Crusher and bypass belt discharge on the conveyor to Screen #2. Screen #2 separates materials to be processed by the Cone Crusher, Surge Hopper – Impact Crusher or the Splitter. The Cone Crusher is "Closed Circuited" on this screen. The Splitter divides materials to be processed by either Screen #3 or the Kolman Screen via separate conveyors. Both of these screens can return materials to the Surge Hopper-Impact Crusher or stockpile conveyors. The Surge Hopper-Impact Crusher processes materials from 1.5 inches to various minus requirements depending upon the desired final product gradation.

Dust suppression is provided by the addition of water spray and fogging at conveyor discharge points and by the addition of water spray in the Cone Crusher.

Aggregate Washing Plant

The aggregate washing plant can be integrated with the crushing plant via the Scalp Screen or run independently via a separate feeder if raw materials are appropriately sized. However, generally, raw material is fed from the Scalp Screen to the Coarse Material Washer which washes the soils from the larger rock. Processed material is transferred from this unit to the Washing Screen where the material is further cleaned and sized. The sand is washed into the Sand Screw and the other sizes discharged to various belts for stockpiling. The Sand Screw further cleans the sands and discharges to a conveyor for stockpiling. The effluent from both the Coarse Material Washer and Sand Screw are discharged to settling ponds to allow time for particulates to settle before recycling as water to be used again in the washing process.

Finished Aggregate Material Handling

Finished aggregate products are stockpiled with a rubber-tired, front-end loader. These materials are then loaded into the Concrete Plant, Asphalt Plant or trucks for delivery to off-site projects/customers. Dust suppression for the material storage yard is provided by watering haul routes in unpaved areas and sweeping and flushing in the paved areas.

Hot Mix Asphalt Batch Plant - Raw Products and Handling

Aggregate materials are loaded into the Cold Aggregate Feed with a rubber-tired, front-end loader. Liquid asphalt products are delivered by contract haulers in insulated trucks and trailers. These products are then pumped into heated storage tanks adjacent to the batch plant.

Hot Mix Asphalt Drum Dryer and Mixer Plant

Aggregates are fed from the cold aggregate feed by conveyor to a single deck scalping screen for removal of any oversize materials. The material passing the screen is fed to the front of the aggregate dryer. The dryer is utilized to remove moisture from the aggregates, and mix in recycled asphalt and liquid asphalt with the dried aggregate. The dryer operates at a discharge temperature of 290-320 degrees Fahrenheit depending upon the mixing temperature requirements of the liquid asphalt being utilized. The dust blown from the dryer is routed to the baghouse, which filters the dust. The airflow passing through the bags is discharged from the stack of the baghouse exhaust fan. The dust removed by the baghouse is returned to the mixer portion of the dryer for incorporation into the hot mix asphalt product. The hot mix asphalt mixture discharged from the drier/mixer drops into a slate conveyor where it is transferred to the hot mix asphalt storage silo for storage until trucks are available to haul the mixture to various projects/customers.

The parallel-flow drum dryer and mixer is heated by burners fueled by propane or natural gas. Hot mix asphalt is stored in an above-ground storage tank, kept in a liquid state using a 2.50 MMBtu-per-hour heater. All fuels are stored in above-ground tanks. Electrical power is provided by a connection to the local grid. The facility Standard Industrial Classification code is 2951, Asphalt Paving Mixtures and Blocks. The drum dryer emissions are controlled by a baghouse (fabric filter). Water may be applied to aggregate crushing equipment and traffic areas to control fugitive dust.

Table 1 lists and describes the emission units and emission controls for the plant.

EU #	Source Description	Emission Controls
1	Aggregate Crushed Stone Processing Operations: Telsmith 25x40 Jaw Crusher, Telsmith 48S Cone Crusher, Barmac MkII9600 Impact Crusher (Surge Hopper-Impact Crusher)	Water spray and fogging
2	Aggregate Handling: Aggregate transfer from crusher to surge piles; Aggregate transfer from inbound trucks to surge piles; Aggregate transfer from surge piles to stock piles; and Aggregate transfer from stock piles to HMA bins.	None
3	Aggregate Wind Erosion: Wind erosion of all exposed areas including piles	None
4	Aggregate Truck and Loader Traffic: Road dust caused by truck and loader traffic on paved and unpaved roads.	Water or dust palliative applications
5	HMA Drum Dryer: Pioneer 7.5 foot drum mixer; parallel-flow design drum; 300 ton/hour rated capacity; RAP capability; 50 MMBtu/hr burner, fueled with propane or natural gas only	65,000 ACF baghouse with 125 hp fan*
6	Asphalt Tank Heater: Heatec HOH-150; 2.50 MMBtu/hr; fueled with propane or natural gas only	
7	 5 - Storage Tanks: (1) Liquid Asphalt Cement Storage Tank: 26,000 gallon capacity; heated (see tank heater) (2) Liquid Asphalt Cement Storage Tank: 12,000 gallon capacity; heated (see tank heater) (3) Liquid Emulsion Storage Tank: 10,000 gallon capacity to supply 	None

Table 1: Emission Units (EU)

EU #	Source Description	Emission Controls
	 (4) Propane Fuel Tank: 20,000 gallon capacity tank to supply drum dryer (5) Propane Storage Tank: 3,000 gallon capacity tank trailer to supply asphalt heater 	
8	Asphalt Aggregate Handling: via trucks, loader and conveyors; to and from piles and to drum dryer; includes RAP and concrete rubble	None
9	Asphalt Silo Filling: via conveyor from drum dryer	None
10	Asphalt Truck Loading and Fumes: HMA truck load-out from silos and fumes from loaded truck bed while in plant	None
11	Asphalt Traffic: Trucks for loading and delivery of HMA product and Asphalt truck delivering asphalt to the HMA plant.	Water application

* All known emission controls are listed - required controls are noted with an asterisk

3.3 Local Air Quality

This reservation is currently unclassifiable or attains the national ambient air quality standards for all criteria pollutants. An area is unclassifiable when there is insufficient monitoring data. Areas of the country where air pollution levels exceed the national ambient air quality standards are designated "nonattainment." Note that PSD applies only in attainment and unclassifiable areas. Ambient air quality designations are presented in 40 CFR Part 81.

4. Regulatory Analysis and Permit Content

4.1 Evaluation of Request

The Clean Air Act requires all major sources to obtain a PSD permit to construct and a Title V permit to operate. Major sources of hazardous air pollutants (HAP) are also subject to the MACT program. The definition of "major" and the criteria for qualifying as a major source are slightly different for each of the three programs. HMA plants that have the potential to emit (PTE) 250 tons per year or more are subject to PSD. Sources that have the potential to emit 10 tons per year or more of any individual HAP or 25 tons per year or more of any combination of HAPs emitted (including fugitive emissions) are subject to the MACT program. Sources that have the potential to emit 100 tons per year or more or that are major for PSD or MACT purposes, are subject to Title V. PTE is based on the source's maximum capacity, operating 8760 hours per year and only considers emission controls or limits that are enforceable. Source categories subject to a New Source Performance Standard (NSPS) that was promulgated as of August 7, 1980, must count fugitive as well as non-fugitive criteria pollutants when determining major source status. NSPS Subpart I, originally promulgated in 1973, applies to HMA plants, so fugitive emissions must be counted when determining major source status for HMA plants.

As shown in Table 2, Interstate's HMA and aggregate plant has the potential to emit more than 250 tpy of PM and 100 tpy of CO, PM10, and PM2.5. The PTE of GHG emissions is predicted to be less than the major source threshold of 100,000 tpy on a carbon dioxide equivalent (CO2e) basis. Lead emissions are predicted to be nonexistent and well below the Title V and MACT applicability thresholds. HAP (total and individual) emissions are predicted to be well below the Title V and MACT applicability thresholds. See Appendix A for emission inventory details. Without enforceable emission limits Interstate's operation would be subject to PSD and Title V.

Table 2: Potential to Emit (PTE)

		Annual Potential Emissions (tons per year) ¹										
#	Emission Unit	со	Pb	NOx	PM	PM10	PM2.5	SO2	voc	GHG	HAP	HAPs
1	Aggregate Crushers	0	0	0	459	132	132	0	0	0	0	0
2	Aggregate Handling	0	0	0	7	3	<1	0	0	0	0	0
3	Aggregate Wind Erosion	0	0	0	<1	<1	0	0	0	0	0	0
4	Aggregate Traffic	0	0	0	188	51	5	0	0	0	0	0
5	Asphalt Drum Dryer	171	0	34	52	78	78	11	42	42,296	4	7
6	Asphalt Tank Heater	5	0	9	2	2	2	0	<1	8,459	<1	<1
7	Asphalt Storage Tanks	0	0	0	0	0	0	0	<1	0	<1	<1
8	Asphalt Aggregate Handling	0	0	0	11	5	<1	0	0	0	0	0
9	Asphalt Silo Filling	2	0	0	<1	<1	<1	0	16	0	<1	<1
10	Asphalt Truck Loading & Fumes	13	0	0	10	10	10	0	7	0	<1	<1
11	AsphaltTraffic	0	0	0	27	2	<1	0	0	0	0	0
	Calculated PTE	191	0	43	756	283	229	11	66	50,755	5	8
	New PTE Limits ²	80	N/A	N/A	200	80	80	N/A	N/A	N/A	N/A	N/A

¹ Carbon monoxide; lead; nitrogen oxides; particulate matter; particulate matter less than 10 microns and 2.5 microns; sulfur dioxide; volatile organic compounds; Greenhouse Gases on a CO₂e basis; highest plant wide single HAP (Formaldehyde); total hazardous air pollutants.

² The PTE is capped by new limits created in this non-Title V permit.

The emission estimates considered each applicable emission limit paired with the fuel type that can be used by the equipment to determine the worst-case emissions that are allowed, assuming full-time operation at full capacity, which would produce approximately 1,971,000 tons of aggregate and 2,628,000 tons of HMA per year. Note that individual HAP PTE estimates were based on natural gas fuel for any single HAP. Source-wide HAP PTE was a summation of the emission units' total HAP PTE. PTE was also limited by applicable NSPS and FARR emission limits when the limits resulted in lower emissions than available emission estimation techniques predicted. Emission testing performed in 2010 demonstrated that actual PM emissions met the NSPS limit. The permittee can use the site-specific PM data to develop an emission factor for use when reporting actual emissions.

As explained in Section 2.2 above and in Table 2, to avoid being subject to Title V and PSD, the permittee has requested PTE limits (called synthetic minor limits) be created in a non-Title V permit. The permittee anticipates only seasonal operations, resulting in production of less than 24% (468,000 tpy of aggregate and 624,000 tpy of HMA) of the potential production (2.0 million tpy of aggregate and 3.5 million tpy of HMA) used in the emission estimates. At the lower production rate and using propane or natural gas fuels, the permittee is confident that its actual emissions will be well below the emission limits requested. Actual emission factors (e.g. developed by testing the emissions from this source) are available that better reflect actual emissions, then those factors should be used. As described in more detail in Section 4.3, the permit will limit emissions on a rolling 12-month basis to:

• Not more than 200 tpy for PM (avoids PSD)

• Not more than 80 tpy for CO, PM10, and PM2.5 (avoids Title V)

A majority of the PM, PM10 and PM2.5 emissions, respectively, from this plant are expected to be fugitive emissions. Emission estimates do not take into account any unenforceable emission reductions techniques that the permittee might use (e.g. road watering) to comply with the fugitive dust or visible emission requirements that may apply. Techniques exist for quantifying emission reductions due to road watering. If the permittee relies upon controls to lower actual emissions, the EPA will require adequate documentation of the emission reduction techniques and applicable operational parameters that the punctification techniques employ. The permittee should discuss the use of such techniques with the EPA before using them for calculation, compliance and reporting purposes.

The emission inventory in Appendix A includes rock handling and crushing emission units because the permittee has indicated to the EPA that operation of these types of emission units are in support of the HMA plant. As explained in the EPA's letter of March 1, 2010 to the permittee, the facility's rock handling and crushing operation must be considered part of the HMA plant. Accordingly, the permittee will be required to account for the emissions from the rock handling and crushing operation, along with the HMA plant, to document compliance with the emission limits in this permit.

4.2 Other Federal Requirements

As part of EPA Region 10's direct federal implementation and oversight responsibilities, EPA Region 10 has a trust responsibility to each of the 271 federally recognized Indian tribes within the Pacific Northwest and Alaska. The trust responsibility stems from various legal authorities including the U.S. Constitution, Treaties, statutes, executive orders, and historical relations with Indian tribes. In general terms, the EPA is charged with considering the interest of tribes in planning and decision making processes. Each office within the EPA is mandated to establish procedures for regular and meaningful consultation and collaboration with Indian tribal governments in the development of EPA decisions that have tribal implications.

EPA Region 10's Office of Air, Waste and Toxics has contacted the Confederated Tribes of the Umatilla Indian Reservation to invite consultation on the Interstate Non-Title V operating permit application.

Endangered Species Act (ESA) – The EPA is obligated under ESA, Section 7, 16 U.S.C. §1531, to consider the impact that a federal project may have on listed species or critical habitats. The EPA considers ESA issues in the context of permitting decisions on a case-by-case basis. Based on the fact that the permit contains voluntarily-requested emission limits to an existing operation, it is the EPA's conclusion that the issuance of this permit will not affect a listed species or critical habitat. Therefore, no additional requirements will be added to this permit for ESA reasons. The EPA's no effect determination concludes the EPA's obligations under Section 7 of the ESA. (See Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species ACT, FWS and NMFS, March 1998, at Figure 1).

National Environmental Policy Act (NEPA) Review – Under Section 793(c) of the Energy Supply and Environmental Coordination Act of 1974, no action taken under the Clean Air Act shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969. This permit is an action taken under regulations implementing the Clean Air Act and is therefore exempt from NEPA.

National Historic Preservation Act (NHPA) – This project involves establishing limits on air emissions. No part of the facility will be physically altered directly as a result of this permit. Consequently, no adverse effects are expected, and further review under NHPA is not indicated.

Environmental Justice (EJ) – Under Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed on February 11, 1994, the EPA is directed, to the greatest extent practicable and permitted by law, to make achieving Environmental Justice (EJ) part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. Meaningful involvement means that people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public's contribution can influence the regulatory agency's decision; their concerns will be considered in the decision making process; and the decision makers seek out and facilitate the involvement of those potentially affected. The EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work.

The EPA will solicit and will consider public input prior to final decision-making consistent with the FARR's Rule for Non-Title V Operating Permits -40 CFR § 49.139. See Section 5.2 of this TSD for further details.

The EPA uses census tract data to help determine whether minority populations and low-income populations reside in an area to be impacted by a proposed permitting action. The EPA transposes onto maps the EJ indicators for people of color and poverty to help illustrate the project's physical proximity to EJ communities. For the benefit of communities living on Indian Reservations in the Pacific Northwest, maps displaying EJ indicators for people of color and poverty are available at the following the EPA Region 10 website: http://yosemite.epa.gov/R10/ocrej.nsf/environmental+justice/maps.

The proposed permit action does not authorize the permittee to generate new or additional air emissions, and by extension does not authorize new air quality impacts. The EPA has no information to suggest that issuance of this Non-Title V operating permit will result in a disproportionately high and adverse human health or environmental effect upon minority populations and low-income populations.

4.3 **Permit Conditions**

۰.

The permit establishes PTE limits as well as monitoring, recordkeeping and reporting requirements necessary to assure compliance with the limits. The permit is organized into four sections as follow:

- 1. General Conditions
- 2. Emission Limits and Work Practice Requirements
- 3. Monitoring and Recordkeeping Requirements
- 4. Reporting Requirements

An explanation of each condition in the permit follows:

Permit Section 1, General Conditions

<u>Permit Condition 1.1</u> clarifies that the permitted source is a hot mix asphalt drum dryer and mixer as well as other ancillary equipment used as part of the process to produce hot mix asphalt (HMA) in combination with aggregate handling and crushing activities.

Permit Condition 1.2 requires the permittee to comply with the conditions in the permit.

<u>Permit Condition 1.3</u> states that compliance with the permit (and site-specific conditions) allows the permittee to operate at the specified location.

<u>Permit Condition 1.4</u> states that the permit does not relieve the permittee from complying with any other federal, tribal, state, or local laws or requirements that apply. This permit only creates owner-requested limits for the purposes explained above. The permit does not contain other Clean Air Act requirements to which the permitted facility is or may be subject, such as the FARR; New Source Performance Standards, 40 CFR Part 60; and National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, and 63. If in the future, the permittee chooses to relax the limits in Permit Section 2 such that the facility becomes a major source, additional permitting requirements may apply.

Permit Section 2, Emission Limits and Work Practice Standards

<u>Permit Conditions 2.1 to 2.4</u> limit the PTE of the facility to 80% of the major source thresholds for PSD (PM), and Title V (CO, PM10, and PM2.5). The thresholds for each program are 250 tpy for PSD and 100 tpy for Title V. The non-Title V limits effectively restrict emissions for PSD purposes with the exception of PM which is no longer considered a regulated pollutant for Title V applicability purposes (which is the reason the limit is 200 tpy). These synthetic minor limits allow the permittee to be treated as a minor source for permitting purposes. Each limit is written as a rolling 12-month total where each month, actual emissions must be totaled for the last 12 months to determine compliance with the ton per year limit. Emission factors are relied upon for calculating actual emissions.

Limiting emissions to a value less than the major source threshold levels are necessary to account for the unknown uncertainty in the calculations employed when determining actual emissions generated by this source. Limiting these "calculated emissions" to a fraction of the threshold level helps assure that actual emissions remain below the major source threshold level. According to the Clean Air Act Stationary Source Compliance Monitoring Strategy, synthetic minor sources with PTE limits at 80 to 100% of the major source thresholds will be inspected on a once every five year frequency. Setting the limits within that range will help to ensure adequate compliance assurance.

<u>Permit Condition 2.5</u> requires that, consistent with the application submitted, the permittee limit fuels combusted in the asphalt drum dryer and asphalt tank heater to only propane or natural gas. Use of a different fuel could require additional permit requirements.

<u>Permit Condition 2.6</u> requires good operation of the fuel burning equipment (drum dryer and tank heater) and the drum dryer baghouse. Good operation generally implies proper operation and good maintenance of equipment - burner tuning and baghouse bag inspection and replacement as needed. The emission factors relied upon in this permit are assumed to reflect good operation, so good maintenance and operation of the equipment is necessary to ensure the factors are representative of actual operations. This permit condition also requires the baghouse be operated at all times the drum dryer is operated and receives any emissions generated by the drum dryer, again, to assure a level of emission control that reflects good operation and the emission factors relied upon.

Permit Section 3, Monitoring and Recordkeeping Requirements

<u>Permit Conditions 3.1 to 3.5 Visible Emission Monitoring and Recordkeeping</u> - These conditions require a daily survey (a plant walkthrough) for visible emissions, from the drum dryer baghouse stack, as well as specific follow-up steps (investigation, corrective action, RM9 observation and additional recordkeeping and reporting) if visible emissions are observed. If observed visible emissions cannot be eliminated within 24 hours, a RM9 opacity observation must be performed. Records of all surveys and observations are required to be kept for a period of five years. This requirement will help ensure that emissions do not exceed the limits created by this permit.

<u>Permit Condition 3.6 Baghouse Inspection and Recordkeeping</u> - This permit condition requires an annual internal inspection of the baghouse to check for wear, corrosion and bag degradation, blinding or channeling that could impair the performance of the unit. Again, the requirement to inspect and appropriately maintain the baghouse is believed to be necessary to ensure the emission factors used in the monthly compliance evaluation represent actual operations.

Permit Condition 3.7 Operations and Production Records - The permittee must track and record the operations and production of the plant, including aggregate handling and crushing equipment aggregated with this asphalt plant, such that facility-wide emissions can be reliably calculated on a monthly and 12-month basis and for troubleshooting compliance concerns. Records shall include all information necessary to perform emission calculations as required by Permit Condition 3.9. Emission estimation techniques, and the data needed, are described in detail in Appendix A to this TSD. Most of the data (production, fuel usage, baghouse pressure drop and fugitive dust controls) must be recorded each day. Other data, such as fuel sulfur and ash content, must be documented for each fuel load or through actual measurements to represent what is being burned at any time. Pursuant to Permit Condition 2.6, the drum dryer exhaust is required to be routed to the baghouse at all times and the baghouse must be kept in good operational condition. Permit Condition 3.6 requires the baghouse internals to be inspected annually. The permittee must document any period of operation when (1) the drum dryer exhaust is not routed to the baghouse is not in good operation to assure compliance with Permit Condition 2.6.

<u>Permit Condition 3.8 Equipment Installation</u> – Some monitoring requirements will require the permittee to have equipment to indicate the operational parameters that must be recorded. The permittee can also automate some recordkeeping systems to assure data is recorded. For instance, baghouse pressure drop requires pressure reading instrumentation and can be linked to recording equipment. Some combustion devices can also be equipped with fuel usage measurement and recording instrumentation. All records can be manually recorded by plant personnel using the technique (or "system") the permittee determines is appropriate to comply with the permit. If monitoring equipment will be installed and used, this condition requires it to be appropriately calibrated and maintained.

<u>Permit Condition 3.9 Emissions Calculations</u> – Because compliance with the synthetic minor emission limits created in this permit must be determined on a rolling 12-month basis, this condition requires the permittee to confirm compliance with the emission limits in the permit every month. Permittees with EPA-issued permits that contain synthetic minor limits should always collect the necessary data to calculate emissions from its plant. This will allow them to be able to produce accurate emissions calculations for any period of time necessary. If the recordkeeping is routine for the plant personnel, it is also less likely that the source will make recordkeeping errors during the time it needs to report to the EPA.

The emission calculations should be based on the best emission factors available and actual operational and production data. Calculations should be performed as they are described in Appendix A; however, assumptions in Appendix A should be verified as needed and when better information is available, it should be used. For instance, emission factors from site-specific emission testing would likely be more

representative than basing emission on NSPS limits or AP-42. Techniques used for the calculations, including any new assumptions, must be clearly documented and acceptable to the EPA.

<u>Permit Condition 3.10 Records Retention</u> – This requirement, to keep all of the required records on site for a period of five years, makes the permit consistent with the other EPA recordkeeping requirements.

Permit Section 4, Reporting Requirements

<u>Permit Condition 4.1 Notification of Deviations</u> – To expedite the time it takes for the EPA to learn that the permittee is having compliance problems, this condition lists the information and timing for notifying the EPA about deviations from permit conditions. Operating circumstances that are of greatest concern (baghouse not operating or functioning improperly) must be reported by telephone within 24 hours of discovery with written follow-up within 10 days. Calculated exceedances of the permit emission limits are required to be reported in writing within 10 days of discovery. Notifications should include a clear, complete explanation of the exceedance or situation that warrants the notification so the EPA understands the severity of the situation.

<u>Permit Condition 4.2 Annual Report</u> – If the permittee operated during a given calendar year, the permittee must submit an emission report to the EPA that provides a summary of the operations (dates) and each calculated monthly and 12-month rolling emission total required in Permit Condition 3.9, including any 12-month totals exceeding the permit limits that were previously sent to the EPA under the deviation notification requirement in Permit Condition 4.1. The emission report is due annually by February 15 following any year in which the source operated. If the source operates every year, the source is required to report every year by February 15.

While monthly emissions data might show up in more than one report, each 12-month rolling total should only be reported once. Note that the emission report required by this permit is different than the annual registration report required by 40 CFR 49.138 in the FARR.

<u>Permit Condition 4.3 and 4.4 Mailing Addresses and Telephone Numbers</u> – The telephone number for telephone notifications has been included here. Copies of all notifications and reports must be sent to the Tribal environmental contact listed that represents the reservation on which the source operates.

5. Permit Procedures

5.1 Permit Revisions, Termination and Reissuance

The permittee should contact the EPA if they are considering requesting any revision to the conditions of this permit. The EPA will evaluate the regulatory options available to the permittee and advise them of same.

If the permittee wishes to terminate the permit, a written request must be submitted to the EPA explaining the reasons for the request and, if necessary for continued operation, submitting applications for any Clean Air Act permits or approvals that the permittee avoided by establishment of the limits contained in this permit.

This permit may be terminated, revised, or revoked and reissued by the EPA for cause. Cause exists to terminate, revise, or revoke and reissue this permit under the following circumstances:

- 1. This permit contains a material mistake;
- 2. Inaccurate statements were made in establishing the terms or conditions of this permit;

- 3. The permittee fails to comply with any condition of this permit; or
- 4. This permit must be terminated, revised, or reopened and reissued to assure compliance with Clean Air Act requirements.

5.2 Public Notice and Comment

• 0,f ±

As required under 40 CFR § 49.139(c), the draft operating permit will be publicly noticed and made available for public comment as follows:

- 1. Make available for public inspection a copy of the draft operating permit prepared by the EPA, the technical support document for the draft permit, the application, and all supporting materials including at least one location in the area affected by the air pollution source (see 40 CFR 49.139(c)(5)(i));
- 2. Publish public notice for this draft permit of the availability of the draft permit and supporting materials and of the opportunity to comment in a newspaper of general circulation (see 40 CFR 49.139(c)(5)(ii));
- 3. Provide copies of the notice to the owners or operators of the air pollution source, the Tribal governing body, and the Tribal environmental organizations as well as Oregon Department of Environmental Quality (see 40 CFR 49.139(c)(5)(iii)); and
- 4. Provide for a 30-day period for submittal of public comments, starting upon the date of publication of the notice (see 40 CFR 49.139(c)(5)(iv)).

As required in 40 CFR 49.139(c)(5)(iv) and (c)(6), the EPA will address any public comments in preparing a final permit and technical support document and will document a response to each comment explaining whether any changes to the permit resulted and the reason the change was or was not made. As required in 40 CFR 49.139(c)(7), the EPA will send the final permit and technical support document to each person who provided comments on the draft permit to operate and the EPA will make available the final permit and technical support document at all of the locations where the draft permit was made available.

The draft permit and technical support document were made available during a public comment period that lasted from July 2, 2013 to August 3, 2013. No comments were received during this time.

6. Abbreviations and Acronyms

Aerometric Information Retrieval System Facility Subset
Code of Federal Regulations
Carbon monoxide
Environmental Justice
United States Environmental Protection Agency (also U.S. EPA or EPA)
Endangered Species Act
Federal Air Rules for Reservations
Federal Register
Hazardous air pollutant (plural: HAPs)
Hot mix asphalt
Maximum Achievable Control Technology (Title 40 CFR Part 63)
National Emission Standards for Hazardous Air Pollutants (Title 40 CFR Parts 61 and
63)
National Historical Preservation Act
Nitrogen oxides
New Source Performance Standards (40 CFR Part 60)

Interstate Concrete & Asphalt - Pendleton Non-Title V Operating Permit R10NT502401, Technical Support Document

. .

PM	Particulate matter
PM10	Particulate matter ≤ 10 micrometers
PM2.5	Particulate matter \leq 2.5 micrometers
PSD	Prevention of Significant Deterioration (40 CFR Part 52)
PTE	Potential to emit
RAP	Recycled asphalt pavement
SO2	Sulfur dioxide
Title V	Title V of the Clean Air Act
TPY	Tons per year
TSD	Technical Support Document
VOC	Volatile organic compound

Appendix A

Emission Inventory

Interstate Concrete & Asphalt - Pendleton

Technical Support Document Non-Title V Air Quality Operating Permit R10NT502401

1

.

Summary of Facility Potential Criteria Air Pollutant Emissions Potential to Emit, (tons per year)

Aggregate Handling and Crushing Activities

	EU1	EU2	EU3	EU4	
	Aggregate	Aggregate Handling	Aggregate	Aggregate Traffic	Total
	Giuaneia	nandanig	Willia Elogion	(Tuilo	TOLAN
Carbon Monoxide (CO)	0.0	0,0	0.0	0.0	0.0
Lead (Pb)	0.0	0.0	0,0	0.0	0,0
Nitrogen Oxides (NOx)	0.0	0.0	0.0	0.0	0.0
Particulate (PM)	459.1	6.8	0.2	187.5	653.5
Fine Particulates < PM10 (PM10)	131.5	3.2	0.1	50.5	185.2
Fine Particulates < PM2.5 (PM2.5)	131.5	0.5	0.0	5.1	137.1
Sulfur Dioxide (SO2)	0.0	0.0	0.0	0.0	0.0
Volatile Organic Compounds (VOC)	0,0	0.0	0.0	0.0	0.0
Greenhouse Gases (CO2e)	0.0	0.0	0.0	0.0	0.0

Hot Mix Asphalt Plant (Point and Fugitive Sources)

	EU5	EU6	EU7	EU8	EU9	EU10	EU11	
	Drum Mixer (Point Source)	Asphalt Tank Heater (Point Source)	Storage Tanks (Point Sources)	Aggregate Handling (Fugitive Source)	Silo Filing (Point Source)	Asphalt Truck Loading & Fumes (Point Source)	Traffic (Fugitive Source)	Total
Carbon Monoxide (CO)	170.8	5.1	0.0	0.0	1.6	13.3	0.0	190.8
Lead (Pb)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nitrogen Oxids (NOx)	34.2	8.9	0.0	0,0	0.0	0.0	0.0	43.0
Particulate (PM)	52.3	2.0	0.0	10.7	0,8	9.7	27.0	102.4
Fine Particulates < PM10 (PM10)	77.8	2.0	0.0	5.1	0.8	9.7	2.4	97.7
Fine Particulates < PM2.5 (PM2.5)	77.8	2.0	0.0	0.8	0.8	9.7	0.7	91,7
Sulfur Dioxide (SO2)	11.2	0.0	0.0	0.0	0.0	0.0	0.0	11.2
Volatile Organic Compounds (VOC)	42.0	0.5	0.6	0.0	16.0	6.5	0.0	65.7
Greenhouse Gases (CO2e)	42295.6	8459.1	0.0	0.0	0.0	0.0	0.0	50754.7

TOTAL SOURCE POTENTIAL TO EMIT

	Total
Carbon Monoxide (CO)	190.8
Lead (Pb)	0.0
Nitrogen Oxides (NOx)	43.0
Particulate (PM)	755.9
Fine Particulates < PM10 (PM10)	282.9
Fine Particulates < PM2.5 (PM2.5)	228.8
Sulfur Dioxide (SO2)	11.2
Volatile Organic Compounds (VOC)	65.7
Greenhouse Gases (CO2e)	50754.7

Total Source PTE Limits

Carbon Monoxide (CO)	80	tpy, based on emission limit in FARR Non-Title V permit
Lead (Pb)	N/A	·
Nitrogen Oxides (Nox)	N/A	
Particulates (PM)	200	tpy, based on emission limit in FARR Non-Title V permit
Fine Particulates (PM10)	80	tpy, based on emission limit in FARR Non-Title V permit
Fine Particulates (PM2.5)	80	tpy, based on emission limit in FARR Non-Title V permit
Sulfur Dioxide (SO2)	N/A	
Volatile Organic Compounds (VOC)	N/A	
Greenhouse Gases (GHGs)	N/A	

Note 1. The "Total Source Potential To Emit" table sums the values in the "Aggregate Handling and Crushing Activities" and "Hot Mix Asphalt" tables above.

Summary of Facility Potential Hazardous Air Pollutant (HAP) Emissions

Potential to Emit, (tons per year)

.

	EU 5	EU 6	EU 7	EU 9	EU 10	
					Truck	Single HAP
		Asphalt Tank	Storage		Loading &	Plantwide
Inorganics	Drum Dryer	Heater	Tanks	Silo Filling	Fumes	Totals (tpy)
Antimony Compounds	2.37E-04	0.00E+00				2.37E-04
Arsenic Compounds (incl arsine)	7.36E-04	1.21E-05				7.48E-04
Beryllium Compounds	0.00E+00	7.27E-07				7.27E-07
Cadmium Compounds	5.39E-04	8.07E-05				0.00E-04
Cobalt Compounds (Incritexavalent)	3.42E-05	5.09E-06				3.03E-05
Lead Compounds (not elemental lead)	8.15E-04	3.03E-05				8.45E-04
Manganese Compounds	1.01E-02	2.30E-05				1.01E-02
Mercury Compounds	3,15E-04	1.58E-05				3.31E-04
Nickel Compounds	8.28E-02	1.27E-04				8.29E-02
Phophorus Compounds	3.68E-02	0.00E+00				3,68E-02
Selenium Compounds	4.60E-04	1.45E-06				4,61E-04
Organics						0.00E+00
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00톤+00
Benzene	5,12E-01	1.27E-04	1.78E-02	5.12E-03	3.59E-03	5.39E-01
Bromomethane (methyl bromide)	0.00E+00	0.00E+00	2.72E-03	7.85E-04	6.63E-04	4.17E-03
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Disulfide	0.00E+00	0.00E+00	8.88E-03	2.56E-03	8.98E-04	1.23E-02
Chloroethane (ethyl chloride)	0.00E+00	0.00E+00	2.22E-03	6.41E-04	1.45E-05	2.87E-03
Chloromethane (methyl chloride)	0.00E+00	0.00E+00	1.28E-02	3,68E-03	1.04E-03	1.75E-02
Cumene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dichlorobenzene	0.00E+00	7.27E-05	0.00E+00	0.00E+00	7.60E-03	7.67E-03
Dioxin (2,3,7,8 tetrachlorodibenzo-p-dioxin)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethyl Benzene	3.15E-01	0.00E+00	2.11E-02	6.09E-03	1.93E-02	3.62E-01
Formaldehyde	4.07E+00	4.55E-03	3,83E-01	1.10E-01	6.08E-03	4.58E+00
Furans (all PCDF)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane (incl n-Hexane)	1.21E+00	1.09E-01	5.55E-02	1.60E-02	1.04E-02	1.40E+00
Hydrochloric Acid (hydrogen chloride or HCL)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Isooctane (2,2,4-trimethylpentane)	5.26E-02	0.00E+00	1.72E-04	4.96E-05	1.24E-04	5.29E-02
Methyl Chloride (chloromethane)	0.00E+00	0.00E+00	1.50E-04	4.32E-05	0.00E+00	1.93E-04
Methyl Chloroform (1,1,1-trichloroethane)	6.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-02
Methyl tert-Butyl Ether (MTBE)	0.00E+00	0.00E+00	0,00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene ¹ (also a POM)	1.18E-01	3.70E-05	0,00E+00	6.07E-03	2.37E-02	1.48E-01
Phenol	0.00E+00	0.00E+00	0.00E+00	3.94E-03	2.23E-02	2.63E-02
Polycyclic Organic Matter* (incl naphthalene)	2.46E-01	4.23E-05	0.00E+00	3.81E-02	4.47E-02	3.29E-01
Propionaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Quinone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	0.00E+00	0.00E+00	3.00E-03	8.65E-04	5.06E-04	4.37E-03
Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-04	5,32E-04
Toluene	1.97E-01	2.06E-04	3.44E-02	9.93E-03	1.45E-02	2.56E-01
Xylene (incl isomers and mixtures)	2,63E-01	0.00E+00	1.43E-01	4.12E-02	3.39E-02	4.80E-01

	EU 5	EU 6	EU 7	EU 9	EU 10
					Truck
		Asphalt Tank	Storage		Loading &
	Drum Dryer	Heater	Tanks	Silo Filling	Fumes
Emission Unit HAP Totals	7.072	0.114	0.684	0.239	0.166

Plantwide Combination HAPs Total	8.276	tons per year	
Highest Plantwide Single HAP	4.577	tons per year	(formaldehyde)

Plantwide PTE Limits

Plantwide Combination HAPs Total	N/A	
Plantwide Single HAP Total	N/A	

Notes: 1. Emission-Unit HAP Totals will not equal the sum of individual pollutants

Isomers of xylene (m-, p-, o-) are grouped as Xylenes for applicability even though the individual isomers are each listed HAPs in the Clean Air Act
 Emission units not shown are not known to emit HAPs

Greenhouse Gases (GHGs) Potential to Emit Emission Inventory

Emissions Unit:	1 to 8	
Global Warming Potential:	CO2	1
	N ₂ O	310
	CH₄	21
Firing Rate Drum Mixer Burner Capacity	50	MMBtu/hr
Asphalt Tank Heater	2.5	MMBtu/hr

Asphalt Tank Heater Point Source Emissions

		Maximum Annual		Maximum Annual Emission Factors ^{1,2}		ors ^{1,2}	Potential to Emit (tpy)			
Unit ID	Description	Capa	city	CO2	N ₂ O	CH₄	CO2	N ₂ O	CH₄	CO ₂ e
5	Drum Mixer - Propane	6,832,800	gailons	61,46	6.E-04	3.E-03	42,125	0.41	2.06	42,296
6	Asphalt Tank Heater - Propane	1,366,560	gallons	61.46	6.E-04	3.E-03	8,425	0.08	0.41	8,459
5	Drum Mixer - Natural Gas	426,070,039	scf	53.02	1.00E-04	1.00E-03	25,599	0.05	0.48	25,624
6	Asphalt Tank Heater - Natural Gas	21,303,502	scf	53.02	1.008-04	1.00E-03	1,280	0.002	0.02	1,281
The followi	ng emission units have no known emissions of	GHG:						+		
1	Aggregate Crusher									
2	Aggregate Handling									
3	Aggregate Wind Erosion									
4	Aggregate Traffic									
7	Asphalt Storage Tanks									
8	Asphalt Aggregate Handling and Screen									
9	Asphalt Silo Handling									
10	Asphalt Truck Loading & Fumes									
11	Asphalt Traffic									

Total from non-biomass-combustion sources: 50,755

4

(highest PTE based on propane fuel)

ĩ

Physical Data and Conversions Used	
453.59	g/lb
2,000	lbs/ton
0.091	MMBtu/gallon
1.03E-03	MMBtu/scf

Footnotes/Assumptions

Heat content of propane fuel (Part 98, Subpart C, Table C1) Heat content of natural gas fuel (Part 98, Subpart C, Table C1)

61.46 40 CFR Part 98, Table C-1

53.02 40 CFR Part 98, Table C-1

6.E-04 40 CFR Part 98, Table C-2

3.E-03 40 CFR Part 98, Table C-2

1.00E-04 40 CFR Part 98, Table C-2

1.00E-03 40 CFR Part 98, Table C-2

1 Emission factors for Propane and Natural Gas are in units of kg/MMBtu 2 Emission factors are from 40 CFR Part 98 Subpart C, Tables C-1 and C-2

Default CO2 emission factor for propane Default CO2 emission factor for natural gas Default N₂O emission factor (kg N₂O/mmBtu) for propane Default N₂O emission factor (kg N₂O/mmBtu) for natural gas Default CH₄emission factor (kg CH₄/mmBtu) for propane Default CH₄emission factor (kg CH₄/mmBtu) for natural gas

Interstate Concrete Asphalt - Pendleton Non-Tille V Permit R10NT502401 Technical Support Document

Criteria Air Pollutant Emission Inventory

Emission Unit: #1 Aggregate Crushed Stone Processing Operations

Mineral PM is formed due to physical attrition of the stone during crushing, screening, Description: conveying, loading, and unloading

Control: Wet Suppression

Capacity: 225 tons per hour (plant)

Operation: 8760 hours/year

Potential to Emit, (tons per year)

СО	
Lead	
NOx	
PM	459.06
PM10	131.48
PM2.5	131.48
SO2	
VOC	

Activity Departmention	Occuropeoe	PM		PM10		PM2.5	
Activity Description	Occurences	EF	PTE TPY	EF	PTE TPY	EF	PTE TPY
Conveyeror transfer point	22	3.00E-03	65.04	1.10E-03	23.85	1.10E-03	23.85
Screening	2	2.50E-02	49.28	8.70E-03	17.15	8.70E-03	17.15
Fines screening	1	3.00E-01	295.65	7.20E-02	70.96	7.20E-02	70.96
Truck unloading	1	1.60E-05	0.02	1.60E-05	0.02	1.60E-05	0.02
Primary crushing	1	5.40E-03	5.32	2.40E-03	2.37	2.40E-03	2.37
Tertiary crushing	1	5.40E-03	5.32	2.40E-03	2.37	2.40E-03	2.37
Fines crushing	1	3.90E-02	38.43	1.50E-02	14.78	1.50E-02	14.78
-	TOTAL PTE TPY		459.06		131.48		131.48

Estimation Explanations

Emission factor (EF) units are lb/ton stone processed

Basis for all EF: AP-42, 08/04, Section 11.19.2, Table 11.19.2-2 (Ib/Ton)

Note: 1. Tertiary crushing EFs utilized to estimate maximum possible emissions from primary crushing.

2. PM10 truck unloading EF utilized to estimate PM2.5 truck unloading emissions.

3. All EFs reflect uncontrolled emissions given that no regulation explicitly requires Pioneer to utilize water suppression.

Criteria Air Pollutant Emission Inventory

Emission Unit: #2 Aggregate Handling and Processing Activities

- Description: a1. Aggregate transfer from crusher to surge piles (225 tons/hr) a2. Aggregate transfer from inbound trucks to surge piles (75 tons/hr)
 - b1. Aggregate transfer from surge piles to stock piles (225 tons/hr)
 - b2. Aggregate transfer from surge piles to stock piles (75 tons/hr)

c. Aggregate transfer from stock piles to HMA bins (300 tons/hr)

Control:	none	
Capacity:	300	tons/hour
Operation:	8760	hours/vear

Potential to Emit, (tons per year)

	5 transfers			
	EF	PTE TPY		
CO				
Lead				
NOx				
PM	0.0010	6.8		
PM10	0.0005	3.2		
PM2.5	0.0001	0.5		
SO2				
VOC				

Estimation Explanations

Emission factor (EF) units are lb/ton of aggregate handled

PM factor: AP-42, 11/06, Section 13.2.4, Equation 1 for each drop operation

Emission	factor=k(0.0032)(U/5)^1.3/(M/2)^1.4
----------	-------------------------------------

	J=K(0.0032)(0/3) 1.3/(W/2) 1.4		mph, average wind speed during a calendar year over last 49 years of
U, mean wind speed: 8.6		8.6	observations - NOAA Pendleton %, conservative estimate based on EPA's Emission Inventory
	M, material moisture content:	3	Improvement Program range of 3 - 7%
PM factor	: k, particle size multiplier:	0.74	from AP-42, Section 13.2.4
PM10 factor	: k, particle size multiplier:	0.35	from AP-42, Section 13.2.4
PM2.5 factor	: k, particle size multiplier:	0.053	from AP-42, Section 13.2.4

Emissions are multiplied by five to account for all five transfers

Criteria Air Pollutant Emission Inventory

,

Emission Unit: #3 Aggregate Wind Erosion

Description:	Wind erosion	of all exposed areas including piles
Control:	none	
Capacity:	300	tons/hour
Operation:	8760	hours/year
	2628000	tons/yr (tons/hr x hours/yr)
	50538.4615	tons/pile (assumes a 1 week supply is available on site so divide total yearly amount by 52)
	962637.363	ft3 per pile, assumes aggregate density is 105 lb/cu ft (Weights of Materials, page 393)
Pile height:	50	feet
Pile width:	200	feet
Pile length:	96.3	feet
Pile Footprint:	19,253	ft2
	0.44	acres, assumes 43560 ft2/acre

Potential to Emit, (tons per year)

	Wind erosion		
	EF		
	(ton per acre-		
	yr)	PTE TPY	
со			
Lead			
NOx			
PM	0.38	0.17	
PM10	0.18	0.08	
PM2.5	0.03	0.01	
SO2			
VOC			

Estimation Explanations

Emission factor (EF) units are tons/acre per year

Stockpile size calculated based on maximum capacity, operating 8760 hr/yr PM factor: 0.38 tons per acre based on AP-42, 10/98, Section 11.9, Table 11.9-4 for wind erosion of exposed areas PM10 factor: Engineering estimate - 47% of PM factor from ratio of transfer particle size multipliers (0.35/0.74) in AP-42, 13.2.4, 11/06 PM2.5 factor: Engineering estimate - 7% of PM factor from ratio of transfer particle size multipliers (0.053/0.74) in AP-42, 13.2.4, 11/06

Critaria Air Pollutant Emission In

Criteria Air Poli	utant En	hission Inven	tory									
Emission Unit:	#4 Truck	and Loader	Traffic									
Description:	Road dust	caused by truck	and loader	rtrathc								
Control: Crusher Canacibe	225	tone ner hour										
HMA Loading	220	tona per nour										
Capacity:	300	tons per hour										
Operation:	8760	hours/year										
	a Tanah d	atives of ferror	nated sta	no. 1225 to no.	h-1							
	a. Ifuck c	envery or tragn	16nted Sto 17	ne: (229 tons) Jons	nrj							
	mean w	eight (loaded):	49.5	tons								
W	, mean we	ight (average):	33.25	tons								
		tons per trip:	32.5	tons								
	number o	f trips per year	60646									
naved road roug	d trìn dista	nce traveled at			uno	aved road rou	nd trip distand	e traveled at				
plant while delive	ering fragm	ented stone to			pl	ant while deliv	ering fragme	nted stone to				
•		crusher:	0.15	miles				crusher:	0.15	miles		
vehicle n	niles travel	ed paved road;	9096.9	miles		vehicle mil	es traveled u	npaved road:	9096.9	miles		
	b. Truck o	lelivery of crus	ned stone:	(75 tons/hr)								
	mean	veight (empty):	17	tons								
	mean w	eight (loaded):	49.5	tons								
W	l, mean we	ight (average):	33.25	tons								
		tons per trip:	32.5	ions								
	number o	of trips per year	20215									
paved road rour	nd trip dista	nce traveled at			unp	aved road rou	nd trip distand	ce traveled at				
plant while delive	ering tragn	nented stane to			P	lant while deli	rering fragme	nled stone to				
		crusher:	0.15	miles				crusher:	0.15	miles		
vehicle h	niles travel	ed paved road:	3032.25	miles		venicie mi	es daveiro u	npaveo roao:	3032.23	nnes		
	c. Loader	for delivering a	ggregate	product from	surge piles l	o stock piles	: (300 tons/h	r)				
	mean	veight (empty):	34	tons	•••							
	mean v	eight (loaded):	40	tons								
V.	/, mean we	eight (average):	37	tons								
	number	of trips per vear	438000	10113								
paved round trip of	dislance tra	voled between	•	- 4	unpa	ved round trip	distance trav	eled between	0.04	milee		
crusher	surge pile	and stockpiles:	D n	miles		crusne vehicle mi	r surge prie ar loc travelort u	na stockpiles.	17520	miles		
ABUTCLE TUNK	es (laveleu	unpaveu roau.	v	+11465		AGUIAIO UN		apurca ibaa.	11020			
	d. Loader	for delivering a	aggregate	product from	stockpiles t	o HMA cold b	ins: (300 ton	s/hr}				
	mean	weight (empty):	34	tons								
14	теал ү	/eight (loaded):	40	tons								
•	4, 1110-211 W	tons per trip:	6	tons								
	number	of trips per year	438000									
naved round itin	distance tr	aveled between			unoa	ved round trip	distance trav	eled between				
pavea round rap (stockoile	and feed bins:	0	miles			stockpile a	and feed bins:	0.04	miles		
vehicle mile	es traveled	unpaved read:	0	miles		vehicte mi	les traveled u	inpaved road:	17520	miles		
Potential to Emit,	(tons per	year)			I		r					
	Truck	delivery of	Truck	delivery of	Truck delive	ry of crushed	Truck delive	ry of crushed	Loader	delivering	Loader	delivering
	iragme na	ented slone •	unna	red stone -	stone - p	aved road	stone - un	paved road		ed road	unpav	ed road
										L DYD YDY		
	EF.	PTE TPY	EF	PTE TPY	EF	PIEIPY	Er	PIEIPT	EF	PIEIPT	Er	PIEIP
Load						1				+ +		
NOx				1	[1	[1				1
PM	0.23	1.05	5,57	25.34	0.23	1.05	5.57	25.34	7.69	67.35	7.69	67.35
PM10	0.05	0.21	1.42	6.46	0.05	0.21	1.42	6.46	2.12	18,56	2.12	18.56
PM2.5	0.01	0.05	0.14	0.65	0.91	0.05	0.14	0.65	0.21	1.86	0.21	1.86
<u>soz</u>				-			<u> </u>	<u> </u>				
	L				L	.I			1			
Estimation Explan	nations											
Emission factor (El	F) units are	lb/miles										
Unpaved Roads				.		.						
Predictive Emission	n Equation	s used to calcula	te Emissio	n Factors from	AP-42 11/06	, Section 13.2	.z, Equation 1	a	•			
PM Tactor:	E=K (5/12	:)-a (₩/3)-0(30: W =	<i></i> //303	mean vehic	e weight (too	s) - see sourc	e data above					
		P=	9	8 average nu	nber of days	in a calendar	yoar during w	hich at teast C).01 inches	of precipitation	I ÍS	

98 average number of days in a calendar yoar during which at least 0.01 inches of precipitation is observed, NOAA - Pendleton

B surface material sit content (%), estimate based on AP-42 Table 13.2.2-1 for a plant road at a sand and gravel processing facility. This factor employed for trucks.
7.1 surface material sit content (%), estimate based on AP-42 Table 13.2.2-1 for a material storage area at a sand and gravel processing facility. This factor employed for loador. 4.9 empirical constant

- k≖
- 0.7 empirical constant 0.45 empirical constant a = b =
- PM10 factor: Same as for PM emission factor

s ≖ s =

except that 1.50 ompirical constant

		0.0	empirical constant
	b=	0.45	empirical constant
PM2.5 factor:	ame as for PM emission factor.	exced	ot that

- 0.15 empirical constant 0.9 empirical constant k =
- a =
- b = 0.45 empirical constant

Emission factor (EF) units are lb/miles

Paved Roads

Paved Roads Prodictive Emission Equations used to calculate Emission Factors (rom AP-42 01/11, Section 13.2.1.3, Equation 2 PM factor: E=[k*(sL)*0.91*(W)*1.02)][1-P/(4*365)] W = mean vehicle weight (tons) - see source data above P = 98 average number of days in a calendar year during whic

- mean vehicle weight (tons) soe source data above 98 average number of days in a calendar year during which at least 0.01 inches of precipitation is observed, NOAA Pendleton observations 0.011 ib/VAT, empirical constant, for PM30, Table 13.2.1-1 0.6 silt loading (g/m2), based on AP-42 Table 13.2.1-2 ubiquitous baseline value for paved roads experiencing less than 500 trips per day (conservative assumption as value increases with increasing number of daily trips) k≕ sL≠
- k = 0.0022 empirical constant, for PM10, Table 13.2.1-1
- For PM2.5:
 - 0.00054 empirical constant, for PM2,5, Table 13.2.1-1 k =

For PM10:

Total

PTE TPY

187.48 50.46 5.11

Criteria Air Pollutant Emission Inventory

Emission Unit: #5 Asphalt Drum Mixer Description: Hot Mix Asphalt Plant Parallel-Flow Drum Mixer

Control; Fabric Filter

.

Control; Fabric Fuer Fubl: Propano or Nalural Gas Firing Rate: 50 MMBtu/hr Estimated value based upon diese! firing at former location. See diese! fuel daily usage and HMA production for September 2, 1999. Value not used in emissions calculation. ((1964 gal / 1348.4 tons HMA) / 42 gal/bbl) * 5.8 MMBtu/bbl = 0.20 MMBtu/ton HMA. 250 ton HMA/hr * 0.20 MMBtu/ton HMA = 50 MMBtu/hr

Capacity: 300 tph hot mix asphalt Operation: 8760 hours/year

Throughput: 2,628,000 tons per year hot mix asphalt

Potential to Emit, (tons per year)

Drum Mixer	Pro	pane	Natural Gas		Max
	EF	PTE TPY	EF	PTE TPY	PTE TPY
co	0,13	170.8	0.13	170.8	170.8
Lead	6.2E-07	0.001	6.2E-07	0.001	0.0
NOx	0.025	34.2	0.026	34.2	34.2
PM (filterable)	0.040	52.3	0.040	52.3	52.3
PM10 (total)	0.059	77.8	0.059	77.8	77.8
PM2.5 (total)	0.059	77.8	0.059	77.8	77.8
SO2	0.009	11.2	0.005	7.1	11.2
VOC	0.037	42.0	0.032	42.0	42.0

Estimation Explanations

Emission factor (EF) units are lb/ton HMA product.

CO factor: AP-42 3/04, Hot Mix Asphalt Plants, Table 11.1-7 -- natural gas-fired. • Assume emissions resulting from combustion of natural gas are similar to emissions resulting from combustion of propane. Lead factor: AP-42 3/04, Hot Mix Asphalt Plants, Table 11.1-12 -- natural gas or propane with fabric filter employed to meet NSPS PM limit. NOX factor: AP-42 3/04, Hot Mix Asphalt Plants, Table 11.1-7 -- natural gas are similar to emissions resulting from combustion of propane. • Assume emissions resulting from combustion of natural gas are similar to emissions resulting from combustion of propane. PM, PM10

factor: EF based on NSPS Subpart I limit and actual operating data from Pioneer's recently installed drum mixer that employs a fabric filter. Operating data was generated while emission unit was employed by Pioneer Asphalt, Inc at its current location.

	abergen 2 apra 1123 Percenten muse en		and mus coup	ofca of 1.0	ueer reprir	and the set is carried to can only
	EF = (gr/dscf) / (7000 gr/lb)	* (dscf/	min) * (60 mi	in/hr) / {tph	HMA}	
	Pioneer Sept. 2, 2010 stac	k test ≈	RUN 1	RUN 2	RUN 3	
	NSPS PM	Limit =	0.04	0.04	0.04	gr/dscf
	stack flow durin	g test =	26043	25372	24079	dscf/min
	production durin	g test =	213.3	230	208.3	ton/hr HMA
	NSPS-based emission f	actor =	0.042	0.038	0.040	lb/ton HMA
	Average NSPS-bas	ed EF =	0.040	ib/ton HMA		
	 Conservatively assume that all filterat PM10 value does include condensable controlled total PM10 for program or page 	e PM is e PM of	s also filterab 0.0194 cond	ie PM10. ensable (ino	rganic and	i organic) per ap-42 dated 3/04 Table 11.1-3
	Per AP42 11 1-3 footnote g: The dat	a indira	o ta that fual ti	me does not	eignificant	the offect DM emissions
	* Fel AF42, 11.1-5, loonote g. me uar	a utorca	te that such sy	pe does not	significant	ay enect and emissions.
PM2.5 factor:	EF based on NSPS Subpart I limit and ac Operating data was generated while en Average NSPS-based EF = 0	tual op nission u .040	erating data f unit was emp lb/ton HMA	irom Pioneer loyed by Pion	r's recently neer Aspha	rinstalled drum mixer that employs a fabric filter. alt at its current location. See 40 CFR 60.92.
	 Conservatively assume that an PWT0 Otd2.5 value deep instude condexects 	is also r	-112.3,			
	 PM2.5 value does include condensab 	16 PM, 0	conservatively	assume all	PM10 is al	50 PM2.5
SO2 factor:	; Option 1 reflects the PTE of the emissio process source stack emission limit con	n unit. sidered	The luel suit: in Option 2,	ır content er	nission lim	nitation considered in Option 1 is more stringent than the
	Option 1: Propane EF based on FARR pr See 40 CFR 49.130(d)(8).	opanel	ivel sulfur lim	iit of 1.1 gram	ms per dsc	m and physical capacity of emission unit.
EF = {S limit g/d	lscm) * (2.205 lb/1000 g) * (m3/35,31 ft3) * (vap	orization ft3/	gal) * (max b	surner firin	ng rate gai/hr) * (2 lb SO2/lb S) / (tph HMA)
	FARR gaseous fuel 5	i limit =	1.1	g/m3		
	vaporization of liquid pro	pane =	36.38	ft3/gal at 60	۴	
	max propane firin	g rate =	513	gal/hr	Based on h	teat input capacity of 50 MMBtu/hr.
	SO2 fraction not staying in	HMA =	0.5	See AP-42 3/	2004, Tabi	le 11.1-5.
	max HMA production	o rate =	300	ton/hr		
	propane emission f	actor =	0.009	lb/ton HMA		
	Option 1:Natural Gas EF based on FARE	t propai	ne fuel sulfur	limit of 400	ppm and p	hysical capacity of emission unit.
for nat gass ff	= (nnm5)imit * 32 / 385 156)*(max.mm8)	TU/br\/	(1020 Btu/cf)	fueB*/2 lb Sr	12 ner ih S	(may tob 9646)*(1 - SO2 staving in 9646)
POS HALBOS, CP	= (ppmaining 327365.100) (maximus	205 156		idely (z lo ac	oz per io o	Witney the react it - 202 area with a stand
	hat Bas conversion: (bbin 2) (MMA) (:) - 10 3 / Ci ila	u gas		
	Nau Stop C II II	urai Gas				1
	FARK S IIMIL =	400	% by weight	inat gas is st	anoaro pp	omv}
	max burner linng rate # 5.0	0E+07	B1U/hr			
	tuel heating value =	020	BTU/gal (na	t gas is BTU/	sci)	
	fuel weight =		lb/gal			
	max HMA production rate =	300	ton/hr HMA			
	SO2 staving in HMA ≖	50	% not to exc	eed 0.1 lb/to	on (per AP-	-42 3/2004, Table 11.1-7)
	emission factor =	.005	lb/ton HMA			
	Option 2: Propane or Natural Gas EF ba	ised on	FARR process	i source stac	k SO2 limit	t (40 CFR 49.129(d)(2)) of 500 ppm and actual test data as follows:
	EF = (ppm) * (1.66E-7 lb/ds	cf / ppm	i) " (dscf/min) * (60 mín/ł	1r}/(tph H	IMA)
	Pioneer Sept. 2, 2010 stac	k test =	RUN 1	RUN 2	RUN 3	
	FARR SO	? límit =	500	500	500	ppm
	measured flow	v cate =	26043	25372	24079	dscf/min
	production durin	g test =	213.3	230	208.3	ton/hr HMA
	emission i	factor =	0.608	0.549	0.576	lb/ton HMA
	Worst-case FARR-based emission i	factor =	0.608	lb/ton HMA		
	Option 3: EF Based on AP42, 3/04. Tabl	e 11.1-7	7 for natural	gas		
	For natural gas: SO2 = 0.0034 lb/ton - s	o actua	emissions sl	- iould be low	er	
	 Assume emissions resulting from corrections 	nbustio	n of natural g	as are simila	er to emiss	ions resulting from combustion of propane.

VOC factor: AP-42 3/84, Hot Mix Asphalt Plants, Table 11.1-8 -- natural gas-fired.

• Assume emissions resulting from combustion of natural gas are similar to emissions resulting from combustion of propane.

Criteria Air Pollutant Emission Inventory

Emission Unit: #6 Asphalt Storage Tank Heater

Description Asphalt heater, Hetec Model HOH-150 Control: none Fuel: Propane or Natural Gas Capacity: 2.500 MMBtu/hr Operation: 8760 hours/year 1,366,560 gallons propane / year (from application) Potential to Emit, (tons per year)

	Propane		Natural	Max	
	EF	PTE	EF	PIE	
	(lb/1000gal)	TPY	(lb/mmscf)	TPY	PTE TPY
CO	7.50	5.1246	8.9	0.09554	5.12
Lead	0.00	0.0000	0.0005	5.4E-06	0.00
NOx	13.00	8.88264	100	1.07353	8.88
PM	0.20	0.136656	190.4	2.04374	2.04
PM10	0.70	0.478296	190.4	2.04374	2.04
PM2.5	0.70	0.478296	190.4	2.04374	2.04
SO2	0.0025	0.001729	0.6	0.00644	0.01
VOC	0.80	0.546624	5.500	0.05904	0.55

Estimation Explanations

Emission factor (EF) units are lb/1000 gallon of propane and lb/mmscf of natural gas Propane fuel conversion factor = 90.5 mmBTU/1000 gal from AP42, App A Natural gas conversion factor = 1.02E+03 Btu/scf from AP-42, Table 1.4-1, footnote a CO factor: For propane: AP-42, 7/08, Table 1.5-1, boilers < 10mmbtu For natural gas: AP-42 3/04, table 11.1-13, hot oil system fired with natural gas Lead factor: For propane: no data available. For natural gas: AP-42 7/98, Table1.4-2 NOx factor: For propane: AP-42, 7/08, Table 1.5-1, boilers < 10mmbtu For natural gas: AP-42 7/98, Table1.4-1, small boilers uncontrolled PM factor: For propane: AP-42, 7/08, Table 1.5-1, boilers < 10mmbtu, Total PM includes only filterable Option 1 for natural gas: EF based on PM emission limits in FARR (40 CFR 49.125) = 0.1 grains/dscf at 7% O2 EF = (emission limit) / (7000 gr/lb) * (dscf-out/mmBtu-in) * (mmBtu/mmscf NG) = lb/mmscf Natural Gas FARR PM Limit = 0.1 gr/dscf (tested at 0.026 gr/dscf counting front and back half) 8710 dscf/mmBtu from 40 CFR 60 App A, Table 19-2 at 0% O2 Stack flow conversion factor FARR-based EF = 190.4 lb/mmscf natural gas Option 2 for natural gas: AP-42 7/98, Table1.4-2, filterable; EF = 1.9 lb/mmscf For natural gas: PM factor will be based on FARR limit, even though actual emissions are predicted to be much less PM10 factor: For propane: AP-42, 7/08, Table 1.5-1, boilers < 10mmbtu, assume PM10= PM filterable and condensables. • PM10 emission rate, intuitively, is less than or equal to PM emission rate. For natural gas: All of the PM is assumed to be PM10 in AP-42 7/98, Table1.4-2, so use same EF PM2.5 factor: For propane: assume PM2.5 = PM10 in the absence of any emission factor data specific to PM2.5. PM2.5 emission rate, intuitively, is less than or equal to PM10 emission rate. For natural gas: assume PM10 is PM2.5 in AP-42 7/98, Table1.4-2, so use same EF AP-42 10/96, Table 1.5-1, boilers<100mmbtu, S expressed in units of gr/100ft3 0.105 SO2 factor: For propane: FF =AP-42 10/96, Table 1.5-1, boilers<100mmbtu, S expressed in units of g/m3= 0.00235 (0.1gr/100 ft3)(35.31ft3/m3)(0.0648 g/gr) ---g/m3 sulfur from FARR 40 CFR 49.130(d)(8) S = 1.1 EF = 10.0025 lb/1000 gal propane

Selection for propane: SO2 EF will be based on AP-42 and FARR fuel sulfur limit because it is more strict than FARR stack SO2 limit For natural gas: AP-42 7/98, Table 1.4-2

VOC factor: For propane: AP-42, 7/08, Table 1.5-1, boilers < 10mmbtu (NMTOC calculated by subtracting methane contribution to TOC) For natural gas: AP-42 7/98, Table 1.4-2

Criteria Air Pollutant Emission Inventory

Emission Unit: #7 Storage Tanks

Description: Three tanks are used to store asphalt liquids Tank 1 - Storage of liquid asphalt Tank 2 - Storage of liquid asphalt

Tank 3 - Storage of liquid asphalt type substance (from applicant)

Parameter	Tank 1	Tank 2	Tank 3	Units
Liquid;	Asphalt	Asphalt	Asphalt	
Control:	none	none	none	
Capacity:	26,000	12,000	10,000	gallons
Operation:	22,495,680	11,247,840	10,000	EPA-calculated gailons per year throughput
TOC Emissions	739.74	369.87	0.33	lbs/yr TOC - Applicant did not provide data. Values
				based on EPA-calculated emissions

Potential to Emit, (tons per year)

	Tank 1 ·	Asphalt	Tank 2	- asphalt	Tank 3	Total	
	EF	PTE TPY	EF	PTE TPY	EF	PTE TPY	PTE TPY
CO	0.097	3.6E-02	0.097	1.6E-05	0.097	0.0E+00	0.036
Lead		1					
NOx							
РМ							
PM10				Ì			
PM2.5							
SO2		1					
VOC	1	3,70E-01	1	1,85E-01	1	1.6E-04	0.555

Estimation Explanations

Emission factors (EF) units in table are fraction (%/100) of Total Organic Compound (TOC) emissions from computer program TOC Emissions: Tanks Computer Program (see AP-42, 7.1 (11/06)), lbs/yr; see application for computer program input details EPA adjusted Tanks Computer Program output to reflect EPA-calculated annual liquid throughput as reflected in table below:

	unito compa	ter i regiarire	афасто топо	ter Er i realisaties annual squis stronghper as rendered in rabie below.
Parameter	Tank 1	Tank 2	Tank 3	Units
Modeled Operation:	2,313,000	2,313,000	2,313,000	Applicant did not provide modeled emissions. EPA used modeled emissions calculated for another hot mix asphalt plant (see Columbia Ready Mix, R10NT501700).
PTE Operation:	22,495,680	11,247,840	10,000	galions per year throughput as calculated by EPA and presented below
Ratio of PTE				
Operation to				
Modeled				
Operation:	9.73	4.86	0.004	
Modeled TOC				lbs/yr TOC - based on EPA calculated emissions from another hot mix asphalt
Emissions:	76.06	76.06	76.06	plant (see Columbia Ready Mix, Inc, R10NT501700).
PTE TOC				Ibs/yr TOC - based on EPA calculated emissions from another hot mix asphalt
Emissions:	739.74	369.87	0.33	plant (see Columbia Ready Mix, Inc, R10NT501700),

PTE Annual Asphalt Throughput:

Asphalt is assumed to be 5.5% wt of final HMA product and 8.57 lb/gal; so, gallons/ton of asphalt = (5.5/100)/(8.57 lb/gal)*(2000 lb/ton) = 12.84 gal/ton Maximum HMA production = (300 tph)*(8760 hpy) = 2,628,000 tpy HMA; using (12.84 gpt)*(2,628,000 tpy) = 33,743,520 gal/yr liquid asphalt

VOC factor: For tank 1, 2 and 3 EF from AP-42, 3/04, table 11.1-16

CO factor: AP-42, 3/04, Page 11.1-9; multiply factor by TOC emissions

,

Criteria Air Pollutant Emission Inventory

Emission Unit: #8 Aggregate Handling Description: a Aggregate transfer from piles to storage bins (drop into bins) b. Aggregate transfer from storage bins to conveyor belt (drop onto belt) c. Aggregate transfer from conveyor belt to dryer (drop into dryer)

Control:	none	
Capacity:	300	tons/hour
Operation:	8760	hours/vear

Potential to Emit, (tons per year)

	3 tra	ansfers
	EF	PTE TPY
CO		
Lead		
NOx		
PM	0.0027	10.7
PM10	0.0013	5.1
PM2.5	0.0002	0.8
SO2		
VOC		

Estimation Explanations

Emission factor (EF) units are lb/ton of aggregate handled

PM factor: AP-42, 11/06, Section 13.2.4, Equation 1 for each drop operation

Emission factor=k(0.0032)(U/5)^1.3/(M/2)^1.4

U, mean wind speed:

mph, average wind speed during a calendar year over last 49 years of observations - NOAA Pendleton 8.6 M, material moisture content: 3 %, conservative estimate based on EPA's Emission Inventory Improvement Program range of 3 - 7%

PM factor:	k, particle size multiplier:	0.74
PM10 factor:	k, particle size multiplier:	0.35
PM2.5 factor:	k, particle size multiplier:	0.053

- from AP-42 <30um from AP-42 <10um
- from AP-42 <2.5

Emissions are multiplied by three to account for all three transfers

Criteria Air Pollutant Emission Inventory

Emission Unit: #9 Silo Filling

Description: Loading of hot-mix asphalt mix (HMA mix) into Silo

Control:	none	
Capacity:	300	tons/hour
Operation:	8760	hours/year

Potential to Emit, (tons per year)

	Silo filling		
	EF	PTE TPY	
CO	1.18E-03	1.55	
Lead		0	
NOx		0	
PM	5.86E-04	0.77	
PM10	5.86E-04	0.77	
PM2.5	5.86E-04	0.77	
SO2		0	
VOC	1.22E-02	16.01	

Estimation Explanations Emission factor (EF) units are lb/ton of HMA handled

Predictive Emission Equations used to calculate Emission Factors from AP-42 3/04, Table 11.1-14

CO factor: CO EF = $0.00488(-V)e^{((0.0251)(T+460)-20.43)}$

PM,PM10

factor: PM10 EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}

- . Conservatively assume that all PM is also PM10.
- Value does include condensable PM

PM2.5 factor: PM2.5 EF = 0.000332+ 0.00105(-V)e^{((0.0251)(T+460)-20.43)}

- . Conservatively assume that all PM is also PM2.5.
- Value does include condensable PM
- VOC factor: VOC EF = $0.0504(-V)e^{((0.0251)(T+460)-20.43)}$
 - V = asphalt volatility =
 - T = HMA mix temperature =
- (100% of TOC measured as propane, per AP42, Table 11.1-16)
- AP-42 default value -0.5 ^oF, AP-42 default value 325

Interstate Concrete Asphalt - Pendleton Non-Title V Permit R10NT502401 Technical Support Document

Criteria Air Pollutant Emission Inventory

Emission Unit: #10 Truck Loading & Fumes

Description: a Load-out of hot-mix asphalt mix (HMA mix) from silo to asphalt trucks b Fumes from HMA in loaded asphalt trucks while in plant

	D Fullies	nom nwizen in loadeu asphait ar
Control:	none	
Capacity:	300	tons hot mix asphalt/hour
Operation:	8760	hours/year

Potential to Emit, (tons per year)

	Silo loadout		Truck	Total	
	EF	PTE TPY	EF	PTE TPY	PTE TPY
CO	9.75E-03	12.81	3.52E-04	0.46	13.27
Lead					
NOx		1			
PM	7.34E-03	9.65			9,65
PM10	7.34E-03	9.65			9.65
PM2.5	7.34E-03	9.65			9.65
SO2					
VOC	3.91F-03	5.14	1.03E-03	1.36	6.50

Estimation Explanations

Emission factor (EF) units are lb/ton of HMA handled

a Silo Loadout

Predictive Emission Equations used to calculate Emission Factors from AP-42 3/04, Table 11.1-14

CO factor: 0.00558(-V)e^{((0.0251)(T+460)-20.43)}

PM10 factor: 0.000181+0.0041(-V)e^{((0.0251)(T+460)-20.43)}

· Conservatively assume that all PM is also PM10.

Value does include condensable PM pursuant

PM2.5 factor: 0.000181+0.0041(-V)e^{((0.0251)(T+460)-20.43)}

. Conservatively assume that all PM is also PM2.5.

Value does not include condensable PM pursuant to EPA's May 16, 2008 final rulemaking.

VOC factor: 0.94[0.0172(-V)e^{((0 0251)(T+460)-20.43)}] (94% of TOC measured as propane, per AP42, Table 11.1-16)

AP42, Table 11.1-16

 $TOC = 0.0172(-V)e^{((0.0251)(T+460)-20.43)}$

V = asphalt volatility = -0.5

AP-42 default value ^VF, AP-42 default value T = HMA mix temperature = 325

b Truck-load emissions (while in plant for approximately 8 minutes)

Emission factors from AP42, 11.1.2.5

TOC = 0.0011 lb/ton

CO factor: (32% of TOC measured as propane) VOC factor: (94% of TOC measured as propane per AP42, Table 11.1-16)

Criteria Air Pollutant Emission Inventory

Emission Unit: #11 Asphalt Truck and Loader Traffic Description: Road dust caused by asphalt truck and loader traffic Control: none

cona oi, none						
Capacity: 300	tons per hour	(plant)				
Operation: 8760	hours/year					
a. Truck del	livery of asohali	t cement to	HMA plant:			
mean we	eight (empty):	18	tons			
mean we	ight (loaded):	52	tons			
W. mean wei	wht (average):	35	tons			
	tons per trip:	34	tons			
percent HMA that is l	iouid asphalt:	6	%			
number of	trins ner vear	4638				
namber of	trips per year	4050				
paved road round trip distan	ce traveled at			unpaved road round trip distance		
plant to unload	raw material:	0.25	miles	traveled at plant to unload raw material:	0.15	miles
vehicle miles traveled	d paved road:	1159.5	miles	vehicle miles traveled unpaved road:	695.7	miles
b. HMA tru	ck for loading a	nd delivery	of HMA product	t:		
mean we	eight (empty):	17	tons			
mean we	ight (loaded):	49.5	tons			
W. mean wei	eht (average):	33.25	tons			
,	tons per trip:	32.5	tons			
number of	trios per vear	80862				
	copo por Joen					
payed road round trip distan	ce traveled at			unpayed road round trip distance		
plant to load and delive	er product to			plant to load and deliver product to		
	customers:	0.25	miles	customers:	0.1	miles
vehicle miles traveled	d paved road:	20215.5	miles	vehicle miles traveled unpaved road:	8086.2	miles
					2220iu	

Potential to Emit, (tons per year)

	asphait cement truck - paved road		ent truck - asphalt cement truck - road unpaved road		HMA truck - paved road		HMA truck - unpaved road		Total
	EF	PTE TPY	٤F	PTE TPY	EF	PTE TPY	EF	PTE TPY	PTE TPY
co									
Lead									
NOx		1							
PM	0,24	0.14	5,70	1.98	0.23	2.32	5,57	22.53	26.97
PM10	0.05	0.03	0.44	0.15	0.05	0.46	0.44	1.76	2.41
PM2.5	0.01	0.01	0.15	0.05	0.01	0.11	0.14	0.57	0.75
SO2									
VOC		-				1			

Estimation Explanations

Emission factor (EF) units are lb/miles

Unpaved Roads.

Predictive Emission Equations used to calculate Emission Factors from AP-42 11/06, Section 13.2.2, Equation 1a PM factor: E=k*(s/12)^a*(W/3)^b(365-P)/365

	W≂	mean vehicle weight (tons) - see source data above
	P=	98 average number of days in a calendar year during which at least 0.01 inches of precipitation is observed, NOAA - Pendleton
	s =	4.8 surface material silt content (%), estimate based on AP-42 Table 13.2.2-1 for a plant road at a sand and gravel processing facility
For PM:	k =	4.9 empirical constant
	a =	0.7 empirical constant
	b =	0.45 empirical constant
For PM10:	k ≂	1.50 empirical constant
	a =	0.9 empirical constant
	b =	0.45 empirical constant
For PM2.5:	k =	0.15 empirical constant
	a =	0.9 empirical constant
	b =	0.45 empirical constant

Emission factor (EF) units are lb/miles

Paved Roads

Predictive Emission Equations used to calculate Emission Factors from AP-42 11/06, Section 13.2.1.3, Equation 1 PM factor: E=[k*(sL)^0.91*(W)^1.02)][1-P/(4*365)]

W =	mean vehicle weight (tons) - see source data above
P≂	98 average number of days in a calendar year during which at lea

	₽≂	98 average number of days in a calendar year during which at least 0.01 inches of precipitation is observed, NOAA - Pendleton observations
	st. =	0.6 silt loading (g/m2), based on AP-42 Table 13.2.1-3 ubiquitous baseline value for paved roads experiencing less than 500 trips per day (conservative assumption as value increases with increasing number of daily trips)
For PM:	k =	0.011 lb/VMT, empirical constant, for PM30, Table 13.2.1-1
For PM10:	k =	0.0022 empirical constant, for PM10, Table 13.2.1-1
For PM2.5:	k =	0.00054

empirical constant, for PM2.5, Table 13.2.1-1
Emission Inventory Interstate Concrete Asphalt - Pendleton Pendleton, Oregon

.

Hazardous Air Pollutant Emission Inventory

Matural Coa

Emission Unit:	#5 Drum D	ryer				
Description:	Hot Mix Aspha	alt Plant Drum	i Oryer - parallel I	flow drum mix desig	n, Pione	er 7.5ft Drum Mixer
Control:	65,000 ACF E	lag House w/	125 hp fan			
Fuel:	Natural Gas o	r Propane				
Capacity:	300	tph hot mix a	sphalt	Burner:	50	mmBtu/hr
Operation:	8760	hours/year				
Fuel:	6,832,800	gallons/year	(from applicatio	n)		

-

Potential to Emit, (tons per year)

	INDIG	11 0 4 5
Inorganics	EF	PTE TPY
Anlimony Compounds	1.80E-07	2.37E-04
Arsenic Compounds (incl arsine)	5.60E-07	7.365-04
Beryllium Compounds	0.00E+00	0.00E+00
Cadmium Compounds	4.102-07	J.39E+04
Chromium Compounds (incl hexavalent)	5.50E-06	7.23E-03
Cobalt Compounds	2.60E+08	3.42E-05
Lead Compounds (not elemental lead)	6.20E-07	8.15E-04
Manganese Compounds	7.70E-06	1.01E-02
Mercury Compounds	2.40E-07	3.15E-04
Nickel Compounds	6.30E-05	8.28E-02
Phophorus Compounds	2.80E-05	3.68E-02
Selenium Compounds	3.50E-07	4.60E-04
Organics		
Acetaldehyde	-	
Acrolein	-	
Benzene	3.90E-04	5.12E-01
Bromomethane (methyl bromide)	-	
1,3-Buladiene	•	
Carbon Disulfide	-	
Chloroethane (ethyl chloride)	-	
Chloromethane (methyl chloride)	•	
Dichlorobenzene	-	
Cumene	-	
Dioxin (2.3.7.8 tetrachlorodibenzo-p-dioxin)	-	
Ethyl Benzene	2,40E-04	3.15E-01
Formaldehyde	3.10E-03	4.07E+00
Furans (all PCDE)	-	
Herana (includes n-Hexane)	9.20E-04	121E+00
Hydrochloric Acid (hydrogen chloride or HCL)	-	
Isooctane (2.2.4-trimelbyloentane)	4 00E-05	5.26E-02
Methyl Chloride (chloromethane)		
Methyl Chloroform (1.1.1-inchloroelbane)	4 80E-05	6.31E-02
Methyl tod-Buby Ether (MTRE)	4.002-00	
Manhibaleae (also a 20M)	9.00E-05	1.185-01
	5.0012-00	
Polynetic Organic Maltert (incl archthologe)	1 875.04	2 46E-01
Conjugatio Matter (nornaphthalene)	1.07 2*04	
Priopional denyde	<u> </u>	
	<u> </u>	
Styrene	-	<u> </u>
retrachioroethane	-	
Toluene	1.50E-04	1.972-01
Xylenes (into isomers and mixtures)	2.00E-04	2.63E-01
HAP Total	5.37E-03	7.07E+00

	Natural Gas	
*Polycyclic Organic Matter	EF	PTE TPY
Acenaphthene	1.40E-06	1.84E-03
Acenaphthylene	8.60E-06	1.13E-02
Anthracene	2.20E-07	2.89E-04
Benzo(a)anthracene	2.10E-07	2.76E-04
Benzo(b)fluoranthene	1.00E-07	1.31E-04
Benzo(k)fluoranthene	4.10E-08	5,39E-05
Benzo(g,h,i)perylene	4.00E-08	5.26E-05
Benzo(a)pyrene	9.80E-09	1.29E-05
Benzo(e)pyrene	1.10E-07	1.45E-04
Chrysene	1.80E+07	2.37E-04
Dioxins (Total PCDD; incl 2,3,7,8 TCDD)	-	
Fluoranthene	6.10E-07	8.02E+04
Fluorene	3.80E-06	4.99E-03
Furans (all PCDF)	-	
Indeno(1,2,3-cd)pyrene	7.00E-09	9.20E-06
2-Methylnaphthalene	7.40E-05	9.72E-02
Naphthalene (also individual HAP)	9.00E-05	1.18E-01
Perylene	8.80E-09	1.16E-05
Phenanlhrene	7.60E-06	9.99E-03
Pyrene	5.40E-07	7.10E-04
POM Subtotal	1.87E-04	2.46E-01

Estimation Explanations

Emission factor (EF) units are lb/ton HMA

To avoid double-counting, "HAP Total" does not count naphthalene, dioxin (HAP) or furans separately because they are accounted for in "POM Sublotal"

Chromium EF: Chromium EF is assumed to include separately reported hexavalent chromium EF in AP-42

All other inorganics EF: AP-42, 3/04, Table 11.1-12 for natural gas or propane-fired dryer with fabric filter Naphthalene EF: AP-42, 3/04, Table 11.1-10 for natural gas with fabric filter (is a HAP & POM)

POM EF: AP-42, 3/04, Table 11.1-10 for natural gas with fabric filter (includes naphthalene, dioxin & furans)

All other organics EF: AP-42, 3/04, Table 11.1-10 for natural gas with fabric filter

Hazardous Air Pollutant Emission Inventory

Therefords All Fondiant Emission inv	entory		
Emission Unit:	#6 Asnha	lt Tank He	ator
Description	Asphali hea	ier Hetec Mo	del HOH-150 model Hsn 35
Control:	лопе		
Fuel:	Natural Gas	or Propane	
Capacity:	2.500	MMBtu/hr (from applicant)
Operation:	8760	hours/yr	
Fuel Throughput:	1,366,560	gallons/year	r (from applicant)
Potential to Emit, (tons per year)	Nabu	al Gas	
Increanics	EF		
Antimony Compounds	•		
Arsenic Compounds (incl arsine)	2.00E-04	1.21E-05	
Beryllium Compounds	1.20E-05	7.27E-07	
Cadmium Compounds	1.10E-03	6.67E-05	
Chromium Compounds (incl hexavalent)	1.408-03	8.49E+05	
Cobalt Compounds	8.408-05	5.09E-06	
Lead Compounds (not elemental lead)	5.00E-04	3.03E-05	
Manganese Compounds	3.80E-04	2,30E+05	
Mercury Compounds	2.608-04	1.58E-05	
Nickel Compounds	2.102-03	1.27E-04	
Phophorus Compounds	-	[
Selenium Compounds	2.40E-05	1.45E-06	
Organics			•
Acetaldehyde	-		
Acrolein			i i i i i i i i i i i i i i i i i i i
Benzene	2.10E-03	1.27E-04	ĺ
Bromomethane (melhvi bromide)	•	1	1
1 3-Buladiene	-		
Carbon Disulfide	-		
Chloroethane (ethyl chloride)		İ	
Chloromethane (methyl chloride)			
Cumene			
Dichlorobanzana	1 205-02	7 276-05	
Diovin (2.3.7.8 tetrachlorodihenza-a-diovin)	1.202-00	1.270-00	
City Passage			
Eury Benzene	7 505 00	1 555 02	
	7.502-02	4.032-00	
rorans (air PCDr)	4 000.00	1.007.01	
Hexane (Inclin-Hexane)	1.802+00	1.045-01	
Hydrochlonic Acia (hydrogen chloride)	ļ		
isooctane (2,2,4-trimethylpentane)	<u>⊢ ∙</u>		
Methyl Chloride (chloromethane)	-		
Melhyl Chloroform (1,1,1-trichloroethane)			1
Melhyl tert-Butyl Ether (MTBE)	<u> </u>	L	1
Naphihalene (also a POM)	6.10E-04	3.70E-05	
Phenol	<u> </u>	<u> </u>	ļ
Polycyclic Organic Matter* (incl naphthalene)	6.98E-04	4.23E-05	

	1	Natur	al Gae
I	HAP Total		1.14E-01
Xylene (incl isomers and mixtures)		•	
Toluene		3.40E-03	2.06E-04
Tetrachloroethane		-	
Styrene		-	
Quinone		-	
Propionaldehyde		-	
Polycyclic Organic Matter* (incl napht	halene)	6.98E-04	4.23E-05
Pheno!		-	

	Natural Gas	
*Polycyclic Organic Matter	EF	PTE TPY
Acenaphthene	1.80E-06	1.09E-07
Acenaphthylene	1.80E-06	1.09E-07
Anthracene	2.40E-06	1.45E-07
Benzo(a)anthracene	1.80E-06	1.09E-07
Benzo(b)fluoranthene	1.80E-06	1.09E-07
Benzo(k)fluoranthene	1.80E-06	1.09E-07
Benzo(g,h,i)perylene	1.20E-06	7.27E-08
Benzo(a)pyrene	-	
Benzo(e)pyrene	1.20E-06	7.27E-08
Chrysene	1.80E-06	1.09E-07
Dibenzo(a,h)anthracene	1.20E-06	7.27E-08
7,12-Dimethylbenz(a)anthracene	1.60E-05	9.70E-07
Dioxins (Total PCDD; incl 2,3,7,8 TCDD)	-	
Fluoranthene	3.00E-06	1.82E-07
Fluorene	2.80E-06	1.70E-07
Furans (all PCDF)	-	
Indeno(1,2,3-cd)pyrene	1.80E-06	1.09E-07
3-Methylcloranthrene	1.80E-06	
2-Methylnaphthalene	2.40E-05	1.45E+06
Naphthalene (also individual HAP)	6.10E-04	3.70E-05
Perylene		
Phenanthrene	1.70E-05	1.03E-06
Pyrene	5.00E-06	3.03E-07
POM Subtotal	6.98E-04	4.22E-05

Estimation Explanations

Estimation Explanations
Emission factor (EF) units are ib/mmscf natural gas converted to ib/mmBTU using the Natural gas conversion factor below
Natural gas emission factors were used as AP-42 does not provide propane emission factors
Propane fuel conversion factor = 90.5 mmBTU/1000 gal from AP42, 1.5
Natural gas conversion factor = 1020 Btu/scf from AP-42, Table 1.4-1, footnote a
Inorganics EF: For natural gas: AP-42 7/98, Table1.4-4
Organics and POM: For natural gas: AP-42 7/98, Table1.4-2
Lead: For natural gas: AP-42 7/98, Table1.4-2

Hazardous Air Pollutant Emission Inventory

Emission Unit: #7 Asphalt Storage Tanks Description: Three tanks are used to store asphalt liquids Tank 1 - Storage of liquid asphalt Tank 2 - Storage of liquid asphalt Tank 3 - Storage of liquid asphalt type substance (from applicant)

Parameter	Tank 1	Tank 2	Tank 3	Units
Liquid:	Asphalt	Asphalt	Asphalt	
Control:	none	none	none	
Capacity:	26,000	12,000	10,000	gallons
Operation:	22,495,680	11,247,840	10,000	EPA-calculated gallons per year throughput
TOC Emissions	739.74	369.87	0.33	lbs/yr TOC - Applicant did not provide data. Values
				based on EPA-calculated emissions

Potential to Emit, (tons per year)

	(Tank 1)) Asphalt	(Tank 2)) asphalt	(Tank)	3) Asphalt	Total
Organics	EF	PTE TPY	EF	PTE TPY	EF	PTE TPY	PTE TPY
Acetaldehyde				[
Acrolein							
Benzene	0.032	1.18E-02	0.032	5.92E-03	0.032	5.26E-06	1.78E-02
Bromomethane (methyl bromide)	0.0049	1.81E-03	0.0049	9.06E-04	0.0049	8.06E-07	2.72E-03
1,3-Butadiene							
Carbon Disulfide	0.016	5.92E-03	0.016	2.96E-03	0.016	2.63E-06	8.88E-03
Chloroethane (ethyl chloride)	0.004	1.48E-03	0.004	7.40E-04	0.004	6.58E-07	2.22E-03
Chloromethane (methyl chloride)	0.023	8.51E-03	0.023	4.25E-03	0.023	3.78E-06	1.28E-02
Cumene							
Dichlorobenzene							
Dioxin (2,3,7,8 tetrachlorodibenzo-p-dioxin)							
Ethyl Benzene	0.038	1.41E-02	0.038	7.03E-03	0.038	6.25E-06	2.11E-02
Formaldehyde	0.69	2.55E-01	0.69	1.28E-01	0.69	1.13E-04	3.83E-01
Furans (all PCDF)				1			
Hexane (incl n-Hexane)	0.1	3.70E-02	0.1	1.85E-02	0.1	1.64E-05	5.55E-02
Hydrochloric Acid (hydrogen chloride)							
Isooctane (2,2,4-trimethylpentane)	0.00031	1.15E-04	0.00031	5.73E-05	0.00031	5.10E-08	1.72E-04
Methyl Chloride (chloromethane)	0.00027	9.99E-05	0.00027	4.99E-05	0.00027	4.44E-08	1.502-04
Methyl Chloroform (1,1,1-trichloroethane)							
Methyl tert-Butyl Ether (MTBE)							
Naphthalene' (also a POM)							
Phenol							
Polycyclic Organic Matter* (incl naphthalene)		1					
Propionaldehyde							
Quinone		1		1			
Styrene	0.0054	2.00E-03	0.0054	9.99E-04	0,0054	8.88E-07	3.00E-03
Tetrachloroethane							<u> </u>
Toluene	0.062	2.29E-02	0.062	1.15E-02	0.062	1.02E-05	3.44E-02
Xylene (incl isomers and mixtures)	0.257	9.51E-02	0.257	4,75E-02	0.257	4.23E-05	1.43E-01
HAP Total		4.56E-01		2.28E-01		2.03E-04	6.84E-01

Estimation Explanations

Emission factor (EF) units are % of organic PM for POM and phenol and fraction (%/100) of TOC for all other organics TOC Emissions: Tanks Computer Program (see AP-42, 7.1 (11/06)), lbs/yr; see Columbia Ready Mix Inc., application for computer program input details EPA adjusted Tanks Computer Program output to reflect EPA-calculated annual liquid throughput as reflected in table below:

Parameter	Tank 1	Tank 2	Tank 3	Units
Modeled Operation:	2.313.000	2.313.000	2.313.000	Applicant did not provide modeled emissions. EPA used modeled emissions calculated for another hot mix asphalt plant (see Columbia Ready Mix, R10NT501700).
PTE Operation:	22,495,680	11,247,840	10,000	gallons per year throughput as calculated by EPA and presented below
Ratio of PTE Operation to Modeled Operation:	9,73	4.86	0.004	
Modeled TOC Emissions:	76.06	76.06	76.06	lbs/yr TOC - based on EPA calculated emissions from another hot mix asphalt plant (see Columbia Ready Mix, Inc, R10NT501700).
PTE TOC Emissions:	739.74	369.87	0.33	Ibs/yr TOC - based on EPA calculated emissions from another hot mix asphalt plant (see Columbia Ready Mix, Inc, R10NT501700).

PTE Annual Asphalt Throughput:

ETE: Annual Aspirate Throotput. Asphalt is assumed to be 5.5% wt of final HMA product and 8.57 ib/gal; so, gallons/ton of asphalt = (5.5/100)/(8.57 ib/gal)*(2000 lb/ton) = 12.84 gal/ton Maximum HMA production = (300 tph)*(8760 hpy) = 2,628,000 tpy HMA; using (12.84 gpt)*(2,628,000 tpy) = 33,743,520 gal/yr liquid asphalt Per application, Tanks 1 and 2 are used to process the total liquid asphalt throughput of 33,743,520 gallons/year calculated above. To avoid double-counting, "HAP Total" does not count naphthalene separately because naphthalene is accounted for in "POM Subtotal"

Xylenes EF: m-, o- and p- isomers are individually listed as HAPs but for applicability purposes, are grouped as Xylenes All other organics EF: AP-42, 3/04, Table 11.1-16 - (TOC) organic volatile-based speciation percentages TOC = VOC/100% (AP-42, 3/04, Table 11.1-16)

Emission Inventory Interstate Concrete Asphalt - Pendleton Pendleton, Oregon

Hazardous Air Pollutant Emission Inventory

Emission Unit: #9 Asphalt Silo Filling

Description: Loading of hot-mix asphalt mix (HMA mix) into silo

	-		
Control:	none		
Capacity:	300	tph hot r	nix a
Operation:	8,760	hours/y	r

asphait (from applicant)

Potential to Emit, (tons per year)

Organics	EF	PTE TPY
Acetaidehyde		
Acrolein		
Benzene	0.032	5.12E-03
Bromomethane (methyl bromide)	0.0049	7.85E-04
1,3-Butadiene		
Carbon Disulfide	0.016	2.56E-03
Chloroethane (ethyl chloride)	0.004	6.41E-04
Chloromethane (methyl chloride)	0.023	3.68E-03
Cumene		
Dichlorobenzene		
Dioxin (2,3,7,8 tetrachlorodibenzo-p-dioxin)		
Ethyl Benzene	0.038	6.09E-03
Formaldehyde	0.69	1.10E-01
Furans (all PCDF)		
Hexane (incl n-Hexane)	0.1	1.60E-02
Hydrochloric Acid (hydrogen chloride)		
Isooctane (2,2,4-trimethylpentane)	0.00031	4.96E-05
Methyl Chloride (chloromethane)	0.00027	4,32E-05
Methyl Chloroform (1,1,1-trichloroethane)		
Methyl tert-Butyl Ether (MTBE)		
Naphthalene ¹ (also a POM)	1.82	6,07E-03
Phenol	1.18	3.94E-03
Polycyclic Organic Matter* (incl naphthalene)	11.41	3.81E-02
Propionaldehyde		
Quinone		
Styrene	0.0054	8.65E-04
Tetrachloroethane		
Toluene	0.062	9.93E-03
Xylene (incl isomers and mixtures)	0.257	4.12E-02
HAP Total		2.39E-01

*Polycyclic Organic Matter	EF	PTE TPY
Acenaphthene	0.47	1.57E-03
Acenaphthylene	0.014	4.67E-05
Anthracene	0.13	4.34E-04
Benzo(a)athracene	0,056	1.87E-04
Benzo(e)pyrene	0.0095	3.17E-05
Chrysene	0.21	7.01E-04
Fluoranthene	0,15	5.00E-04
Fluorene	1.01	3.37E-03
2-Methylnaphthalene	5.27	1.76E-02
Naphthalene (also individual HAP)	1.82	6.07E-03
Perylene	0.03	1.00E-04
Phenanthrene	1.8	6.00E-03
Pyrene	0.44	1.47E-03
POM Subtotal	11.41	3.81E-02

Estimation Explanations

Emission factor (EF) units are % of organic PM for POM and phenol and % of TOC for all other organics To avoid double-counting, "HAP Total" does not count naphthalene separately because naphthalene is accounted for in "POM Subtotal" Predictive emission factors from AP-42 Tbl 11.1-14 for silo filling Xylenes EF: m-, o- and p- isomers are individually listed as HAPs but for applicability purposes, are grouped as Xylenes POM, naphthalene and phenol EF: AP-42, 3/04, Table 11.1-15 - organic particulate-based speciation percentages (%/100 x PM) All other organics EF: AP-42, 3/04, Table 11.1-16 - (TOC) organic volatile-based speciation percentages (%/100 x TOC) TOC EF: 0.0504(-V)e((0.0251)(T+460)-20 43) lb/ton HMA loaded into silo

Organic PM FF: 0.00105(-V)e^{((0.0251)(T+460)-20.43)} Ib/ton HMA loaded into silo

	Organic Five	_F. 0.00100(V)C	10/10/11/10/21/10/
V = asphalt volatility =	-0.5	AP-42 default value	
T = HMA mix temperature =	325	^o F, AP-42 default value	
TOC EF =	1.22E-02	lb/ton	
TOC emissions =	1.60E+01	tons/year (TOC EF x annual ca	apacity)
Organic PM EF =	2.54E-04	lb/ton	
Organic PM emissions =	3.34E-01	tons/year (Organic PM EF x ar	nnual capacity)

Emission Inventory Interstate Concrete Asphalt - Pendleton Pendleton, Oregon

Hazardous Air Pollutant Emission Inventory

Emission Unit: #10 Asphalt Truck Loading & Fumes

none

Description: a Load-out of hot-mix asphalt mix (HMA mix) from silo to asphalt trucks Fumes from loaded asphalt trucks while in plant

		U	
Contr	م ا .		

Capacity: Operation:

300 tph hot mix asphalt (from applicant) 8,760 hours/yr

Potential to Emit, (tons per year)

	i ruck loading		Truck-toad tumes		lotal	
Organics	EF	PTE TPY	EF	PTE TPY	PTE TPY	
Acetaldehyde						
Acrotein						
Benzene	0.052	2.84E-03	0.052	7.52E-04	0.004	
Bromomethane (methyl bromide)	0.0096	5.25E-04	0.0096	1.39E-04	0.001	
1,3-Butadiene						
Carbon Disulfide	0.013	7.10E-04	0.013	1.88E-04	0.001	
Chloroethane (ethyl chioride)	0.00021	1.15E-05	0.00021	3.04E-06	0.000	
Chloromethane (methyl chloride)	0.015	8.20E-04	0.015	2.17E-04	0.001	
Dichlorobenzene						
Сителе	0.11	6.01E-03	0.11	1.59E-03	0.008	
Dioxin (2,3,7,8 tetrachlorodibenzo-p-dioxin)						
Ethyl Benzene	0.28	1.53E-02	0.28	4.05E-03	0.019	
Formaldehyde	0.088	4.81E-03	880.0	1.27E-03	0.006	
Furans (all PCDF)						
Hexane (incl n-Hexane)	0.15	8.20E-03	0.15	2.17E-03	0.010	
Hydrochloric Acid (hydrogen chloride)						
Isooctane (2,2,4-trimethylpentane)	0.0018	9.84E-05	0,0018	2.60E-05	0.000	
Methyl Chloride (chloromethane)						
Methyl Chloroform (1,1,1-trichloroethane)						
Methyl tert-Butyl Ether (MTBE)						
Naphthalene ¹ (also a POM)	1.25	5.60E-03	1.25	1.81E-02	0.024	
Phenol	1.18	5.29E-03	1.18	1.71E-02	0.022	
Polycyclic Organic Matler* (incl naphthalene)	5.93	2.66E-02	1.25	1.81E-02	0.045	
Propionaldehyde						
Quinone						
Styrene	0.00732	4.00E-04	0.00732	1.06E-04	0.001	
Tetrachloroethane	0.0077	4.21E-04	0.0077	1.11E-04	0.001	
Toluene	0.21	1.15E-02	0.21	3.04E-03	0.015	
Xylene (incl isomers and mixtures)	0.49	2.68E-02	0.49	7.08E-03	0.034	
HAP Total		1.10E-01		5.59E-02	1.66E-01	

Polycyclic Organic Matter	EF	PTE TPY	EF	PTE TPY
Acenaphthene	0.26	1,16E-03		
Acenaphthylene	0.028	1.25E-04		
Anthracene	0.07	3.14E-04		
Benzo(a)athracene	0.019	8.51E-05		
Benzo(b)fluoranthene	0.0076	3.40E-05		
Benzo(k)fluoranthene	0.0022	9.86E-06		
Benzo(g,h,l)perylene	0.0019	8.51E-06		
Benzo(a)pyrene	0.0023	1.03E-05		
Benzo(e)pyrene	0.0078	3.49E-05		
Chrysene	0.103	4,61E-04		
Dibenzo(a,h)anthracene	0.00037	1.66E-06		
Fluoranthene	0.05	2.24E-04		
Fluorene	0.77	3.45E-03		
Indeno(1,2,3-cd)pyrene	0.00047	2.11E-06		1
2-Methylnaphthalene	2.38	1.07E-02		
Naphthalene (also individual HAP)	1.25	5.60E-03	1.25	1.81E-02
Perylene	0.022	9.86E-05		
Phenanthrene	0.81	3.63E-03		
Pyrene	0.15	6.72E-04		
POM Subtotal	5.93	2.66E-02	1.25	1.81E-02

Estimation Explanations

Emission factor (EF) units are % of organic PM for POM and phenol and % of TOC for all other organics To avoid double-counting, "HAP Total" does not count naphthalene separately because naphthalene is accounted for in "POM Subtotal" POM, naphthalene and phenol EF: AP-42, 3/04, Table 11.1-15 - organic particulate-based speciation percentages

All other organics EF: AP-42, 3/04, Table 11.1-16 - (TOC) organic volatile-based speciation percentages

Xylenes EF: m-, o- and p- isomers are individually listed as HAPs but for applicability purposes, are grouped as Xylenes

a. Truck loading predictive emission factors from AP-42 Tbl 11.1-14

TOC EF: 0.0172(-V)e^{((0.0251)(T+460)-20 43)} lb/ton HMA loaded out

Organic PM EF: 0.00141(-V)e^{((0 0251)(T+460)-20.43)} Ib/ton HMA loaded out

V = asphalt volatility = T = HMA mix temperature =	-0.5 325	AP-42 default value ^O F, AP-42 default value
TOC EF =	4.16E-03	lb/ton
TOC emissions =	5.46E+00	tons/year (TOC EF x annual capacity)
Organic PM EF =	3.41E-04	lb/ton
Organic PM emissions =	4.48E-01	tons/year (Organic PM EF x annual capacity)

b. Truck-load emission factors from AP42, 11.1.2.5

TOC EF:	1.10E-03	lb/ton HMA hauled by trucks
TOC emissions =	1.45	tons/year (TCO EF x annual capacity)

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oregon Fish And Wildlife Office 2600 Southeast 98th Avenue, Suite 100 Portland, OR 97266-1398 (503) 231-6179

Project Summary

Consultation Code:	01EOFW00-2020-SLI-0557
Event Code:	01EOFW00-2020-E-01138
Project Name:	Pendleton Mission Site
Project Type:	DREDGE / EXCAVATION
Project Description:	Crushing operations at quarry site.

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/45.67262593001995N118.72819650434371W</u>



Counties: Umatilla, OR

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Wolf Canis lupus	Endangered
Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA,	
MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA,	
VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico.	
There is final critical habitat for this species. The location of the critical habitat is not available.	
Species profile: <u>https://ecos.fws.gov/ecp/species/4488</u>	

Birds

NAME	STATUS
Yellow-billed Cuckoo Coccyzus americanus	Threatened
Population: Western U.S. DPS	
There is proposed critical habitat for this species. Your location is outside the critical habitat.	
Species profile: <u>https://ecos.fws.gov/ecp/species/3911</u>	

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus	Threatened
Population: U.S.A., conterminous, lower 48 states	
There is final critical habitat for this species. Your location is outside the critical habitat.	
Species profile: <u>https://ecos.fws.gov/ecp/species/8212</u>	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



ECOS /

Gray wolf (Canis lupus)

Range Information |Candidate Info |Federal Register |Recovery |Critical Habitat |SSA |Conservation Plans |Petitions |Biological Opinions |Life History

Taxonomy: <u>View taxonomy in ITIS</u>

Listing Status: Endangered and others listed below



The Gray Wolf, being a keystone predator, is an integral component of the ecosystems to which it

typically belongs. The wide range of habitats in which wolves can thrive reflects their adaptability as a species, and includes temperate forests, mountains, tundra, taiga, and grasslands. Gray wolves were originally listed as subspecies or as regional populations of subspecies in the contiguous United States and Mexico. In 1978, we reclassifed the gray wolf as an endangered population at the species level (C. lupus) throughout the contiguous United States and Mexico, except for the Minnesota gray wolf population, which was classified as threatened. Gray wolf populations in Idaho and Montana were delisted due to recovery in 2011.

The species historical range included Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming. See below for information about where the species is known or believed to occur.

Population detail

The following populations are being monitored: Gray wolf

Current Listing Status Summary

Show 10 **v** entries

• Status	Date 🗢 Listed	Lead Region	Where Listed
Threatened	03-09- 1978	<u>Midwest</u> <u>Region</u> (<u>Region 3)</u>	U.S.A. (MN) Additional species information
Endangered	03-09- 1978	<u>Mountain</u> <u>Prairie</u> <u>Region</u> (<u>Region 6)</u>	U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, U WA as follows: (1) Northern AZ (that portion north of the centerline of Interstate Highway 40); (2) Northern NM (that portion north of the centerline of Interstate Highway 40); (3) Western OR (the portion of OR west of the centerline of Highway 395 and Highway 78 north of Burns Junction an portion of OR west of the centerline of Highway 95 south of Burns Junction); (4) Most of Utah (tr portion of UT south and west of the centerline of Highway 84 and that portion of UT south of Hi 80 from Echo to the UT/WY Stateline); and (5) Western WA (that portion of WA west of the centerline of Highway 97 and Highway 17 north of Mesa and that portion of WA west of the centerline of Hig 395 south of Mesa). Mexico. Additional species information
Delisted due to Recovery	03-09- 1978	Mountain Prairie Region	Northern Rocky Mountain Distinct Population Segment: Montana, Idaho, Wyoming, eastern Washington, eastern Oregon, and north central Utah <u>Additional species information</u>
4			>

Showing 1 to 3 of 3 entries

» Range Information





Next >

< Previous

- 🗹 🛓 🍳 U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL,
- 🗹 🚣 🧕 U.S.A. (MN)
- 🗹 🛃 🎯 Northern Rocky Mountain Distinct Population Segm

Zoom in! Some species' locations may be small and hard to see from a wide perspective. To narrow-in on locations, check the state and county lists (below) and then use the zoom tool.

Want the FWS's current range for all species? Click <u>here</u> to download a zip file containing all individual shapefiles and metadata for all species.

* For consultation needs do not use only this current range map, please use <u>IPaC</u>.



U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA as follows: (1) Northern AZ (that portion north of the centerline of Interstate Highway 40); (2) Northern NM (that portion north of the centerline of Interstate Highway 40); (3) Western OR (that portion of OR west of the centerline of Highway 395 and Highway 78 north of Burns Junction and that portion of OR west of the centerline of Highway 95 south of Burns Junction); (4) Most of Utah (that portion of UT south and west of the centerline of Highway 84 and that portion of UT south of Highway 97 and Highway 17 north of Mesa and that portion of WA west of the centerline of Highway 17 north of Mesa and that portion of WA west of the centerline of Mesa). Mexico.

Listing status: Endangered This population has been proposed for delisting

- **States/US Territories** in which this population is known to or is believed to occur: California, Michigan, Oregon, Washington, Wisconsin
- US Counties in which this population is known to or is believed to occur: View All
- **USFWS Refuges** in which this population is known to occur: Crane Meadows National Wildlife Refuge, J. Clark Salyer National Wildlife Refuge, J. Clark Salyer Wetland Management District ...<u>Show All Refuges</u>
- U.S.A. (MN)

Listing status: Threatened This population has been proposed for delisting

- States/US Territories in which this population is known to or is believed to occur: Minnesota
- US Counties in which this population is known to or is believed to occur: View All
- **USFWS Refuges** in which this population is known to occur: Agassiz National Wildlife Refuge, Detroit Lakes Wetland Management District, Fergus Falls Wetland Management District ...<u>Show All Refuges</u>
- Northern Rocky Mountain Distinct Population Segment: Montana, Idaho, Wyoming, eastern
 Washington, eastern Oregon, and north central Utah

Listing status: Delisted due to Recovery

- **States/US Territories** in which this population is known to or is believed to occur: Idaho, Montana, Oregon, Utah, Washington, Wyoming
- US Counties in which this population is known to or is believed to occur: View All
- **USFWS Refuges** in which this population is known to occur: Lost Trail National Wildlife Refuge, National Bison Range, Northwest Montana Wetland Management District-Flathead County

» Candidate Information

No Candidate information available for this species.

No Candidate Assessments available for this species. No Candidate Notice of Review Documents currently available for this species. No Uplisting Documents currently available for this species.

» Federal Register Documents

Federal Register Documents

Show 10 • entries CPM Development Corporation CD6tBs:#ecks.6wsubatec#spellets/#488ission Quarry

▼ Date	Citation 🖨 Page	Title	Supporting Document				
06/06/2019	84 FR 26393 26394	<u>Removing the Gray Wolf (Canis lupus) From the List of Endangered and Threatened Wildlife;</u> Proposed rule; announcement of a public open house and public hearing.					
05/14/2019	84 FR 21312 21313	<u>Removing the Gray Wolf (Canis lupus) From the List of Endangered and Threatened Wildlife;</u> <u>Proposed rule; extension of public comment period</u>					
03/15/2019	84 FR 9648 9687	Removing the Gray Wolf (Canis lupus) From the List of Endangered and Threatened Wildlife; Proposed Rules					
05/01/2017	82 FR 20284 20285	Endangered and Threatened Wildlife and Plants; Reinstatement of Removal of Federal Protections for Gray Wolves in Wyoming					
07/01/2015	80 FR 37568 37579	90-Day Findings on 31 Petitions					
02/20/2015	80 FR 9218 9229	ETWP; Reinstatement of Final Rules for the Gray Wolf in Wyoming and the Western Great Lakes in Compliance With Court Orders					
01/16/2015	QA ED 2512	ETM/D: Devicion to the Degulations for the Nonessential Experimental Dopulation of the Mexican	▼ ►				
Showing 1 to	10 of 76 entrie	S < Previous 1 2 3 4 5	8 Next >				

» Species Status Assessments (SSAs)

Species Status Assessments (SSAs)

No Species Status Assessments (SSA's) are currently available for this species.

Special Rule Publications

Show 10 ✓ entries

Date 💂	Citation Page 🗢	Title						
01/28/2008	73 FR 4720 4736	vision of Special Regulation for the Central Idaho and Yellowstone Area Nonessential Experimental pulations of Gray Wolves in the Northern Rocky Mountains						
01/12/1998	63 FR 1752 1772	WP; Establishment of a Nonessential Experimental Population of the Mexican Gray Wolf in Arizona w Mexico						
11/22/1994	59 FR 60266 60281	ETWP; Establishment of a Nonessential Experimental Population of Gray Wo Southwestern Montana	olves in Centra	<u>al Ida</u>	<u>ho and</u>			
11/22/1994	59 FR 60252 60266	<u>TWP; Establishment of a Nonessential Experimental Population of Gray Wolves in Yellowstone Natio</u> ark in Wyoming, Idaho and Montana						
08/16/1994	59 FR 42118 42128	ETWP; Proposed Establishment of a Nonessential Experimental Population Idaho Area	<u>ETWP; Proposed Establishment of a Nonessential Experimental Population of the Gray Wolf in Centra</u> Idaho Area					
08/16/1994	59 FR 42108 42118	ETWP; Proposed Establishment of a Nonessential Experimental Population National Park in Wyoming, Idaho, and Montana	<u>of Gray Wolf ir</u>	<u>า Yell</u>	lowston			
12/12/1985	50 FR 50792 50793	Regulations Governing Gray Wolf in Minnesota; 50 FR 50792-50793						
08/10/1983	48 FR 36256 36266	Regulations Governing Gray Wolf in Minn.; 48 FR 36256-36266						
03/09/1978	43 FR 9607 9615	Reclassification of the Gray Wolf in the U.S. and Mexico with Determination	of Critical Hat	<u>oitat i</u>	in Michi •			
Showing 1 to 9	9 of 9 entries		< Previous	1	Next >			

» Recovery

• Species with Recovery Documents Data Explorer

Current Recovery Plan(s)

```
Show 10 v entries
```

- Date	Plan 🖨 Stage	¢ Recovery Plan	very Plan		Recovery Strategie	r Imp s	lementat
01/31/1992	Final	Recovery Plan for the Eastern Timber	View Implementation				A
•	Povision 1	Wolf Poviced	Drogross				•
Showing 1 to	< Previous	1	Next >				

Showing 1 to 1 of 1 entries

Other Recovery Documents

Show 10

• Date	¢ Citation Page	¢ Title	Documen Type					
03/15/2019	84 FR 9648 9687	R 9648 9687 Removing the Gray Wolf (Canis lupus) From the List of Endangered and Threatened Wildlife; Proposed Rules						
05/01/2017	82 FR 20284 20285	Endangered and Threatened Wildlife and Plants; Reinstatement of Removal of Federal Protections for Gray Wolves in Wyoming	• Delis Final					
06/13/2013	78 FR 35663 35719	Removing the Gray Wolf(Canis lupus) From the List of Endangered and Threatened Wildlife and Maintaining Protections for the Mexican Wolf (Canis lupus baileyi) by Listing It as Endangered; Proposed Revision to the Nonessential Experimental Population of the Mexican Wolf; Proposed Rules	• Delis Prop					
12/28/2011	76 FR 81666 81726	<u>Endangered and Threatened Wildlife and Plants; Revising the Listing of the Gray Wolf</u> (<u>Canis lupus) in the Western Great Lakes</u>	• Delis Final					
10/05/2011	76 FR 61782 61823	Endangered and Threatened Wildlife and Plants, Removal of the Gray Wolf in Wyoming From the Federal List of Endangered and Threatened Wildlife and Removal of the Wyoming Wolf Population's Status as an Experimental Population	• Delis Prop					
05/05/2011	76 FR 26086 26145	Endangered and Threatened Wildlife and Plants; Proposed Rule To Revise the List of Endangered and Threatened Wildlife for the Gray Wolf (Canis lupus) in the Eastern United States, Initiation of Status Reviews for the Gray Wolf and for the Eastern Wolf (Canis	• Delis Prop					
Showing 1 to	10 of 21 entries	< Previous 1 2 3	Next >					

Five Year Reviews

Show 10 ¥	entries				
Date		Title			
∩ว/ว∩/ว∩1ว ∢		Lowor 10 C	tate and Movice C. Junus listing as revised .5 VSD		•
Showing 1 to 1 o	of 1 entries		< Previous	1	Next :
Show 10 V	entries				
. .		_	Title		
Date		*			
evelopment Corp	poration	Ŧ		No	vember

•

» Critical Habitat

Critical Habitat Spatial Extents



Critical Habitat Documents

Show 10 ✓ entries

• Date	Citation Page	Title		4	Docume Type
03/09/1978 43 FR 9607 9615 Reclassification of the Gray Wolf in the U.S. and Mexico with Determination of Critical Habitat					
•					•
Showing 1 to	1 of 1 entries		< Previous	1	Next >

To learn more about critical habitat please see <u>http://ecos.fws.gov/crithab</u>

» Conservation Plans

Habitat Conservation Plans (HCP) (learn more)

Show 10 ▼ entries

HCP Plan Summaries				
West Fork Timber HCP (formerly Murray Pacific)				^
WDNR Forest Lands HCP				-
Plum Creek Timber I-90 Land Exchange				
Plum Creek Timber Central Cascades HCP (aka I-90 HCP)				
<u>City of Tacoma, Tacoma Water HCP</u>				
			Þ	•
Showing 1 to 6 of 6 entries	< Previous	1	Next	>

Safe Harbor Agreements (SHA): (learn more)

Show 10 ✓ entries ∢

Showing 1 to 1 of 1 entries

~

» Petitions

Show 10 ✓ entries

• Petition Title	Date Received by the FWS	Where the species is believed to or known to occur	Petitioner Name	¢ Requested Action	Petition Finding(\$ 5)	Active	4	Petitio Docur	on nents
Wolf, Mexican gray (Canis lupus baileyi); Amend 10(j) rule to ban all traps and snares	06/11/2010	AZ	 Rio Grande Chapter Sierra Club Southwest Environmental Center Jean Ossorio WildEarth Guardians 	• APA: Other	• 12m petitic findin Warra on 10/09	on g Not anted /2012	Yes			
Wolf, gray (Canis lupus); Rocky Mountain DPS; designate and delist	07/15/2005	CA, ID, MI, MT, OR, UT, WA, WI, WY, United States	 State of Wyoming Governor Dave Freudenthal 	Delisting: Due to error - New information	 Petition finding not year made 	on gs et	No			
Wolf, gray (Canis lupus); Retain ESA Listing for Northeast Wolves & Write a Recovery Plan	10/03/2012	CA, MI, OR, WA, WI, United States	• John M. Glowa The Maine Wolf Coalition	• APA: Other	• 12m petitio findin Warra on	on g Not anted	No			•
Showing 1 to 10 of 22 ent	ries					< Previo	ous 1	2	3	Next >

» Biological Opinions

Show 10 ▼ entries

BO 💂	Lead 🗢 Office	÷ Title	Activity ≑ Code	¢ Project Type	¢	Lead 🗘 Agency	Document
07/21/2020	Klamath Falls Fish and Wildlife Office	Wildlife Services CA IWDM wolf consultation	08EKLA00- 2020-F- 0072	Agriculture - Other		Wildlife Services	Biological Opinion Rendered (Einal)_08El 2020-E-002

< Previous

• Next >

1

Species Profile for Gray wolf(Canis lupus)

08/23/2016 Western FWS/R6/10(A)1(a) 06E24100- Recovery Permit - Adams (CO), Alamosa (CO), Fish and B B Colorado Wolf research 2016-F- Research - Arapahoe (CO), Archuleta Wildlife Q Ecological and recovery 0313 collection/handling (CO), Baca (CO), Bent (CO), Service R Services permit; Boulder (CO), Chaffee (CO), (E Field B016F010 Cheyenne (CO), Clear Creek 2	<u>3iological</u> <u>2pinion</u> <u>Rendered</u> <u>Final)_06E</u> 2016-E-005
---	---

Showing 1 to 2 of 2 entries

< Previous 1 Next >

To see all Issued Biological Opinions please visit the report

» Life History

Habitat Requirements

Wolves are habitat generalists and lived thorughout the northern hemisphere. They only require ungulate prey and human-casued mortality rates that are not excessive.

Food Habits

Ungulates [wild and domestic] are the typical prey of wolves, but wolves also readily scavenge. Beaver are among the smallest important prey but wolves can utilize smaller mamals, birds, and fish.

Movement / Home Range

Wolves packs defend their territories from other wolves. Territory size is a function of prey density and can range from 25-1,500 square miles. Both male and female wolves disperse at equal rates and equal distances, sometimes >600 miles.

Reproductive Strategy

Normally first breed as yearings and once a year in February. One to 10 pups [normally ~5] are born 63 days later. Pups normally stay with pack until > 1 year old.

» Other Resources

<u>NatureServe Explorer Species Reports</u>-- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

<u>ITIS Reports</u>-- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

<u>FWS Digital Media Library</u> -- The U.S. Fish and Wildlife Service's National Digital Library is a searchable collection of selected images, historical artifacts, audio clips, publications, and video." +



ECOS /

Yellow-billed Cuckoo (*Coccyzus americanus*)

Range Information|Candidate Info|Federal Register|Recovery|Critical Habitat|SSA|ConservationPlans|Petitions|Biological Opinions|Life History

Taxonomy: <u>View taxonomy in ITIS</u>

Listing Status: Threatened



General Information

Yellow-billed Cuckoos are fairly large, long, and slim birds. The mostly yellow bill is almost as long as the head, thick and slightly downcurved. They have a flat head, thin body, and very long tail. Wings appear pointed and swept back in flight. Yellow-billed Cuckoos are warm brown above and clean whitish below. Their blackish face mask is accompanied by a yellow eyering. In flight, the outer part of the wings flash rufous. From below, the tail has wide white bands and narrower black ones.

References cited in Species Profile

- Cornell Lab of Ornithology. 2015. Yellow-billed Cuckoo. All About Birds. http://www.allaboutbirds.org/guide/Yellow-billed Cuckoo/id
- Hughes, Janice M. 2015. Yellow-billed Cuckoo (Coccyzus americanus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/418</u>
- Laymon, S. A. 1998. Yellow-billed Cuckoo (Coccycus americanus). In The Riparian Bird Conservation Plan:a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <u>http://www.prbo.org/calpif/htmldocs/riparian_v-2.html</u>
- Partners in Flight. 2012. Species assessment database. http://rmbo.org/pifassessment/Database.aspx
- USGS Patuxent Wildlife Research Center. 2012. North American Breeding Bird Survey 1966-2010 analysis. <u>http://www.mbr-pwrc.usgs.gov/bbs/specl10.html</u>

The species historical range included Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, Wyoming. See below for information about where the species is known or believed to occur.

Current Listing Status Summary

Show 10 ¥	entries		
Status	Date 🗘 Listed	Lead Region	Where Listed
Threatened	11-03- 2014	Southwest Region (Pogion 2)	Western DPS: U.S.A. (AZ, CA, CO (western), ID, MT (western), NM (western), NV, OR, TX (western), WY (western)); Canada (British Columbia (southwestern); Mexico (Baja California, Baja California, Chibushua, Durange (western), Sinalea, Senera) Additional species information

Showing 1 to 1 of 1 entries

» Range Information

Current Range

Western DPS: U.S.A. (AZ, CA, CO (western), ID, MT (w Zoom in! Some species' locations may be small and hard to see from a wide perspective. To narrow-in on locations, check the state and county lists (below) and then use the zoom tool.

Want the FWS's current range for all species? Click <u>here</u> to download a zip file containing all individual shapefiles and metadata for all species.

* For consultation needs do not use only this current range map, please use <u>IPaC.</u>



< Previous

Next >

1

CPM Development Corporation CDGtBs9/eeles GressbergerBepelers/ng/hission Quarry • Western DPS: U.S.A. (AZ, CA, CO (western), ID, MT (western), NM (western), NV, OR, TX (western), UT, WA, WY (western)); Canada (British Columbia (southwestern); Mexico (Baja California, Baja California Sur, Chihuahua, Durango (western), Sinaloa, Sonora)

Listing status: Threatened

- **States/US Territories** in which this population is known to or is believed to occur: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, Wyoming
- US Counties in which this population is known to or is believed to occur: View All
- **USFWS Refuges** in which this population is known to occur: Bill Williams River National Wildlife Refuge, Bosque del Apache National Wildlife Refuge, Browns Park National Wildlife Refuge ...<u>Show All Refuges</u>
- **Countries** in which this population is known to occur: Canada, Mexico, United States

» Candidate Information

No Candidate information available for this species.

No Candidate Assessments available for this species.

Candidate Notice of Review Documents

Show 10 🗸 entries

Date 🚽	Citation Page 🗦	Title
11/21/2012	77 FR 69993 70060	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions
10/26/2011	76 FR 66370 66439	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions
11/10/2010	75 FR 69222 69294	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule
11/09/2009	74 FR 57804 57878	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions
12/10/2008	73 FR 75176 75244	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule
12/06/2007	72 FR 69034 69106	Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule
09/12/2006	71 FR 53756 53835	Review of Native Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions
05/11/2005	70 FR 24870 24934	Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates or Pro for Listing as Endangered or Threatened: Annual Notice of Findings on Resubmitted Petitions: Annual

Showing 1 to 10 of 16 entries

< Previous 1 2 Next >

No Uplisting Documents currently available for this species.

» Federal Register Documents

Federal Register Documents

Show 10 🗸 entries

-	Citation 🖨	\$	Supporting
Date	Page	Title	Documents

Species Profile for Yellow-billed Cuckoo(Coccyzus americanus)

02/27/2020	85 FR 11458 11594	Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow- Billed Cuckoo	 Peer Revi Peer Revi Peer Revi Peer Revi Critio Habi 	: <u>ev</u> : <u>ev</u> : <u>ev</u> : <u>ev</u> : <u>ca</u>
06/27/2018	83 FR 30091	90-Day Findings for Three Species; Notice of petition findings and initiation of status reviews.		
•				•

Showing 1 to 10 of 36 entries

< Previous 1 2 3 4 Next >

» Species Status Assessments (SSAs)

Species Status Assessments (SSAs)

No Species Status Assessments (SSA's) are currently available for this species.

Special Rule Publications

No Special Rule Publications currently available for this species.

» Recovery

• Species with Recovery Documents Data Explorer

No Current Recovery Plans available for this species.

Other Recovery Documents

Show 10 ➤ entries

30091 30094	<u>90-Day Findings for Three Species; Notice of petition findings and initiation of status reviews.</u>	 Delisting 90 Substantial) day	petitior
/2018 83 FR 28251 28254 Initiation of 5-Year Status Reviews of 50 Species in California, Nevada, and the Klamath Basin of Oregon			eviev n Soli	/ Notice citation -
ntrios			1	Novt N
	28251 28254 ntries	30091 30094 90-Day Findings for Three Species; Notice of petition findings and initiation of status reviews. 28251 28254 Initiation of 5-Year Status Reviews of 50 Species in California, Nevada, and the Klamath Basin of Oregon ntries Initiation of Second Status Reviews of 50 Species in California, Nevada, and the Klamath Basin of Oregon	30091 30094 90-Day Findings for Three Species, Notice of petition findings and initiation of status reviews. • Delisting 90 Substantial 28251 28254 Initiation of 5-Year Status Reviews of 50 Species in California, Nevada, and the Klamath Basin of Oregon • Five Year Re Information ntries < Previous	30091 30094 90-Day Findings for Three Species; Notice of petition findings and initiation of status reviews. • Delisting 90 day Substantial 28251 28254 Initiation of 5-Year Status Reviews of 50 Species in California, Nevada, and the Klamath Basin of Oregon • Five Year Review Information Solit htries < Previous

No Five Year Reviews currently available for this species.

No Delisting Documents currently available for this species.

» Critical Habitat

Critical Habitat Spatial Extents

Population(s)	+	Seattle Washington	Montana	North Dakota Minnesota
		Oregon Idaho	Wyoming Dem Utah . ~ Colorado	South Dakota Nebraska VINITED STATES StLos
CPM Development Corporation	Service of	San Francisco		November 2020
CDGtBsszecks.GrusherecBspelletongHission Quarry		California		Appendix B-54 3/6

Species Profile for Yellow-billed Cuckoo(Coccyzus americanus)



Critical Habitat Documents

Show	10	~	entries

- Date	¢ Citation Page	Title			Docum Type
02/27/2020	85 FR 11458 11594 Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Western Distinct Reputation Segment of the Vellow, Billed Cuskee				Prop
Showing 1 to	1 of 1 entries		< Previous	1	Next >

To learn more about critical habitat please see <u>http://ecos.fws.gov/crithab</u>

» Conservation Plans

Habitat Conservation Plans (HCP) (learn more)

Show 10 • entries

HCP Plan Summaries				
Yolo Natural Heritage Program				
Western Riverside MSHCP (One permit w/ 22 permittees)				
San Luis Valley				
San Joaquin County Multi-Species Habitat Conservation and Open Space Plan				
Salt River Project Roosevelt Lake Habitat Conservation Plan				
Salt River Project Horseshoe and Bartlett HCP				
Pima County Multi-Species Conservation Plan, under Sonoran Desert Conservation Plan				
Malpai Borderlands				
Lower Colorado River Multi-Species Conservation Plan (LCR MSCP)				
4				• •
Showing 1 to 10 of 12 entries	< Previous	1	2	Next >

» Petitions

Show 10 • entries

Petition Title	Date Received by the FWS	Where the species is believed to or known to occur	Petitioner Name	Requested Action	Petition Finding(s)	¢ Active	Petition Document
----------------	-----------------------------------	--	--------------------	---------------------	------------------------	-------------	----------------------

CPM Development Corporation CDC_{htBe9xcles} Crusher - Pendleton Mission Quarry Species Profile for Yellow-billed Cuckoo(Coccyzus americanus)

Yellow-billed cuckoo (Coccyzus americanus); Emergency listing as Endangered with critical habitat	02/02/1998	AZ, CA, CO, ID, MT, NM, NV, OR, TX, UT, WA, WY, Canada, Mexico, United States	 Maricopa Audubon Society Sky Island Alliance, etc. Noah Greenwald Southwest Center for Biological Divsersity White Mountain Audobon Society Kieran Suckling 	 Listing: Endangered APA: Designate Critical Habitat 	 12m petition finding Warranted But Precluded: Resubmitted on 11/21/2012 12m petition finding Warranted But Precluded: Resubmitted on 10/26/2011 90 day petition finding Substantial on 02/17/2000 	No	• <u>Cuck</u> Yellov <u>Billed</u> <u>02-</u> <u>1998</u> .
Chausing 1 to 2 of 2 and	rios					Dustinus	1

Showing 1 to 2 of 2 entries

< Previous 1 Next >

» Biological Opinions

Show 10 👻 entries

BO 🚽	Lead = Office	¢ Title	Activity 🖨 Code	¢ Project Type	÷ Location	Lead ÷ Agency	Document
05/27/2020	Carlsbad Fish and Wildlife Office	[MCBCP] Wildfire Prevention Plan	08ECAR00- 2020-F- 0437	FIRE, LAND - MANAGEMENT PLANS, Military - Operations, Veg Management - Fire, Veg Management - Mechanical	San Diego (CA)	Department of Defense (DOD) - Marine Corps	Biological Opinion Rendered (Final) 08ECAR00-2 02622
05/15/2020	San Francisco Bay-Delta Fish and Wildlife	Reinitiation of Consultation on the Coordinated Long Term Operations of the CVP & SWP	08FBDT00- 2019-F- 0164	WATER SUPPLY / DELIVERY		Bureau of Reclamation	Biological Opinion Rendered (Final)_08FBDT00-2 00401
05/07/2020	Arizona Ecological Services Field Office	Proposed Verde Connect Road and Bridge Project	02EAAZ00- 2019-F- 1018	Bridge - New Construction - Federal, Transport - Road / Hwy - New Constr - Federal	Yavapai (AZ)	Federal Highway Administration	Biological Opinion Rendered (Einal)_02EAAZ00-2 01838
4	1		1		•		•

Showing 1 to 10 of 33 entries

< Previous 1 2 3 4 Next >

To see all Issued Biological Opinions please visit the report

» Life History

Habitat Requirements

Yellow-billed Cuckoos use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. In the Midwest, look for cuckoos in shrublands of mixed willow and dogwood, and in dense stands of small trees such as American elm. In the central and eastern U.S., Yellow-billed Cuckoos nest in oaks, beech, hawthorn, and ash. In the West, nests are often placed in willows along streams and rivers, with nearby cottonwoods serving as foraging sites.

CPM Development Corporation

CDGtBsgreetesGrusherecBepdletsngVhission Quarry

Food Habits

Caterpillars top the list of Yellow-Billed Cuckoo prey: individual cuckoos eat thousands of caterpillars per season. On the East coast, periodic outbreaks of tent caterpillars draw cuckoos to eat as many as 100 caterpillars in one sitting. Fall webworms and the larvae of gypsy, brown-tailed, and white-marked tussock moths are also part of the cuckoos lepidopteran diet, often supplemented with beetles, ants, and spiders. They take advantage of the annual outbreaks of cicadas, katydids and crickets, and will hop to the ground to chase frogs and lizards. In summer and fall, cuckoos forage on small wild fruits, including elderberries, blackberries and wild grapes. In winter, fruit and seeds become a larger part of their diet.

Movement / Home Range

Yellow-billed Cuckoos breed throughout much of the eastern and central U.S., winter almost entirely in South America east of the Andes, and migrate through Central America. The western subspecies (C.a. occidentalis) has disappeared over much of the western U.S. and now occurs as a rare breeder in California, Arizona, New Mexico, and west Texas.

Reproductive Strategy

The male and female Yellow-billed Cuckoo build a flat, oblong platform nest together constructed of loose sticks, using twigs collected from the ground or snapped from nearby trees and shrubs. The pair may line the nest sparingly with strips of bark or dried leaves. The male sometimes continues bringing in nest materials after incubation has begun. Pairs may visit prospective nest sites multiple times before building a nest together.

Other

In the West, much of the Yellow-Billed Cuckoos riparian habitat has been converted to farmland and housing, leading to population declines and the possible extirpation of cuckoos from British Columbia, Washington, Oregon, and Nevada. Once common in the California Central Valley, coastal valleys, and riparian habitats east of the Sierra Nevada, habitat loss now constrains the California breeding population to small numbers of birds. As long-distance, nocturnal migrants, Yellow-Billed Cuckoos are also vulnerable to collisions with tall buildings, cell towers, radio antennas, wind turbines, and other structures.Yellow-billed Cuckoo populations declined by 1.6 percent per year between 1966 and 2010. Partners in Flight estimates the global breeding population at about 9 million, with 84 percent breeding in the U.S., 10 percent in Mexico, and none in Canada. For more information on this species, including occurence, conservation strategies and recovery actions in specific states or regions, refer to the following resource: Laymon, S. A. 1998. Yellow-billed Cuckoo (Coccycus americanus). In The Riparian Bird Conservation Plan:a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2

2.html">http://www.prbo.org/calpif/htmldocs/riparian_v-2.html

» Other Resources

<u>NatureServe Explorer Species Reports</u>-- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

<u>ITIS Reports</u>-- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

<u>FWS Digital Media Library</u> -- The U.S. Fish and Wildlife Service's National Digital Library is a searchable collection of selected images, historical artifacts, audio clips, publications, and video." +

U.S. Fish & Wildlife Service



ECOS /

Bull Trout (*Salvelinus*) *confluentus*)

Range Information |Candidate Info |Federal Register |Recovery |Critical Habitat |SSA |Conservation Plans |Petitions |Biological Opinions |Life History

Taxonomy: <u>View taxonomy in ITIS</u>

Listing Status: Threatened and Experimental Population, Non-Essential



General Information

Bull trout (Salvelinus confluentus) are members of the family Salmonidae and are char native Washington, Oregon, Idaho, Nevada, Montana and western Canada. Compared to other salmonids, bull trout have more specific habitat requirements that appear to influence their distribution and abundance. They need cold water to survive, so they are seldom found in waters where temperatures exceed 59 to 64 degrees (F). They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. Bull trout may be distinguished from brook trout (Salvelinus fontinalis) by several characteristics: spots never appear on the dorsal (back) fin, and the spots that rest on the fish's olive green to bronze back are pale yellow, orange or salmon-colored. The bull trout's tail is not deeply forked as is the case with lake trout (Salvelinus namaycush). Bull trout exhibit two forms: resident and migratory. Resident bull trout spend their entire lives in the same stream/creek. Migratory bull trout move to larger bodies of water to overwinter and then migrate back to smaller waters to reproduce. An anadromous form of bull trout also exists in the Coastal-Puget Sound population, which spawns in rivers and streams but rears young in the ocean. Resident and juvenile bull trout prey on invertebrates and small fish. Adult migratory bull trout primarily eat fish. Resident bull trout range up to 10 inches long and migratory forms may range up to 35 inches and up to 32 pounds. Bull trout are currently listed coterminously as a threatened species.

The species historical range included Alaska, California, Idaho, Montana, Nevada, Oregon, Washington. See below for information about where the species is known or believed to

Population detail

The following populations are being monitored: Bull Trout

Current Listing Status Summary

Show 10 🗸 entries			
• Status	Date 🗘 Listed	Lead Region	Where Listed
Threatened	06-10- 1998	<u>Pacific</u> <u>Region</u> (Region 1)	U.S.A., conterminous, (lower 48 st
Experimental Population, Non-	12-09- 2009	Pacific Region	Clackamas River subbasin and the points of confluence with the Colu
Showing 1 to 2 of 2 entries	;		<pre>< Previous 1 Next ></pre>

+

Showing 1 to 2 of 2 entries

» Range Information

Current Range

🗹 🛓 🗕 U.S.A., conterminous, (lower 48 ≤ Zoom in! Some species' locations may be small and hard to see from a wide perspective. To narrow-in on locations, check the state and county lists (below) and then use the zoom tool.

Want the FWS's current range for all species? Click here to download a zip file containing all individual shapefiles and metadata for all species. * For consultation needs do not use only this current range map, please use IPaC.



• U.S.A., conterminous, (lower 48 states)

Listing status: Threatened **CPM** Development Corporation CDChtRecryedes furs.sheat/ecB/spelbeto/82M2ssion Quarry

- **States/US Territories** in which this population is known to or is believed to occur: Idaho, Montana, Nevada, Oregon, Washington
- **US Counties** in which this population is known to or is believed to occur: <u>View All</u>
- USFWS Refuges in which this population is known to occur: Benton Lake Wetland Management District, Grays Harbor National Wildlife Refuge, Julia Butler Hansen Refuge for the Columbian White-Tailed Deer ...<u>Show All Refuges</u>
- Clackamas River subbasin and the mainstem Willamette River, from Willamette Falls to its points of confluence with the Columbia River, including Multnomah Channel

Listing status: Experimental Population, Non-Essential

- **States/US Territories** in which this population is known to or is believed to occur:
- **US Counties** in which this population is known to or is believed to occur: <u>View All</u>
- **USFWS Refuges** in which this population is known to occur: Northwest Montana Wetland Management District-Flathead County

» Candidate Information

Show 10

No Candidate information available for this species.

No Candidate Assessments available for this species.

Candidate Notice of Review Documents

✓ entries

Date 🚽	Citation Page 🔶	Title
10/30/2001	66 FR 54808 54832	ETWP; Review of Plant and Animal Species That Are Threatened, Annual Notice of Findings on Recycled F Actions; Proposed Rule
10/25/1999	64 FR 57535 57547	Review of Plant and Animal Taxa That Are Candidate Annual Notice of Findings on Recycled Petitions; An
09/19/1997	62 FR 49398 49397	Review of Plant and Animal Taxa
02/28/1996	61 FR 7597 7613	ETWP; Review of Plant and Animal Taxa That Are Ca
11/15/1994	59 FR 58982 59028	ETWP; Animal Candidate Review for Listing as Enda
11/21/1991	56 FR 58804 58836	ETWP; Animal Candidate Review for Listing as Enda
01/06/1989	54 FR 554 579	ETWP; Animal Notice of Review; 54 FR 554 579
4		

1 Nex

Showing 1 to 8 of 8 entries

< Previous

Next >

No Uplisting Documents currently available for this species.

» Federal Register Documents

Federal Register Documents

Show 10	✓ entries										
• Date	Citation 🗢 Page	Title									
07/24/2017	82 FR 34326 34329	<u>Notice of l</u> <u>River Basi</u>	Notice of Intent To Prepare a Draft Environmental Impact S River Basin Habitat Conservation Plan in Oregon							<u>S</u>	
09/30/2015	80 FR 58767 58768	<u>Recovery l</u>	<u>Recovery Plan for the Coterminous United States Populatio</u>						ic		
06/04/2015	80 FR 31916 31918	<u>Endangere</u> <u>Cotermine</u> <u>Plans</u>	Endangered and Threatened Wildlife and Plants; Revised D Coterminous United States Population of Bull Trout and Dr Plans								
09/04/2014	79 FR 52741 52743	<u>ETWP; Rev</u> (<u>Salvelinus</u>	<u>ETWP; Revised Draft Recovery Plan for the Coterminous Ur</u> (Salvelinus confluentus)								
03/06/2012	77 FR 13248 13251	<u>5-Year Sta</u> <u>Guam, an</u>	<u>5-Year Status Reviews of 46 Species in Idaho, Oregon, Wasł</u> <u>Guam, and the Northern Mariana Islands:Notice of initiatio</u>								
06/21/2011	76 FR 35979	<u>Establishn</u> <u>Subbasin,</u>	Establishment of a Nonessential Experimental Population of Subbasin, OR						<u>(</u>		
•										1	*
Showing 1 to 10 of 59 entries		S	< Previous	1	2	3	4	5	6		

Next >

» Species Status Assessments (SSAs)

Species Status Assessments (SSAs)

No Species Status Assessments (SSA's) are currently available for this species.

Special Rule Publications

Date 🚽	Citation Page 🗘	Title
06/21/2011	76 FR 35979 35995	Establishment of a Nonessential Experimental Popu
04/08/1999	64 FR 17110 17125	ETWP; Determination of Threatened Status for the J
06/10/1998	63 FR 31647 31674	ETWP; Determination of Threatened status for the F
•	и 	· · · · · · · · · · · · · · · · · · ·

Showing 1 to 3 of 3 entries

< Previous 1 Next >

» Recovery

• Species with Recovery Documents Data Explorer

Current Recovery Plan(s)

٠ \$ Implemen Plan **Recovery Plan** Status Date Stage St. Mary Recovery Unit Implementation Plan for 09/30/2015 Final <u>View</u> **Bull Trout (Salvelinus confluentus)** <u>Impleme</u> **Progress** Coastal Recovery Unit Implementation Plan for 09/30/2015 Final <u>View</u> **Bull Trout (Salvelinus confluentus) Impleme Progress** Upper Snake Recovery Unit Implementation Plan 09/30/2015 Final <u>View</u> for Bull Trout (Salvelinus confluentus) **Impleme Progress**

Species Profile for Bull Trout(Salvelinus confluentus)

09/30/2015	Final	<u>Coastal Recovery Unit Implementat</u> <u>Bull Trout (Salvelinus confluentus)</u>	⊻ ∐ ₽	<u>View</u> Impleme Progress			
09/30/2015	Final	<u>Klamath Recovery Unit Implementa</u> <u>Bull Trout (Salvelinus confluentus)</u>	<u>View</u> Impleme Progress				
•					•		
Showing 1 to 8	3 of 8 entrie	< Previous	1	Next >			

Other Recovery Documents

Show ✓ entries 10

Date 🚽	Citation Page 🗢	Title
09/30/2015	80 FR 58767 58768	Recovery Plan for the Coterminous United States Po of Availability
06/04/2015	80 FR 31916 31918	<u>Endangered and Threatened Wildlife and Plants; Re</u> <u>the Coterminous United States Population of Bull Ti</u> <u>Implementation Plans</u>
09/04/2014	79 FR 52741 52743	<u>ETWP; Revised Draft Recovery Plan for the Cotermir</u> <u>of Bull Trout (Salvelinus confluentus)</u>
03/06/2012	77 FR 13248 13251	<u>5-Year Status Reviews of 46 Species in Idaho, Orego</u> <u>Montana, Hawaii, Guam, and the Northern Mariana</u> <u>reviews; request for information.</u>
07/01/2004	69 FR 39951 39952	Draft Recovery Plan for the Jarbidge River Distinct P Trout (Salvelinus confluentus)
	• ·	

Showing 1 to 8 of 8 entries

< Previous 1 Next >

Show 10 • entries					
Date	-	Title			
11/13/2015		2015 Bull Trout 5-ye	ear Review		
		Dull Trout Complete	d E viz Dovious		•
Showing 1 to 2 of 2 entries			< Previous	1	Next >

No Delisting Documents currently available for this species.

» Critical Habitat

Critical Habitat Spatial Extents

M ontrios



Critical Habitat Documents



Showing 1 to 1 of 1 entries Image: Previous 1 Next > Fo learn more about critical habitat please see http://ecos.fws.gov/crithab Image: Previous Image: Plan Summaries				
For learn more about critical habitat please see http://ecos.fws.gov/crithab * Conservation Plans Habitat Conservation Plans (HCP) (learn more) Show 10 • entries HCP Plan Summaries West Fork Timber HCP, Amendment (Addition of Bull Trout and Lynx) WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition) Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company Simpson Timber I-90 HCP. Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP. Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP. Amendment (addition of Canada Lynx and Puget SoundCompany) Plum Creek Timber I-90 HCP. Amendment (addition of Canada Lynx and Puget SoundCompany) Sihowing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 • entries	Showing 1 to 1 of 1 entries	< Previous	1	Next >
	To learn more about critical habitat please see <u>http://eco</u>	<u>s.fws.gov/crithab</u>		
Habitat Conservation Plans (HCP) (learn more) Show 10 • entries HCP Plan Summaries West Fork Timber HCP, Amendment (Addition of Bull Trout and Lynx) WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition) Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 • entries	» Conservation Plans			
Show 10 • entries HCP Plan Summaries West Fork Timber HCP, Amendment (Addition of Bull Trout and Lynx) WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition) Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company) Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries CCA Plan Summaries CCA Plan Summaries	Habitat Conservation Plans (HCP) (<u>learn more</u>)			
HCP Plan Summaries West Fork Timber HCP, Amendment (Addition of Bull Trout and Lynx) WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition) Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries < Previous	Show 10 🖌 entries			
West Fork Timber HCP, Amendment (Addition of Bull Trout and Lynx). WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition) Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada Lynx and Puget Sound/C Showing 1 to 10 of 16 entries Yerevious 1 2 Next > CCA Plan Summaries	HCP Plan Summaries			
WDNR Forest Practices HCP WDNR Forest Lands HCP, Amendment (Bull Trout Addition). Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries ✓ Previous 1 2 Next > CCA Plan Summaries	West Fork Timber HCP, Amendment (Addition of Bull Tro	<u>out and Lynx)</u>		^
WDNR Forest Lands HCP, Amendment (Bull Trout Addition). Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 entries	WDNR Forest Practices HCP			
Washington Department of Natural Resources (WDNR) Low-effect HCP for Commercial Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 • entries	WDNR Forest Lands HCP, Amendment (Bull Trout Additi	<u>on)</u>		
Storedahl's Daybreak Mine Expansion and Habitat Enhancement Project HCP Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 ← entries	Washington Department of Natural Resources (WDNR) I	Low-effect HCP for	Com	<u>mercial</u>
Stimson Lumber Company. Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries < Previous	Storedahl's Daybreak Mine Expansion and Habitat Enha	<u>ncement Project H</u>	<u>ICP</u>	
Simpson Timber NW Operations (Green Diamond Resource Company). Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 • entries CCA Plan Summaries	<u>Stimson Lumber Company</u>			
Plum Creek Timber I-90 HCP, Amendment (Bull Trout Addition) Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 → entries	Simpson Timber NW Operations (Green Diamond Resou	<u>urce Company)</u>		
Plum Creek Timber I-90 HCP, Amendment (addition of Canada lynx and Puget Sound/C Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 • entries CCA Plan Summaries	Plum Creek Timber I-90 HCP, Amendment (Bull Trout Ac	<u>ldition)</u>		
Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 ♥ entries CCA Plan Summaries	Plum Creek Timber I-90 HCP, Amendment (addition of C	anada lynx and Pu	i <u>get S</u>	ound/C
Showing 1 to 10 of 16 entries Candidate Conservation Agreements (CCA): (learn more) Show 10 ✓ entries CCA Plan Summaries	4			•
Candidate Conservation Agreements (CCA): (learn more)	Showing 1 to 10 of 16 entries	< Previous 1	2	Next >
Show 10 v entries CCA Plan Summaries	Candidate Conservation Agreements (CCA): (learn mor	r <u>e</u>)		
CCA Plan Summaries	Show 10 🕶 entries			
	CCA Plan Summaries			

Conservation Agreement for bull trout in the South Early of the Elathoad Diver (Mentan

Next >

< Previous

1

Show

10

entries

~

• Petition Title	Date Received by the FWS	Where the species is believed to or known to occur	Petitioner Name	Requeste Action
Bull trout (Salvelinus confluentus)-Klamath R. & Columbia R. pops (Remanded finding)	11/03/1992	ID, MT, NV, OR, WA, United States		• Listi Thre
Bull trout (Salvelinus confluentus)- Coastal/Puget Sound, Jarbridge River, & Saskatchewan pops (Remanded finding)	11/03/1992	ID, MT, NV, OR, WA, United States		• Listi Thre
Bull trout (Salvelinus confluentus)- Coastal/Puget Sound, Jarbridge River, & Saskatchewan pops (Remanded finding)	11/03/1992	ID, MT, NV, OR, WA, United States		• Listi Thre
Bull trout (Salvelinus confluentes)	11/03/1992	ID, MT, NV, OR, WA, United	Steve Kelly	• APA Des
Showing 1 to 4 of 4 entries			< Previous 1	Next >

» Biological Opinions

BO date	•	Lead Office	Title	4	Activity Code	•	Project Type	4	L

CPM Development Corporation CDGtBsspecks Gussborec Pepeletson 24 Dission Quarry

08/05/2020	ldaho Fish and Wildlife Office	Pettit Lake Creek Weir Construction Project			01EIFW00- 2020-F- 1121			Stream/Waterboo - Mod - Fish Passage Barrier Constr			
08/05/2020	ldaho Fish and Wildlife Office	Huckleberry Landscape Restoration Project			01EIFW00- 2020-F- 1101			Land Restoration Enhancement - Forest			/
07/31/2020	Washington Fish and Wildlife Office	EWFO - Amended Settlement Agreement to the Box Canyon Hydroelectric Project		01EWFW00- 2020-F- 0601		- Power Gen - Hydropower - Other - FERC		 -			
07/24/2020	Washington Fish and	EWFO Columbia River System Operation		01E 201	WFV 7-F-	V00-	Da Feo	m - (deral	Opera	ations	; - ,
Showing 1 to 10 of 163 entries		< Previous	1	2	3	4	5		17		

Next >

To see all Issued Biological Opinions please visit the report

» Life History

No Life History information has been entered into this system for this species.

» Other Resources

NatureServe Explorer Species Reports-- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

<u>ITIS Reports</u>-- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

 FWS Digital Media Library
 -- The U.S. Fish and Wildlife Service's National Digital Library is a searchable collection of selected images, historical artifacts, audio clips, publications, and video." +

 CPM Development Corporation
 November 2020

 CDGhtBes/sedes@system/ecBispelbaseses@system/ecBispelbaseses@system/ecBispelba

Appendix C Historic Property Maps



CPM Development Corporation CDC Recycle Crusher - Pendleton Mission Quarry

November 2020 Appendix C-1



CPM Development Corporation CDC Recycle Crusher - Pendleton Mission Quarry November 2020 Appendix C-2