

1.0 APPENDIX A
Air Quality Technical Analysis

1.1 Particulate Matter Modeling

Particulate matter emissions as total suspended particulates (TSP) were modeled when the original notice of construction permit (NOC) was issued in 1984 by Puget Sound Air Pollution Control Agency (PSAPCA), the predecessor of PSCAA (PSAPCA 1984). Upon proposing to resume mining in 2010 as described under the Proposed Action, PCCC applied to PSCAA for a permit to operate two coal crushers and associated coal-processing equipment. PSCAA updated their analysis to include estimates of PM_{10} and $PM_{2.5}$ based on previous modeling for TSP. The new permit was granted on September 6, 2010 (PSCAA 2010).

Initial air emission modeling was done by John T. Boyd Company (1983) with guidance from PSAPCA. This assessment was incorporated into the SEPA FEIS prepared by King County Department of Planning and Community Development (1984). King County concluded that over 95% of particulate matter would settle out on PCCC's mine site and that air quality standards for particulate matter would not be exceeded.

To assess impacts of mining on particulate matter concentrations in the FEIS, OSMRE analyzed expected increases in TSP (OSMRE 1985). OSMRE used EPA's emission rates for surface mining operations (EPA 1979) and applied PCCC's proposed air pollution control practices to estimate total mine related TSP emission for each year. Estimates of increases of TSP due to mining were made using the EPA valley computer model (EPA 1977). The maximum annual increase in projected TSP concentrations was $31 \mu\text{g}/\text{m}^3$. This was within the mine site during dry conditions. Maximum annual increase at the western edge of Lake 12 and eastern side of the City of Black Diamond was 18 and $8 \mu\text{g}/\text{m}^3$, respectively. Ambient TSP concentrations were $20\text{--}25 \mu\text{g}/\text{m}^3$ so expected TSP near the western edge of Lake 12 was $38\text{--}43 \mu\text{g}/\text{m}^3$. These projected increases were not expected to exceed Washington State or Federal secondary TSP annual average concentrations of $60 \mu\text{g}/\text{m}^3$ or the 24 hour maximum level of $150 \mu\text{g}/\text{m}^3$. OSMRE concluded in 1985 that these impacts would be moderate. It also concluded that there would be some gaseous emission for the mining equipment and blasting but the increase in gaseous concentrations would be negligible and within State and Federal standards (OSMRE 1985).

As required by PSAPCA, a high-volume air sampler was installed to monitor the effects of mining and initial construction on TSP concentrations. The high-volume sampler consisted of a fan and motor, which draws a known volume of air through a filter media for a specific time period. The filter media traps dust particles in the air and the amount of particulate trapped is determined by gravimetric analysis. The sampler was located near the western edge of Lake 12, at the eastern permit boundary. Sampling was conducted for a 3-year period from September 1986 through August 1989. Analyses were performed by the PSCAA. Results, found in Appendix X-1 of the PAP, showed that actual mean fugitive dust emissions were $24.2\text{--}31.9 \mu\text{g}/\text{m}^3$ and were much less than the $38\text{--}43 \mu\text{g}/\text{m}^3$ expected from modeling. Actual results are shown on Table A-1 below (PCCC 2011a).

Table A-1. Summary of Air Quality Monitoring Results Puget Sound Air Pollution Control Agency (1986-1989)

Year	Standard	1986	1987	1988	1989
		TSP ($\mu\text{g}/\text{m}^3$)			
Annual Mean	50	24.2	31.9	26.1	27.7
Maximum	150	82	118	76	93
Number Samples		14	54	54	38

Wind patterns have not changed since modeling was completed in 1984 with predominant winds from the south and southwest from fall through spring and west to northwest from May through September (Western Regional Climate Center 2015). A wind rose diagram from a station near Enumclaw that shows May through September data from 2005 through 2014 is provided as Figure A-1. This station is at the same elevation as the John Henry No. 1 Mine and located approximately seven miles south of the mine as shown on Figure A-1. The potential for the greatest emissions is during the dry summer months. Land use southeast of the project is presently undeveloped managed timberland with no residential development currently or planned (King County 2012). See section 4.1.9, *Land Use*, for discussion of reasonably foreseeable and past residential development.

As shown on Table A-2 and as part of the NOC permit review in 2010, PSCAA modeled concentrations using the original modeled TSP concentrations with the following modifications to adapt the results to current PM_{10} and $\text{PM}_{2.5}$ standards:

24-hour and 1-hour modeled concentrations were derived from the modeled annual concentrations using standard persistence factors.

PM_{10} was derived using the PM_{15} size fraction presented in the original modeling. This should result in a conservatively high estimation of PM_{10} .

$\text{PM}_{2.5}$ was derived using the $\text{PM}_{2.5}$ size fraction present in the original modeling.

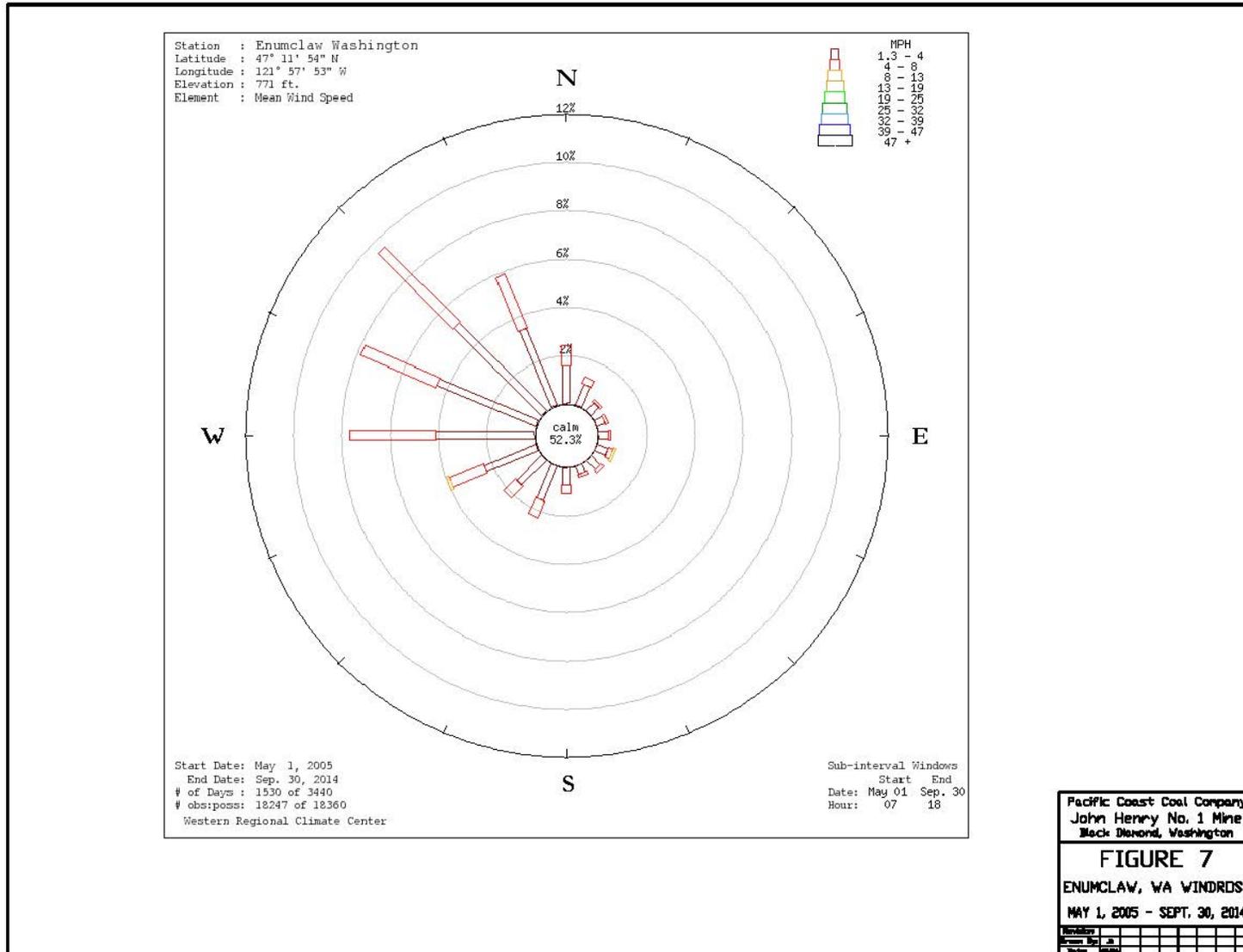
$\text{PM}_{2.5}$ background concentration was developed from the agency ambient monitor at Mud Mountain using 2006 data which appears to be the greatest in the dataset.

PM_{10} background concentration was developed from the last agency PM_{10} monitoring conducted in Kent for 2006. 2006 was the last year the agency monitored for PM_{10} . It is expected that this value should be high in that the Kent monitor is located in an urban area near an intersection.

Table A-2. Particulate Matter Emission Summary

Emission Source	Control Technology	Control Efficiency (%)	Emission Uncontrolled	Factor (lb. per) Controlled
Drilling-Overburden	Dust Collector	99.9	1.5 hole	0.0
Drilling-Coal	None	-	0.22 hole	0.22 hole
Blasting	None	-	50 blast	50 blast
Overburden Removal	None	-	0.037 cubic yard	0.037 cubic yard
Coal Removal	None	-	0.00875 ton	0.00875 ton
ROM Coal Dump	Spray Nozzles	50.0	0.007 ton	0.0035 ton
ROM Coal Crushing	H ₂ O Sprays	95.0	0.02 ton	0.0010 ton
Conveyors	Enclosure	100.0	0.20 ton	0.0
Clean/Stoker Coal Storage	None	-	2.56 ac. - hr.	2.56 ac. -hr.
Clean Coal Loadout	None	-	0.0002 ton	0.0002 ton
Stoker Coal Loadout	None	-	0.2 ton	0.2 ton
Transfer Station	Partial Enclosure	70.0	0.2 ton	0.06 ton
Topsoil Storage	None	-	98.0 ac. -yr.	98.0 ac. - yr.
Overburden Storage	None	-	43.3 ac. - yr.	43.3 ac. - yr.
Topsoil/Overburden Dumping	None	-	0.007 ton	0.007 ton
Road Maintenance	Chemical Dust Suppressant	-	32 grader hours	32 grader hours
Unpaved Roads	Chemical Dust Suppressant	85.0	1.77 VMT	0.27 VMT
Paved Roads	Watering	80.0	0.0134 VMT	0.00268 VMT

Figure A-1. Enumclaw, WA Wind Rose May 1, 2005 - Sept. 30, 2014



Currently there are four particulate matter (PM) ambient air standards of concern in addition to the TSP standards. There are two 24-hour standards, one for PM_{2.5} (Federal) and one for PM₁₀ (state and Federal). There are also two annual averaging period standards, one for PM_{2.5} (Federal) and one for PM₁₀ (state) (PSCAA 2010). The original modeling for NOC 2390 as modified above by PSCAA resulted in ambient concentrations of particulate due to the proposed activity that were less than the ambient air quality standards for PM₁₀ and PM_{2.5}. There has been no additional modeling required by PSCAA.

Federal Standards of Performance for Coal Preparation and Processing Plants (40 CFR, Part 60, Subpart Y 2009) apply to the facility. PCCC's mine contains the following affected facilities: coal processing and conveying equipment, coal storage systems, coal transfer, and loading systems that were constructed before April 28, 2008. The facility also contains open storage piles which are not affected facilities under Federal New Source Performance Standards (NSPS), because they were constructed prior to May 27, 2009. The facility does not include any thermal dryers or pneumatic cleaning equipment.

The State of Washington implements the NAAQS, and develops air quality attainment and maintenance plans, in order to keep Washington in compliance with the Federal NAAQS. The Puget Sound air shed has been in compliance with the annual PM_{2.5} standard since the EPA promulgated it in 1997. The Black Diamond area is in compliance with the Federal air quality standards for these pollutants (PSCAA 2014).

The PSCAA permit (PSCAA 2010) shows the overall facility flow from the original application and the highlighted portions are those emission associated with the coal cleaning plant. Figure 11 shows the facility flow of the as built plant. The current plant, as configured, does not have the clean coal loadout and thus emission points B2 and C5 are not present. Table A-3 shows emission sources and estimated rates for the coal cleaning plant. Table A-4 shows estimated emissions for the coal cleaning plant and mine including fugitive emissions (PSCAA 2010).

Table A-3. Coal Cleaning Plant Estimated Emissions Sources and Rate (Including Fugitives)

Emission Point	Description	TSP Emissions (lb/yr)	TSP Emissions (tons/yr)	PM₁₀ (tons/yr)	PM_{2.5} (tons/yr)
A1	ROM crusher to plant, conveyor	6,760	3.4	1.43	0.08
A2	CC Plant to CC truck bin, conveyor	285	0.1	0.06	0.00
A3	CC Truck Bin to CC Stockpile, conveyor	30	0.0	0.01	0.00
A4	Plant to Stoker Stockpile, conveyor	3	0.0	0.00	0.00
A5	Plant to Refuse bin, conveyor	98	0.0	0.02	0.00
B1	Trucks to truck bin	6,760	3.4	1.43	0.08
B2	CC trucks	760	0.4	0.16	0.01
B3	Stockpile conveyor to CC stockpile	600	0.3	0.13	0.01
B4	Stoker conveyor to stoker stockpile	59	0.0	0.01	0.00
B5	Refuse conveyor to refuse haul truck	261	0.1	0.06	0.00
C4	Refuse trucks	4,056	2.0	0.86	0.05
C5	Coal trucks	497	0.2	0.10	0.01
D1	ROM coal pile	9	0.0	0.00	0.00
D2	CC pile	111	0.1	0.02	0.00
D3	Stoker coal pile	3	0.0	0.00	0.00
TOTALS		20,291	10.1	4.3	0.3

1. TSP emission estimates from original NOC 2390.

2. PM₁₀ and PM_{2.5} fractions based on those used in original modeling of TSP. Original modeling PM₁₅ treated as PM₁₀ for a conservatively high emission estimate.

3. Emission estimates based on approximate production of 134,000 tons of a maximum 350,000 tons per year from 1984 predictions.

Table A-4. Coal Cleaning Plant and Mine Estimated Emission Sources and Rates (Including Fugitives)

Emission Point	Description	TSP Emissions (lb/yr)	TSP Emissions (ton/yr)	PM ₁₀ (ton/yr)	PM _{2.5} (ton/yr)
A1	ROM crusher to plant, conveyor	6,760.0	3.4	1.43	0.08
A2	CC Plant to CC truck bin, conveyor	284.9	0.1	0.06	0.00
A3	CC Truck Bin to CC Stockpile, conveyor	30.1	0.0	0.01	0.00
A4	Plant to Stoker Stockpile, conveyor	3.0	0.0	0.00	0.00
A5	Plant to Refuse bin, conveyor	97.7	0.0	0.02	0.00
B1	Trucks to truck bin	6,760.0	3.4	1.43	0.08
B2	CC trucks	759.9	0.4	0.16	0.01
B3	Stockpile conveyor to CC stockpile	599.9	0.3	0.13	0.01
B4	Stoker conveyor to stoker stockpile	59.4	0.0	0.01	0.00
B5	Refuse conveyor to refuse haul truck	260.7	0.1	0.06	0.00
C1	Rock trucks	69,492.8	34.7	14.66	0.87
C2	Employee vehicles	5,213.4	2.6	1.10	0.07
C3	Coal trucks	13,520.0	6.8	2.85	0.17
C4	Refuse trucks	4,056.0	2.0	0.86	0.05
C5	Coal trucks	496.6	0.2	0.10	0.01
C6	Topsoil Trucks	2,028.0	1.0	0.43	0.03
D1	ROM coal pile	8.5	0.0	0.00	0.00
D2	CC pile	111.4	0.1	0.02	0.00
D3	Stoker coal pile	3.0	0.0	0.00	0.00
E1	Spoil Pile No. 1	0.6	0.0	0.00	0.00
E2	Spoil Pile No. 2	0.7	0.0	0.00	0.00
E3	Spoil Pile No. 3	0.6	0.0	0.00	0.00
E4	Topsoil storage	0.5	0.0	0.00	0.00
		110,548	55.3	23.3	1.4

1 TSP emission estimates from original NOC 2390

2 PM₁₀ and PM_{2.5} fractions based on those used in original modeling of TSP. Original modeling PM₁₅ treated as PM₁₀ for a conservatively high emission estimate.
 3 Emission estimates based on approximate production of 350,000 tons per year from 1984 prediction.

1.2 Air Quality Emission Standards

Table A-5. NSPS Air Quality Emission Standards

Affected Facility	Description	Before April 28, 2008	After April 28, 2008	After May 27, 2009
Coal Processing and Conveying Equipment (including breakers and crushers)	Any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts. Equipment located at the mine face is not considered to be part of the coal preparation and processing plant.	20% Opacity	10% Opacity except for equipment used in the loading, unloading, and conveying operations of open storage piles. 0.01gr/dscf Mechanical Vent	
Coal Storage Systems	Any facility used to store coal except for open storage piles.			
Transfer and loading systems	Any facility used to transfer and load coal for shipment.			

Open storage piles	Any facility, including storage areas, that is not enclosed that is used to store coal, including the equipment used in the loading, unloading, and conveying operations of the facility.	Not Applicable	Prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions.
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Source: EPA 2016g

Table A-6. British Columbia Air Quality Objectives for Total Suspended Particulates and Dustfall

Contaminant	Averaging Period	Source	Level	Air Quality Objective	Date Adopted
Total Suspended Particulate Matter (TSP)	24 hour	MDL – NAAQO; Levels B and C – PCOs for various sectors	MDL B C	120 µg/m ³ 200 µg/m ³ 260 µg/m ³	1974 1974-79 1979
	Annual (geometric)	PCOs for various sectors	A B C	60 µg/m ³ 70 µg/m ³ 75 µg/m ³	- - -
dustfall	1 month	PCOs for the Mining, Smelting, and Related Industries	Lower Upper	1.7 mg/(dm ² -d) 2.9 mg/(dm ² -d)	1979
dustfall: residential	2 week	PCOs for the Forest Products Industry	A B	1.7 mg/(dm ² -d) 1.7 mg/(dm ² -d)	1977
dustfall: other	2 week	PCOs for the Forest Products Industry	A B	2.9 mg/(dm ² -d) 2.9 mg/(dm ² -d)	1977
dustfall: residential	1 month	PCOs for Food-processing, Agriculturally Orientated, and Other Misc. Industries and Chemical and Petroleum Industries	A B C	1.7 mg/(dm ² -d) 1.7-2.3 mg/(dm ² -d) 2.3 mg/(dm ² -d)	1974-75

dustfall: other	1 month	PCOs for Food-processing, Agriculturally Orientated, and Other Misc. Industries and Chemical and Petroleum Industries	A B C	2.9 mg/(dm ² -d) 2.9-3.5 mg/(dm ² -d) 4.1 mg/(dm ² -d)	1974-75
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Source: British Columbia 2016

National Maximum Desirable Level (NAAQO) = MDL; National Maximum Acceptable Level (NAAQO) = MAL; National Maximum Tolerable Level (NAAQO) = MTL; Canadian Ambient Air Quality Standards = CAAQS; Provincial Air Quality Objective (B.C.) = AQO; Provincial Planning Goal (B.C.) = Goal; Provincial Level A, B and C Pollution Control Objectives (B.C.) = A, B and C

Table A-7. Description of Pollution Control Objectives and National Ambient Air Quality Objectives

Pollution Control Objectives	Level A	Level B	Level C
Forest Products Industry 1977	Desirable goals for all discharges and will generally apply to all new discharges, and to existing installations whose discharges are significantly altered in quantity or quality	Intended as acceptable interim objectives for all other discharges and will be reviewed periodically by the Direction of Pollution Control	
Chemical and Petroleum Industries 1974	For new and proposed discharges, and within the limits of the best practicable technology, to existing discharges by planned staged improvements for these operations	Intermediate objective for all existing discharges to reach within a period of time specified by the Director, and as an immediate objective for existing discharges which may be increased in quantity or altered in quality as a result of process expansion or modification	Immediate objective for all existing chemical and petroleum industries to reach within a minimum technically feasible period of time

Food-processing, Agriculturally Oriented and Other Miscellaneous Industries 1975	Intended to provide adequate long-term protection	Not defined	Intended to provide adequate short-term protection of the environment
Pollution Control Objectives	Lower Range	Upper Range	
Mining, Smelting and Related Industries 1979	Defined for discharges as applying to sensitive environmental situations	Defined for discharges as applying to where it can be shown that unacceptably deleterious changes will not follow	
National Ambient Air Quality Objective	Maximum Desirable Level (MDL)	Maximum Acceptable Level (MAL)	Maximum Tolerable Level (MTL)
	Long-term goal for air quality and provides a basis for an anti-degradation policy for unpolluted parts of the country and for the continuing development of pollution control technology	Intended to provide adequate protection against effects on soil, water, vegetation, materials, animals, visibility, and personal comfort and well-being	Time-based concentrations of air contaminants beyond which, owing to a diminishing margin of safety, appropriate action is required without delay to protect the health of the general population

Source: British Columbia 2016

1.3 Air Quality Emission Inventory

1.3.1 Construction and Operations Emissions

This section presents the base assumptions and primary emission factors used to prepare the air quality emissions inventory for the mining operations and construction.

Table A-8. Work week and workforce assumptions

Workweek/workforce	
5	days per week
52	weeks per year
260	days per year
5.5	years of mining operations
1	year reclamation (Proposed Action)
2	years reclamation (No Action)
12	hours per day
30	full time employees (mining)
20	full time employees (reclamation)
1	vehicle per worker (assumes light duty truck)
60	miles per day for employees
30	mph for area roadways
1	hour (total commuting time)

Table A-9. List of Equipment and Hours of Operation

Equipment Type	Horsepower	gal/hr	Hours of Operation (total per year - Proposed Action)	Hours of Operation (total - Proposed Action)	Hours of Operation (total per year - No Action)	Hours of Operation (total - No Action)	Number of Pieces of Equip	Operations/Reclamation
D9R	405	21.51	1500	9750	1500	3000	1	Y/Y
140H Grader	267	14.17	2000	13000	2000	4000	1	Y/Y
40t Articulated	489	25.97	2000	13000	2000	4000	4	Y/Y
375 Excavator	428	22.73	2000	13000	2000	4000	1	Y/Y
980 Loader	393	20.87	2000	11000	0	0	1	Y/N
HCR1500 drill	348	18.48	1600	8800	0	0	1	Y/N

Notes: gal/hr assumes 300-hp diesel engine

Horsepowers presented in EA are estimates based on manufacturer data sheets. Actual equipment used may vary.

"The number of trucks will vary depending on contractor requirements. PCCC anticipates that 3-4 trucks in the 30-40 ton class range will be the norm." permit revision application. The EA assumes use of 4 40 ton trucks to be conservative.

Source: permit revision application. Table III-8 Mobile Equipment.

Source: EPA 2010c

Table A-10. Conversion Factors

Conversion Factors		
1 kilogram	2.205	pounds
1 kilogram	1000	grams
1 lb =	453.6	grams
1 ton =	2000	lbs
1 gallon	7.08	lbs
Average vehicle speed	30	mph
Grams to US tons	0.0000011	tons/g
kilowatts to horsepower	1.3410200	horsepower

Source: EPA1985 and Google 2016

Table A-11. National MOVES Emission Factors for Nationwide Diesel Passenger Trucks

Construction Equipment	MOVES Vehicle Type	Number of Pieces of Equipment	Total Operation (hours)	Total VMT	CO	NOx	PM10	PM2.5	SO2	VOC	Acetaldehyde	Acrolein	Benzene	1,3-Butadiene	Ethylbenzene	Formaldehyde	n-Hexane	Toluene	Xylene
Pickups	Passenger Truck	30	1	30	1.32E+00	9.44E-01	1.02E-02	9.90E-03	4.50E-03	7.72E-02	5.35E-03	7.71E-04	9.97E-04	6.18E-05	4.84E-04	1.68E-02	4.18E-04	2.32E-03	2.93E-03

The source used "the "default" input database in MOVES2010b that summarizes all required emission-relevant information for the entire U.S. to estimate the U.S. average emission factors of a specific MY vehicle over the calendar years (CYs) of the vehicle's lifetime, except for information on evaporative VOC emissions, which requires hourly temperature and relative-humidity profiles and fuel specifications for hourly-based simulation".

Table A5 Lifetime mileage-weighted average air pollutant emission factors (g/mile) for diesel passenger trucks for model years 1990–2020. MY 2017 was used for purposes of this EA and diesel engines were assumed in order to provide conservative emission estimate.

Source: Cai, H., A. Burnham, and M. Wang 2013.

Table A-12. Speciation Factors for Diesel

Pollutant	Basis	Speciation (multiplier)	Reference for Speciation
Criteria			
PM2.5	PM10	0.97	EPA 2010a
VOC	THC	1.053	EPA 2010b
HAP	Table 12 - Diesel Engines		
Acetaldehyde	VOC	0.06934	EPA 2010a
Acrolein	VOC	0.00999	EPA 2010a
Benzene	VOC	0.01291	EPA 2010a
1,3-butadiene	VOC	0.0008	EPA 2010a
Ethylbenzene	VOC	0.00627	EPA 2010a
Formaldehyde	VOC	0.21744	EPA 2010a
n-Hexane	VOC	0.00541	EPA 2010a
Toluene	VOC	0.02999	EPA 2010a
Xylene	VOC	0.038	EPA 2010a

Assumes post-2007 mining equipment. Exact equipment list with manufacturer information was not provided by applicant but will be renting.
Source: EPA 2010a and EPA 2010b

Table A-13. Emission Factors for NONROAD Equipment (grams per horsepower-hour - g/hp-hr)

NONROAD Equipment Description	THC-Exhaust+ Crankcase	CO-Exhaust	NO _x -Exhaust	SO ₂ -Exhaust	PM-Exhaust [PM10]	Horsepower	Sources
D9R Dozer	0.14	0.30	4.40	1.0731	0.11	405	Catepillar 2016a
140H Grader	0.30	0.66	4.00	1.0720	0.19	267	Catepillar 2016b.
40t Articulated Dump Truck	0.16	0.71	4.49	1.0730	0.13	489	Catepillar 2016c.
375 Excavator	0.14	0.35	4.09	1.0731	0.10	428	Catepillar 2016d.
980 Loader	0.25	0.30	4.40	1.0724	0.11	393	Catepillar.2016e.
HCR1500 drill	0.12	0.77	4.71	1.0732	0.11	348	Furukawa Rock Driller. 2016

1 Horsepowers presented in EA are closest estimates found in EPA 2010 Table D-7 based on manufacturer data sheets. Actual equipment used may vary.

2 When individual NOx values were not available in EPA 2010c the analysis used values for HC+NOx which presents a more conservative estimate of NOx emissions.

Sources: EPA 2010c; Furukawa Rock Driller 2016; Caterpillar 2016a; Caterpillar 2016b; Caterpillar 2016c; Caterpillar 2016d; Caterpillar 2016e.

1.3.2 Transportation Emissions

Tables A-24 – A-25 present the emission and conversion factors used to derive values found in the transportation emissions table in Section 3.13, *Transportation*. The analysis assumes a distance of 183,570 transportation miles based on travel from the Mine to the Port of Richmond, British Columbia. Vessel emissions were calculated using the formula below:

$$E = P \times LF \times A \times EF$$

E = Emissions (grams);

P = Maximum continuous rating power (Kw);

LF = Load Factor (percent of vessel's total power);

A = Activity (hours);

EF = Emission Factor (grams per kilowatt-hour)

Table A-14. Vessel Emission Factor (grams/kilowatt-hour - g/kw-hr)

CO	NO _x	VOC	PM _{2.5}	PM ₁₀	SO _x
1.1	13.2	0.5	0.72	0.72	1.3

Source: EPA 2009

Table A-15. Vessel Emission Calculations and Conversion Factors

Conversion factors	
1	gram = 0.00000110231
0.83	LF = general cargo maneuver load factor
612	P = kilowatt engine power
9,188	A = based on 20 mph to cover 183,570 miles
0.97	PM10 to PM2.5

Source: EPA 2009

1.4 References

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2.0 APPENDIX B

Water Resources

2.1 Surface Water

2.1.1 Monitoring Schedules

Table B-1. OSMRE Surface Water Monitoring Schedule (June 1992 to Present)

Parameter	Discharge Point				OSMRE Reference (Ginder Creek)
	001 Ginder Lake (Ponds B, F & G)	002 Mud Lake Creek (Ponds H1, H2 & I)	003 Unnamed Tributary to Lake No. 12 (Pond - A)	008/010 Unnamed Tributary to Lake No. 12 (Pond A')	
Flow	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
pH	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
Specific Conductivity	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
Iron	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
Manganese	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
Phosphorus	Annual	Annual	Annual	Annual	Annual
Zinc	Annual	Annual	Annual	Annual	Annual
Arsenic	Annual	Annual	Annual	Annual	Annual
Chromium	Annual	Annual	Annual	Annual	Annual
Copper	Annual	Annual	Annual	Annual	Annual
Calcium	Annual	Annual	Annual	Annual	Annual
Sodium	Annual	Annual	Annual	Annual	Annual
Magnesium	Annual	Annual	Annual	Annual	Annual
Potassium	Annual	Annual	Annual	Annual	Annual
Chloride	Annual	Annual	Annual	Annual	Annual
Sulfate	Annual	Annual	Annual	Annual	Annual
Nitrate	Annual	Annual	Annual	Annual	Annual
Carbonate	Annual	Annual	Annual	Annual	Annual
Bicarbonate	Annual	Annual	Annual	Annual	Annual

Table B-2. 1992-2008 NPDES Surface Water Monitoring Schedule (June 1992 to February 2008)

Parameter	Discharge Point			
	001 Ginder Lake (Ponds B, F & G)	002 Mud Lake Creek (Ponds H1, H2 & I)	003 Unnamed Tributary to Lake 12 (Pond A)	008/010 Unnamed Tributary to Lake 12 (Pond A')
Flow	Daily	Daily	Monthly	Monthly
pH	Daily	Daily	Monthly	Monthly
Specific Conductivity	Daily	Daily	Monthly	Monthly
Total Suspended Solids (TSS)	Monthly	Monthly	Monthly	Monthly
Phosphorus	Monthly	Monthly	Quarterly	Quarterly
Hardness	Quarterly	Quarterly	Bi-annual	Bi-annual
Iron	Quarterly	Quarterly	Bi-annual	Bi-annual
Zinc	Quarterly	Quarterly	Bi-annual	Bi-annual
Arsenic	Quarterly	Quarterly	N/A	N/A
Chromium	Quarterly	Quarterly	N/A	N/A
Copper	Quarterly	Quarterly	N/A	N/A

N/A = Not required

Table B-3. NPDES Surface Water Monitoring Schedule 2008 to Present

Parameter	Discharge Point				
	Pond B	Pond F&G	Pond H1	Pond H2	Pond I
Flow	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
pH	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Specific Conductivity	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Turbidity	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Dissolved Oxygen	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Oil Sheen	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Phosphorus	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Lead*	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Zinc*	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Arsenic*	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Chromium*	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall
Copper*	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall	0.5"Rainfall

* Maximum of one sample per month

2.1.2 Water Quality Trends

The Figures B-1 – B-6 illustrate the water quality trends at John Henry No. 1 Mine associated with sediment loading, as total suspended solids, and total phosphorus loading. Figures were generated by OSMRE using Steven Chapra's 2008 surface water quality model (Chapra 2008).

Figure B-1. Monitoring Point 001 Total Suspended Solids

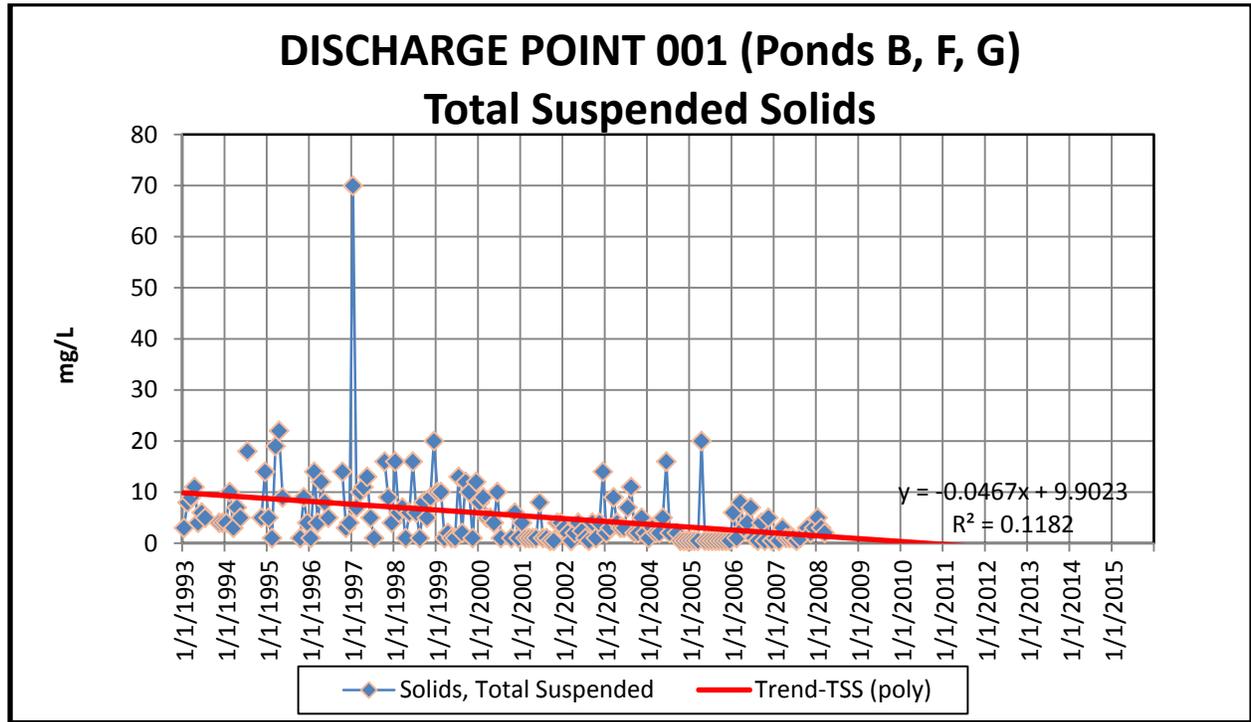


Figure B-2. Monitoring Point 002 Total Suspended Solids

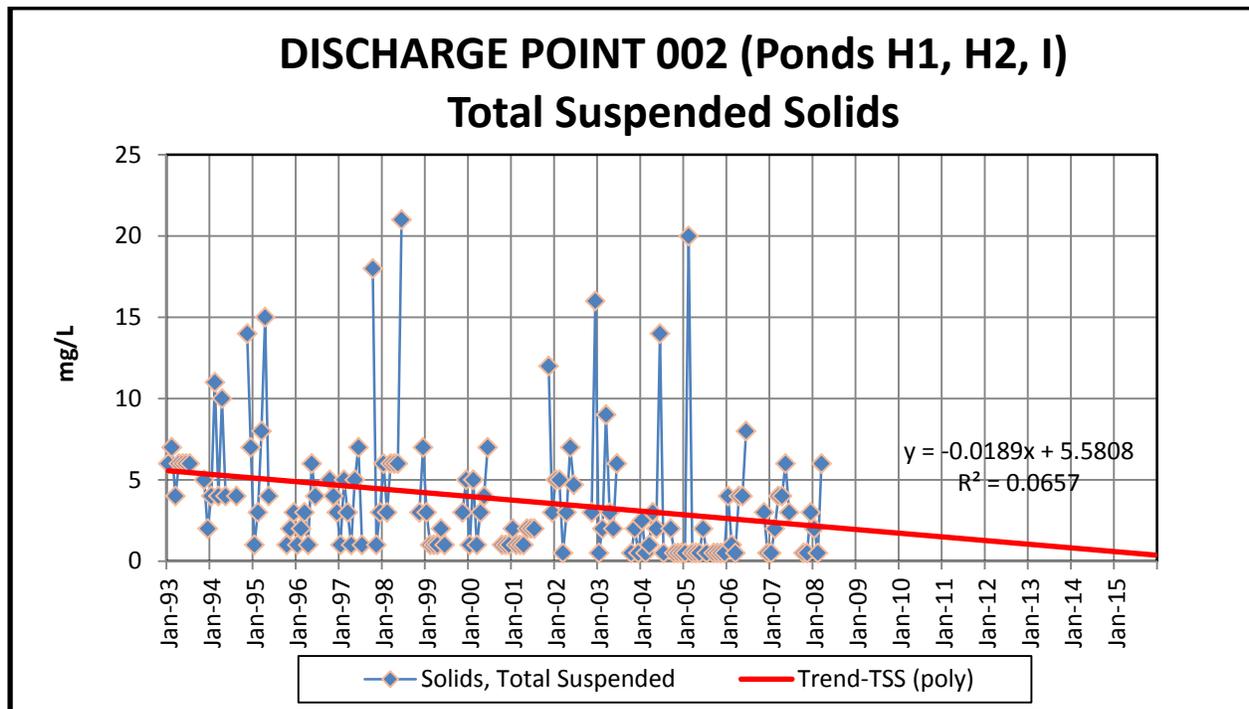


Figure B-3. Monitoring Point 003 Total Suspended Solids

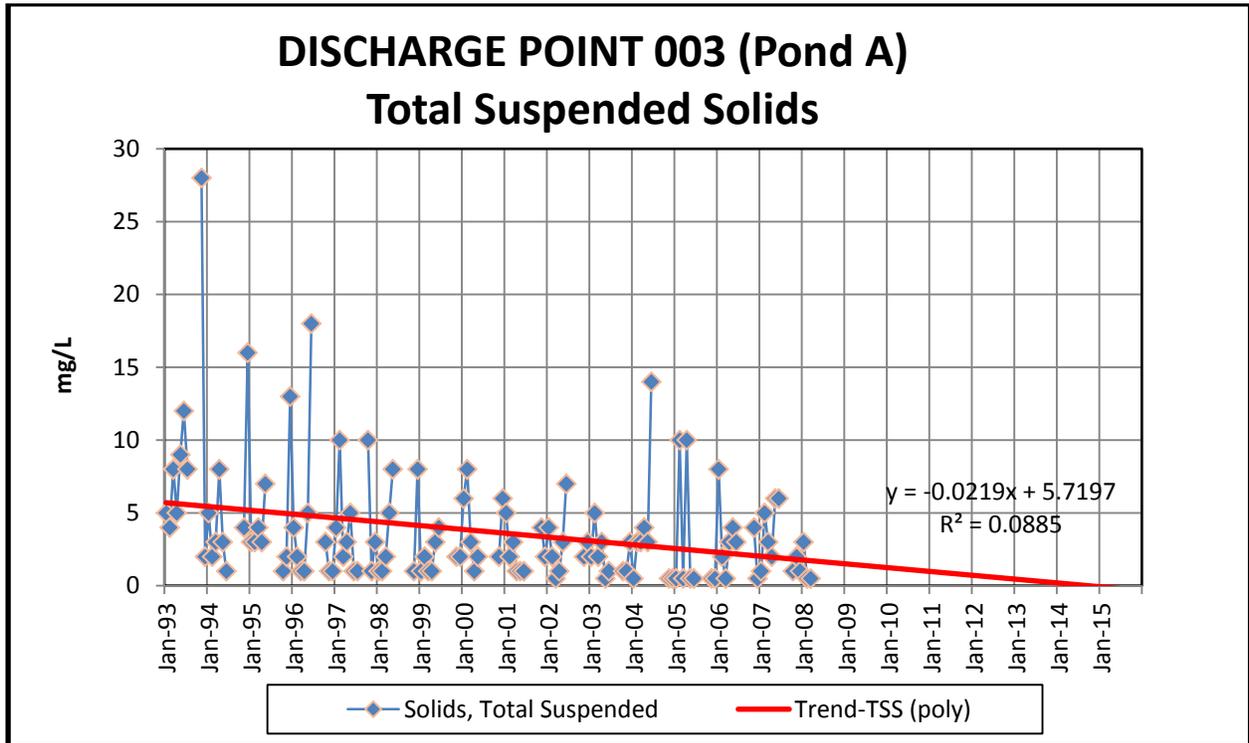


Figure B-4. Total Phosphorus Concentrations at Monitoring Point 001

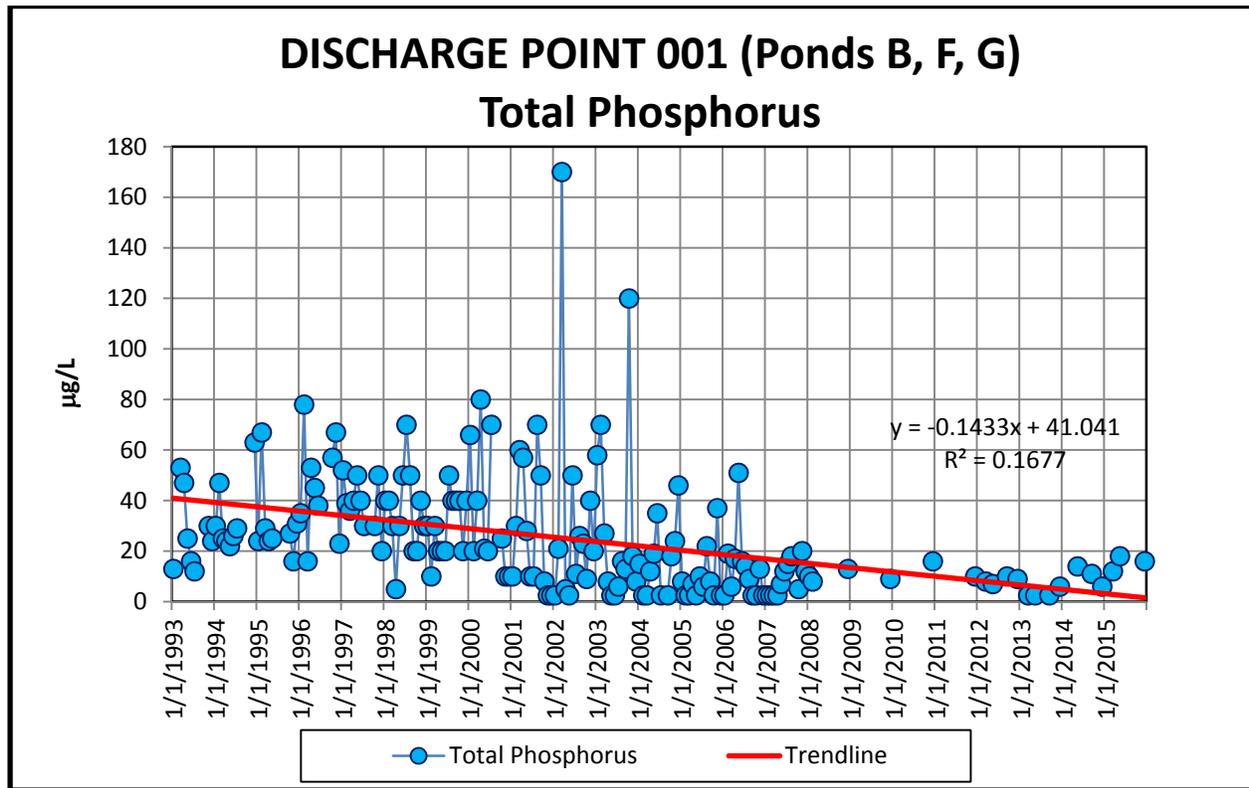


Figure B-5. Total Phosphorus Concentrations at Monitoring Point 002

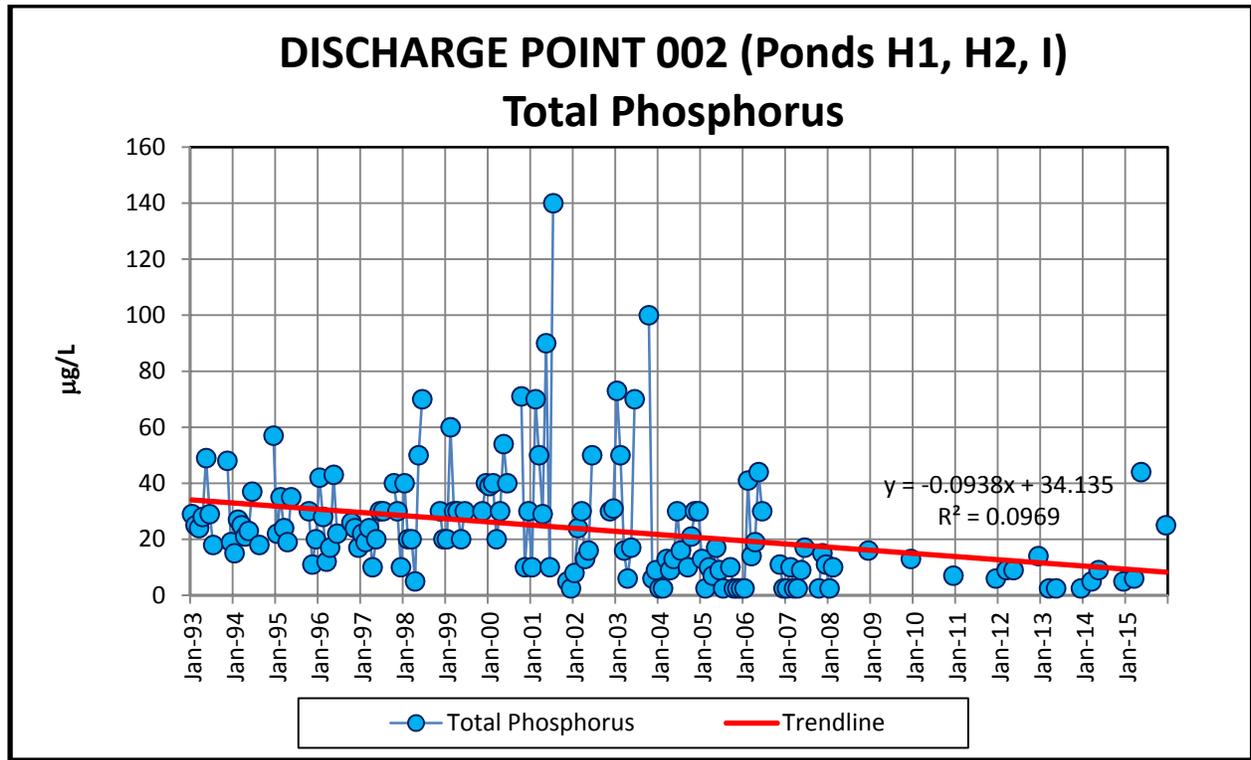
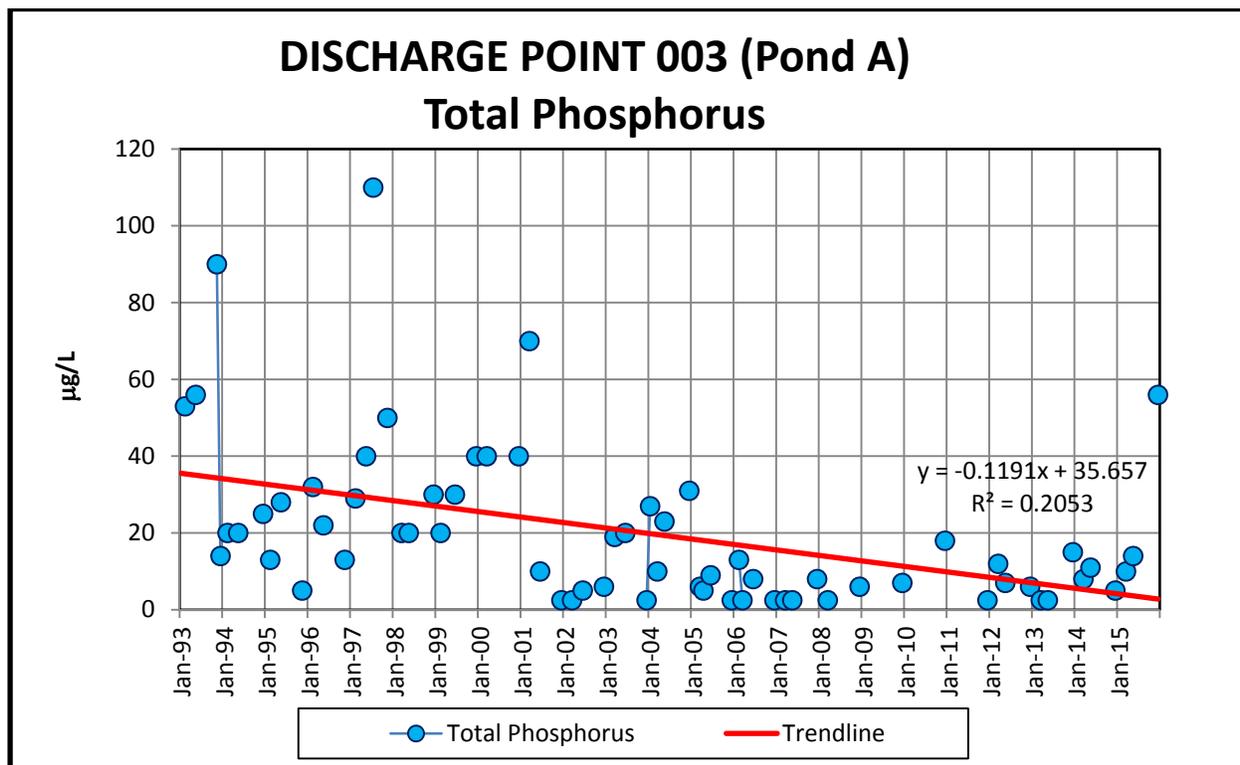


Figure B-6. Total Phosphorus Concentrations at Monitoring Point 003



Comparison to baseline metrics outlined in the John Henry No. 1 Mine CHIA show the effects that mining and reclamation activities at the John Henry No. 1 Mine have had on the hydrologic balance to date. The water monitoring program data illustrate that there have been consistent large increases in bicarbonate alkalinity, calcium, magnesium, sodium, specific conductivity, and sulfate concentrations in surface water exiting the permit area, as compared to baseline data. There have been lesser increases in chloride, manganese, and zinc at these monitoring points.

Exceedances of NPDES water quality standards since mining began in 1986 have been infrequent and limited to turbidity, total suspended solids (TSS), phosphorus, oil and grease, and copper. Increased sediment load caused by erosion and subsequent runoff into sediment ponds increase the TSS and turbidity. The increases in TSS and turbidity are managed through implementation of an approved Drainage and Sedimentation Control Plan in the PAP (PCCC 2011a). TSS was no longer monitored under the NPDES permit starting in 2008. See Figures B-4 and B-6 for discharge concentrations of TSS. Additional information regarding, turbidity, TSS, and phosphorus measurements are found in Appendix A of the CHIA (OSMRE 2016).

Total phosphorus concentrations indicate a negative trend at monitoring points 001, 002, and 003 (Figures B-1 through B-3). Mining and reclamation operations ceased in 1999, and total phosphorus concentrations have trended lower since that time. It's anticipated that loading would increase from the Proposed Action Alternative, but not likely to the levels observed during

the pre-1999 period of mining. John Henry No. 1 Mine is the only operation within the Lake Sawyer basin that has specific limits set for total phosphorus; however, the rest of the watershed is under a general mandate by WDOE to reduce phosphorus levels by 50 percent. Additionally, a requirement exists in the NPDES permit stating that four consecutive exceedances of 41 µg/L for total phosphorus concentrations is considered a violation, which helps to protect the watershed for extended phosphorus loading impacts.

Historic surface water data from Monitoring Points 001, 002, and 003 were evaluated to determine potential impacts from the Proposed Action Alternative. This analysis was conducted under the assumption that historical impacts documented from when the mine was previously active are an indicator of whether impacts would occur from the Proposed Action Alternative.

Comparing water quality data at surface water monitoring points to baseline data¹ resulted in the identification of numerous exceedances of baseline metrics. The concentrations in water quality data at Point 001 from 1993-2015 are greater than the baseline metrics for iron in 1.2 percent of all samples, for manganese in 26 percent of all samples, and for specific conductivity in 100 percent of all samples. The increase in specific conductivity relative to baseline is consistent with increases in total dissolved solids due to exposed reactive surface area of the spoil material. The measured concentrations of sodium, calcium, magnesium, potassium, sulfate, and bicarbonate alkalinity in the 1993-2015 dataset compared to the baseline metric indicate increases in all these water quality constituents. However, no NPDES standards were exceeded for the aforementioned water quality parameters. Exceedances of applicable water quality criteria at monitoring Point 001 from 1993-2015 were limited to copper in 3.3 percent of samples, turbidity in 0.5 percent of samples, and phosphorus in 1.1 percent of samples.

The concentrations in water quality data at Point 002 from 1993-2015 are greater than the baseline metric concentrations for iron in 2.74 percent of all samples, for manganese in 1.47 percent of all samples, and for specific conductivity in 100 percent of all samples. Similar to water quality conditions at Point 001, Point 002 exhibited an increase in specific conductivity and TDS attributable to increase in bicarbonate, calcium, magnesium, sulfate, and sodium concentrations. Exceedances of applicable water quality criteria at monitoring Point 002 from 1993-2015 were limited to copper in 3.6 percent, pH in 0.6 percent, turbidity in 3.8 percent, and phosphorus in 2 percent of samples.

The concentrations in water quality data at Point 003 from 1993-2015 are greater than the baseline metric concentrations for iron in 2.9 percent of all samples, for manganese in 25 percent of all samples, and for specific conductivity in 100 percent of all samples. Iron concentrations seem to have increased within this watershed much less than manganese, although concentrations of both parameters are still within the range of compliance related to water quality standards. Point 003 exhibited an increase in specific conductivity and TDS attributable to increase in bicarbonate, calcium, magnesium, sulfate, and sodium concentrations. Exceedances of applicable water quality criteria at monitoring point 003 from

¹ Baseline data refers to data collected before mining commenced in 1986.

1993-2015 were limited to copper in 4.2 percent of samples, and phosphorus in 3 percent of samples. Because additional surface area will not be disturbed by proposed mining activities within the Lake 12 watershed and the reclamation area will be relatively small, future water quality impacts are anticipated to be minor.

Figures B-7 and B-8 illustrate that discharge was higher during the mining years (up to 1999), compared to the 2000-2015 timeframe when mining was limited or not occurring. Recorded flow at the OSMRE reference point at Ginder Creek just outside of the permit area has averaged 8.9 daily mean flows (CFS) from 2002-2010. Flow contributions in the Ginder Creek watershed from the John Henry No. 1 Mine discharges average 17-34 percent of the total flow, as measured at the OSMRE reference point, depending on whether the mine is active.

Figure B-7: Discharge at NPDES Point 002

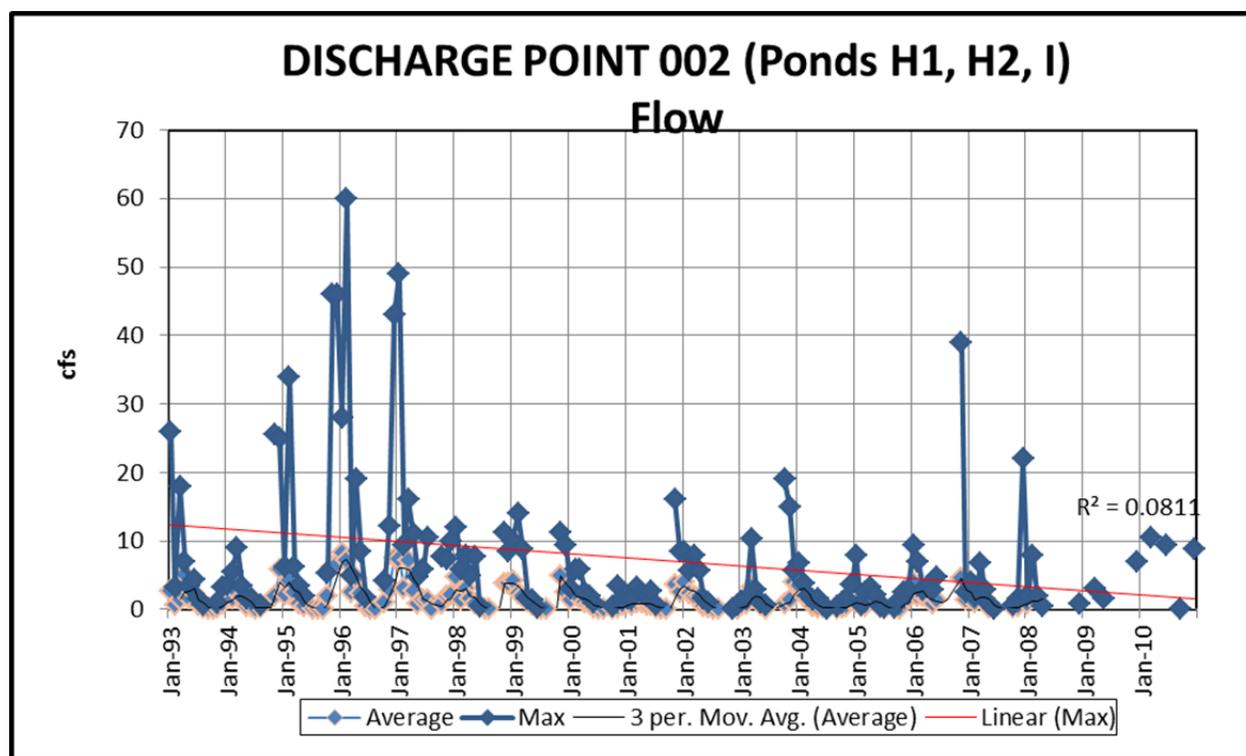
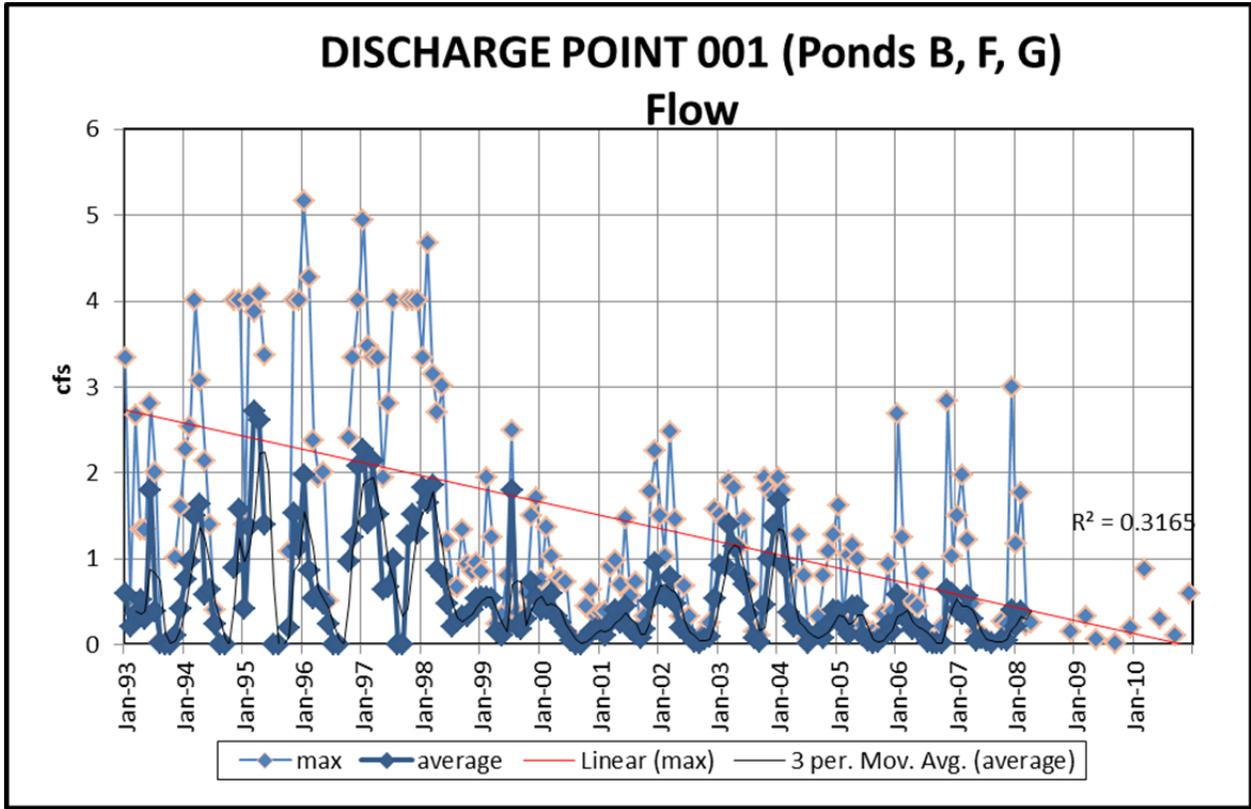


Figure B-8: Discharge at NPDES Point 001



2.2 Groundwater

2.2.1 Monitoring Schedules

Table B-4. OSMRE Ground Water Monitoring Requirements

Parameter	Station Name		
	Reichert Well	PCCC Well	12-4 Well
Water Level	Quarterly	Quarterly	Quarterly
Specific Conductivity	Quarterly	Quarterly	Quarterly
Hardness	Quarterly	Quarterly	Quarterly
pH	Quarterly	Quarterly	Quarterly
Arsenic	Quarterly	Quarterly	Quarterly
Iron	Quarterly	Quarterly	Quarterly
Manganese	Quarterly	Quarterly	Quarterly
Lead	Annual	Annual	Annual
Mercury	Annual	Annual	Annual
Chromium	Annual	Annual	Annual
Calcium	Annual	Annual	Annual
Sodium	Annual	Annual	Annual
Magnesium	Annual	Annual	Annual
Potassium	Annual	Annual	Annual
Chloride	Annual	Annual	Annual
Sulfate	Annual	Annual	Annual
Nitrate	Annual	Annual	Annual
Carbonate	Annual	Annual	Annual
Bicarbonate	Annual	Annual	Annual

Table B-5. WDOE Ground Water Monitoring Requirements

Parameter	Station Name			
	Reichert Well	PCCC Well	12-4 Well	Pit 2
Water Level	Monthly	Monthly	Monthly	N/A
Specific Conductivity	Monthly	Monthly	Monthly	Monthly
Hardness	Quarterly	Quarterly	Quarterly	Quarterly
pH	Monthly	Monthly	Monthly	Monthly
Arsenic	Quarterly	Quarterly	Quarterly	Quarterly
Iron	Quarterly	Quarterly	Quarterly	Quarterly
Manganese	Quarterly	Quarterly	Quarterly	Quarterly
Lead	Bi-annual	Bi-annual	Bi-annual	Quarterly
Mercury	Bi-annual	Bi-annual	Bi-annual	Quarterly
Chromium	Bi-annual	Bi-annual	Bi-annual	Quarterly

2.2.2 Groundwater Quantity

The 1984 CHIA predicted that after 19 years of mining there would be up to 200 feet of drawdown within the CIA area. However, data from the monitoring program indicate the impact

to the potentiometric surface in the area is less than predicted. Figures B-9 – B-11 illustrate the trends of water levels in the Reichert, PCCC, and 12-4 wells. The depth of the Reichert well is 240 feet, and water level measurements in Figure B-9 illustrate the groundwater levels at the location are seasonally lowest during August through October, and otherwise stable from 1993 – 2015. It is possible that the Reichert well may be affected by mine operations at the John Henry No. 1 Mine and will continue to be monitored; however, the projected impact for the Puget Group and groundwater resource outside the permit area is considered negligible.

Depth to water in the 12-4 well near Mud Lake has been consistent from 1993 to 2015, fluctuating less than 5-feet both seasonally and during the period of record. The water level in this area was originally predicted to be the most impacted by mining operations based on the 1984 CHIA, which assumed that mining would commence in the Mud Lake Wetlands. However, no mining occurred in this area.

Figure B-9. Reichert Well Water Depth

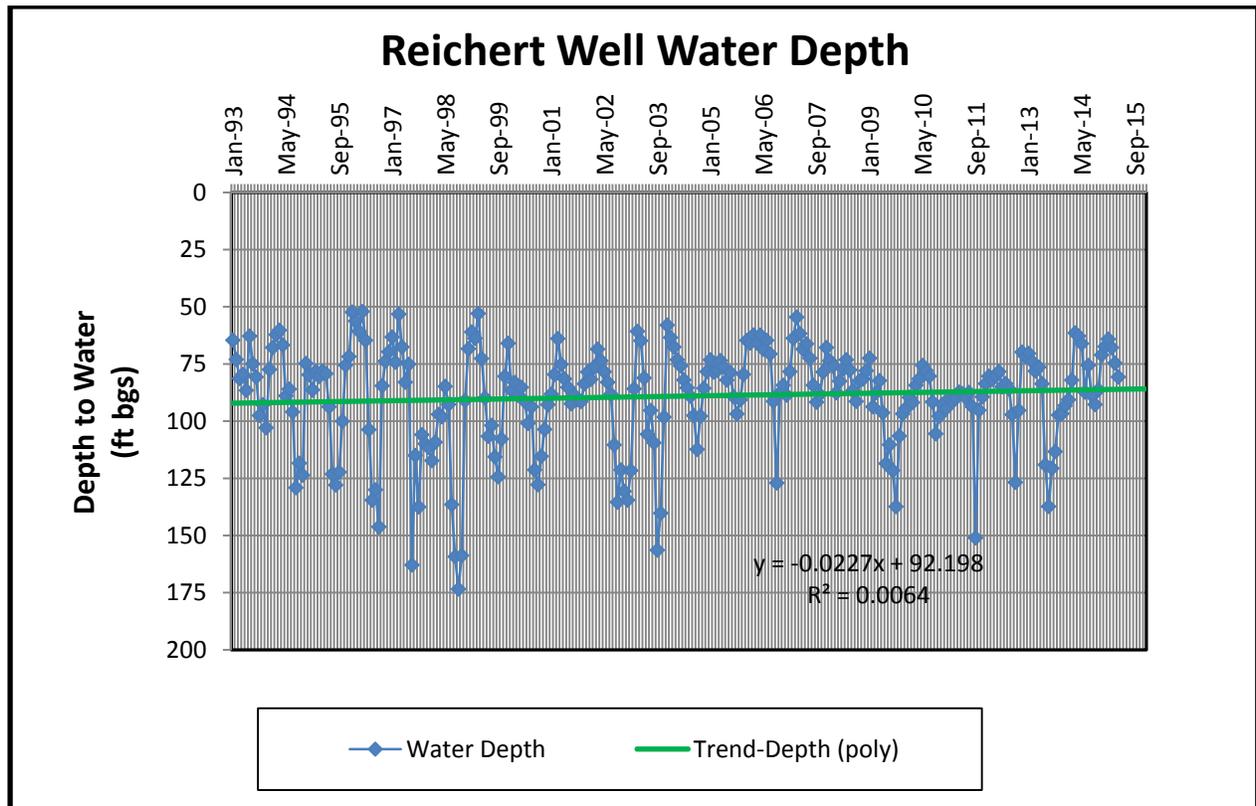


Figure B-10. PCCC Well Water Depth

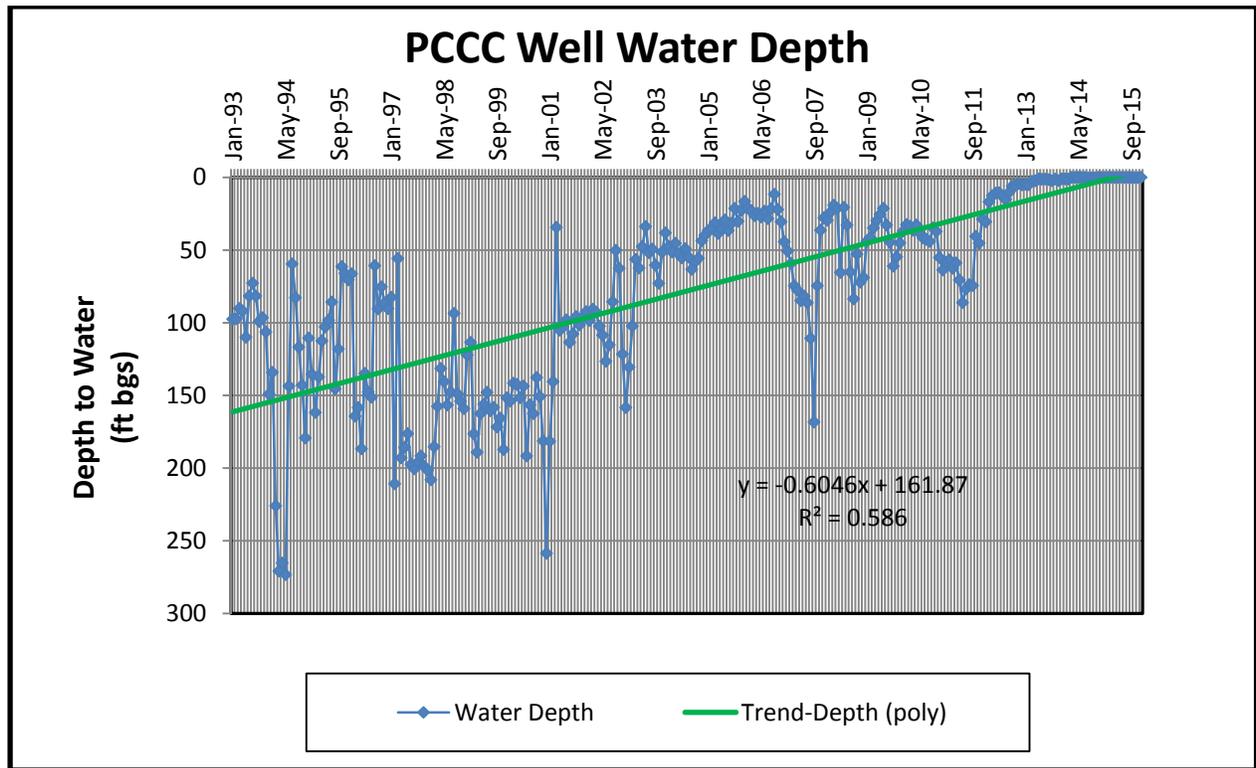
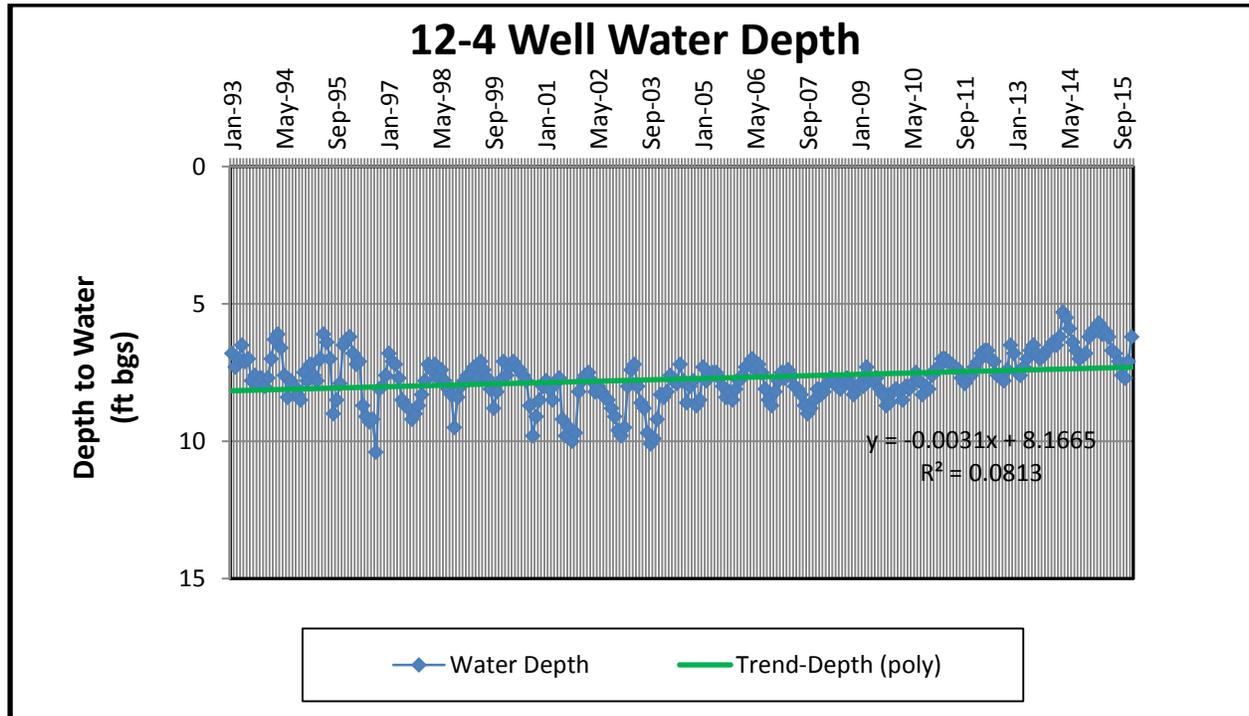


Figure B-11. 12-4 Well Water Depth



3.0 APPENDIX C

Consultation



STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

August 11, 2006

Mr. Kirby Foster
Office of Surface Mining
PO Box 46667
Denver, Colorado 80201-6667

06-08-17-04

Re: John Henry No. 1 Mine Permit Renewal
Log No.: 081106-06-OSM

Dear Mr. Foster:

Thank you for contacting our department. We have reviewed the materials you provided for the proposed John Henry No. 1 Mine Permit Renewal, King County, Washington.

Based upon this information we concur with the finding the proposed project will have no effect upon cultural properties included in the National and State Registers of Historic Places and the Washington State Archaeological and Historic Sites Inventories. Thus, no historic properties are affected.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with the Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800.4. Should additional information become available, our assessment may be revised, including information regarding historic properties that have not yet been identified. In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and this department notified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360)586-3080
email: rob.whitlam@dahp.wa.gov





STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

October 17, 2011

Mr. Kenneth Walker
Office of Surface Mining
1999 Broadway, # 3320
Denver, Colorado 80201-6667

RE: John Henry # 1 Mine Renewal
OSM#: WA-0007D-N-02
Log No. 101711-05-OSM

Dear Mr. Walker;

Thank you for contacting our department. We have reviewed the materials for the proposed Pacific Coast Coal Company John Henry # 1 Mine Renewal Permit in King County, Washington.

We concur with your determination of the Area of Potential Effect (APE). We look forward to the results of your consultation with the concerned tribes, cultural resources survey, and your Determination of Effect. Please include the DAHP Log Number in future correspondence.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov



CITY OF BLACK DIAMOND

24301 Roberts Drive
PO Box 599
Black Diamond, WA 98010

Phone: (360) 886-5700
Fax: (360) 886-2592
www.ci.blackdiamond.wa.us

March 5th, 2015

Mathew Hulbert
Office of Surface Mining
Western Region
1999 Broadway, Suite 3320
Denver, Colorado 80202-3050

Re: John Henry Mine Coal Trucking operation

Dear Mr. Hulbert:

Since my last letter to you on February 6th, I have met with David Morris and reviewed additional materials including 1) King County's October 24th, 2014 letter containing comments on the environmental Assessment for the mining permit revision, 2) conditions from the King County Grading permit renewal issued December 24th, 2014 and 3) the latest text of the Transportation section of the EA.

With the King County grading permit condition that they will not haul during peak periods, (condition 3 on page 13) I am satisfied that truck traffic has been adequately addressed. I therefore withdraw my request for further truck traffic study or other mitigation.

The City of Black Diamond reserves the right to intervene on truck traffic issues, if there is substantial changes to the trucking operations that have been proposed either in the timing the trucking, to the route of the trucking or in the number of trucks.

Sincerely,

Seth Boettcher
Public Works Director

Copy to Black Diamond Mayor Benson
 Andy Williamson, Black Diamond MDRT Director
 Aaron Nix, Black Diamond Planning Director
 Black Diamond City Council
 David J. Morris, Pacific Coast Coal Company



King County

**Department of Permitting
and Environmental Review**

35030 SE Douglas St., Suite 210
Snoqualmie, WA 98065-9266

206-296-6600 TTY 206-296-7217

www.kingcounty.gov

October 24, 2014

Joe Wilcox
Office of Surface Mining Reclamation and Enforcement
Western Region
1999 Broadway, Suite 3320
Denver, CO 80202-3050

RE: Comments on Environmental Assessment of Proposed Revision of Permit
WA0007D for Resumption of Coal Mining at John Henry No. 1 Mine

Dear Mr. Wilcox:

King County has reviewed the supplemental traffic information that was prepared by Pacific Coast Coal Company (PCCC) for the above referenced environmental assessment. This supplemental information has clarified that, with the exception of a 0.8 mile segment of the Ravensdale-Black Diamond Road (RBDR), all of the proposed haul routes are either state highways or are located outside of King County's jurisdiction. We are not aware of any capacity, safety or other impacts or concerns that would result from using the portion of RBDR from the mine entrance to State Route 169 at the levels proposed. OSMRE should condition their final decision to not allow coal hauling trucks on RBDR north of the mine entrance.

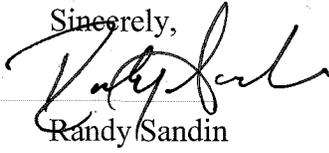
In our May 13, 2014 letter to you, we expressed some concern that the wheel wash that was being proposed to mitigate traffic related impacts may not be adequate because of its close proximity to the RBDR. We were advised that the pit entrance road from the wheel wash to the RBDR is paved which addresses that concern.

The EA and PCCC have noted that there will be every attempt made to avoid hauling during peak traffic hours. This should be expressly included as a condition of permit approval. Another concern is possible dust emissions hauling this light material to the Port. The State of Washington requires every load with less than six inches of freeboard be covered. While PCCC has indicated to us that it is their intention to require the hauling contractor to cover each load, this requirement should be a condition of approval in OSMRE's final decision.

Joe Wilcox
October 24, 2014
Page 2

Again, we would like to express our appreciation to OSM for the excellent work they've done on this site over the years and for the current opportunity to provide comment on the proposed resumption of mining at the John Henry Coal Mine No. 1. If you have any questions regarding these comments, you can contact me at randy.sandin@kingcounty.gov or by phone at 205-477-0378.

Sincerely,



Randy Sandin
Resource Products Line Manager

Cc: Dave Morris, PCCC
Fred White, Site Development Specialist, Resource Product Line



CITY OF BLACK DIAMOND

24301 Roberts Drive
PO Box 599
Black Diamond, WA 98010

Phone: (360) 886-5700
Fax: (360) 886-2592
www.ci.blackdiamond.wa.us

February 6, 2015

Mathew Hulbert
Office of Surface Mining
Western Region
1999 Broadway, Suite 3320
Denver, Colorado 80202-3050

Re: John Henry Mine Coal Trucking operation

Dear Mr. Hulbert:

In our review of the Pacific Coast Coal Company's significant permit revision package dated April 14, 2011 and as later revised, the new coal trucking proposal from the John Henry Mine will be routing a significant increase in truck traffic through the Black Diamond Ravensdale Road and State Route 169 intersection. This intersection already operates at a level of service F well below the City standard of LOS D for the state route intersections.

Increases in truck traffic on this intersection will have an adverse affect on traffic and the pavement at this intersection. We are requesting that the impact of the additional truck traffic to the operation of the intersection be studied including an appropriate mitigation so the intersection will operate within City standards. Additionally we are requesting that the impact of the additional loaded trucks will have on the intersection paving including appropriate mitigation to provide for a long term functional road surface.

Thank you for considering the impacts to the City of Black Diamond from the John Henry Mine operations.

Sincerely,

Seth Boettcher
Public Works Director

Copy to Black Diamond Mayor Benson
 Andy Williamson, Black Diamond MDRT Director
 Aaron Nix, Black Diamond Planning Director
 Black Diamond City Council
 David J. Morris, Pacific Coast Coal Company



King County

Department of Permitting
and Environmental Review
35030 SE Douglas St., Suite 210
Snoqualmie, WA 98065-9266
206-296-6600 or TTY Relay: 711
www.kingcounty.gov

Notice of Decision

(Type 2)

File No.: **L86G2632/L11GI261**

File Name: John Henry Coal Mine

Applicant: **Pacific Coast Coal Co.**
Attn: **Dave Morris**
P.O. Box 450
Black Diamond, WA 98010

DPER Project Manager: **Fred White, Site Dev. Spec. Phone No.: 206-477-0363**
E-mail: **Fred.white@kingcounty.gov**

Project Location: **30600 Black Diamond-Ravensdale Rd SE Postal City Black Diamond**

Parcel Nos.: 112106-9013, 9014, 9026,9102, 9103; 122106-9002, 9003, 9005, 9006, 9007, 9008, 9009, 9010, 9022, 99038, 90456, 9047, 9052, 9053, 9056, 9060, 9061, 9066, 9067, 9068, 9069, 9071, 9072, 9073, 9074, 9075, 9076 and 122106-9077.

Project Description: Continued operations of an open pit coal mine. The project area comprises nearly 500 acres of which approximately 363 acres were proposed to be disturbed over the life of the mine. Mining will be limited to Pit 2. Mining commenced in 1986 but has been idle since 1999. Once approved by the Office of Surface Mining – Reclamation and Enforcement, the operator anticipates removing and processing approximately 740,000 short tons of coal over a six year period followed by a one-year period of reclamation only activities.

Permit Requested: **Periodic Report and Decision**

Department Decision: **Approve with conditions**

SEPA Threshold Determination: **N/A**

Appeal Procedure:

Except for shoreline permits which are appealable to the State Shorelines Hearings Board, this decision may be appealed in writing to the King County Hearing Examiner. A notice of appeal must be filed with the Department of Permitting and Environmental Review at the address listed below **prior to 4:00 p.m. on January 12, 2015**, and be accompanied with a filing fee of \$250.00 payable to the King County Office of Finance.

If a timely Notice of Appeal has been filed, the appellant shall also file a Statement of Appeal with the Department of Permitting and Environmental Review at the address listed below **prior to 4:00 p.m. on January 20, 2015**. The Statement of Appeal shall identify the decision being appealed (including the file number) and the alleged errors in that decision. Further, the Statement of Appeal shall state: 1) specific reasons why the decision should be reversed or modified; and 2) the harm suffered or anticipated by the appellant, and the relief sought. The scope of an appeal shall be based on matters or issues raised in the Statement of Appeal. Failure to timely file a Notice of Appeal, appeal fee or Statement of Appeal, deprives the Hearing Examiner of jurisdiction to consider the appeal.

Appeals must be submitted to the Department of Permitting and Environmental Review (DPER) at the following address:

**Department of Permitting
And Environmental Review
35030 SE Douglas Street, Suite 210
Snoqualmie, WA 98065-9266**

Date of Mailing: December 24, 2014

If you have any questions regarding the appeal procedures, please contact the Project Manager at the phone number or e-mail listed above. Note: To request this information in alternative formats for people with disabilities, call 206-296-6600 or TTY Relay: 711.

King County has made a decision on an application for a development proposal on property at the address listed above. You are receiving notice of this decision because our records indicate that you own property within approximately 500 feet or because you requested to receive notice of the decision.



King County

Department of Permitting
and Environmental Review
35030 SE Douglas St., Suite 210
Snoqualmie, WA 98065-9266

Periodic Review Report and Decision

Date of Decision: December 24, 2014

A. General Information

File No./Name: Grading Permit L86G2632/L11GI261
John Henry Coal Mine

Permittee: Pacific Coast Coal Co.
Attn: Dave Morris
P.O. Box 450
Black Diamond, WA 98010

Staff Contact: Primary Contact:
Fred White, SDS II
35030 SE Douglas St., Suite 210
Snoqualmie, WA 98065-9266
206-477-0363

Section, Township, Range: Section 11 Township 21 N Range 06 E

Tax Parcels: 112106-9013, 9014, 9026, 9102, 9103; 122106-9002, 9003, 9005,
9006, 9007, 9008, 9009, 9010, 9022, 9038, 9046, 9047, 9052,
9053, 9056, 9060, 9061, 9066, 9067, 9068, 9069, 9071, 9072,
9073, 9074, 9075, 9076 and 122106 – 9077

Location: 30600 Black Diamond – Ravensdale Road Southeast

Zoning: “M” Mineral

County Community Plan: Tahoma-Raven Heights

B. Project Description:

John Henry #1 Mine is an open pit coal mine which applied for and received appropriate permits and approvals from regulatory agencies with jurisdiction. The mine received a King County Grading permit in 1986 and obtained annual extensions-since. In 2002, in accordance with K.C.C. 21A.22.050 this permit underwent periodic review. The resultant Periodic Review Report and Decision (PRRD) is attached as Exhibit 1. The 2002 PRRD includes a complete history of the site under Section C. This current PRRD also includes, by reference, all attachments associated with the 2002 Report. Current attachments are identified as Exhibits to this 2014 Report.

In 2013 the operator submitted a revised mining and reclamation plan to the Department of Interior's Office of Surface Mining, Reclamation and Enforcement (OSMRE) which revises the original plan reducing the acreage intended to be disturbed. This will be discussed later in the report. The description of the updated mining operation as proposed in the EA state: Pacific Coast Coal Company (PCCC) has submitted a Revision Application to OSMRE to revise the currently-approved permit to allow the resumption of surface coal mining operations at the John Henry No. 1 Coal Mine, located in King County, Washington, near the City of Black Diamond. PCCC has not engaged in active coal mining operations since 1999 and has since been conducting mine maintenance and minor reclamation activities. PCCC proposes to resume mining predominantly in Pit 2, the location of which is shown on Figure 2 of this document. The proposed mining conducted over a six-year period would remove 740,000 short tons of minable coal reserves and would be followed by a one-year period of reclamation-only actions. After cleaning and processing the mined coal, PCCC would then possess 450,000 short tons of saleable coal for market. The proposal indicates the coal would be trucked from the site to the Port of Tacoma where it would be loaded on barges for transport to the buyer, identified at this time as LeHigh Cement Company in British Columbia.

Originally, the mine operation planned to extract approximately 5.3 million tons of run of mine bituminous coal during the initially proposed 16-year mine life period. The site includes a coal processing facility. The project area encompasses nearly 500 acres of which approximately 363 acres were proposed to be disturbed over the life of the mine. Mining at the site has been idle since 1999 due to adverse market conditions. During the period of 2001 through 2003 the site was used for the disposal of clean fill within the confines of Pit 1. During the last several years the mine has maintained a maintenance and standby schedule with ongoing reclamation. This significantly reduced environmental impacts envisioned under the original mining plan. The recent proposal to resume mining will result in the occurrence of many of the original identified impacts from the operation. Please see Exhibit 2. This exhibit is this department's comment letter to the OSMRE in response to the Environmental Assessment (EA) prepared for renewed mining at the site. The EA is included as Exhibit 3. King County provided OSMRE with an additional comment letter on the updated EA dated October 24, 2014. This is included as Exhibit 4.

C. Periodic Review Scope and Standard of Review

All extractive and processing operations are subject to a review of developmental and operating standards at five year intervals. The following discussion outlines the regulations and agreements that create the scope of Periodic Review, establish review procedures and develop the code standards to which the existing operation is evaluated.

Scope and Standard of Periodic Review:

The purpose of the periodic review process is to provide opportunities for public review and comment on the mineral resource facility's fulfillment of state, county and city regulations and implementation of industry-standard best management practice (R-688, King County 2012 Comprehensive Plan update). If inspections uncover new circumstances, unapproved disturbance and/or unanticipated project-generated impacts the periodic review process allows King County to modify, add or remove conditions to address these new circumstances. King County regulations regarding nature, extent and process for periodic review are contained in KCC 21A.22.050.

The regulations state:

- “A. In addition to the review conducted as part of the annual renewal of a mineral extraction operating permit or materials processing permit, the department shall conduct a periodic review of mineral extraction and materials processing operation site design and operating standards at five-year intervals.
- B. The periodic review is a Type 2 land use decision.
- C. The periodic review shall determine:
 - 1. Whether the site is operating consistent with all existing permit conditions; and
 - 2. That the most current site design and operating standards are applied to the site through additional or revised permit conditions as necessary to mitigate identifiable environmental impacts (Ord. 15032 § 28, 2004; Ord. 11157 § 21, 1993; Ord. 10870 § 443, 1993).”

The periodic review process is not a new action that would require additional State Environmental Policy Act (SEPA) analysis. King County Comprehensive Plan Policy R-688 states that “The periodic review process is not intended to reexamine the appropriateness of the mineral resource use, or to consider expansion of operations beyond the scope of existing permitted operations since that review would be accomplished through the county’s permitting process. The periodic review is intended to be a part of King County’s ongoing enforcement and inspections of mineral resource sites, and not to be a part of the county’s permitting process.” The periodic review decision itself is categorically exempt from SEPA. Action required by the decision may however require SEPA analysis depending on whether thresholds are exceeded where SEPA is required.

Regulatory Standards for Grading and Site Design and Operating Standards for Mining and Mining-Related Operations

The following regulations of King County are the basis for site design and operation standards: Grading Code, K.C.C. 16.82; K.C.C. 21A. 22 “Development Standards-Mineral Extraction” and other standards required under certain threshold conditions such as Title 9 “Surface Water Management” and the King County Surface Water Design Manual; K.C.C. 21A.24 “Critical Areas”, Title 12 “Noise Control”, specifically sections K.C.C. 12.86 through 12.100 that refers to noise control in the county; and other applicable sections of the King County Code.

There are also other agencies that regulate specific environmental impacts and/or operation standards of mines and mining operations in the state of Washington. Some of the regulations of other agencies are adopted by reference as part of grading permit conditions and are required for operations. Specific compliance with certain of these regulations is beyond the scope of the periodic review, except as referenced in King County Code or required by existing permit conditions. Specifically, other agency regulations pertinent to operating a mine in an environmentally responsible manner are those regulations of the Puget Sound Clean Air Agency, and the State of Washington Department of Ecology General Permit.

D. Public Notice

A letter informing the permit holder that DPER was prepared to begin the periodic review process was sent May 28, 2014 (Exhibit 5). The following public notices were provided in accordance with KCC 20.20.060. A Notice of Periodic Review was sent to all landowners within a 500 foot radius on September 5, 2014. The notice was published in the Seattle Times and the Covington/Maple Valley – Black Diamond Reporter on August 29, 2014. The King County Department of Natural Resources and Parks (KCDNRP), the Washington State Departments of Ecology (DOE), and City of Black Diamond were also notified.

The only comment received was an email from the City of Black Diamond regarding approval of the site drainage plan. Once received we will provide the city with a copy of the drainage plan for their review and comment prior to our approval.

E. Regulatory History – County Reviews

The following is a chronologic regulatory history associated with this mine site based on review of the grading permit file.

1. August 8, 1985 Report and Recommendation to the King County Council re: File No. 237-82-R Request for rezone John Henry No. 1 Coal Mine.
2. November 12, 1985 Ordinance 7400 approving rezone.
3. Current Grading Permit Conditions, updated with the 2002 PRRD.
4. October 3, 2002 Periodic Review Report and Decision

Approved Permits, Plans and Conditions

For the purposes of review and comparison, the following documents are considered the current approved plans and conditions.

1. Revised grading permit conditions superseding all previous conditions for project number L86G2632 issued subsequent to the October 3, 2002 PRRD.
2. Drainage and sediment control plan approved by Jeff O'Neil and Randy Sandin on March 14, 1986.
3. JHM No. 1 plot plan approved by James Ballweber on June 19, 1987.
4. King County Grading Permit L86G2632 and most recent permit extension under activity L11GI261.
5. 2002 Periodic Review Report and Decision.
6. March 2014 OSMRE Environmental Assessment on John Henry Coal Mine

Regulatory History - Other Agency Reviews

The John Henry Mine is unique in King County in that operations, environmental safeguards, and reclamation are regulated by the OSMRE division of the Department of the Interior. The authority for this regulation is under the Surface Coal Mining and Reclamation Act of 1977 (SMCRA). Federal environmental standards, permit requirements and inspections are especially rigorous and meet or exceed King County requirements on most environmental issues.

The project has coverage under the State of Washington administered NPDES General permit. Process water, mine dewatering water and storm water are permitted to be discharged to ground. The project also operates under approval from the Puget Sound Clean Air Agency. The compliance record with the Agencies is good.

A complete discussion of the elements reviewed for conformance with the applicable regulations is included in the following sections.

Insurance/Financial Guarantees

KCC 16.82.090 requires the permittee to maintain a liability policy in the amount of one hundred thousand dollars per individual, three hundred thousand dollars per occurrence, and fifty thousand dollars property damage, and shall name King County as an additional insured. An updated certificate of insurance is currently in place for this permit.

KCC 16.82.170 authorizes DPER to require all applicants issued permits or approvals under the grading code to post financial guarantees. In this case the permittee has posted extensive bonds with the OSMRE for reclamation. King County has not previously requested a supplemental operating bond. However this periodic review has revealed the need for an operating bond to address potential impacts to the King County roadway at the entrance to the mine and extending to the City limits of Black Diamond.

F. Review and Discussion of Environmental Elements

SEPA

Original Impact Under SEPA

SEPA Chapter 43.21C RCW requires evaluation of environmental impacts associated with a project or an agency action prior to approval. The SEPA Rules, Chapter 197-11 WAC, are the implementing regulations that identify standard procedures to be used in evaluating a project's environmental impact.

A large portion of the permit area for the John Henry Mine is within unincorporated King County. For mining to occur in the unincorporated area in King County, it was necessary to rezone the property to Quarry-Mining (QM now designated as Mining, M). In response to the zoning change request, an Environmental Impact Statement (EIS) under the provisions of the Washington State Environmental Policy Act (SEPA) was prepared. An EIS was prepared under the National Environmental Policy Act through the permit application to OSMRE. The SEPA final EIS was published by King County on February 15, 1984 and the NEPA EIS was published by OSMRE in February of 1985.

The original environmental analysis did not include an evaluation of the effects of coal processing and coal burning on greenhouse gas (GHG) emissions and climate change. The OSMRE Environmental Assessment (EA) that the applicant prepared for the proposed resumption of mining at the John Henry Mine glosses over the issue of GHG emissions, simply noting that the local climate has not changed perceptively since 1986 when the last environmental review was completed. The EA also noted that because there were not standardized procedures available to measure the factors that may contribute to climate change, impacts could not be accurately measured. King County provided extensive comments on the EA, especially noting the assessment of climate change impacts did not reflect the latest science on climate change and that additional analyses was needed. OSMRE is currently responding to this and other comments they received in response to the applicant's EA. Per OSMRE's regulatory process, mining at this site will not commence until OSMRE reviews the climate change comments and ensures the applicant is compliant with any climate change requirements

The periodic review and decision is not a new action that would require additional SEPA analysis. However, during this periodic review the department may find that some elements of the review that was not adequately addressed through the original NEPA/SEPA processes and that modifications to the project may be required that may constitute an action that would require reopening the environmental review and, at a minimum, result in a new environmental determination for the project. If SEPA is reopened at some future time, we will require an evaluation of GHG emissions in accordance with standard practices.

King County Comprehensive Plan Policy R-688 states that "The periodic review process is not intended to reexamine the appropriateness of the mineral resource use, or to

consider expansion of operations beyond the scope of existing permitted operations since that review would be accomplished through the county's permitting process. The periodic review is intended to be a part of King County's ongoing enforcement and inspections of mineral resource sites, and not to be a part of the county's permitting process."

The conditions imposed by this review and decision may require a revision to the grading permit conditions and/or modifications to existing plans. Both the periodic review report and any appeal decisions may require modifications to operating conditions or grading plans. If the modifications are significant or exceed thresholds where environmental review is required, SEPA review for the modification may be required prior to implementation of modifications under a revision to the grading permit.

Original Mitigation/Conditions

The discussion regarding compliance of current operation with current grading permit conditions and SEPA/NEPA mitigation decision for specific environmental elements such as air, water, transportation, and noise follow within separate headings below.

Zoning/Land Use

King County Ordinance 7400 reclassified the zoning of the property from G (General) to QM (Quarry-Mining) subject to conditions from the report of the zoning and subdivision examiner with modifications to the report by the Council. All QM zoned properties with in unincorporated King County were converted to M (Mining) in 1995 when King County adopted zoning classifications to implement the new zoning code (Title 21A) and the 1994 Comprehensive Plan. Mining is an allowed use on the subject property.

Original Mitigation/Conditions

The original mitigation measures contained in the 1984 EIS, Rezone Examiner Decision and 2002 PRRD have been incorporated into the grading permit conditions to ensure the proposal would be compatible with existing and projected land uses and plans. It has been assumed that the project development would adhere to mineral development standards found in King County Zoning Code KCC 21A.22. as well as the extensive requirements found in the Federal Surface Coal Mining and Reclamation Act of 1977. Compliance with these standards is discussed under specifically affected environmental elements.

Observations from Inspections/Identifiable environmental impacts and/or non-compliance with plans and conditions

The most direct immediate land use impact from the project is the loss of the undeveloped natural character of the proposed mining area. Site character initially changed from a low intensity use to one that is more intensive. However the hiatus in mining from 1999 to present eliminated most impacts with the possible exception of surface water and off-site drainage. Under the latest proposal there would be a definite change in the intensity of use of the site. While use of the site has changed, the project has not led to an appreciable change in the area's rural character. Proximity impacts are mitigated by buffers, and compliance with zoning code provisions. In addition, throughout the history of the John Henry Mine, OSMRE has maintained a monthly

schedule of very thorough site inspections. King County has also continued periodic inspections of the mine site under the provisions of the issued grading permit.

Proposed new mitigation/Conditions

1. *No new conditions are warranted regarding land use and zoning.*

Reclamation

While OSMRE provides King County with ample opportunities for input and comment regarding site reclamation of the John Henry Coal Mine, the approval and oversight of the reclamation plan remains solely within the purview of OSMRE. The 2002 PRRD explains the reclamation history of the site in greater detail and is attached as Exhibit 1 to this Decision. In addition our comment letter to OSMRE of May 14, 2014 regarding the Environmental Assessment provides additional information on the reclamation element of this permit. It's attached as Exhibit 2 to the Report.

Proposed new mitigation/Conditions

1. *No new conditions are warranted regarding reclamation.*

Drainage/Water Quality

The drainage facilities and water quality issues on this site are monitored by three agencies: The Washington State Department of Ecology through the National Pollutant Discharge Elimination System (NPDES) permit, the King County Departments of Natural Resources and Parks and Permitting and Environmental Review through its municipal storm water permit, and the OSMRE through their mining permit. OSMRE monitors background and water quality at ten monitoring points in and around the mine site. The NPDES permit monitors discharge at five points for ponds A through H2. The proposed revision includes an additional monitoring point at the Pit 1 discharge.

There has been a lot of concern over phosphorous levels in Lake Sawyer where the majority of the storm related runoff from this site is eventually received. As noted in the Cumulative Hydrologic Impact Assessment (CHIA)(Exhibit 6), between 1993 and 1999 when mining was active, the mine's contribution to phosphorus loading at Lake Sawyer generally increased from a low of 4.3 percent in 1993 to a peak of 14.8 percent in 1998. Shortly after mining concluded in 1999, phosphorous loading from the mine dropped significantly, "and a decline in loading can be observed in the years 2000 to 2010. Based on that trend, the CHIA and EA concluded that phosphorous loading can be expected to increase slightly with the resumption of mining but would be able to be mitigated with existing sediment ponds and other best management practices. The monitoring data for 2009 and 2010 show elevated levels of phosphorous that approached 1999 levels even though there has been no activity at the site. Neither the EA nor the CHIA adequately explain how existing on-site water quality treatment facilities or practices will be able to adequately address the additional phosphorous loading that will result from the renewed mining.

The stormwater runoff facilities at the John Henry Mine were constructed in the mid-1980s to standards that have changed significantly over the past twenty-five years. There has been no analysis completed that demonstrates the existing facilities are adequate to control runoff from this site. PCCC should provide a detailed evaluation of the on-site to demonstrate that they provide equivalent flow control, water quality and applicable storm water best management practices as required by the Washington State Department of Ecology' 2012 Storm Water Management Manual for Western Washington.

Proposed New Mitigation/Conditions

1. King County will be requesting an updated technical information report (TIR) prepared by a licensed engineer to determine if the site's current facilities meet the requirements set forth in the Washington State Department of Ecology' 2012 Storm Water Management Manual for Western Washington for the drainage facilities onsite. This TIR shall be submitted prior to March 31, 2015 in order to provide opportunities during the dry season to make any necessary upgrades to facilities if the current facilities are found deficient. As a part of the TIR, the permittee shall also provide an updated mining plan. This plan should include current facilities, any proposed changes to those facilities and address the revision to the proposed mining program.

Noise/Blasting

The original noise analysis done under the NEPA/SEPA EIS's expected noise levels associated with mining activities to increase but still be at or below levels allowed under the King County Noise Ordinance. To ensure compliance with the prescribed levels, several permit conditions addressing noise were attached to the rezone report and adopted by the King County Council. Examiner Condition #10 required a noise attenuation study and plan to recommend site and equipment features and restrictions, noise berms and operating conditions that would mitigate noise impacts from the operation. Condition 11 limited blasting to mid-day hours and Condition 16 as modified by the Council and adopted as grading permit condition 9009 restricted hours of operation to between 6:00 a.m. and 10:00 p.m. during the workweek and 7:30 a.m. to 5:30 p.m. on Saturdays. Further restrictions were placed on hours of operation until noise berms were built.

The 2002 PRRD found that noise conditions were significantly less than anticipated due to the lack of mining. The noise berms required under the original permit conditions and approved plans had been built and setbacks maintained from residential areas to attenuate noise generated by truck traffic and reclamation work. There had been no complaints regarding noise in the record during the 2002 review (with the exception of a complaint about hours of operation being too long) and that remains true through to the current periodic review.

The 2002 PRRD found that the conditions in place at that time appeared adequate to mitigate noise complaints. The 2002 PRRD resulted in the revision of permit conditions, eliminating those conditions that had become moot with the construction of the noise attenuation berms and elimination of the restrictions on hours of operation. Permit Condition 9009 was revised to state "Hours of operation at the mine are between the

hours of 6:00 a.m. and 10:00 p.m. Monday through Friday and 7:30 and 5:30 p.m. Saturday, excluding legal holidays.” A further revision to the operating conditions resulted in adding the following Condition: “All work shall comply with the provisions of the King County Noise Ordinance, relating to noise control and the associated Code section 12.86 – 12.100. Noise mitigation measures may be required to avoid significant adverse environmental impacts and to comply with King County noise regulations”. With the current proposal to renew mining in Pit 2, we anticipate the existing noise berms and setbacks will continue to provide adequate noise attenuation and mitigation from the noise emanating from renewed mining, processing and haulage of the coal.

During active mining, blasting is conducted at the mine to reduce the overburden and inter-burden to a size that can be removed by the mine equipment. Blasting is regulated by the OSMRE through the federal permit. Historically, regulatory compliance has been achieved through strict adherence to blasting procedures set forth in the permit. Specific times for blasting are conditioned to be between 10:00 a.m. and 4:00 p.m. as required by Condition 9006 of the King County Grading Permit. The original grading permit imposed extensive conditions regarding blasting. Those conditions were voided in 1998 as the standards contained in KCC 21A.22.070.B specifically calls for blasting methods specified in the Office of Surface Mining Blasting Guidance Manual. Permit conditions were modified by the 2002 PRRD to reflect those changes.

It should be noted that the permittee is required by permit conditions to have a blasting schedule published in the local newspaper. In addition, monitoring may be required for ground vibration and sound pressure levels. JHM has historically utilized a licensed blasting contractor for all blasting at the site and if mining is reinstated, intends to continue this practice.

Original Impact analysis under SEPA

The impact analysis both in the original EIS’s employed both real data and modeled data to support the permittee’s contention that the operation would be able to meet permissible sound levels as set forth in King County noise regulations. To date this has been shown to be the case. The department utilizes noise sampling equipment periodically during inspections and if it’s determined that an exceedance of the standards may be occurring, can require the permittee to provide a supplemental noise study with proposed mitigations to address the issue.

Proposed new mitigation/Conditions

1. No new mitigation measures or conditions are necessary at this time. The monitoring plan and current noise abatement strategies provide a solid regulatory framework to maintain compliance with King County noise standards.

Air Quality

Current permit conditions 7020 and 9007 address dust control for hauling operations and control of fugitive dust. The latter condition requires a yearly analysis of fugitive dust emissions from the site. Dust suppression mitigation, if it were found to be needed, would be designed using best available control technologies to control dust in response

to the emission analysis and does provide for annual renewals of the permit to be conditioned as necessary to implement these mitigations. The Puget Sound Clean Air Agency (PSCAA) has the primary responsibility to monitor dust emissions and, in consultation with this department, provide information regarding appropriate mitigation measures. The specific regulations pertaining to fugitive dust are contained in Sections 9.15 and 9.20 of PSCAA's Regulation 1 and require the use of best available control technology to control emissions that would achieve the goal of no visible dust. Additionally, the current OSMRE permit quantifies project impacts on air quality, identifies mitigation to control air pollutants and employs an air quality monitoring plan to identify compliance.

The PSCAA Construction permit is required to operate the coal preparation plant. Pacific Coast Coal will need to provide the department with a copy of the current permit prior to beginning operation of the plant.

There are frequent questions to mine operators in general regarding responsibilities to reduce dust and dirt on road system from track-out and from blown dust and dirt from trucks. State standards for loading are enumerated in RCW 46.61.655(5). New permit conditions placed on mines undergoing periodic review more explicitly state load standards consistent with state commercial vehicle standards. In our comment letter to OSMRE on the EA, we recommended that any permit revision should be conditioned to include conditions that all truck-loads of transported coal be covered, and prohibiting tracking of mud and debris onto public roads.

Original Impact Analysis Under SEPA

The original SEPA documentation required that permit holder abide by rules and conditions of the Puget Sound Clean Air Agency. The 2002 PRRD review reiterated this rule and imposed certain best management operational conditions to reduce fugitive dust impacts. The review also limited blasting to non-windy days. An additional permit condition was added which stated: "Permittee shall comply with all conditions and requirements of the Puget Sound Clean Air Agency (PSCAA)."

Based on review of the blast reports, wind speeds have all been below the maximums allowed prior to blasting.

Proposed new mitigation/Conditions

The following condition is proposed as part of the grading permit to mitigate environmental impacts or enforce/clarify current grading permit conditions.

The current permit shall be revised to include the following permit condition: "Trucks leaving the site will be loaded in a manner compliant with RCW 46.61.655 and covered."

Transportation

This Periodic Review Report and Decision, for the purposes of evaluating impacts, and in the case of transportation specifically, is focusing the review on the latest proposal by Pacific Coast Coal Company (PCCC). This proposal involves the transportation of coal from the mine site in Black Diamond to destinations at the Port of Tacoma, Seattle, and

other possible locations. The EA indicates that under the Proposed Action Alternative average truck traffic is only ten (10) trucks per day, five days per week and is relatively insignificant. Transportation related impacts are intended to be mitigated through use of an existing on-site wheel wash. The Environmental Assessment (EA) initially provided insufficient information on haul routes, potential maximum hourly or daily truck trips, and expected hours of hauling or additional market locations needed to adequately evaluate traffic safety or level of service (LOS) impacts. There was later supplemental information provided by the permittee and that information was included in our analysis. See exhibit. Based upon this supplemental information, it was determined that if the truck movement from the site was limited to westbound on the Ravensdale-Black Diamond Road to State Route 169, there would be limited impacts to the LOS of that route.

The applicant, Pacific Coast Coal Company, (PCCC) indicated in the EA they will also mitigate truck traffic by scheduling coal transport during off or non-peak hours whenever possible. See exhibit 3. Every attempt would be made to avoid hauling during peak traffic hours. This should be expressly included as a condition of permit approval. Another concern is possible dust emissions from hauling this light material to the Port. The State of Washington requires every load with less than six inches of freeboard be covered. While PCCC has indicated to us that it is their intention to require the hauling contractor to cover each load, a more enforceable requirement would be to include this as a condition of approval in OSMRE's final decision as well as make it a condition of the grading permit as we've already proposed to do in the previous section.

The final item under transportation is the wheel wash that is proposed to mitigate traffic related impacts resulting from renewed coal mining. While recent inspections have revealed that the wheel wash is functional and an effective tool at low traffic volumes to reduce tracking of mud and dust onto public roads, we are concerned that it was placed too close to the intersection of the entrance road with the Ravensdale-Black Diamond Road (RBDR). The proximity to the RBDR is such that there is not a sufficient interval for the excess water and mud to fall from the wheels and undercarriages before exiting onto the county road. This will need to be monitored once hauling begins and if tracking out of the site becomes an issue, the operator should be required to either pave the exit road from the wheel wash to its connection with RBDR or relocate the wheel wash further away from the county roadway.

Proposed new mitigation/Conditions

The following condition(s) are proposed as part of the grading permit to mitigate environmental impacts or enforce/clarify current grading permit conditions.

1. Once hauling begins, the permittee shall monitor the mine exit onto RBDR for possible tracking. If it is determined that tracking is a chronic problem during inclement weather, the permittee shall have sixty (60) days to provide a workable solution that prevents further tracking. This may require moving the wheel wash further into the interior of the permitted site. (As noted in the prior section on air quality, all loaded trucks leaving the site will be covered,
2. Loaded trucks will be limited to exiting the site westbound on RBDR.

3. No hauling during peak periods. The peak periods shall be identified prior to beginning any haulage from the site.

Visual/Aesthetics/Safety

The original SEPA documents and zoning ordinance required fencing of the site along the public way, specifically that portion of the Green River Gorge Road which parallels the mine site along the southern boundary. The fence consisted of a six-foot high wooden slatted structure. The location of the fence made it difficult to maintain and construction on the Tacoma pipeline (which also paralleled the mine along the southern boundary) during the late 1990's resulted in significant damage to large segments of the fence.

At the time of the Periodic Review conducted in 2002, the fence was in a dilapidated and generally unsalvageable condition. The permittee requested at that time that the department revise the permit conditions to remove the requirement for the fencing. It was determined that periodic review was not the appropriate process for eliminating a condition established through the Examiner/Council process. The permittee was advised to submit a revision to the permit that would encapsulate this request. Subsequent to completion of the PRRD the permittee did submit a formal revision request to abandon the fence. Given that site operations were idle and might remain so indefinitely, the department determined that the requirement for the fence was unneeded at that time. Eventually the request was approved with conditions requiring removal and clean-up of the portion of the fence that remained.

With the potential for renewal of mining and processing operations at the mine the department has determined that some type of visual screening should be in place to eliminate the potential for any kind of attractive nuisance. This could be achieved through additional plantings or re-establishment of the wooden screening fence.

As a result of the 2002 PRRD, the permittee has placed appropriate signage around the perimeter of the mine site warning of the potential dangers of an active mine site and warning trespass upon entry.

Proposed new mitigation/Conditions

The following new condition(s) are proposed as part of the grading permit to mitigate environmental impacts or enforce/clarify current grading permit conditions regarding traffic.

1. Within sixty (60) days of renewal of the site operations, Permittee shall provide the department with a visual screen plan to address that portion of the mine boundary adjacent to the Green River Gorge Road. The plan may consist of additional plantings (planting plan with species and numbers required) or a proposal to reconstruct portions of the original wooden fence or a combination of the two.

I. Decision

King County has reviewed the John Henry Coal Mine No. 1 as part of the periodic review process established under KCC 21A.22.05. This periodic report and supporting file documentation provides a sufficient level of information from which to establish whether the permitted site is operating consistent with all existing permit conditions and whether there are identifiable environmental impacts. During this process we received two comments regarding the review. One was requesting general information regarding the operation and the second was from the City of Black Diamond requesting an opportunity to review and comment on the drainage plans when submitted. We provided the requested information to the first and notified the City that we would provide them with the plans for their review and comment once received.

Pursuant to KCC 21A.22.050 King County is requiring that the following additional or revised permit conditions and/or revisions to existing plans are to be applied to the existing grading permit L86G2632 to mitigate identifiable environmental impacts and/or bring the site into compliance with its permit conditions. The new conditions and changes shall be added to the permit through the permit revision process.

1. An active grading permit shall be required to remain in force until the site is reclaimed as per the Federal Office of Surface Mining Reclamation and Enforcement approved permit is successfully finalized and closed.
2. Trucks leaving the site will be covered. All trucks leaving the site shall exit onto the Ravensdale-Black Diamond Road via a left turn towards the City of Black Diamond and SR169. Truck haulage from the site will be limited during peak traffic hours.
3. Permittee shall be responsible for implementing all appropriate measures needed (i.e. paving, sweeping, or vacuuming) to keep access streets and roads used as haul routes into and out of mine clean and free from debris, mud, track out originating from site.
4. Once hauling begins, the permittee shall monitor the mine exit onto RBDR for possible tracking. If it is determined that tracking is a chronic problem during inclement weather, the permittee shall have sixty (60) days to provide a workable solution that prevents further tracking. This may require moving the wheel wash further into the interior of the permitted site.

Supplemental Requirements

In addition, the permit holder shall be required to comply with existing conditions.

1. Provide an updated technical information report (TIR) prepared by a licensed engineer to determine if the site's current facilities meet the requirements set forth in the 2009 King County Surface Water Design Manual for the drainage facilities onsite. This TIR shall be submitted prior to March 31, 2015. Any modifications or

- upgrades to facilities, if the current facilities are found deficient, shall be completed by the later of sixty days from approval of the plan or October 1, 2014.
2. As a part of the TIR, the permittee shall also provide an updated mining plan. This plan should include current facilities, any proposed changes to those facilities and address the revision to the proposed mining program.
 3. Within sixty (60) days of renewal of the site operations, Permittee shall provide the department with a visual screen plan to address that portion of the mine boundary adjacent to the Green River Gorge Road. The plan may consist of additional plantings (planting plan with species and numbers required) or a proposal to reconstruct portions of the original wooden fence. The plan shall be implemented by the later of 60 days from plan approval or prior to resumption of mining.
 4. Prior to commencing hauling on Ravensdale-Black Diamond Road, provide an operating bond. The amount of the bond will be determined within 45 days of the issuance of the Report and Decision and the permittee shall be provided with the necessary documents.

ORDERED THIS 24th day of December, 2014



Jim Chan
Assistant Director for Permitting
Dept. of Permitting and Environmental Review

Transmitted on December 24, 2014 to the following Parties and Persons of Record:

Randy Sandin, RPL, DPER
Jerry Shervey, Washington State Department of Ecology
Dave Morris, PCCC, 2319 Hobart Avenue SW, Seattle, WA 98116
Glenn Waugh, Evergreen Plaza Bldg., 711 South Capitol Way, Suite 703, Olympia, WA 98501

EXHIBITS:

- Exhibit 1 – 2002 Periodic Review Report and Decision (Including all exhibits)
- Exhibit 2 – May 13, 2014 King County Comment Letter to OSMRE on EA
- Exhibit 3 – 2014 Environmental Assessment prepared by OSMRE
- Exhibit 4 – October 24, 2014 Supplemental Comment Letter from King County to OSMRE
- Exhibit 5 – May 28, 2014 Letter from King County to Permittee regarding Periodic Review
- Exhibit 6 – Cumulative Hydrologic Impact Assessment (CHIA)

The complete file and all documents used in the review and preparation of this report are available for public viewing. You may arrange to review the record by contacting the Permit Center at (206) 296-6600. Please reference the permit name and number when making your request.

RIGHT TO APPEAL

This action may be appealed in writing to the King County Hearing Examiner, with a fee of \$250 (check payable to King County Office of Finance).

Filing an appeal requires actual delivery to the King County Department of Permitting and Environmental Review prior to the close of business 4:00 p.m. on **January 12, 2015**. The cashier is located near the reception desk in our main lobby. Prior mailing is not sufficient if actual receipt by the Department does not occur within the applicable time period. The Examiner does not have authority to extend the time period unless the Department is not open on the specified closing date, in which event delivery prior to 4:30 p.m. on the next business day is sufficient to meet the filing requirement.

If a timely Notice of Appeal has been filed, the appellant shall file a statement of appeal by 4:00 p.m. on **January 20, 2015**. The statement of appeal shall identify the decision being appealed (including file number) and the alleged errors in that decision.

The statement of appeal shall state: 1) specific reasons why the decision should be reversed or modified; and 2) the harm suffered or anticipated by the appellant, and the relief sought. The scope of an appeal shall be based on matters or issues raised in the statement of appeal. Failure to timely file a notice of appeal, appeal fee, or statement of appeal deprives the Examiner of jurisdiction to consider the appeal.

Appeals must be submitted to the Department Permitting and Environmental Review, addressed as follows:

LAND USE APPEAL
Resource Products Section
Department of Permitting and Environmental Review
35030 SE Douglas St., Suite 210
Snoqualmie, WA 98065-9266

A request for a pre-hearing conference may be made by any party. For more information regarding appeal proceedings and pre-hearing conferences, please contact the Office of the Examiner at 206-296-4660 for a Citizens' Guide to the Examiner hearings and/or read K.C.C. 20.20 and 20.24. The Web address is:
http://kingcounty.gov/council/HearingExaminer/guide_hearings.htm.



United States Department of the Interior

OFFICE OF SURFACE MINING

Reclamation and Enforcement

Western Region Office

1999 Broadway, Suite 3320

Denver, CO 80202-3050

May 3, 2011



Mr. David J. Morris
Pacific Coast Coal Company
John Henry No. 1 Mine
P.O. Box 450
Black Diamond, WA 98010

11-05-03 11

RE: Request for Permit Revision, Federal Permit No. WA-0007D
(ARMS # 09/11/25-07, 10/08/02-09, and 11/02/14-09)

Dear Mr. Morris:

The Office of Surface Mining (OSM) has completed its review of Pacific Coast Coal Company's (PCC) request for a permit revision to the John Henry No. 1 Mine, Federal Permit No WA-0007D, dated November 23, 2009, July 30, 2010, and February 10, 2011. OSM has determined that PCC's permit revision request is complete.

PCC's proposed permit revision to OSM is in response to Permit Revision Orders (PRO) 1 and 2. PRO 1 and 2 required PCC to address the proposed discharge structure from the Final Cut Lake to Mud Lake, and to update the Probable Hydrologic Consequences (PHC) section of the approved permit.

Mike Conaboy agreed on October 28, 2010, that, once OSM determined PCC's permit revision request to be complete, PCC would send a complete package to the U.S. Army Corps of Engineers for consultation and concurrence. PCC must send OSM the concurrence letter from the U.S. Army Corps of Engineers once it is received. The U.S. Army Corps of Engineers has previously commented on PCC's submittals dealing with the proposed discharge structure from the Final Cut Lake (Corps letter to PCC dated June 10, 2008, attached).

If you have any questions concerning this letter, please contact me at (303) 293-5027.

Sincerely,

Joseph O. Wilcox, Hydrologist
John Henry Mine Coordinator
Washington State Mines Team

cc: Olympia Office
City of Black Diamond
U.S. Army Corps of Engineers



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

Regulatory Branch

JUN 10 2008

08-06-11-01

Mr. David Morris
Pacific Coast Coal Company
P.O. Box 450
Black Diamond, Washington 98010

Reference: OYB-N-09860
Pacific Coast Coal
Company

Dear Mr. Morris:

We received your letter dated August 31, 2007, which describes Pacific Coast Coal Company's (PCCC) proposal to construct a spillway in the berm between the Mud Lake wetlands and Pit 1 at the mine site at Black Diamond, King County, Washington. Mining activities in the wetlands associated with Mud Lake, the outlet of which flows into Ginder Creek, were authorized by Nationwide Permit (NWP) 21 on March 13, 1985 (reference no. OYB-N-09860). By letter dated February 26, 2003, the U.S. Army Corps of Engineers (Corps) informed PCCC that all NWP 21's authorized before February 11, 2002, including PCCC's original authorization, had expired. The Corps also stated that any further work in wetlands would require a new Department of Army (DA) permit.

In this letter, we discuss a) the proposed spillway and permit requirements, b) mine reclamation and potential impacts to wetlands, c) the revised mine-reclamation plan, and d) the required wetland delineation; and we specifically request a delineation of wetlands on site and a copy of the revised reclamation plan:

a) **Proposed spillway and DA permit requirements.** The spillway will require a Corps permit if fill will be placed outside the current footprint of an existing berm. The spillway is proposed in a berm that was constructed in wetlands to prevent Mud Lake and associated wetlands from draining into Mining Pit 1 (Pit 1). No mining has occurred for several years in Pit 1. The mining pit is currently filling with water, and OSM has required construction of a spillway to regulate water flow out of the pit. As requested by the Office of Surface Mining (OSM), PCCC contacted the Corps to see if construction of the spillway would require a DA permit. Corps staff visited the PCCC mine site on October 11, 2007, and determined that jurisdictional wetlands exist on both sides of the berm, beginning at the toe

of each sloped side of the berm. Therefore a new DA permit would be required for new fill placed outside of the current footprint of the berm for such projects as a spillway or temporary road. PCCC's application for a new permit must include a delineation of the wetlands in the area of proposed direct and indirect impact. Wetland delineations are covered in greater detail in section d.

b) **Reclamation and potential wetland impacts.** According to OSM regulations and the terms of PCCC's original NWP 21, PCCC is required to reclaim the mine site. The Corps is concerned about impacts to wetlands and other waters of the U.S. that may result from reclamation activities. For instance, wetlands still remain at the edge of Pit 1 and could be impacted by reclamation or other work. The wetland delineation for the site must cover areas that would be directly or indirectly affected by work associated with reclamation in or near Pit 1.

c) **Revised reclamation plan.** In a letter to PCCC dated June 3, 2008, OSM reiterated its request for a revised reclamation plan. The original OSM-approved reclamation plan was a condition of the Corps' 1985 authorization of mine-associated work under NWP 21. We must review revisions, such as a new location of the final-cut lake, whether or not impacts to wetlands or other waters of the U.S. are proposed beyond impacts that have already occurred. Please send us a copy of the revised plan when you submit it to OSM.

d) **Wetland delineation.** We need to know the extent of wetlands as they currently exist on site. They must be documented using the 1987 *Corps Wetland Delineation Manual* (<http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (http://www.usace.army.mil/cw/cecwo/reg/west_mt_intersupp.pdf). The delineation should include all wetlands that might be impacted by reclamation or other work on site as explained above. At a minimum, wetlands at the edge of Pit 1 and at the foot of the Mud Lake berm should be included in the delineation. However, the delineation should also include wetlands that might experience secondary or indirect impacts as a result of work associated with reclamation and spillway construction. This delineation should be conducted by a qualified wetland scientist, many of whom can be contacted at local environmental firms. Please submit the wetland delineation by July 30, 2008. We will be unable to review or approve any spillway work or reclamation activities without this delineation.

If work, in addition to that addressed above, is proposed in other wetlands within the OSM permit boundary, please contact us. You may be required to submit an application for a new DA permit, including a delineation of additional wetlands on site.

If you have any questions, please contact Ms. Caren Crandell at 206-764-6182 or via email caren.j.crandell@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Michelle Walker". The signature is written in a cursive, flowing style.

Michelle Walker, Chief
Regulatory Branch

cc

Joe Wilcox, Office of Surface Mining, Denver
Glenn Waugh, Office of Surface Mining, Olympia

Wilcox, Joe

From: Crandell, Caren J NWS [Caren.J.Crandell@usace.army.mil]
Sent: Tuesday, May 10, 2011 6:36 PM
To: Dave
Cc: Waugh, Glenn; Wilcox, Joe
Subject: What PCCC needs to submit to the Corps (UNCLASSIFIED)
Attachments: Components of a Wetland Delineation Report (1-20-11).pdf

Classification: UNCLASSIFIED
Caveats: NONE

Dave:

I've received your phone message regarding PCCC's proposed design for a new spillway between Pit 1 and Mud Lake.

In a letter dated May 3, 2011, OSM reminded PCCC of its obligation to contact the Corps. Our letter dated June 10, 2008, was enclosed with (i.e., attached to) that letter. That letter remains in effect, and our requirements remain the same. Briefly, we need 1) drawings of the spillway that depict not only the footprint of any proposed work but also the impact to wetlands on both sides of the current berm separating Pit 1 from Mud Lake; 2) a revised reclamation plan (if different from that submitted on May 28, 2010); and 3) a wetland delineation that includes all wetlands on site that might be impacted by future reclamation or other work, including a new spillway.

The wetland and stream "characterization" of the Mud Lake area submitted to us on December 2, 2008, is not a wetland delineation and will not fulfill that requirement. The components of a complete wetland delineation report are covered in the attached document and will be familiar to all qualified professional wetland scientists.

Thank you for contacting the Corps. Please let me know if you have any questions.

--Caren

Caren Crandell
Regulatory Project Manager
Corps of Engineers, Seattle District
206-764-6182 (Mon, Tues, Wed)

Classification: UNCLASSIFIED
Caveats: NONE

77-05-12 13



US Army Corps
of Engineers®
Seattle District

Components of a Complete Wetland Delineation Report

For submittal to the U.S. Army Corps of Engineers, Seattle District
January 20, 2011



In Washington State, wetland delineations submitted to the Corps of Engineers (Corps), Seattle District must be conducted in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* and the appropriate supplement for the project site, either the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0 (May 2010)* or *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (September 2008)*.

A complete wetlands delineation report should include:

1. Who authorized the wetlands delineation, property ownership, and who conducted the delineation.
2. The reason the wetlands delineation was conducted (is it for a particular project?)
3. Date of the site visit/s with information on tasks performed on those dates.
4. Recent weather conditions and conditions during the delineation.
5. A vicinity map showing the project location and text identifying the street address, latitude/longitude, and section/township/range.
6. The most current field data sheets from the appropriate Regional Supplement.
7. A map identifying delineated wetland boundaries and the locations of all data collection points (for large and/or complex projects, a large scale [1":400' to 1":100'] aerial photo with overlays displaying site property and wetland boundaries is helpful). This map must also clearly identify the boundaries of the overall area evaluated.
8. Each separate wetland labeled (e.g. Wetland A, Wetland B, etc.) on the map and in the report text.
9. Use of scientific names of plants (vs. only using common names) recorded on the data sheets.
10. An explanation of the approach used to delineate the wetlands and synthesize the data. Describe if the delineation methodology used was routine, comprehensive, or atypical, or if "Difficult Wetland Situations" procedures were used and why.
11. A description of the site including mapped and observed vegetation, soils, hydrologic characteristics, and topography. This should include all waterbodies (e.g., ditches, streams, rivers, lakes, etc.)
12. A summary of the available information used in making the wetland determination. Information sources consulted should be listed in a "References Cited" section of the report. The following are examples of potential sources of information:
 - Aerial photos
 - County drainage maps – many can be found online
 - Federal Emergency Management Agency (FEMA) insurance maps
 - Rare plants and high-quality wetlands data from the Washington National Heritage Program
 - Priority habitats and species lists from the Washington Department of Fish & Wildlife
 - Local experts
 - Local wetland inventories and soil surveys
 - National Wetland Inventory (NWI) map (see USFWS website: <http://www.fws.gov/wetlands/>)
 - Plant Lists (preferably a wetland plant list with the indicator status)
 - Precipitation records. (see WETS table data on the NRSC website: <http://www.wcc.nrcs.usda.gov/>)
 - Previous site documentation and analysis (e.g., environmental checklist, prior delineation, etc.)
 - Scientific literature
 - Stream and tidal gage data
 - USGS land use and land cover maps
 - USGS quadrangle map (or other topographic map of the area)
13. A narrative description of results and conclusions, including characteristics and acreage of each area of wetland and non-wetland waters and the rationale for the wetland boundary line/s.
14. A list of references cited.



US Army Corps
of Engineers
Seattle District

Components of a Complete Wetland Delineation Report

For submittal to the U.S. Army Corps of Engineers, Seattle District
January 20, 2011



Additional recommendations for wetland delineations and reports include:

- Upland and wetland data points should be paired on both sides of the wetland boundary to facilitate the reviewer's understanding of the justification for the location of the wetlands boundary line. Additional data points and supporting description should be provided in areas where a narrow area of upland is identified as the break between two wetlands, or for other situations that warrant additional explanation.
- Data points should be surveyed to create accurate maps and acreage computations.
- As described in the Regional Supplements, only on highly disturbed or problematic sites or areas, direct hydrology monitoring may be needed. Any monitoring wells used to facilitate wetland hydrology determinations must be installed in accordance with the guidelines in *Technical Standard for Water-Table Monitoring of Potential Wetland Sites, ERDC-TN-WRAP-05-2, U.S. Army Research and Development Center, Vicksburg, MS* (<http://el.erdcc.usace.army.mil/elpubs/pdf/tnwrap05-2.pdf>). Hydrologic monitoring data should be interpreted and discussed.
- Photographs showing wetlands and non-wetlands areas, and other details, such as soil profiles.
- If the site was the subject of prior delineations, provide a reference to that document, a summary of the prior delineation's findings, the prior delineation's wetland boundary map, and an explanation of any differences in the findings between the prior and current delineation. Provide the Corps' reference number for the prior delineation, if available.
- To assist with the Corps' jurisdictional determination, provide information about flow in and out of the wetland/water (volume/duration of flow and directional flow path to other wetlands, streams, rivers, lakes or tidal waters) for each wetland or non-wetland water. It is recommended that this data be provided either in the report or on a *Tributary and Wetland Information Form*, available at: [http://www.nws.usace.army.mil/PublicMenu/documents/REG/Trib_Wtld_Info_Checklist\(11-1-07\)_DRAFT.doc](http://www.nws.usace.army.mil/PublicMenu/documents/REG/Trib_Wtld_Info_Checklist(11-1-07)_DRAFT.doc)
- Refer to *Wetland Mitigation in Washington State, Part 2, Version 1, Appendix H*, Ecology Publication #06-06-011b, March 2006, for a wetlands delineation report sample outline.
- Tailor the delineation and the wetlands delineation report to the size and complexity of the site, providing enough information to support the boundary line/s and wetlands/waters area calculations.
- On drawings please draw a box around the review area that was evaluated and in the report text specify if you are discussing inside or outside the review area.
- Please indicate if the wetlands or other waterbodies extend out of the review area and/or cross property lines.
- An overall plan view that includes all demarcated waterbodies allows the reviewer to visualize total impacts. For large or linear projects please include match lines to show where a drawing that is too large to be contained on one page is continued onto another.
- The number and size of upland inclusions in a wetland area should be discussed and delineators may want to coordinate with the Corps to determine whether each upland area needs to be delineated. Mosaic wetlands are discussed in the Supplements and specific delineation procedures are provided that should be adhered to.
- The Corps may choose to visit the site to confirm wetland boundaries after review of a wetland report so the wetland boundaries must be well-marked with stakes/flags for the site inspection.

More information is available at:

- **Corps, Seattle District Website:**
http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=mainpage_Wetlands_and_Waters
- **Washington State Department of Ecology Website:**
<http://www.ecy.wa.gov/programs/sea/wetlands/delineation.html>



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

JUN 06 2013

Regulatory Branch

13-06-10-02

Mr. Dave Morris
Pacific Coast Coal Company
30700 Black Diamond-Ravensdale Road
P.O. Box 450
Black Diamond, Washington 98010

Reference: OYB-N-009860
Pacific Coast Coal Company

Dear Mr. Morris:

We have received your application for a Department of the Army permit to continue coal mining activities at Black Diamond, Washington. Regulations and guidelines implementing our regulatory program under Section 404 of the Clean Water Act generally require that you obtain a permit prior to discharging dredged or fill material into waters of the United States, including wetlands.

The Preamble to the U.S. Army Corps of Engineers (Corps) 1986 regulations (33 CFR Part 328.3(e)) state that generally we do not consider the following to be waters of the United States: "water filled depressions created in dry land incidental to construction activity." We have reviewed this specific circumstance and the associated documentation for Pit 1, the wetland in the Pit 2 Reservoir Fringe Area, Wetland F, Wetland B, and Wetland G, the drainage ditch along the north side of Spoil Pile 3N that flows to pond H2, and the drainage ditch along the south side of the haul road leading to pond I, as shown on the enclosed Figure 1. We have determined that these waters are not waters of the U.S. No permit is required for additional mining in these areas.

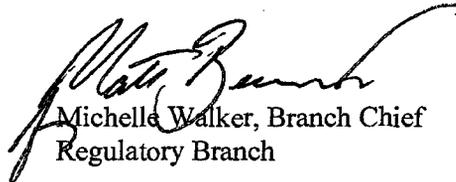
You have also provided information on your proposed spillway design associated with your reclamation plan. We have reviewed the drawings that you submitted on December 10, 2012, which include cross sections of the discharge structure. We have determined that construction of the spillway would not include the placement of fill material in the mud lake wetland and therefore no additional permit is required. You are not authorized to place any temporary fill in wetlands as part of the spillway construction.

The Corps made a determination that the project had minimal impacts considering the reclamation plan for authorization under the original Nationwide Permit 21. We have reviewed

the current reclamation proposal as depicted in "Plate III-28 and Plate III-19" and have determined that it still meets the minimally impacting threshold of the 1985 Nationwide Permits. If you have subsequent revisions to your reclamation plan, you must coordinate with the Corps to ensure that the reclamation still meets the minimally impacting threshold of the 1985 Nationwide Permits and to ensure that the reclamation plan has appropriate designs for wetland areas.

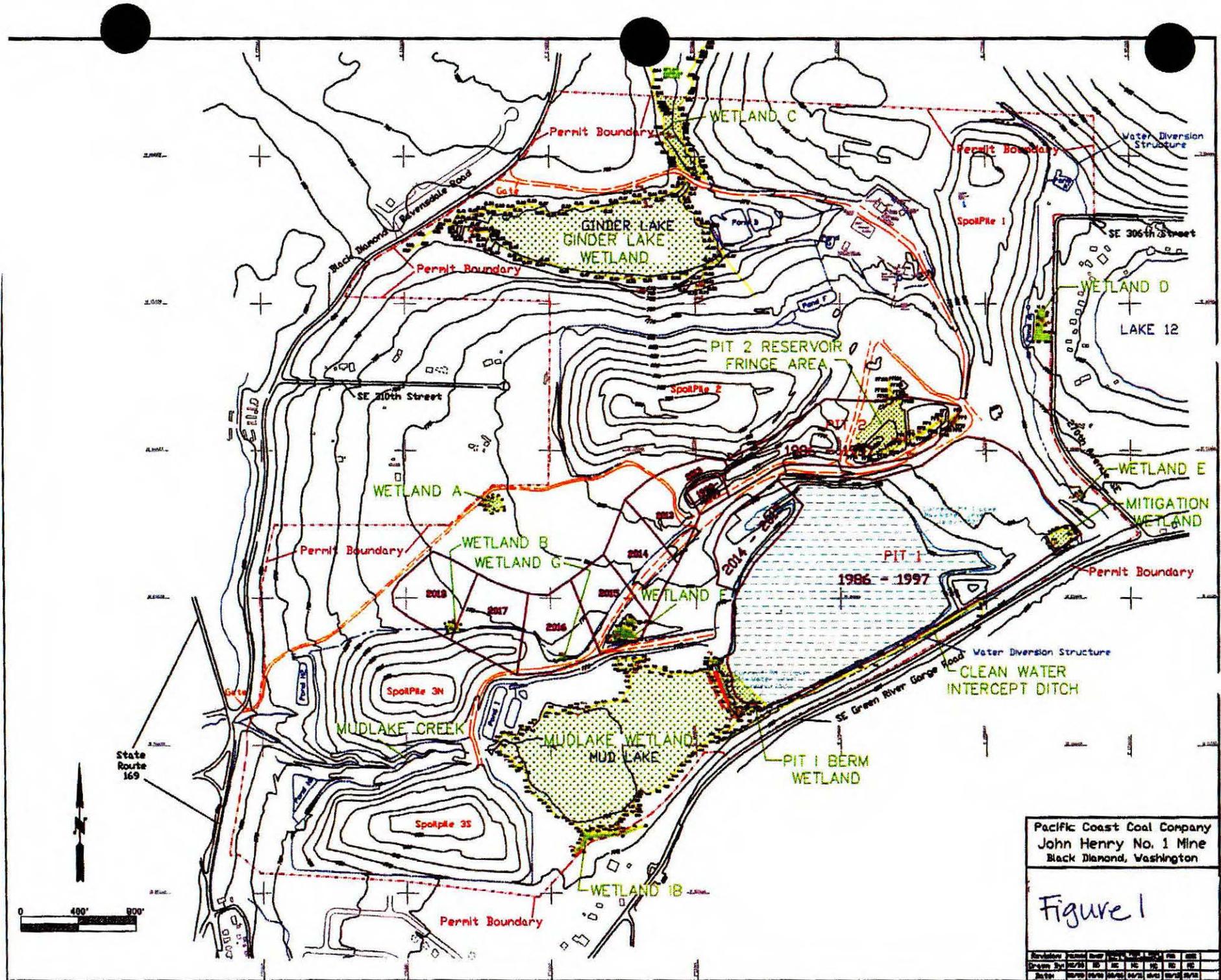
If you have any questions, please contact Ms. Lori C. Lull at lori.c.lull@usace.army.mil or by phone at (206) 316-3153.

Sincerely,



Michelle Walker, Branch Chief
Regulatory Branch

Enclosure



Pacific Coast Coal Company
 John Henry No. 1 Mine
 Black Diamond, Washington

Figure 1

Boundary	12/18	01/19	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19	10/19	11/19	12/19
Green Spill													
Water													



United States Department of the Interior



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Western Region Office
1999 Broadway, Suite
3320
Denver, CO 80202-3050

January 31, 2017

Mr. David J. Morris
Pacific Coast Coal Company
30700 Black Diamond-Ravensdale Rd.
P. O. Box 450
Black Diamond, WA 98010

Dear Mr. David Morris,

The Office of Surface Mining Reclamation and Enforcement (OSMRE) has initiated informal consultation with the U.S. Department of the Army, Corps of Engineers (USACE) concerning Pacific Coast Coal Company's (PCCC) significant revision permit application and the associated Environmental Assessment for the proposed action(s). A Section 404 of the Clean Water Act (CWA) permit, issued by USACE, is required for certain activities in, over, under or near waters of the U.S. or special aquatic sites, including wetlands. Thus, USACE has authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 of the CWA, and permit work and the placement of structures in navigable waters of the U.S. under Sections 9 and 10 of the Rivers and Harbors Act of 1899.

In recent conversations, USACE has informed us that there was no USACE Jurisdictional Determination (JD) currently in place for the John Henry No. 1 Mine. A JD is prepared by the proponent of an action(s) that may affect 'waters of the US' and used by the USACE to determine the nature and significance of those actions. A JD has an effective timeframe of 5 years, the last being conducted at the John Henry Mine in 2011.

We discussed with USACE the best path forward, considering the following factors:

- Group Four Inc. completed a wetland delineation study on November 8, 2011. This was required by the U.S. Army Corps of Engineers (USACE) before it could issue a Nationwide permit (NWP) 21 or require a Section 404 individual permit. Following review of the September 2011 draft wetland delineation study, the USACE requested additional information from PCCC. Group Four Inc. completed supplemental fieldwork on November 8, 2011, revised the study and identified two additional wetlands that had been established in previously disturbed mine areas. The 45.22 acres of wetlands that were delineated in the study include five wetlands totaling 3.72 acres that have developed on ground disturbed by previous mining. These five wetlands would be eliminated under the currently approved reclamation plan under either the Proposed Action or No Action Alternatives. After reviewing PCCC's Pre-Construction Notice supported by the Wetland Delineation Study, the USACE determined that PCCC could continue to operate under a NWP 21.
- On June 6, 2013, the USACE stated that they had reviewed the specific circumstance and associated documentation for Pit 1, the wetland in the Pit 2 Reservoir Fringe Area, Wetland F, Wetland B, and Wetland G, the drainage ditch along the north side of SP 3N that flows to pond H2, and the drainage ditch along the south side of the haul road leading to pond I. The USACE determined that those waters were not water of the U.S. and no permit was required for additional mining in these areas. The USACE also determined that construction of the spillway would not include the placement of fill material in Mud Lake

wetland and therefore no additional permit was required. The USACE determined that the project had minimal impacts considering the reclamation plan for authorization under the original NWP 21. The USACE stated that if PCCC has subsequent revisions to the reclamation plan, PCCC must coordinate with the USACE to ensure that the reclamation plan still meets the minimally impacting threshold of the 1985 NWPs and to ensure that the reclamation plan has appropriate designs for wetland areas.

- The significant revision application submitted by PCCC does not propose any additional fill areas, changes to the mine plan, or changes to the reclamation plan.

USACE advised that the operator, Pacific Coast Coal Company, should direct correspondence to their office, requesting a review of past actions relative to this matter and seek a determination as to whether USACE would reaffirm their earlier findings or, as to what further actions would be needed. It may be advisable to request a site visit to verify no changes since the 2011 JD. Please direct your correspondence to Mr. Daniel Krenz, biologist in the Regulatory Branch, Operations Division USACE Seattle District, at daniel.a.krenz@usace.army.mil or by phone at (206) 316-3153.

Should you have any questions regarding this matter, please feel free to contact me.

Sincerely,



David Costain,
John Henry Mine Coordinator
Washington State Mines Team
(303) 293-5027
dcostain@osmre.gov



Pinkham, Gretchen <gpinkham@osmre.gov>

Fwd: John Henry Mine

Vasquez, Edward <evasquez@osmre.gov>

Thu, Mar 23, 2017 at 3:13 PM

To: "Costain, David" <dcostain@osmre.gov>, "Pinkham, Gretchen" <gpinkham@osmre.gov>, Glenn Waugh <gwaugh@osmre.gov>

Hello All,

Below is the response from the FWS concerning the John Henry section 7. See below.

Ed

—— Forwarded message ——

From: Vogel, Bill <bill_vogel@fws.gov>

Date: Thu, Mar 23, 2017 at 3:06 PM

Subject: Re: John Henry Mine

To: "Vasquez, Edward" <evasquez@osmre.gov>, Carolyn Scafidi <carolyn_scafidi@fws.gov>

Dear Mr. Vasquez:

Thank you for checking with us about the continued validity of our previous informal consultation (February 27, 2001).

We also note that the U.S. Fish and Wildlife Service completed a Formal Section 7 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations Under the Surface Mining Control and Reclamation Act of 1977 at a nationwide level.

You are correct that if the project does not change beyond that analyzed previously, that our determination for bull trout would remain the same as analyzed in 2001 - not likely to adversely affect. Since 2001, the bald eagle has been delisted and therefore is no longer relevant in an ESA section 7 analysis.

Here are my thoughts on the following species:

Whitebark pine (*Pinus albicaulis*) and North American wolverine (*Gulo gulo luscus*) – your project would have no effect on these species due to the low elevation of your project and therefore the project is located outside the range of these species.

Marbled Murrelet (*Brachramphus marmoratus*) – the project site does not appear to contain any suitable habitat. From the aerial photos in your February 10, 2017, request, it would be extremely surprising to find any platforms suitable for nesting. Because of the lack of suitable nesting habitat, we do not anticipate use by murrelets and do not anticipate any exposure to effects. Therefore, this project would have no effect on murrelets.

Oregon spotted frog (*Rana pretiosa*) – the project site is outside the range of the species and therefore would have no effect on the species.

Yellow billed cuckoo (*Coccyzus americanus*) - the project is not located in suitable habitat and therefore it is not anticipated to contain cuckoos. Therefore, this project would have no effect on cuckoos.

Streaked homed lark (*Eremophila alpestris strigata*) – the project site is outside the range of the species and therefore would have no effect on the species.

For each of these species for which you choose to make a "no effect" call, you merely need to document it for the record – such as the information you have sent me. There is no need to seek concurrence from the USFWS regarding these species and as a matter of policy we do not respond to concur with no effect determinations.

Thank you again for contacting us. I also appreciate your offer for a site visit, but I do not feel it is necessary given the clarity of the situation with respect to the discussed species. If you need additional information or assistance, please feel free to contact me via email or phone.

3-37

Bill Vogel

On Tue, Mar 21, 2017 at 1:37 PM, Vasquez, Edward <evasquez@osmre.gov> wrote:

Hello Bill,

Thank you for getting on top of this project. Attached is the consultation letter from the FWS dated February 27, 2001 you requested. Please let me know if you require additional information and/or have any questions. I appreciate your time and consideration. Thank you.

Ed

On Mon, Mar 20, 2017 at 4:01 PM, Vogel, Bill <bill_vogel@fws.gov> wrote:

Mr. Vasquez

I will try to review these materials by tomorrow and may call you if I need further clarifications. If you do not hear from me by tomorrow afternoon, please feel free to prompt me.

Thanks

Bill Vogel

—

William O. Vogel, Certified Wildlife Biologist®
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Washington Fish and Wildlife Office
510 Desmond Drive
Lacey, Washington 98503
Desk: (360) 753-4367
Cell: (360) 528-9145
Office: (360) 753-9440
bill_vogel@fws.gov

—

Ed Vasquez, Ph.D.
Ecologist
Western Region Program Support Division
Indian Programs Branch
Office of Surface Mining, Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-3050

303-293-5081 (Office Voice)
303-293-5017 (Office Fax)

—

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3-38

—
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United States Department of the Interior



FISH AND WILDLIFE SERVICE
Washington Fish and Wildlife Office
510 DESMOND DRIVE SE, SUITE 102
LACEY, WA 98503
PHONE: (360)753-9440 FAX: (360)753-9405
URL: www.fws.gov/wafwo/

Consultation Code: 01EWF00-2015-SLI-0379

March 06, 2015

Event Code: 01EWF00-2015-E-00296

Project Name: Pacific Coast Coal - John Henry No. 1 Mine

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated and proposed critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. The species list is currently compiled at the county level. Additional information is available from the Washington Department of Fish and Wildlife, Priority Habitats and Species website:

<http://wdfw.wa.gov/mapping/phs/> or at our office website:

http://www.fws.gov/wafwo/species_new.html. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether or not the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). You may visit our website at <http://www.fws.gov/pacific/eagle/for> information on disturbance or take of the species and information on how to get a permit and what current guidelines and regulations are. Some projects affecting these species may require development of an eagle conservation plan: (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Also be aware that all marine mammals are protected under the Marine Mammal Protection Act (MMPA). The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas. The importation of marine mammals and marine mammal products into the U.S. is also prohibited. More information can be found on the MMPA website: <http://www.nmfs.noaa.gov/pr/laws/mmpa/>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Related website:

National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Pacific Coast Coal - John Henry No. 1 Mine

Official Species List

Provided by:

Washington Fish and Wildlife Office
510 DESMOND DRIVE SE, SUITE 102
LACEY, WA 98503
(360) 753-9440
<http://www.fws.gov/wafwo/>

Consultation Code: 01EWF00-2015-SLI-0379

Event Code: 01EWF00-2015-E-00296

Project Type: Mining

Project Name: Pacific Coast Coal - John Henry No. 1 Mine

Project Description: Full Permit Area

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Pacific Coast Coal - John Henry No. 1 Mine

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-121.9956784 47.3295675, -121.9801902 47.3291647, -121.9801473 47.3273947, -121.9816022 47.3273859, -121.9816022 47.3233425, -121.9807438 47.3224698, -121.9791131 47.3213643, -121.9808297 47.3210152, -121.9858079 47.3190951, -121.9905285 47.3172331, -121.9913869 47.3166512, -121.9921593 47.3164767, -121.9929318 47.3160112, -121.9938409 47.3157248, -121.9945726 47.3156375, -121.9956798 47.314849, -122.0002803 47.3150003, -122.0036578 47.3152272, -122.0042629 47.3159575, -122.0041792 47.3179607, -122.0037972 47.3188378, -122.0036127 47.3211056, -121.9956848 47.3211083, -121.9956376 47.325469, -122.0016865 47.3254952, -122.0001416 47.3266587, -121.9972233 47.3279386, -121.9959359 47.3289858, -121.9956784 47.3295675)))

Project Counties: King, WA



Endangered Species Act Species List

There are a total of 11 threatened, endangered, or candidate species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
Oregon Spotted frog (<i>Rana pretiosa</i>)	Threatened	Proposed	
Birds			
Marbled murrelet (<i>Brachyramphus marmoratus</i>) Population: CA, OR, WA	Threatened	Final designated	
Streaked Horned lark (<i>Eremophila alpestris strigata</i>)	Threatened	Final designated	
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>) Population: Western U.S. DPS	Threatened	Proposed	
Conifers and Cycads			
Whitebark pine (<i>Pinus albicaulis</i>)	Candidate		
Fishes			
Bull Trout (<i>Salvelinus confluentus</i>) Population: U.S.A., conterminous, lower 48 states	Threatened	Final designated	
Flowering Plants			



United States Department of Interior
Fish and Wildlife Service

Project name: Pacific Coast Coal - John Henry No. 1 Mine

Golden Paintbrush (<i>Castilleja levisecta</i>)	Threatened		
Mammals			
Canada Lynx (<i>Lynx canadensis</i>) Population: (Contiguous U.S. DPS)	Threatened		
Gray wolf (<i>Canis lupus</i>) Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, KS, KY, LA, MA, MD, ME, MO, MS, NC, NE, NH, NJ, NV, NY, OK, PA, RI, SC, TN, TX, VA, VT and WV; and portions of AZ, IA, IN, IL, ND, NM, OH, OR, SD, UT, and WA. Mexico.	Endangered		
Gray wolf (<i>Canis lupus</i>) Population: Western Distinct Population Segment	Proposed Endangered		
Grizzly bear (<i>Ursus arctos horribilis</i>) Population: lower 48 States, except where listed as an experimental population or delisted	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Pacific Coast Coal - John Henry No. 1 Mine

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Subj: **RE: Project Area Report**
Date: 9/18/2015 11:25:38 A.M. Pacific Daylight Time
From: Natural_Heritage_Program@dnr.wa.gov
To: DJMorris@aol.com

Dave Morris, General Manager
Pacific Coast Coal Company
PO Box 450
Black Diamond WA 98010

SUBJECT: Mining Permit Renewal, King Co. (T21N R06E S12)

We've searched the Natural Heritage Information System for information on significant natural features in your project area. Currently, we have no records for rare plants or high quality native ecosystems in the vicinity of your project.

The information provided by the Washington Natural Heritage Program is based solely on existing information in the database. In the absence of field inventories, we cannot state whether or not a given site contains high quality ecosystems or rare plant species; there may be significant natural features in your study area of which we are not aware.

The Washington Natural Heritage Program is responsible for information on the state's rare plants as well as high quality ecosystems. For information on animal species of concern, please contact Priority Habitats and Species, Washington Department of Fish and Wildlife, 600 Capitol Way N, Olympia WA 98501-1091, or by phone (360) 902-2543.

For more information on the Natural Heritage Program, please visit our website at <http://www.dnr.wa.gov/natural-heritage-program>. Lists of rare plants and their status, rare plant fact sheets, as well as rare plant survey guidelines are available for download from the site. Please feel free to call the Natural Heritage Program at (360) 902-1667 if you have any questions, or by e-mail at natural_heritage_program@dnr.wa.gov.

Sincerely,

Jasa Holt, Data Specialist
Washington Natural Heritage Program
Forest Resources and Conservation Division
PO Box 47014, Olympia WA 98504-7014

From: DJMorris@aol.com [mailto:DJMorris@aol.com]
Sent: Thursday, September 17, 2015 2:42 PM
To: DNR RE Natural Heritage Program <Natural_Heritage_Program@dnr.wa.gov>
Subject: Project Area Report

Please see the attached.

Dave Morris, General Manager
Pacific Coast Coal Company
PO Box 450
Black Diamond WA 98010
Mobile: (206) 321 5984

Tuesday, September 29, 2015 AOL: DJMorris



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

JUN 06 2013

Regulatory Branch

Mr. Dave Morris
Pacific Coast Coal Company
30700 Black Diamond-Ravensdale Road
P.O. Box 450
Black Diamond, Washington 98010

Reference: OYB-N-009860
Pacific Coast Coal Company

Dear Mr. Morris:

We have received your application for a Department of the Army permit to continue coal mining activities at Black Diamond, Washington. Regulations and guidelines implementing our regulatory program under Section 404 of the Clean Water Act generally require that you obtain a permit prior to discharging dredged or fill material into waters of the United States, including wetlands.

The Preamble to the U.S. Army Corps of Engineers (Corps) 1986 regulations (33 CFR Part 328.3(e)) state that generally we do not consider the following to be waters of the United States: "water filled depressions created in dry land incidental to construction activity." We have reviewed this specific circumstance and the associated documentation for Pit 1, the wetland in the Pit 2 Reservoir Fringe Area, Wetland F, Wetland B, and Wetland G, the drainage ditch along the north side of Spoil Pile 3N that flows to pond H2, and the drainage ditch along the south side of the haul road leading to pond I, as shown on the enclosed Figure 1. We have determined that these waters are not waters of the U.S. No permit is required for additional mining in these areas.

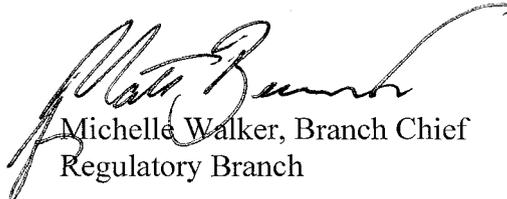
You have also provided information on your proposed spillway design associated with your reclamation plan. We have reviewed the drawings that you submitted on December 10, 2012, which include cross sections of the discharge structure. We have determined that construction of the spillway would not include the placement of fill material in the mud lake wetland and therefore no additional permit is required. You are not authorized to place any temporary fill in wetlands as part of the spillway construction.

The Corps made a determination that the project had minimal impacts considering the reclamation plan for authorization under the original Nationwide Permit 21. We have reviewed

the current reclamation proposal as depicted in "Plate III-28 and Plate III-19" and have determined that it still meets the minimally impacting threshold of the 1985 Nationwide Permits. If you have subsequent revisions to your reclamation plan, you must coordinate with the Corps to ensure that the reclamation still meets the minimally impacting threshold of the 1985 Nationwide Permits and to ensure that the reclamation plan has appropriate designs for wetland areas.

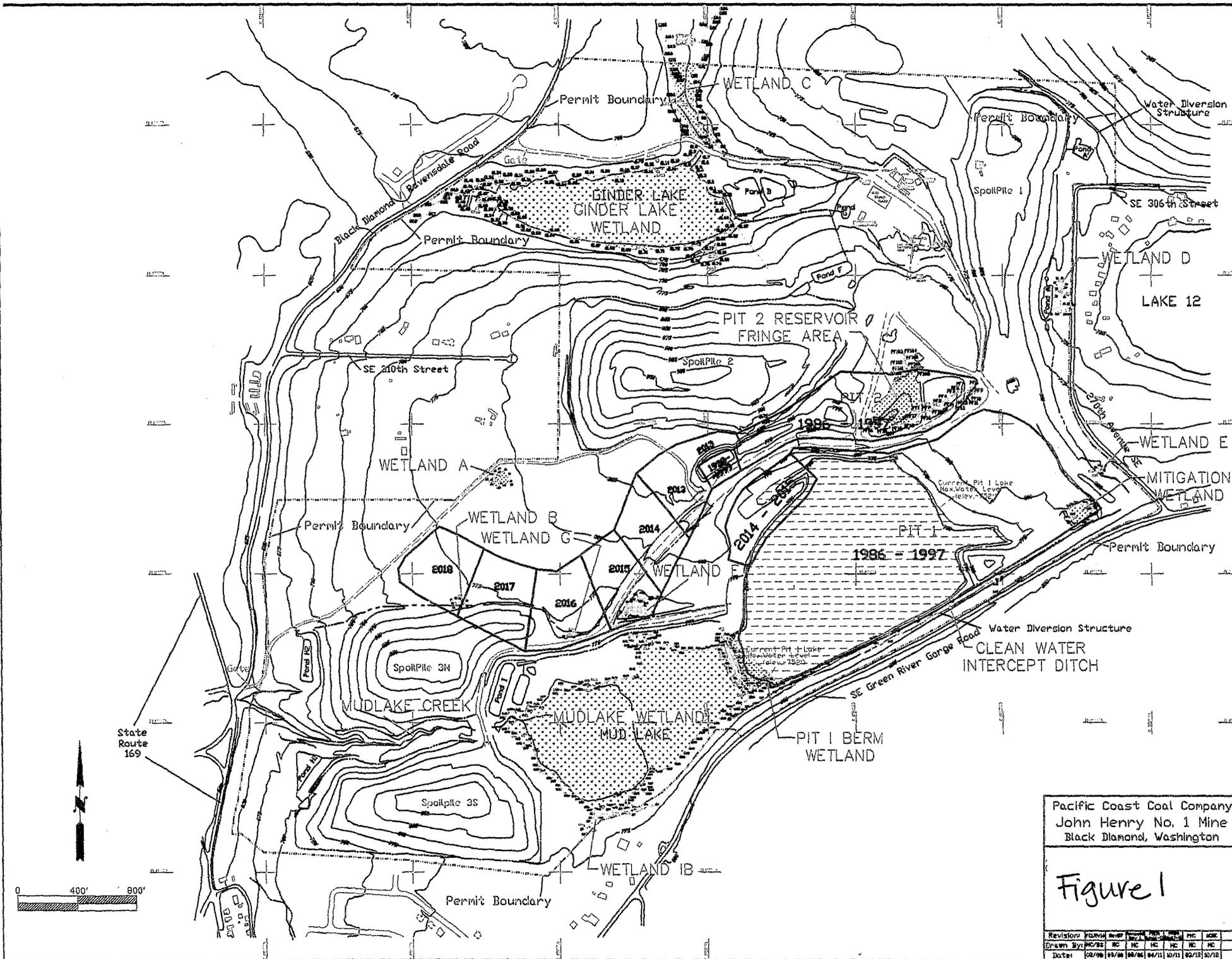
If you have any questions, please contact Ms. Lori C. Lull at lori.c.lull@usace.army.mil or by phone at (206) 316-3153.

Sincerely,



Michelle Walker, Branch Chief
Regulatory Branch

Enclosure



Pacific Coast Coal Company
 John Henry No. 1 Mine
 Black Diamond, Washington

Figure 1

Revision	DATE	BY	CHKD	APPD	DATE	BY	CHKD	APPD
Drawn By	02/92	MC/RS	NC	NC	NC	NC	NC	NC
Date:	02/92	03/92	04/92	05/92	06/92	07/92	08/92	09/92



WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITATS AND SPECIES REPORT

SOURCE DATASET: PHSPublic
REPORT DATE: 03/03/2015 4.30

Query ID: P150303162954

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
Caves Or Cave-rich Areas	PHSPTS 902275	Habitat Feature Habitat Feature N/A	1/4 mile (Quarter)	N/A N/A PHS LISTED	Y TOWNSHIP	WA Dept. of Fish and Wildlife Points
Coho Oncorhynchus kisutch	FISHDIST 25733	Occurrence/Migration Occurrence/migration http://wdfw.wa.gov/wlm/diversty/soc/soc.htm http://wdfw.wa.gov/publications/pub.php?	NA	N/A N/A PHS LISTED	N AS MAPPED	Lines
Coho Oncorhynchus kisutch	SASI 3140	Occurrence Occurrence http://wdfw.wa.gov/wlm/diversty/soc/soc.htm http://wdfw.wa.gov/publications/pub.php?	NA	Candidate N/A PHS Listed	N AS MAPPED	WDFW Fish Program Lines
Elk Cervus elaphus	GREEN/CEDAR RIVER PHSREGION 918540	Regular Concentration Regular concentration http://wdfw.wa.gov/publications/pub.php?	General locality	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons
Fall Chinook Oncorhynchus tshawytscha	FISHDIST 25730	Occurrence/Migration Occurrence/migration http://wdfw.wa.gov/wlm/diversty/soc/soc.htm http://wdfw.wa.gov/publications/pub.php?	NA	N/A N/A PHS LISTED	N AS MAPPED	Lines
LACUSTRINE LITTORAL	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons

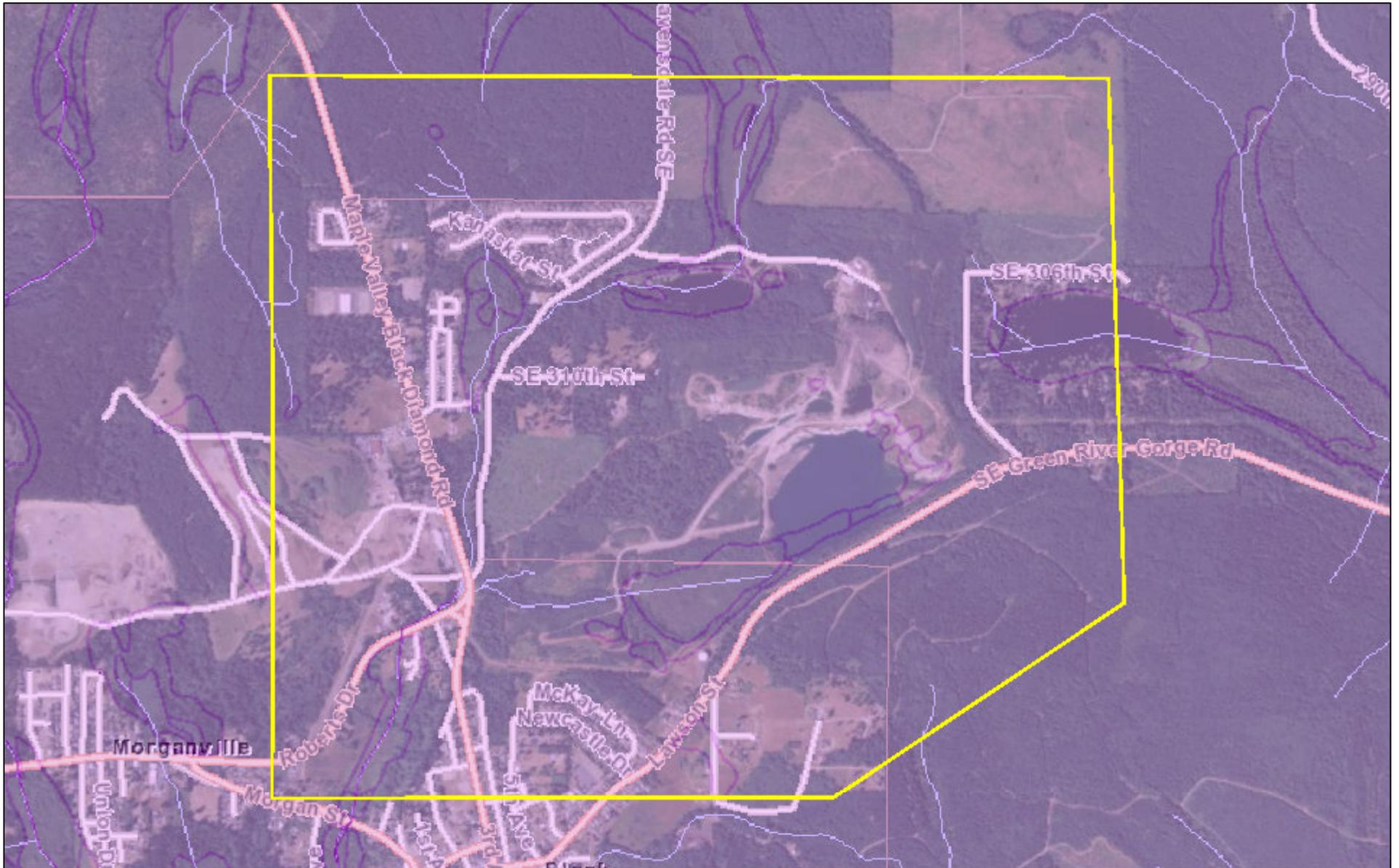
Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa.gov	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat http://www.ecy.wa.gov	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
Resident Coastal Cutthroat Oncorhynchus clarki	FISHDIST 25729	Occurrence/Migration Occurrence/migration http://wdfw.wa.gov/wlm/diversty/soc/soc.htm http://wdfw.wa.gov/publications/pub.php?	NA	N/A N/A PHS LISTED	N AS MAPPED	Lines
Waterfowl Concentrations	LAKES WITH WATERFOWL PHSREGION 902790	Regular Concentration Regular concentration http://wdfw.wa.gov/publications/pub.php?	1/4 mile (Quarter)	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons
Wetlands	SOOS CREEK WETLANDS PHSREGION 902538	Aquatic Habitat N/A http://www.ecy.wa.gov	1/4 mile (Quarter)	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons

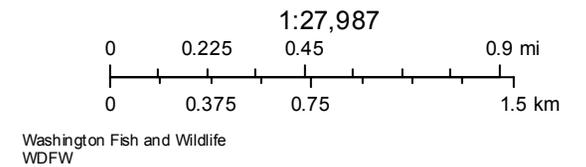
DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

WDFW Test Map



March 3, 2015

- | | | | | | |
|---|----------------------|---|-----------|---|----------|
|  | PHS Report Clip Area |  | AS MAPPED |  | TOWNSHIP |
|  | PT |  | SECTION |  | QTR-TWP |
|  | LN | | | | |





IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF SURFACE MINING

Reclamation and Enforcement

1999 Broadway, Suite 3320

Denver, Colorado 80202-5733

December 5, 2000

WA-0007

National Marine Fisheries Service - HCD Building #1
Attn: Mr. Dan Tonnes
7600 Sand Point Way NE
Seattle, Washington 98115

RE: Informal Section 7 Consultation - Biological Assessment for Pacific Coast Coal
Company's Revised Final Cut Lake Proposal - John Henry No. 1 Mine, King County,
Washington

Dear Mr. Tonnes:

Last spring the Office of Surface Mining (OSM) submitted to your office a Biological Assessment (BA) and requested the initiation of informal Section 7 consultation for the federally threatened Puget Sound chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*O. kisutch*), a candidate species (see April 13, 2000, memorandum from OSM). This BA was for Pacific Coast Coal Company's (PCCC) proposal to add approximately 58 acres to the existing John Henry No. 1 Mine permit area and revise their reclamation plan to replace what was once "Mud Lake" and its associated wetlands with a 33.7-acre surface area, deep water, final cut lake. At this time we would like to submit a new BA for the subject species that reflects PCCC's revised proposal to instead create a lake upstream of the existing Mud Lake and associated wetlands.

OSM has requested additional information from PCCC that we believed was necessary to informally consult with your agency and make determinations of effect for the subject species. Per our request we have received and attached a BA of the potential effects of PCCC's revised proposal on the Puget Sound chinook salmon and the coho salmon (see Attachment 2), which PCCC prepared according to the National Marine Fisheries Service's "A Guide to Biological Assessments," revised March 23, 1999; and a BA supplement (see Attachment 1).

Based on this new information, OSM requests your concurrence on the resulting determination that PCCC's revised proposal may affect but is not likely to adversely affect the Puget Sound chinook salmon or result in the destruction or adverse modification of its critical habitat; and, is not likely to jeopardize the coho salmon.

If you have any questions regarding this Biological Assessment and the request for your concurrence, or the mining operations at the John Henry No. 1 Mine, please contact me at (303) 844-1400, extension 1472.

Sincerely,

A handwritten signature in black ink that reads "Sandy Vana-Miller". The signature is written in a cursive, flowing style.

Sandy Vana-Miller
Wildlife Biologist
Program Support Division

Attachments (2)

cc: Glen Waugh, WOLY
Joe Wilcox, PSD

<Attachment 1>

The following information, submitted by Pacific Coast Coal Company (PCCC) to the Office of Surface Mining (OSM) in a March 29, 2000, memorandum and then supplemented in October 2000, reflects the new, proposed location for the Final Cut Lake. It is provided here as supplemental text for the Biological Assessment (BA) in Attachment 2.

Background

The listing of the Puget Sound 'ESU' chinook salmon (*Oncorhynchus tshawytscha*) as a threatened species protected by the Endangered Species Act (ESA) prompted OSM's request for additional and updated information regarding fish and wildlife related to mining at John Henry (an 'ESU' or 'Evolutionarily Significant Unit' being a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout). The OSM also recommended that additional information be submitted related to the Puget Sound/Strait of Georgia ESU coho salmon (*O. kisutch*), which was designated as a candidate for listing by the National Marine Fisheries Service (NMFS). Although there is no legal requirement to protect this species under the ESA, PCCC has included relevant information regarding coho runs in the event the species is eventually listed.

The primary impact from PCCC's proposal is a reduction in flow from Mud Lake Creek for approximately two years while the proposed final cut lake is filling. The first part of PCCC's response, which discusses the potential impacts of such action on the migration of both the chinook and coho salmon, is presented below in narrative form to provide an overall understanding of the impacts from the project. This information was then incorporated into a BA in Attachment 2 as a stand-alone document in a general format recommended by the NMFS.

Water Flow

Direct Impact From Lake Fill. The discussion on water quantity impacts contained in Second Amendment to PHC (Appendix VI-1a of the Mine's Permit Application Package [PAP]) is not entirely correct and misrepresents the direct impact of reduction in flow from Mud Lake Creek on Ginder Creek. In that discussion actual water flow data from Mud Lake Creek over the period 1993-1997 was correctly used to estimate the impacts from the Mud Lake Creek watershed. That analysis shows total flow of 2.00 cfs with 1.05 cfs average flow into the new lake and 0.95 cfs residual flow through Mud Lake Creek while the lake is filling. These numbers are based on actual conditions from 1993-1997 and should reasonably reflect future conditions.

Original estimates for average flow from both Mud Lake Creek and Ginder Creek watershed were presented in the Determination of Hydrological Consequences prepared by Systems Architects Engineers Inc., P.S. Those flow estimates were based

on USGS regression models using drainage area and average precipitation. The model results were then correlated with the stream flow record at Big Soos Creek located down drainage from the mine site. The correlation was made using watershed area proportioning techniques. Average annual flow in Ginder Creek was estimated at 2.5 cfs, flow into Ginder Lake was estimated at 0.2 cfs and average annual flow in Mud Lake Creek estimated at 1.3 cfs.

The 1993-97 period used to estimate flow from Mud Lake Creek showed actual flows of 1.99 cfs. PCCC does not directly monitor the flow in Ginder Creek but does monitor the flow into Ginder Lake. Flow into Ginder Lake averaged 0.8 cfs over the same five-year period. Combined flow of flow through Mud Lake Creek and into Ginder Lake was 2.8 cfs compared to estimated (from the regression analysis) combined flow of 1.5 cfs. This represents an 87 percent increase of predicted flow over actual for these two points where flow is measured. It is logical therefore, based on the relative size of the watersheds, that a proportional increase in Ginder Creek flow also occurred during the same period. Applying the factor determined for Mud Lake and the flow into Ginder Lake to predicted flow for Ginder Creek results in average annual flow of 4.67 cfs in Ginder Creek above its confluence with Mud Lake Creek.

Thus the reduction in annual average flow in Ginder Creek at its confluence with Rock Creek due to lake filling under the new proposal is 15.6 percent compared to 25 percent under the previous BA submittal (rather than 37 percent as earlier reported). The correct comparison is now 6.66 cfs ($1.67+0.32+4.67$) before fill, with 5.62 cfs ($0.32+.63+4.67$) during the fill. Appendix VI-1a of the PAP will be amended to reflect this more accurate comparison.

Lake Sawyer Water Balance. In January 1997, King County Surface Water Management (SWM) issued the Draft Lake Sawyer Management Plan (LSMP). This plan was funded by SWM, Washington Department of Ecology (DOE) and the U.S. Environmental Protection Agency (EPA). The study and plan were partially in response to adverse water quality impacts that resulted from the City of Black Diamond's failed wastewater treatment system that operated between 1983 and 1992. That system was located in Black Diamond near the head of Rock Creek. The Final LSMP was issued in 2000 and is available upon request from Glen Waugh, OSM - Olympia Office.

The LSMP provides an understanding of the local water budget and also addresses the impacts of water flows on the migration of coho salmon. A complete copy of the draft plan was provided in OSM's April 19, 2000, submittal to your office. Also provided were two relevant appendices, Appendix C - Modeling and Water/Nutrient Budget Methods and Assumptions and Appendix H - Timing of Juvenile Coho Salmon Emigration from the Lake Sawyer Drainage Basin. These documents are important in assessing potential impacts on coho salmon from a temporary diversion of water flow from a portion of Mud Lake Creek. Also attached were the daily flow data used to develop the Lake Sawyer Water Budget.

King County collected flow information for Rock Creek almost continuously from January 1, 1993 through April 23, 1995. During this two year period average mean flow in Rock Creek was 6.69 cfs while that from Mud Lake Creek during the same period was 1.30 cfs. Considering that the Rock Creek watershed is 2,532 acres and Mud Lake Creek watershed is 442 acres this is a reasonable correlation based on watershed proportioning. Apparent flow in Rock Creek is probably somewhat understated due to some subsurface flows through sand and gravel as Rock Creek approaches Lake Sawyer. To better understand the potential impact on Rock Creek during the critical flow months of October through May, Table 1 shows the impacts on flow if the final cut lake had been filling during the time when comparable flow data is available. Table 1 shows that average flow in Rock Creek during the critical months would have decreased 10.6 percent from 9.83 cfs to 8.78 cfs.

Covington Creek Flows. According to the LSMP the average mean flow through Lake Sawyer is 29.2 cfs. 72 percent of this, or approximately 21.0 cfs, is over the outlet weir to Covington Creek during the months of high flow (usually mid November through mid April). The balance is primarily lost through seepage through gravel soils. Much of the subsurface flow eventually comes back into Covington Creek. Assuming conservatively that Mud Lake filling only impacts the direct flow of Covington Creek (and not the subsurface flow), the average flow during this period will be reduced 5.0 percent to 19.95 cfs.

Big Soos Creek Flows. To examine the potential impact of reduced flow on chinook runs up Big Soos Creek and partially up Covington Creek we've compared the diminished Mud Lake Creek flow with that measured by the USGS just above the salmon hatchery on Big Soos Creek. Data for the same period examined for the Rock Creek analysis is also presented in Table 1 and shows that flow through Big Soos Creek would have decreased 0.9 percent from 121.49 cfs to 120.45 cfs. Historic and real time flow information for Big Soos Creek is available on the Internet at <http://waterdata.usgs.gov/nwis-w/WA/>.

Salmon Migration

Green River Chinook. The Green River chinook run is a late summer run and is a component of the Puget Sound chinook run. The run usually commences in late August and is finished by October. The run on Big Soos Creek is comprised of both hatchery and wild stocks. When the hatchery quota is filled, fish are allowed to bypass the hatchery and spawn upstream. Three experts confirmed that some chinook will spawn in the lower reaches of Covington Creek and all agree that it is physically impossible for the chinook to reach Lake Sawyer because upper Covington Creek is either dry or contains extremely low flows in the August through October spawning period. Experts with knowledge concerning the Big Soos chinook run include:

Table 1
Comparison of Relevant Flows (Revised Plan)
From Information Obtained by King County 1993-1995

	<u>Mud Lake Creek</u>			<u>Rock Creek</u>		<u>Big Soos Creek</u>	
	<u>Full Flow</u>	<u>Lake Fill</u>	<u>Flow During Fill</u>	<u>Full Flow</u>	<u>Flow During Fill</u>	<u>Full Flow</u>	<u>Flow During Fill</u>
Jan-May 1993	2.28	1.92	0.37	10.10	8.18	131.78	129.87
Oct 93-May 94	0.95	0.80	0.15	8.93	8.13	104.85	104.05
Oct 94-Apr 95	2.86	2.40	0.46	13.94	11.55	172.82	170.42
Average Flow During Spawn and Migration	1.76	1.05	0.71	9.83	8.78	121.49	120.44
Percent Reduction in Flow:					10.7%		0.9%

Name	Title	Organization	Telephone No.
Ted Muller	Regional Habitat Program Manager	Washington DFW	(425) 775-1311
Tom Cropp	District Fish Biologist	Washington DFW	(253) 848-0540
Rod Malcolm	Senior Habitat Biologist	Muckelshoot Indian Tribe	(252) 939-3319 Ext. 119
Tom Nelson	Basin Biologist	King County SWM	(206) 296 8012

According to Mr. Cropp, the juvenile chinook are hatched and migrate out of the basin and into the Green River and eventually Puget Sound by May. He also stated that there probably isn't a genetic difference between the hatchery and naturally spawned chinook in Big Soos and Covington Creeks. He estimates that approximately 60 percent of the run are hatchery and 40 percent wild. Both Mr. Cropp and Mr. Malcolm stated that the Green River chinook run is considered healthy and is not declining.

With the exception of Mr. Nelson, the experts listed above have directly participated in field surveys for salmon in the Big Soos Basin of the Green River Watershed. They have also conducted surveys and are knowledgeable of the coho run through Lake Sawyer as well as the unique characteristics of Rock Creek. Mr. Muller is the regional habitat biologist for WDFW and has personally surveyed Rock Creek. He stated that he observed that Rock Creek had little surface flow during the dry summer months and thinks that this is caused by porous gravel soil that the creek passes over before it reaches Lake Sawyer. Mr. Muller stated he conducted an electroshock survey for chinook and has observed them in Covington Creek for approximately three miles. He concluded that low flow through a large wetland on Covington Creek acts as a barrier to chinook in September and October. By the time the coho run occurs, water flow through the wetland is sufficient to allow passage.

Lake Sawyer Coho. In addition to the above listed experts, Patrick C. Trotter is another expert with knowledge regarding the Lake Sawyer coho run. Dr. Trotter can be reached at (206) 725-7648 and was the lead scientist for the study of juvenile coho emigration presented as Appendix H of the LSMP. This coho run is a winter run that has adapted to the limited surface flows from Lake Sawyer into Covington Creek. According to Dr. Trotter the run is primarily destined for Ravensdale Creek although some spawning may occur in Rock Creek. He has never observed spawning pairs in Rock Creek. The hatchery on Big Soos Creek also intercepts a portion of the coho run and raises juvenile coho in addition to juvenile chinook. The WDFW has planted hatchery-raised juvenile coho in Rock Creek on a regular basis in an attempt to establish a natural run in the Rock Creek sub-basin. In spite of these efforts there is no evidence that these juvenile coho survive or if they return to Rock Creek. It is

problematic that this run, if it exists, would be protected by an ESA listing since it doesn't appear to be sustainable without hatchery support according to Dr. Trotter.

The timing of the coho run is dependent on the initiation of flow in the fall over a low dam located at the Covington Creek outlet of Lake Sawyer. This dam and associated fishway were constructed in 1954 to restore Lake Sawyer to its original level after a real estate developer attempted to lower the lake to create more saleable land by destroying a natural dam. The dam partially controls the lake level. The lake level drops below the dam spillway in April and resumes flow over the spillway after normal rains that occur in November or December. Until such high flows resume, the dam is a total barrier to fish passage.

The migration and spawning habits of this coho run are relatively well known through the efforts of Dr. Trotter and others. What is not so well known is the emigration pattern of the juvenile coho. One theory is that the juvenile fish remain in Ravensdale Creek or Rock Creek for over a year before smolts emigrate through the lake and down Covington Creek. This is a normal pattern for coho in most river systems. Evidence gathered by Dr. Trotter and others (see Appendix H of the LSMP) support the alternative theory that, in the case of Lake Sawyer coho, young-of-the-year (Y-O-Y) fish emigrate soon after they are hatched and don't remain in the Lake Sawyer system for rearing.

Ravensdale Creek offers excellent spawning and rearing habitat and is the primary destination for the run. The temporary diversion of water to fill the final cut lake will not have any effect on that stream. Rock Creek offers good salmonid habitat during most of the year according to the experts consulted. However, according to the data and Mr. Muller's (and others) observations, during unusually dry weather conditions, surface flow from Rock Creek to Lake Sawyer ceases or is severely restricted. This was confirmed by the monitoring conducted by King County in August 1994 when there was almost no flow. Records show Mud Lake Creek was still flowing during that month confirming that there is considerable subsurface flow through the sands and gravels underlying Rock Creek.

Impacts on Salmon From Lake Filling

The impacts of filling the Final Cut Lake at the John Henry Mine on the Green River chinook run are minimal. That run spawns in Big Soos and the lower reaches of Covington Creek between August and October. During August and September Mud Lake Creek normally does not flow. It begins some flow in October although all that flow is retained in Lake Sawyer and is not released downstream until November or later. Juvenile chinook are hatched and spend the high flow months in Big Soos and Covington Creeks before emigrating to salt water. Filling has the potential to reduce Covington Creek flow by 5.0 percent from 21 cfs to 19.95 cfs. The impact on Big Soos Creek during the winter high flow months is even less with the potential for a 0.9 percent reduction in flow from 121.5 cfs to approximately 120.45 cfs. The consensus of

the various experts consulted is that filling Mud Lake should not have an adverse impact on the spawning and emigration of Green River chinook.

Lake filling should not have a material impact on the Lake Sawyer coho salmon run. This run is primarily destined for Ravensdale Creek. Water flow in Ravensdale Creek is not impacted by the Mud Lake Creek drainage. Covington Creek, through which the coho must pass, may show a reduction in flow of 5.0 percent during the winter and early spring months as noted above. According to the experts consulted, this will not impair the migration of adult coho in the November-January period or emigration of juvenile coho in March through May. Even if it is determined that WDFW has been able to establish a sustainable run in Rock Creek a reduction in flow from 9.83 cfs to 8.78 cfs should not adversely affect the run. In the long run, water storage in the new lake during wet conditions has the potential to help sustain flows in Rock Creek during dry months.

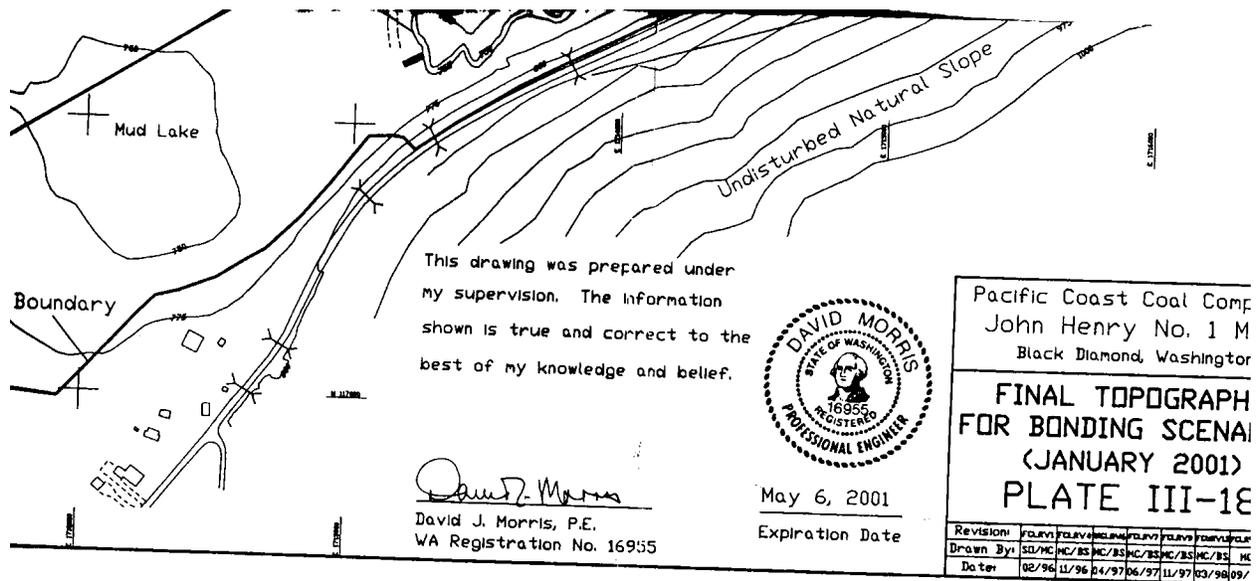
Recent Fish and Wildlife Survey

King County issued a Draft Environmental Impact Study (DEIS) for the Maple Ridge Highlands Subdivision on December 3, 1999 (the Final EIS was then issued May 4, 2000). This project covers 720 acres and is located approximately two miles north of the John Henry mine site. The site partially drains into Ravensdale Lake and Ravensdale Creek. In association with the State environmental review process, surveys for birds, mammals, reptiles and amphibians began on May 6, 1999 and are ongoing. This work is under the direction of Shapiro and Associates, Inc. Survey results are summarized in the DEIS text and provided in more detail as Appendix F of the DEIS. The results and conclusions are consistent with those developed for the John Henry mine site in the early 1980's. This is to be expected because the drainage area in question is adjacent to the Ginder Lake drainage portion of the John Henry mine site.

It should be noted that the northern area of the Maple Ridge project drains into Rock Creek. This Rock Creek is distinct and separate from the Rock Creek that flows into Lake Sawyer. In the DEIS that Rock Creek is often referred to as the Cedar River Rock Creek sub-basin as opposed to the Green River Rock Creek sub-basin that is the focus of downstream drainage from the John Henry mine site. The Cedar River Rock Creek is high quality habitat for salmon spawning and supports runs of Sockeye, coho and chinook salmon as well as steelhead and cutthroat trout. Because of water withdrawals by the City of Kent, the stream is considered impaired. These withdrawals reduce annual average flow from 7 cfs to 2 cfs.

The DEIS addresses the Lake Sawyer coho run and Ravensdale Creek. Survey information and flow estimates were not presented in the DEIS but are contained in the Preliminary Draft Master Drainage Plan.

PLEASE NOTE THE FOLLOWING MAP OR MAP(S) ARE PART OF THIS DOCUMENT BUT BECAUSE OF THEIR SIZE THEY ARE UNABLE TO BE SCANNED INTO THE DOCUMENT.





Pinkham, Gretchen <gpinkham@osmre.gov>

Fwd: Request for additional letter of concurrence for the PCCC John Henry No. 1 Mine project.

Vasquez, Edward <evasquez@osmre.gov>
To: "Pinkham, Gretchen" <gpinkham@osmre.gov>

Tue, Jul 11, 2017 at 7:26 AM

Hi Gretchen, below is the response from NOAA concerning the JH EA.

—— Forwarded message ——

From: Michael Grady - NOAA Federal <michael.grady@noaa.gov>

Date: Thu, Mar 30, 2017 at 1:38 PM

Subject: Request for additional letter of concurrence for the PCCC John Henry No. 1 Mine project.

To: evasquez@osmre.govCc: Frankie Chavez <Frankie.Johnson@noaa.gov>, Jennifer Quan - NOAA Federal <jennifer.quan@noaa.gov>, Michael Grady <michael.grady@noaa.gov>

Mr. Vasquez.

Thank you for your recent submittal of the amended project description for the John Henry No. 1 Mine project. I have reviewed all of the documents you submitted to our Lacey Office on 21 February 2017. Based on the information you provided, the 28 June 2001 Letter of Concurrence (WSB-99-411) is still valid for the revised project components you describe. Your amended project description and actions at the mine are consistent with the parameters we discussed in our 28 June 2001 Letter of Concurrence and cover the same action (permit) area, acreage, listed species and critical habitat. In addition, the conservation measures identified in the 28 June 2001 Letter of concurrence will still apply and we anticipate will be implemented as part of the amended project description.

Should you have any questions or concerns, please feel free to contact me at: 206-526-4645 or michael.grady@noaa.gov.

Thank you.

Michael Grady

NOAA Fisheries-West Coast Region (Sand Point)

—
Ed Vasquez, Ph.D.
Ecologist
Western Region Program Support Division
Indian Programs Branch
Office of Surface Mining, Reclamation and Enforcement

3-66

1999 Broadway, Suite 3320
Denver, Colorado 80202-3050

303-293-5081 (Office Voice)
303-293-5017 (Office Fax)



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

December 5, 2000

WA-0007

Ms. Bobbi Barrera
U.S. Fish and Wildlife Service
Western Washington Office
510 Desmond Drive S.E., Suite 102
Lacey, Washington 98503

RE: Threatened and Endangered (T&E) Species Information for Pacific Coast Coal Company's Revised Final Cut Lake Proposal - John Henry No. 1 Mine, King County, Washington

Dear Ms. Barrera:

Last spring the Office of Surface Mining (OSM) submitted T&E species information to your office and requested your concurrence on effect determinations for the federally listed bald eagle (*Haliaeetus leucocephalus*) and bull trout (*Salvelinus confluentus*); the candidate species, Oregon spotted frog (*Rana pretiosa*); and several species of concern that may occur in the vicinity of the John Henry No. 1 Mine. This T&E species information was for Pacific Coast Coal Company's (PCCC) proposal to add approximately 58 acres to the existing John Henry No. 1 Mine permit area and revise their reclamation plan to replace what was once "Mud Lake" and its associated wetlands with a 33.7-acre surface area, deep water, final cut lake (see April 19, 2000, memorandum from OSM). At this time we would like to submit species-specific information for PCCC's revised proposal to instead create a lake upstream of the existing Mud Lake and associated wetlands.

As you are aware, on September 24, 1996, the U.S. Fish and Wildlife Service (the Service) issued a Formal Section 7 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations Under the Surface Mining Control and Reclamation Act (SMCRA) of 1977 (1996 Biological Opinion). This non-jeopardy opinion covers the continuation and approval of surface coal mining and reclamation operations under Federal and State regulatory programs adopted pursuant to the SMCRA. It addresses all present and future Federally listed and proposed species and designated or proposed critical habitats. It also includes an Incidental Take Statement that requires compliance with its implementing terms and conditions.

OSM has requested additional information on the revised proposal from PCCC that we believed was necessary for your agency to review in accordance with SMCRA and its implementing regulations (30 CFR) and the 1996 Biological Opinion. Per our request we have received and

attached information from PCCC concerning the potential effects of their revised proposal on the subject species (see Attachment 1).

Based on this information, OSM has determined that PCCC's revised proposal may affect but is not likely to adversely affect the bald eagle or bull trout, or result in the destruction or adverse modification of their critical habitats; and, is not likely to jeopardize the Oregon spotted frog. We request your determination as to whether or not the development of species-specific protective measures, as specified in the terms and conditions of the 1996 Biological Opinion's Incidental Take Statement, will be necessary.

If you have any questions regarding the attached species information and our request for your determination, or the mining operations at the John Henry No. 1 Mine, please contact me at (303) 844-1400, extension 1472.

Sincerely,



Sandy Vana-Miller
Wildlife Biologist
Program Support Division

Attachment

cc: Glen Waugh, WOLY
Joe Wilcox, PSD

ATTACHMENT 1

Pacific Coast Coal Company (PCCC) provided the following project information for the revised proposal at John Henry Mine No. 1; and, species-specific information regarding the federally listed bald eagle (*Haliaeetus leucocephalus*) and bull trout (*Salvelinus confluentus*), the candidate species, Oregon spotted frog (*Rana pretiosa*), and several species of concern as requested by the U.S. Fish and Wildlife Service (USFWS) (see February 3, 2000, memorandum from the USFWS to Office of Surface Mining [OSM]).

Description of the Project

The subject project is an active surface coal mine approved for construction in 1986. The mine has operated continuously since 1986 although production is relatively low at the present time because of adverse market conditions. The coal reserves were originally estimated to be over 3.5 million tons. Approximately 1.9 million tons have been mined, resulting in remaining reserves of approximately 1.6 million tons. The mine is designed to produce approximately 250,000 tons per year. The timing of mining remaining reserves depends on market conditions.

The PCCC proposes to add approximately 58 acres to the existing permit area and revise the reclamation plan to create a lake upstream from existing wetlands as part of the post mining land use. The new lake will have 33.7 surface acres, store approximately 1,773 acre feet and will take approximately two years to fill. Approximately 55 percent of the Mud Lake watershed will be diverted to fill the new lake. The lake has already been partially filled, although it may be pumped dry to mine additional coal; all calculations assume that the pit is void of water. The geology has been extensively studied; no measurable groundwater has been noted during 14 years of mining and no aquifers have been identified. All water flowing into the lake will either be retained or will flow out through Mud Lake Creek. The currently approved reclamation plan is to fill the entire mine pit with overburden spoil material that is presently placed in four external piles. Adding 58 acres to the permit will make the permit boundary consistent with the project/lease boundary and will have no effect on downstream flow or threatened or endangered species. The temperature of water flowing from the lake is expected to be lower than receiving streams based on the depth of the lake and depth of surrounding water bodies from which the receiving streams originate.

The revised plan is similar to the final mine reclamation plan reviewed through an EIS process completed by King County under the Washington State Environmental Policy Act. A parallel EIS was completed by OSM under the National Environmental Policy Act (NEPA). Both EISs were completed in 1985 after full consultation with all concerned federal, state and local governmental agencies.

At the recommendation of the Muckelshoot Indian Tribe, PCCC engaged experts to conduct baseline fishery, benthic and stream assessment studies of the three creek drainages

impacted by mining (Shepard, et al.). All surface water leaving the mine site is monitored in accordance with the Surface Mining Control and Reclamation Act (SMCRA) of 1977 and the Clean Water Act. The Washington Department of Ecology administers the latter law through an NPDES permit. That permit requires water monitoring of any water discharge leaving the mine site.

If the revised proposal is approved, the mine will be reclaimed to a final cut lake and associated riparian area. This will require moving approximately 50 percent of overburden material from four external overburden stockpiles back to the mine pit. The remaining overburden will then be graded to meet approximate original contour standards of SMCRA. The lake will require approximately two years to fill under normal precipitation conditions if water from the entire watershed above the new lake is diverted. Mud Lake and the portion of Mud Lake watershed below the new lake outlet will continue to contribute flow into Mud Lake Creek as the lake fills.

If the subject proposal is not approved, the reclamation plan requires the pit to be completely filled with external spoil. Topsoil will be placed over the regraded overburden and the surface land planted as a Douglas fir forest. This plan will also require some flow from Mud Lake Creek to be diverted until the replaced overburden material is saturated. Impacts of flow under this option have not been determined, although such short-term impacts will likely be less severe than filling a final cut lake in terms of amount of water temporarily diverted and the duration of that diversion. Long-term impacts may be more adverse because surface water will drain immediately compared to the potential to moderate the flow through a final cut lake.

Description of the Project Area

The project consists of 500 acres located in Section 12, T 21 N, R 6 E, King County. It is partially located within the City of Black Diamond as shown in Plate III-18 of the Permit Application Package (PAP)(see Figure 1). The legal description is contained in Permit WA-007C. Three drainages originate on the mine site; two drainages, Mud Lake and Ginder Lake are part of the Rock Creek watershed and will be impacted by reclamation activities associated with this proposal. The third drainage, Lake 12, will not be impacted by the revised proposal.

Environmental Baseline

The environmental baseline conditions at the John Henry Mine were thoroughly described in the EIS prepared by OSM for the mine, which was issued in February 1985 (OSM-EIS-13). Environmental baseline conditions for the 8,310 acre Lake Sawyer watershed were described in the Draft Lake Sawyer Management Plan (King County Surface Water Management, 1997), which was included in OSM's April 19, 2000, submittal to your office (a final plan was issued in 2000 and is available from Glen Waugh, OSM - Olympia Office).

Updated Fish and Wildlife Assessment

The Washington Department of Fish and Wildlife (WDFW) maintains a geographic information system of fish and wildlife data. The data sets covered by WDFW represent their knowledge of fish and wildlife resources and occurrences based on research and field surveys conducted over the past 20 years. A habitat and species map for Section 12 and adjacent sections was requested and is enclosed along with the accompanying habitats and species report of the vicinity of the John Henry Mine (see Appendices A-C from April 19, 2000, submittal by OSM). The maps and reports confirm prior reports that no sensitive, threatened or endangered wildlife species listed by the state or federal governments regularly use the mine site.

Bald Eagle. To address the USFWS' concern regarding local bald eagle habitat, PCCC has enclosed a similar WDFW map and report provided by the land owner, Palmer Coking Coal Company, in 1995 (see Appendix B from April 19, 2000, submittal by OSM). This was issued in conjunction with a forest practice application for tree thinning in Section 11, which is immediately west of the John Henry Mine. That report identified a bald eagle nest near the southwest shore of Lake Sawyer approximately 2 miles from the John Henry Mine. Every year since, one or more adult bald eagles and young have been observed at this location; 2 adults with one young were observed in 1999 (see Appendix A). Continuing mining activities including lake filling will not affect this nest. There are no bald eagle nests on the mine site and limited roosting opportunities; however, bald eagles have been observed flying over the mine site. Reclaimed areas of the mine offer enhanced foraging opportunities for bald eagles and other raptors. As the reforested area matures the foraging potential declines. Construction of the final cut lake will provide additional open water habitat and potentially increase foraging opportunities for bald eagles. Therefore, the revised proposal is not likely to adversely affect and will likely have beneficial effects on the bald eagle.

Bull Trout. This species has never been observed in the Lake Sawyer system. According to Ted Muller of the WDFW, there are no documented sitings of bull trout in the lower and middle portions of the Green River system. Bull trout require cold clean water and normally reside at much higher elevations according to Mr. Muller. He stated he has personally electroshock-surveyed the Green River system up to Howard Hanson dam and has not observed any bull trout or Dolly Varden trout. Therefore, the revised proposal is not likely to adversely affect the bull trout.

Candidate Species. Candidate species of concern that have the potential to occur in the area according to the USFWS include the **Oregon spotted frog**. Oregon spotted frogs are highly aquatic, inhabiting wetland edges of ponds, streams and lakes. Oregon spotted frogs are rare in Western Washington. Before 1940, the Oregon spotted frog was found in portions of the Puget Sound Lowlands and the Willamette Valley in Oregon. The only recent siting was in Thurston County where one was captured in 1990. This was the only confirmed siting in Western Washington or Oregon in more than 23 years (Leonard et al., 1993). None have been observed in

the vicinity of the John Henry Mine. They are unlikely to reside in the Mud Lake wetland because it contains no open water or lake. Therefore, the revised proposal is not likely to jeopardize the Oregon spotted frog and, by creating habitat more conducive to its survival, will likely result in beneficial effects on the species.

Species of Concern. The USFWS identified several Species of Concern that may occur in the vicinity of the John Henry Mine. Three of these are bats including the **long-eared myotis** (*Myotis evotis*), **long-legged myotis** (*M. volans*), and **Pacific Townsend's big-eared bat** (*Corynorhinus townsendii townsendii*). These bat species display similar reproduction, foraging, and hibernation behavior with some variations (Christy and West, 1993). Roosts and hibernacula are critical components for bat habitat and play a major role in determining the abundance and distribution of these species. Breeding females and juveniles often roost communally in large cavities and crevices that are natural or manmade. Because of the need for constant temperature and humidity a limited number of maternity roosts are available. Maternity roosts have been observed in caves, attics, hollow trees, under bridges and in other cavities.

Old-growth forests appear to provide higher quality roost sites than younger forests (Thomas and West, 1991). Snags, bird holes and hollow interiors also provide good sites for the large maternity colonies that Myotis bats commonly form in spring (Christy and West, 1993). Conditions at the John Henry Mine site, including residual third growth mixed forest, are not conducive to formation of bat maternity roosts. As the reclaimed forest land matures it may offer more habitat potential for such roosts.

The **Pacific fisher** is a subspecies of the more common fisher (*Martes pennanti*). Fishers inhabit mature forests, nesting in hollow trees or rocky crevices, Pacific fisher live in dense forested habitat so it is unlikely they would be in the vicinity of the John Henry Mine although they are known to occur in wetland and riparian habitats. Extensive surveys in Washington state from 1990 to 1997 failed to confirm the existence of a fisher population in the state (Raedeke, 1997).

Olive-sided flycatchers (*Contopus borealis*) are associated with conifer forests and woodlands. The species is relatively common in Northwest coniferous forests and has potential to associate with reclaimed forest habitat as it matures.

Northwestern pond turtles (*Clemmys marmorata marmorata*) occur at elevations ranging from sea level to 5,400 feet where they inhabit marshes, sloughs, moderately deep ponds and small lakes (Washington Department of Wildlife, 1991d). The species was once widely distributed throughout Western Washington, but are now severely restricted in range. Currently, populations in Washington are confirmed only in Klickitat and Skamania Counties (Washington Department of Wildlife, 1991d). No observations of any northwestern pond turtles have been made in King County since 1987. The open water habitat required for this species is lacking in

Mud Lake wetlands because of the relative lack of open water. The reclaimed final cut lake may offer suitable habitat for the species.

Pacific lamprey (*Lampetra tridentata*) and **river lamprey** (*L. ayresi*) migrate upstream to the headwaters of systems to spawn. Spawning areas typically are sand and gravel at the head of riffles in small streams. Adults die after spawning. Pacific lamprey larva live in bottom mud and are filter feeders for five to six years before metamorphosing and becoming parasites on fish that migrate to the ocean (Scott and Crossman, 1973). Suitable fish habitat may occur downstream from John Henry although neither species has been observed in surveys and may face an impassible barrier with the Lake Sawyer dam and fishway.

Northern Goshawk (*Accipiter gentilis*) has not been observed in the vicinity of the John Henry Mine. A State Species of Concern, the goshawk is not known to breed anywhere close to the mine.

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Biological Assessment

Project Description. The project is an active surface coal mine approved for construction in 1986. The mine has operated continuously since 1986 although production is relatively low at the present time because of adverse market conditions. The coal reserves were originally estimated to be over 3.5 million tons. Approximately 1.9 million tons have been mined, resulting in remaining reserves of approximately 1.6 million tons. The mine is designed to produce approximately 250,000 tons per year. The timing of mining remaining reserves depends on market conditions.

Pacific Coast Coal Company (PCCC) proposes to add approximately 58 acres to the existing permit area and revise the reclamation plan to create a lake upstream from existing wetlands as part of the post mining land use. The new lake will have 33.7 surface acres, store approximately 1,773 acre feet and will take approximately two years to fill. Approximately 55 percent of the Mud Lake watershed will be diverted to fill the new lake. The lake has already been partially filled, although it may be pumped dry to mine additional coal; all calculations assume that the pit is void of water. The geology has been extensively studied; no measurable groundwater has been noted during 14 years of mining and no aquifers have been identified. All water flowing into the lake will either be retained or will flow out through Mud Lake Creek. The currently approved reclamation plan is to fill the entire mine pit with overburden spoil material that is presently placed in four external piles. Adding 58 acres to the permit will make the permit boundary consistent with the project/lease boundary and will have no effect on downstream flow or threatened or endangered species. The temperature of water flowing from the lake is expected to be lower than receiving streams based on the depth of the lake and depth of surrounding water bodies from which the receiving streams originate.

The revised plan is similar to the final mine reclamation plan reviewed through an EIS process completed by King County under the Washington State Environmental Policy Act. A parallel EIS was completed by OSM under the National Environmental Policy Act (NEPA). Both EISs were completed in 1985 after full consultation with all concerned federal, state and local governmental agencies.

At the recommendation of the Muckelshoot Indian Tribe, PCCC engaged experts to conduct baseline fishery, benthic and stream assessment studies of the three creek drainages impacted by mining (Shepard, et al.). All surface water leaving the mine site is monitored in accordance with the Surface Mining Control and Reclamation Act (SMCRA) of 1977 and the Clean Water Act. The Washington Department of Ecology administers the latter law through an NPDES permit. That permit requires water monitoring of any water discharge leaving the mine site.

If the revised proposal is approved, the mine will be reclaimed to a final cut lake and associated riparian area. This will require moving approximately 50 percent of overburden material from four external overburden stockpiles back to the mine pit. The remaining overburden will then be graded to meet approximate original contour standards of SMCRA. The lake will require approximately two years to fill under normal precipitation conditions if water from the entire watershed above the new lake is diverted. Mud Lake and the portion of Mud Lake watershed below the new lake outlet will continue to contribute flow into Mud Lake Creek as the lake fills.

If the subject proposal is not approved, the reclamation plan requires the pit to be completely filled with external spoil. Topsoil will be placed over the regraded overburden and the surface land planted as a Douglas fir forest. This plan will also require some flow from Mud Lake Creek to be diverted until the replaced overburden material is saturated. Impacts of flow under this option have not been determined, although such short-term impacts will likely be less severe than filling a final cut lake in terms of amount of water temporarily diverted and the duration of that diversion. Long-term impacts may be more adverse because surface water will drain immediately compared to the potential to moderate the flow through a final cut lake.

Description of the Project Area. The project consists of 500 acres located in Section 12, T 21 N, R 6 E, King County. It is partially located within the City of Black Diamond as shown in Plate III-18 of the Permit Application Package (PAP)(see Figure 1). The legal description is contained in Permit WA-007C. Three drainages originate on the mine site; two drainages, Mud Lake and Ginder Lake are part of the Rock Creek watershed and will be impacted by reclamation activities associated with this proposal. The third drainage, Lake 12, will not be impacted by the subject proposal.

Environmental Baseline. The environmental baseline conditions at the John Henry Mine were thoroughly described in the EIS prepared by OSM for the mine, which was issued in February 1985 (OSM-EIS-13). Environmental baseline conditions for the 8,310 acre Lake Sawyer watershed were described in the Draft Lake Sawyer Management Plan (King County Surface Water Management, 1997), which was included in OSM's April 13, 2000, submittal to your office (a final plan was issued in 2000 and is available from Glen Waugh, OSM - Olympia Office). Appendix H in the Lake Sawyer Management Plan presents a discussion of the winter run of coho salmon that migrates up Ravensdale Creek; Ravensdale Creek is not impacted by the subject proposal.

List of Species. Puget Sound 'ESU' chinook salmon (*Oncorhynchus tshawytscha*) is a Federally threatened species under the jurisdiction of the National Marine Fisheries Service (NMFS)(an 'ESU' or 'Evolutionarily Significant Unit' being a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout). The NMFS determined that listing was not warranted for the Puget Sound/Strait of Georgia ESU coho salmon (*O. kisutch*). However, the ESU was designated as a candidate for listing due to concerns over specific risk factors. Conservation measures for candidate species are voluntary, but recommended by the NMFS. Protection provided to these

species now may preclude possible listing in the future. Although there is currently no legal requirement under the Endangered Species Act (ESA) to protect these species, PCCC is including relevant information regarding coho runs in the event the species is eventually listed.

The Green River chinook salmon run is one component of the Puget Sound chinook. A subset of the Green River run migrate to a fish hatchery located on Big Soos creek. The Washington Department of Fish and Wildlife (WDFW) and the Muckelshoot Tribe jointly determine operational procedures for that hatchery. The outflow of Lake Sawyer is Covington Creek, which is a tributary of Big Soos creek. The Green River chinook run takes place in late summer or early fall. About 60 percent of the run is retained at the fish hatchery. The remaining 40 percent spawn above the hatchery in Big Soos or its tributaries including the lower reaches of Covington Creek. Juvenile chinook are hatched in the late winter and emigrate to salt water via Green River in April and May.

The Lake Sawyer coho run is a winter run that migrates up Big Soos Creek and Covington Creek into Lake Sawyer and eventually up Ravensdale Creek. The timing of the run is weather dependent and begins when water starts flowing over the spillway and through the fishway at a dam that controls the lake level and flow into Covington Creek. Usually the coho reach the Lake in late November and can continue well into March. There may be some coho that spawn in the lower reaches of Rock Creek although the various experts consulted did not confirm this. The experts were unanimous that Ravensdale creek was the primary destination for the run because it offered superior habitat. Rock Creek habitat is considered good for spawning but not for rearing because a portion of the summer flow is subsurface, thereby causing isolated pools to form. These pools heat up, increasing mortality of the juvenile coho. WDFW has, on numerous occasions, planted juvenile coho in Rock Creek in an attempt to enhance the run. These fish were hatched at the Big Soos hatchery. According to WDFW personnel, these efforts have not been successful because of intermittent surface flow during dry weather conditions among other reasons.

According to the experts consulted, the Green River chinook run is healthy and stable. They also agree that the Lake Sawyer coho run is relatively stable and should remain so. King County recently purchased land and conservation easements along most of Ravensdale Creek. The county also recently purchased land in the vicinity where Rock Creek flows into Lake Sawyer. This land will become a new regional county park.

Inventories and Surveys. The WDFW and the Muckelshoot Tribe monitor the Big Soos Creek continuously during the migration. They have recently installed a screw type fish trap above the hatchery to gain a better understanding of the behavior of juvenile fish. Water flow above the hatchery is monitored continuously and reported in real time over the Internet.

The Alpine Fly Fishers Club of Federal Way, Washington has adopted Ravensdale Creek under a King County sponsored program. The club has been monitoring the Lake Sawyer coho run since the early 1990's. Partial results of this monitoring and the surveys made by the club are contained in the Draft Lake Sawyer Management Plan and its Appendix H. WDFW personnel have also completed several fish surveys of both Ravensdale Creek and Rock Creek. It is not apparent that any of this information has been published. Most recently a portion of Ravensdale Creek was surveyed in conjunction with a draft EIS prepared under NEPA for a 720-acre subdivision planned on land north of the creek and approximately 2 miles north of the John Henry mine. The draft EIS was published on December 3, 1999 for the Maple Ridge Highlands; the Final EIS was then issued May 4, 2000. The stream survey and fish and wildlife survey results are contained in public files for the project maintained by King County Department of Development and Environmental Services (DDES).

Analysis of Effects. Based on a review of all relevant and published literature and discussion with knowledgeable biologists including those with WDFW and the Muckelshoot Tribe, the proposal being considered by OSM "may affect but is not likely to adversely affect" the threatened Puget Sound chinook salmon. The same conclusion can be drawn for the Lake Sawyer run of coho salmon, which is a candidate for listing. The primary impact on salmon runs is diminished flow for approximately two years while the new lake is filling.

While the primary impact of the proposal is reduced water flow during high flow periods, the other pathway and indicators suggested by NMFS have been reviewed and are discussed below:

- : **Water Quality:** No differential impacts on water quality during mining or reclamation activities are anticipated. Long-term post mining water quality may be enhanced with the construction of the final cut lake as water runoff from adjacent property during storm events will flow through the lake and sediment will have an opportunity to settle before the water is discharged into Mud Lake Creek. Mud Lake Creek is an intermittent stream and does not flow from August through the middle of October. Diversion of flow during the fall and winter months will have no effect on downstream water temperatures. Because the stream does not flow in hot summer months, it will have no impact on temperature of water in Rock Creek when flow in that stream subsides below the surface in late summer.
- : **Habitat Access:** The proposal will have no impact on downstream habitat access. According to WDFW experts, chinook spawners migrate approximately 3 miles up Covington Creek but are then prevented further access by a large natural wetland and the relatively low water flow that results from the manmade dam on the outlet of Lake Sawyer. During the winter coho migration, Rock Creek has average flow of 9.83 cfs. During the two-year diversion, the flow is reduced to 8.78 cfs. This is

sufficient flow to allow coho spawners access to Rock Creek if it is ever established that they do return in the absence of planting additional hatchery raised juvenile fish.

- : Habitat Elements: The proposal will have no impact on downstream habitat elements including substrate, the amount of large woody debris and pool frequency. Diversion may have a beneficial affect during unusually large storm events by reducing downstream floods that could adversely impact habitat elements.
- : Channel Condition & Dynamics: The proposal will not affect width/depth ratio and may have a beneficial affect on stream bank conditions during unusually large storm events as noted above. There are few if any floodplains in the Big Soos Creek drainage system. Wetlands within the drainage function with normal precipitation and don't rely on flood events to function effectively.
- : Flow/Hydrology: While the lake is filling, flow at the Big Soos monitoring point above the hatchery will decline 1.4 percent from 121.49 cfs to 119.85 cfs during the high flow months of late fall through early spring. According to common sense and the experts, this relatively small decline in flow will have no impact on either the chinook or coho runs. Flow from Lake Sawyer into Covington Creek is totally restricted from April 15th until high water causes flow over the dam spillway in November or December. When the lake is discharging, the flow rate is estimated at 21.0 cfs through the outlet weir according to the Lake Sawyer Draft Management Plan. While the lake is filling this could be reduced 5.1 percent to 19.92 cfs. While this is a more significant impact than at the Big Soos monitoring station it is not expected to affect the chinook run because that run has already spawned by the time Lake Sawyer begins discharging into Covington Creek. A flow of 19.92 cfs will have no adverse affect on the late winter coho run as that run must travel up Ravensdale Creek which has a much lower flow during the winter months than the discharge into Covington Creek. There will be no increase in drainage network due to roads or construction activity. This 5 percent reduction of flow in the upper reaches of Covington Creek during the winter months is not expected to have any notable impact on chinook redds in the lower portion of Covington Creek where the impact will be even less than 5 percent. Nor is this relatively short-term, minor reduction in flow expected to adversely impact habitat components required for incubating eggs.
- : Watershed Conditions: The proposal will have no impact on downstream watershed conditions.

Management Actions Related to the Species. Reduction in flow during the high flow months is the only identified consequence of the proposal that may have an impact on either the Puget Sound chinook or Lake Sawyer coho salmon runs. If it is determined that the effect of reducing flow by 1.05 cfs during the two year fill period is

adverse for any reason, a portion of the flow can be diverted around the lake and into Mud Lake Creek. This will increase the time it will take to fill the lake.

The Mud Lake watershed includes substantial forested land south of the mine permit area. Drainage from this area flows into a clean water inceptor ditch that runs along the south edge of the permit area and is diverted around mine workings and into the Mud Lake drainage. Water intercepted in this ditch represents 45.7 percent of the water scheduled to fill the final cut lake. If mitigation of flow reduction is required, this water can remain in the clean water ditch and continue to flow around mine workings. This would result in flow of 1.43 cfs (0.32 cfs + 1.11 cfs) into Mud Lake Creek with 0.65 cfs remaining to fill the pit. In the alternative, any amount within the range of 0-1.11 cfs can be used to supplement Mud Lake Creek Flow.

Recommendations for Effect Determinations. There would be no impact from filling a final cut lake at the John Henry Mine site on chinook spawning in Big Soos Creek and lower Covington Creek. That salmon run spawns before water is discharged from Lake Sawyer. The impact on juvenile chinook hatching and rearing is either neutral (during normal and low flow years) or positive during flood years when peak flow is reduced. Some excess water that would normally exacerbate the adverse effects on salmon from flooding will remain in the final cut lake. The effect determination should be “may affect, but not likely to adversely affect.”

It is well documented that the primary destination for the Lake Sawyer coho run is Ravensdale Creek. Based on the available information and surveys conducted by the WDFW, the lower portion of Rock Creek is priority habitat and has some presence of coho. However, in spite of extensive efforts to establish a thriving coho run in this section of stream, it has not happened. Experts theorize that the reason for this is that the lower portion of Rock Creek flows through extensive gravels and during the dry season surface flow is impaired or non-existent. There is no evidence that reducing the winter flow in Rock Creek from 9.83 cfs to 8.78 cfs for a two-year period will have any adverse impacts on the establishment of or sustainability of a coho run in Rock Creek. Retention of peak flows during flood conditions may also prevent adverse impacts to stream bed conditions. The effect determination for the coho should also be “may affect, but not likely to adversely affect.”

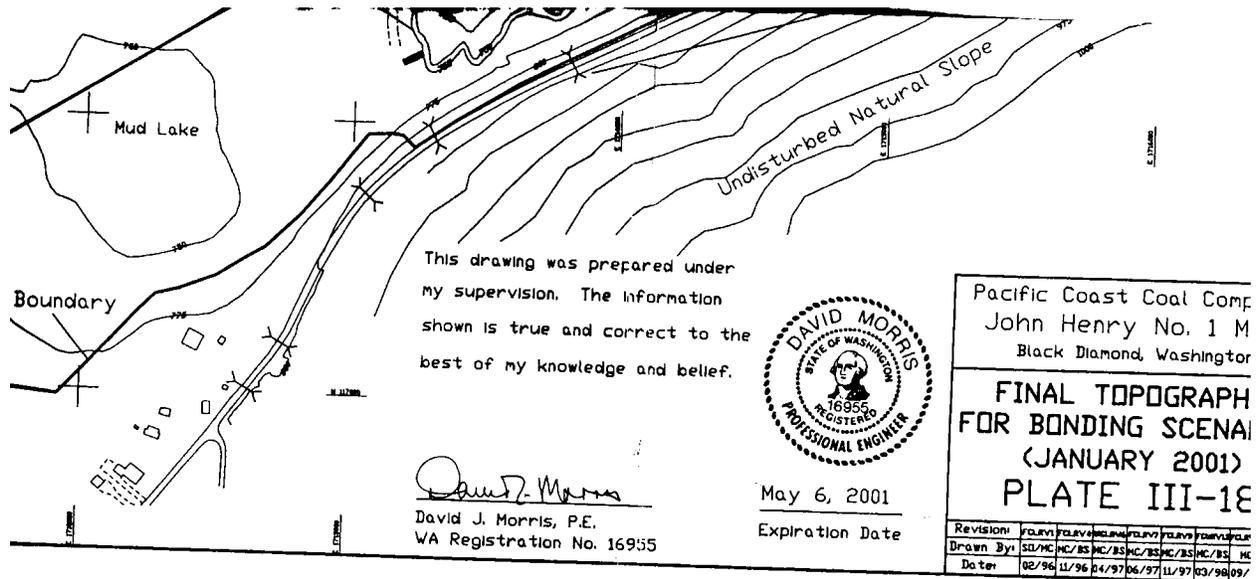
References. The following list of references is a partial list that is still being supplemented. It will be updated as new references are added. Certain key documents are attached to this submittal. Some of the references relate to species listed by the U. S. Fish and Wildlife Service, which are covered under separate correspondence.

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PLEASE NOTE THE FOLLOWING MAP OR MAP(S) ARE PART OF THIS DOCUMENT BUT BECAUSE OF THEIR SIZE THEY ARE UNABLE TO BE SCANNED INTO THE DOCUMENT.





United States Department of the Interior

FISH AND WILDLIFE SERVICE

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01-03-01-01
FEB 27 2001

Memorandum

To: Program Support Division, Office of Surface Mining, Reclamation and Enforcement, Denver, Colorado. Attention: Sandy Vana-Miller

From: Acting Manager, Western Washington Office, Lacey, Washington

Subject: Pacific Coast Coal Company's revised Final Cut Lake Proposal - John Henry No. 1 Mine. FWS Reference #: 1-3-01-I-0902

This responds to your request for informal consultation on the proposed Pacific Coast Coal Company's revised Final Cut Lake Proposal - John Henry No. 1 Mine in King County, Washington. Your letter was dated December 5, 2000, and received in this office on December 7, 2000. In your letter you request U.S. Fish and Wildlife Service (FWS) concurrence with your determination of "may affect, not likely to adversely affect" on bald eagle (*Haliaeetus leucocephalus*) and bull trout (*Salvelinus confluentus*) in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act)(16 U.S.C. 1531 et seq.).

The FWS concurs that the proposed project, as described in your letter and Attachment 1, is not likely to adversely affect the bald eagle or bull trout. Our concurrence is based on information and conservation measures described in Attachment 1 and telephone conversations between Glen Waugh of your staff and Bobbi Barrera of my staff.

This concludes informal consultation pursuant to the regulations implementing the Act, 50 CFR Section 402.13. This project should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; and/or if a new species is listed or critical habitat is designated that may be affected by this project.

If you have further questions about this letter or your responsibilities under the Act, please contact Bobbi Barrera at (360) 753-6048, or John Grettenberger at (360) 753-6044, of this office.


for
Carol Schuler

cc: NMFS, Seattle (D. Tonnes)
OSM, Olympia (G. Waugh)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

June 28, 2001

01-07-06-08

Mr. Joe Wilcox
Department of the Interior
Office of Surface Mining (OSM), Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

Re: John Henry No. 1 Mine, King County, Washington Biological Assessment (NMFS No. WSB-99-411) Endangered Species Act consultation, and Essential Fish Habitat consultation

Dear Mr. Wilcox:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson Stevens Fishery Conservation and Management Act (MSA).

Endangered Species Act

The referenced Biological Assessment (BA) and other supporting documents have been reviewed by the National Marine Fisheries Service (NMFS). You have made the determinations of "may affect, not likely to adversely affect" for Puget Sound (PS) chinook salmon (*Oncorhynchus tshawytscha*), and designated critical habitat. The NMFS has considered the determination of effects under section 7(a)(2) of the ESA, and its implementing regulations (50 CFR Part 402) and concurs with your determination.

The proposed permit action will add 58 acres to the existing John Henry Mine No. 1 permit. This permit will facilitate the filling of an existing "cut lake" with the natural drainage of up-slope surface waters that are presently being diverted around the site. It has been estimated that the lake will be filled over a period of two years, and will divert approximately 1.4 percent of flow by volume in Big Soos Creek, and less than five percent flow by volume in Covington Creek, both of which support naturally spawning chinook stocks. The final cut lake drainage area contributes flows to Lake Sawyer, which eventually drains to Covington and Big Soos Creek. Lake Sawyer is not hydrologically connected via surface waters to Covington Creek during summer and fall low-flow periods. Chinook are likely to construct redds during periods when there will be no surface water influence change from filling of the cut lake.

Because of land-scape changes from past (and on-going) forestry and development in these basins, Covington Creek and Big Soos Creek experience higher winter time flows than pre-development conditions (Williams et al. 1975). As a result, adverse affects (i.e., de-watering of redds) to chinook adults, juveniles and critical habitat are not expected to occur from the decreased winter-time flows in these basins over a period of two years.



Further, the filling of the cut lake will not begin until after December 2001, thus avoiding exacerbation of anticipated low flows in this basin due to recent below average precipitation. To ensure that water quality exiting the lake after it is filled will not compromise downstream chinook habitat, a 150 foot buffer around currently exposed soils of the lake will be planted and maintained by the applicant. Native vegetation, including shrubs, deciduous and coniferous trees, will be planted and managed to ensure 80 percent survival over a period of five years.

In addition, this permit will enable the applicant to move approximately 50 percent of overburden material from four stockpiles (within the 58 acres of the new permit) of soil back to the mine pit. The remaining overburden material will then be graded to meet the approximate original contour standards of the OSM.

NMFS' concurrence with your finding relies on the OSM permit requirement to utilize best management practices for erosion and sediment control, and prepare and implement a spill prevention and containment plan and comply with the technical provisions of a Hydraulic Project Approval (HPA) issued by the Washington State Department of Fish and Wildlife (WDFW). The action area for this project has been defined by NMFS to include the project site downstream to the confluence of Big Soos Creek and the Green River.

We believe that sufficient information was provided to determine the effects of the proposed project on federally listed species and to conclude whether this project is likely to adversely affect PS chinook salmon. Our concurrence is based on the information and on the conservation measures described in the BA and supporting documents.

This concludes informal consultation pursuant to the regulations implementing the ESA, 50 CFR 402.10 and 402.13. This project should be re-analyzed if new information reveals effects of the action may affect listed species or adversely modify critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or adversely modifies critical habitat that was not considered in this consultation; and/or if a new species is listed or critical habitat is designated that may be affected by this project.

Essential Fish Habitat

Federal agencies are obligated, under Section 305(b)(2) of the MSA and its implementing regulations (50 CFR 600), to consult with NMFS regarding actions that are authorized, funded, or undertaken by that agency, that may adversely affect Essential Fish Habitat (EFH). The MSA (§3) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Furthermore, NMFS is required to provide the Federal agency with conservation recommendations which minimize the adverse effects of the project and conserve EFH (MSA §305(b)(4)(A)). This consultation is based, in part, on information provided by the Federal agency and descriptions of EFH for Pacific coast groundfish, coastal

pelagic species, and Pacific salmon contained in the Fishery Management Plans produced by the Pacific Fisheries Management Council.

The proposed action and action area is described above and in the BA. The action areas include habitats which have been designated as EFH for various life stages of chinook, coho (*O. kisutch*) and PS pink salmon (*O. gorbuscha*). Information submitted by the OSM in the BA and associated documents is sufficient for NMFS to conclude that the effects of the proposed actions are transient, local, of low intensity, and are not likely to adversely affect EFH in the long-term. NMFS also believes that the conservation measures proposed as an integral part of the actions would avert, minimize, or otherwise offset potential adverse impacts to designated EFH.

EFH Conservation Recommendations: The conservation measures that the OSM included as part of the proposed actions are adequate to minimize the adverse impacts from these projects to designated EFH for salmon. It is NMFS' understanding that the OSM intends to permit the proposed activities with these built-in conservation measures that minimize potential adverse effect to the maximum extent practicable. Consequently, NMFS has no additional conservation recommendations to make at this time.

Please note that the MSA (§305(b)(4)(B)) and 50 CFR 600.920(j) require the Federal agency to provide a written response to NMFS' EFH conservation recommendations within 30 days of its receipt of this letter. However, since NMFS did not provide conservation recommendations for this action, a written response to this consultation is not necessary.

This concludes EFH consultation in accordance with the MSA and 50 CFR 600. The OSM must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920(k)).

Thank you for your effort to protect endangered species. We appreciate your search for opportunities within your projects to improve environmental baseline conditions for Endangered, Threatened and candidate species. If you have any questions concerning this response, please contact Dan Tonnes of the Washington State Habitat Branch Office at (206) 526-4656.

Sincerely,



Donna Darr
Acting Regional Administrator

References

- PMC (Pacific Fishery Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon. Portland, Oregon.
- Williams, R.W., R. M. Larimie, and J. J. Ames, 1975. A catalog of Washington streams and salmon utilization. Volume 1. Puget Sound Region. WDFW.



United States Department of the Interior
OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
Western Region Office
1999 Broadway, Suite 3320
Denver, CO 80202-3050



September 8, 2015

Mr. Brad Duncan
Assistant State Soil Scientist
316 W. Boone Ave
Suite 450
Spokane, WA 99201

Mr. Duncan,

The Office of Surface Mining Reclamation and Enforcement (OSMRE) is the lead permitting agency for surface coal mining operations at the John Henry No. 1 Mine (Federal Permit WA-0007D), located near Black Diamond, Washington.

The surface coal mine operator has proposed revisions to the approved mining operations plan, including creating additional disturbance within the John Henry No. 1 Mine permit boundary. We are currently evaluating the proposed revisions and are reviewing the prime farmland soils classification within the John Henry No.1 Mine permit boundary in accordance with our regulations at 30 CFR §785.17, specifically within the area proposed for additional disturbance.

We have consulted the Natural Resources Conservation Service (NRCS) Farmland Classification Web Soil Survey for the project area and have found that prime farmland soils may exist within the mine permit boundary. However, we have found that there are no prime farmland soils within the proposed disturbance area.

We have included a copy of our review of the Web Soil Survey. The Web Soil Survey indicates that prime farmland soils classified as "Seattle Muck" and "Shalcar Muck" exist within the permit boundary. However, the Web Soil Survey appears to show that there are no prime farmland soils within the area of proposed disturbance. We have also included a copy of the revised mine plan that we are currently reviewing for your reference.

We respectfully request concurrence from NRCS acknowledging OSMRE's finding that, while prime-farmland soils may exist within the permit boundary, these soils are not found within the proposed mining area.

Should you have any questions or comments, please contact me at your convenience at (303) 293-5034 or email: mhulbert@osmre.gov. Thank you for your time and attention in this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Matthew Hulbert', with a stylized flourish extending to the right.

Matthew Hulbert
John Henry No. 1 Team Leader

Enclosure
Ec: OSMRE Olympia Field Office

Puget Sound Clean Air Agency

Notice of
Construction No. **10182**

Registration No. **28520**

Date

SEP 06 2010

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH



Clean Air Agency

John Henry No. 1 coal mine and coal preparation plant: includes two crushers (Gunlach 36 SSHD rated at 150 TPH, and Gundlach 18 SS rated at 70 TPH), associated coal processing and conveying equipment, coal storage systems, transfer and loading systems, open storage piles.

APPLICANT

David Morris
Pacific Coast Coal Co/John Henry Mine 1
PO Box 450
Black Diamond, WA 98010-0450

OWNER

Pacific Coast Coal Co/John Henry Mine 1
PO Box 450
Black Diamond, WA 98010-0450

INSTALLATION ADDRESS

Pacific Coast Coal Co/John Henry Mine 1, 30700 Blk Dia - Raven Rd, Black Diamond, WA, 98010

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

NSPS

3. Pacific Coast Coal Company shall comply with the applicable requirements of the New Source Performance Standards of 40 CFR 60, Subparts A and Y for Coal Processing and Conveying Equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and other Subpart Y applicable facilities which includes notifications following 40 CFR 60.7, performance tests following 40 CFR 60.8, meeting the applicable opacity emission standards of 40 CFR 60.254(a) and performing tests using methods and procedures of 40 CFR 60.255 and 40 CFR 60.257 using EPA Method 9.

BACT

4. Pacific Coast Coal Company shall not allow visible emissions or fallout from the Coal Processing and Conveying Equipment (including breakers and crushers), coal storage systems, transfer and loading systems, mechanical vents, open storage piles and associated coal preparation equipment.
5. Pacific Coast Coal Company shall not allow particulate emissions from any mechanical vent to exceed 0.01 gr/dscf as measured by a US EPA Method 5 compliance source test following the requirements of Regulation I, Section 3.07.
6. Pacific Coast Coal Company shall develop and implement a Comprehensive Fugitive Emission Control Plan. The Comprehensive Fugitive Emission Control Plan shall incorporate measures to achieve agency BACT limits, SEPA

Order of Approval for NC No. 10182

SEP 06 2010

mitigation measures, and provide for monitoring and record keeping to document that planned measures are being carried out.

FUGITIVE DUST CONTROL

7. Pacific Coast Coal Company shall minimize dust emissions by continually applying a fine water mist to the ROM truck dump and crusher inlet whenever the equipment is processing materials.

8. Pacific Coast Coal Company shall implement reasonable precautions to minimize fugitive dust as required by Puget Sound Clean Air Agency Regulation I, Section 9.15.

9. Pacific Coast Coal Company shall, within 60 days after startup and prior to conducting compliance demonstrations required under Condition No. 10, determine the acceptable range of water pressures and flow rates for water supply to the ROM crusher during normal operations, and incorporate those range(s) into the facility's Operations and Maintenance Plan as required by Puget Sound Clean Air Regulation I, Section 5.05. The acceptable water pressure and flow rate ranges shall be made visible for equipment inspections.

SOURCE TEST

10. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, Pacific Coast Coal Company shall demonstrate compliance with Condition No. 3 and 4 by conducting a US EPA Method 9 visual emissions test on the Coal Processing and Conveying Equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and open storage piles following the requirements of Regulation I, Section 3.07.

O&M INSPECTIONS

11. Pacific Coast Coal Company shall, for every day equipment operates, inspect water pressure and flow rate, and inspect operations for visible fugitive dust or signs of fallout. Pacific Coast Coal Company shall record the results of all inspections in a daily log. If water pressure or flow rate is outside the ranges documented by Condition No. 9 or there are signs of fallout, Pacific Coast Coal Company shall investigate the cause and initiate repairs as needed as soon as possible but no later than within 24 hours after observation. Repairs made as the result of an inspection required by this condition shall be recorded in the daily log. Upon observation of visible fugitive dust emissions Pacific Coast Coal Company shall investigate the cause of the visible fugitive dust emissions and record in the daily log what precautions are being taken to minimize emissions. Pacific Coast Coal Company shall maintain the logs at the operator station covering the time period for the current project for review by Agency personnel.

NUISANCE COMPLAINTS

12. Pacific Coast Coal Company shall investigate and document complaints regarding odor, fugitive dust, or nuisance as soon as possible, but no later than 2 hours after receipt of the complaint. The O&M Plan shall include good industrial practices for returning the plant to compliant status within 24 hours, if the cause of the complaint is verified to originate from the plant. Complaint records shall include:

- a. The name, phone number and address of a complainant (if known);
- b. The date, time and nature of complaints; and

Order of Approval for NC No. 10182

c. The date, time, results and corrective actions of any complaint investigations.

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RECORD RETENTION

13. Pacific Coast Coal Company shall maintain a copy of the O&M Plan and all records from completed projects, inspections and investigations required by this Order for at least two years and shall make these records available to Puget Sound Clean Air Agency personnel upon request.

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.



Brian Renninger
Reviewing Engineer

ns



Steven Van Slyke
Supervising Engineer

4.0 APPENDIX D Vegetation

4.1 Vegetation Survey

Table D-1 List of Plant Species Observed on the Mine			
Stratum	Scientific Name	Common Name	WISA
Tree	<i>Acer macrophyllum</i>	Bigleaf maple	FACU
	<i>Alnus rubra</i>	Red alder	FAC
	<i>Betula papyrifera</i>	Paper birch	FAC
	<i>Picea sitchensis</i>	Sitka spruce	FAC
	<i>Populus balsamifera</i>	Black cottonwood	FAC
	<i>Prunus emarginata</i>	Bitter cherry	FACU
	<i>Pseudotsuga menziesii</i>	Douglas fir	FACU
	<i>Rhamnus purshiana</i>	Cascara	FAC
	<i>Salix lucida</i>	Pacific willow	FACW
	<i>Thuja plicata</i>	Western red cedar	FAC
	<i>Tsuga heterophylla</i>	Western hemlock	FACU
Shrub	<i>Acer circinatum</i>	Vine maple	FAC
	<i>Buddleja davidii</i>	Butterfly bush	NI
	<i>Cornus sericea</i>	Red-osier dogwood	FACW
	<i>Corylus cornuta</i>	Beaked hazelnut	FACU
	<i>Crataegus douglasii</i>	Black hawthorn	FAC
	<i>Cytisus scoparius</i>	Scotch broom	FACU
	<i>Gaultheria shallon</i>	Salal	FACU
	<i>Holodiscus discolor</i>	Oceanspray	NI
	<i>Ilex aquifolium</i>	Holly	FACU
	<i>Lonicera involucrata</i>	Black twinberry	FAC
	<i>Mahonia nervosa</i>	Dull Oregon grape	FACU
	<i>Malus fusca</i>	Western crabapple	FACW
	<i>Menziesia ferruginea</i>	Fool's huckleberry	FACU
	<i>Nymphaea odorata</i>	White water lily	OBL
	<i>Oemleria cerasiformis</i>	Indian plum	FACU
	<i>Oplopanax horridus</i>	Devil's club	FAC
	<i>Philadelphus lewisii</i>	Mock orange	NI
	<i>Physocarpus capitatus</i>	Pacific ninebark	FACW
<i>Rhododendron groenlandicum</i>	Labrador tea	OBL	
Shrub	<i>Ribes divaricatum</i>	Wax current	FAC

	<i>Rubus parviflorus</i>	Thimbleberry	FAC
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a Wetland indicator status based on Reed (1988 and 1993) is defined as: obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), upland (UPL), and not indicated (NI).

4.2 Vegetation Communities

4.2.1 Coniferous Forest (Fc)

This habitat unit covers the tops and slopes of four, external overburden spoil piles. The 101.5 acres were planted between 1988 and 1993 with Douglas fir saplings. These forests also contain additional species of trees scattered throughout, including western hemlock, western red cedar, red alder, black cottonwood, and bigleaf maple. Sword fern, salmonberry, trailing blackberry, bracken fern, Himalayan blackberry, and foxglove dominate the understory in this habitat unit.

The NWReGaP (2016) project classifies this community type as: North Pacific Maritime Mesic – Wet Douglas Fir – Western Hemlock Forest. This system represents the moist-site variant of the major lowland conifer forests found in foothills and mountains of western Oregon, Washington, and British Columbia. They occur in a matrix with the dry-site Douglas-fir western hemlock forest system. Historically they were characterized by a mixed of tall western hemlock, western red cedar and Douglas fir forests, although many have become conifer plantations. These moist-site giant conifer forests have understory species such as swordfern, Oregon oxalis, salmonberry, devil's club, vanilla-leaf, and huckleberry.

4.2.2 Deciduous Forest (Fd and Fd-m)

Forests dominated by deciduous trees occur in several locations within the Mine and occur in two variations. The first variation of this habitat unit, (Fd), is a red alder dominated forest of a young to medium age (approximately 15 to 30 year old trees). The site contains 60.9 acres of this community. Other trees found in this habitat unit include Douglas fir and smaller amounts of western hemlock, bigleaf maple, black cottonwood, and western red cedar. The shrub/herbaceous layer are dominated by Himalayan blackberry, trailing blackberry, vine maple, sword fern, bracken fern, and salmonberry. The second variation of the deciduous forest habitat unit, (Fd-m), is a bigleaf maple-dominated forest of a medium to mature age (approximately 25 to 80 year old trees). The site contains 76 acres of mature deciduous. Additional trees found in this habitat unit include western red cedar, western hemlock, red alder, black cottonwood, and Douglas fir. The shrub/herbaceous layer are dominated by red elderberry, trailing blackberry, salmonberry, sword fern, bracken fern, Oregon grape, stinging nettle, and salal. This area also contains a number of snags and larger trees. This forest type occurs along Mud Lake Creek, west of Spoil Piles 3N and 3S and on the slopes south of Ginder Lake. The area south of Ginder Lake also contains a significant number of snags and downed trees. Deciduous forest units comprise 28.5% of the total permit area.

Depending on the amount of dominance of coniferous species, the NWReGaP (2016) project may classify this community type as: North Pacific Dry Douglas-fir-(Madrone) Forest and

Woodland. This system is most common in the Puget Trough - Willamette Valley ecoregion but also occurs in adjacent ecoregions. These woodlands are fairly dry conifer forests dominated by Douglas fir, often with madrone or Oregon white oak, but rarely with other conifers present. Historically this was a widespread, fire maintained type, which has moved to occupy areas that were formerly prairies and oak savannas.

4.2.3 Mixed Forest (Fm)

52.3 acres of mixed forests include the land between the main access road (SE Ginder Lake Road) and the northern permit boundary line excluding Wetland C described below. It also includes the strip of land between Pit 1 and the Green River Gorge road on the south and the noise mitigation berm and buffer area along the eastern edge of Pit 1. Trees in this habitat vary in age up to approximately 35 years old. Tree species are a mix of bigleaf maple, red alder, bitter cherry, Douglas fir, western red cedar, black cottonwood, and western hemlock. The shrub layer is dominated by vine maple, salal, trailing blackberry, red huckleberry, sword fern, red-osier dogwood (*Cornus sericea*), Himalayan blackberry, salmonberry, and red elderberry.

The NWReGaP project (2016) classifies this community type as: North Pacific Dry Douglas-fir-(Madrone) Forest and Woodland. This system is most common in the Puget Trough - Willamette Valley ecoregion but also occurs in adjacent ecoregions. These woodlands are fairly dry conifer forests dominated by Douglas fir, often with madrone or Oregon white oak, but rarely with other conifers present. Historically this was a widespread, fire maintained type, which has moved to occupy areas that were formerly prairies and oak savannas.

4.2.4 Shrub/Sapling Stage of Forest Succession (Fs)

This habitat unit includes the triangle area west of Pit 1, the southeast portion of partially reclaimed Pit 1, and portions of the perimeter of Pit 1. This habitat unit totals 22.0 acres and is dominated by a combination sapling trees and shrubs. Sapling trees consist primarily of red alder, black cottonwood, and bigleaf maple. The shrub/herbaceous layer are dominated by Himalayan blackberry and reed canarygrass. NWReGaP (2016) project classifies this community type as: Harvested Forest – Shrub Regeneration.

4.2.5 Lowland Grass/Forb, Stable Unmowed (Gu)

This 8.7 acre habitat unit is found in the eastern backfill area of Pit 1 and a small area on top of Spoil Pile 2. The backfill area has been partially reclaimed with final grading, topsoil covering, and grass seeding in accordance with the PAP. Dominant plant species in this habitat unit include bentgrass, fescue, typical pasture grasses, and thistle, as well as smaller amounts of Himalayan blackberry. NWReGaP (2016) project classifies this community type as: Harvested Forest – grass/forb regeneration.

4.2.6 Mine (M)

This includes 65.6 acres of the mining and reclamation areas that don't fall into any vegetative community. It includes the roads and the facility area with the office, shop, and plant. The

NWReGaP (2016) project classifies this community type as: Quarries, Mines, Gravel Pits, and Oil Wells.

5.0 APPENDIX E
Wetlands and Riparian Zones

5.1 Wetland Communities

5.1.1 Mud Lake Wetland (22.74 acres)

Located in the southwest corner of the mine site between Pit #1 and Spoil Pile 3S. Prior to 1970, Mud Lake contained more standing water due to dikes built by the local fire district to impound water for firefighting. In early 1971, these dikes washed out following a major storm and Mud Lake subsequently drained. By 1981, the decreased hydrology allowed the plant community to shift from emergent plants to a scrub/shrub and forested strata. In 1996, mining activities authorized under Nationwide Permit 21, involved creation of a berm that separates Mud Lake and Pit 1 (the Mud Lake Dike). Mud Lake is considered a Freshwater – Forested/Shrub Wetland priority aquatic habitat as well as an Elk (*Cervus elaphus*) priority habitat – regular concentration by WDFW (see Section 3.10, *Fish and Wildlife Resources*). A spillway to be constructed on this berm will allow water to flow between the Pit 1 PML and Mud Lake until equilibrium is reached as part of ongoing reclamation. The plant community in Mud Lake is a mosaic of forested, scrub/shrub, and emergent areas. The forested areas are located on the higher shoreline fringe, especially along the north and south sides of Mud Lake. The scrub/shrub habitat occurs as clumps on middle elevations in the wetland, while emergent habitat dominates the lowest ground in Mud Lake. It appears that beaver activity over the last few years has flooded some of these forested areas and killed the trees so they are reverting back to scrub/shrub habitat. The dominant trees include western red cedar, black cottonwood, red alder, and Pacific willow (*Salix lucida*). The shrub layer is dominated by Sitka willow, hardhack (*Spiraea douglasii*), black twinberry (*Lonicera involucrata*), Pacific ninebark (*Physocarpus capitatus*), salmonberry, and red-osier dogwood (*Cornus sericea*). There are thickets of invasive vines such as Himalayan blackberry and evergreen blackberry on higher ground. The dominant herbaceous species include reed canarygrass, cattail (*Typha latifolia*), soft rush (*Juncus effusus*), skunk cabbage (*Lysichiton americanum*), and small-fruited bulrush (*Scirpus microcarpus*). Under the Proposed and No Action Alternative, this wetland would not be disturbed during mining and reclamation operations.

5.1.2 IB Wetland (0.33 acre)

IB is located at the southwest corner of Mud Lake near the City of Black Diamond water tower. Although the IB Wetland is hydrologically connected to Mud Lake, it was delineated separately because its source of hydrology, plant community, and soil conditions are much different from Mud Lake. Vegetation in IB Wetland includes reed canarygrass, common velvetgrass (*Holcus lanatus*), cattail, soft rush, daggerleaf rush (*Juncus ensifolius*), tapertip rush (*Juncus acuminatus*), creeping spikerush (*Eleocharis palustris*), sawbeak sedge (*Carex stipata*), and field horsetail. There are also black cottonwood saplings sprouting through the emergent layer. Under the Proposed and No Action Alternative, this wetland would not be disturbed during mining and reclamation operations.

5.1.3 Pit 1 Berm Wetland (1.14 acre)

Located along the southwest shoreline of Pit 1 and is separated from Mud Lake by a berm (designated as the Mud Lake Dike) that was created during past mining operations. Plant community includes a tree canopy of black cottonwood, red alder and Pacific willow. The shrub layer consists of Sitka willow, hardhack, salmonberry and Himalayan blackberry. The

herbaceous species include reed canarygrass, cattail, small fruited bulrush, narrow-leaved burreed (*Sparganium emersum*), broadleaf water plantain (*Alisma plantagoaquatica*) and yellow pond lily (*Nuphar luteum*). Under the Proposed and No Action Alternative, this wetland would not be disturbed during mining or reclamation.

5.1.4 Pit 2 Reservoir Fringe Wetland (2.19 acre)

Pit 2 is located along the shoreline of the easternmost area of Pit 2 in the center of the mine site. This mined-out portion of Pit 2 has been and will be maintained as a reservoir to provide water for the coal processing plant throughout the operating life of the mine. The water level fluctuates with precipitation and water usage of the plant. Excess water decants from the drainage swale at the eastern end of the pit to storm water drainage ditches that convey the water to Sediment Pond B. Should the water level drop too low, water is pumped to the reservoir from Pit 1 or other portions of Pit 2. Plant community consists of trees and shrubs on higher ground and emergent vegetation along the shoreline. The woody vegetation includes red alder, Sitka willow, hardhack, salmonberry and Himalayan blackberry. There is a diverse emergent assemblage that includes woolly sedge (*Scirpus atrocinctus*), floating-leaved pondweed (*Potamogeton natans*), reed canarygrass, cattail, tapertip rush, soft rush, creeping spike rush, field horsetail and common mare's tail (*Hippuris vulgaris*). Under the Proposed and No Action Alternative, this wetland would be removed during the reclamation operations.

5.1.5 Wetland A (0.22 acre)

Wetland A is located between Spoil Piles 2 and 3N within a second-growth deciduous forest. Wetland A is located near an access road that extends from Spoil Pile 2 to Highway 169. This wetland consists of a shallow depression with a clay hardpan that perches water. The surrounding forest is relatively flat. The plant community in Wetland A is dominated by red-osier dogwood, vine maple, western crabapple (*Malus fusca*), Devil's club (*Oplopanax horridus*), slough sedge (*Carex obnupta*), and skunk cabbage. The wetland is bordered by a tree canopy of black cottonwood and western red cedar on higher ground. Under the Proposed and No Action Alternative, this wetland would not be disturbed during mining and reclamation operations.

5.1.6 Wetland B (0.06 acre)

Wetland B is located at the northeast corner of Spoil Pile 3N where groundwater seeps flow from the toe of the slope. The compacted mine spoils perch a groundwater seep at the surface and have created a small emergent wetland. Plant community consists of reed canarygrass, field horsetail, common velvetgrass and Sitka willow. Under the Proposed and No Action Alternative, this wetland would be removed during mining and reclamation operations.

5.1.7 Wetland D (0.36 acre)

Wetland D is located at the northeast corner of the mine site. It is down gradient of storm water Pond A, and a discharge pipe through the pond berm is providing its hydrology. This discharge pipe drains into a level spreader ditch and then this water flows east to a culvert underneath 270th Avenue SE and eventually into Lake 12. Although, this wetland is associated with the storm water conveyance and collection system for the mine, it was delineated because it meets

the wetland criteria. Under the Proposed and No Action Alternative, this wetland would not be disturbed by mining or reclamation activities. The plant community along the border of Wetland D includes a tree canopy of western red cedar, black cottonwood, red alder, and cascara. Shrubs within the wetland include salmonberry, vine maple, and Himalayan blackberry. The herbaceous vegetation includes reed canarygrass, field horsetail, skunk cabbage, Cooley hedge nettle (*Stachys cooleyae*), lady fern, creeping buttercup (*Ranunculus repens*), largeleaf avens (*Geum macrophyllum*), and water parsley (*Oenanthe sarmentosa*).

5.1.8 Wetland E (0.01 acre)

Wetland E is located near a drainage ditch that follows the toe of Spoil Pile 1 but is not part of this storm water conveyance system. Under the Proposed and No Action Alternative, this wetland would not be disturbed during mining or reclamation. The plant community in Wetland E includes Sitka willow, hardhack, salmonberry, Himalayan blackberry, and reed canarygrass. The surrounding upland forest contains red alder, red elderberry, and sword fern.

5.1.9 Wetland F (0.30 acre)

Wetland F is located north of Mud Lake and west of Pit 1 in a triangular area created by two access roads. This depressional area is confined by steep road embankments that pond storm water before it flows through a culvert. This storm water detention facility is separated into two cells by a berm with an overflow culvert. This area was stripped of topsoil in anticipation of mining in 1997. Under the Proposed and No Action Alternative, this wetland will be eliminated in the third year of mining. The entire area will be reclaimed to Douglas fir forest in accordance with the PAP. Plant community includes black cottonwood, Sitka willow, hardhack, salmonberry, Himalayan blackberry, common cattail, and reed canarygrass.

5.1.10 Wetland G (0.03 acre)

Wetland G is a small wetland depression located in a drainage ditch along the north side of an access road near Spoil Pile 3N. This drainage ditch is part of the storm water conveyance system that flows into I Pond. The linear swale and steep banks of this drainage ditch are composed of compacted mine spoils that perch water near the surface. Under the Proposed and No Action Alternative, this wetland will be removed during mining and reclamation operations. Plant community includes black cottonwood, Sitka willow, hardhack, salmonberry, Himalayan blackberry, and reed canarygrass.

5.1.11 Wetland Mitigation Area (0.31 acre)

The wetland mitigation area is located in the southeast corner of the mine site that was created in 1996 during mining activities in Pit 1. A small portion of the Mud Lake Wetland was salvaged during construction of the berm that separates Mud Lake and Pit 1. This involved transporting intact sections of hydric soil and clumps of plants from the Mud Lake Wetland and placing them in a depression surrounded by berms created from mine spoils. The salvaged soil and plants have been growing for 15 years and the area has developed wetland characteristics. This wetland would not be disturbed by mining or reclamation activities. The plant community in this wetland mitigation area includes a tree canopy of red alder, black cottonwood, and Pacific willow, with a shrub layer of Sitka willow, salmonberry, hardhack, and Himalayan blackberry. The understory is dominated by reed canarygrass, lady fern, and field horsetail.

6.0 APPENDIX F
Fish and Wildlife

6.1 Game and Non-game Specie Descriptions

6.1.1 Non-game Species

6.1.1.1 Small Mammals

Common small mammals that are known to occur within the mine footprint include the eastern cottontail (*Sylvilagus floridamus*), Douglas squirrel (*Tamiasciurus douglasii*), Raccoon (*Procyon lotor*), coyote (*Canis latrans*), muskrat, Townsend's chipmunk (*Tamias townsendii*), shrew mole (*Neurotrichus gibbsii*), big brown bat (*Eptesicus fuscus*) and mink (*Neovison vison*).

6.1.1.2 Reptiles and Amphibians

One common species that has been noted within the mine footprint is the northwestern gardner snake (*Thamnophis ordinoides*) [(WRI 2008) (Table 36)]. A common native amphibian that could potentially occur in the mine footprint is the Pacific tree frog (*Pseudacris regilla*) (WRI 2008).

6.1.2 Game Species

6.1.2.1 Rocky Mountain elk (*Cervus elaphus nelsoni*)

While not a threatened or endangered species (TES), the Rocky Mountain elk is a State designated game species. These include native and non-native wildlife species of recreational importance, commercial importance, or recognized species used for tribal ceremonial and subsistence purposes and that are vulnerable to habitat loss or degradation. While there are several game species that may inhabit the John Henry No. 1 Mine for all or part of their life cycle, WDFW has designated the entire mine site as priority habitat for the Rocky Mountain elk (WDFW 2015a). The mine footprint is within the historic distribution of Roosevelt elk (*Cervus elaphus roosevelti*) but by the turn of the last century they had been eliminated by early settlers (Bradley 1982, Spencer 2002). Rocky Mountain elk were introduced into western Washington from Yellowstone National Park in the early part of the 20th century and by the late 1980's and early 1990's these elk spread to the mine vicinity (Spencer 2002). It is noteworthy that this species was not observed in the WDG wildlife survey in 1981 (WDG 1981).

6.1.2.2 Columbian black-tailed deer (*Odocoileus virginianus leucurus*)

Within the region, black-tailed deer utilize a variety of vegetation communities that provide year-round suitable habitat occurring from the crest of the Cascades west to the ocean, preferring bushy, logged lands and coniferous forests (WDFW 2016a). Black-tailed deer were observed in the WDG wildlife survey in 1981 and are expected to occur throughout the John Henry mine permit boundary (WDG 1981).

6.1.2.3 American black bear (*Ursus americanus*)

The American black bear is not a Washington State or federally listed species of concern, and there are currently no critical habitat rules or conservation plans developed for the American black bear (USFWS 2017). The statewide black bear population in Washington is estimated between 25,000 and 30,000 animals (WDFW 2017) and may exceed 30,000 (Ziegler and Nolte 2001). Black Bears are found throughout Washington in hardwood and coniferous forests, meadows, alder thickets, burns, clear cuts, and sub-alpine parkland (Ulev 2007; USFS 2017; WNMP 2017a). However, range limits appear to include a buffer zone of a few miles

around the most heavily populated areas of Seattle, Tacoma and Olympia. Koehler and Pierce (2002) estimates of home ranges for males were found to be 3.8 times larger than those for females and differences for females may be correlated to differences in available forage plants and cover. Thus, differences in home-range sizes between males and females and among regions may result, in part, from climatic and vegetative conditions, as well as from social status (Koehler and Pierce 2002). Consequently, habitat use appears to be driven by seasonal food production and breeding season (Ulev 2007). Black bears were observed in the WDG wildlife survey in 1981 and are expected to occur throughout the John Henry mine permit boundary (WDG 1981; WNMP 2017a).

6.1.2.4 Mountain lion (*Puma concolor*)

Except for the islands and interior steppe, mountain lions occur throughout Washington. Habitat requirements are stalking cover, prey, and lack of excessive interference by people. The most common prey for mountain lions are mule deer; consequently, their range and density are closely correlated with those of mule deer. Mountain lions avoid large cities but occasionally penetrate the suburbs; however, they are unlikely to establish long-term residence in these areas. Core areas include all forested zones. In these zones, bare ground, water/wetlands, non-forested, and forested are good habitats (WNMP 2017b). Mountain lions were not observed in the WDG wildlife survey in 1981, but potentially could occur throughout the John Henry mine permit boundary (WDG 1981; WNMP 2017b).

6.1.2.5 Furbearers

Furbearers likely to occur within the wildlife analysis area include cottontail (*Sylvilagus* spp.), raccoon (*Procyon lotor*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), mink (*Mustela vison*), and red fox (*Vulpes vulpes*) (WDFW 2013). These species have wide distributions and are found within a variety of habitat types in the greater region (e.g., mixed deciduous, Douglas Fir woodland, montane shrubland, and grassland). The distribution of furbearers within the mine footprint is typically determined by available food sources and suitable cover sites for burrows or dens.

6.1.2.6 Upland Game Birds

Upland game bird species that occur within the mine footprint include the California quail (*Callipepla californica*), ruffed grouse (*Bonasa umbellus*), band-tailed pigeon (*Patagioenas fasciata*), and mourning dove (*Zenaida macroura*). Mourning doves occur in habitats ranging from deciduous forests to shrubland and grassland communities, often nesting in trees or shrubs near riparian areas or water sources (Stokes and Stokes 1996). Most upland game bird species feed on a wide variety of plant and insect species depending on the time of year (i.e., insects during the spring and summer and leaves and seeds during the fall and winter). Many of the species described above exhibit annual population fluctuations depending on habitat conditions and weather patterns.

6.1.2.7 Waterfowl

The mine footprint is located within the Pacific Flyway. Common waterfowl species that have been reported to occur in the region or that may occur within the mine footprint include Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), and ring-necked duck (*Aythya collaris*). These species distributions are limited to the rivers, streams, lakes, reservoirs, ponds, and wetlands found within the greater region. Population numbers for these species vary annually based on available food and weather patterns. While waterfowl species are considered game birds, they also are protected under the MBTA.

6.2 Federally and State-Listed Specie Descriptions

6.2.1 Federally Listed Species

6.2.1.1 Larch Mountain Salamander (*Plethodon larselli*)

The Larch Mountain salamander is a Federal Species of Concern and State sensitive species. They use cutaneous respiration, and for that reason, must live in moist habitats (Petranka 1998). This species was once believed to be confined to the Columbia River Gorge, but recent records demonstrate its occurrence throughout much of the Southwest Cascades. Most individuals are found on steep talus slopes and within forests with a dense over-story of coniferous trees. The Larch Mountain Salamander is known to occur in talus in an oak cover type. The talus substrate is believed to be the most important habitat feature, and any tree type can apparently serve the purpose of providing shade (Nature Mapping Foundation 1997).

6.2.1.2 Western Toad (*Bufo boreas*)

The western toad is a Federal Species of Concern and a State candidate species. Western toads can occur in a variety of terrestrial habitats in the Puget Sound region. They are listed in the City of Black Diamond Comprehensive Plan as a species that can be expected to be found in aquatic habitat within Black Diamond (City of Black Diamond 1995). Management recommendations include creating buffers around natural ponds and wetlands to maintain breeding habitat (WDNR 2015c). No critical habitat rules have been published for the Western Toad.

6.2.1.3 Beller's Ground Beetle (*Agonum belleri*)

Beller's ground beetle is a Federal Species of Concern and State candidate species. Beller's ground beetles inhabit eutrophic sphagnum bogs associated with lakes below 3,300 ft (1,000 m) elevation. Suitable bogs have very little surface drainage and tend to be acidic (Johnson 1979). Known records are from Skagit, Snohomish, King, Kitsap, and Mason Counties (Bergdahl 1997). Although the species was believed to be extirpated from the Washington type locality (Chase Lake) due to suburban residential development (Applegarth 1995), recent surveys (1996-1997) by James Bergdahl have revealed low numbers of this species at Chase Lake (Bergdahl 2009, pers. comm., Foltz 2009).

6.2.1.4 Hatch's Click Beetle (*Eanus hatchii*)

The hatch's click beetle is a Federal Species of Concern and State candidate species. Hatch's click beetles inhabit eutrophic sphagnum bogs in or near lakes below 3,300 ft (1,000 m). They

have been collected in very low, floating mats of vegetation in pure sphagnum bogs (Johnson 1979). It was historically known from Sphagnum bogs in Snohomish and King counties, although the species may be extirpated at both of the Snohomish County sites (Chase Lake and Carkeek Park) in which case the only extant populations would be restricted to King County (Johnson 1984 and Bergdahl 2009, pers. comm.). Sphagnum habitat has been heavily altered by urban development at both sites, and survey attempts were not successful at locating this species or even Sphagnum habitat at the Carkeek Park site (Bergdahl 2008, pers. comm.). Records in King County are from three sites (Lake Marie, Snoqualmie Bog, and Kings Lake Bog), although more recent survey work in the region by James Bergdahl revealed additional populations in southern King County at undisclosed localities (Bergdahl 2008, pers. comm.) (Foltz 2009).

6.2.1.5 Valley Silverspot (*Speyeria zerene bremnerii*)

The valley silverspot is a Federal candidate species and State candidate species. This highly localized and often abundant butterfly uses open prairies, arctic-alpine tundra, subalpine glades, and mid-elevation roadsides and clearings. Development activities within habitats, grazing, fertilization, and other agricultural practices, logging and associated reduction of floristic diversity, succession of prairies, and aerially applied herbicides within forestlands threaten valley silverspot butterflies (Larsen, et al., 1995). The Valley Silverspot uses an open grassland habitat on salt-spray meadows and higher headlands adjacent to the ocean, where the larvae feed on the common *Viola adunca* (McCorkle and Hammond 1988), which has not been identified within the mine footprint.

6.2.1.6 Bald Eagle (*Haliaeetus leucocephalus*)

The Bald eagle is a Federal Species of Concern and State sensitive species. WDFW maintains records (1991-2006) of a Bald eagle nesting site adjacent to Lake Sawyer, approximately one mile northwest of the John Henry No. 1 Mine (WDFW 2015b). According to WDFW information, this nesting site was located at the southern end of Lake Sawyer and contained two nests located in a group of two old trees, thirty feet down from the treetops. The John Henry No. 1 Mine does not contain any large conifers or large snags adjacent to lakes or large creeks that bald eagles prefer for perching and nesting. However, in 2016, one occupied Bald eagle nest was sighted in a large conifer tree, north of Lake 12 along SE 306th Street, approximately 0.25 miles from the John Henry Mine permit boundary. -

6.2.1.7 Black-Backed Woodpecker (*Picoides arcticus*)

The black-backed woodpecker is a State candidate species. The species is rare to locally uncommon in mid- to high elevation conifer forests in eastern Washington and rare west of the Cascade crest. The species strongly prefers burns that have not been salvaged logged. Individuals were most common at sites with the highest level of snag retention (15-32 snags/ac) in salvage-logged stands in the Washington Cascades (WDFW 2013). There has been confirmed breeding in eastern King County.

6.2.1.8 Common Loon (*Gavia immer*)

The common loon is a State sensitive species. Common loons usually nest on lakes surrounded by forest that have deep inlets and bays. Lakes where loons nest in Washington range in size from 14-7,800 acres. Use of a lake is dependent on an ample supply of small fish for prey and

isolation from human disturbance, such as wave action created from powerboats or personal watercraft. Loons often forage in shallow clear water. They primarily use the top 15 ft of the water column, but have been recorded diving to 180 ft in clear water to obtain food. During migration, loons aggregate on rivers, reservoirs, and lakes with abundant food. In autumn, most loons move to coastal marine locations; and they winter on shallow, sheltered marine waters (WDFW 2016b). There has been confirmed breeding in King County.

6.2.1.9 Golden Eagle (*Aquila chrysaetos*)

The golden eagle is a State candidate species. It is under consideration for potential listing as an endangered species, as its population is declining in the Northwest for unknown reasons. The golden eagle is primarily found in the eastern Cascades although is sometimes found in mature and old-growth forests on the edge of open areas in western Washington (WDFW 2016b). There has been confirmed breeding in eastern King County.

6.2.1.10 Northern Goshawk (*Accipiter gentilis*)

The Northern Goshawk is a Federal Species of Concern and a State candidate species. The northern goshawk inhabits mature coniferous forests at mid to high elevations (Stone 2013). It is believed that there are only a few members of the species breeding in King County.

6.2.1.11 Peregrine Falcon (*Falco peregrinus*)

The peregrine falcon is a Federal Species of Concern and State sensitive species. The nest scrape is usually on a high cliff ledge, but some are placed on manmade structures, including skyscrapers, towers, and bridges. Population numbers have been steadily increasing in Washington, with just over 100 occupied territories in 2009.

6.2.1.12 Pileated Woodpecker (*Dryocopus pileatus*)

The pileated woodpecker is a State candidate species because they are a “keystone habitat modifier.” They create large excavations in trees and snags that provide nesting and roosting habitat to a wide variety of cavity nesting wildlife species. Pileated woodpecker excavations were detected in the WDG survey (WDG 1981), the Lawson Hills field survey (WRI 2008), and both wildlife surveys for the Morgan Kame Terrance sand and gravel mine (Table 27). Management recommendations for pileated woodpeckers include retaining forest in the largest patches available, as well as retaining or creating snags and retaining live trees in the largest size class available (Aubry and Raley 2002). There has been confirmed breeding in King County.

6.2.1.13 Purple Martin (*Progne subis*)

Purple Martin is a State candidate species because of population declines over the last fifty years due to loss of nesting habitat. Purple martins are colonial cavity nesters and require snags with existing cavities or nesting boxes near water. Purple martins are found in the Puget Sound region, primarily along shorelines and close to human habitation where people have installed nesting boxes (WDFW 2003). There has been confirmed breeding in King County.

6.2.1.14 Vaux's Swift (*Chaetura vauxi*)

Vaux's swift is a State candidate species. Vaux's swifts are present in Washington as spring and autumn migrants and as summer residents. Migration occurs from late April to late May and again from mid-August to late September. During the breeding season, the species is mainly

associated with old growth and mature forests in western Washington, the eastern Cascades, northeastern Washington, and the Blue Mountains (Smith et al. 1997 and Lewis and Nordstrom 2005). The Vaux's swift is associated with old-growth forests where it nests in primarily dead hollow trees and other large snags. Nests are often placed in hollow trees used by roosting pileated woodpeckers (*Dryocopus pileatus*), with swifts entering these trees through woodpecker holes. Without these excavations, Vaux's swifts would have no access to many hollow tree chambers (Bull and Collins 1993 and Sterling and Paton 1996). There has been confirmed breeding in King County.

6.2.1.15 Townsend's Big-Eared Bat (*Corynorhinus townsendii*)

The Townsend's big-eared bat is a Federal Species of Concern and State candidate species. In Washington, this species is found in lowland conifer-hardwood forest, montane conifer forest, ponderosa pine forest and woodland, shrub- steppe, riparian habitats, and open fields (Woodruff and Ferguson 2005). Caves, lava tubes, mines, old buildings, bridges, and concrete bunkers are commonly used as day roosts. It is presumed that there is breeding occurring in King County.

6.2.1.16 Wolverine (*Gulo gulo*)

The North American wolverine (*Gulo gulo luteus*) is a "state candidate" and federally "proposed Threatened" listed species, which potentially can occur within and/or areas surrounding the John Henry Mine permit boundary. However, the denning requirements of the wolverine primarily determine the limits of its range of suitable habitat; reproductive dens occur at sites with persistent spring snow cover (Copeland et al. 2010). The Southern Cascade Range in Washington appears to represent the southernmost extent of current North American wolverine range along the Pacific coast of North America (Aubry et al. 2007; Conservation Northwest 2017; USFWS - Catherine Raley-personal communication January 17, 2017). For example, individual wolverines have been documented near Mount Adams in Washington's South Cascades.

The North American wolverine prefers cold and remote mountainous areas occupying habitat at high elevations, generally above 2,100 m (6,888 ft), in the mountains of the contiguous United States. General site elevations at wolverine livetraps used in studies by Aubry et al. (2016) in the North Cascades Ecosystems in Washington ranged between 823 to 1890 meters in elevation. Intervening valleys in these areas may be dominated by ecosystems that are unsuitable for long-term wolverine presence, but may serve as routes for wolverine movement between suitable habitat patches. Thus, they appear to be specialists at exploiting a cold, unproductive niche that limits competition from other carnivores (Inman et al. 2012a).

Surface elevations within the PCCC's permit area range from a maximum of 840 feet (256 meters) above mean sea level in the center to a minimum of approximately 625 feet (190.5-meters) above mean sea level where Mud Lake creek leaves the permit area of the John Henry Mine. USGS (2017) climate change models suggest a decreasing trend in annual mean snow levels in Washington's Cascade Mountains. In addition, the wolverine is known to avoid people and developed areas. Thus, it is unlikely the John Henry Mine site characteristics would be

suitable habitat for the North American wolverine in terms of denning requirements. Because of the low elevation of the John Henry Mine, the project is located outside the range of this species.

6.2.1.17 Western pond turtle (*Actinemys marmorata*)

The western pond turtle is a Federal species of concern and State endangered species. Historically, the western pond turtle was widespread in the Puget Sound region (WDNR 2016b). Overharvesting and the introduction of non-native fish and the bullfrog have contributed to the turtle's decline. The western pond turtle has been nearly extirpated from Washington State and is only known to occur in four small, localized populations in Klickitat and Thurston County (Hays, et al. 1999). The WDFW PHS maps (WDFW 2015a) do not indicate any records of endangered, threatened, or sensitive amphibian, reptile, bird, or mammal species on or near the mine footprint. It is believed that there are only a few members of the species breeding in King County.

6.2.1.18 Oregon Spotted Frog (*Rana pretiosa*)

Oregon Spotted Frog (*Rana pretiosa*) is a Federal threatened species and State listed endangered species. WDFW has not records of spotted frogs on or near the John Henry Mine permit boundary. Historically spotted frogs were more widespread throughout the Puget Sound region. Due to pollution, habitat loss, and the introduction of non-native predatory fish and bullfrogs, spotted frogs have nearly disappeared from Washington State and only few small local populations were known to exist in Washington, none of which were in King County (Blouin et al. 2010; McAllister et al. 1993, 1997). The species live in a wetland habitat and if found on the project site this species would likely be found within the Class I (Ginder Lake) or Class II (Mud Lake) wetlands. These will not be disturbed under either alternative. The project site is outside the range of the species and therefore would have no effect on the species.

6.2.1.19 Whitebark pine (*Pinus albicaulis*)

Whitebark pine (*Pinus albicaulis*), a Federal candidate species, is typically found in cold, windy, high elevation or high latitude sites in western North America and as a result, many stands are geographically isolated (USFW 2017). The species is distributed in Coastal Mountain Ranges (from British Columbia, Washington, Oregon, down to east-central California) and Rocky Mountain Ranges (from northern British Columbia and Alberta to Idaho, Montana, Wyoming, and Nevada). Whitebark pine habitat is found at the tree line in the Cascade Mountains (USFW 2017). In contrast, the tree line in the Cascade Mountain range in elevation from 5,700 to 8,500 feet above mean sea level (U.S. Department of Agriculture – Forest Service 2017). The John Henry No. 1 Mine is located at elevations that range from 625 to 950 above mean sea level and is not suitable habitat for the Whitebark pine. There would be no impact to Whitebark pine under either the Proposed Action Alternative or No Action Alternative.

6.2.1.20 Anadromous Fish

As noted above, in 2000 PCCC developed an analysis of the impacts of filling the PML on anadromous fish. Anadromous fish migrate from the sea up rivers to breed in fresh water. The

concern at that time was the downstream impacts to stream flow over the two-year period it would take the PML to fill. This analysis is presented in detail as Appendix IX-4 of the PAP (PCCC 2011a).

6.2.2 State Monitor Species

State monitor species are species that are monitored for status and distribution. These species are managed by the WDFW, as needed, to prevent them from becoming endangered, threatened, or sensitive. WDFW monitor species include: species that were previously listed as endangered, threatened, or sensitive within the last five years, species that require habitat that is of limited availability during some portion of their life cycle, species that are indicators of environmental quality, and species in which there are unresolved taxonomic questions that may affect their candidacy for listing as endangered, threatened, or sensitive. Species are often considered a priority only within known limiting habitats (e.g., breeding areas) or within areas that support a relatively high number of individuals (e.g. regular large concentrations) (WDFW 2008). There are five monitor species that could occur within the habitats located on the Villages property therefore these species could also occur at the John Henry No. 1 Mine. Each species is discussed below and indicates whether or not it is presumed that species would be located within the mine footprint.

6.2.2.1 Osprey (*Pandion haliaetus*)

The osprey is a state listed monitor species. Osprey populations declined during the last century due to the use of DDT. Since the ban of DDT in 1972, osprey populations have increased. There is a WDFW record of an osprey nest adjacent to the Green River, approximately one quarter of a mile south of the South Area of the John Henry No. 1 Mine. The record is from 1994 and no further description is provided. Ospreys forage over water and prefer to nest near water in large dead trees or similar structures. No osprey nests have been detected within the mine footprint during field surveys. The area does contain large trees adjacent to Black Diamond Lake that could be utilized by osprey.

6.2.2.2 Great Blue Heron (*Ardea herodias*)

The great blue heron is a state listed monitor species because of their vulnerability during the breeding season, when they aggregate into communal roosts, also known as rookeries. Suitable great blue heron breeding habitat is declining as human populations increase (WDFW 2016b). Great blue herons are common and only their nesting/breeding areas (communal roosts/rookeries) are considered priority habitat. No great blue heron roosts/breeding areas have been detected within the mine footprint.

6.2.2.3 Black-crowned Night Heron (*Nycticorax nycticorax*)

The black-crowned night heron is also a state listed monitor species and their breeding sites are considered priority. Black-crowned night herons are known to breed in central Washington along the Columbia River. Though rare, these herons occasionally winter over in the Puget Sound region. They are not known to breed in western Washington and thus no priority breeding habitat would be located within the mine footprint.

6.2.2.4 Western Bluebird (*Sialia mexicana*)

The western bluebird is listed as a monitor species and breeding sites are considered priority habitat. The western bluebird nests in cavities in snags, openings in buildings, and nest boxes. Its population has declined over recent decades due to a reduction in nesting cavities and competition with house sparrows and European starlings for nesting cavities. Though not common, western bluebirds do breed in western Washington, including King County (Seattle Audubon Society 2006). Western bluebirds may occur within the mine footprint. No management recommendations have been developed by the WDFW.

6.2.2.5 Pacific Water Shrew (*Sorex bendirii*)

The pacific water shrew is included on the WDFW list of monitor species. The range and numbers of these animals are thought to have declined due to loss of suitable wetland habitat, especially near urban areas and farmlands. The pacific water shrew is found near aquatic habitats throughout the Puget Sound region. WDFW does not provide specific management recommendations for the pacific water shrew. Existing wetland protections and buffers will retain significant habitat for the pacific water shrew. No pacific water shrew habitat or breeding areas have been detected within the mine footprint.

6.3 King County List of Species Protected in the Comprehensive Plan

Table F-1 provides a list of Federal and State protected species. This list is current as of June 1, 2009, and represents species protected in King County's Comprehensive Plan (King County 2012).

Table F-1. List of Species Protected in the Comprehensive Plan with Potential to be found in Non Marine Areas

Common Name	Scientific Name	Animal Type	Federal Status	State Status	Notes On Presence In King County	Merits Discussion
Larch Mountain Salamander	<i>Plethodon larselli</i>	Amphibian	FCo	SS	In King County	Yes
Oregon Spotted Frog	<i>Rana pretiosa</i>	Amphibian	FT	SE	Historic presence; no current populations known	Yes
Van Dyke's Salamander	<i>Plethodon vandykei</i>	Amphibian	FCo	SC	Eastern King County near Snoqualmie Pass	No
Western Toad	<i>Bufo boreas</i>	Amphibian	FCo	SC	Present and breeding in King County	Yes
Beller's Ground Beetle	<i>Agonum belleri</i>	Beetle	FCo	SC	In WA, only known in King County	Yes
Hatch's Click Beetle	<i>Eanus hatchii</i>	Beetle	FCo	SC	Endemic: only known in King County	Yes
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Bird	none	SE	Eastern WA; rare in K.C.; 5+ records	No
Bald Eagle*	<i>Haliaeetus leucocephalus</i>	Bird	FCo	SS	Nesting in King County	Yes
Black-Backed Woodpecker	<i>Picoides arcticus</i>	Bird	none	SC	Confirmed breeding in eastern King County	Yes
Brandt's Cormorant	<i>Phalacrocorax penicillatus</i>	Bird	none	SC	Winters in King County waters	No
Brown Pelican	<i>Pelecanus occidentalis</i>	Bird	FE	SE	Outer coast; rare in K.C.; 5+ records	No
Burrowing Owl	<i>Athene cunicularia</i>	Bird	FCo	SC	E WA; not in King County (fewer than 5 records)	No

Cassin's Auklet	<i>Ptychoramphus aleuticus</i>	Bird	FCo	SC	Outer coast; not King County; fewer than 5 records in K.C.	No
Common Loon	<i>Gavia immer</i>	Bird	none	SS	Breeding in King County	Yes
Common Murre	<i>Uria aalge</i>	Bird	none	SC	Winters in King County coastal waters	No
Flammulated Owl	<i>Otus flammeolus</i>	Bird	none	SC	E WA; not in King County; fewer than 5 records in K.C.	No
Golden Eagle	<i>Aquila chrysaetos</i>	Bird	none	SC	Confirmed breeding in eastern King County	Yes
Lewis' Woodpecker	<i>Melanerpes lewis</i>	Bird	none	SC	E WA; not supposed to be in King County; record from 1900s post-logging on Vashon	No
Marbled Murrelet*	<i>Brachyramphus marmoratus</i>	Bird	FT	ST	Probable nesters in King County	Yes
Merlin	<i>Falco columbarius</i>	Bird	none	SC	Winters in and migrates through King County; no breeding	Yes
Northern Goshawk*	<i>Accipiter gentilis</i>	Bird	FCo	SC	Few breeding in King County	Yes
Oregon Vesper Sparrow	<i>Poocetes gramineus affinis</i>	Bird	FCo	SC	Not in King County; rare in K.C.; 5+ records	No
Peregrine Falcon*	<i>Falco peregrinus</i>	Bird	FCo	SS	In King County	Yes
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Bird	none	SC	Confirmed breeding in King County	Yes

Purple Martin	<i>Progne subis</i>	Bird	none	SC	Confirmed breeding in King County	Yes
Sandhill Crane	<i>Grus canadensis</i>	Bird	none	SE	Eastern WA breeder; some migrate through K.C.	No
Snowy Plover	<i>Charadrius alexandrinus</i>	Bird	FT	SE	SW coast of WA; not their habitat or range; fewer than 5 records in K.C.	No
Spotted Owl*	<i>Strix occidentalis</i>	Bird	FT	SE	Confirmed breeding	Yes
Streaked Horned Lark	<i>Eremophila alpestris strigata</i>	Bird	FC	SE	Extremely unlikely; if in county, extreme NE edge	Yes
Upland Sandpiper	<i>Bartramia longicauda</i>	Bird	none	SE	Eastern WA, if in WA at all; fewer than 5 records in K.C.	No
Vaux's Swift*	<i>Chaetura vauxi</i>	Bird	none	SC	Confirmed breeding in King County	Yes
Western Grebe	<i>Aechmophorus occidentalis</i>	Bird	none	SC	Winters in and migrates through King County; no breeding	No
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	Bird	FT	SC	Historic presence; no current populations known in WA	Yes

Johnson's Hairstreak	<i>Mitoura johnsoni</i>	Butterfly/Moth	none	SC	Have been recorded in King County in suitable habitat: lowland coniferous forests that contain dwarf mistletoes of the genus <i>Arceuthobium</i> .	No
Valley Silverspot	<i>Speyeria zerene bremnerii</i>	Butterfly/Moth	FCo	SC	May be in King Co.	Yes
Bull Trout	<i>Salvelinus confluentus</i>	Fish	FT	SC	In King County	Yes
Chinook Salmon (Puget Sound)	<i>Oncorhynchus tshawytscha</i>	Fish	FT	SC	In King County	Yes
Steelhead (Puget Sound)	<i>Oncorhynchus mykiss</i>	Fish	FT	none	In King County watercourses	Yes
Fisher	<i>Martes pennanti</i>	Mammal	FC	SE	Extirpated; historically present	No
Grizzly Bear	<i>Ursus arctos</i>	Mammal	FT	SE	Possible, but highly unlikely in King County	Yes
Lynx	<i>Lynx canadensis</i>	Mammal	FT	ST	Extremely unlikely, but theoretically possible in extreme NE corner of county	Yes
Townsend's Big-Eared Bat*	<i>Corynorhinus townsendii</i>	Mammal	FCo	SC	Presumed in King County	Yes
Wolverine	<i>Gulo gulo</i>	Mammal	FCo	SC	Possible in King County	Yes
Western Pond Turtle	<i>Actinemys marmorata</i>	Reptile	FCo	SE	There are just a few historic records in KC	Yes

Status Codes:

- **FE:** Federal Endangered

- **FT:** Federal Threatened
- **FC:** Federal Candidate
- **FCo:** Federal Species of Concern
- **SE:** State Endangered
- **ST:** State Threatened
- **SS:** State Sensitive
- **SC:** State Candidate