

Appendix E

Air Quality and Greenhouse Gas Analysis Supporting Documentation

Restoration Activities

Phase	Code	Start Date	End Date	Working Days
Lower Hole Creek				
Mobilization	1-1	2019/1/1	2019/1/3	3
Clearing & Grubbing	1-2	2019/1/3	2019/1/8	3
Invasive Plant Removal	1-3	2019/1/3	2019/2/15	28
Channel and Floodplain Earthwork	1-4	2019/1/8	2019/3/15	25
Streambank Erosion Protection	1-5	2019/1/21	2019/3/15	10
In-Stream Habitat Features	1-6	2019/1/21	2019/3/20	28
Seeding and Planting	1-7	2019/4/1	2019/4/21	15
Demobilization	1-8	2019/4/21	2019/4/23	2
Old Farm Creek				
Mobilization	2-1	2019/1/1	2019/1/3	3
Clearing & Grubbing	2-2	2019/1/3	2019/1/13	8
Invasive Plant Removal	2-3	2019/1/3	2019/2/10	26
Channel and Floodplain Earthwork	2-4	2019/1/13	2019/4/25	35
Concrete Box Culvert Installation	2-5	2019/3/1	2019/3/15	12
In-Stream Habitat Features	2-6	2019/1/20	2019/4/30	40
Seeding and Planting	2-7	2019/5/1	2019/7/7	45
Demobilization	2-8	2019/7/7	2019/7/9	2
Anza Drain				
Mobilization	3-1	2020/1/1	2020/1/3	3
Clearing & Grubbing	3-2	2020/1/3	2020/1/9	5
Invasive Plant Removal	3-3	2020/1/3	2020/2/29	40
Channel and Floodplain Earthwork	3-4	2020/1/9	2020/2/25	32
Streambank Erosion Protection	3-5	2020/1/21	2020/2/25	8
In-Stream Habitat Features	3-6	2020/1/21	2020/2/30	10
Seeding and Planting	3-7	2020/3/1	2020/3/9	7
Demobilization	3-8	2020/3/9	2020/3/11	2
Hidden Valley Creek				
Mobilization	4-1	2020/1/1	2020/1/3	3
Clearing & Grubbing	4-2	2020/1/3	2020/1/22	13
Invasive Plant Removal	4-3	2020/1/3	2020/1/24	14
Channel and Floodplain Earthwork	4-4	2020/1/22	2020/3/15	53
In-Stream Habitat Features	4-5	2020/2/1	2020/3/10	22
Concrete Box Culvert Installation	4-6	2020/3/1	2020/3/10	6
Seeding and Planting	4-7	2020/4/1	2020/4/28	20
Demobilization	4-8	2020/4/28	2020/4/30	2

Offroad Calculations						2019								2020													
Code	Equip	#/day	hrs/day	HP	LF	Pounds per day						Metric tons per year				Pounds per day						Metric tons per year					
						ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e		
1-1	2 CY Loader			1	2	203	0.4	0.1	1.2	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-1	Bulldozer/Small Bulldozer			1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.3	0.0	0.0	0.3	0.3	2.8	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-2	2 Person ATV			1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-2	Chain Saw			1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.1	0.0	0.0	0.2	8.1	0.2	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-2	Chain Saw			1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.1	0.0	0.0	0.2	8.1	0.2	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-2	Excavator/Small Excavator			1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.3	0.0	0.0	0.4	0.1	1.2	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-3	2 Person ATV			1	1	9	0.4	0.1	0.0	3.9	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-3	Chain Saw			1	2	9	0.6	2.7	0.1	7.5	0.0	0.0	0.0	0.2	0.0	0.0	0.6	2.7	0.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-3	Excavator/Small Excavator			1	6	158	0.4	0.2	2.0	2.5	0.1	0.1	0.0	4.9	0.0	0.0	5.0	0.2	1.8	2.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-4	2 CY Loader			1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4	Bulldozer/Small Bulldozer			1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	2.4	0.0	0.0	2.4	0.3	2.8	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-4	Excavator/Small Excavator			1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	5.8	0.0	0.0	5.9	0.2	2.4	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-4	Excavator/Small Excavator			1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	5.8	0.0	0.0	5.9	0.2	2.4	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-5	2 CY Loader			1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-5	Excavator/Small Excavator			1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	2.3	0.0	0.0	2.4	0.2	2.4	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-5	Excavator/Small Excavator			1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	2.3	0.0	0.0	2.4	0.2	2.4	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-5	Handheld Vibratory Compactor			1	4	8	0.4	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1-6	2 CY Loader			1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-6	2 Person ATV			1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-6	Excavator/Small Excavator			1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	6.5	0.0	0.0	6.6	0.2	2.4	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-6	Excavator/Small Excavator			1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	3.3	0.0	0.0	3.3	0.1	1.2	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0
1-7	2 Person ATV			1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-7	2 Person ATV			1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-8	Bulldozer/Small Bulldozer			1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.2	0.0	0.0	0.2	0.3	2.8	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2-1	2 CY Loader			1	2	203	0.4	0.1	1.2	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-1	Bulldozer/Small Bulldozer			1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.3	0.0	0.0	0.3	0.3	2.8	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
2-2	2 Person ATV			1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-2	Chain Saw			1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.2	0.0	0.0	0.5	8.1	0.2	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-2	Chain Saw			1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.2	0.0	0.0	0.5	8.1	0.2	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-2	Excavator/Small Excavator			1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.9	0.0	0.0	0.9	0.1	1.2	1.6	0.1	0.1	0.0	0.0	0.		

3-2	Chain Saw	1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.2	22.4	0.0	0.0	0.0	0.1	0.0	0.0	0.3
3-2	Excavator/Small Excavator	1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.6	0.1	0.1	0.0	0.6	0.0	0.0	0.6
3-3	2 Person ATV	1	1	9	0.4	0.1	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.9	0.0	0.0	0.0	0.1	0.0	0.0	0.1
3-3	Chain Saw	1	2	9	0.6	2.7	0.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.1	7.5	0.0	0.0	0.0	0.4	0.0	0.0	0.8
3-3	Excavator/Small Excavator	1	6	158	0.4	0.2	2.0	2.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.8	2.5	0.1	0.1	0.0	6.8	0.0	0.0	6.9
3-4	2 CY Loader	1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	1.1	0.0	0.0	1.1
3-4	Bulldozer/Small Bulldozer	1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.8	1.0	0.1	0.1	0.0	3.0	0.0	0.0	3.0
3-4	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	7.3	0.0	0.0	7.4
3-4	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	7.3	0.0	0.0	7.4
3-5	2 CY Loader	1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.3	
3-5	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	1.8	0.0	0.0	1.9
3-5	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	1.8	0.0	0.0	1.9
3-5	Handheld Vibratory Compactor	1	4	8	0.4	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
3-6	2 CY Loader	1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.4	
3-6	2 Person ATV	1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	7.7	0.0	0.0	0.0	0.1	0.0	0.0	0.1
3-6	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	2.3	0.0	0.0	2.3
3-6	Excavator/Small Excavator	1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.6	0.1	0.1	0.0	1.1	0.0	0.0	1.2
3-7	2 Person ATV	1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	30.9	0.0	0.0	0.0	0.2	0.0	0.0	0.2
3-7	2 Person ATV	1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	30.9	0.0	0.0	0.0	0.2	0.0	0.0	0.2
3-8	Bulldozer/Small Bulldozer	1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.8	1.0	0.1	0.1	0.0	0.2	0.0	0.0	0.2
4-1	2 CY Loader	1	2	203	0.4	0.1	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.2
4-1	Bulldozer/Small Bulldozer	1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.8	1.0	0.1	0.1	0.0	0.3	0.0	0.0	0.3
4-2	2 Person ATV	1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	7.7	0.0	0.0	0.0	0.1	0.0	0.0	0.1
4-2	Chain Saw	1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.2	22.4	0.0	0.0	0.0	0.3	0.0	0.0	0.8
4-2	Chain Saw	1	6	9	0.6	8.2	0.2	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.2	22.4	0.0	0.0	0.0	0.3	0.0	0.0	0.8
4-2	Excavator/Small Excavator	1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.6	0.1	0.1	0.0	1.5	0.0	0.0	1.5
4-3	2 Person ATV	1	1	9	0.4	0.1	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-3	Chain Saw	1	2	9	0.6	2.7	0.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.1	7.5	0.0	0.0	0.0	0.1	0.0	0.0	0.3
4-3	Excavator/Small Excavator	1	6	158	0.4	0.2	2.0	2.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.8	2.5	0.1	0.1	0.0	2.4	0.0	0.0	2.4
4-4	2 CY Loader	1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	1.8	0.0	0.0	1.9
4-4	Bulldozer/Small Bulldozer	1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.8	1.0	0.1	0.1	0.0	4.9	0.0	0.0	5.0
4-4	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	12.1	0.0	0.0	12.3
4-4	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	12.1	0.0	0.0	12.3
4-5	2 CY Loader	1	1	203	0.4	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.8	0.0	0.0	0.8
4-5	2 Person ATV	1	2	9	0.4	0.1	0.1	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	7.7	0.0	0.0	0.0	0.1	0.0	0.0	0.1
4-5	Excavator/Small Excavator	1	8	158	0.4	0.3	2.7	3.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.4	3.3	0.1	0.1	0.0	5.0	0.0	0.0	5.1
4-5	Excavator/Small Excavator	1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.6	0.1	0.1	0.0	2.5	0.0	0.0	2.5
4-5	Pavement Roller	1	6	80	0.4	0.2	1.7	1.4	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.5	1.4	0.1	0.1	0.0	0.1	0.0	0.0	0.1
4-6	2 CY Loader	1	0.5	203	0.4	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1
4-6	Bulldozer/Small Bulldozer	1	0.5	247	0.4	0.1	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1
4-6	Excavator/Small Excavator	1	4	158	0.4	0.1	1.3	1.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.6	0.1	0.1	0.0	0.7	0.0	0.0	0.7
4-6	Handheld Vibratory Compactor	1	1	8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4-6	Pavement Roller	1	6	80	0.4	0.2	1.7	1.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.5	1.4	0.1	0.1	0.0	0.5	0.0	0.0	0.5
4-7	2 Person ATV	1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	30.9	0.0	0.0	0.0	0.5	0.0	0.0	0.5
4-7	2 Person ATV	1	8	9	0.4	0.5	0.3	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	30.9	0.0	0.0	0.0	0.5	0.0	0.0	0.5
4-8	Bulldozer/Small Bulldozer	1	2	247	0.4	0.3	3.0	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.8	1.0	0.1	0.1	0.0	0.2	0.0	0.0	0.2

Labor Calculations			2019												2020											
Code	Single Trips/day	Miles/day	Pounds per day							Metric tons per year				Pounds per day							Metric tons per year					
	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e		
1-1	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-2	10	198	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.2	0.2	0.0	0.0	0.4	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-3	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	1.3	0.0	0.0	1.4	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
1-4	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	1.8	0.0	0.0	1.8	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
1-5	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
1-6	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
1-7	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
1-8	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
2-1	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
2-2	10	198	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
2-3	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
2-4	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	2.5	0.0	0.0	2.6	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
2-5	16	317	0.0	0.1	0.7	0.0	0.0	0.6	0.1	0.0	1.2	0.0	0.0	1.2	0.0	0.1	0.7	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0
2-6	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	2.9	0.0	0.0	2.9	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0
2-7	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	2.2	0.0	0.0	2.2	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
2-8	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
3-1	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1
3-2	10	198	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.1	0.0	0.3	0.0	0.0	0.3
3-3	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	1.9	0.0	0.0	1.9
3-4	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	2.3	0.0	0.0	2.3
3-5	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.6	0.0	0.0	0.6
3-6	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.7	0.0	0.0	0.7
3-7	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.3	0.0	0.0	0.3
3-8	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1
4-1	6	119	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1
4-2	10	198	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.1	0.0	0.8	0.0	0.0	0.8
4-3	8	158	0.0	0.0	0.4	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.0	0.7	0.0	0.0	0.7
4-4	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	3.7	0.0	0.0	3.7
4-5	12	238	0.0	0.0	0.6	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.1	0.0	1.5	0.0	0.0	1.6
4-6	16	317	0.0	0.1	0.7	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.0	0.0	0.6	0.1						

Onroad Calculations				2019										2020											
Code	Single Trips/day	Miles/day	Vehicle	Pounds per day							Metric tons per year				Pounds per day							Metric tons per year			
	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e	ROG	NOX	CO	PM10	PM2.5	PM10 D	PM2.5 D	SO2	CO2	CH4	N2O	CO2e	
1-1	4	0	Onsite Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1-1	4	0	Onsite Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1-1	4	80	Offsite Delivery	0.1	1.3	0.5	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.5	0.1	1.1	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0
1-1	4	80	Offsite Delivery	0.1	1.3	0.5	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.5	0.1	1.1	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0
1-1	2	0	Onsite Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-1	2	40	Offsite Delivery	0.0	0.8	0.4	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.7	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0
1-2	0	0	Onsite Truck	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-3	2	0	Onsite Truck	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4	15	1	Onsite Truck	0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4	15	1	Onsite Truck	0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4	15	1	Onsite Truck	0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4	2	0	Onsite Water Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-5	2	0	Onsite Truck	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-5	2	0	Onsite Truck	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-5	2	0	Onsite Water Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-6	2	0	Onsite Truck	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-6	2	0	Onsite Truck	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-6	2	0	Onsite Water Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-7	2	0	Onsite Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-7	2	0	Onsite Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-7	2	40	Offsite Delivery	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0
1-7	2	40	Offsite Delivery	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0
1-7	2	0	Onsite Water Truck	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-8	2	0	Onsite Truck	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-8	2	40	Offsite Delivery	0.0	0.8	0.4	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.7	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0
2-1	4	2	Onsite Truck	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-1	4	2	Onsite Truck	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-1	4	80	Offsite Delivery	0.1	1.3	0.5	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.5	0.1	1.1	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0
2-1	4	80	Offsite Delivery	0.1	1.3	0.5	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.5	0.1	1.1	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0
2-1	2	1	Onsite Truck	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-1	2	40	Offsite Delivery	0.0	0.8	0.4	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.7	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0
2-2	0	0	Onsite Truck	0.0	0.3	0.2	0.0	0.																	

4-7	2	40	Offsite Delivery	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4
4-7	2	40	Offsite Delivery	0.0	0.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4
4-7	2	1	Onsite Water Truck	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
4-8	2	1	Onsite Truck	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-8	2	40	Offsite Delivery	0.0	0.8	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.1	0.0	0.0	0.2

Earthmoving/Paving Calculations					2019			2020		
Code	Acres/day	Cut/Fill (cy/day)	Dozing hr/day	Paving (sf/day)	Pounds per day			Pounds per day		
					ROG	PM10 D	PM2.5 D	ROG	PM10 D	PM2.5 D
1-2	0.500				0.00	0.2	0.0	0.0	0.2	0.0
1-4	0.020	206.2	2.00		0.00	0.7	0.4	0.0	0.7	0.4
1-5		16.000			0.00	0.0	0.0	0.0	0.0	0.0
1-6		11.250			0.00	0.0	0.0	0.0	0.0	0.0
2-2	0.500				0.00	0.2	0.0	0.0	0.2	0.0
2-4		169.857	2.00		0.00	0.7	0.4	0.0	0.7	0.4
2-5		13.333	0.50		0.00	0.2	0.1	0.0	0.2	0.1
2-6				1300.000	0.04	0.0	0.0	0.0	0.0	0.0
3-2	0.500				0.00	0.2	0.0	0.0	0.2	0.0
3-4	0.100	73.750	2.00		0.00	0.7	0.4	0.0	0.7	0.4
3-5		17.500			0.00	0.0	0.0	0.0	0.0	0.0
3-6		4.500			0.00	0.0	0.0	0.0	0.0	0.0
4-2	0.500				0.00	0.2	0.0	0.0	0.2	0.0
4-4		356.415	2.00		0.00	0.7	0.4	0.0	0.7	0.4
4-5				1250.000	0.03	0.0	0.0	0.0	0.0	0.0
4-6		22.500	0.50		0.00	0.2	0.1	0.0	0.2	0.1

Maintenance Activities

Phase	Code	Start Date (yyyy/m/d)	End Date (yyyy/m/d)	Working Days
Short-term	Short	2021/1/1	2021/12/31	120
Long-term	Long	2023/1/1	2023/12/31	48
In perpetuity	Perp	2033/1/1	2033/12/31	24

Earthmoving/Paving Calculations	2	3	6	11	12						
	Location	Onsite	2021			2023		2033			
Code	Acres/day	Cut/Fill (cy/day)	Pounds per day			Pounds per day			Pounds per day		
			ROG	PM10 D	PM2.5 D	ROG	PM10 D	PM2.5 D	ROG	PM10 D	PM2.5 D
Short	0.500	500	0.00	0.2	0.0						
Long	0.500	500				0.00	0.2	0.0			
Perp	0.500	0							0.0	0.2	0.0

Pumping
Pump HP 7.5
Number 2
Hr/year 8760

MWh/yr 98
MT CO₂e/yr 23