

APPENDIX E

NOISE MODELING TECHNICAL DATA

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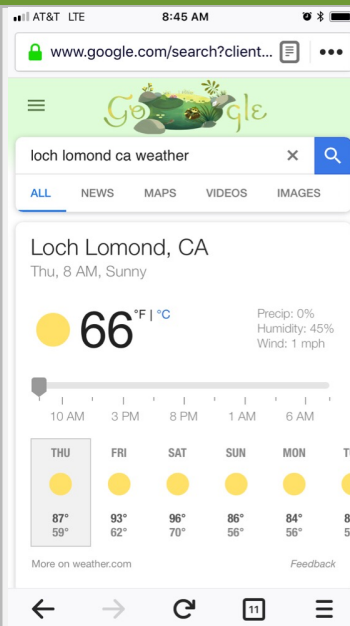
Field Noise Measurement Data

Record: 998

Project Name	Newell Creek Dam
Project #	10832
Observer(s)	Christopher Barnobi
Date	2018-06-21

Meteorological Conditions

Upload NOAA Forecast



Temp (F)	66
Humidity % (R.H.)	45
Wind	Calm
Wind Speed (MPH)	1
Sky	Clear

Instrument and Calibrator Information

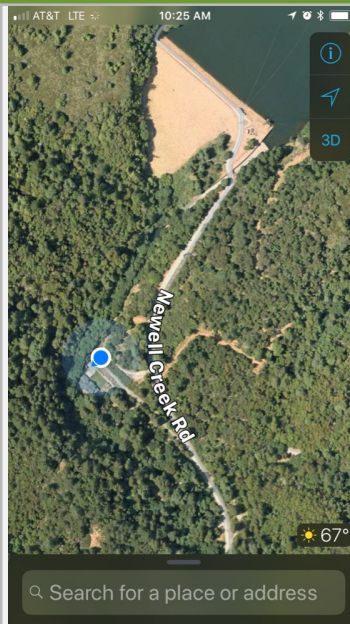
Instrument Name List	(AUB) NL-62
Instrument Name	(AUB) NL-62
Instrument Name Lookup Key	(AUB) NL-62
Manufacturer	Rion
Model	NL-62
Serial Number	350815
Calibration Date	5/17/2017
Calibrator Name	(SAC) Rion NC-74
Calibrator Name	(SAC) Rion NC-74
Calibrator Name Lookup Key	(SAC) Rion NC-74
Calibrator Manufacturer	Rion
Calibrator Model	NC-74
Calibrator Serial #	34167529
GPS Assistance Used	No
Pre-Test (dBA SPL)	94
Windscreen	Yes
Weighting?	A-WTD
Slow/Fast?	Slow
ANSI?	NA

Recordings

Record #	1
Site ID	ST1_Residential Drive
Site Location Lat/Long	37.099090, -122.075166
Begin (Time)	10:18:00
End (Time)	10:48:00
Leq	40
Other Lx (Specify Metric)	L
Primary Noise Source	Water running in stream
Other Noise Sources (Background)	Birds
Other Noise Sources Additional Description	10:33 distant aircraft
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes

Description / Photos

Upload Google Maps Data



Terrain

Mixed

Site Photos

Photo



Site Photos

Photo



Site Photos

Photo

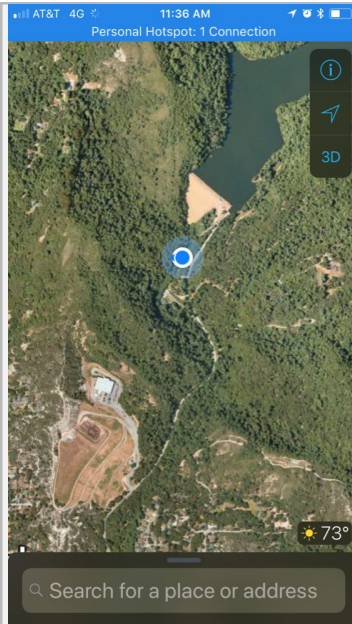


Recordings

Record #	3
Site ID	ST3_near construct work bridge
Site Location Lat/Long	37.100293, -122.074601
Begin (Time)	11:34:00
End (Time)	12:04:00
Leq	49
Other Lx (Specify Metric)	L
Primary Noise Source	Running water in stream
Other Noise Sources (Background)	Birds, Rustling Leaves
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes

Description / Photos

Upload Google Maps Data



Site Photos

Photo



Site Photos

Photo

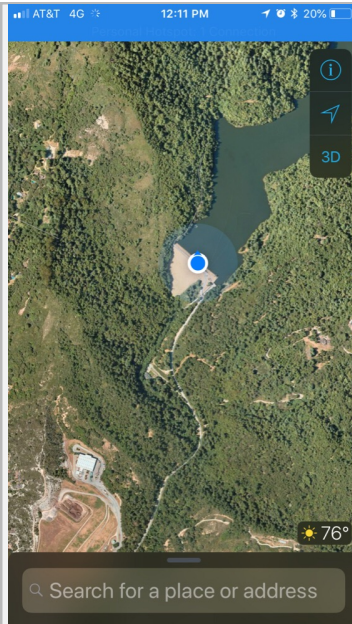


Recordings

Record #	4
Site ID	ST4_top of dam
Site Location Lat/Long	37.102814, -122.073079
Begin (Time)	12:10:00
End (Time)	12:40:00
Leq	40
Other Lx (Specify Metric)	L
Primary Noise Source	Mechanical dam equipment
Other Noise Sources (Background)	Birds, Rustling Leaves
Other Noise Sources Additional Description	12:17 distant back up alarm 12:24 distant aircraft
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes

Description / Photos

Upload Google Maps Data



Site Photos

Photo



Site Photos

Photo



Recordings

Record #	5
Site ID	ST5_road to dump
Site Location Lat/Long	37.091237, -122.077303
Begin (Time)	12:52:00
End (Time)	13:02:00
Leq	62.5
Other Lx (Specify Metric)	L
Primary Noise Source	Traffic
Other Noise Sources (Background)	Birds, Rustling Leaves
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes

Source Info and Traffic Counts

Number of Lanes	2
Lane Width (feet)	10
Roadway Width (feet)	20
Roadway Width (m)	6.1
Distance to Roadway (feet)	3
Distance to Roadway (m)	0.9
Distance Measured to Centerline or Edge of Pavement?	Edge of Pavement
Estimated Vehicle Speed (MPH)	0

Traffic Counts

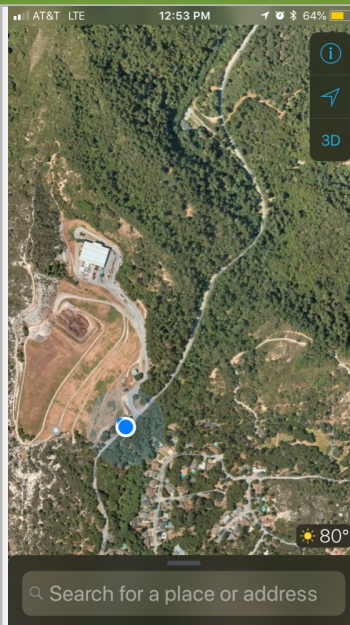
Vehicle Count Summary	A 1, MT 0, HT 0, B 0, MC 0
Counting Both Directions?	Yes
Count Duration (minutes)	0
Vehicle Count Tally	
Select Method for Vehicle Counts	Use Counter (+/-)
Number of Vehicles - Autos	1
Number of Vehicles - Medium Trucks	0
Number of Vehicles - Heavy Trucks	0
Number of Vehicles - Buses	0
Number of Vehicles - Motorcycles	0

Traffic Counts

Vehicle Count Summary	A 15, MT 1, HT 1, B 0, MC 0
Counting Both Directions?	Yes
Count Duration (minutes)	0
Vehicle Count Tally	
Select Method for Vehicle Counts	Enter Manually
Number of Vehicles - Autos	15
Number of Vehicles - Medium Trucks	1
Number of Vehicles - Heavy Trucks	1
Number of Vehicles - Buses	0
Number of Vehicles - Motorcycles	0

Description / Photos

Upload Google Maps Data



Site Photos

Photo



Site Photos

Photo



Site Photos

Photo

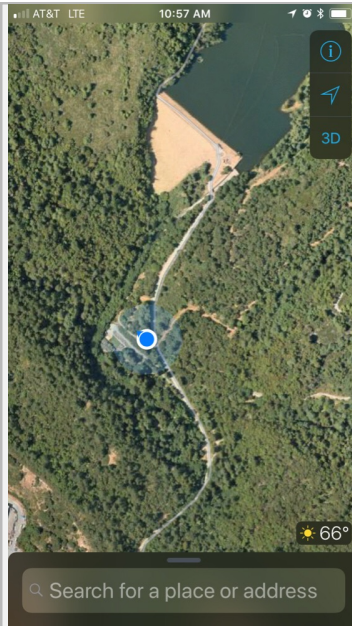


Recordings

Record #	2
Site ID	ST2_work side of gate
Site Location Lat/Long	37.098812, -122.074515
Begin (Time)	10:56:00
End (Time)	11:26:00
Leq	33
Other Lx (Specify Metric)	L
Primary Noise Source	Water running in stream
Other Noise Sources (Background)	Birds
Other Noise Sources Additional Description	11:20 bugs pick up
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes

Description / Photos

Upload Google Maps Data



Site Photos

Photo



Site Photos

Photo



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Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Mobilization

		---- Receptor #1 ----					
Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Laydownn Area 100'	Residential	65	60	55			
		Equipment					
				Spec	Actual	Receptor	Estimated
		Impact		Lmax	Lmax	Distance	Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck		No	40		74.3	100	0
Man Lift		No	20		74.7	125	0
Dozer		No	40		81.7	150	0
		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck		68.2	64.3	N/A	N/A	N/A	N/A
Man Lift		66.7	59.8	N/A	N/A	N/A	N/A
Dozer		72.1	68.1	N/A	N/A	N/A	N/A
	Total	72.1	70.1	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

		---- Receptor #2 ----					
Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Main Tunneling Area 800'	Residential	65	60	55			
		Equipment					
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)	
Flat Bed Truck	No	40		74.3	800	0	
Man Lift	No	20		74.7	800	0	
Dozer	No	40		81.7	800	0	
		Results					
		Calculated (dBA)		Noise Limits (dBA)			
Equipment		*Lmax	Leq	Day	Evening		
				Lmax	Leq	Lmax	Leq
Flat Bed Truck		50.2	46.2	N/A	N/A	N/A	N/A
Man Lift		50.6	43.6	N/A	N/A	N/A	N/A

Dozer		57.6	53.6	N/A	N/A	N/A	N/A
	Total	57.6	54.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----							
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Receiver 580'	Residential	65	60	55			

Equipment						
		Spec	Actual	Receptor	Estimated	
Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	580	0
Man Lift	No	20		74.7	580	0
Dozer	No	40		81.7	580	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
		Day	Evening			
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
	Total	60.4	57.5	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----							
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Residences 1000'	Residential	65	60	55			

Equipment						
		Spec	Actual	Receptor	Estimated	
Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	1000	5
Man Lift	No	20		74.7	1000	5
Dozer	No	40		81.7	1000	5

Results						
Calculated (dBA)			Noise Limits (dBA)			
		Day	Evening			
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A

Total	50.6	47.7	N/A	N/A	N/A	N/A
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*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Develop Staging Areas

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	125	0
Excavator	No	40		80.7	125	0
Dozer	No	40		81.7	150	0
Dozer	No	40		81.7	150	0
Front End Loader	No	40		79.1	175	0
Front End Loader	No	40		79.1	175	0
Flat Bed Truck	No	40		74.3	200	0
Flat Bed Truck	No	40		74.3	200	0
Crane	No	16		80.6	225	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	66.3	62.3	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Dozer	72.1	68.1	N/A	N/A	N/A	N/A
Dozer	72.1	68.1	N/A	N/A	N/A	N/A
Front End Loader	68.2	64.2	N/A	N/A	N/A	N/A
Front End Loader	68.2	64.2	N/A	N/A	N/A	N/A
Flat Bed Truck	62.2	58.2	N/A	N/A	N/A	N/A
Flat Bed Truck	62.2	58.2	N/A	N/A	N/A	N/A
Crane	67.5	59.5	N/A	N/A	N/A	N/A
Total	72.8	75.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Dozer	No	40		81.7	800	0
Dozer	No	40		81.7	800	0
Front End Loader	No	40		79.1	800	0
Front End Loader	No	40		79.1	800	0
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Crane	No	16		80.6	800	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Excavator	56.6	52.6	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Total	57.6	60.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Equipment			
Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Dozer	No	40		81.7	580	0
Dozer	No	40		81.7	580	0
Front End Loader	No	40		79.1	580	0
Front End Loader	No	40		79.1	580	0
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Crane	No	16		80.6	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Excavator	59.4	55.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Total	60.4	63.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Dozer	No	40		81.7	1000	5
Dozer	No	40		81.7	1000	5

Front End Loader	No	40	79.1	1000	5
Front End Loader	No	40	79.1	1000	5
Flat Bed Truck	No	40	74.3	1000	5
Flat Bed Truck	No	40	74.3	1000	5
Crane	No	16	80.6	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Total	50.6	53.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Construct NCP

		---- Receptor #1 ----					
Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Laydownn Area 100'	Residential	65	60	55			
Equipment							
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck		No	40		74.3	100	0
Flat Bed Truck		No	40		74.3	100	0
Excavator		No	40		80.7	125	0
Dozer		No	40		81.7	125	0
Grader		No	40	85		150	0
Front End Loader		No	40		79.1	150	0
Roller		No	20		80	175	0
Flat Bed Truck		No	40		74.3	175	0

Man Lift	No	20	74.7	200	0
Crane	No	16	80.6	200	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	68.2		64.3 N/A	N/A	N/A	N/A
Flat Bed Truck	68.2		64.3 N/A	N/A	N/A	N/A
Excavator	72.8		68.8 N/A	N/A	N/A	N/A
Dozer	73.7		69.7 N/A	N/A	N/A	N/A
Grader	75.5		71.5 N/A	N/A	N/A	N/A
Front End Loader	69.6		65.6 N/A	N/A	N/A	N/A
Roller	69.1		62.1 N/A	N/A	N/A	N/A
Flat Bed Truck	63.4		59.4 N/A	N/A	N/A	N/A
Man Lift	62.7		55.7 N/A	N/A	N/A	N/A
Crane	68.5		60.6 N/A	N/A	N/A	N/A
Total	75.5		76.4 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Dozer	No	40		81.7	800	0
Grader	No	40	85		800	0
Front End Loader	No	40		79.1	800	0
Roller	No	20		80	800	0
Flat Bed Truck	No	40		74.3	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Excavator	56.6		52.6 N/A	N/A	N/A	N/A

Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Grader	60.9	56.9	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A
Roller	55.9	48.9	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Total	60.9	61.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Dozer	No	40		81.7	580	0
Grader	No	40	85		580	0
Front End Loader	No	40		79.1	580	0
Roller	No	20		80	580	0
Flat Bed Truck	No	40		74.3	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Excavator	59.4	55.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Grader	63.7	59.7	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Roller	58.7	51.7	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Total	63.7	64	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Dozer	No	40		81.7	1000	5
Grader	No	40	85		1000	5
Front End Loader	No	40		79.1	1000	5
Roller	No	20		80	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)		Day		Evening	
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Grader	54	50	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Roller	49	42	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Total	54	54.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Access Road Improvement

		---- Receptor #1 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	100	0
Excavator	No	40		80.7	125	0
Dozer	No	40		81.7	125	0
Grader	No	40	85		150	0
Front End Loader	No	40		79.1	150	0
Roller	No	20		80	175	0
Flat Bed Truck	No	40		74.3	175	0
Man Lift	No	20		74.7	200	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Dozer	73.7	69.7	N/A	N/A	N/A	N/A
Grader	75.5	71.5	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A
Roller	69.1	62.1	N/A	N/A	N/A	N/A
Flat Bed Truck	63.4	59.4	N/A	N/A	N/A	N/A
Man Lift	62.7	55.7	N/A	N/A	N/A	N/A
Total	75.5	76.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----				
Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Dozer	No	40		81.7	800	0
Grader	No	40	85		800	0
Front End Loader	No	40		79.1	800	0
Roller	No	20		80	800	0

Flat Bed Truck	No	40	74.3	800	0
Man Lift	No	20	74.7	800	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Excavator	56.6		52.6 N/A	N/A	N/A	N/A
Dozer	57.6		53.6 N/A	N/A	N/A	N/A
Grader	60.9		56.9 N/A	N/A	N/A	N/A
Front End Loader	55		51 N/A	N/A	N/A	N/A
Roller	55.9		48.9 N/A	N/A	N/A	N/A
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Man Lift	50.6		43.6 N/A	N/A	N/A	N/A
Total	60.9		61 N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

---- Receptor #3 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Dozer	No	40		81.7	580	0
Grader	No	40	85		580	0
Front End Loader	No	40		79.1	580	0
Roller	No	20		80	580	0
Flat Bed Truck	No	40		74.3	580	0
Man Lift	No	20		74.7	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Excavator	59.4		55.4 N/A	N/A	N/A	N/A
Dozer	60.4		56.4 N/A	N/A	N/A	N/A
Grader	63.7		59.7 N/A	N/A	N/A	N/A

Front End Loader		57.8	53.8	N/A	N/A	N/A	N/A
Roller		58.7	51.7	N/A	N/A	N/A	N/A
Flat Bed Truck		53	49	N/A	N/A	N/A	N/A
Man Lift		53.4	46.4	N/A	N/A	N/A	N/A
	Total	63.7	63.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Dozer	No	40		81.7	1000	5
Grader	No	40	85		1000	5
Front End Loader	No	40		79.1	1000	5
Roller	No	20		80	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Man Lift	No	20		74.7	1000	5

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck		43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck		43.2	39.3	N/A	N/A	N/A	N/A
Excavator		49.7	45.7	N/A	N/A	N/A	N/A
Dozer		50.6	46.7	N/A	N/A	N/A	N/A
Grader		54	50	N/A	N/A	N/A	N/A
Front End Loader		48.1	44.1	N/A	N/A	N/A	N/A
Roller		49	42	N/A	N/A	N/A	N/A
Flat Bed Truck		43.2	39.3	N/A	N/A	N/A	N/A
Man Lift		43.7	36.7	N/A	N/A	N/A	N/A
	Total	54	54.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Grade Portal Construction Platform

		---- Receptor #1 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	100	0
Front End Loader	No	40		79.1	125	0
Front End Loader	No	40		79.1	125	0
Dozer	No	40		81.7	150	0
Dozer	No	40		81.7	150	0
Concrete Mixer Truck	No	40		78.8	175	0
Concrete Mixer Truck	No	40		78.8	175	0
Concrete Mixer Truck	No	40		78.8	200	0
Concrete Mixer Truck	No	40		78.8	200	0
Crane	No	16		80.6	225	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
Equipment		*Lmax	Leq	Day		Evening	
				Lmax	Leq	Lmax	Leq
Flat Bed Truck		68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck		68.2	64.3	N/A	N/A	N/A	N/A
Front End Loader		71.2	67.2	N/A	N/A	N/A	N/A
Front End Loader		71.2	67.2	N/A	N/A	N/A	N/A
Dozer		72.1	68.1	N/A	N/A	N/A	N/A
Dozer		72.1	68.1	N/A	N/A	N/A	N/A
Concrete Mixer Truck		67.9	63.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck		67.9	63.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck		66.8	62.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck		66.8	62.8	N/A	N/A	N/A	N/A
Crane		67.5	59.5	N/A	N/A	N/A	N/A
	Total	72.1	75.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Equipment			
Spec	Actual	Receptor	Estimated

Description	Impact	Usage(%)	Lmax	Lmax	Distance	Shielding
	Device		(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Front End Loader	No	40		79.1	800	0
Front End Loader	No	40		79.1	800	0
Dozer	No	40		81.7	800	0
Dozer	No	40		81.7	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Crane	No	16		80.6	800	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Total	57.6	61.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
Device			Lmax	Lmax	Distance	Shielding
			(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Front End Loader	No	40		79.1	580	0
Front End Loader	No	40		79.1	580	0
Dozer	No	40		81.7	580	0
Dozer	No	40		81.7	580	0

Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Crane	No	16	80.6	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Total	60.4	64.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Equipment				
	Impact	Device	Spec	Actual	Receptor
			Lmax (dBA)	Lmax (dBA)	Distance (feet)
Flat Bed Truck	No	40		74.3	1000
Flat Bed Truck	No	40		74.3	1000
Front End Loader	No	40		79.1	1000
Front End Loader	No	40		79.1	1000
Dozer	No	40		81.7	1000
Dozer	No	40		81.7	1000
Concrete Mixer Truck	No	40		78.8	1000
Concrete Mixer Truck	No	40		78.8	1000
Concrete Mixer Truck	No	40		78.8	1000
Concrete Mixer Truck	No	40		78.8	1000
Crane	No	16		80.6	1000

Results	
Calculated (dBA)	Noise Limits (dBA)

Equipment	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Total	50.6	54.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Install Culvert Brdige

---- Receptor #1 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	100	0
Excavator	No	40		80.7	100	0
Dozer	No	40		81.7	125	0
Roller	No	20		80	125	0
Man Lift	No	20		74.7	150	0
Man Lift	No	20		74.7	150	0
Crane	No	16		80.6	175	0

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Excavator	74.7	70.7	N/A	N/A	N/A	N/A
Dozer	73.7	69.7	N/A	N/A	N/A	N/A
Roller	72	65.1	N/A	N/A	N/A	N/A

Man Lift		65.2	58.2	N/A	N/A	N/A	N/A
Man Lift		65.2	58.2	N/A	N/A	N/A	N/A
Crane		69.7	61.7	N/A	N/A	N/A	N/A
	Total	74.7	74.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Dozer	No	40		81.7	800	0
Roller	No	20		80	800	0
Man Lift	No	20		74.7	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Excavator	56.6	52.6	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Roller	55.9	48.9	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
	Total	57.6	58.1	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0

Excavator	No	40	80.7	580	0
Dozer	No	40	81.7	580	0
Roller	No	20	80	580	0
Man Lift	No	20	74.7	580	0
Man Lift	No	20	74.7	580	0
Crane	No	16	80.6	580	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Excavator	59.4	55.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Roller	58.7	51.7	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Total	60.4	60.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Dozer	No	40		81.7	1000	5
Roller	No	20		80	1000	5
Man Lift	No	20		74.7	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Roller	49	42	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A

Man Lift		43.7	36.7	N/A	N/A	N/A	N/A
Crane		49.5	41.6	N/A	N/A	N/A	N/A
Total		50.6	51.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Install Temporary Boat Launch and Silt Curtain

		---- Receptor #1 ----				
Description	Land Use	Baselines (dBA)		Night		
		Daytime	Evening			
Laydownn Area 100'	Residential	65	60	55		
Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	100	0
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	125	0
Excavator	No	40		80.7	125	0
Grader	No	40	85		150	0
Roller	No	20		80	150	0
Flat Bed Truck	No	40		74.3	175	0
Man Lift	No	20		74.7	175	0
Crane	No	16		80.6	200	0
Dozer	No	40		81.7	200	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	66.3	62.3	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Grader	75.5	71.5	N/A	N/A	N/A	N/A
Roller	70.5	63.5	N/A	N/A	N/A	N/A
Flat Bed Truck	63.4	59.4	N/A	N/A	N/A	N/A
Man Lift	63.8	56.8	N/A	N/A	N/A	N/A
Crane	68.5	60.6	N/A	N/A	N/A	N/A
Dozer	69.6	65.6	N/A	N/A	N/A	N/A
Total	75.5	76.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Generator	No	50		80.6	800	0
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Grader	No	40	85		800	0
Roller	No	20		80	800	0
Flat Bed Truck	No	40		74.3	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0
Dozer	No	40		81.7	800	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Generator	56.5	53.5	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Excavator	56.6	52.6	N/A	N/A	N/A	N/A
Grader	60.9	56.9	N/A	N/A	N/A	N/A
Roller	55.9	48.9	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Total	60.9	61.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		

Generator	No	50	80.6	580	0
Flat Bed Truck	No	40	74.3	580	0
Flat Bed Truck	No	40	74.3	580	0
Excavator	No	40	80.7	580	0
Grader	No	40	85	580	0
Roller	No	20	80	580	0
Flat Bed Truck	No	40	74.3	580	0
Man Lift	No	20	74.7	580	0
Crane	No	16	80.6	580	0
Dozer	No	40	81.7	580	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	59.3		56.3 N/A	N/A	N/A	N/A
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Excavator	59.4		55.4 N/A	N/A	N/A	N/A
Grader	63.7		59.7 N/A	N/A	N/A	N/A
Roller	58.7		51.7 N/A	N/A	N/A	N/A
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Man Lift	53.4		46.4 N/A	N/A	N/A	N/A
Crane	59.3		51.3 N/A	N/A	N/A	N/A
Dozer	60.4		56.4 N/A	N/A	N/A	N/A
Total	63.7		64.3 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Equipment				
	Impact Device	Usage(%)	Spec	Actual	Receptor
			Lmax (dBA)	Lmax (dBA)	Distance (feet)
Generator	No	50		80.6	1000
Flat Bed Truck	No	40		74.3	1000
Flat Bed Truck	No	40		74.3	1000
Excavator	No	40		80.7	1000
Grader	No	40	85		1000
Roller	No	20		80	1000
Flat Bed Truck	No	40		74.3	1000
Man Lift	No	20		74.7	1000
Crane	No	16		80.6	1000
Dozer	No	40		81.7	1000

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Grader	54	50	N/A	N/A	N/A	N/A
Roller	49	42	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	54	54.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Dredge Material & Drill Shafts

---- Receptor #1 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	100	0
Drill Rig Truck	No	20		79.1	100	0
Clam Shovel (dropping)	Yes	20		87.3	125	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Crane	74.5	66.6	N/A	N/A	N/A	N/A
Drill Rig Truck	73.1	66.1	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	79.3	72.3	N/A	N/A	N/A	N/A
Total	79.3	74.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	800	0
Drill Rig Truck	No	20		79.1	800	0
Clam Shovel (dropping)	Yes	20		87.3	800	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
			Day			Evening
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Drill Rig Truck	55.1	48.1	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	63.2	56.2	N/A	N/A	N/A	N/A
Total	63.2	57.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	580	0
Drill Rig Truck	No	20		79.1	580	0
Clam Shovel (dropping)	Yes	20		87.3	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
			Day			Evening
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Drill Rig Truck	57.9	50.9	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	66	59	N/A	N/A	N/A	N/A
Total	66	60.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	1000	5
Drill Rig Truck	No	20		79.1	1000	5
Clam Shovel (dropping)	Yes	20		87.3	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
			Day			Evening
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Drill Rig Truck	48.1	41.1	N/A	N/A	N/A	N/A
Clam Shovel (dropping)	56.2	49.2	N/A	N/A	N/A	N/A
Total	56.2	50.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Construct Intake & Air Vent

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Laydownnn Area 100'	Residential	65	60	55		
Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	100	0
Concrete Mixer Truck	No	40		78.8	100	0
Man Lift	No	20		74.7	125	0
Crane	No	16		80.6	125	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
			Day			Evening
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	72.8	68.8	N/A	N/A	N/A	N/A

Concrete Mixer Truck		72.8	68.8	N/A	N/A	N/A	N/A
Man Lift		66.7	59.8	N/A	N/A	N/A	N/A
Crane		72.6	64.6	N/A	N/A	N/A	N/A
	Total	72.8	72.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
	Total	56.5	55.2	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0

Results

Calculated (dBA)	Noise Limits (dBA)
------------------	--------------------

Equipment		*Lmax	Leq	Day		Evening	
				Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck		57.5	53.5	N/A	N/A	N/A	N/A
Man Lift		53.4	46.4	N/A	N/A	N/A	N/A
Crane		59.3	51.3	N/A	N/A	N/A	N/A
	Total	59.3	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Mixer Truck	No	40		78.8	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	Leq
			Lmax		Lmax	
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Total	49.5	48.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Inlet Control House

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Equipment		Receptor	Estimated
Spec	Actual		

Description	Impact	Usage(%)	Lmax	Lmax	Distance	Shielding
	Device		(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	100	0
Excavator	No	40		80.7	100	0
Grader	No	40	85		125	0
Concrete Mixer Truck	No	40		78.8	125	0
Concrete Mixer Truck	No	40		78.8	150	0
Man Lift	No	20		74.7	150	0
Crane	No	16		80.6	175	0
Dozer	No	40		81.7	175	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Excavator	74.7	70.7	N/A	N/A	N/A	N/A
Grader	77	73.1	N/A	N/A	N/A	N/A
Concrete Mixer Truck	70.8	66.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.3	65.3	N/A	N/A	N/A	N/A
Man Lift	65.2	58.2	N/A	N/A	N/A	N/A
Crane	69.7	61.7	N/A	N/A	N/A	N/A
Dozer	70.8	66.8	N/A	N/A	N/A	N/A
Total	77	77	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax	Lmax	Distance	Shielding
			(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Grader	No	40	85		800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0
Dozer	No	40		81.7	800	0

Results		
Calculated (dBA)		Noise Limits (dBA)
Day		Evening

Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Excavator	56.6		52.6 N/A	N/A	N/A	N/A
Grader	60.9		56.9 N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7		50.7 N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7		50.7 N/A	N/A	N/A	N/A
Man Lift	50.6		43.6 N/A	N/A	N/A	N/A
Crane	56.5		48.5 N/A	N/A	N/A	N/A
Dozer	57.6		53.6 N/A	N/A	N/A	N/A
Total	60.9		61.1 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Grader	No	40	85		580	0
Concrete Mixer Truck	No	40		78.8	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0
Dozer	No	40		81.7	580	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Excavator	59.4		55.4 N/A	N/A	N/A	N/A
Grader	63.7		59.7 N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5		53.5 N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5		53.5 N/A	N/A	N/A	N/A
Man Lift	53.4		46.4 N/A	N/A	N/A	N/A
Crane	59.3		51.3 N/A	N/A	N/A	N/A
Dozer	60.4		56.4 N/A	N/A	N/A	N/A
Total	63.7		63.9 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Grader	No	40	85		1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5
Dozer	No	40		81.7	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Grader	54	50	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	54	54.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Start Tunnel Excavation

---- Receptor #1 ----					
Description	Land Use	Baselines (dBA)			
		Daytime	Evening	Night	
Laydownn Area 100'	Residential	65	60	55	

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	100	0

Flat Bed Truck	No	40	74.3	100	0
Flat Bed Truck	No	40	74.3	125	0
Concrete Mixer Truck	No	40	78.8	125	0
Rock Drill	No	20	81	150	0
Compressor (air)	No	40	77.7	150	0
Compressor (air)	No	40	77.7	175	0
All Other Equipment > 5 HP	No	50	85	175	0
All Other Equipment > 5 HP	No	50	85	200	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	66.3	62.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	70.8	66.9	N/A	N/A	N/A	N/A
Rock Drill	71.5	64.5	N/A	N/A	N/A	N/A
Compressor (air)	68.1	64.1	N/A	N/A	N/A	N/A
Compressor (air)	66.8	62.8	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	74.1	71.1	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	73	69.9	N/A	N/A	N/A	N/A
Total	74.6	77.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----				
Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	800	0
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Rock Drill	No	20		81	800	0
Compressor (air)	No	40		77.7	800	0
Compressor (air)	No	40		77.7	800	0
All Other Equipment > 5 HP	No	50	85		800	0
All Other Equipment > 5 HP	No	50	85		800	0

Results		
Calculated (dBA)	Noise Limits (dBA)	
	Day	Evening

Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Generator	56.5		53.5 N/A	N/A	N/A	N/A
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Flat Bed Truck	50.2		46.2 N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7		50.7 N/A	N/A	N/A	N/A
Rock Drill	56.9		49.9 N/A	N/A	N/A	N/A
Compressor (air)	53.6		49.6 N/A	N/A	N/A	N/A
Compressor (air)	53.6		49.6 N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	60.9		57.9 N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	60.9		57.9 N/A	N/A	N/A	N/A
Total	60.9		62.9 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description			Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)		
Generator	No	50		80.6	580	0
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Rock Drill	No	20		81	580	0
Compressor (air)	No	40		77.7	580	0
Compressor (air)	No	40		77.7	580	0
All Other Equipment > 5 HP	No	50	85		580	0
All Other Equipment > 5 HP	No	50	85		580	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Generator		59.3	56.3	N/A	N/A	N/A	N/A
Flat Bed Truck		53	49	N/A	N/A	N/A	N/A
Flat Bed Truck		53	49	N/A	N/A	N/A	N/A
Concrete Mixer Truck		57.5	53.5	N/A	N/A	N/A	N/A
Rock Drill		59.7	52.7	N/A	N/A	N/A	N/A
Compressor (air)		56.4	52.4	N/A	N/A	N/A	N/A
Compressor (air)		56.4	52.4	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP		63.7	60.7	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP		63.7	60.7	N/A	N/A	N/A	N/A
	Total	63.7	65.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----					
Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Residences 1000'	Residential	65	60	55			
		Equipment					
Description	Impact	Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Generator	No		50		80.6	1000	5
Flat Bed Truck	No		40		74.3	1000	5
Flat Bed Truck	No		40		74.3	1000	5
Concrete Mixer Truck	No		40		78.8	1000	5
Rock Drill	No		20		81	1000	5
Compressor (air)	No		40		77.7	1000	5
Compressor (air)	No		40		77.7	1000	5
All Other Equipment > 5 HP	No		50	85		1000	5
All Other Equipment > 5 HP	No		50	85		1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Rock Drill	50	43	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	54	51	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	54	51	N/A	N/A	N/A	N/A
Total	54	55.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Complete Electrical and Controls Install

		---- Receptor #1 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	100	0
Generator	No	50		80.6	100	0
Excavator	No	40		80.7	125	0
Front End Loader	No	40		79.1	125	0
Man Lift	No	20		74.7	150	0
Man Lift	No	20		74.7	150	0
Crane	No	16		80.6	175	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Front End Loader	71.2	67.2	N/A	N/A	N/A	N/A
Man Lift	65.2	58.2	N/A	N/A	N/A	N/A
Man Lift	65.2	58.2	N/A	N/A	N/A	N/A
Crane	69.7	61.7	N/A	N/A	N/A	N/A
Total	74.6	76.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	800	0
Generator	No	50		80.6	800	0
Excavator	No	40		80.7	800	0
Front End Loader	No	40		79.1	800	0
Man Lift	No	20		74.7	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq

Generator		56.5	53.5	N/A	N/A	N/A	N/A
Generator		56.5	53.5	N/A	N/A	N/A	N/A
Excavator		56.6	52.6	N/A	N/A	N/A	N/A
Front End Loader		55	51	N/A	N/A	N/A	N/A
Man Lift		50.6	43.6	N/A	N/A	N/A	N/A
Man Lift		50.6	43.6	N/A	N/A	N/A	N/A
Crane		56.5	48.5	N/A	N/A	N/A	N/A
	Total	56.6	59.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	580	0
Generator	No	50		80.6	580	0
Excavator	No	40		80.7	580	0
Front End Loader	No	40		79.1	580	0
Man Lift	No	20		74.7	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	59.3	56.3	N/A	N/A	N/A	N/A
Generator	59.3	56.3	N/A	N/A	N/A	N/A
Excavator	59.4	55.4	N/A	N/A	N/A	N/A
Front End Loader	57.8	53.8	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
	Total	59.4	62.2	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	1000	5
Generator	No	50		80.6	1000	5
Excavator	No	40		80.7	1000	5
Front End Loader	No	40		79.1	1000	5
Man Lift	No	20		74.7	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Front End Loader	48.1	44.1	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Total	49.7	52.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Complete Outlet Yard Construction

---- Receptor #1 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	100	0
Flat Bed Truck	No	40		74.3	100	0
Excavator	No	40		80.7	125	0
Grader	No	40	85		125	0
Roller	No	20		80	150	0
Concrete Mixer Truck	No	40		78.8	150	0
Man Lift	No	20		74.7	175	0

Man Lift	No	20	74.7	175	0
Crane	No	16	80.6	200	0
Dozer	No	40	81.7	200	0

			Results			
			Calculated (dBA)		Noise Limits (dBA)	
					Day	Evening
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Grader	77	73.1	N/A	N/A	N/A	N/A
Roller	70.5	63.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.3	65.3	N/A	N/A	N/A	N/A
Man Lift	63.8	56.8	N/A	N/A	N/A	N/A
Man Lift	63.8	56.8	N/A	N/A	N/A	N/A
Crane	68.5	60.6	N/A	N/A	N/A	N/A
Dozer	69.6	65.6	N/A	N/A	N/A	N/A
Total	77	77.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Grader	No	40	85		800	0
Roller	No	20		80	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Man Lift	No	20		74.7	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0
Dozer	No	40		81.7	800	0

			Results			
			Calculated (dBA)		Noise Limits (dBA)	
					Day	Evening
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Generator	56.5	53.5	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A

Excavator	56.6	52.6	N/A	N/A	N/A	N/A
Grader	60.9	56.9	N/A	N/A	N/A	N/A
Roller	55.9	48.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Total	60.9	61.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	580	0
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Grader	No	40	85		580	0
Roller	No	20		80	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Man Lift	No	20		74.7	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0
Dozer	No	40		81.7	580	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Generator	59.3	56.3	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Excavator	59.4	55.4	N/A	N/A	N/A	N/A
Grader	63.7	59.7	N/A	N/A	N/A	N/A
Roller	58.7	51.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Total	63.7	64.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Grader	No	40	85		1000	5
Roller	No	20		80	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Man Lift	No	20		74.7	1000	5
Man Lift	No	20		74.7	1000	5
Crane	No	16		80.6	1000	5
Dozer	No	40		81.7	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Grader	54	50	N/A	N/A	N/A	N/A
Roller	49	42	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	54	54.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Complete Tunnel Excavation

		---- Receptor #1 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night

Laydownn Area 100'	Residential	65	60	55
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Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	100	0
Flat Bed Truck	No	40		74.3	100	0
Flat Bed Truck	No	40		74.3	125	0
Concrete Mixer Truck	No	40		78.8	125	0
Rock Drill	No	20		81	150	0
Compressor (air)	No	40		77.7	150	0
Compressor (air)	No	40		77.7	175	0
All Other Equipment > 5 HP	No	50	85		175	0
All Other Equipment > 5 HP	No	50	85		200	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Flat Bed Truck	66.3	62.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	70.8	66.9	N/A	N/A	N/A	N/A
Rock Drill	71.5	64.5	N/A	N/A	N/A	N/A
Compressor (air)	68.1	64.1	N/A	N/A	N/A	N/A
Compressor (air)	66.8	62.8	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	74.1	71.1	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	73	69.9	N/A	N/A	N/A	N/A
Total	74.6	77.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	800	0
Flat Bed Truck	No	40		74.3	800	0
Flat Bed Truck	No	40		74.3	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Rock Drill	No	20		81	800	0
Compressor (air)	No	40		77.7	800	0

Compressor (air)	No	40	77.7	800	0
All Other Equipment > 5 HP	No	50	85	800	0
All Other Equipment > 5 HP	No	50	85	800	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	56.5	53.5	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Rock Drill	56.9	49.9	N/A	N/A	N/A	N/A
Compressor (air)	53.6	49.6	N/A	N/A	N/A	N/A
Compressor (air)	53.6	49.6	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	60.9	57.9	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	60.9	57.9	N/A	N/A	N/A	N/A
Total	60.9	62.9	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

---- Receptor #3 ----				
Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	580	0
Flat Bed Truck	No	40		74.3	580	0
Flat Bed Truck	No	40		74.3	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Rock Drill	No	20		81	580	0
Compressor (air)	No	40		77.7	580	0
Compressor (air)	No	40		77.7	580	0
All Other Equipment > 5 HP	No	50	85		580	0
All Other Equipment > 5 HP	No	50	85		580	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	59.3	56.3	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A

Rock Drill	59.7	52.7	N/A	N/A	N/A	N/A
Compressor (air)	56.4	52.4	N/A	N/A	N/A	N/A
Compressor (air)	56.4	52.4	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	63.7	60.7	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	63.7	60.7	N/A	N/A	N/A	N/A
Total	63.7	65.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Rock Drill	No	20		81	1000	5
Compressor (air)	No	40		77.7	1000	5
Compressor (air)	No	40		77.7	1000	5
All Other Equipment > 5 HP	No	50	85		1000	5
All Other Equipment > 5 HP	No	50	85		1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Rock Drill	50	43	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	54	51	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	54	51	N/A	N/A	N/A	N/A
Total	54	55.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Decommission Existing Outlet

		---- Receptor #1 ----					
Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Laydownn Area 100'	Residential	65	60	55			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck		No	40		74.3	100	0
Concrete Mixer Truck		No	40		78.8	100	0
Crane		No	16		80.6	125	0
Dozer		No	40		81.7	125	0
		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck		68.2	64.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck		72.8	68.8	N/A	N/A	N/A	N/A
Crane		72.6	64.6	N/A	N/A	N/A	N/A
Dozer		73.7	69.7	N/A	N/A	N/A	N/A
	Total	73.7	73.5	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

		---- Receptor #2 ----				
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Main Tunneling Area 800'	Residential	65	60	55		
		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Crane	No	16		80.6	800	0
Dozer	No	40		81.7	800	0
		Results				
		Calculated (dBA)		Noise Limits (dBA)		
Equipment	*Lmax	Leq	Day	Evening		
			Lmax	Leq	Lmax	Leq
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A

Crane		56.5	48.5	N/A	N/A	N/A	N/A
Dozer		57.6	53.6	N/A	N/A	N/A	N/A
	Total	57.6	56.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Crane	No	16		80.6	580	0
Dozer	No	40		81.7	580	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Flat Bed Truck	53	49	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
	Total	60.4	59.4	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Flat Bed Truck	No	40		74.3	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Crane	No	16		80.6	1000	5
Dozer	No	40		81.7	1000	5

Results

Calculated (dBA)	Noise Limits (dBA)	
	Day	Evening

Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	50.6	49.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Diving Equipment

		---- Receptor #1 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Laydownn Area 100'	Residential	65	60	55			
					Equipment		
					Spec	Actual	Receptor
					Lmax	Lmax	Distance
		Impact	Usage(%)	(dBA)	(dBA)	(feet)	Estimated
Description	Device						Shielding
Compressor (air)	No		40			77.7	100
Generator	No		50			80.6	100
					Results		
		Calculated (dBA)			Noise Limits (dBA)		
					Day	Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		71.6	67.7	N/A	N/A	N/A	N/A
Generator		74.6	71.6	N/A	N/A	N/A	N/A
Total		74.6	73.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Main Tunneling Area 800'	Residential	65	60	55			
					Equipment		
					Spec	Actual	Receptor
					Lmax	Lmax	Distance
		Impact	Usage(%)	(dBA)	(dBA)	(feet)	Estimated
Description	Device						Shielding
Compressor (air)	No		40			77.7	800
Generator	No		50			80.6	0

			Results			
			Calculated (dBA)		Noise Limits (dBA)	
					Day	Evening
Equipment			*Lmax	Leq	Lmax	Leq
Compressor (air)			53.6	49.6	N/A	N/A
Generator				-3	N/A	N/A
	Total		53.6	49.6	N/A	N/A
*Calculated Lmax is the Loudest value.						

		---- Receptor #3 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

		Equipment			
		Spec	Actual	Receptor	Estimated
		Lmax	Lmax	Distance	Shielding
Description	Impact	Usage(%)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	580	0
Generator	No	50	80.6	580	0

			Results			
			Calculated (dBA)		Noise Limits (dBA)	
					Day	Evening
Equipment			*Lmax	Leq	Lmax	Leq
Compressor (air)			56.4	52.4	N/A	N/A
Generator			59.3	56.3	N/A	N/A
	Total		59.3	57.8	N/A	N/A
*Calculated Lmax is the Loudest value.						

		---- Receptor #4 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

		Equipment			
		Spec	Actual	Receptor	Estimated
		Lmax	Lmax	Distance	Shielding
Description	Impact	Usage(%)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	1000	5
Generator	No	50	80.6	1000	5

			Results			
			Calculated (dBA)		Noise Limits (dBA)	
					Day	Evening
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A

Generator		49.6	46.6	N/A	N/A	N/A	N/A
Total		49.6	48.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/14/2018

Case Description: Newell Creek Damn_Install Inlet/Outlet Conduit

		---- Receptor #1 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	100	0
Concrete Mixer Truck	No	40		78.8	100	0
Concrete Mixer Truck	No	40		78.8	125	0
Concrete Mixer Truck	No	40		78.8	125	0
Concrete Mixer Truck	No	40		78.8	150	0
Man Lift	No	20		74.7	150	0
Man Lift	No	20		74.7	175	0
Compressor (air)	No	40		77.7	175	0
Compressor (air)	No	40		77.7	200	0
Dozer	No	40		81.7	200	0

		Results				
Equipment		Calculated (dBA)		Noise Limits (dBA)		
		*Lmax	Leq	Day Lmax	Evening Leq	Leq
Generator		74.6	71.6	N/A	N/A	N/A
Concrete Mixer Truck		72.8	68.8	N/A	N/A	N/A
Concrete Mixer Truck		70.8	66.9	N/A	N/A	N/A
Concrete Mixer Truck		70.8	66.9	N/A	N/A	N/A
Concrete Mixer Truck		69.3	65.3	N/A	N/A	N/A
Man Lift		65.2	58.2	N/A	N/A	N/A
Man Lift		63.8	56.8	N/A	N/A	N/A
Compressor (air)		66.8	62.8	N/A	N/A	N/A
Compressor (air)		65.6	61.6	N/A	N/A	N/A
Dozer		69.6	65.6	N/A	N/A	N/A
Total		74.6	76.4	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Man Lift	No	20		74.7	800	0
Man Lift	No	20		74.7	800	0
Compressor (air)	No	40		77.7	800	0
Compressor (air)	No	40		77.7	800	0
Dozer	No	40		81.7	800	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax			Leq
Generator	56.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Compressor (air)	53.6	49.6	N/A	N/A	N/A	N/A
Compressor (air)	53.6	49.6	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Total	57.6	60.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #3 ----		
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	580	0

Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Concrete Mixer Truck	No	40	78.8	580	0
Man Lift	No	20	74.7	580	0
Man Lift	No	20	74.7	580	0
Compressor (air)	No	40	77.7	580	0
Compressor (air)	No	40	77.7	580	0
Dozer	No	40	81.7	580	0

Results						
Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	59.3	56.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5	53.5	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Man Lift	53.4	46.4	N/A	N/A	N/A	N/A
Compressor (air)	56.4	52.4	N/A	N/A	N/A	N/A
Compressor (air)	56.4	52.4	N/A	N/A	N/A	N/A
Dozer	60.4	56.4	N/A	N/A	N/A	N/A
Total	60.4	63.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Equipment					
	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Generator	No	50		80.6	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Concrete Mixer Truck	No	40		78.8	1000	5
Man Lift	No	20		74.7	1000	5
Man Lift	No	20		74.7	1000	5
Compressor (air)	No	40		77.7	1000	5
Compressor (air)	No	40		77.7	1000	5
Dozer	No	40		81.7	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
Compressor (air)	46.6	42.7	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	50.6	53.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Perform Start-Up Test

---- Receptor #1 ----						
Description	Land Use	Baselines (dBA)				
		Daytime	Evening	Night		
Laydownn Area 100'	Residential	65	60	55		

Description	Equipment					
		Spec	Actual	Receptor	Estimated	
		Lmax	Lmax	Distance	Shielding	
	Impact Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	100	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Crane	74.5	66.6	N/A	N/A	N/A	N/A
Total	74.5	66.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----					
Description	Land Use	Baselines (dBA)			
		Daytime	Evening	Night	
Main Tunneling Area 800'	Residential	65	60	55	

Description			Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage(%)	Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Crane	No	16		80.6	800	0

		Results				
		Calculated (dBA)		Noise Limits (dBA)		
Equipment				Day	Evening	
		*Lmax	Leq	Lmax	Leq	Leq
Crane		56.5	48.5	N/A	N/A	N/A
	Total	56.5	48.5	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

		---- Receptor #3 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description			Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage(%)	Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Crane	No	16		80.6	580	0

		Results				
		Calculated (dBA)		Noise Limits (dBA)		
Equipment				Day	Evening	
		*Lmax	Leq	Lmax	Leq	Leq
Crane		59.3	51.3	N/A	N/A	N/A
	Total	59.3	51.3	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

		---- Receptor #4 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description			Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
	Impact Device	Usage(%)	Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Crane	No	16		80.6	1000	5

		Results		
		Calculated (dBA)		Noise Limits (dBA)
				Day Evening

Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		49.5	41.6	N/A	N/A	N/A	N/A
	Total	49.5	41.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Start Outlet Yard Construction

---- Receptor #1 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Laydownn Area 100'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	100	0
Flat Bed Truck	No	40		74.3	100	0
Excavator	No	40		80.7	125	0
Grader	No	40	85		125	0
Roller	No	20		80	150	0
Concrete Mixer Truck	No	40		78.8	150	0
Concrete Mixer Truck	No	40		78.8	175	0
Man Lift	No	20		74.7	175	0
Man Lift	No	20		74.7	200	0
Crane	No	16		80.6	200	0
Dozer	No	40		81.7	225	0

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)		Day		Evening	
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Generator	74.6	71.6	N/A	N/A	N/A	N/A
Flat Bed Truck	68.2	64.3	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A
Grader	77	73.1	N/A	N/A	N/A	N/A
Roller	70.5	63.5	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.3	65.3	N/A	N/A	N/A	N/A
Concrete Mixer Truck	67.9	63.9	N/A	N/A	N/A	N/A
Man Lift	63.8	56.8	N/A	N/A	N/A	N/A
Man Lift	62.7	55.7	N/A	N/A	N/A	N/A
Crane	68.5	60.6	N/A	N/A	N/A	N/A
Dozer	68.6	64.6	N/A	N/A	N/A	N/A

Total	77	77.6	N/A	N/A	N/A	N/A
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*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	800	0
Flat Bed Truck	No	40		74.3	800	0
Excavator	No	40		80.7	800	0
Grader	No	40	85		800	0
Roller	No	20		80	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Concrete Mixer Truck	No	40		78.8	800	0
Man Lift	No	20		74.7	800	0
Man Lift	No	20		74.7	800	0
Crane	No	16		80.6	800	0
Dozer	No	40		81.7	800	0

Results

Calculated (dBA)

Noise Limits (dBA)

Equipment	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Generator	56.5	53.5	N/A	N/A	N/A	N/A
Flat Bed Truck	50.2	46.2	N/A	N/A	N/A	N/A
Excavator	56.6	52.6	N/A	N/A	N/A	N/A
Grader	60.9	56.9	N/A	N/A	N/A	N/A
Roller	55.9	48.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	50.7	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Man Lift	50.6	43.6	N/A	N/A	N/A	N/A
Crane	56.5	48.5	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A
Total	60.9	62.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Generator	No	50		80.6	580	0
Flat Bed Truck	No	40		74.3	580	0
Excavator	No	40		80.7	580	0
Grader	No	40	85		580	0
Roller	No	20		80	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Concrete Mixer Truck	No	40		78.8	580	0
Man Lift	No	20		74.7	580	0
Man Lift	No	20		74.7	580	0
Crane	No	16		80.6	580	0
Dozer	No	40		81.7	580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	59.3		56.3 N/A	N/A	N/A	N/A
Flat Bed Truck	53		49 N/A	N/A	N/A	N/A
Excavator	59.4		55.4 N/A	N/A	N/A	N/A
Grader	63.7		59.7 N/A	N/A	N/A	N/A
Roller	58.7		51.7 N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5		53.5 N/A	N/A	N/A	N/A
Concrete Mixer Truck	57.5		53.5 N/A	N/A	N/A	N/A
Man Lift	53.4		46.4 N/A	N/A	N/A	N/A
Man Lift	53.4		46.4 N/A	N/A	N/A	N/A
Crane	59.3		51.3 N/A	N/A	N/A	N/A
Dozer	60.4		56.4 N/A	N/A	N/A	N/A
Total	63.7		64.9 N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----				
Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Generator	No	50		80.6	1000	5
Flat Bed Truck	No	40		74.3	1000	5
Excavator	No	40		80.7	1000	5
Grader	No	40	85		1000	5

Roller	No	20	80	1000	5
Concrete Mixer Truck	No	40	78.8	1000	5
Concrete Mixer Truck	No	40	78.8	1000	5
Man Lift	No	20	74.7	1000	5
Man Lift	No	20	74.7	1000	5
Crane	No	16	80.6	1000	5
Dozer	No	40	81.7	1000	5

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Generator	49.6	46.6	N/A	N/A	N/A	N/A
Flat Bed Truck	43.2	39.3	N/A	N/A	N/A	N/A
Excavator	49.7	45.7	N/A	N/A	N/A	N/A
Grader	54	50	N/A	N/A	N/A	N/A
Roller	49	42	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.8	43.8	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Man Lift	43.7	36.7	N/A	N/A	N/A	N/A
Crane	49.5	41.6	N/A	N/A	N/A	N/A
Dozer	50.6	46.7	N/A	N/A	N/A	N/A
Total	54	55.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/14/2018
Case Description: Newell Creek Damn_Work Boats

		---- Receptor #1 ----					
Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Laydownn Area 100'	Residential	65	60	55			
		Equipment					
Description		Impact		Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
		Flat Bed Truck	No	40		74.3	100
		Results					
Equipment		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
		*Lmax	Leq	Lmax	Leq	Lmax	Leq

Flat Bed Truck		68.2	64.3	N/A	N/A	N/A	N/A
	Total	68.2	64.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Main Tunneling Area 800'	Residential	65	60	55

Description	Equipment	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No		40		74.3	800	0

Equipment		Results		Noise Limits (dBA)	
		Calculated (dBA)		Day	
		*Lmax	Leq	Lmax	Leq
Flat Bed Truck		50.2	46.2	N/A	N/A
	Total	50.2	46.2	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Receiver 580'	Residential	65	60	55

Description	Equipment	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Flat Bed Truck	No		40		74.3	580	0

Equipment		Results		Noise Limits (dBA)	
		Calculated (dBA)		Day	
		*Lmax	Leq	Lmax	Leq
Flat Bed Truck		53	49	N/A	N/A
	Total	53	49	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences 1000'	Residential	65	60	55

