Project-Generated Construction Source Noise Prediction Model

Argonaut Dam / Stormwater Infrastructure Improvements

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (Leq dBA)	Assumptions:	Reference Emission Noise Levels (Lmax) at 50 feet1	Usage Factor1
Threshold*	139	70.0	**Backhoe**	78	0.4
	60	79.1	**Dozer**	82	0.4
	80	76.0	Excavator	81	0.4
	100	73.6			
	200	66.1			
	250	63.7			
	275	62.6			
	350	60.0	**Ground Type**	Soft	
	400	58.5	**Ground Factor**	0.50	
	450	57.3			
	500	56.1			
	550	55.1			
	600	54.1			
	8500	25.4	**Predicted Noise Level 2**	**Leq dBA at 50 feet2**	
			Dozer	72.0	
			Dozer	78.0	
			Excavator	77.0	

Combined Predicted Noise Level (Leq dBA at 50 feet)
81.1

Sources:

1 Obtained from the FHWA Roadway Construction Noise Model, January 2006.

2 Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

Leq(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold