



**Los Angeles Department of Water and Power**  
**Construction Noise Monitoring Report**  
**Silver Lake Reservoir Complex Bypass Project**  
**August 18, 2015**

**Project Construction Site:** Work Areas #1 and #2

**Monitoring Date:** August 11, 2015

**Monitoring Time:** 9:02 a.m. to 11:16 a.m.

**Relevant Atmospheric Conditions:** Approximately 68° F, overcast; sunny after 10 a.m.

**Monitoring Equipment:** One (1) Larson Davis 824 sound level meter (Work Area #1) and one (1) Metrosonics db 3080 sound level meter (Work Area #2).

### **Project Area Description**

The noise monitoring results presented in this report are for construction activities that occurred within Work Areas #1 and #2, located along West Silver Lake Drive between Putnam Street and Hawick Street in Los Angeles, California. The closest noise-sensitive uses to the project construction site are the existing single-family residential uses fronting West Silver Lake Drive. These noise-sensitive receivers had direct line-of-sight to the construction activities. Noise level measurements were completed at the following two locations (please refer to the attached graphic): 2433 West Silver Lake (Measurement Location 1) and 2331 West Silver Lake Drive (Measurement Location 2). At both locations, the noise monitor was mounted on a tripod that measured noise levels at approximately 24 feet from the active construction area. See the attached graphic for the construction site location, locations of the closest receivers, and noise level measurement locations.

### **Construction Activity Monitored**

On-site construction at Work Area #1 included the operation of a Komatsu PC308USLC hydraulic excavator, Komatsu PC300LC hydraulic excavator, Caterpillar IT38G Integrated Tool Carrier, John Deere 410J loader backhoe, pick-up trucks, cement trucks, Broce Broom street sweeper, and water truck. The primary construction activities monitored at this area consisted of placing pipe segments into the ground, transferring construction-related materials onto pick-up trucks, removal of trench plates from the ground, excavation of soil, and the pouring of cement. The pipe placement and trench plate removal activities were conducted by the Komatsu hydraulic excavators, while the Caterpillar IT38G was used primarily to transport construction-related materials around the construction area and onto pick-up trucks. The John Deere 410J loader backhoe was used to excavate soil within the construction area and move it towards a stockpile. Water trucks and the Broce Broom street sweeper drove by Silver Lake Drive periodically throughout the monitoring period. The cement pouring activities at the construction area began towards the end of the monitoring period.

The on-site construction at Work Area #2 included the operation of a Komatsu PC800LC hydraulic excavator, multiple haul trucks, two utility trucks, a flatbed delivery truck, diesel-powered generator, and welder. The construction activities monitored consisted primarily of soil removal from the construction area. During the monitoring period, the hydraulic excavator continuously loaded soil from

an excavated area onto haul trucks for transport off the site. The hydraulic excavator was also used to lift and maneuver trench plates within the construction area.

### Summary of Construction Noise Level Measurement Results

The noise level measurements and observations at the construction areas are summarized in the attached charts and monitoring logs, respectively.<sup>1</sup> In summary, the average hourly construction noise levels measured during the first hour were 78.2 dBA  $L_{eq}$  at Measurement Location 1 (Work Area #1) and 74.5 dBA  $L_{eq}$  at Measurement Location 2 (Work Area #2), while the average hourly construction noise levels measured during the second hour were 78.0 dBA  $L_{eq}$  at Measurement Location 1 and 76.4 dBA  $L_{eq}$  at Measurement Location 2. A comparison of the measured construction noise levels at Locations 1 and 2 to the baseline noise levels measured at Work Areas #1 and #2, which were conducted by ESA on March 10, 2015, are shown in Table 1.

**TABLE 1  
SUMMARY OF CONSTRUCTION NOISE MEASUREMENTS**

Noise Measurement Location	Measurement Date	Measurement Time Periods	Construction Hour	Construction Noise Level $L_{eq}$ dBA (Hourly)	Work Area #1 Baseline Noise Level $L_{eq}$ dBA <sup>a</sup>	Work Area #2 Baseline Noise Level $L_{eq}$ dBA <sup>a</sup>
1. 2433 West Silver Lake Drive	08/11/15	09:02 – 10:02 A.M.	1	78.2	60.5	NA
		10:03 – 11:03 A.M.	2	78.0	60.5	NA
2. 2331 West Silver Lake Drive	08/11/15	09:13 – 10:13 A.M.	1	74.5	NA	60.1
		10:14 – 11:14 A.M.	2	76.4	NA	60.1

Note: NA = non-applicable

<sup>a</sup> To establish the existing baseline noise level for Work Areas #1 and #2, two separate noise measurements each were taken in front of single-family residences located along West Silver Lake Drive within Work Area #1 and Work Area #2 on March 10, 2015 to provide a representative sample of the daytime ambient noise levels. The baseline noise levels shown in this table represents the average of the two separate noise measurements taken at both Work Area #1 and Work Area #2.

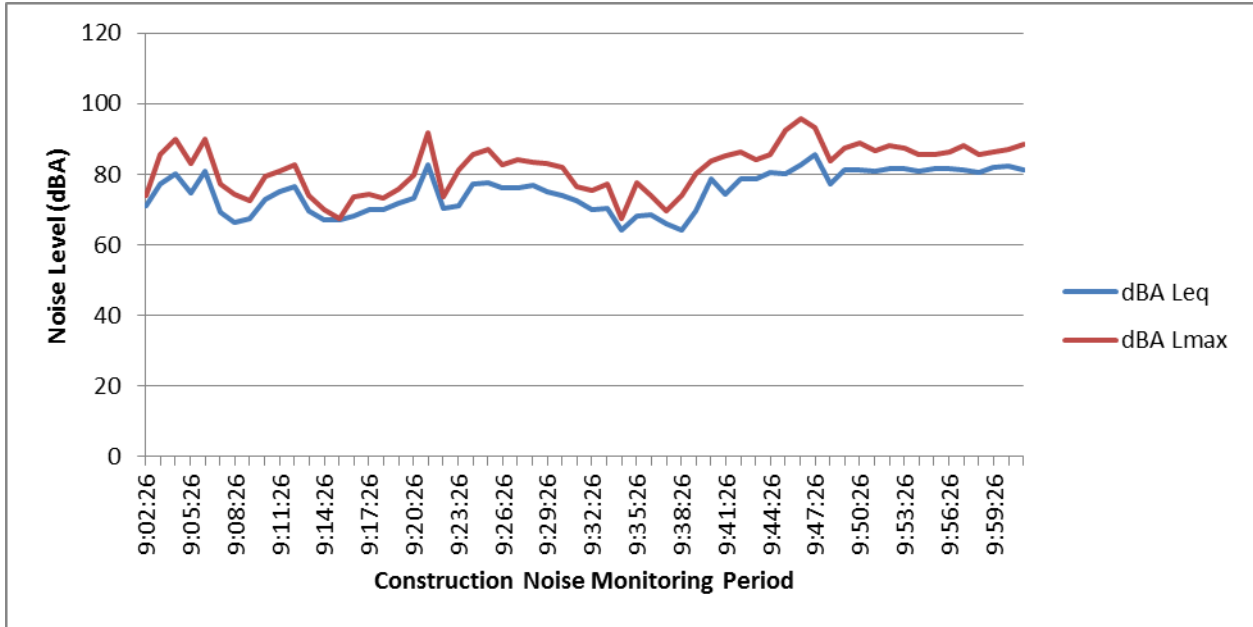
The dominant source of noise at the Work Area #1 construction site was the operation of the hydraulic excavators, with high noise levels observed during the removal of the trench plates from the ground. The dominant source of noise at the Work Area #2 construction site was also the operation of the hydraulic excavator, which loaded excavated soil onto haul trucks to be transported off-site. The soil loading activities ran continuously for three to four minutes per haul truck.

<sup>1</sup> Due to the settings that were programmed into the Metrosonics dB 3080 sound level meter used at Work Area #2, only the hourly average noise levels were measured by the meter and no minute-by-minute noise levels were captured. As such, the attached charts only shows the minute-by-minute noise levels collected by the Larson Davis 824 sound level meter at Work Area #1.

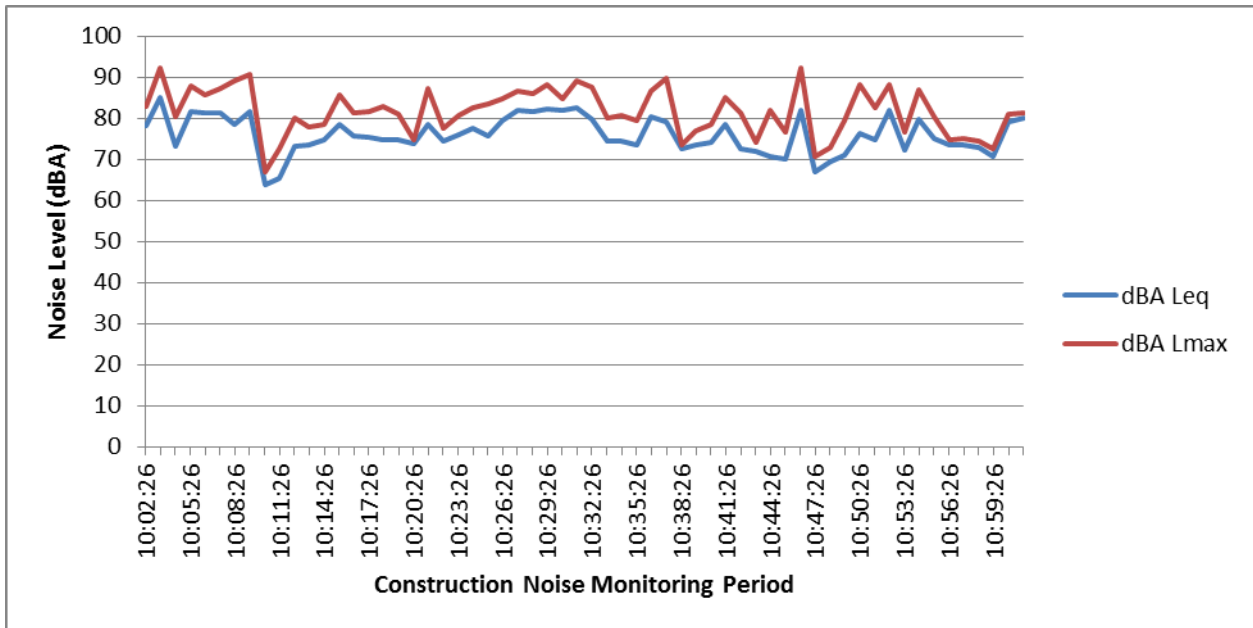


SOURCE: ESRI

LADWP SLRC Bypass Project . 130500.22  
 Work Areas 1 and 2  
 Construction Noise Measurement Locations



Noise Measurement Location 1 – Hour 1



Noise Measurement Location 1 – Hour 2

## Noise Monitoring Log

Project: D130500.22 Silverlake Reservoir Complex Bypass

Site Location: Work Area 1

Date: 8/11/2015

Temperature: 68 F

Weather Conditions: Cloudy, overcast; sunny after 10AM

Monitoring Location: 2433 W. Silver lake Drive (24 feet from construction area)

Construction Equipment Onsite:

Komatsu PC308USLC, Catapillar IT38G, John Deere 410J, Komatsu PC300LC, F450 white pick up truck

Catalina concrete trucks, Broce Broom street sweeper, watering truck

<u>Time</u>	<u>Noise Source</u>	<u>Notes</u>
<b>HOOR 1</b>		
9:02 AM		Noise monitor starts
9:02-9:07 AM	Komatsu 300 engine starts	Moving, squeaking sounds
9:09 AM	F450 Pick up	back up beeping
9:11 AM	Komatsu 300 LC	engine sounds increase, lifting up pipe section
9:12 AM	F450 Pick up	drives by
9:17 AM	Komatsu 300LC	moving pipe segment into ground
9:19-9:20 AM	Cat IT38G	back up alarm
9:21 AM	Buntich 5-30	back up alarm
9:22 AM	Cat IT38G	lifting plywood to back of truck
9:23 AM	Cat IT38G	back up beeping; engine increase sound
9:24-9:27 AM	Komatsu 300LC	engine sounds, begin lifting pipe segment
9:27 AM	Komatsu 300 LC	pipe segment moves toward ground hole
9:27 AM	Cat IT38G	plywood that is moving hits ground
9:27-9:29 AM	Komatsu 300LC	engine sounds increase
9:28 AM	Cat IT38G	back up alarm
9:29 AM	Cat IT38G	plywood that is moving hits ground
9:30 AM	Cat IT38G	back up alarm; engine sounds increase
9:32 AM	commuter bus	drives by

9:33 AM	Cat IT38G	moving plywood
9:36 AM	Murillos big rig truck	drives by
9:36-9:38 AM	Deere 410J	engine starts, back up alarm
9:39 AM	F450 Pick up	engine starts, drives by
9:40 AM	Stafan truck	drives by
9:41-9:42 AM	Komatsu 308	noisily drives forward
9:46 AM	Komatsu 308	pulls trench plate out of ground
9:46-9:48 AM	conversation with pedestrian in front of monitor	
9:47 AM	Komatsu 308+300LC	Moving, squeaking sounds
9:51-9:52 AM	Komatsu 300LC	moving another pipe segment, moving backwards
9:53 AM	Komatsu 308	pulling up vertical metal sheet
9:53-9:58 AM	Komatsu 308	loud banging, pulling up vertical metal sheet from ground
9:55 AM	E7473 Ale'x truck, big rig	drives by
9:57 AM	Komatsu 300LC	moves pipe segment off the ground
9:59 AM	Komatsu 308	pulling up vertical metal sheet lots of shaking and rattling
10:00 AM	Peterbilt big rig	drives by
10:00 AM	Komatsu 300LC	moves fwd

## HOUR 2

10:03 AM	Komatsu 308	moves forward, squeaks
10:05 AM	Murillos big rig truck	drives by
10:05-10:09 AM	Komatsu 308	pulling up vertical metal sheet
10:12-10:26 AM	Deere 410J	back up alarm, begins excavating
10:15 AM	Broce Broom street sweeper	drives by
10:16 AM	watering truck	drives by
10:18 AM	commuter bus	drives by
10:21 AM	Broce Broom street sweeper	drives by
10:24 AM	Broce Broom street sweeper	drives by
10:30 AM	Broce Broom street sweeper	drives by
10:34 AM	Deere 410J	moves soil into pile
10:36 AM	F450 Pick up	backs up, sounding alarm
10:36 AM	Catalina Concrete truck	drives by backs up
10:37-10:42 AM	Catalina Concrete truck	moves into place, begins pouring concrete
10:41 AM	big rig	drives by
10:42 AM	Catalina Concrete truck	turns on water hose, hose down inside

10:44 AM	man yells	
10:45 AM	Catalina Concrete truck	backs up
10:46 AM	E427 truck	drives by
10:49 AM	Komatsu 308	engine starts
10:50 AM	Peterbilt big rig	drives by
10:52 AM	Catalina Concrete truck	arrives and backs up
10:53 AM	Cat IT38G	drives forward
10:55 -11:01 AM	Catalina Concrete truck	begin pouring concrete

## Noise Monitoring Log

Project: D130500.22 Silverlake Reservoir Complex Bypass

Site Location: Work Area 2

Date: 8/11/2015

Temperature: 68 F

Weather Conditions: Cloudy, overcast; sunny after 10AM

Monitoring Location: 2331 W. Silver Lake Drive (24 feet from construction area)

Construction Equipment Onsite:

Komatsu PC800LC, haul trucks (multiple), flatbed delivery truck, two utility trucks; generator; welder

<u>Time</u>	<u>Noise Source</u>	<u>Notes</u>
<b>HOOR 1</b>		
9:15 AM		Noise meter starts
	Komatsu PC800LC	Lifting metal beam
9:17 AM	Komatsu PC800LC	Excavation shovel inserted onto arm
9:19-9:22 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading) Excavator operating approx. 42 feet from noise meter.
9:23 AM	Haul truck	Drives by on Silver Lake Dr., backs up into const. area to receive dirt load
9:24-9:27 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
9:29 AM	Haul truck	Drives by on Silver Lake Dr., backs up into const. area to receive dirt load
9:30-9:34 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
9:37 AM	Komatsu PC800LC	Shovel makes rattling noise
9:39 AM	Komatsu PC800LC	Quiets down engine and idles, waiting on haul truck to arrive.
9:42 AM	Haul truck	Drives by
9:48 AM	Haul truck	Drives by
9:49-9:53 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
9:51 AM	Komatsu PC800LC	Shovel makes rattling noise
9:53 AM	Komatsu PC800LC	Shovel makes rattling noise
9:54-9:58 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
9:56 AM	Haul truck	Drives by



9:58 AM	Haul truck	Drives by
9:59-10:03 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
10:01 AM	Komatsu PC800LC	Shovel makes rattling noise
10:05 AM	Komatsu PC800LC	Quiets down engine and idles, waiting on haul truck to arrive.
10:07 AM	Komatsu PC800LC	Lifts generator off of flatbed truck and moves it to inside of const. area
10:10 AM	Komatsu PC800LC	Lifts compressor equipment off of flatbed delivery truck
10:14 AM	Komatsu PC800LC	Unlocks shovel head from arm
	Haul truck	Drives by
10:15 AM		Tools dropped onto ground, causing loud noise

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**HOOR 2**

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10:17 AM		Noise meter starts
	Komatsu PC800LC	Lifting trench plate
10:19 AM	Komatsu PC800LC	Locks on different attachment to arm to move trench plate
10:20 AM	Komatsu PC800LC	Noise from maneuvering/swinging arm
10:22-10:34 AM	Komatsu PC800LC	Maneuvering arm inside excavated area to loosen dirt.
10:25 AM	Water truck	Drives by on Silver Lake Dr.
10:30 AM	Haul truck	Drives by on Silver Lake Dr.
	Komatsu PC800LC	Back-up alarm sounds
10:32 AM	Welder	Operated by construction worker
10:34 AM	Komatsu PC800LC	Switches out attachment and puts on shovel onto arm
10:35 AM	Cement truck	Drives by on Silver Lake Dr.
10:36-10:39 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
10:40-10:43 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
10:45-10:48 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
10:50-10:53 AM	Komatsu PC800LC	Dirt loading onto haul truck begins (horn sounds before and after loading)
10:51 AM	Water truck	Drives by
10:54 AM	Komatsu PC800LC	Quiets down engine and idles
	Power tool	Sanding down trench plates
	Generator	Operating from afar within construction area
10:55 AM	Komatsu PC800LC	Engine turns back on
10:56 AM	Komatsu PC800LC	Shovel rattles as arm swings
10:58 AM	Cement truck	Drives by
	Komatsu PC800LC	Turns engine off
10:59 AM	Komatsu PC800LC	Turns engine back on

11:00-11:01 AM	Komatsu PC800LC	Maneuvers position, resulting in loud noise from excavator tracks
11:03-11:05 AM	Komatsu PC800LC	Moves trench plates
11:06 AM	Haul truck	Drives by
	Komatsu PC800LC	Maneuvering trench plates
11:11 AM	Komatsu PC800LC	Maneuvering, resulting in loud noise from excavator tracks
11:12 AM	Haul truck	Drives by
	Komatsu PC800LC	Back-up alarm sounds; tracks moving and causing noise
11:15 AM	Cement truck	Drives by
11:16 AM	Komatsu PC800LC	Lifts up trench plate; sounds horn