

Appendix E

Noise Data



Project: OCSD Biosolids MP

Construction Noise Impact on Sensitive Receptors

Plant No. 1

Parameters

Construction Hours:	12 Daytime hours (7 am to 7 pm) 0 Evening hours (7 pm to 10 pm) 0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

				Sensitive Receptors				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated
								Noise Shielding, dBA
Demolition					58	58		
Backhoe	1	80	40%	400	57	53	56	5
Cranes	1	81	40%	400	58	54	57	5
Dump Truck	2	76	20%	500	54	47	50	5
Loaders	1	79	40%	600	52	48	51	5
Grading/Excavation					61	60		
Backhoes	1	80	40%	500	55	51	54	5
Haul Trucks	2	76	20%	700	51	44	47	5
Loaders	1	79	40%	600	52	48	51	5
Rubber Tired Dozer	1	82	40%	400	59	55	58	5
Scrapers	1	84	40%	400	61	57	60	5
Building Construction					58	56		
Cranes	1	81	40%	400	58	54	57	5
Forklift	1	75	10%	600	48	38	41	5
Loaders	1	79	40%	500	54	50	53	5
Drill Rig Truck	1	79	20%	400	56	49	52	5
Paving					62	58		
Grader	1	85	40%	400	62	58	61	5
Loaders	1	79	40%	500	54	50	53	5
Paver	1	77	50%	600	50	47	50	5

Source for Ref. Noise Levels: FHWA RCNM, 2005

A 5 dBA noise shielding reduction was applied as the walls that line the perimeter of single-residential uses along Brookhurst street provide partial noise shielding.

Project: OCSD Biosolids MP

Construction Noise Impact on Sensitive Receptors

Plant No 2

Parameters

Construction Hours:	12 Daytime hours (7 am to 7 pm) 1 Evening hours (7 pm to 10 pm) 0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

				West				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Demolition					66	65		
Backhoe	2	80	40%	200	66	62	65	5
Cranes	1	81	40%	200	64	60	63	5
Dump Truck	5	76	20%	300	62	55	58	5
Loaders	2	79	40%	400	59	55	58	5
Grading/Excavation					79	77		
Backhoes	3	80	40%	220	67	63	66	5
Haul Trucks	15	76	20%	420	64	57	60	5
Loaders	3	79	40%	320	63	59	62	5
Rubber Tired Dozer	3	82	40%	120	74	70	73	5
Scrapers	6	84	40%	120	79	75	78	5
Building Construction					85	78		
Cranes	2	81	40%	180	68	64	67	5
Forklift	3	75	10%	380	57	47	50	5
Loaders	1	79	40%	280	59	55	58	5
Pile Driver (Impact)	1	101	20%	180	85	78	81	5
Paving					72	68		
Grader	1	85	40%	130	72	68	71	5
Loaders	1	79	40%	130	66	62	65	5
Paver	1	77	50%	230	59	56	59	5

Source for Ref. Noise Levels: FHWA RCNM, 2005

A 5 dBA noise shielding reduction was applied as the walls that line the perimeter of single-residential uses along Brookhurst street provide partial noise shielding.

Roadway Traffic Noise Calculations



Project: OCSD Biosolid Master Plan

Existing										
Roadway/Segment	Speed MPH	Traffic Volumes			Leq			CNEL		
		AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Ellis Avenue east of Ward Street	45			24320	74.2	71.0	69.1	75.4	72.2	70.3
Ward Street south of Ellis Street	45			17790	72.4	69.4	67.6	73.6	70.6	68.8
Brookhurst Street	50			11000	70.7	68.0	66.4	71.9	69.3	67.6
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future No Project										
Roadway/Segment	Speed MPH	Traffic Volumes			Leq			CNEL		
		AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Ellis Avenue east of Ward Street	45			0	-	-	-	-	-	-
Ward Street south of Ellis Street	45			0	-	-	-	-	-	-
Brookhurst Street	50			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future With Project										
Roadway/Segment	Speed MPH	Traffic Volumes			Leq			CNEL		
		AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Ellis Avenue east of Ward Street	45			0	-	-	-	-	-	-
Ward Street south of Ellis Street	45			0	-	-	-	-	-	-
Brookhurst Street	50			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-

Summary	CNEL			
	25 ft. from ROW		At ROW	
	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Roadway/Segment				
Ellis Avenue east of Ward Street	-	-	-	-
Ward Street south of Ellis Street	-	-	-	-
Brookhurst Street	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Vehicle Type	% of ADT			Sub total
	Day	Eve	Night	
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Noise Data

Project: OCSD Biosolids Master Plan **Location:** Ellis Avenue

Start Date and Time

12:00:00 AM	62.81
1:00:00 AM	60.61
2:00:00 AM	59.41
3:00:00 AM	58.71
4:00:00 AM	58.51
5:00:00 AM	63.81
6:00:00 AM	66.31
7:00:00 AM	68.91
8:00:00 AM	70.01
9:00:00 AM	69.21
10:00:00 AM	69.11
11:00:00 AM	69.61
12:00:00 PM	69.71
1:00:00 PM	69.21
2:00:00 PM	69.71
3:00:00 PM	70.41
4:00:00 PM	71.31
5:00:00 PM	71.51
6:00:00 PM	71.01
7:00:00 PM	69.41
8:00:00 PM	68.81
9:00:00 PM	68.41
10:00:00 PM	66.61
11:00:00 PM	65.61

1/0/1900	12:00:00 AM	Start
1/0/1900	1:00:00 AM	1/0/00 12:00 AM
1/0/1900	2:00:00 AM	End
1/0/1900	3:00:00 AM	1/1/00 12:00 AM
	4:00:00 AM	
	5:00:00 AM	
	6:00:00 AM	

CNEL	72
L _{dn}	72
24-hr Max.	72
24-hr Min.	59
24-hr Nighttime Average ^a	64
24-hr Nighttime Max	67
24-hr Nighttime Min	59
24-hr Daytime Average ^a	70
24-hr Daytime Max	72
24-hr Daytime Min	68
Total Period Average	68
Total Period Max	72
Total Period Min	59
Total Period Daytime Average	70
Total Period Daytime Max	72
Total Period Daytime Min	69
Total Period Nighttime Average	64
Total Period Nighttime Max	69
Total Period Nighttime Min	59

^a Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

Noise Data

Project: OCSD Biosolids Master Plan **Location:** Ward Street

Start Date and Time

12:00:00 AM	61.20
1:00:00 AM	59.00
2:00:00 AM	57.80
3:00:00 AM	57.10
4:00:00 AM	56.90
5:00:00 AM	62.20
6:00:00 AM	64.70
7:00:00 AM	67.30
8:00:00 AM	68.40
9:00:00 AM	67.60
10:00:00 AM	67.50
11:00:00 AM	68.00
12:00:00 PM	68.10
1:00:00 PM	67.60
2:00:00 PM	68.10
3:00:00 PM	68.80
4:00:00 PM	69.70
5:00:00 PM	69.90
6:00:00 PM	69.40
7:00:00 PM	67.80
8:00:00 PM	67.20
9:00:00 PM	66.80
10:00:00 PM	65.00
11:00:00 PM	64.00

1/0/1900	12:00:00 AM	Start
1/0/1900	1:00:00 AM	1/0/00 12:00 AM
1/0/1900	2:00:00 AM	End
1/0/1900	3:00:00 AM	1/1/00 12:00 AM
	4:00:00 AM	
	5:00:00 AM	
	6:00:00 AM	

CNEL	71
L _{dn}	70
24-hr Max.	70
24-hr Min.	57
24-hr Nighttime Average ^a	62
24-hr Nighttime Max	65
24-hr Nighttime Min	57
24-hr Daytime Average ^a	68
24-hr Daytime Max	70
24-hr Daytime Min	67
Total Period Average	67
Total Period Max	70
Total Period Min	57
Total Period Daytime Average	68
Total Period Daytime Max	70
Total Period Daytime Min	67
Total Period Nighttime Average	62
Total Period Nighttime Max	68
Total Period Nighttime Min	57

^a Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

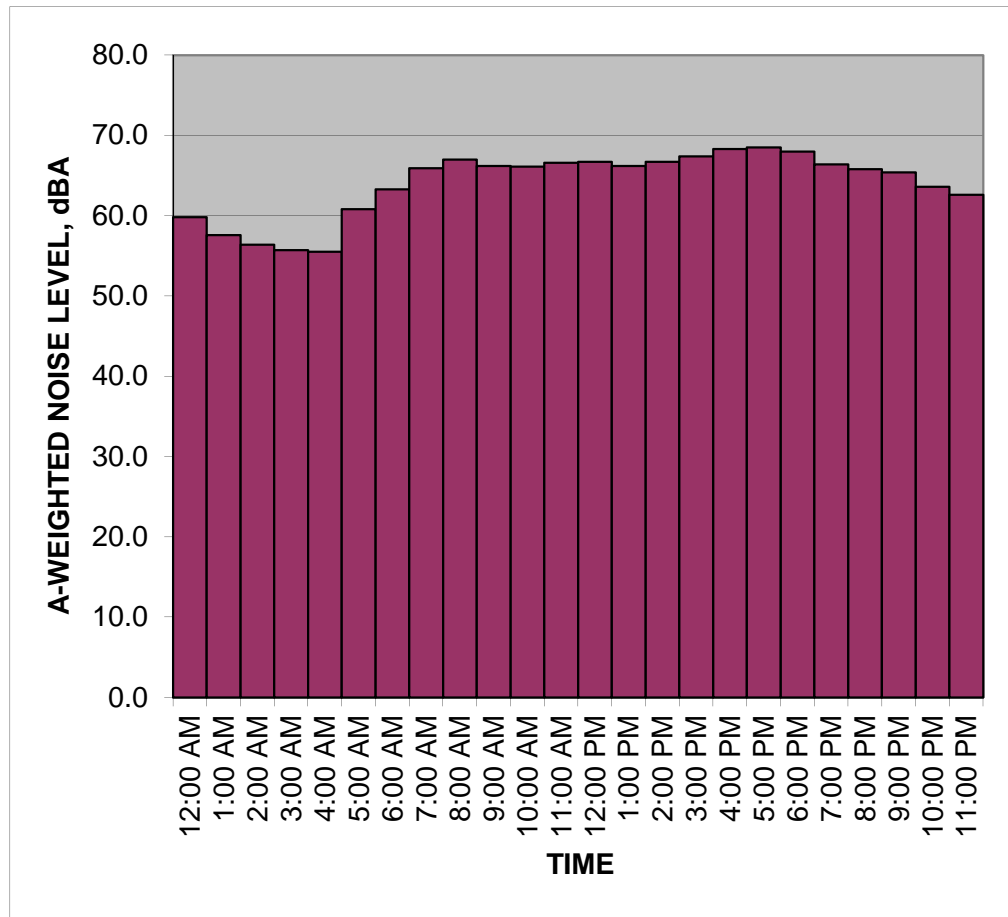
Measured Ambient Noise Levels

Noise Data was obtained from the OCWD Water Production Enhancement Project, 2016.

Project: OCSD Biosolids Master Plan Project
 Location: R1 - West of the Project Site
 Sources: Ambient

Date: July 13, 2016

TIME	HNL, dB(A)
12:00 AM	59.8
1:00 AM	57.6
2:00 AM	56.4
3:00 AM	55.7
4:00 AM	55.5
5:00 AM	60.8
6:00 AM	63.3
7:00 AM	65.9
8:00 AM	67.0
9:00 AM	66.2
10:00 AM	66.1
11:00 AM	66.6
12:00 PM	66.7
1:00 PM	66.2
2:00 PM	66.7
3:00 PM	67.4
4:00 PM	68.3
5:00 PM	68.5
6:00 PM	68.0
7:00 PM	66.4
8:00 PM	65.8
9:00 PM	65.4
10:00 PM	63.6
11:00 PM	62.6
CNEL, dB(A):	69.2



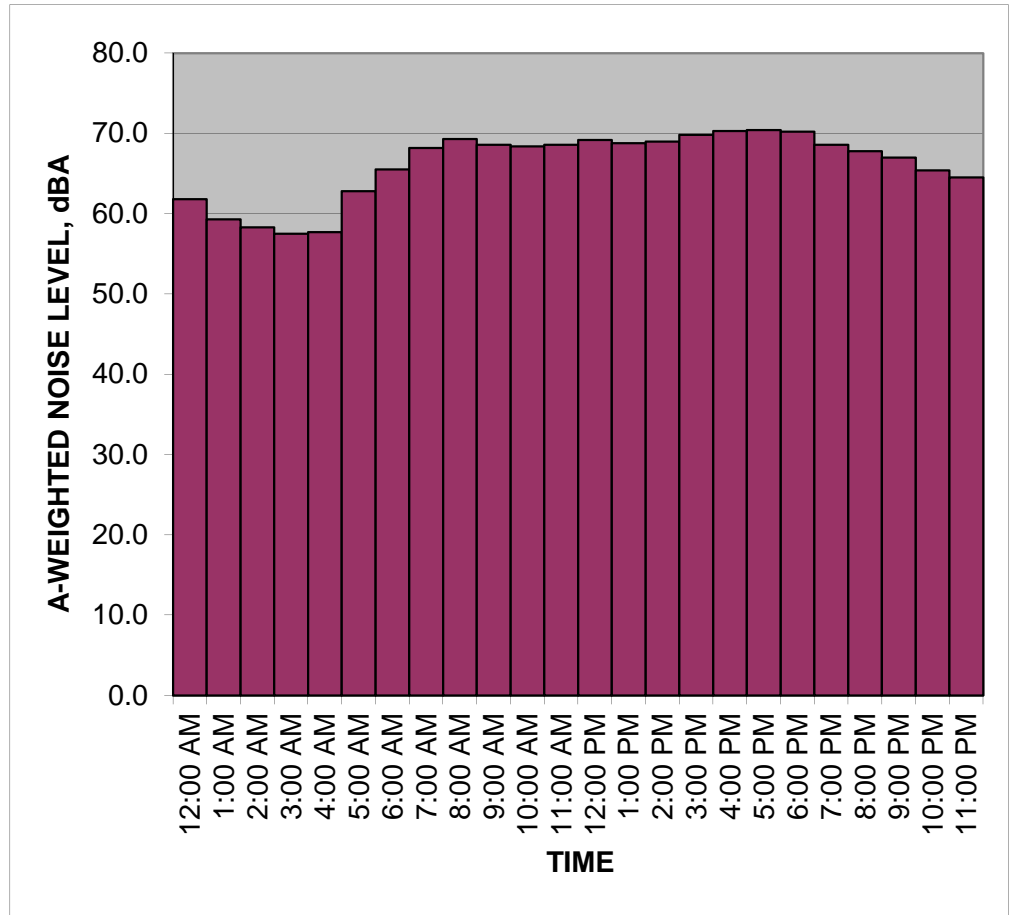
NOTES:

Measured Ambient Noise Levels

Project: OCSD Biosolids Master Plan Project
 Location: R2 - Southwestern Boundary of Multi-family Residential Uses
 Sources: Ambient

Date: July 13, 2016

TIME	HNL, dB(A)
12:00 AM	61.8
1:00 AM	59.3
2:00 AM	58.3
3:00 AM	57.5
4:00 AM	57.7
5:00 AM	62.8
6:00 AM	65.5
7:00 AM	68.2
8:00 AM	69.3
9:00 AM	68.6
10:00 AM	68.4
11:00 AM	68.6
12:00 PM	69.2
1:00 PM	68.8
2:00 PM	69.0
3:00 PM	69.8
4:00 PM	70.3
5:00 PM	70.4
6:00 PM	70.2
7:00 PM	68.6
8:00 PM	67.8
9:00 PM	67.0
10:00 PM	65.4
11:00 PM	64.5
CNEL, dB(A):	71.2



NOTES: