

# Malibu Creek Ecosystem Restoration Study

## Los Angeles and Ventura Counties, California

### Appendix M

### Noise

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**U.S. Army Corps of Engineers  
Los Angeles District**



August 2020

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**Table 36.9 Baseline Traffic Noise Summary 2021**

Roadway Segment	Alt 2a, 2b, 4a, and 4 b Background Traffic Volumes (2021 Conditions)		Alt 3a and 3b Background Traffic Volumes (2021 Conditions)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Predicted Noise 50 Feet from Roadway 1-Hour Leq (dBA)			
Malibu Canyon Road (Project Site - SR 1)	70.5	70.1	70.8	70.3
Las Virgenes Road (Project Site - Lost Hills Road)	73.1	73.1	73.5	73.4
Las Virgenes Road (Lost Hills Road - US 101)	68.0	69.9	68.4	70.2
Lost Hills Road (Las Virgenes Road - US 101)	69.8	69.9	70.1	70.2
PCH (East of Malibu Canyon Road)	73.1	73.0	73.3	73.2
PCH (West of Malibu Canyon Road)	72.2	72.1	72.7	72.6
Northbound US 101 (West of Lost Hills Road) Southside of 101	81.5	81.6	81.8	81.9
Southbound US 101 (West of Lost Hills Road) Northside of 101	83.8	83.4	84.0	83.6
Northbound US 101 (East of Las Virgenes Road) Southside of 101	81.8	82.0	82.1	82.2
Southbound US 101 (East of Las Virgenes Road) Northside of 101	84.1	83.7	84.3	83.9

Noise Predicted Using FHWA TNM 2.5

**Table 36.10 Baseline Traffic and Worst-Case Project Traffic Noise Summary 2021**

Roadway Segment	Alt 2a, 2b, 4a, and 4 b Background Traffic Volumes (2021 Conditions)		Alt 3a and 3b Background Traffic Volumes (2021 Conditions)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Predicted Noise 50 Feet from Roadway 1-Hour Leq (dBA)			
Malibu Canyon Road (Project Site - SR 1)	71.2	70.2	71.4	70.4
Las Virgenes Road (Project Site - Lost Hills Road)	73.6	73.4	73.5	73.9
Las Virgenes Road (Lost Hills Road - US 101)	68.1	69.9	68.4	70.2
Lost Hills Road (Las Virgenes Road - US 101)	70.4	70.3	70.7	70.5
PCH (East of Malibu Canyon Road)	73.4	73.0	73.6	73.3
PCH (West of Malibu Canyon Road)	72.4	72.2	72.9	72.7
Northbound US 101 (West of Lost Hills Road) Southside of 101	81.5	81.7	81.8	81.9
Southbound US 101 (West of Lost Hills Road) Northside of 101	83.8	83.4	84.0	83.6
Northbound US 101 (East of Las Virgenes Road) Southside of 101	81.8	82.0	82.1	82.2
Southbound US 101 (East of Las Virgenes Road) Northside of 101	84.1	83.7	84.3	83.9

Noise Predicted Using FHWA TNM 2.5

**Table 36.11 Project Traffic Noise Impact Summary 2021**

Roadway Segment	Alt 2a, 2b, 4a, and 4 b Background Traffic Volumes (2021 Conditions)		Alt 3a and 3b Background Traffic Volumes (2021 Conditions)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Predicted Noise 50 Feet from Roadway 1-Hour Leq (dBA)			
Malibu Canyon Road (Project Site - SR 1)	0.7	0.1	0.6	0.1
Las Virgenes Road (Project Site - Lost Hills Road)	0.5	0.3	0.0	0.5
Las Virgenes Road (Lost Hills Road - US 101)	0.1	0.0	0.0	0.0
Lost Hills Road (Las Virgenes Road - US 101)	0.6	0.4	0.6	0.3
PCH (East of Malibu Canyon Road)	0.3	0.0	0.3	0.1
PCH (West of Malibu Canyon Road)	0.2	0.1	0.2	0.1
Northbound US 101 (West of Lost Hills Road) Southside of 101	0.0	0.1	0.0	0.0
Southbound US 101 (West of Lost Hills Road) Northside of 101	0.0	0.0	0.0	0.0
Northbound US 101 (East of Las Virgenes Road) Southside of 101	0.0	0.0	0.0	0.0
Southbound US 101 (East of Las Virgenes Road) Northside of 101	0.0	0.0	0.0	0.0

Noise Predicted Using FHWA TNM 2.5

<b>Table 36.12 Alternatives 2a and 2b Construction Noise Assessment</b>				<b>Noise Increase Above Threshold</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		<b>Pioma Road Receptor</b>  55 dBA
		<b>50 feet</b>	<b>Nearest Receptor (3,500 Ft)</b>	
1	Clear & Grub - Sheriff's Overlook (Staging Area)	88.6	52.7	0.0
	Clear & Grub - Sediment Removal Area & Access Rd	91.9	56.1	1.1
	Dewatering	91.3	55.5	0.5
	Temporary Access Road	91.7	55.9	0.9
2	Clear Vegetation	88.4	52.5	0.0
	Dewatering	91.4	55.5	0.5
	Temporary Access Road	88.8	53.0	0.0
	Coarse Material (Gravel & Larger) (4/1-7/21)	89.0	53.2	0.0
	Sand to Surfrider Beach (32,400 cy) (9/3-18) Material Excavation	87.3	67.3	12.3
	Sand to Topanga Beach (93,200 cy) (7/22-Labor Day; 9/19-10/15) Material Excavation	87.3	67.3	12.3
3	Demolition	90.6	70.6	15.6
	Clear Vegetation	88.4	52.5	0.0
	Dewatering	91.5	55.7	0.7
	Temporary Access Road	88.8	53.0	0.0
	Sand to Topanga Beach (7,200 cy) (4/1-9) Material Excavation	85.3	49.5	0.0
	Sand to Zuma Beach (124,200 cy) (4/10-10/15) Material Excavation	85.3	49.5	0.0
	Demolition	90.1	54.3	0.0
4	Clear Vegetation	88.4	52.5	0.0
	Dewatering	91.5	55.7	0.7
	Temporary Access Road	89.3	53.5	0.0
	Sand to Zuma Beach (19,000 cy) (4/1-26) Material Excavation	85.3	49.5	0.0
	Fines to landfill (147,700 cy) (4/27-10/15)	85.3	49.5	0.0
	Demolition	90.2	54.4	0.0
5	Clear Vegetation	88.4	52.5	0.0
	Landscaping	84.5	48.6	0.0
	Dewatering	91.5	55.7	0.7
	Access Road	89.3	53.5	0.0
	Fines to landfill (82,300 cy) (4/1-7/10)	85.3	49.5	0.0
	Material from South Ramp (to landfill) (60,500 cy) (7/11-8/6)	89.0	53.2	0.0
	Material from North Ramp (to landfill) (45,100 cy) (8/8-10/15)	85.3	49.5	0.0
	Demolition	91.9	71.9	16.9
	Road Improvement Plan	89.7	69.7	14.7

<b>Table 36.13 Alternatives 2a and 2b Noise Assessment for Sediment Application at Beach Areas</b>				<b>Noise Increase Above Threshold Generic Receptor (65 dBA)(1)</b>  70 dBA
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (500 Ft)</b>	
2	Sand to Surfrider Beach (32,400 cy) (9/3-18)	87.3	67.3	0.0
	Sand to Topanga Beach (93,200 cy) (7/22-Labor Day; 9/19-10/15)	87.3	67.3	0.0
3	Sand to Topanga Beach (7,200 cy) (4/1-9)	84.5	64.5	0.0
	Sand to Zuma Beach (124,200 cy) (4/10-10/15)	84.5	64.5	0.0
4	Sand to Zuma Beach (19,000 cy) (4/1-26)	87.3	67.3	0.0

(1) Based on noise contours from the Malibu General Plan 1995

**Table 36.14 Upstream Barrier and Culvert Removal Alternative 2b**

Culvert & Barrier Removal Location	Nearest Receptor	Predicted Noise 1-hour Leq (dBA) Approximate Work Duration			Impact above Existing Noise Level 1-hour Leq		
		Year 2017	4/1-21	4/22-5/12	5/13-6/2	4/1-21	4/22-5/12
CC1	2	82	81	NA	27	26	NA
CC2	3	NA	NA	NA	NA	NA	NA
CC3	4	NA	NA	NA	NA	NA	NA
CC4	5	86	NA	NA	31	NA	NA
CC5	6	73	72	NA	18	17	NA
LV1	7	NA	NA	NA	NA	NA	NA
LV2	8	NA	NA	55	NA	NA	5
LV3	9	NA	NA	NA	NA	NA	NA
LV4	10	NA	NA	NA	NA	NA	NA
Year 2018		4/1-21	4/22-5/12	5/13-6/2	4/1-21	4/22-5/12	5/13-6/2
CC1	2	NA	NA	NA	NA	NA	NA
CC2	3	83	NA	NA	28	NA	NA
CC3	4	NA	NA	89	NA	NA	34
CC4	5	NA	NA	NA	NA	NA	NA
CC5	6	NA	NA	NA	NA	NA	NA
LV1	7	68	NA	NA	17	NA	NA
LV2	8	60	NA	NA	10	NA	NA
LV3	9	NA	NA	NA	NA	NA	NA
LV4	10	NA	NA	NA	NA	NA	NA
Year 2019		4/1-6/9	6/10-7/30		4/1-6/9	6/10-7/30	
LV1	7	67	63		16	11	
LV2	8	59	55		9	5	
LV3	9	81	77		26	22	
LV4	10	79	75		24	20	



**Table 36.15 Distance Between Receptors and Culvert/Barrier Removal Project**

Nearest Receptor ID	Landuse	Distance (feet) to Project Location	Barrier Removal Project ID
2	Rural Residential	220	CC1
3	Rural Residential	175	CC2
4	Rural Residential	80	CC3
5	Suburban Residential	130	CC4
6	Rural Residential	620	CC5
7	Rural	1,000	LV1
8	Rural Residential	2,500	LV2
9	Suburban Residential	200	LV3
10	Suburban Residential	250	LV4

<b>Table 36.16 Alternative 3a and 3b Rindge Dam Construction Noise Summary</b>				<b>Noise Increase Above Threshold Piuma Road Receptor  55 dBA</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (3,500 Ft)</b>	
1	Clear & Grub - Sheriff's Overlook (Staging Area)	88.0	52.1	0.0
	Celar & Grub - Sediment Removal Area & Access Rd	83.0	47.2	0.0
	Celar & Grub - Sediment Removal Area & Access Rd	91.6	55.8	0.8
	Dewatering	91.3	55.5	0.5
	Temporary Access Road	91.7	55.9	0.9
	Excavation/Demolition	89.0	53.6	0.0

**Table 36.17 Alternatives 3a and 3b Rindge Dam Construction, Episodes 2 to 23 Noise Summary**

Year	Activity Description	1-hour Leq (dBA)	
		50 feet	Receptor (3,500 Ft)
Episode 2	Clear Vegetation & Environmental protection measures	85.1	49.2
	Dewatering	91.4	55.5
	Temporary Access Road	88.8	53.0
	Demolition	90.0	54.2
Episode 3 through 23	Clear Vegetation & Environmental protection measures	85.1	49.2
	Dewatering	91.4	55.5
	Temporary Access Road	88.8	53.0
	Demolition	92.0	56.1
Episode 22	Clear Vegetation & Environmental protection measures	85.1	49.2
	Landscaping	84.7	48.8
	Dewatering	91.4	55.5
	Temporary Access Road	90.1	54.2
	Rindge Dam & Spillway Demolition*	92.0	56.1
	Rindge Dam Concrete Arc Foundation Demolition	88.7	52.9
	Road Improvement Plan	87.4	51.5

<b>Noise Increase Above Threshold Piuma Road Receptor</b>
55 dBA
0.0
0.5
0.0
0.0
0.0
0.5
0.0
1.1
0.0
0.0
0.5
0.0
1.1
0.0
0.0

<b>Table 36.18 Floodwall Construction Malibu Beach State Park</b>				<b>Noise Increase Above Threshold  500 feet from Construction Area</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (3,500 Ft)</b>	
1	FloodWall	89.0	77.0	70 dBA 7.0

**Table 36.19 Upstream Barrier and Culvert Removal Alternative 3b**

Culvert & Barrier Removal Location	Nearest Receptor	Predicted Noise 1-hour Leq (dBA) Approximate Work Duration			Impact above Existing Noise Level 1-hour Leq		
		Year 2017	4/1-21	4/22-5/12	5/13-6/2	4/1-21	4/22-5/12
CC1	2	82	NA	NA	27	NA	NA
CC2	3	84	83	NA	29	28	NA
CC3	4	NA	NA	85	NA	NA	30
CC4	5	86	NA	NA	31	NA	NA
CC5	6	NA	72	NA	NA	17	NA
LV1	7	68	NA	NA	17	NA	NA
LV2	8	NA	60	55	NA	10	5
LV3	9	82	82	77	27	27	22
LV4	10	80	80	75	25	25	20

<b>Table 36.20 Alternative 4a and 4b Rindge Dam Construction Noise Summary</b>				<b>Noise Increase Above Threshold Piuma Road Receptor  55 dBA</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (3,500 Ft)</b>	
1	Clear & Grub - Sheriff's Overlook (Staging Area) & Environmental protection measures	88.8	52.9	0.0
	Clear & Grub - Sediment Removal Area	91.2	55.4	0.4
	Clear & Grub - Access Rd & Cofferdam	91.2	55.4	0.4
	Dewatering	91.3	55.5	0.5
	Temporary Access Road	91.7	55.9	0.9
2	Clear Vegetation & Environmental protection measures	88.4	52.5	0.0
	Dewatering	91.4	55.5	0.5
	Temporary Access Road	88.8	53.0	0.0
	Coarse Material (Gravel & Larger) - 167,000 cy after ramp building (4/1-7/21)	89.0	53.2	0.0
	Sand to Surfrider Beach (32,400 cy) (9/3-18)	89.0	53.2	0.0
	Sand to Topanga Beach (93,200 cy) (7/22-Labor Day; 9/19-10/15)	89.0	53.2	0.0
	Demolition - Concrete Arc & Spillway	90.1	54.3	0.0
	Demolition - Notch 5'	89.4	53.6	0.0
3	Clear Vegetation & Environmental protection measures	88.4	52.5	0.0
	Dewatering	91.5	55.7	0.7
	Temporary Access Road	88.8	53.0	0.0
	Sand to Topanga Beach (7,200 cy) (4/1-9)	85.3	49.5	0.0
	Sand to Zuma Beach (124,200 cy) (4/10-10/15)	85.3	49.5	0.0
	Demolition	90.6	54.8	0.0
	Demolition - Notch 5'	90.0	54.2	0.0
4	Clear Vegetation & Environmental protection measures	88.4	52.5	0.0
	Dewatering	91.5	55.7	0.7
	Temporary Access Road	89.9	54.1	0.0
	Sand to Zuma Beach (19,500 cy) (4/1-26)	85.3	49.5	0.0
	Fines to landfill (147,700 cy) (4/27-10/15)	85.3	49.5	0.0
	Demolition	90.6	54.8	0.0
	Demolition - Notch 5'	90.0	54.2	0.0
5	Clear Vegetation & Environmental protection measures	88.4	52.5	0.0
	Landscaping	84.5	48.6	0.0
	Dewatering	91.5	55.7	0.7
	Access Road	89.9	54.1	0.0
	Fines to landfill (82,300 cy) (4/1-7/10)	85.3	49.5	0.0
	Material from South Ramp (to landfill) (60,500 cy) (7/11-8/6)	89.0	53.2	0.0
	Material from North Ramp (to landfill) (45,100 cy) (8/7-11/19)	85.3	49.5	0.0
	Rindge Dam & Spillway Demolition	90.2	54.4	0.0
	Rindge Dam Concrete Arc Foundation Demolition	88.5	52.7	0.0
Road Improvement Plan	89.7	53.8	0.0	

<b>Table 36.21 Alternative 4a and 4b Beach Sand Placement Noise Summary Year 2</b>				<b>Noise Increase Above Threshold Generic Receptor (500 ft) 70 dBA</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (500 Ft)</b>	
2	Sand to Surfrider Beach (32,400 cy) (9/3-18)	87.3	67.3	0.0
	Sand to Topanga Beach (93,200 cy) (7/22-Labor Day; 9/19-10/15)	87.3	67.3	0.0
3	Sand to Topanga Beach (7,200 cy) (4/1-9)	84.5	64.5	0.0
	Sand to Zuma Beach (124,200 cy) (4/10-10/15)	84.5	64.5	0.0
4	Sand to Zuma Beach (19,500 cy) (4/1-26)	87.3	67.3	0.0



<b>Table 36.22 Alternative 4a and 4b Floodwall Construction Noise Summary</b>				<b>Noise Increase Above Threshold Piuma Road Receptor  70 dBA</b>
<b>Year</b>	<b>Activity Description</b>	<b>1-hour Leq (dBA)</b>		
		<b>50 feet</b>	<b>Nearest Receptor (3,500 Ft)</b>	
1	FloodWall	89.0	77.0	7.0

**Table 36.23 Upstream Barrier and Culvert Removal Alternative 4b**

Culvert & Barrier Removal Location	Nearest Receptor	Predicted Noise 1-hour Leq (dBA) Approximate Work Duration			Impact above Existing Noise Level 1-hour Leq		
		Year 2017	4/1-21	4/22-5/12	5/13-6/2	4/1-21	4/22-5/12
CC1	2	82	NA	NA	27	NA	NA
CC2	3	NA	NA	NA	NA	NA	NA
CC3	4	NA	NA	NA	NA	NA	NA
CC4	5	86	NA	NA	31	NA	NA
CC5	6	NA	72	NA	NA	17	NA
LV1	7	NA	NA	NA	NA	NA	NA
LV2	8	NA	NA	55	NA	NA	5
LV3	9	NA	NA	NA	NA	NA	NA
LV4	10	NA	NA	NA	NA	NA	NA
Year 2018		4/1-21	4/22-5/12	5/13-6/2	4/1-21	4/22-5/12	5/13-6/2
CC1	2	NA	NA	NA	NA	NA	NA
CC2	3	83	NA	NA	28	NA	NA
CC3	4	NA	NA	89	NA	NA	34
CC4	5	NA	NA	NA	NA	NA	NA
CC5	6	NA	NA	NA	NA	NA	NA
LV1	7	68	NA	NA	17	NA	NA
LV2	8	60	60	NA	10	10	NA
LV3	9	NA	NA	NA	NA	NA	NA
LV4	10	NA	NA	NA	NA	NA	NA
Year 2019		4/1-6/9	6/10-7/30		4/1-6/9	6/10-7/30	
LV1	7	67	63		16	11	
LV2	8	59	55		9	5	
LV3	9	81	77		26	22	
LV4	10	79	75		24	20	