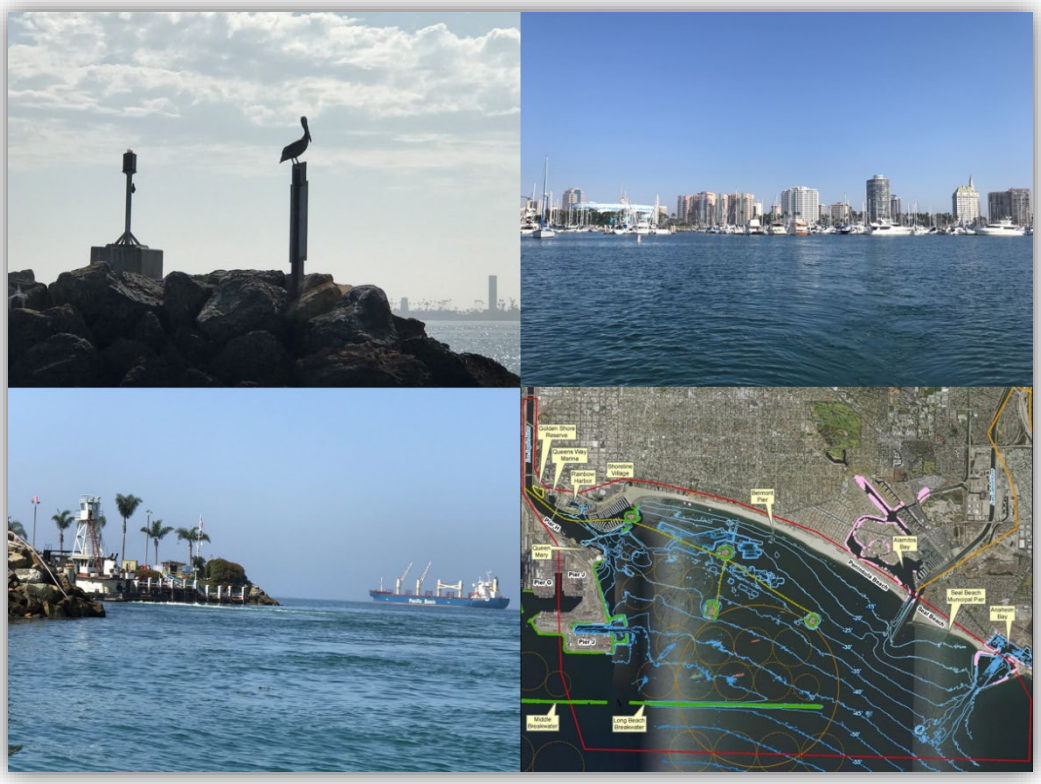
DRAFT INTEGRATED FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT (EIS/EIR)

APPENDIX L: ENVIRONMENTAL JUSTICE

EAST SAN PEDRO BAY
ECOSYSTEM RESTORATION STUDY
Long Beach, California

November 2019



US Army Corps of Engineers ®

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EJSCREEN Report (Version 2018)

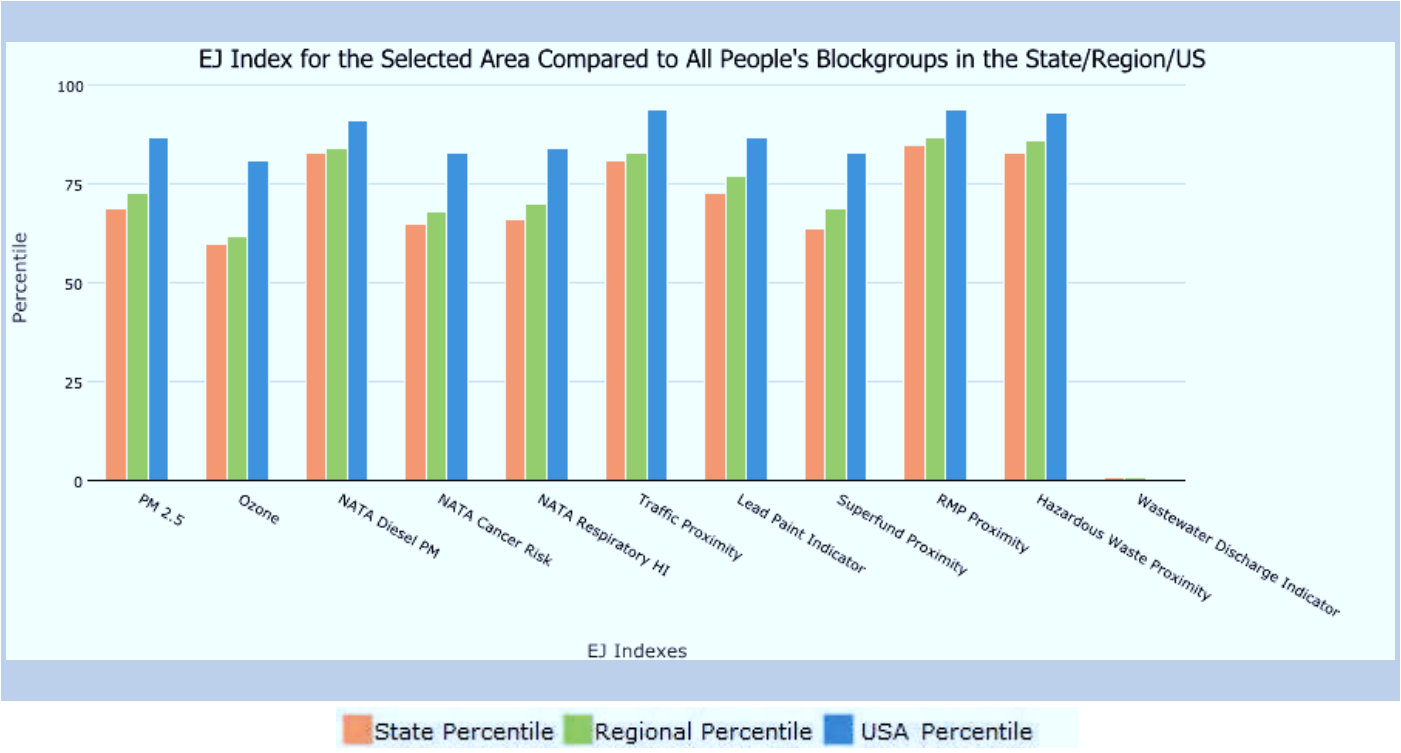
1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 149,610

Input Area (sq. miles): 45.78

(The study area contains 6 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	69	73	87
EJ Index for Ozone	60	62	81
EJ Index for NATA* Diesel PM	83	84	91
EJ Index for NATA* Air Toxics Cancer Risk	65	68	83
EJ Index for NATA* Respiratory Hazard Index	66	70	84
EJ Index for Traffic Proximity and Volume	81	83	94
EJ Index for Lead Paint Indicator	73	77	87
EJ Index for Superfund Proximity	64	69	83
EJ Index for RMP Proximity	85	87	94
EJ Index for Hazardous Waste Proximity	83	86	93
EJ Index for Wastewater Discharge Indicator	1	1	0



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

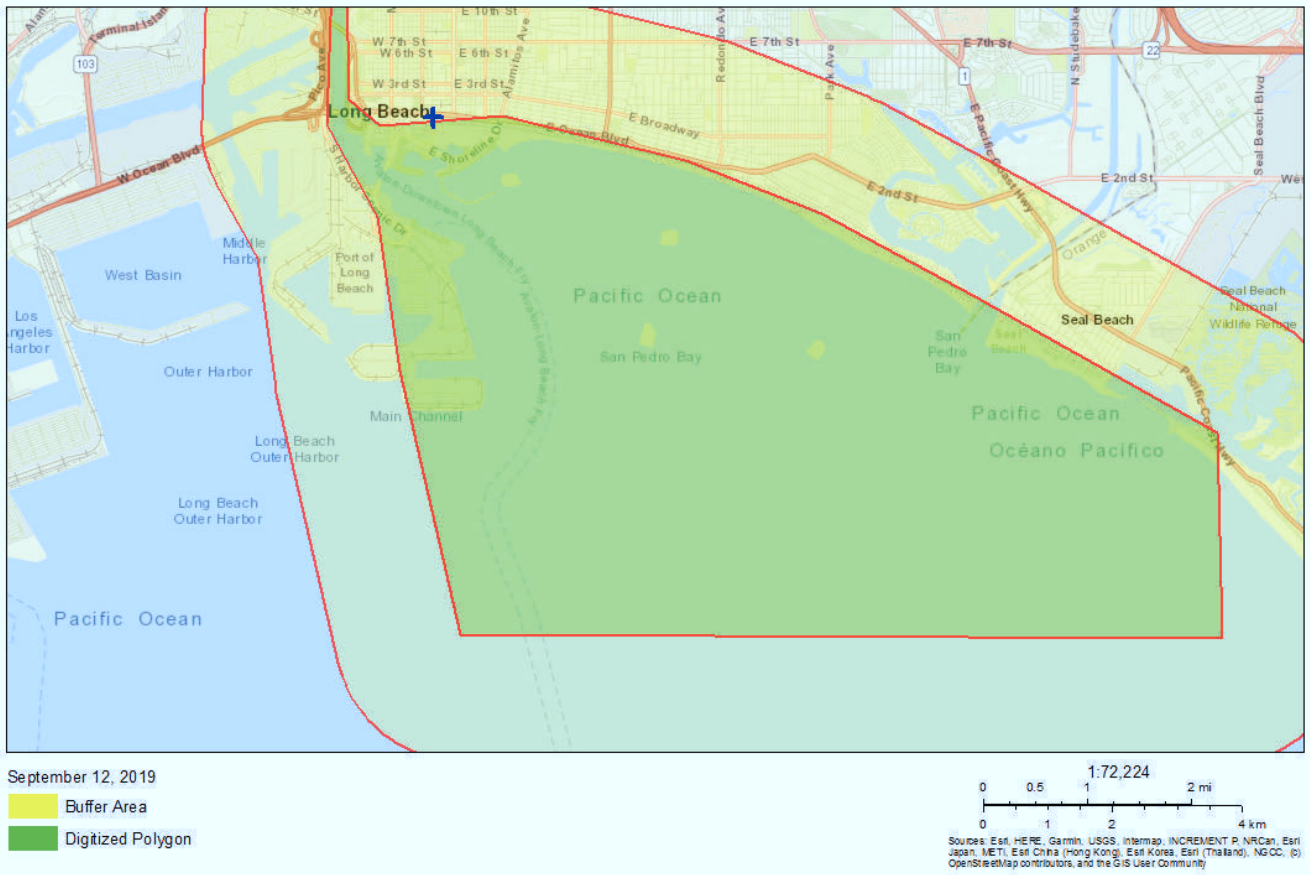
EJSCREEN Report (Version 2018)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 149,610

Input Area (sq. miles): 45.78

(The study area contains 6 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	7

EJSCREEN Report (Version 2018)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 149,610

Input Area (sq. miles): 45.78

(The study area contains 6 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	13	10.7	76	10.1	80	9.53	96
Ozone (ppb)	39.4	47.4	22	48.3	18	42.5	26
NATA* Diesel PM (µg/m^3)	1.84	0.972	91	0.978	90-95th	0.938	90-95th
NATA* Cancer Risk (lifetime risk per million)	45	44	56	43	50-60th	40	60-70th
NATA* Respiratory Hazard Index	2.2	2.1	58	2	60-70th	1.8	70-80th
Traffic Proximity and Volume (daily traffic count/distance to road)	1500	1200	78	1100	80	600	91
Lead Paint Indicator (% Pre-1960 Housing)	0.5	0.29	74	0.24	78	0.29	76
Superfund Proximity (site count/km distance)	0.065	0.17	46	0.14	53	0.12	58
RMP Proximity (facility count/km distance)	1.7	1.1	80	0.97	83	0.72	88
Hazardous Waste Proximity (facility count/km distance)	4.3	3.3	72	2.8	77	4.3	88
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	14	16	96	12	97	30	98
Demographic Indicators							
Demographic Index	55%	48%	60	47%	63	36%	77
Minority Population	64%	62%	50	59%	53	38%	76
Low Income Population	46%	35%	68	35%	68	34%	72
Linguistically Isolated Population	8%	9%	54	8%	59	4%	79
Population With Less Than High School Education	19%	18%	60	17%	63	13%	76
Population Under 5 years of age	6%	6%	52	6%	52	6%	56
Population over 64 years of age	10%	13%	45	13%	44	14%	35

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

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EJSCREEN Report (Version 2018)

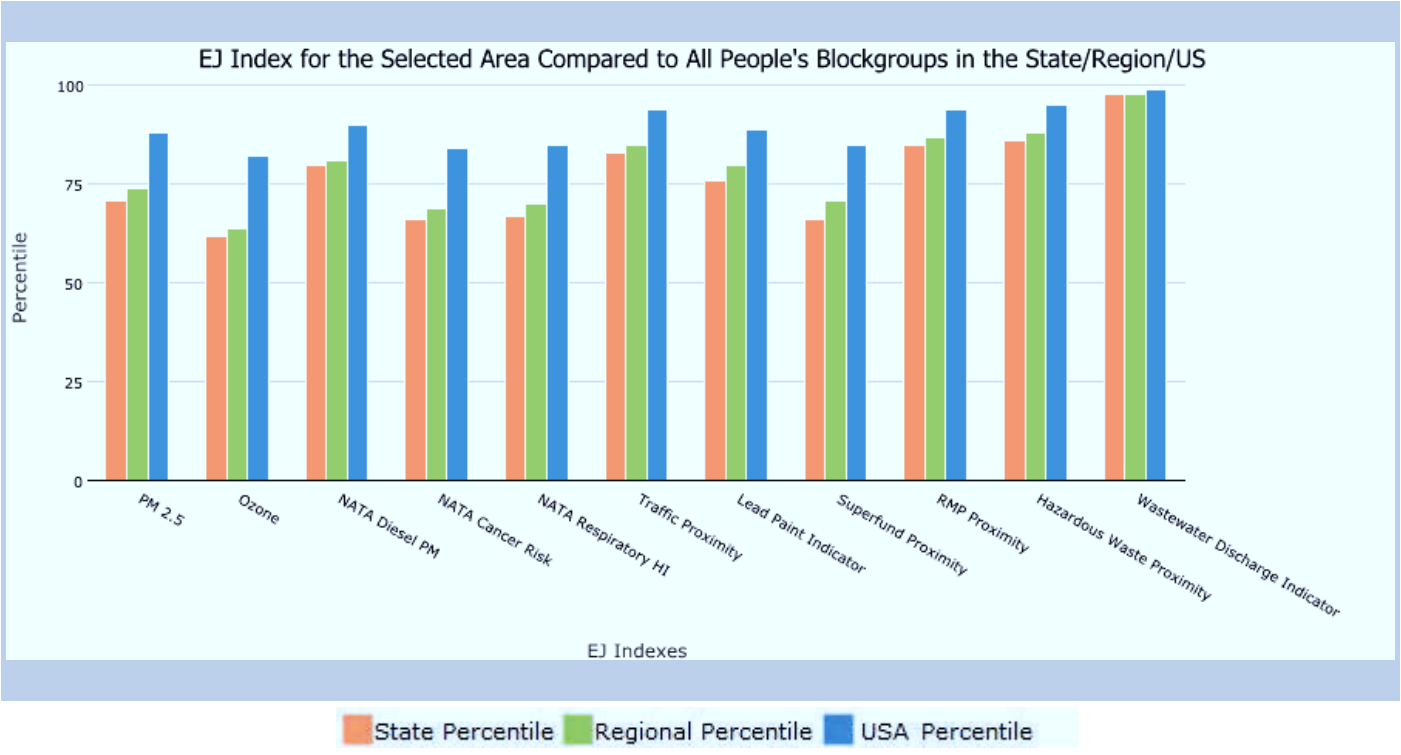
City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 469,743

Input Area (sq. miles): 51.44

(The study area contains 6 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	71	74	88
EJ Index for Ozone	62	64	82
EJ Index for NATA* Diesel PM	80	81	90
EJ Index for NATA* Air Toxics Cancer Risk	66	69	84
EJ Index for NATA* Respiratory Hazard Index	67	70	85
EJ Index for Traffic Proximity and Volume	83	85	94
EJ Index for Lead Paint Indicator	76	80	89
EJ Index for Superfund Proximity	66	71	85
EJ Index for RMP Proximity	85	87	94
EJ Index for Hazardous Waste Proximity	86	88	95
EJ Index for Wastewater Discharge Indicator	98	98	99



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

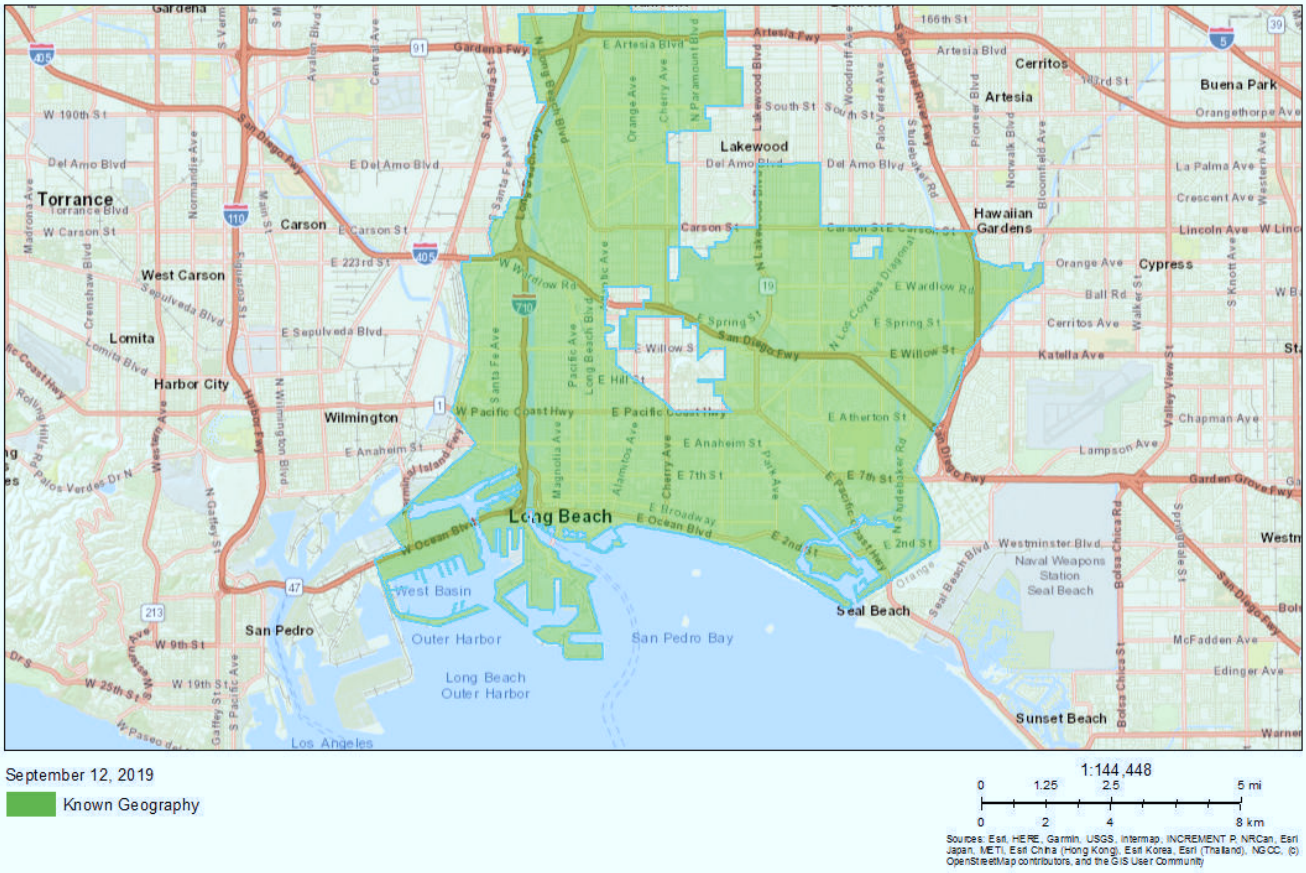
EJSCREEN Report (Version 2018)

City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 469,743

Input Area (sq. miles): 51.44

(The study area contains 6 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	26

EJSCREEN Report (Version 2018)

City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 469,743

Input Area (sq. miles): 51.44

(The study area contains 6 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	13.4	10.7	82	10.1	86	9.53	97
Ozone (ppb)	40.3	47.4	26	48.3	20	42.5	30
NATA* Diesel PM (µg/m^3)	1.64	0.972	87	0.978	80-90th	0.938	80-90th
NATA* Cancer Risk (lifetime risk per million)	45	44	56	43	50-60th	40	60-70th
NATA* Respiratory Hazard Index	2.2	2.1	57	2	60-70th	1.8	70-80th
Traffic Proximity and Volume (daily traffic count/distance to road)	1900	1200	82	1100	83	600	93
Lead Paint Indicator (% Pre-1960 Housing)	0.56	0.29	78	0.24	82	0.29	80
Superfund Proximity (site count/km distance)	0.075	0.17	52	0.14	58	0.12	63
RMP Proximity (facility count/km distance)	2.1	1.1	84	0.97	87	0.72	91
Hazardous Waste Proximity (facility count/km distance)	6.1	3.3	82	2.8	85	4.3	92
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	21	16	97	12	97	30	98
Demographic Indicators							
Demographic Index	57%	48%	63	47%	65	36%	79
Minority Population	72%	62%	57	59%	61	38%	80
Low Income Population	42%	35%	64	35%	64	34%	67
Linguistically Isolated Population	8%	9%	55	8%	59	4%	80
Population With Less Than High School Education	21%	18%	63	17%	66	13%	78
Population Under 5 years of age	7%	6%	59	6%	60	6%	63
Population over 64 years of age	10%	13%	46	13%	45	14%	35

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

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EJSCREEN Report (Version 2018)

City: Seal Beach, CALIFORNIA, EPA Region 9

Approximate Population: 24,865

Input Area (sq. miles): 13.03

(The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	13.1	10.7	77	10.1	82	9.53	96
Ozone (ppb)	40.7	47.4	27	48.3	22	42.5	33
NATA* Diesel PM (µg/m^3)	1.34	0.972	76	0.978	70-80th	0.938	80-90th
NATA* Cancer Risk (lifetime risk per million)	41	44	40	43	<50th	40	50-60th
NATA* Respiratory Hazard Index	1.9	2.1	44	2	50-60th	1.8	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	3000	1200	88	1100	89	600	95
Lead Paint Indicator (% Pre-1960 Housing)	0.19	0.29	48	0.24	56	0.29	50
Superfund Proximity (site count/km distance)	0.049	0.17	36	0.14	42	0.12	49
RMP Proximity (facility count/km distance)	1.8	1.1	81	0.97	84	0.72	89
Hazardous Waste Proximity (facility count/km distance)	2.9	3.3	63	2.8	69	4.3	83
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	87	16	98	12	98	30	99
Demographic Indicators							
Demographic Index	23%	48%	13	47%	15	36%	36
Minority Population	26%	62%	12	59%	15	38%	46
Low Income Population	20%	35%	30	35%	30	34%	30
Linguistically Isolated Population	5%	9%	43	8%	48	4%	73
Population With Less Than High School Education	5%	18%	24	17%	25	13%	29
Population Under 5 years of age	4%	6%	24	6%	25	6%	27
Population over 64 years of age	38%	13%	98	13%	97	14%	97

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

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