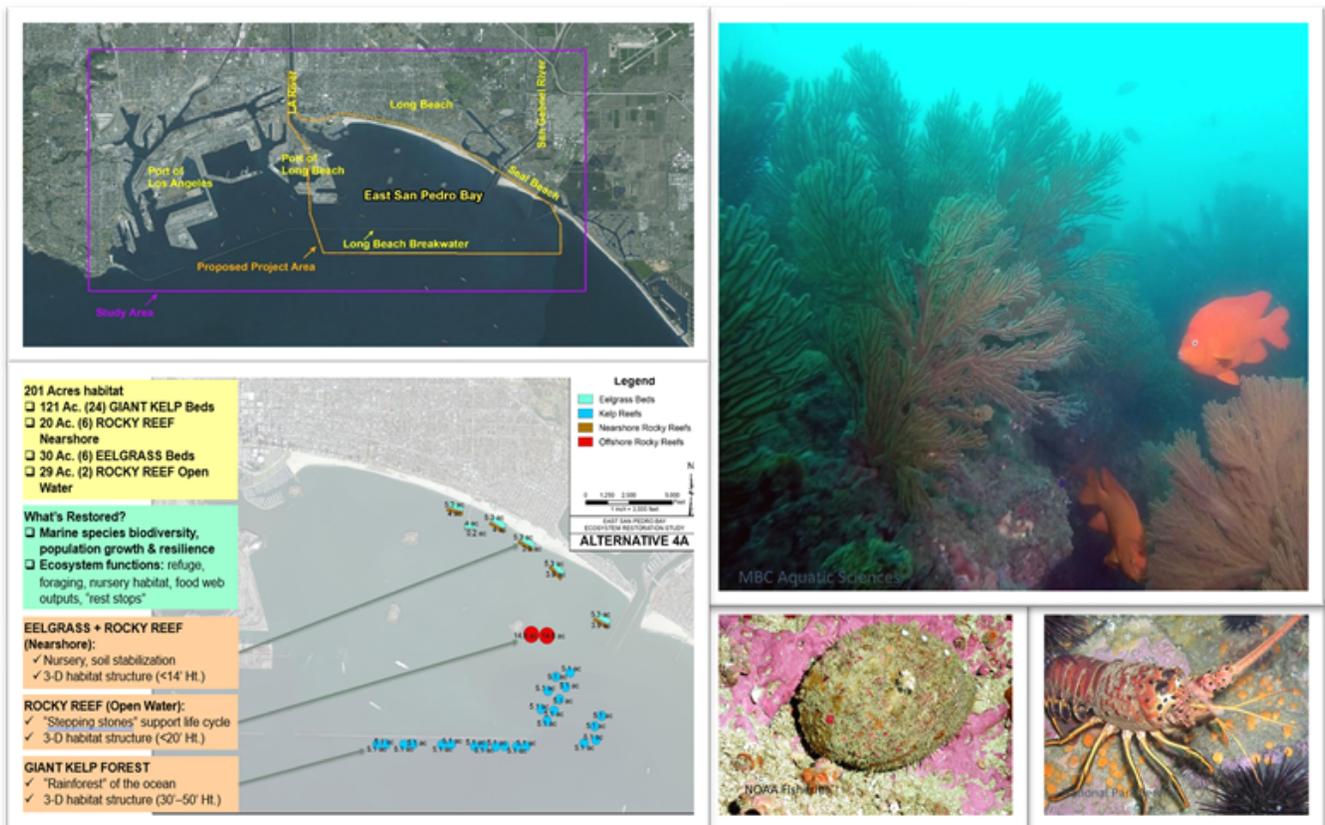


# FINAL INTEGRATED FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT (EIS/EIR)

## APPENDIX L: ENVIRONMENTAL JUSTICE

### EAST SAN PEDRO BAY ECOSYSTEM RESTORATION STUDY Long Beach, California

January 2022



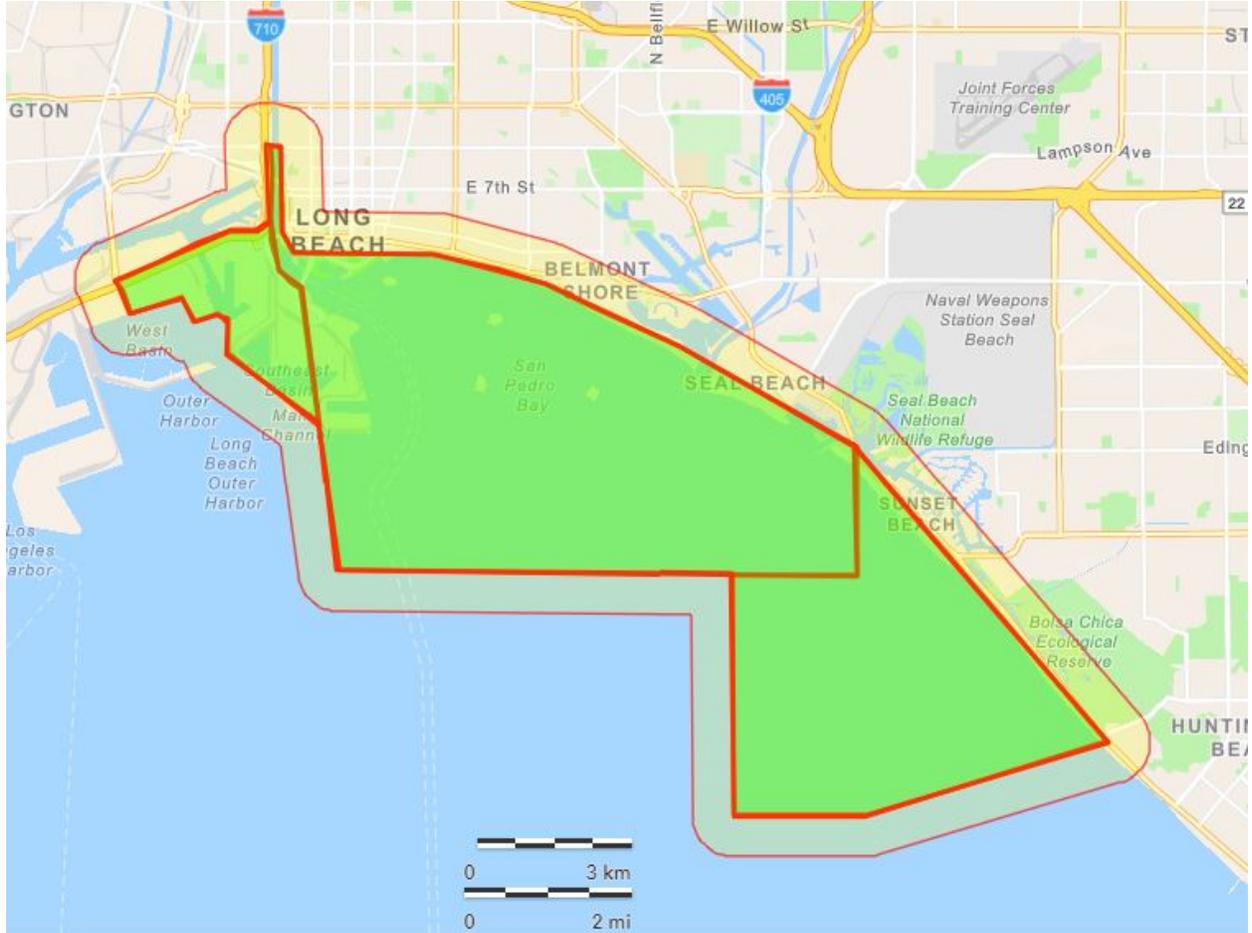
US Army Corps  
of Engineers®



**Results from the EPA's EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

Approximate Population: 68,375



Analyzed on 12/14/2021

**Results from the EPA’s EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

Approximate Population: 68,375

0.5 miles Ring around the Area, CALIFORNIA, EPA Region 9 (Population: 68,375)

#	Category	Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
1	EJ Index	EJ Index for Particulate Matter (PM 2.5)			41		45		67
2	EJ Index	EJ Index for Ozone			39		42		65
3	EJ Index	EJ Index for NATA Diesel PM			75		76		86
4	EJ Index	EJ Index for NATA Air Toxics Cancer Risk			44		47		68
5	EJ Index	EJ Index for NATA Respiratory Hazard Index			44		48		70
6	EJ Index	EJ Index for Traffic Proximity and Volume			69		74		91
7	EJ Index	EJ Index for Lead Paint Indicator			55		60		74
8	EJ Index	EJ Index for Superfund Proximity			46		52		72
9	EJ Index	EJ Index for RMP Proximity			76		79		89
10	EJ Index	EJ Index for Hazardous Waste Proximity			62		68		88
11	EJ Index	EJ Index for Wastewater Discharge Indicator			1		1		1

Analyzed on 12/14/2021

**Results from the EPA's EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

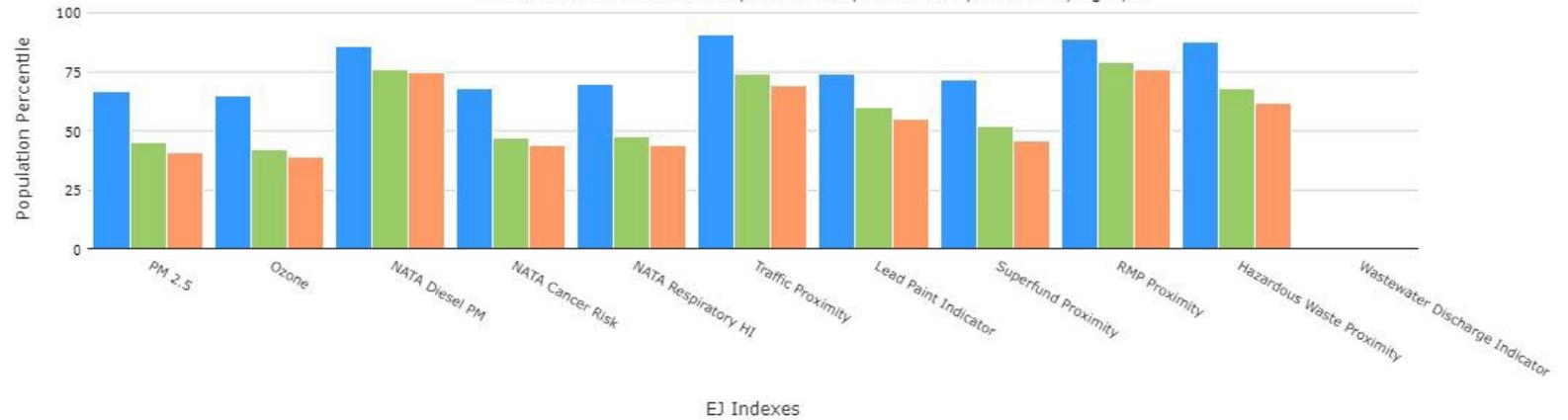
Approximate Population: 68,375

Environmental Indicators    Demographic Indicators    **EJ Indexes**

- [Unselect All]
- PM 2.5
  - NATA Cancer Risk
  - Lead Paint Indicator
  - Hazardous Waste Proximity
  - Ozone
  - NATA Respiratory HI
  - Superfund Proximity
  - Wastewater Discharge Indicator
  - NATA Diesel PM
  - Traffic Proximity
  - RMP Proximity

State Percentile     Regional Percentile     USA Percentile

EJ Indexes for the Selected Area Compared to All People's Block Groups in the State/Region/US



Analyzed on 12/14/2021

**Results from the EPA’s EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

Approximate Population: 68,375

0.5 miles Ring around the Area, CALIFORNIA, EPA Region 9 (Population: 68,375)

#	Category	Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
12	Environmental	Particulate Matter (PM 2.5 in ug/m3)	11.7	10.6	66	9.99	73	8.55	95
13	Environmental	Ozone (ppb)	41.2	49.2	22	50.1	18	42.9	37
14	Environmental	NATA Diesel PM (ug/m3)	1.86	0.467	99	0.479	95-100th	0.478	95-100th
15	Environmental	NATA Air Toxics Cancer Risk (risk per MM)	40	36	69	35	60-70th	32	80-90th
16	Environmental	NATA Respiratory Hazard Index	0.61	0.55	67	0.53	60-70th	0.44	80-90th
17	Environmental	Traffic Proximity and Volume (daily traffic count/distance to road)	3400	2000	83	1700	86	750	95
18	Environmental	Lead Paint Indicator (% pre-1960s housing)	0.47	0.29	72	0.24	77	0.28	75
19	Environmental	Superfund Proximity (site count/km distance)	0.069	0.17	42	0.15	48	0.13	53
20	Environmental	RMP Proximity (facility count/km distance)	1.6	1.1	77	0.99	81	0.74	86
21	Environmental	Hazardous Waste Proximity (facility count/km distance)	7.5	6.2	66	5.3	73	5	89
22	Environmental	Wastewater Discharge Indicators (toxicity-weighted concentration/m distance)	13	18	96	18	96	9.4	98
23	Demographic	Demographic Index	39%	47%	38	46%	41	36%	63
24	Demographic	People of Color Population	48%	62%	33	60%	36	39%	65
25	Demographic	Low Income Population	30%	33%	52	33%	52	33%	53
26	Demographic	Linguistically Isolated Population	5%	9%	41	8%	46	4%	70
27	Demographic	Population with Less Than High School Education	10%	17%	42	16%	45	13%	53
28	Demographic	Population under Age 5	5%	6%	34	6%	34	6%	37
29	Demographic	Population over Age 64	14%	14%	61	14%	59	15%	50

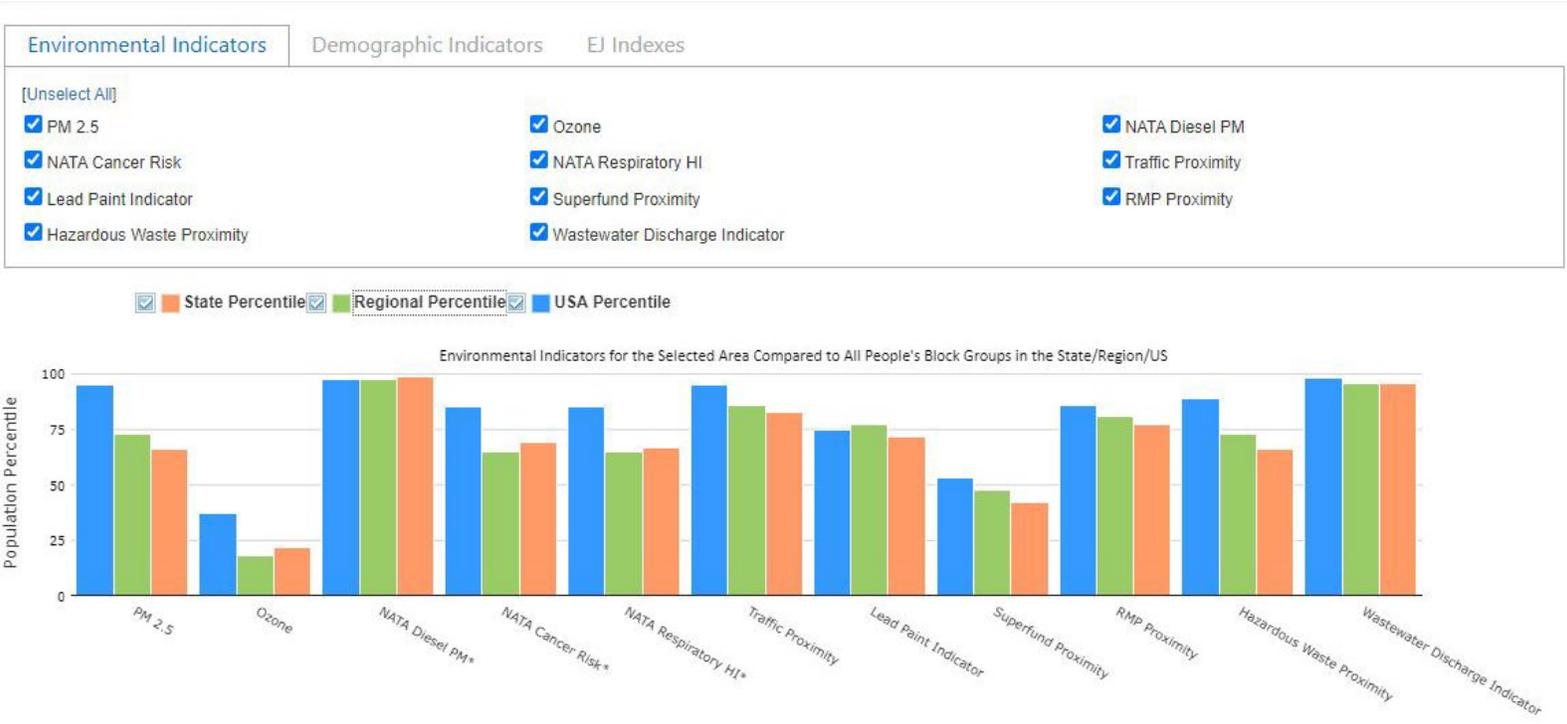
Analyzed on 12/14/2021

**Results from the EPA's EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

Approximate Population: 68,375

0.5 miles Ring around the Area, CALIFORNIA, EPA Region 9 (Population: 68,375)



Analyzed on 12/14/2021

**Results from the EPA’s EJScreen Report (Version 2020) for the East San Pedro Bay Project Area**

City: ESPB Project Area and 0.5-mile Buffer

Approximate Population: 68,375

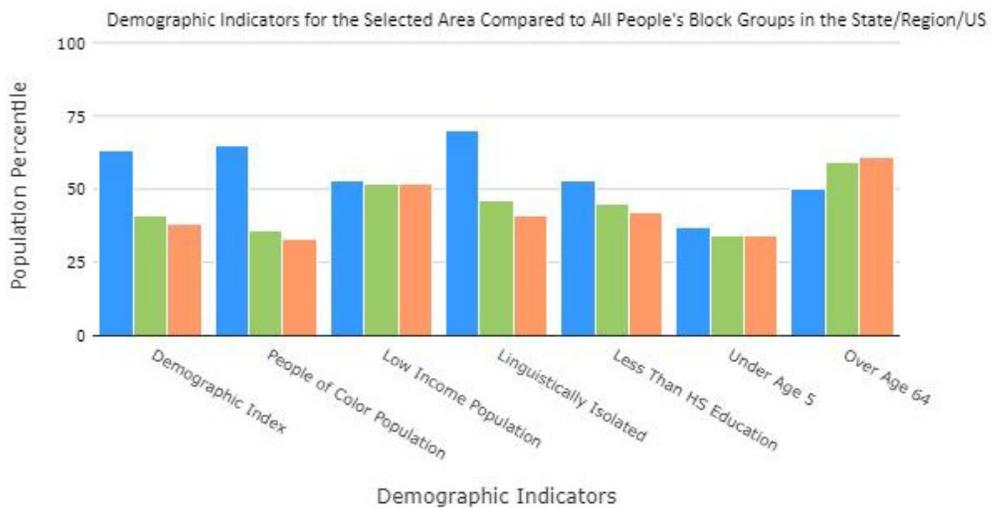
0.5 miles Ring around the Area, CALIFORNIA, EPA Region 9 (Population: 68,375)

Environmental Indicators    **Demographic Indicators**    EJ Indexes

[Unselect All]

- Demographic Index
- Linguistically Isolated
- Over Age 64
- People of Color Population
- Less Than HS Education
- Low Income Population
- Under Age 5

State Percentile     Regional Percentile     USA Percentile



Analyzed on 12/14/2021



## EJSCREEN Report (Version 2020)



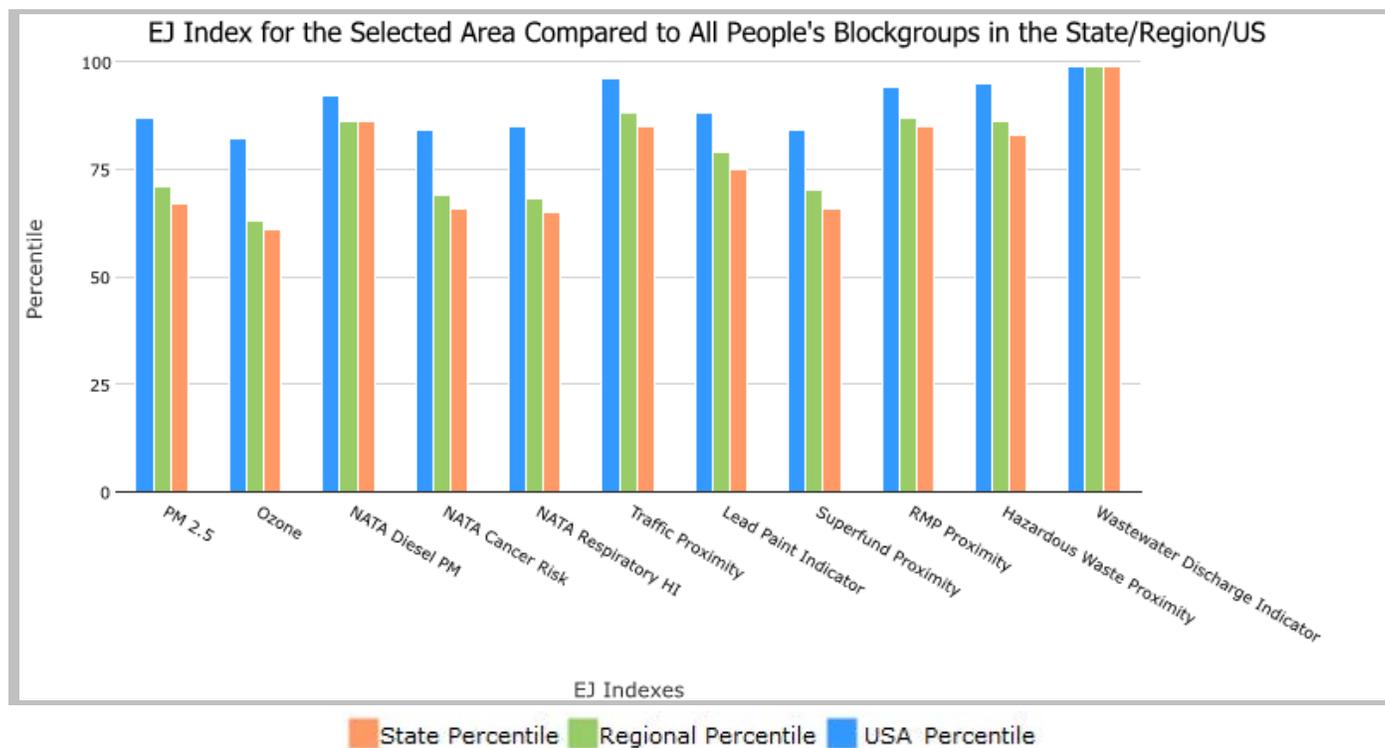
City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 468,857

Input Area (sq. miles): 51.44

(The study area contains 5 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>EJ Indexes</b>			
EJ Index for PM2.5	67	71	87
EJ Index for Ozone	61	63	82
EJ Index for NATA* Diesel PM	86	86	92
EJ Index for NATA* Air Toxics Cancer Risk	66	69	84
EJ Index for NATA* Respiratory Hazard Index	65	68	85
EJ Index for Traffic Proximity and Volume	85	88	96
EJ Index for Lead Paint Indicator	75	79	88
EJ Index for Superfund Proximity	66	70	84
EJ Index for RMP Proximity	85	87	94
EJ Index for Hazardous Waste Proximity	83	86	95
EJ Index for Wastewater Discharge Indicator	99	99	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 2020)

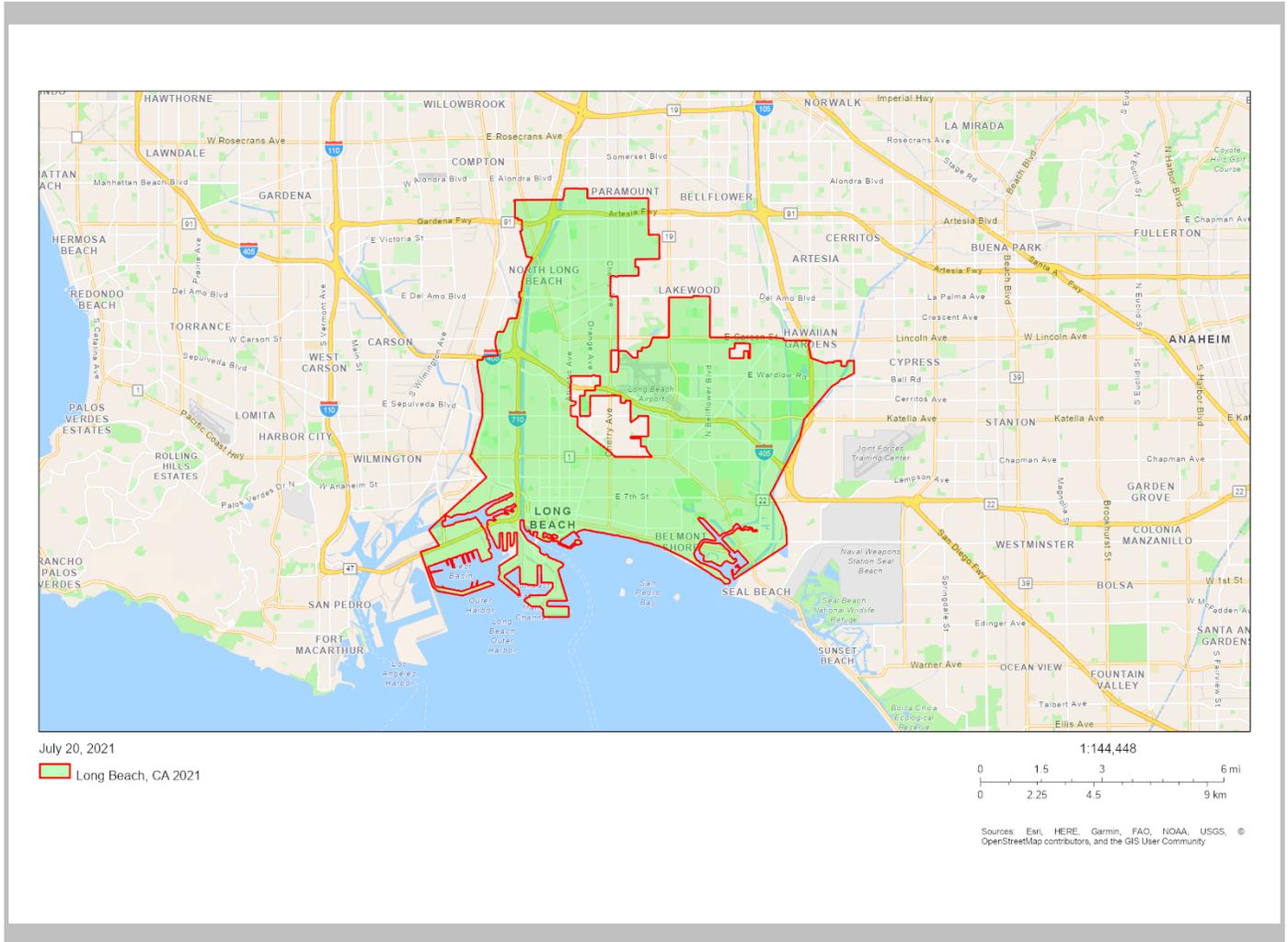


City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 468,857

Input Area (sq. miles): 51.44

(The study area contains 5 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	40



## EJSCREEN Report (Version 2020)

City: Long Beach, CALIFORNIA, EPA Region 9

Approximate Population: 468,857

Input Area (sq. miles): 51.44

(The study area contains 5 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
<b>Environmental Indicators</b>							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$ )	12.2	10.6	76	9.99	80	8.55	96
Ozone (ppb)	42.1	49.2	26	50.1	20	42.9	44
NATA* Diesel PM ( $\mu\text{g}/\text{m}^3$ )	1.15	0.467	98	0.479	95-100th	0.478	95-100th
NATA* Cancer Risk (lifetime risk per million)	39	36	65	35	60-70th	32	80-90th
NATA* Respiratory Hazard Index	0.58	0.55	59	0.53	50-60th	0.44	80-90th
Traffic Proximity and Volume (daily traffic count/distance to road)	3700	2000	85	1700	87	750	95
Lead Paint Indicator (% Pre-1960 Housing)	0.56	0.29	78	0.24	82	0.28	80
Superfund Proximity (site count/km distance)	0.087	0.17	51	0.15	58	0.13	62
RMP Proximity (facility count/km distance)	2.2	1.1	85	0.99	87	0.74	91
Hazardous Waste Proximity (facility count/km distance)	11	6.2	82	5.3	86	5	94
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	87	18	99	18	99	9.4	99
<b>Demographic Indicators</b>							
Demographic Index	55%	47%	63	46%	65	36%	78
People of Color Population	72%	62%	56	60%	60	39%	79
Low Income Population	39%	33%	64	33%	64	33%	66
Linguistically Isolated Population	7%	9%	53	8%	57	4%	78
Population With Less Than High School Education	20%	17%	63	16%	66	13%	78
Population Under 5 years of age	7%	6%	57	6%	57	6%	61
Population over 64 years of age	11%	14%	45	14%	45	15%	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](http://www.epa.gov/environmentaljustice)

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. 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. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.



### EJSCREEN Report (Version 2020)



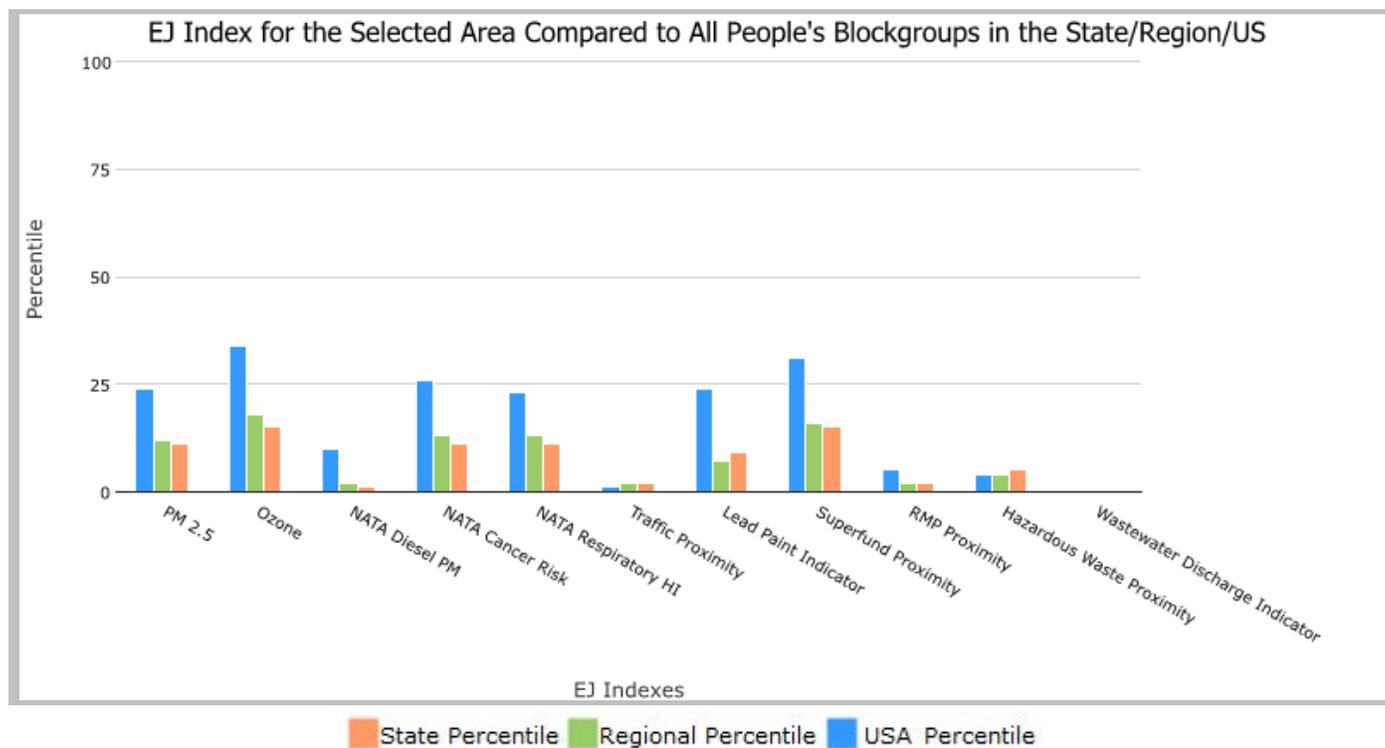
City: Seal Beach, CALIFORNIA, EPA Region 9

Approximate Population: 24,508

Input Area (sq. miles): 13.03

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

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>EJ Indexes</b>			
EJ Index for PM2.5	11	12	24
EJ Index for Ozone	15	18	34
EJ Index for NATA* Diesel PM	1	2	10
EJ Index for NATA* Air Toxics Cancer Risk	11	13	26
EJ Index for NATA* Respiratory Hazard Index	11	13	23
EJ Index for Traffic Proximity and Volume	2	2	1
EJ Index for Lead Paint Indicator	9	7	24
EJ Index for Superfund Proximity	15	16	31
EJ Index for RMP Proximity	2	2	5
EJ Index for Hazardous Waste Proximity	5	4	4
EJ Index for Wastewater Discharge Indicator	0	0	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.



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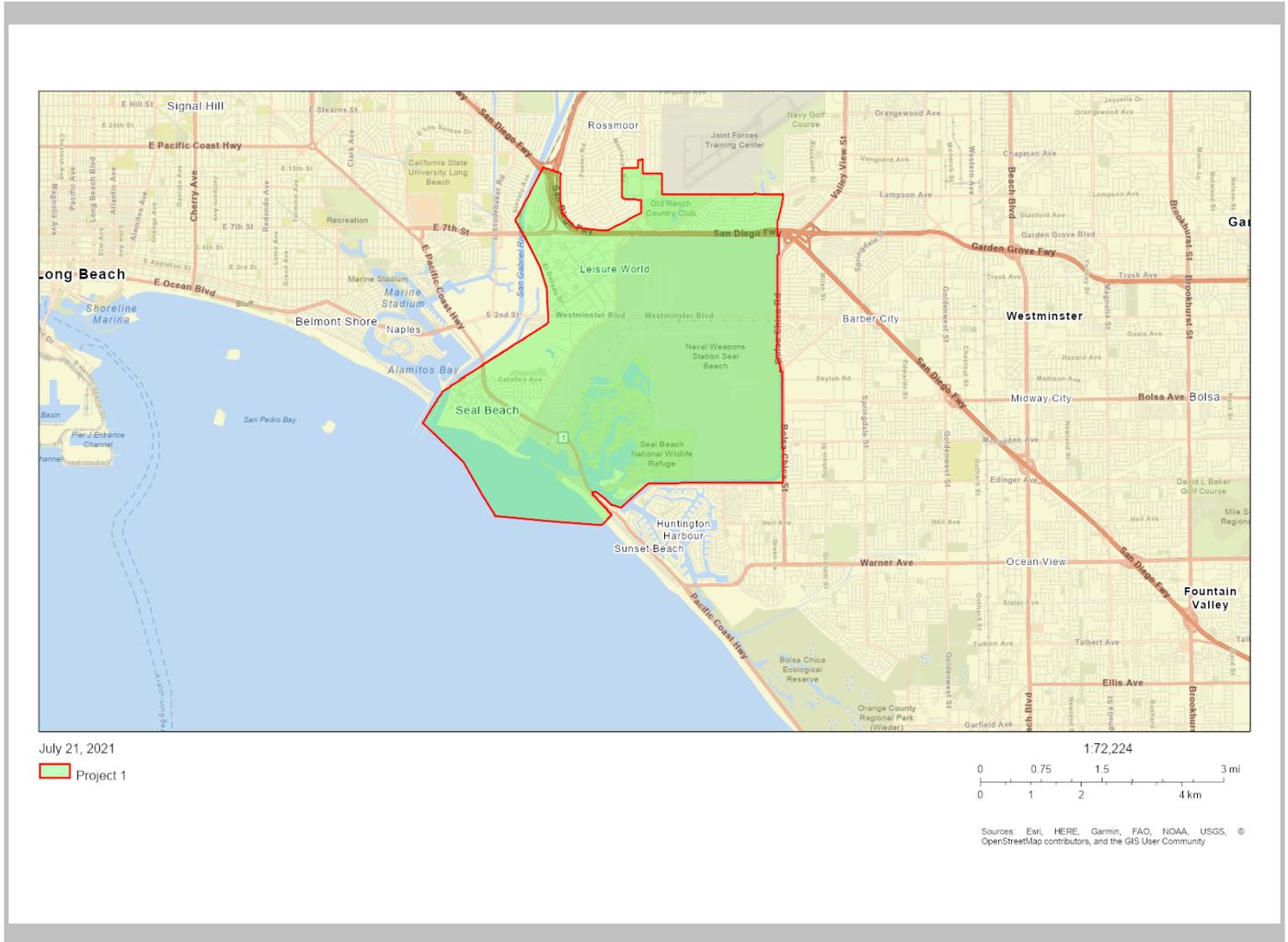


City: Seal Beach, CALIFORNIA, EPA Region 9

Approximate Population: 24,508

Input Area (sq. miles): 13.03

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



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	5



## EJSCREEN Report (Version 2020)

City: Seal Beach, CALIFORNIA, EPA Region 9

Approximate Population: 24,508

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
<b>Environmental Indicators</b>							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$ )	11.8	10.6	69	9.99	75	8.55	95
Ozone (ppb)	42.7	49.2	28	50.1	22	42.9	48
NATA* Diesel PM ( $\mu\text{g}/\text{m}^3$ )	0.999	0.467	96	0.479	95-100th	0.478	90-95th
NATA* Cancer Risk (lifetime risk per million)	38	36	61	35	50-60th	32	70-80th
NATA* Respiratory Hazard Index	0.57	0.55	56	0.53	50-60th	0.44	80-90th
Traffic Proximity and Volume (daily traffic count/distance to road)	3800	2000	85	1700	87	750	95
Lead Paint Indicator (% Pre-1960 Housing)	0.19	0.29	48	0.24	56	0.28	51
Superfund Proximity (site count/km distance)	0.058	0.17	35	0.15	41	0.13	47
RMP Proximity (facility count/km distance)	1.8	1.1	81	0.99	84	0.74	89
Hazardous Waste Proximity (facility count/km distance)	7.2	6.2	65	5.3	72	5	89
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	47	18	98	18	98	9.4	98
<b>Demographic Indicators</b>							
Demographic Index	22%	47%	12	46%	14	36%	35
People of Color Population	28%	62%	13	60%	16	39%	47
Low Income Population	16%	33%	26	33%	26	33%	26
Linguistically Isolated Population	5%	9%	44	8%	49	4%	73
Population With Less Than High School Education	5%	17%	24	16%	25	13%	30
Population Under 5 years of age	4%	6%	24	6%	25	6%	27
Population over 64 years of age	39%	14%	98	14%	97	15%	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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