



South Central Coast Louisiana



Hurricane Ike flooding in Delcambre, Louisiana.

Appendix A-2 – Environmental Justice

June 2021

Controlled by: USACE MVD
CUI Category(ies): USACE MVN
LDC or Distribution Statement: FEDCON
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Section 1

Introduction

1.1 METHODOLOGY

Environmental Justice (EJ) is institutionally significant because of Executive Order 12898 of 1994 (E.O. 12898) and the Department of Defense's Strategy on Environmental Justice of 1995, which direct Federal agencies to identify and address any disproportionately high adverse human health or environmental effects of Federal actions to minority and/or low-income populations and to those populations challenged with environmental hazards. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, Pacific Islander, some other race, or a combination of two or more races. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations as of 2017 are those whose income are no greater than \$25,094 for a family of four and are identified using the Census Bureau's statistical poverty threshold. The Census Bureau defines a "poverty area" as a census tract or block group with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level.

This resource is technically significant because the social and economic welfare of minority and low-income populations may be positively or adversely impacted by the proposed actions. This resource is publicly significant because of public concerns about the fair and equitable treatment (fair treatment and meaningful involvement) of all people with respect to environmental and human health consequences of Federal laws, regulations, policies, and actions. EJ is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies (1 <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>, accessed 10/16/2014).

The methodology, consistent with E.O. 12898, to accomplish this EJ analysis includes identifying populations that are exposed to high levels of environmental stressors and are low-income or minority populations within the project area using up-to-date economic statistics, aerial photographs, and U.S. Census Bureau 2013-2017 American Community Survey (ACS) estimates. The EPA has developed a new EJ mapping and screening tool called EJSCREEN, which is based on nationally consistent data and an approach that combines environmental and demographic indicators in the form of EJ indexes. EJSCREEN relies on the 2013-2017 ACS 5-year summary file data. This

information can help to highlight geographic areas and the extent to which they may be candidates for further review, including additional consideration, analysis, or outreach. The tools also allow users to explore locations at a detailed geographic level, across broad areas, or across the entire nation. Environmental indicators typically are direct or proxy estimates of risk, pollution levels, or potential exposure (e.g., due to nearby facilities). Demographic indicators are often used as proxies for a community's health status and potential susceptibility to pollution. Environmental and demographic data and indicators may be viewed separately or in combination.

EPA selected these environmental indicators for use in the 2017 version of EJSCREEN:

- 1) Air pollution
 - a) PM2.5 level in air.
 - b) Ozone level in air.
 - c) NATA air toxics:
 - i) Diesel particulate matter level in air.
 - ii) Air toxics cancer risk.
 - iii) Air toxics respiratory hazard index.
- 2) Traffic proximity and volume: Amount of vehicular traffic nearby, and distance from roads.
- 3) Lead paint indicator: Percentage of housing units built before 1960, as an indicator of potential exposure to lead.
- 4) Proximity to waste and hazardous chemical facilities or sites: Number of significant industrial facilities and/or hazardous waste sites nearby, and distance from those:
 - a) National Priorities List (NPL) sites.
 - b) Risk Management Plan (RMP) Facilities.
 - c) Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs).
- 5) Wastewater discharge indicator: Proximity to toxicity-weighted wastewater discharges

If an EJ area's exposure to the environmental indicators listed previously is above the 80th percentile in the state and the Federal action exacerbates any of those environmental risks, a potential disproportionate impact may occur. Specifically, a disproportionate impact occurs when a proposed project impacts a much higher percentage of minority and low-income populations than other communities located within the project area.

1.2 HISTORIC AND EXISTING CONDITIONS

The EJ study area for the South Central Coast Louisiana (SCCL) study includes Iberia, St. Martin, and St. Mary Parishes.

Each parish in the study area is majority white. Iberia Parish is the largest, with a population of about 73,300, and 39 percent are minority. The majority of the minority

population are Black/African American. St. Martin and St. Mary each have a population of approximately 53,000. About 40 percent of Iberia and St. Mary's population is Black, Native American, Asian, Native Hawaiian, Some other Race alone, or Two or More Races (minority). The ACS 2017 total population of the three-parish area is approximately 179,500. Hispanic ethnicity is between 3 and 7 percent of the population. Census information for the parishes in the study area is shown in Table A2:1-1.

Table A2:1-1. Census Information

Parish	Total Population	White	Black	Native American	Asian	Native Hawaiian	Some Other Race ¹	Percent Minority
Iberia	73,346	45,077	23,101	78	2,035	-	3,055	39%
St. Martin	53,609	35,372	15,768	328	537	0	1,604	34%
St. Mary	52,578	31,960	16,362	562	730	7	2,957	39%
Hispanic Population	Total Population	Hispanic	% Hispanic					
Iberia	73,346	2,961	4%					
St. Martin	53,609	1,504	3%					
St. Mary	52,578	3,598	7%					

¹ includes some other race alone and two or more races

While the parishes in the study area, taken as a whole, are majority white, there are minority communities throughout the study area. A review of 21 communities in the study area shows that 6 have at least 50 percent or more of the population identifying as non-white. Baldwin, Charenton, Franklin, Glencoe, Jeanerette, and St. Martinville each have a minority population as the majority, while all 21 communities have less than 50 percent Hispanic population. While 6 of the 21 communities have predominant minority populations, 16 of the 21 communities have at least 20 percent or more of their population with incomes below poverty. A total of 17 communities are identified as either having 50 percent or more of the population identifying as a minority or 20 percent or more of the population below the poverty threshold (Figure A2:1-1).

PLACE	Tot Population*	Population having Income Below Poverty	Percent of Population Below Poverty
Amelia CDP	1,976	686	35%
Arnaudville town	1,337	317	24%
Baldwin town	2,283	601	26%
Bayou Vista CDP	5,133	1,245	24%
Breaux Bridge city	8,135	1,774	22%
Cade CDP	1,703	261	15%
Cecilia CDP	1,674	256	15%
Charenton CDP	1,605	180	11%
Delcambre town	2,270	525	23%
Franklin city	7,121	2,059	29%
Glencoe CDP	313	79	25%
Henderson town	2,081	465	22%
Jeanerette city	5,437	1,643	30%
Loreauville village	751	203	27%
Lydia CDP	652	95	15%
Morgan City city	11,719	2,428	21%
New Iberia city	30,233	7,255	24%
Parks village	826	98	12%
Patterson city	5,922	1,213	20%
St. Martinville city	5,970	1,943	33%
Sorrel CDP	474	93	20%
*For Whom Poverty Status is Known			
Source: U.S. Census Bureau ACS 2013-2017			

Figure A2:1-1. Communities within Study Area

1.3 ENVIRONMENTAL CONSEQUENCES

A disproportionately high and adverse effect means the impact is appreciably more severe or greater in magnitude on minority or low-income populations than the adverse effect suffered by the non-minority or non-low-income populations after taking benefits into account. This appendix provides information on existing and future without-and with-project conditions for geographic areas in the study area.

An EJ analysis that focused on the potential for disproportionately high and adverse impacts to minority and low-income populations during the construction and normal operation of the proposed risk-reduction system was conducted. While the assessment identified the occurrence of environmental stressors and minority and low-income populations within the project area, both inside and outside of the proposed system, no disproportionately high and adverse effects to environmental or human resources are evident with any of the alternatives.

1.4 ALTERNATIVE 1: 25-YEAR FLOODPLAIN NONSTRUCTURAL MEASURE

1.4.1 Direct Impacts

The voluntary nonstructural plan for SCCL may directly impact EJ communities, but these impacts are not anticipated to be disproportionately high and adverse. All structures located within the 25-year storm surge floodplain are in eligible to be

voluntarily flood-proofed or elevated; therefore, all residents within the reaches, irrespective of race, ethnicity, or income, would be able to choose to participate in the plan. These nonstructural measures may provide minority and low-income populations with hurricane and storm damage and risk reduction equivalent to structural measures, which are not economically justifiable due to the sparse populations scattered over a large area. Despite existing base floor elevations differing among individual structures, structure-raising would provide the same level of risk reduction benefits per structure at year 2075 (end of the period of analysis).

The RP consists of elevating eligible residential structures in the 0.04 AEP (25-year) floodplain. Appendix K outlines eligibility criteria. Homeowners would be responsible for costs associated with repairs to meet structural stability requirements prior to elevation. Additionally, while the eligible structure is being elevated, residents of that structure are required to leave the structure. Relocation may be to temporary quarters or remain on site. Remaining on site is dependent on lot size and local ordinances and will be determined on an individual structure basis.

Minority and low-income tenants living in rental properties maybe eligible for Uniform Relocation Act benefits if the property owner chooses to participate in the flood-proofing, under those circumstances they would not be responsible for temporary relocation costs. How the implementation of the NS plan might impact low-income and minority communities is not yet known at this point in the planning process.

Uncertainty remains in regards to the number of structures not meeting structural criteria, owners who can't afford repairs and/or who can't afford to relocate during elevation and correlation to low-income and minority communities. The uncertainty may result in residents remaining at grade and continued exposure to high flood damages and risk. All other eligible costs of elevating structures, including the cost to elevate the structure, would not be borne by any single individual or the community; rather, these costs would be part of the proposed project costs.

The voluntary nonstructural plan for SCCL may directly impact EJ communities, but these impacts would not be disproportionately high and adverse. Due to the uncertainty associated with implementation of a nonstructural plan and potential unintended consequences of eligibility criteria. During PED, USACE will coordinate with local floodplain managers and hold public meetings with the purpose of communicating eligibility requirements. Monitoring of barriers to eligibility and participation during PED based on social and economic indicators and in context of the estimated participation rate analysis will occur. If adverse disproportionate impacts are identified a mitigation plan will be developed through public outreach of EJ communities in accordance with policy and legal requirements.

1.4.2 Indirect Impacts:

Indirect impacts would include a decrease in risk of damage from a 1 percent, 2 percent, and 4 percent annual exceedance storm event for minority and/or low-income populations in the study area. Population groups residing or working near elevation sites

may experience indirect impacts due to the added traffic congestion and construction noise and dust. Trucks would transport equipment needed to elevate structures, which may increase traffic congestion in the area during construction activities. The environmental indicator (see Table A2:1-2), “Traffic Proximity and Volume,” shows the area to be at the 28th percentile in the State of Louisiana, which does not indicate an existing environmental risk or existing traffic congestion problem. Any additional traffic congestion caused by construction activities should not result in elevating the percentile to above the 80th percentile, which is representative of very poor traffic conditions. Truck traffic and noise along roads, highways and streets during project construction would cease following completion of construction activities. There may also be a degradation of the transportation infrastructure, primarily local roads and highways, as a result of the wear and tear from transporting construction materials. Best management practices will be utilized to avoid, reduce, and contain temporary impacts to human health and safety.

Homeowners choosing to have their home elevated would be required to relocate to other housing until their home is ready for occupancy. The indirect impact of having to find alternative housing would be temporary, but nonetheless, a disruption to their current living arrangement.

1.4.3 Cumulative Impacts

Positive cumulative impacts to minority and/or low-income populations associated with providing risk reduction would be expected to occur as a result of the lower flood risk in the area under this alternative. If this alternative encourages regional economic growth, any additional jobs created may benefit minority and/or low-income groups living within the project area.

1.5 ALTERNATIVE: 50-YEAR FLOODPLAIN NONSTRUCTURAL MEASURE

1.5.1 Direct, Indirect, and Cumulative Impacts

Impacts to EJ resources from implementation of the 50-year floodplain nonstructural alternative would be similar to those described for the 25-year floodplain, but to a greater extent because more structures that would be vulnerable to flood risk could be elevated or flood-proofed.

1.6 ALTERNATIVE 2: FUTURE WITHOUT-PROJECT CONDITION

1.6.1 Direct, Indirect, and Cumulative Impacts

The No Action Alternative would not provide hurricane and storm damage risk reduction, or reduce flooding induced by storm surge, or provide ecosystem restoration that improves ecosystem sustainability. Direct impacts to EJ communities, including flood risk, would continue. Indirect impacts under the No Action Alternative include a higher potential for temporary displacement of minority and/or low-income populations because residents within the project area would remain vulnerable to flooding and may be forced to relocate. Storm surge increase due to subsidence and sea level rise will exacerbate their vulnerability to flooding. Low-income populations may also find it more

difficult to bear the cost of evacuation. This alternative would not contribute to any additional EJ issues when combined with other Federal, state, local, and private risk reduction efforts.

1.7 MITIGATION FOR HIGH ADVERSE DISPROPORTIONATE IMPACTS

Regulations require that mitigation measures be developed to address environmental effects, including cumulative impacts, threatened by proposed actions (40 CFR 1502.14(f) and 1502.16(h)). In addition, mitigation measures should be developed specifically to address potential disproportionately high and adverse effects to minority and/or low-income communities. High and adverse disproportionate direct or cumulative impacts to EJ communities of the with-project alternative are not identified and therefore, mitigation is not required.

Table A3:1-2 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 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.

Table A3:1-2. EJ SCREEN Report

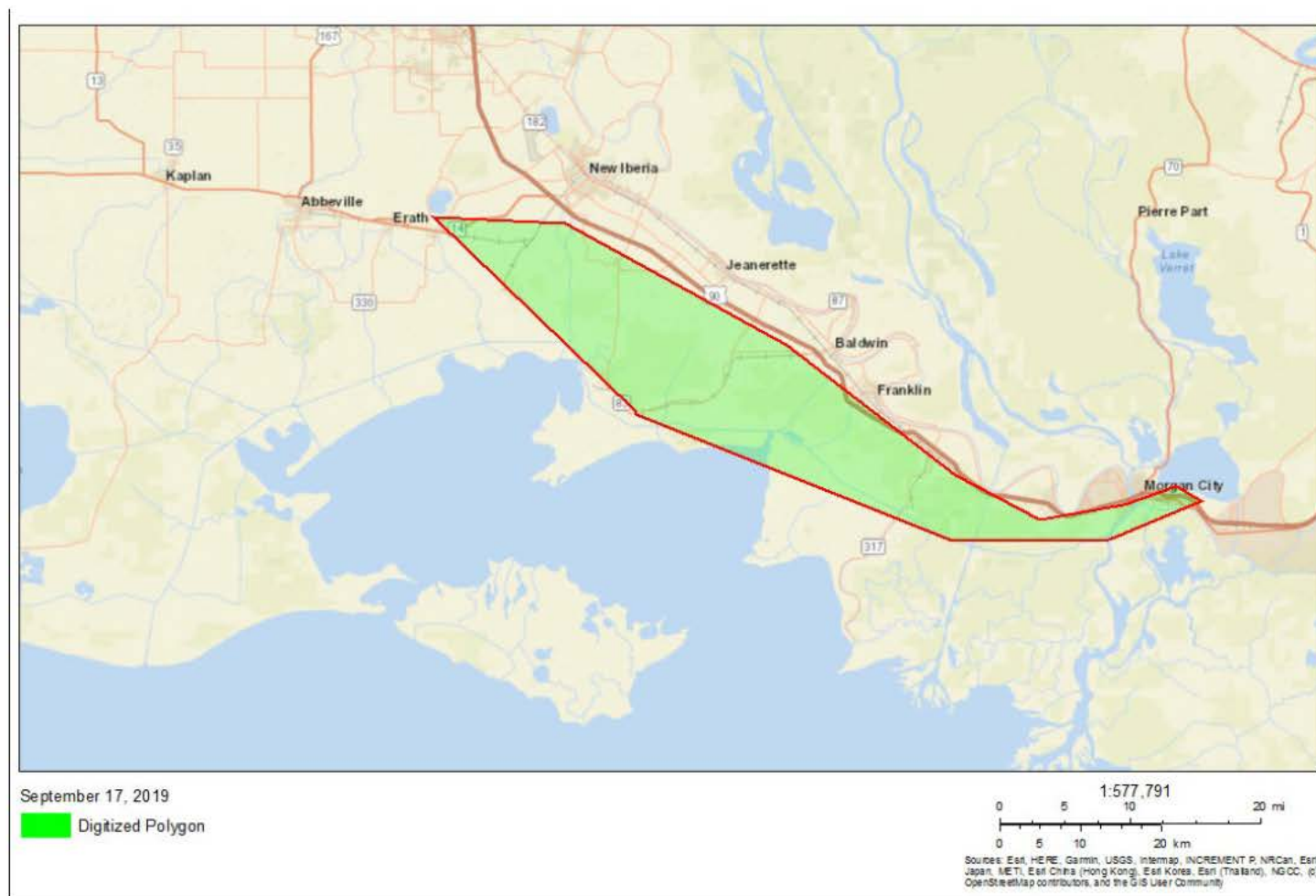


EJSCREEN Report (Version 2018)



25-Year Floodplain
LOUISIANA, EPA Region 6
Approximate Population: 12,280
Input Area (sq. miles): 276.34

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	53	45	60
EJ Index for Ozone	53	45	60
EJ Index for NATA* Diesel PM	67	58	69
EJ Index for NATA* Air Toxics Cancer Risk	53	45	60
EJ Index for NATA* Respiratory Hazard Index	54	46	61
EJ Index for Traffic Proximity and Volume	28	26	40
EJ Index for Lead Paint Indicator	71	71	75
EJ Index for Superfund Proximity	55	47	61
EJ Index for RMP Proximity	61	52	65
EJ Index for Hazardous Waste Proximity	68	61	69
EJ Index for Wastewater Discharge Indicator	85	81	87



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

Selected Variables	Value	State Avg.	Percentile in State	EPA Region Average	Percentile in EPA Region	USA Avg.	Percentile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	8.59	9.03	16	9.55	16	9.53	30
Ozone (ppb)	36.4	37.4	33	40.4	24	42.5	14
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	0.911	0.891	63	0.721	70-80th	0.938	60-70th
NATA* Air Toxics Cancer Risk (risk per MM)	38	49	11	42	<50th	40	<50th
NATA* Respiratory Hazard Index	2	1.9	55	1.8	60-70th	1.8	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	150	250	68	320	60	600	57
Lead Paint Indicator (% pre-1960s housing)	0.24	0.21	70	0.18	75	0.29	56
Superfund Proximity (site count/km distance)	0.012	0.067	19	0.07	18	0.12	11
RMP Proximity (facility count/km distance)	0.3	0.88	49	0.8	46	0.72	50
Hazardous Waste Proximity (facility count/km distance)	0.9	0.74	73	0.86	72	4.3	62
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.0037	0.49	76	0.38	78	30	75
Demographic Indicators							
Demographic Index	40%	40%	56	44%	48	36%	63
Minority Population	37%	41%	54	51%	40	38%	57
Linguistically Isolated Population	4%	2%	85	6%	60	4%	69
Population with Less Than High School Education	24%	16%	77	17%	74	13%	83
Population under Age 5	8%	7%	62	7%	58	6%	67
Population over Age 64	12%	14%	42	13%	52	14%	42

*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

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.