Mississippi Valley Division,
Regional Planning and Environment Division South

Upper Barataria Basin, Louisiana Feasibility Study

Appendix C: Annex 1 – Environmental Justice

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Section 1
Introduction

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 directs 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. 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 2019 are those whose income is at or below $24,600 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.

An EJ analysis focuses on the potential for disproportionately high and adverse impacts to minority and low-income populations during the construction and normal operation of the Federal action. A detailed assessment identifies specific EJ communities near structural alternatives and will assess if EJ communities are disproportionately exposed to high and adverse effects of the Federal action. If 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 offsetting benefits into account, then there may be a disproportionate finding.

If a disproportionate impact is found, mitigation measures should be developed specifically to address potential disproportionately high and adverse effects to minority and/or low-income communities. When identifying and developing potential mitigation measures to address environmental justice concerns, members of the affected communities would be consulted. Enhanced public participation efforts would also be conducted to ensure that effective mitigation measures are identified and that the effects of any potential mitigation measures are fully analyzed and compared. Mitigation measures may include a variety of approaches for addressing potential effects and balancing the needs and concerns of the affected community with the requirements of the action or activity.

For a description of the EJ Existing Conditions, refer to Chapter 3, Section 3.1.5.3.7.

1.1 ENVIRONMENTAL CONSEQUENCES

1.1.1 Recommended Plan (RP) – Hwy 90 - Segment 1 Levee Extension

The Recommended Plan is a structural alignment constructed to a 1 percent AEP (100-year future design) that would take place in reaches A through H, which are located east of the towns of Luling, Boutte, Paradis, and Des Allemands and west of the Bayou Gauche community. The RP is 30.4 miles long and involves construction of new levees and floodwalls, levee lifts along the existing St. Charles Parish and Sunset Drainage District levees, and construction of a 270-foot-wide barge gate to preclude storm surge flooding within the protected area. Levees in this alignment would be constructed to an elevation of 14.5 to 16 feet and would be up to 190 feet wide in the marshes southwest of Bayou Des Allemands and 260 feet wide along the existing St. Charles levee. A 40-foot-wide right-of-way would be established on both sides of the levee footprint in marsh.

Positive impacts to EJ communities include a decrease in flood risk to minority or low-income populations in the project area. The RP would reduce the adverse impacts to EJ communities experienced under the no-action condition - flood damages, loss of life, reduced economic activity, and potential out-migration. These positive impacts would be long-term and would be likely to sustain the socioeconomic vitality of the project area, thus positively impacting EJ communities.

There would be no high, adverse disproportionate impacts to EJ communities near the proposed levee alignment from the construction of the Federal action. Impacts to those communities further from the proposed levee alignment would be expected to be positive, resulting in reduced flood risk. Although EJ communities are spread throughout the project area, as shown in the EJ Affected Environmental Section of the integrated feasibility report and environmental impact statement, there are no EJ communities along the The RP alignment that could be directly impacted by the Federal action. Eight reaches, A-H, comprise the RP levee alignment. The levee lengths vary from Reach E at 14,600 linear feet (LF) to the largest segment Reach G at 31,000 LF. The following is a description of the potential impacts to communities along the proposed RP levee alignment.

The northern part of the proposed levee alignment, reaches A, B and C, involves increasing the height of the existing St. Charles Parish Levee which crosses through marshland. A canal separates the existing levee and several communities. There would be no direct impacts to housing along these reaches of levee improvement.

Communities that may experience construction-related noise impacts are located across the canal and are vastly white and not low-income, with census block groups ranging from 80 percent of residents identifying as white and 3 percent having household incomes below the poverty level. Indirect impacts may be felt by residents in these communities, which may include construction related noise and potential increase in truck traffic using access routes (streets) to deliver material to the construction sites along the levee reaches. The types of indirect impacts that may be relevant to this Federal action are discussed below as are mitigation measures. Positive impacts are expected that result from the improved levee decreasing the flood risk to these households.

A new earthen levee and floodwalls are proposed for the southern part of the alignment, in reaches D, E, F, G and H. The reach D levee alignment passes through undeveloped marsh land, before passing near a community along Grand Bayou Road. A floodwall is proposed to be constructed adjacent to this community, which is 100 percent white with 2.7 percent of households living below poverty. Reach E consists of a floodwall that would be constructed adjacent to the Bayou Gauche community, which is also located in the same census block group as the community in Reach D, vastly majority white and not low-income. Table C1:1-1 shows the demographic composition of communities in Reaches D and E. Reaches F, G and H consist of a building a new earthen levee, which passes through undeveloped land.

The proposed levee system does not bifurcate any neighborhoods as shown in the proposed RP alignment map, Figure 4-1 in the main report. The 1 percent AEP design levee has the potential to induce flooding in the communities of Bayou Gauche, Gheens,and Mathews, which are located outside of the system on the east side of the levee. Eminent domain may become mandatory for all residents in areas with induced flooding and would include relocation assistance as per the Uniform Relocation Act. During PED, further assessments will be completed to determine the extent of induced flooding and the need for buyouts. However, mitigation measures would be identified once a better determination regarding induced flooding can be made at PED.

Population groups residing or working near construction activities may experience indirect impacts due to the added traffic congestion and construction noise and dust. The environmental indicator, “Traffic Proximity and Volume,” shows the area to be at the 9th percentile in the State of Louisiana, which does not indicate an existing environmental risk. Truck traffic and noise along access roads, at borrow sites, and 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. Housing located along the proposed floodwalls would also experience temporary noise from construction related impacts. Indirect impacts related to levee improvement construction activities are expected to be short-term and minor.

A community located just east of the proposed RP alignment, along Bayou Gauche, is outside of the proposed flood risk reduction system and would remain vulnerable to flooding. This small community, mostly camps, is reliant on Bayou Gauche for access to fishing and hunting grounds. However, this community is not low-income nor majority minority and would not be disproportionately impacted.

Borrow sites are proposed in rural areas and excavation of material would not directly impact the human environment. Borrow material to be used for levee construction is proposed to come from sites estimated to be within 15 miles of where US Highway 90 crosses Bayou Des Allemands. At this time, it is not known if existing Government borrow sites would be available at time needed for construction that would be located within the designated distance. Potential borrow sites on farmlands (avoiding swamp and marsh lands) were identified near Raceland and can be seen in the Real Estate Appendix, Figure D:3-11. Not all lands from the potential borrow sites are intended to be used.

Staging and access routes are in Reaches A, B and C. For Reaches A and B, the access route to the levee that would be improved would be expected to be via Willowdale Drive, which passes through a subdivision; residents are 82 percent white and 1.6 percent of households live below poverty. A staging area on an undeveloped piece of land is also located on the edge of this subdivision. For Reach C, the access road to the levee would be via Magnolia Ridge Road, which passes through a subdivision with 34 percent of households living below poverty. Best management practices would be utilized to avoid, reduce, and contain temporary impacts to human health and safety.

Short-term noise impacts would be avoided, minimized, or mitigated by use of these best management practices:

1. Placement of temporary noise barriers adjacent to construction activities.
2. Inclusion of the following noise and vibration monitoring language in the contract specifications for specific Work Items: monitoring of noise levels to verify adherence to contract specifications; limiting pile driving activities associated with pile founded T-walls to daylight hours; and vibration monitoring equipment measure surface velocity waves caused by equipment and monitor vibration up to a threshold value established and approved in writing by USACE. Such measurements would only be taken near residences and occupied buildings that could be adversely affected by excessive ground vibrations.
3. Construction equipment noise would be minimized during construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications), and by shrouding or shielding impact tools.
4. All equipment, haul trucks, and worker vehicles would be turned off when not in use for more than 30 minutes.
5. Equipment warm up areas, water tanks, equipment storage areas, and staging areas would be located as far from existing residences as is feasible.

Several impact avoidance features are included as integral components of the proposed action to minimize impacts to vehicular transportation. Specific routes would be designated for construction-related traffic to minimize residential disturbance and traffic congestion. USACE contracts would designate specific routes for construction-related traffic to avoid residential areas, to the maximum extent practicable, and staging areas for construction equipment and personnel would be located away from heavily populated areas. Streets that would serve construction-related traffic would be resurfaced, if needed and as appropriate, prior to initiation of construction activities, and maintenance of those streets would be provided during the construction period. Appropriate detour signage would be placed in order to preserve access to local streets during construction activities. Off-street parking would be provided for construction workers, and shuttle vans would be used to transport construction workers to the work sites, if necessary. Streets that are damaged by construction activities would be repaired.

1.1.2 Alternative 2 – Full Alignment

Alternative 2 takes place in Reaches A through H, measures 30.4 miles long, and incorporates all of the Alternative 1 structure measures; however, this alternative would be constructed to an elevation of 8.5 feet with a maximum levee base footprint of 200 feet.

EJ impacts from construction of Alternative 2 would include those impacts identified for Alternative 1. There would be no additional direct impacts to EJ communities from construction of Alternative 2. Housing near the northern part of the alignment, but across from Paradis canal would only feel temporary, indirect impacts during construction activities. Indirect impacts would include those discussed for Alternative 1, but to a lesser extent because the alignment includes a lower levee height and therefore less construction activities that may temporarily, indirectly impact housing in the vicinity.

1.1.3 The Potential for Induced Flooding

The 1 percent AEP design levee has the potential to induce flooding in the communities of Bayou Gauche, Gheens, and Mathews, which are located outside of the system on the east side of the levee. Eminent domain may be required, which would require relocation/buy outs to become mandatory for all residents in areas with induced flooding. Residents are not in favor of mandatory buy outs. To reduce the residual risk to the RP, PED phase structure acquisition (buyouts) was selected until more information can be collected in the impacted areas. The induced flooding is greatest within the community of Bayou Gauche, which is directly adjacent to the levee. This area is estimated to receive 1 to 1.5 feet of induced flooding under existing conditions and 2 to 4 feet under future conditions. In order to mitigate for the induced flooding, 64 residential structures in Bayou Gauche may be acquired. Due to the presence of existing or proposed flood risk reduction measures in Gheens and Mathews, the extent of induced flooding in those communities is more uncertain and would be investigated further in the PED phase of the study. Currently, it is estimated that 173 residential structures could be acquired in Gheens. In Mathews, it is estimated that 33 residential structures and 5 commercial structures could be acquired.

Two of the three of the areas where induced flooding is possible, including Gheens and Bayou Gauche (and half of Mathews) have very minimal minority population and low-income households as shown in Table C1:1-2. However, mitigation measures would be included in the final plan once a better determination regarding induced flooding can be made at PED.

Table C1:1-1. Demographic Indicators

Selected Variables	Value	State Average	Percentile in State	EPA Region Average	Percentile in EPA Region	USA Average	Percentile in USA
Demographic Indicators: Reach D*							
Demographic Index	8%	40%	1	44%	1	36%	4
Minority Population	0%	41%	1	51%	0	38%	1
Low Income Population	15%	40%	10	38%	16	34%	22
Linguistically Isolated Population	0%	2%	63	6%	35	4%	44
Population with Less Than High School Education	13%	16%	44	17%	49	13%	61
Population under Age 5	5%	7%	38	7%	32	6%	41
Population over Age 64	18%	14%	78	13%	80	14%	73
Demographic Indicators: Reach E**							
Demographic Index	8%	40%	1	44%	1	36%	4
Minority Population	0%	41%	1	51%	0	38%	1
Low Income Population	15%	40%	10	38%	16	34%	22
Linguistically Isolated Population	0%	2%	63	6%	35	4%	44
Population with Less Than High School Education	13%	16%	44	17%	49	13%	61
Population under Age 5	5%	7%	38	7%	32	6%	41
Population over Age 64	18%	14%	78	13%	80	14%	73

*Reach D begins just south of the Paradise Control Structure and this segment of the levee measures approximately 19,000 feet in length. This reach would be constructed atop the existing Sunset Levee.

**Reach E begins just south of Grand Bayou Road and is a combination of earthen levee and floodwalls which total approximately 14,600 feet. The earthen levee portion measures approximately 3,340 feet in length while the floodwall section measures approximately 11,230 feet in length.

Source: EPA EJSCREEN and the U.S. Census Bureau.

Table C1:1-2. Areas with the Potential for Induced Flooding, Minority and Low-Income Households

LOCATION AND CENSUS TRACT/ BLOCK GROUP	MINORITY PERCENTAGE	PERCENT OF HOUSEHOLDS LIVING BELOW POVERTY LEVEL
MATHEWS **220570210/001**	33.8%	19.0%
220570210/003	0.0%	14.2%
GHEENS **220570210/002**	2.9%	7.8%
BAYOU GAUCHE **220890632/001**	0.0%	2.7%

Census Block Groups shown are locations where induced flooding is possible.

Source: EPA EJSCREEN, U.S. Census 2014-2018 ACS.