

3.11 ENVIRONMENTAL JUSTICE

Environmental justice 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 (EPA 1999). Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, tasks “each Federal agency [to] make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Federal agencies must provide minority and low-income communities with access to information on matters relating to human health or the environment and opportunities for input in the NEPA process, including input on potential effects and mitigation measures. The environmental justice analysis is described in this section. Demographic information supporting the analysis is presented in appendix J.

3.11.1 Methodology

CEQ oversees the Federal government’s compliance with Executive Order 12898 and the NEPA process. CEQ has prepared guidance to assist Federal agencies with their NEPA procedures to ensure that agencies identify and consider environmental justice concerns (CEQ 1997). Based on CEQ and DOE guidance (DOE 2004f), this EIS uses a three-step methodology to evaluate potential environmental justice impacts:

- Step 1: Identify the potential environmental justice populations that are located in the project area or could otherwise be affected by the proposed action. Environmental justice populations are minority groups and low-income populations.
 - CEQ defines the following groups as minorities: Black/African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and Hispanic populations (regardless of race). According to CEQ, a minority population exists where either: (a) the minority population of the affected area exceeds 50 percent; or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In addition to the 50 percent threshold, DOE used both the United States and the state in which a city, town, or country/parish is located as the “general population.” In other words, a population is minority if its percentage is either greater than 50 percent or greater than the percentage in the United States or its state.
 - CEQ defines low-income by using the annual statistical poverty thresholds from the U.S. Census Bureau. A low-income community exists when the low-income population percentage in the area of interest is “meaningfully greater” than the low-income population in the general population. For purposes of the analysis of low-income communities, DOE used both the United States and the state in which a city, town, or county/parish is located as the “general population.” In other words, a population is low-income if its percentage of low-income residents is greater than the percentage in the United States, its state, or both. In addition, DOE used the population below the poverty level to define low-income population.
- Step 2: Identify the potential human health and environmental effects of the proposed alternatives.
- Step 3: Assess whether there are any potential significant adverse effects to minority and low-income populations that would be disproportionately high and adverse, that is, would appreciably exceed impacts to the general population or other appropriate comparison group. This assessment also considers whether minority and low-income populations would be affected by an alternative in

different ways than the general population, such as through unique exposure pathways or rates of exposure, special sensitivities, or different uses of natural resources.

For step 1, DOE identified potential environmental justice populations for each proposed new and expansion site (see appendix J for more details). For each proposed site, DOE collected demographic data for the areas where the proposed storage site support facilities, RWI, pipelines, and oil distribution facilities would be located. DOE identified all counties or parishes in which the proposed project was located, and cities and towns of a population greater than 1,000 close to the proposed project. Towns with a population of less than 1,000 people were not included because of the large number of very small towns in rural areas near the project sites. The county or parish data cover these small towns. For the storage sites, DOE identified cities and towns within 5 miles (8 kilometers) of the site. For pipelines and other infrastructure, DOE identified cities and towns within 2 miles (3.2 kilometers) of the proposed infrastructure. DOE used a shorter distance for the pipelines and other infrastructure than for the storage sites because the potential impacts of the infrastructure generally would be smaller and more localized than for the storage sites. DOE supplemented these data with U.S. Census block information in a few instances where there are no nearby cities and towns of a population greater than 1,000. Finally, DOE compared demographic data on minority and low-income populations in these areas to similar state and national data to identify potential environmental justice communities.

The demographic data used in this analysis predate Hurricanes Katrina and Rita, which may have had systematic demographic effects on many of the potentially affected areas. DOE could not avoid this limitation because detailed post-hurricane data were not yet available. This limitation does not affect the conclusions of the environmental justice analysis because DOE finds no potential high and adverse impacts (see section 3.11.3).

3.11.2 Affected Environment

Table 3.11-1 identifies the minority and low-income populations associated with each proposed site and its associated infrastructure. A check mark in the table indicates that one or more jurisdictions or Census tracts in the potentially affected area for the proposed site may have an environmental justice community. Detailed information on the populations in each relevant jurisdiction for each proposed site is presented in appendix J.

As shown in table 3.11-1, each proposed site has at least two potential environmental justice communities. For example, low-income communities and Black or African American communities, as defined by CEQ, are located in the potentially affected areas for each site.

3.11.3 Impacts

Sections 3.2 through 3.10 describe the potential health and environmental impacts to resource areas. Based on that analysis and further consideration of whether minority and low-income populations would have different ways than the general population of being affected by an alternative (e.g., unique exposure pathways or rates of exposure, special sensitivities, or different uses of natural resources), the discussion below indicates that no environmental justice population would incur disproportionately high and adverse impacts in any resource category.

Table 3.11-1: Potential Environmental Justice Populations

Proposed Site	Potentially Affected States	Overall Minority	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Hispanic or Latino Origin	Low Income
Bruinsburg	Louisiana & Mississippi	✓	✓		✓			✓
Chacahoula	Louisiana	✓	✓	✓				✓
Richton	Mississippi	✓	✓	✓	✓	✓	✓	✓
Stratton Ridge	Texas	✓	✓	✓			✓	✓
Bayou Choctaw	Louisiana	✓	✓					✓
Big Hill	Texas	✓	✓	✓	✓		✓	✓
West Hackberry	Louisiana		✓					✓

Environmental Risks and Occupational Health and Safety: Based on SPR projections presented in section 3.2, the probability of a spill of brine, crude oil, or hazardous materials would be low. While some spills are likely to occur, they generally would be small, contained, and quickly cleaned up without causing significant or long-term impacts. Based on historical data, any fires would result in minor injuries and no environmental impacts or long-term impacts to SPR site operations. The risks to occupational safety would be small, generally lower than for comparable types of facilities. Overall the impacts would be small and minority and low-income populations would likely be affected in the same way as the general population.

- **Land use conflicts:** The proposed sites and their infrastructure generally would not conflict with existing land uses, largely because the storage facilities and associated infrastructure would be located primarily in undeveloped, rural areas away from existing land uses. While pipelines would cross land used for agricultural and recreational purposes, the impacts would be temporary because the pipelines would be buried and, following construction, prior uses of the land could continue. Where project infrastructure would be in developed areas, conflicts would not occur because the pipelines would be underground and other new infrastructure would not conflict with existing land uses. Potential land use conflicts, however, would arise where proposed pipelines:
 - For the Bruinsburg alternative would cross the Natchez Trace National Scenic Trail, the Natchez Trace Parkway, and the proclamation area for the Homochitto National Forest;
 - For the Richton alternative would cross the Percy Quinn State Park; and
 - For the Stratton Ridge alternative would cross the Brazoria Wildlife Refuge.

In these instances, the impacts to minority and low-income communities would not appreciably exceed the impacts to the general population and would not be affected in different ways than the general population.

- **Visual resource impacts:** Throughout the region of influence for the proposed SPR development, storage facilities, pipelines, power lines, and industrial facilities are common. Many viewers of the proposed project would be familiar with the purpose and use of SPR facilities, pipelines, and power lines and tolerant of the visual changes. Viewers would be more sensitive to visual contrasts on lands with special designations that pipelines would cross, as noted above, which may be visited more often and serve a greater aesthetic or uniquely scenic purpose. In those situations, the visual impacts would not be significant, because, the amount of land area involved is small, pipelines would be underground, and the ROWs would be managed to minimize visual contrast with adjacent vegetation.

In addition, minority and low-income communities would not be affected in different ways than the general population by visual resource impacts.

- **Farmlands:** The construction of some proposed SPR facilities would make prime farmland unavailable for agricultural purposes. Based on DOE's consultation with the United States Department of Agriculture's (USDA's) NRCS, the conversion of farmlands to non-agricultural uses would not be significant, based on the amount, condition, and location of the land to be converted. Also, minority and low-income communities would not be affected in different ways than the general population by the conversion of farmland to other uses.
- **Coastal zone:** DOE will coordinate its required Coastal Determination processes with both the applicable state agencies and with the USACE, which will have a CWA Section 404 permitting responsibilities. The applicable state agencies in Texas, Louisiana, and Mississippi often use joint review processes with the U.S. Corps of Engineers on permit applications affected lands within the designated coastal zone. DOE has determined that any potential impacts to human health and the environment in coastal zone areas would not be significant to environmental justice communities. The only significant potential impacts may be to wetlands in coastal zones, which are discussed below under biological resources. Also, minority and low-income communities would not be affected in different ways than the general population by coastal zone impacts.

Geology and Soils: The potential subsidence at new SPR caverns would be only a few feet on the salt domes and any resulting environmental impacts would be small. The development of SPR caverns also would not affect other uses of the salt dome. Overall, geological and soil impacts would be small and minority and low-income communities would not be affected in different ways than the general population.

Air Quality: As discussed in section 3.5, the proposed action would not cause any significant air quality impacts. At all of the candidate sites, modeling indicates that airborne emissions from construction activities, even under a set of conservative assumptions, would not result in a local exceedance of the NAAQS for PM, NO_x, CO, and ozone. Modeling and historical operating data from existing SPR sites also show that emissions from the proposed operation and maintenance activities would not result in a level of air pollution that exceeds the NAAQS. EPA has established the NAAQS taking into account evidence of potential risks to sensitive populations, such as children, the elderly, and individuals with respiratory and cardiovascular disease. EPA also periodically reviews and revises the NAAQS based on the best available evidence related to potential health effects, including health effects in sensitive, minority, and disadvantaged groups. Therefore, compliance with the NAAQS provides a high degree of assurance that public health—including among minority and low-income populations—would be protected. Thus, minority and low-income communities would not be affected in different ways than the general population.

Water Resources: The proposed project would increase salinity from brine disposal in the Gulf Coast, temporarily increase turbidity and suspended nutrients and organic matter during construction, and would decrease water flows during the operation of the RWI facility. None of these and other potential water resource impacts, however, would be significant. Neither surface water nor groundwater would be contaminated with pollutants that would create special pathways of concern or harm human health. The availability of groundwater and surface water resources also would not be significantly affected. Also, minority and low-income communities would not be affected in different ways than the general population by water resource impacts.

Biological Resources: The proposed action would have significant impacts on wetlands, endangered species, and, for the Richton site, fish populations due to the withdrawal of water from the Leaf River.

Minority and low-income communities would not incur appreciably higher impacts than the general public and they would not be affected in different ways than the general population.

- No biological resources would be contaminated with pollutants that would create risks to human health (excluding spills, which are discussed above). Thus, unique exposure pathways or rates of exposure to pollutants would not be a concern.
- Little if any subsistence fishing, hunting, or gathering of plants occurs at the proposed storage sites or nearby. In addition, the proposed sites either have limited access or are surrounded by similar habitat that might be available for subsistence activities.
- While subsistence activities may occur along the associated infrastructure, such as pipeline or power line ROWs, the impacts of the infrastructure would be small. The ROWs are narrow; similar activities could be pursued nearby; and most construction impacts are short term.
- While the withdrawal of water from the Leaf River might reduce the fish populations, no substantial subsistence fishing occurs in that river (Beiser 2006).

Socioeconomics: The project would have positive effects on local employment, wages, expenditures, and tax revenue. Any effects from in-migration, the associated increased demand on housing and public services, and increased traffic would be minor. Also, minority and low-income communities would not be affected in different ways than the general population.

Cultural Resources: DOE will not complete the identification of cultural resources until after DOE selects a proposed alternative. Only then would DOE proceed with field survey and additional information gathering for all facility locations and pipeline routes associated with each site, according to the terms of the relevant programmatic agreements. Consequently, DOE will not complete the assessment of potential effects and the identification of ways to resolve any adverse effects until after site selection. Thus, DOE lacks information on the potential cultural impacts to minority and low-income populations. But if any impacts would occur, DOE would consider mitigation measures.

Noise: Construction activities would cause, at most, only minor, short-term noise impacts because the proposed facilities are generally located in rural areas with few nearby residences and other sensitive receptors. SPR operations and maintenance noise impacts also would be low. In addition, minority and low-income communities would not be affected in different ways than the general population.

3.11.4 No-Action Alternative

The no-action alternative would limit the impacts from SPR construction and operation to those that have already occurred or that will occur at the existing SPR storage sites at Bayou Choctaw, Big Hill, Bryan Mound, and West Hackberry. The existing conditions at the proposed new SPR storage site alternatives would remain unchanged. The Bruinsburg storage site would likely remain in agricultural use because of the lack of development pressure. The Chacahoula storage site could remain undeveloped. Since oil and gas activities occur near the Chacahoula storage site, the proposed site could be developed by a commercial entity for oil and gas production. The Richton site would likely remain in use as a pine plantation because of the lack of development pressure. Dow, British Petroleum, Conoco, and Occidental energy companies have storage facilities on the Stratton Ridge dome and it is possible that the Stratton Ridge storage site could be developed for cavern storage by a commercial entity. At proposed SPR oil distribution facility locations that are near existing oil distribution facilities, a commercial entity could develop them for oil storage.

The no-action alternative would leave regional socioeconomics unchanged and afford no opportunity for disproportionate impacts on populations subject to environmental justice considerations.

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