



**NF Energía LLC**

**San Juan Micro-Fuel Handling Facility**

**Resource Report 8  
Land Use, Recreation, and Aesthetics**

**Docket No.  
CP21-\_\_\_\_-000**

**September 15, 2021**

**NFEnergía LLC**  
**SAN JUAN MICRO-FUEL HANDLING FACILITY**  
**RESOURCE REPORT 8—LAND USE, RECREATION, AND AESTHETICS**

Minimum Filing Requirements for Environmental Reports:	Addressed in Section:
<p>1. Describe the width and acreage requirements of all construction and permanent rights-of-way and the acreage required for each proposed plant and operational site, including injection or withdrawal wells.</p> <p>(i) List, by milepost, locations where the proposed right-of-way would be adjacent to existing rights-of-way of any kind.</p> <p>(ii) Identify, preferably by diagrams, existing rights-of-way that would be used for a portion of the construction or operational right-of-way, the overlap and how much additional width would be required.</p> <p>(iii) Identify the total amount of land to be purchased or leased for each aboveground facility, the amount of land that would be disturbed for construction and operation of the facility, and the use of the remaining land not required for project operation.</p> <p>(iv) Identify the size of typical staging areas and expanded work areas, such as those at railroad, road, and waterbody crossings, and the size and location of all pipe storage yards and access roads—18 Code of Federal Regulations (“CFR”) § 380.12(j)(1).</p>	Section 8.2.1 and 8.2.3
<p>2. Identify, by milepost, the existing use of lands crossed by the proposed pipeline, or on or adjacent to each proposed plant and operational site—18 CFR § 380.12(j)(2).</p>	Section 8.2
<p>3. Describe planned development on land crossed or within 0.25 mile of proposed facilities, the time frame (if available) for such development, and proposed coordination to minimize impacts on land use. Planned development means development which is included in a master plan or is on file with the local planning board or the county—18 CFR § 380.12(j)(3).</p>	Not Applicable
<p>4. Identify, by milepost and length of crossing, the area of direct effect of each proposed facility and operational site on sugar maple stands, orchards and nurseries, landfills, operating mines, hazardous waste sites, state wild and scenic rivers, state or local designated trails, nature preserves, game management areas, remnant prairie, old-growth forest, national or state forests, parks, golf courses, designated natural, recreational or scenic areas, or registered natural landmarks, Native American religious sites and traditional cultural properties to the extent they are known to the public at large, and reservations, lands identified under the Special Area Management Plan of the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, and lands owned or controlled by federal or state agencies or private preservation groups. Also identify if any of those areas are located within 0.25 mile of any proposed facility—18 CFR § 380.12(j)(4).</p>	Section 8.2.2, Section 8.2.5, and Section 8.3
<p>5. Identify, by milepost, all residences and buildings within 50 feet of the proposed pipeline construction right-of-way and the distance of the residence or building from the right-of-way. Provide survey drawings or alignment sheets to illustrate the location of the facilities in relation to the buildings—18 CFR § 380.12(j)(5).</p>	Not Applicable
<p>6. Describe any areas crossed by or within 0.25 mile of the proposed pipeline or plant and operational sites which are included in, or are designated for study for inclusion in: The National Wild and Scenic Rivers System (Title 16 United States Code part 1271); The National Trails System (16 United States Code 1241); or a wilderness area designated under the Wilderness Act (16 United States Code 1132)—18 CFR § 380.12(j)(6).</p>	Section 8.2.5
<p>7. For facilities within a designated coastal zone management area, provide a consistency determination or evidence that the applicant has requested a consistency determination from the state's coastal zone management program—18 CFR § 380.12(j)(7).</p>	Section 8.2.2
<p>8. Describe the impact the project will have on present uses of the affected area as identified above, including commercial uses, mineral resources, recreational areas, public health and safety, and the aesthetic value of the land and its features. Describe any temporary or permanent restrictions on land use resulting from the project—18 CFR § 380.12(j)(8).</p>	Section 8.1, Section 8.2, and Section 8.3
<p>9. Describe mitigation measures intended for all special use areas identified under paragraphs (j) (2) through (6) of this section—18 CFR § 380.12(j)(9).</p>	Section 8.2.7, Section 8.3.1, and Section 8.4.3

<p>10. Describe proposed typical mitigation measures for each residence that is within 50 feet of the edge of the pipeline construction right-of-way, as well as any proposed residence-specific mitigation. Describe how residential property, including for example, fences, driveways, stone walls, sidewalks, water supply, and septic systems, would be restored. Describe compensation plans for temporary and permanent rights-of-way and the eminent domain process for the affected areas—18 CFR § 380.12(j)(10).</p>	<p>Not Applicable</p>
<p>11. Describe measures proposed to mitigate the aesthetic impact of the facilities especially for aboveground facilities such as compressor or meter stations—18 CFR § 380.12(j)(11).</p>	<p>Section 8.4.3</p>
<p>12. Demonstrate that applications for rights-of-way or other proposed land use have been or soon will be filed with federal land-management agencies with jurisdiction over land that would be affected by the project—18 CFR § 380.12(j)(12).</p>	<p>Not Applicable</p>

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**ACRONYMS AND ABBREVIATIONS**

CFR	Code of Federal Regulations
DRNA	Departamento de Recursos Naturales y Ambientales (Department of Natural and Environmental Resources)
FERC	Federal Energy Regulatory Commission
FSU	floating storage unit
LNG	liquefied natural gas
MFH Facility	San Juan Micro-Fuel Handling Facility
NFEnergía	NFEnergía LLC
PRCZMP	Puerto Rico Coastal Zone Management Program
PREPA	Puerto Rico Electric Power Authority
PRPB	Puerto Rico Planning Board

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**8.0 RESOURCE REPORT 8—LAND USE, RECREATION, AND AESTHETICS**

**8.1 Introduction**

NFEnergía LLC (“NFEnergía”) is seeking authorization from the Federal Energy Regulatory Commission (“FERC”) under Section 3 of the Natural Gas Act to continue operating the San Juan Micro-Fuel Handling Facility (“MFH Facility”), a liquefied natural gas (“LNG”) import and regasification facility. The MFH Facility is located on approximately 6.1 paved and fenced acres of an industrial area at Wharves A and B of the Puerto de San Juan (“Port of San Juan”), Puerto Rico, which is situated among existing industrial uses in the north of Puerto Rico where it can supply power generation sources serving nearby load centers using minimal additional infrastructure. To operate the MFH Facility, “pocket-sized” LNG vessels (also called “shuttle vessels”) bring LNG into the San Juan Harbor where the LNG is transferred from the shuttle vessel to a non-jurisdictional floating storage unit (“FSU”) vessel that is semi-permanently moored adjacent to the MFH Facility site. The FSU transfers LNG onshore where certain quantities remain liquefied and are transloaded onto trucks for over-the-road delivery to end users and certain quantities are regasified and made available to Units 5 and 6 of the adjacent San Juan Power Plant via a 75-foot long, 10-inch diameter segment of power plant piping. The MFH Facility has a regasification capacity of 130 million standard cubic feet per day and a truck loading capacity of 87.52 million standard cubic feet per day.

NFEnergía initially developed the MFH Facility to serve its commercial customers via a truck loading operation for distribution of LNG for regasification and use at behind-the-fence power generation facilities across Puerto Rico—typically multinational companies with manufacturing operations. In July 2018, Puerto Rico Electric Power Authority (“PREPA”) issued a request for proposals to retrofit Units 5 and 6 of the San Juan Power Plant to enable dual-fuel capability and to supply PREPA with natural gas. NFEnergía participated in that competitive process and was chosen as the successful bidder. PREPA and NFEnergía entered into a contract to effectuate the award in March 2019 and the MFH Facility began operating in March 2020 and became fully operational in May 2020.

FERC’s National Environmental Policy Act review process requires that an applicant submit an Environmental Report consisting of up to 13 individual resource reports. This resource report is consistent with and meets or exceeds all applicable FERC filing requirements. A checklist showing the status of FERC’s filing requirements for Resource Report 8 (18 Code of Federal Regulations [“CFR”] § 380.12(j)) is included before the table of contents.

Resource Report 8 characterizes and quantifies land affected by the operation of the MFH Facility. The report identifies existing and planned residential and commercial areas, public lands, designated recreational and special use areas, and it addresses the potential visual impacts of MFH Facility operations on these land uses. Information for this resource report has been compiled from publicly available documents, including United States Geological Survey topographic maps and recent aerial photography.

## **8.2 Land Use**

### ***8.2.1 MFH Facility***

The MFH Facility is located on approximately 6.1 acres at Wharves A and B in the Port of San Juan, an industrial seaport facility along the southern most area of Bahía de San Juan (“San Juan Bay”) and adjacent to PREPA’s San Juan Power Plant. The FSU is semi-permanently moored in San Juan Bay adjacent to the MFH Facility site. Shuttle vessels traverse the San Juan Bay using existing navigation channels.

Figure 1-1 in appendix 1A of Resource Report 1 provides an overview of the MFH Facility. The MFH Facility site and navigation channels are depicted on topographic and aerial maps in appendix 1A, figures 1-2 and 1-3, respectively.

The MFH Facility is located on an entirely paved area (a small portion of which is overwater) with a land use categorization of heavy industrial. The Mapa de Calificación de Suelo Municipio Autónomo de San Juan (Zoning Map for the Municipality of San Juan, see figure 8-1 in appendix 8A) shows the MFH Facility site is located on urban land in a heavy industrial use (I-2, “industrial pesado”) district of San Juan. San Juan Bay is located to the north while the areas to the south and east are also zoned I-2, heavy industrial use. The Municipality of Guaynabo, also zoned I-2 and classified as urban land (see figure 8-2 in appendix 8A) is west of and adjacent to the MFH Facility site. The Joint Regulation for the Evaluation and Issuance of Permits Related to Development, Land Use and Business Operation 2020 (Regulation 6.1.16) provides a list of authorized uses within the heavy industrial district, which include manufacturing, treatment, processing, refining, and storage of chemical substances.

According to the national land use/land cover database, Puerto Rico Land Cover (United States Geological Survey, 2001), the entire 6.1 acres of the MFH Facility site are located on developed land, which is used for industrial purposes, with a strip of Grassland/Herbaceous cover along the edge of the port. While the 2001 land use/land cover database includes the presence of a strip of Grassland/Herbaceous cover in this location, it is not currently present between the MFH Facility and San Juan Bay. No additional land is required for ongoing operations of the MFH Facility.

### ***8.2.2 Coastal Zone Management Area***

The Puerto Rico Coastal Zone Management Program (“PRCZMP”), adopted by the government of Puerto Rico in 1978 and approved by the National Oceanic and Atmospheric Administration, is administered by the Office of the Coastal Zone and Climate Change Program in the Departamento de Recursos Naturales y Ambientales (“DRNA” [Department of Natural and Environmental Resources]) in cooperating with the Puerto Rico Planning Board (“PRPB”).

The DRNA serves as the lead agency and is responsible for managing the maritime zone, coastal waters, and marine lands. The PRPB serves as the primary agency for managing coastal development and coastal zone consistency review. As such, the DRNA does not have a formal role in the permit review process other than providing comments to the PRPB and Regulations and Permits Administration on permit applications and issuing maritime zone concessions (National Oceanic and Atmospheric Administration, 2015).

The jurisdictional area of the PRCZMP is defined as 0.6 mile (1 kilometer) inland, though it may extend further inland to include key ecosystems along the coast, and the seaward boundary is 3 marine leagues (9 nautical miles). Goals of the PRCZMP are to provide guidance on public and private coastal development, conduct active management of coastal resources, foster scientific research, promote education, and encourage public participation as a means to promote sustainable development. The key priorities of the PRCZMP are to strengthen coastal and marine resources research, enhance science based decision making, shift the focus of restoration in the coastal zone from wetlands restoration to coastal systems restoration, and assist communities in all aspects of coastal zone management.

The National Coastal Zone Management Program requires a federal consistency review for actions taken or authorized by federal or state agencies that may affect an approved state coastal zone. The MFH Facility site is within the PRCZMP boundary; therefore, NFEnergía is preparing a complete coastal zone consistency evaluation. The comprehensive Coastal Zone Assessment was submitted to PRPB on August 10, 2021 for determination of the MFH Facility's consistency with each of the PRCZMP policies and corresponding sub-policies.

### ***8.2.3 Land Ownership and Lease Agreements***

The MFH Facility site is owned by the Puerto Rico Port Authority. NFEnergía has executed a 20-year lease of the entire 6.1 acre site with the property owner. The waterway for LNG shuttle vessel marine traffic to the MFH Facility site is located in San Juan Bay within established marine navigational channels.

### ***8.2.4 Public or Conservation Land***

There are no local, state, or federal lands, conservation land, or lands designated for any special land uses (e.g., specialty crops, natural areas, conservation land, etc.) within or adjacent to the MFH Facility site. Additionally, there are none of the following within the MFH Facility site area: natural, recreational, or scenic areas; registered natural landmarks; or designated or proposed candidate Wild and Scenic Rivers.

### ***8.2.5 Hazardous Sites***

United States Environmental Protection Agency databases were searched to identify landfills or hazardous waste sites within 0.25 mile of the MFH Facility, per Title 18 CFR Part 380.12(j). There are no landfills or hazardous waste sites within 0.25 mile of the MFH Facility.

### ***8.2.6 Airports***

No aircraft operations will be associated with the MFH Facility (e.g., helipads). The closest airport to the MFH Facility is the San Juan / Fernando Luis Ribas Dominicci Airport, an airport with one runway, located approximately 1.6 miles to the northeast across San Juan Bay.

### ***8.2.7 Operation Impacts and Mitigation***

The MFH Facility is located within a Federal Emergency Management Agency floodplain; however, as described in section 8.2.1, the area is zoned within the I-2 heavy industrial use zone.

Operation of the MFH Facility will not result in impacts on land use because the onshore MFH Facility is located within a previously paved, industrial site, and there is no change in land use.

### **8.3 Recreation**

There are no recreational opportunities within or adjacent to the MFH Facility site.

The entrance to San Juan Bay is located approximately 3 miles north-northwest of the MFH Facility site. Isla de Cabras is located on the west side of the San Juan Bay entrance channel and Old San Juan is on an islet located on the east side. The Parque Nacional Isla de Cabras is a National Park located on Isla de Cabras and includes a non-swimming beach and the ruins of Fort San Juan de la Cruz (“El Cañuelo”). Old San Juan is a historic community and one of the most popular cruise destinations in the Caribbean. The Castillo San Felipe del Morro (“El Morro”) is located at the northern tip of Old San Juan. El Morro and El Cañuelo are both part of the San Juan National Historic Site (National Park Service, 2021a; 2021b).

Just south of the Isla de Cabras, on the west shore of San Juan Bay, is the Parque Recreativo La Esperanza del Municipio Cataño, which includes a playground, picnic area, and beach. The Parque Central de San Juan is a park with green space, paths, a playground, and sport facilities located over 1.8 miles northeast of the MFH Facility site, at the mouth of Puerto Nuevo River.

A variety of sightseeing tours, watersport rentals, and fishing charters are available in Old San Juan. These recreational opportunities cater to both visitors to Old San Juan and cruise ship passengers arriving at the adjacent San Juan Cruise Port Terminal. Personal pleasure watercrafts can dock at Club Náutico de San Juan or San Juan Bay Marina, both located at the end of the San Antonio Channel, where bridges connect Old San Juan to the main island.

There are three rivers with National Wild & Scenic designation in Puerto Rico (Rio Mameyes, Rio Icacos, and Rio de la Mina); all three rivers are located over 20 miles southeast of the MFH Facility site, in the El Yunque National Forest (National Wild and Scenic Rivers, 2021).

#### ***8.3.1 Operation Impacts and Mitigation***

A primary concern when crossing recreational areas is the impact of construction on the area (i.e., the recreational activities, public access, and resources the area aims to protect). However, there is no construction associated with continued operation of the MFH Facility and there are no recreational areas within or adjacent to the MFH Facility, so there will be no impact on recreational users and no mitigation measures will be required.

Boat traffic is part of the regular view of tourists to Old San Juan and recreational users of the National and local parks. San Juan Bay experiences recreational boat traffic traveling to marinas, cruise ships headed to the San Juan Cruise Port Terminal in Old San Juan, and industrial cargo ships (including oil and LNG tankers) destined for the cargo facilities on the southern portion of the bay. Shuttle vessels that access the MFH Facility are smaller than the cruise ships and large industrial ships that regularly sail in San Juan Bay. During operations, an average of up to 10 shuttle vessel calls are anticipated per month, for a total of up to 120 calls per year. Based on the maximum shuttle vessel transits per year, operation of the MFH Facility may result in a minor increase (up to 4.5 percent) in ship traffic in San Juan Harbor. However, it is anticipated that with



increased LNG import and usage in Puerto Rico, import of diesel and other fuels (and the associated ship traffic) will decrease, potentially offsetting or minimizing a portion of the increase. Therefore, the shuttle vessel traffic would not impact recreational users of San Juan Bay.

As discussed in Resource Report 9, noise impacts during operation of the MFH Facility will be minor. The MFH Facility is not near recreational areas; therefore, no recreational impacts are expected from operation of the MFH Facility.

## **8.4 Aesthetics**

Aesthetics or visual resources refer to the composite of basic terrain features, geologic features, hydrologic features, vegetation patterns, and anthropogenic features that influence the visual appeal of an area for residents or visitors. In general, impacts on visual resources may occur during normal operations to the extent that facilities or portions of facilities and their lighting are visible to residents and visitors.

To determine the potential for operation of the MFH Facility to impact visual resources, NFEnergía followed FERC's guidance to analyze the MFH Facility viewshed.

### ***8.4.1 Viewshed***

The primary viewers in the MFH Facility viewshed include commercial and industrial users of the Port of San Juan. Residential communities along San Juan Bay all have obstructed views of the MFH Facility, as other industrial facilities block, and in some cases dwarf, the view of the MFH Facility. Existing industrial operations adjacent to the MFH Facility include the San Juan Power Plant to the south and the Cataño Oil Dock and tank farm to the west. The majority of locations around the Port of San Juan that can view the MFH Facility are industrial locations centered on cargo and fuel shipping (e.g., ship berths, cranes, and storage facilities) with residences located along the coast on the small peninsula across the bay over 0.5 mile to the north-northwest of the MFH Facility.

The MFH Facility ship berths and offloading facilities are consistent with the other industrial areas located along Port of San Juan, and the heights of the semi-permanently moored FSU and shuttle vessels that visit the MFH Facility site are within the range of heights that normally transit San Juan Bay. Further, the MFH Facility, FSU, and shuttle vessels are all shorter than the stack heights of the adjacent San Juan Power Plant. The nearest residence is located 0.25 mile west-southwest of the MFH Facility, just beyond the Cataño Oil Dock. Therefore, aesthetic impacts from MFH Facility operations and shuttle vessel traffic are minor.

### ***8.4.2 Lighting***

The MFH Facility is in compliance with 33 CFR 127.109 as part of the United States Coast Guard requirements, and inspections made the past two years have not identified any noncompliances on this area/system. Nighttime lighting is prominent in and around the MFH Facility given the nearby industrial facilities. The MFH Facility will add to existing lighting impacts due to the need to comply with the lighting requirements for operational safety and security, but these additional impacts are expected to be minor.

### ***8.4.3 Operation Impacts and Mitigation***

Operation of the MFH Facility will result in negligible impacts on the visual landscape of the area. The tallest structure at the MFH Facility is the ground flare which is approximately 45 feet above grade, which will not create a vertical visual contrast across the existing industrial landscape. There is no visual screening as the MFH Facility and FSU are consistent with the other nearby industrial areas, and the heights of the shuttle vessels that visit the MFH Facility site are within the range of heights that normally transit San Juan Bay. Therefore, aesthetic impacts from the MFH Facility, FSU, and shuttle vessels will be minor and are not expected to be significant.

## 8.5 References

- National Oceanic and Atmospheric Administration. 2015. Final Evaluation Findings: Puerto Rico Coastal Management Program June 2005 to September 2015. Available online at: <https://coast.noaa.gov/data/czm/media/puertorico-cmp.pdf>. Accessed: June 30, 2021.
- National Park Service. 2021a. Castillo San Felipe del Morro. Available online at: <https://www.nps.gov/saju/learn/historyculture/el-morro.htm>. Accessed: June 15, 2021.
- National Park Service. 2021b. Fortín San Juan de la Cruz (El Cañuelo). Available online at: <https://www.nps.gov/saju/learn/historyculture/san-juan-de-la-cruz.htm>. Accessed: June 15, 2021.
- National Wild and Scenic Rivers System. 2021. National Wild and Scenic Rivers—Puerto Rico. Available online at: <https://www.rivers.gov/puerto-rico.php>. Accessed: June 15, 2021.
- United States Geological Survey. 2001. National Land Cover Database, 2001 PR Land Cover. Available online at: <https://www.mrlc.gov/data?f%5B0%5D=category%3Aland%20cover>. Accessed: June 15, 2021.

**APPENDIX 8A      FIGURES**

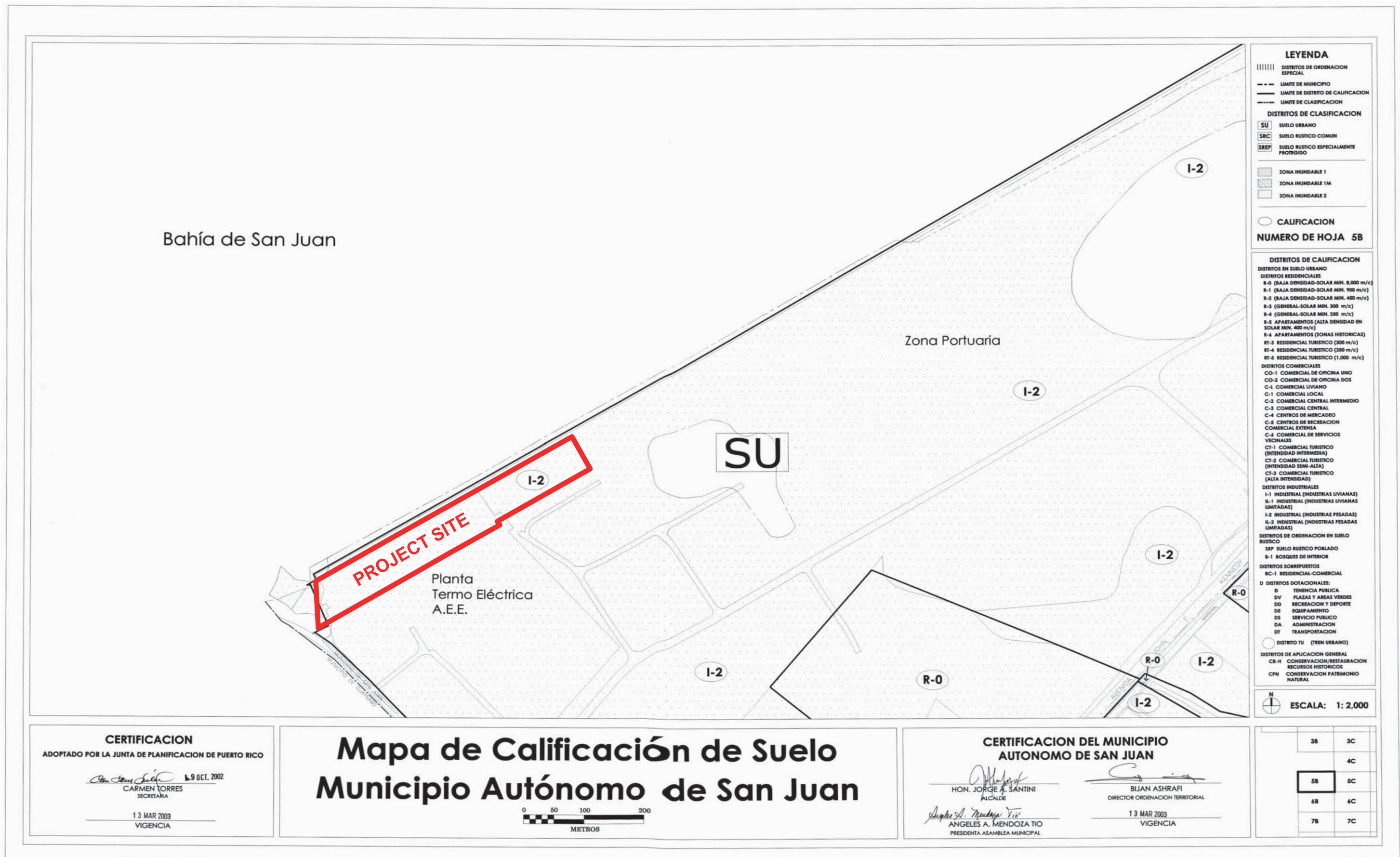


Figure 8-1  
 Zoning Map for the Municipality of San Juan

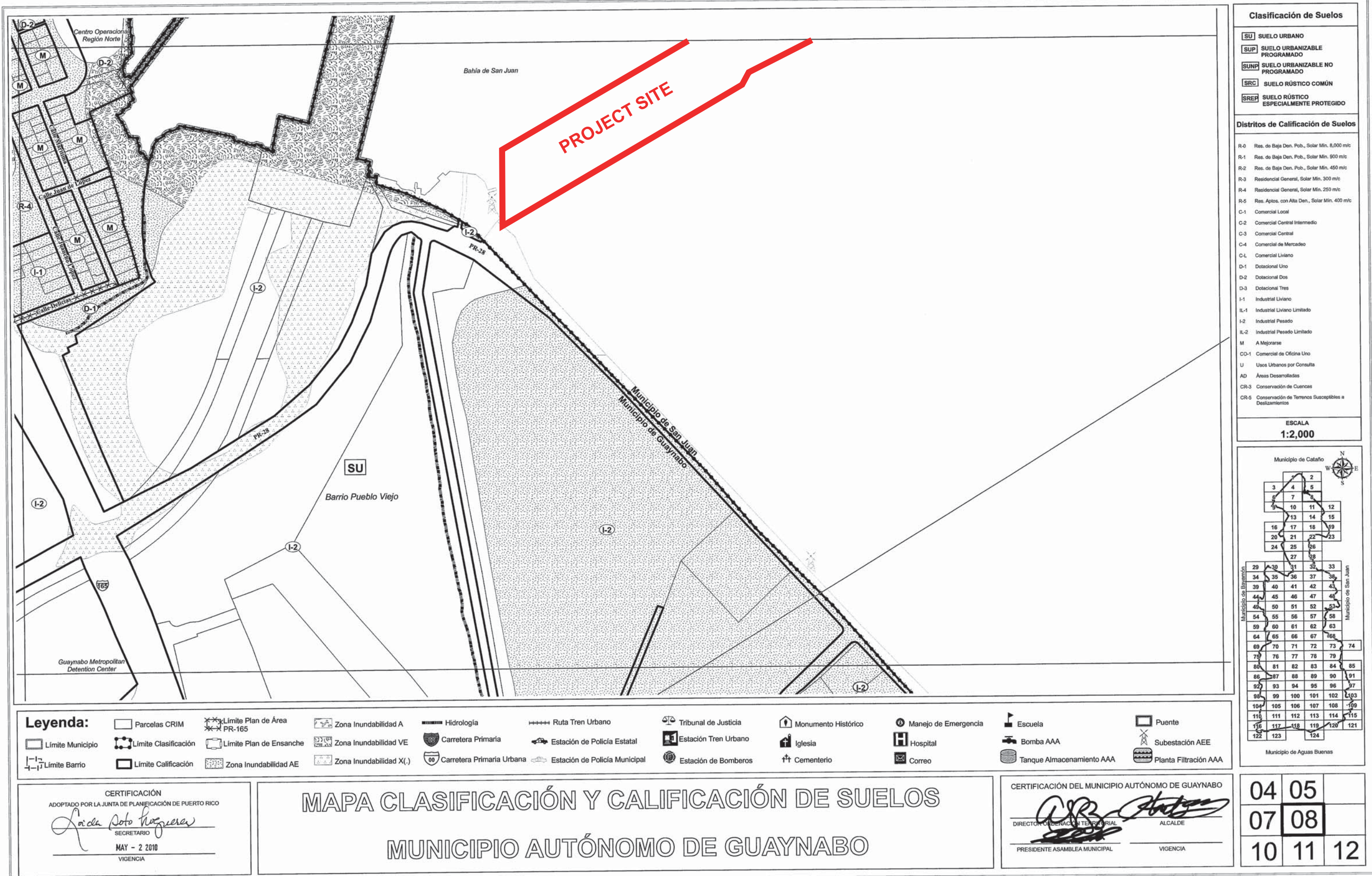


Figure 8-2  
Zoning Map for the Municipality of Guaynabo

San Juan Micro-Fuel Handling Facility - NFEnergía, LLC  
San Juan, Puerto Rico

