

# **Environmental Assessment**

## **Determinations and Compliance Findings for HUD-assisted Projects**

### **24 CFR Part 58**

#### **Project Information**

**Project ID:** PR-RGRW-01779

**Project Name:** Jardín Tierra Adentro

**Responsible Entity:** Puerto Rico Department of Housing

**Grant Recipient** (if different than Responsible Entity): same as above

**State/Local Identifier:** Puerto Rico / Municipio of Aibonito

**Preparer:** Heath Anderson, Deputy Program Manager

#### **Certifying Officer Name and Title:**

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**Consultant** (if applicable): SWCA Environmental Consultants

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#### **Project Location:**

The proposed project, which includes the purchase and installation of a photovoltaic system, is located on a 138-acre parcel (Cadastral Number 323-000-002-06-001) at Barrio Robles Sector la Sierra, Carretera 7722 Km 5.8 Interior, Aibonito, PR 00705 (see **Appendix A, Figure 1**- Site Location and **Figure 2**- Site Vicinity). This property is in a rural area in the

eastern portion of Aibonito Municipio. Access to the project areas is provided via an existing road that runs east/southwest through the central portion of the property. The applicant has identified one location for project activities related for the Intended Use of Grant Funds that are being evaluated under this Environmental Assessment (EA), also shown on Figures 1 and 2:

- Photovoltaic System (18.119603, -66.22672) is in the south-southwest portion of the parcel.

**Description of the Proposed Project** [24 CFR 58.32; 40 CFR 1508.25]:

The proposed project includes the purchase and installation of a photovoltaic system consisting of approximately 30 solar panels. The proposed photovoltaic system is expected to be no larger than 50 feet (ft) by 16 ft with a height of 5 ft. It will be placed on top of a platform, the details of which are unknown at the time of review. It is expected that the area of the platform will be approximately 936 square feet (sq ft) (52 ft x 18 ft), and will be elevated 5 inches (in) from the ground using poles that enter the ground at a maximum depth of 2 ft. The polygon used in the Area of Potential Effects map along with the Historic Preservation correspondence (figure 2) was an area of 1,500 ft (50 ft x 30 ft). The larger polygon was used due to uncertainty of the size and orientation of the photovoltaic system and its respective platform during the site inspection. The area where the photovoltaic system will be installed is vacant and flat, therefore grading will not be required.

The new solar panels will provide electricity for the greenhouses, water well, water tank, and storage warehouse via underground connections that will be no wider than 2 ft and approximately 2 ft deep. The greenhouses, water well, water tank, and storage warehouse are all existing structures. The electrical connections, shown in figure 2, are not part of the Intended Use of Grant Funds. Electrical connection 1 is 24 ft long, electrical connection 2 is 243 ft long, and electrical connection 3 is 312 ft long.

Ground disturbance is limited to the installation of poles associated with the photovoltaic system and underground electrical connection, no tree clearing or pruning is required. The applicant owns the property and currently uses it for agricultural use; therefore, no acquisition or conversion is required.

**Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:

In September of 2017, Hurricanes Irma and María produced sustained winds and intense rainfall that decimated agricultural production across the island of Puerto Rico. These hurricanes caused the loss of eighty percent of crop value island wide, exacerbating challenges to food security and agricultural business development. The Puerto Rico Department of Agriculture (PRDA) estimated seven hundred and eighty million dollars

(\$780 million) worth of damages from the hurricanes to the agricultural sector of the economy.

Many properties were damaged in Hurricane Maria, resulting in struggling businesses. The Re-Grow Puerto Rico Urban-Rural Agriculture Program (Re-Grow Program) will develop greater agricultural capacity and address the needs created by Hurricanes Irma and María with a substantial investment of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds for a wide variety of viable and sustainable agricultural activities.

Agricultural capacity and strong food systems are fundamental to resiliency of economies and, as Puerto Rico's entire agriculture sector was devastated by the Hurricanes, this Program is designed to revitalize this industry. The Re-Grow Program is an integral part of the long-term expansion of jobs in the sector, food security and contributing to overall economic recovery of disaster impacted populations.

The applicant does not have the resources to purchase farming equipment and materials for their agricultural operation nor has the applicant received any other outside source of funding for the project. The photovoltaic system will help increase the agricultural production by providing electricity for farm operations. The project as a whole will support continued local agricultural production during future disasters.

Agencies consulted for the proposed project are provided in the *List of Sources, Agencies and Persons Consulted* section of this Environmental Assessment (EA). Further discussion of the environmental impacts of the proposed action and alternatives is provided in the *Cumulative Impact Analysis, Alternatives/No Action Alternative*, and *Summary of Findings and Conclusions* sections of this EA.

### **Existing Conditions and Trends**

The applicant property is located within the eastern portion of the Aibonito municipality. This property is an established farm. The project area is located near the applicant's residence and is within an open lawn near other farming operation areas. There are existing greenhouses, water well, water tank, and storage warehouse located on the property. The area surrounding the applicant's property is rural and used primarily for agricultural purposes. In the absence of this project, the surrounding area would not be able to be self-sufficient in agriculture as intended by the ReGrow program.

## **Funding Information**

<b>Grant Number</b>	<b>HUD Program</b>	<b>Funding Amount</b>
B-17-DM-72-0001 B-18-DP-72-0001 B-19-DP-78-0002 B-18-DE-72-0001	Community Development Block Grant – Disaster Recovery (CDBG-DR)	\$11,938,162,230

**Estimated Total HUD Funded Amount:** \$74,500.00

**Additional non-HUD Funds (Estimated Total Funded by Applicant):** Electrical Connections will cost the applicant \$12,850.00

**Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]:** \$87,350.00

## **Compliance with 24 CFR 58.5 and 58.6 Laws and Authorities**

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits or approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

<b>Compliance Factors:</b> Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.6</b>		
<b>Airport Hazards</b>  24 CFR Part 51 Subpart D	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	<p>The project site is not within 2,500 ft of a civil primary or commercial service airport or within 15,000 ft of a military airport. The nearest civil primary or commercial service airport, Mercedita, is located 120,710 ft (23miles [mi]) from the project site. The nearest military airport, Luis Munoz Marin International Airport], is located 135,940 ft (26 mi) from the project site. No further evaluation is required. The project is in compliance with airport hazards requirements.</p> <p>The Airport Hazards Partner Worksheet and Airport Hazards Map (<b>Figure B 1-1</b>) are provided in <b>Appendix B, Attachment 1</b>.</p>
<b>Coastal Barrier Resources</b>  Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	<p>The project site is not located in a Coastal Barrier Resource Systems Unit (CBRS) or Otherwise Protected Area (OPA). There are no CBRS units in Aibonito. The closest CBRS unit, Bajia de Jobos, is located 55,606 ft (11 mi) from the project site. No further evaluation is required. The project is in compliance with the Coastal Barrier Resources Act.</p>

		<p>The Coastal Barrier Resources Act Partner Worksheet and Coastal Barrier Resources Map (<b>Figure B 2-1</b>) are provided in <b>Appendix B, Attachment 2</b>.</p>
<p><b>Flood Insurance</b></p> <p>Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>A review of the FEMA Flood Insurance Rate Map (FIRM), Community Panel 72000C1730H (effective date 04/19/2005), shows the project site is in Flood Zone X, which is not in a Special Flood Hazard Area (SFHA). Flood insurance is not required. No further evaluation is required. The project is in compliance with the Flood Disaster Protection Act and National Flood Insurance Reform Act.</p> <p>The Flood Insurance Partner Worksheet and FIRM (<b>Figure B 3-1</b>) are provided in <b>Appendix B, Attachment 3</b>.</p>
<p><b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.5</b></p>		
<p><b>Clean Air</b></p> <p>Clean Air Act, as amended, particularly section 176(c) &amp; (d); 40 CFR Parts 6, 51, 93</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project site is in Aibonito Municipio, which is within a U.S. Environmental Protection Agency (USEPA) designated attainment area. Municipios in Nonattainment or Maintenance areas include Arecibo, Bayamon, Catano, Guaynabo, Salinas, San Juan and Toa Baja. Project activities include purchase and construction of a photovoltaic system. The project is not anticipated to have a negative impact on air quality. Emissions associated with the proposed actions are temporary and limited to the use of small construction equipment and will be well below the Federal General Conformity Rule de minimis thresholds. No further evaluation is required. The project is in compliance with the Clean Air Act.</p> <p>The Air Quality Partner Worksheet, List of Non-Attainment/Maintenance Status Counties in Puerto Rico, and Clean Air</p>

		Map ( <b>Figure B 4-1</b> ) are provided in <b>Appendix B, Attachment 4.</b>
<p><b>Coastal Zone Management</b></p> <p>Coastal Zone Management Act, sections 307(c) &amp; (d)</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project site is not located within the Puerto Rico Coastal Management Zone. The closest coastal zone area is located 53,389 ft (10 mi) from the project site. No further evaluation is required. The project is in compliance with the Coastal Zone Management Act.</p> <p>The Coastal Zone Management Partner Worksheet and Coastal Zone Map (<b>Figure B 5-1</b>) are provided in <b>Appendix B, Attachment 5.</b></p>
<p><b>Contamination and Toxic Substances</b></p> <p>24 CFR Part 58.5(i)(2)</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project site was evaluated for potential contamination by conducting a field site inspection on February 15, 2024 to identify any onsite hazards including, but not limited to, soil staining, above ground storage tanks, signs of underground storage tanks, odors, hazardous debris etc.</p> <p>The site inspection did not identify any onsite hazards, stained soil or vegetation and the project is in compliance with contamination and toxic substances requirements.</p> <p>The project does not involve any occupied structures, and therefore, is exempt from considering radon as part of the site contamination analysis as per HUD Notice CDP- 23-103.</p> <p>In addition, a desktop review of USEPA databases, NEPAassist, and other sources was conducted to determine if the project site was located near dump sites, junk yards, landfills, hazardous waste sites, or industrial sites, including USEPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. The parcel</p>

		<p>has been used for agricultural purposes and there has been no change in land use in the last 20 years. The project is located in a rural area of Aibonito Municipio and will continue to be used for agricultural purpose.</p> <p>The desktop review did not find any of the above-listed toxic, hazardous or radioactive substances in or within 3,000 feet of the project area. The project is in compliance with contamination and toxic substances requirements.</p> <p>The Contamination and Toxics Substances Partner Worksheet, Radon Agency Correspondence, and Contamination and Toxic Substances Map (<b>Figure B 6-1</b>) are provided in <b>Appendix B, Attachment 6.</b></p>
<p><b>Endangered Species</b></p> <p>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p>Yes    No</p> <p><input checked="" type="checkbox"/>    <input type="checkbox"/></p>	<p>The project involves activities that have the potential to affect protected species or habitats including but not limited to activities such as ground disturbance.</p> <p>Threatened, endangered, and migratory bird species were identified by reviewing data from the United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) Tool. In addition, critical species habitat was reviewed through the USFWS IPaC Critical Habitat Portal.</p> <p>The review identified two federally listed species (Puerto Rican boa [<i>Chilabothrus inornatus</i>] and palo de ramón [<i>Banara vanderbiltii</i>]) with the potential to occur within the project area. There is no designated or proposed critical habitat within the project area; the closest final designated critical habitat is located 18,631 feet (4 miles) away.</p> <p>The project activities will result in ground disturbing activities, including digging trenches for electrical connections. A qualified biologist reviewed the proposed activity location(s) and</p>

		<p>determined that the project will have <i>no effect</i> on the palo de ramón or designated critical habitat. Due to the generalist nature of the Puerto Rican boa, forested habitat surrounding the project areas, and dense ground cover present throughout the review area, the Puerto Rican boa may occur within the project area. The applicant will employ the conservation measures outlined in the USFWS 2024 General Project Design Guidelines for the Puerto Rican boa. As such, it is anticipated that the project <i>may affect, but is not likely to adversely affect</i> the Puerto Rican boa.</p> <p>USFWS was consulted, and that they acknowledged the receipt of the Dkey NLAA consistency letter on Wednesday, August 22, 2024.</p> <p>If a Puerto Rican Boa is found in the project action site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa.</p> <p>The Endangered Species Act Partner Worksheet, Threatened and Endangered Species Technical Memorandum with IPaC, Critical Habitat Map (<b>Figure B 7-1</b>) are provided in <b>Appendix B, Attachment 7</b>.</p>
<p><b>Explosive and Flammable Hazards</b></p> <p>24 CFR Part 51 Subpart C</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project includes the purchase and installation of a photovoltaic system. The project itself is not the development of a hazardous facility nor will the project increase residential densities. No further evaluation is required. The project is in compliance with explosive and flammable hazard requirements.</p> <p>The Explosive and Flammable Hazards Partner Worksheet is provided in <b>Appendix B, Attachment 8</b>.</p>

<p><b>Farmlands Protection</b></p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>This project does not include any activities that could potentially convert agricultural land to non-agricultural use. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: Caf (Caguabo clay loam, 40 to 60 percent slopes); LsE (Los Guineos clay, 20 to 40 percent slopes); MoF (Maricao clay, 20 to 60 percent slopes). Farmlands of statewide importance are within the project area. Although the project includes new construction, the project is exempt from review under the Farmland Protection Policy Act (FFPA) as the project is limited to construction of on-farm structures needed for farm operations. No further review is required. The project is in compliance with the Farmland Protection Policy Act.</p> <p>The Farmlands Protection Partner Worksheet and Prime Farmland Map (<b>Figure B 9-1</b>) are provided in <b>Appendix B, Attachment 9</b>.</p>
<p><b>Floodplain Management</b></p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>An Advisory Base Flood Elevation (ABFE) map was developed by FEMA, which shows the project sites are in Flood Zone X. The project is not located in the 100-year floodplain or ABFE special flood hazard area. The extent of the FFRMS floodplain was determined using the 0.2 percent flood approach. The project is in compliance with Executive Order 11988, as amended by Executive Order 13690 particularly section 2(a); 24 CFR Part 55.</p> <p>PFIRMs in Puerto Rico were only developed for certain sections of the municipalities of Carolina, Canovanas, Loiza, San Juan and Trujillo Alto. The proposed project is located in the municipality of Aibonito; therefore, PFIRM information was not available for the area and therefore not considered in the review.</p>

		<p>HUD implemented new floodplain regulations under 89 FR 30850 effective June 24, 2024 which created the Federal Flood Risk Management Standard (FFRMS). The current project comprises non-critical actions that lie outside the 0.2-percent-annual-chance (500-year flood elevation), which is the approach used for this project to comply with the FFRMS; therefore, mitigation is not required and the project is in compliance with 24 CFR Part 55.</p> <p>The Floodplain Management Partner Worksheet and ABFE Floodplain Map (<b>Figure B 10-1</b>) are provided in <b>Appendix B, Attachment 10</b>.</p>
<p><b>Historic Preservation</b></p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project will involve purchase and installation of a photovoltaic system consisting of approximately 30 solar panels on a developed property and significant ground disturbing activities of previously undisturbed soil. State Historic Preservation Office (SHPO) consultation was performed.</p> <p>No National Historic Landmark (NHL) are within or near the project area.</p> <p>Record reviews and research were conducted at the SHPO and the Instituto de Cultura Puertorriqueña (ICP) to determine if any archaeologically sensitive resources could be present within a 0.5-mile radius.</p> <p>The results of the record search and the site inspection indicate that there are no historic properties or cultural resources within the 0.50-mile radius study area or within the project Area of Potential Effect (APE). Based on the results of the historic property identification efforts, the Program has determined that project actions will not affect historic properties that compose the APE.</p>

		<p>The determination was submitted to SHPO by PRDOH for concurrence on March 18, 2024 and SHPO concurred with the No Historic Properties Affected determination on March 20, 2024. No further evaluation is required. The project is in compliance with the National Historic Preservation Act.</p> <p>The Historic Preservation Partner Worksheet and SHPO consultation are provided in <b>Appendix B, Attachment 11.</b></p>
<p><b>Noise Abatement and Control</b></p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>The project activities are limited to the purchase and installation of a photovoltaic system and do not involve residential new construction or rehabilitation. No further evaluation is required. The project is in compliance with HUD's noise regulation.</p>
<p><b>Sole Source Aquifers</b></p> <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>According to the USEPA's Source Water Protection, Sole Source Aquifer Protection Program, there are no sole source aquifers in Puerto Rico. No further evaluation is required. The project is in compliance with the Safe Drinking Water Act.</p> <p>The Sole Source Aquifer Partner Worksheet and Sole Source Aquifer Map (<b>Figure B 12-1</b>) are provided in <b>Appendix B, Attachment 12.</b></p>
<p><b>Wetlands Protection</b></p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>The project site was reviewed for wetlands using the U.S. Fish and Wildlife Service (USFWS) Wetland Inventory Mapper and a visual confirmation during the field site inspection. A riverine wetland is present 584 ft southeast of the project site. Due to the distance and intervening forest vegetation, further evaluation is not required. The project is in compliance with Executive Order 11990.</p> <p>The Wetlands Protection Partner Worksheet and Wetland Map (<b>Figure B 13-1</b>) are provided in <b>Appendix B, Attachment 13.</b></p>

<p><b>Wild and Scenic Rivers</b></p> <p>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>A review of the USFWS National Wild and Scenic River mapper identified no Wild and Scenic Rivers or National Rivers Inventory (NRI) rivers present in Aibonito Municipio. The closest Wild and Scenic River segment is located 159,241 ft (30 mi) from the project site. No further evaluation is required. The project is in compliance with the Wild and Scenic Rivers Act.</p> <p>The Wild and Scenic Rivers Partner Worksheet and Wild and Scenic Rivers Map (<b>Figure B 14-1</b>) are provided in <b>Appendix B, Attachment 14</b>.</p>
<p><b>ENVIRONMENTAL JUSTICE</b></p>		
<p><b>Environmental Justice</b></p> <p>Executive Order 12898</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The ReGrow Program intends to alleviate negative economic impacts to, and strengthen, the agricultural industry in Puerto Rico. The project's direct and indirect impacts are limited to a small area on a single land parcel. The project will benefit the farm owner by providing access to electricity for improving agricultural use and production. The project would not facilitate development that would negatively affect human health or result in disproportionate adverse environmental impacts to low-income or minority populations. The project is in compliance with Executive Order 12898.</p> <p>The Environmental Justice Partner Worksheet and EJSscreen Report are provided in <b>Appendix B, Attachment 15</b>.</p>

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits or approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

**Impact Codes:** Use an impact code from the following list to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor Adverse Impact – May require mitigation
- (4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>LAND DEVELOPMENT</b>		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	<p>The project includes the purchase and installation of a photovoltaic system.</p> <p>The project site location(s) is classified as Agricola General (A-G) land use. The proposed action is continued agricultural use of property, which is compatible with zoning and existing land use.</p> <p>Construction actions include new construction which increase the current function of the existing land use. There is no change in land use since the land will continue to be used for agriculture purposes. The project site is in a rural area of Aibonito Municipio, and project activities will not contribute to urban sprawl.</p>

		The applicant and/or construction manager is required to obtain any necessary local and territorial building and environmental permits prior to construction activities commencing.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<p>The project includes the purchase and installation of a photovoltaic system.</p> <p>Soil suitability will be assessed prior to construction and will be addressed during local permitting processes. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: : Caf (Caguabo clay loam, 40 to 60 percent slopes); LsE (Los Guineos clay, 20 to 40 percent slopes); MoF (Maricao clay, 20 to 60 percent slopes). Contractors will be required to use best management practices during construction to control erosion and prevent runoff. The soil is currently being used for agriculture purposes.</p> <p>Landslide data from the U.S. Geological Survey (USGS) indicates less than 25 landslides per square kilometer for the project area (see <b>Appendix A, Figure 3-</b> USGS Landslide Map). Department of Natural and Environmental Resources (DNER) authorization is required for any extraction, removal, excavation, and dredging of the components of the earth's crust.</p>
Hazards and Nuisances including Site Safety and Noise	2	<p>The project includes the purchase and installation of a photovoltaic system.</p> <p>Contractors will be required to provide health and safety plans and monitoring during construction. Noise levels will temporarily increase during construction which may impact surrounding neighbors; however, program activities are limited to the existing farm property and will not elevate ambient noise levels long-term. Contractors will be required to comply with the applicable local noise ordinances. Noise impacts will be mitigated by restricting construction activities to daylight hours and to the hours established in the Regulation for Noise Control and Pollution in Puerto Rico. Additionally, the project does not include housing to where inhabitants would be affected.</p>

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>SOCIOECONOMIC</b>		
Employment and Income Patterns	2	The project includes the purchase and installation of a photovoltaic system.  The project is not anticipated to have a significant impact on employment and income patterns; however, the project may help restore employment opportunities and income patterns.
Demographic Character Changes, Displacement	2	The project includes the purchase and installation of a photovoltaic system.  The project is a rural area in Aibonito Municipio and will not alter the demographics or character of the surrounding community. Project activities will not result in any direct or indirect displacement of individuals or families.
Environmental Justice	2	The project includes the purchase and installation of a photovoltaic system.  The project's direct and indirect impacts are limited to a small area on a single land parcel. The project will benefit the farm owner by providing access to electricity for agricultural use and production. The project will not facilitate development that would negatively affect human health or result in disproportionate adverse environmental impacts to low-income or minority populations (see EJ Screen Report in Attachment 15).

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The proposed project includes the purchase and installation of a photovoltaic system on private land and will not contribute to any change in educational or cultural facilities or affect access to or capacity of educational or cultural facilities.
Commercial Facilities	2	The proposed project includes the purchase and installation of a photovoltaic system. The proposed project will increase agricultural production, resulting in a net positive impact to the applicant's farm

		commercial output and a positive benefit to surrounding commercial enterprises who purchase and sell the produce; however, the project will not put undue pressure on commercial facilities.
Health Care and Social Services	2	The proposed project includes the purchase and installation of a photovoltaic system on private land and will not affect access to or capacity of health care and social services.
Solid Waste Disposal / Recycling	2	The proposed project includes the purchase and installation of a photovoltaic system. The proposed project may cause an increase in short-term generation of solid waste during construction. All construction debris will be disposed of at the proper facilities for the debris type (i.e., construction waste). The project will not contribute to long-term needs or changes to solid waste disposal and recycling.
Wastewater / Sanitary Sewers	2	The purchase and installation of a photovoltaic system is not expected to result in significant changes in wastewater or sanitary sewer generation.  Sewage will not be generated from the project. No new wastewater or sanitary sewer connections are required for this project.
Water Supply	2	The proposed project includes the purchase and installation of a photovoltaic system. The proposed project activities are not expected to result in any changes to water supply. The applicant currently uses a water well located on the property.
Public Safety - Police, Fire and Emergency Medical	2	The proposed project includes the purchase and installation of a photovoltaic system on private land and will not affect public safety concerns such as police, fire, and emergency medical services.
Parks, Open Space and Recreation	2	The proposed project includes the purchase and installation of a photovoltaic system on private land and will not result in any changes to access or use of parks, open space, and recreation areas.
Transportation and Accessibility	2	The proposed project includes the purchase and installation of a photovoltaic system on private land and will have no relation to transportation services. The proposed activities will not result in any changes in transportation and accessibility.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>NATURAL FEATURES</b>		
Unique Natural Features, Water Resources	2	The proposed project includes the purchase and installation of a photovoltaic system. Tributaries of the Calle Hoyo Frio run along the northwestern and southeastern boundary of the applicant's property. No construction or project activities will occur within or near the waterbody or affect quality or access to Calle Hoyo Frio.
Vegetation, Wildlife	2	The proposed project includes the purchase and installation of a photovoltaic system. The project area has already been previously disturbed for farm operations; therefore, the project is not anticipated to result in any new impacts to trees, vegetation, wildlife or native plant communities. No tree clearing or pruning is anticipated prior to photovoltaic system construction.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>CLIMATE AND ENERGY</b>		
Climate Change Impacts	2	<p>The project includes the purchase and installation of a photovoltaic system.</p> <p>The proposed ReGrow program project aims to increase resiliency in the agricultural industry to prepare for future climate related disasters, including drought. The Climate Mapping for Resilience and Adaptation Assessment tool (<a href="https://resilience.climate.gov/#assessment-tool">https://resilience.climate.gov/#assessment-tool</a>) provides historical and future climate data for five common climate-related hazards (extreme heat, drought, wildfires, flooding, and coastal inundation). The data model for the census tract that includes application location does not indicate a significant increase in hazard risks from climate change for drought, wildfire, or flooding, when comparing historical data (1976-2005) to future projections. The model projects a greater number of days where temperatures will exceed 90 degrees Fahrenheit after</p>

		<p>2015, which is a systemic trend in the model across the Island.</p> <p>The specific activities proposed for this economic development project are limited in scale and land impacts. The proposed photovoltaic system construction activities are for individual farm use and will not require electricity use or water draw. The equipment that will be used during construction and operation will also be limited to occasional use at this specific land parcel, and therefore will not generate a significant amount of greenhouse gas.</p>
Energy Efficiency	2	<p>The project will not result in significant additional energy consumption as it involves only the construction of a photovoltaic system using self-powered construction equipment on an existing farm and will not require any expansion to existing power facilities.</p>

**Additional Studies Performed:**

No additional studies were performed.

**Field Inspection** (Date and completed by):

Field inspection completed on February 15, 2024, by Karina Morales, SWCA Environmental Consultants.

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]:

Department of Natural and Environmental Resources (DNER). 2023. Puerto Rico DNER Species Ranges – under construction. Accessed February 19, 2024. Available at: <https://arcg.is/1S9aju0>.

Federal Aviation Administration (FAA). 2022. National Plan for Integrated Airport Systems 2023-2027. Accessed February 19 2024. Available at: [National Plan of Integrated Airport Systems \(NPIAS\) 2023-2027, Appendix B: National and State Maps \(faa.gov\)](https://www.faa.gov/airports/airport-systems/npias).

Federal Emergency Management Agency (FEMA). 2023. FEMA Flood Map Service Center - Map Panel 72000C1730H (effective 4/19/2005). Accessed February 19, 2024. Available at: <https://msc.fema.gov/portal/home>.

Institute of Puerto Rican Culture (ICP). 2023. San Juan, Puerto Rico. Data collection conducted on February 16, 2024.

National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management. 2024. Puerto Rico Coastal Zone Boundary. Accessed February 19, 2024. Available at: [Puerto Rico Coastal Vulnerability Viewer \(arcgis.com\)](#).

State Historic Preservation Office (SHPO). 2024. San Juan, Puerto Rico. Data collection conducted on February 13, 2024.

U.S. Environmental Protection Agency (USEPA). 2022a. Envirofacts Mapper. Air pollution data (ICIS-AIR), Brownfields, Hazardous Waste (RCRAInfo), Superfund National Priorities List (NPL), Toxic Releases Inventory (TRI), and National Pollutants Discharge Elimination Systems (NPDES). Accessed January 19, 2024. Available at: <https://geopub.epa.gov/arcgis/rest/services/EMEF/efpoints/MapServer>.

USEPA. 2022b. Sole Source Aquifer Map. Accessed February 19, 2024. Available at: <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>.

USEPA. 2023a. Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. USEPA Green Book. Accessed February 19, 2024. Available at: [https://www3.epa.gov/airquality/greenbook/anayo\\_pr.html](https://www3.epa.gov/airquality/greenbook/anayo_pr.html).

USEPA. 2023b. EJScreen: Environmental Justice Screening and Mapping Tool. Accessed February 22, 2024. Available at: <https://www.epa.gov/ejscreen/download-ejscreen-data>.

U.S. Fish and Wildlife Service (USFWS). 2019. Coastal Barrier Resources System. Accessed April 15, 2024. Available at: <https://www.fws.gov/CBRA/Maps/Mapper.html>.

USFWS. 2023a. Information for Planning and Consultation (IPaC). Accessed March 1, 2023. Available at: <https://ipac.ecosphere.fws.gov/location/index>.

USFWS. 2023b. Critical Habitat for Threatened & Endangered Species. Accessed February 9, 2024. Available at: <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>.

USFWS. 2023c. National Wetlands Inventory Surface Waters and Wetlands Mapper. Accessed February 19, 2024. Available at: <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>.

U.S. Forest Service. 2022. National Wild and Scenic River Segments. Accessed February 19, 2024. Available at: <https://www.rivers.gov/mapping-gis.php>; [Wild & Scenic Rivers | US Forest Service \(usda.gov\)](#).

U.S. Geological Survey (USGS). 2022. Concentration of Landslides caused by Hurricane Maria, Puerto Rico. Accessed February 19, 2024. Available at: [U.S. Landslide Inventory \(arcgis.com\)](#).

**List of Permits Obtained:**

No permits have been obtained.

**Public Outreach** [24 CFR 58.43]:

Puerto Rico Department of Agriculture has worked closely with the agricultural community. In compliance with the National Environmental Policy Act (NEPA) regulations for HUD, the public will be notified of the project through publication of the combined Finding of No Significant Impact (FONSI) – Notice of Intent to Request Release of Funds (NOI-RROF) notice with a 15-day public comment period.

**Cumulative Impact Analysis** [24 CFR 58.32]:

The installation of a photovoltaic system at the project site is not anticipated to have a negative impact on environmental resources. None of the environmental assessment factors nor the regulations reviewed in the above checklist resulted in negative environmental impacts or the need for mitigation. Overall, the project will have a net positive impact by helping a small business increase their capacity for agricultural production. No other planned or ongoing projects were identified in the project vicinity that could contribute to cumulative impacts of environmental resources.

**Alternatives** [24 CFR 58.40(e); 40 CFR 1508.9]

Within the boundaries of the property, other locations could be considered for the new photovoltaic system. However, other locations may require greater environmental impacts such as additional ground disturbance, grading for slopes that are not suitable for installation or additional tree clearing and would result in higher costs to the applicant.

**No Action Alternative** [24 CFR 58.40(e)]:

If the proposed project did not take place, the farm may have to rely on outside sources of electricity rather than having their own photovoltaic system. In the absence of a photovoltaic system, the business may have difficulty continuing agricultural production during future disasters. Given the degree of need for greater agricultural capacity in Puerto Rico following Hurricanes Irma and María, the costs of foregoing the Project would exceed the benefits.

**Summary of Findings and Conclusions:**

The proposed project would not result in any adverse impacts to the surrounding natural, historical, and water resources; generate significant air or noise pollution; or promote environmental or socioeconomic injustices. The proposed project is not located within a coastal zone or near a major water resource.

## **Mitigation Measures and Conditions [40 CFR 1505.2(c)]**

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

<b>Law, Authority, or Factor</b>	<b>Mitigation Measure</b>
<p><b>Endangered Species</b> Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p><i>General Condition:</i> The current project activities do not involve the removal of trees. If any tree clearing is to be proposed, the project will need to be re-evaluated for impacts to threatened and endangered species.</p> <p>If a Puerto Rican Boa (Boa) is found in the project activity site, work shall cease until the Boa moves off site on its own. If the Boa does not move off site, the construction manager shall contact the Puerto Rico DNER to relocate the Boa. The USFWS has developed the following conservation measures for the Boa:</p> <ol style="list-style-type: none"> <li>1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.</li> <li>2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.</li> <li>3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or project personnel with experience on this species should survey the areas</li> </ol>

to be cleared to verify the presence of any PR boa within the work area.

4. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #5). Do not capture the boa. If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: (787) 724-5700, (787) 230-5550, (787) 771-1124). If immediate relocation is not an option, project-related activities at that area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue.

5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior. Last Revised: January 2024

6. If a PR boa is captured by PRDNER personnel, record the name of that person and information on where the PR boa will be taken. This information should be reported to the Service.

7. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal, and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #4). If not possible, the animal should be left alone until it leaves the vehicle on its own.

8. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles

	<p>should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.</p> <p>9. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #5). If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.</p> <p>10. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.</p>
<p><b>Historic Preservation</b> National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p><i>General Condition:</i></p> <p>If historic properties are discovered, unanticipated effects on historic properties are found, or cultural materials are encountered, work should cease in the immediate area; work can continue where no historic properties or cultural materials are present. Please contact PRDOH to consult on further actions that may be necessary to protect historic properties or cultural materials.</p>
<p>Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design</p>	<p>The proposed action is continued agricultural use of property, which is compatible with the existing land use.</p> <p>The applicant and/or construction manager is required to obtain any necessary local and territorial building and environmental permits prior to construction activities commencing.</p>
<p>Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff</p>	<p>Soil suitability will be assessed prior to construction. Contractors will be required to use best management practices during construction.</p> <p>DNER authorization is required for any extraction, removal, excavation, and dredging of the components of the earth's crust.</p>
<p>Hazards and Nuisances including Site Safety and Noise</p>	<p>Contractors will be required to provide health and safety plans and monitoring during construction.</p>

	Contractors will be required to comply with the applicable local noise ordinances. Noise impacts will be mitigated by restricting construction activities to daylight hours and to the hours established in the Regulation for Noise Control and Pollution in Puerto Rico.
Solid Waste Disposal / Recycling	All construction debris will be disposed of at the proper facilities for the debris type (i.e. construction waste).

**Determination:**

**Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]

The project will not result in a significant impact on the quality of the human environment.

**Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

The project may significantly affect the quality of the human environment.

Preparer Signature:  Date: 30 January 2025

Name/Title/Organization: Heath Anderson, Ph.D., Deputy Project Manager

SWCA Environmental Consultants

Certifying Officer Signature:  Date: 02/13/2025

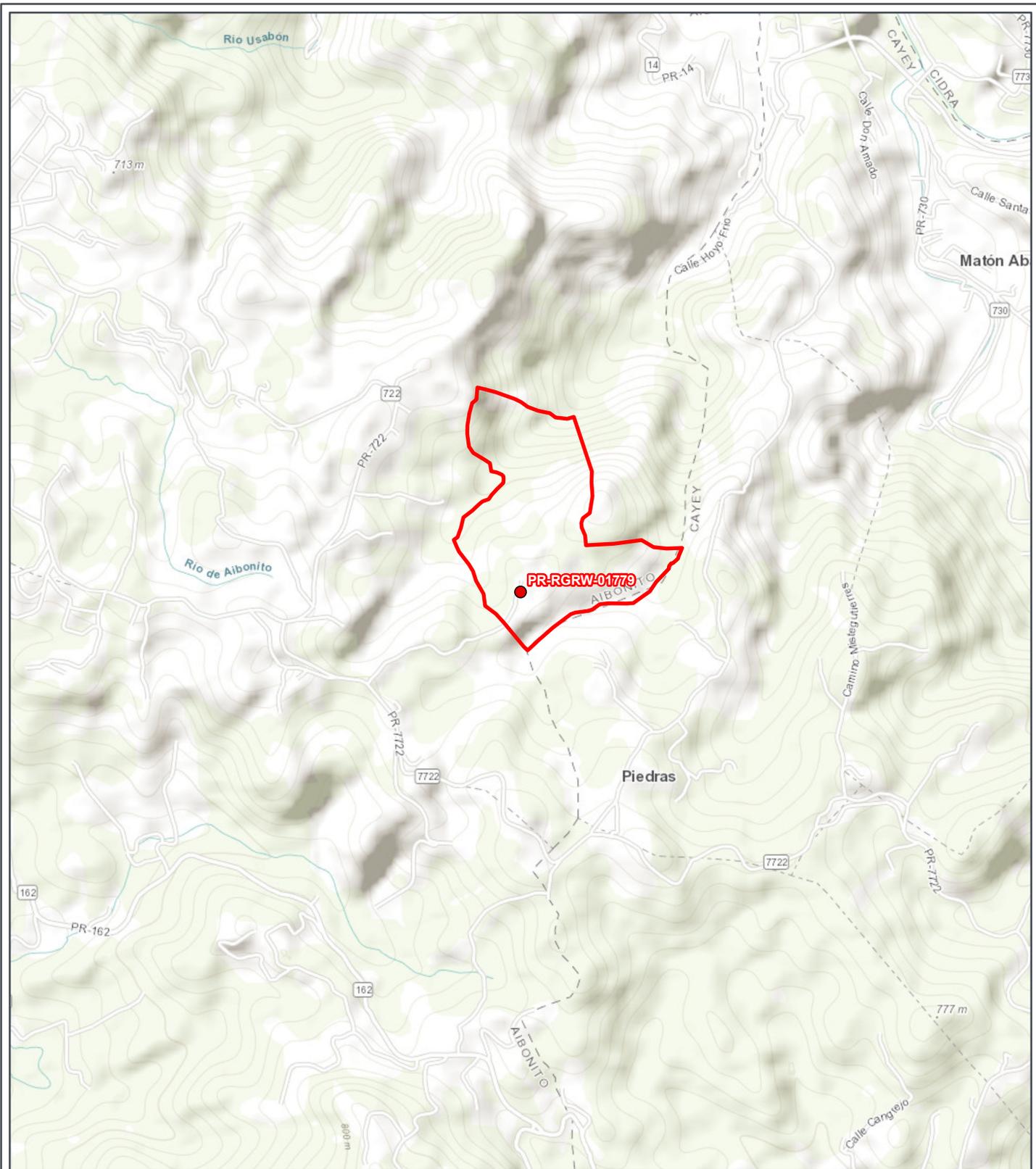
Name/Title: Abdul X. Feliciano Plaza, Permits and Environmental Specialist

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

# **Appendix A**

## **Project Overview Figures**

**Figure 1**  
**Site Location Map**



REGROW PROGRAM

**Figure A-1:  
Site Location**

Applicant ID: PR-RGRW-01779



- Site
- Site Parcel

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

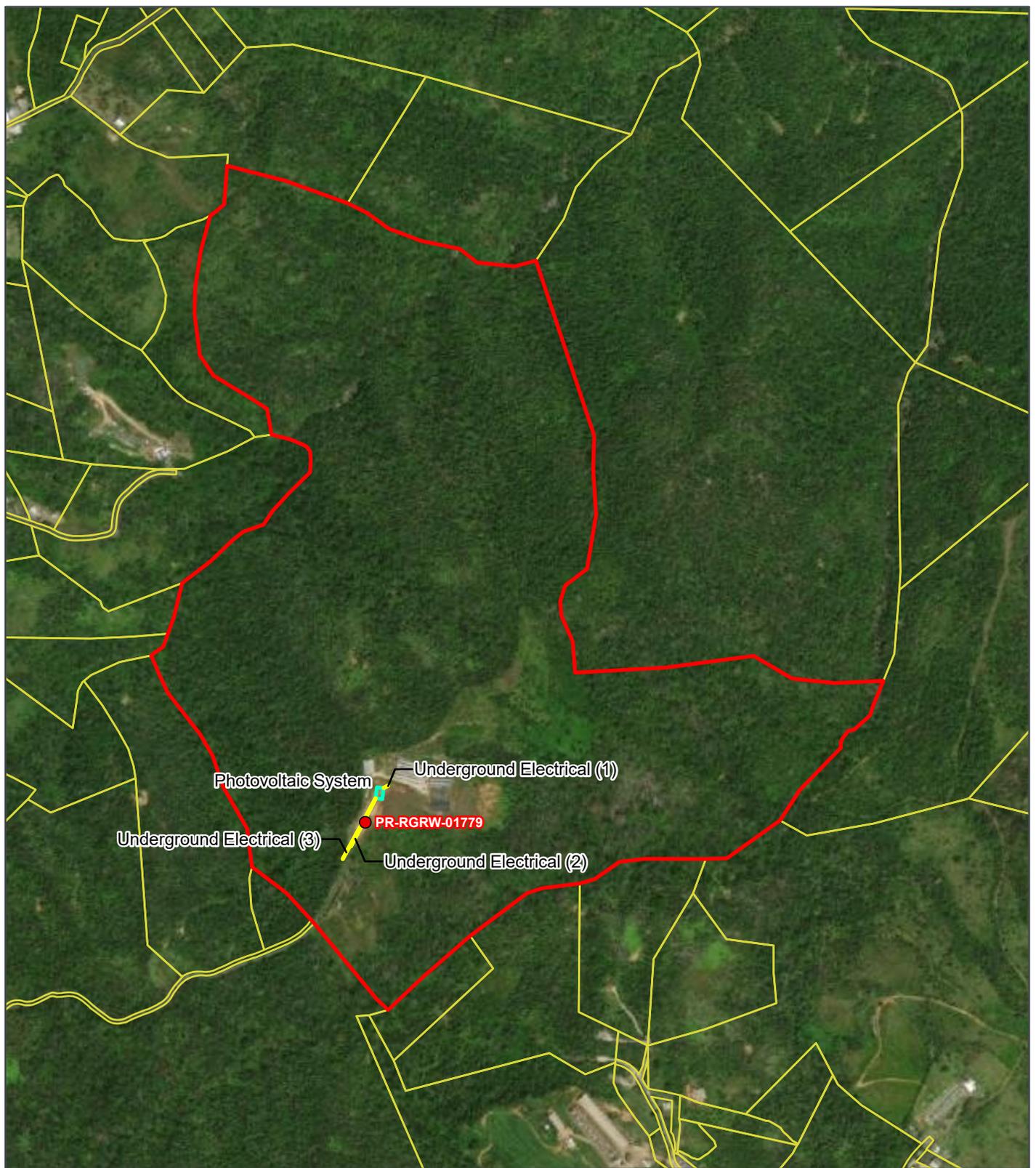
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024

Layout: Site Location  
Aprx: 72428\_ReGrowTier2Maps



**Figure 2**  
**Site Vicinity Map**



REGROW PROGRAM

**Figure A-2:  
Site Vicinity**

Applicant ID: PR-RGRW-01779



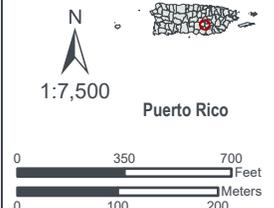
- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024

Layout: Site Vicinity  
Aprx: 72428\_ReGrowTier2Maps



**Figure 3**  
**USGS Landslide Map**



REGROW PROGRAM

**Figure A-3:  
USGS Landslide Map**

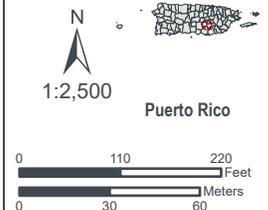
Applicant ID: PR-RGRW-01779



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ Underground Electrical Line
- ▭ Greater than 25 Landslides per sq km
- ▭ Less than 25 Landslides per sq km
- ▭ No Landslides
- ▭ Not Examined

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: [https://arcgis.cuahsi.org/arcgis/rest/services/MariaRAPID/Hurricane\\_Maria\\_Landslides/MapServer](https://arcgis.cuahsi.org/arcgis/rest/services/MariaRAPID/Hurricane_Maria_Landslides/MapServer)  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: Landslide



**Appendix B**  
**Attachments and Supporting**  
**Documentation**

**Attachment 1**

**Airport Hazards Partner Worksheet and**

**Airport Hazards Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## **Airport Hazards (CEST and EA) – PARTNER**

<https://www.hudexchange.info/environmental-review/airport-hazards>

**1. To ensure compatible land use development, you must determine your site’s proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

No à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

Yes à *Continue to Question 2.*

**2. Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

Yes, project is in an APZ à *Continue to Question 3.*

Yes, project is an RPZ/CZ à *Project cannot proceed at this location.*

No, project is not within an APZ or RPZ/CZ

à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

**3. Is the project in conformance with DOD guidelines for APZ?**

Yes, project is consistent with DOD guidelines without further action.

à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

No, the project cannot be brought into conformance with DOD guidelines and has not been approved. à *Project cannot proceed at this location.*

**If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Click here to enter text.

*à Work with the RE/HUD to develop mitigation measures. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

The project site is not within 2,500 ft of a civil primary or commercial service airport or within 15,000 ft of a military airport. The nearest civil primary or commercial service airport Mercedita, is located 120,710 ft (23miles [mi]) from the project site. The nearest military airport, Luis Munoz Marin International Airport], is located 135,940 ft (26 mi) from the project site. No further evaluation is required. The project is in compliance with airport hazards requirements.



REGROW PROGRAM

**Figure B 1-1:  
Airport Hazards Map**

Applicant ID: PR-RGRW-01779

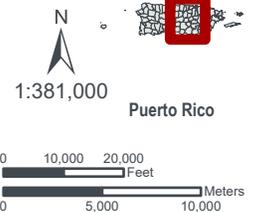


- Site
- Airport Runway
- Accident Potential Zones (APZ)
- Runway Protection Zones (RPZ)
- 2,500-FT Civil Airport Buffer
- 15,000-FT Military Airport Buffer

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://geodata.bts.gov/>  
Base Map: ESRI ArcGIS Online,  
accessed February 2024

Updated: 2/19/2024  
Layout: Airport Hazards  
Aprx: 72428\_ReGrowTier2Maps



## **Attachment 2**

# **Coastal Barrier Resources Act Partner Worksheet and Coastal Barrier Resources Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Coastal Barrier Resources (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/coastal-barrier-resources>

Projects located in the following states must complete this form.

Alabama	Georgia	Massachusetts	New Jersey	Puerto Rico	Virgin Islands
Connecticut	Louisiana	Michigan	New York	Rhode Island	Virginia
Delaware	Maine	Minnesota	North Carolina	South Carolina	Wisconsin
Florida	Maryland	Mississippi	Ohio	Texas	

### 1. Is the project located in a CBRS Unit?

- No à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a CBRS Unit.*
- Yes à *Continue to 2.*

Federal assistance for most activities may not be used at this location. You must either choose an alternate site or cancel the project. In very rare cases, federal monies can be spent within CBRS units for certain exempted activities (e.g., a nature trail), after consultation with the Fish and Wildlife Service (FWS) (see [16 USC 3505](#) for exceptions to limitations on expenditures).

### 2. Indicate your recommended course of action for the RE/HUD

- Consultation with the FWS
- Cancel the project

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

The project site is not located in a Coastal Barrier Resource Systems Unit (CBRS) or Otherwise Protected Area (OPA). There are no CBRS units in Aibonito. The closest CBRS unit, Baja de Jobos, is located 55,606



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WASHINGTON, DC 20410-1000

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ft (11 mi) from the project site. No further evaluation is required. The project is in compliance with the Coastal Barrier Resources Act.



REGROW PROGRAM

**Figure B 2-1: Coastal Barrier Resources Map**

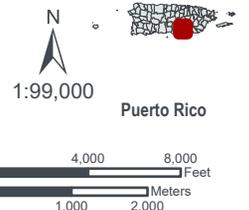
Applicant ID: PR-RGRW-01779



- Site
- Otherwise Protected Area
- System Unit

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://cbrgis.wim.usgs.gov/arcgis/rest/services/CoastalBarrierResourcesSystem/MapServer>  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: Coastal Barrier Resources System



## **Attachment 3**

# **Flood Insurance Partner Worksheet and Flood Insurance Rate Map**



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Flood Insurance (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/flood-insurance>

**1. Does this project involve mortgage insurance, refinance, acquisition, repairs, rehabilitation, or construction of a structure, mobile home, or insurable personal property?**

No. This project does not require flood insurance or is excepted from flood insurance.

à *Continue to the Worksheet Summary.*

Yes à *Continue to Question 2.*

**2. Provide a FEMA/FIRM map showing the site.**

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs).

**Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?**

No à *Continue to the Worksheet Summary.*

Yes à *Continue to Question 3.*

**3. Is the community participating in the National Flood Insurance Program or has less than one year passed since FEMA notification of Special Flood Hazards?**

Yes, the community is participating in the National Flood Insurance Program.

Flood insurance is required. Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.

à *Continue to the Worksheet Summary.*

Yes, less than one year has passed since FEMA notification of Special Flood Hazards.

If less than one year has passed since notification of Special Flood Hazards, no flood insurance is required.

à *Continue to the Worksheet Summary.*

No. The community is not participating, or its participation has been suspended.

Federal assistance may not be used at this location. Cancel the project at this location.

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

A review of the FEMA Flood Insurance Rate Map (FIRM), Community Panel 72000C1730H (effective date 04/19/2024), shows the project site is in Flood Zone X, which is not in a Special Flood Hazard Area (SFHA). Flood insurance is not required. No further evaluation is required. The project is in compliance with the Flood Disaster Protection Act and National Flood Insurance Reform Act.



REGROW PROGRAM

**Figure B 3-1: Flood Insurance Rate Map (FIRM)**

Applicant ID: PR-RGRW-01779



- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line
- Base Flood Elevations
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone VE
- Floodway
- Zone X - Shaded (500-year floodplain)
- Zone X - Unshaded
- Area Not Included
- Open Water

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://hazards.fema.gov/gis/nfhl/rest/services/public/NFHL/MapServer>  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: Effective Floodplain  
Aprx: 72428\_ReGrowTier2Maps

N

1:2,500

Puerto Rico

## **Attachment 4**

**Air Quality Partner Worksheet, List of Non-Attainment/Maintenance Status Counties in Puerto Rico, and Clean Air Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## **Air Quality (CEST and EA) – PARTNER**

<https://www.hudexchange.info/environmental-review/air-quality>

- 1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

Yes → *Continue to Question 2.*

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide any documents used to make your determination.*

- 2. Is your project’s air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**

Follow the link below to determine compliance status of project county or air quality management district:

<http://www.epa.gov/oaqps001/greenbk/>

No, project’s county or air quality management district is in attainment status for all criteria pollutants

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

Yes, project’s management district or county is in non-attainment or maintenance status for one or more criteria pollutants. → *Continue to Question 3.*

- 3. Determine the estimated emissions levels of your project for each of those criteria pollutants that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis* or *threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

No, the project will not exceed *de minimis* or threshold emissions levels or screening levels

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Explain how you determined that the project would not exceed *de minimis* or *threshold* emissions.*

Yes, the project exceeds *de minimis* emissions levels or screening levels.

→ *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

**4. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

[Click here to enter text.](#)

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

The project site is in Aibonito Municipio, which is within a U.S. Environmental Protection Agency (USEPA) designated attainment area. Municipios in Nonattainment or Maintenance areas include Arecibo, Bayamon, Catano, Guaynabo, Salinas, San Juan and Toa Baja. Project activities include new construction of a photovoltaic system. The project is not anticipated to have a negative impact on air quality. Emissions associated with the proposed actions are temporary and limited to the use of small construction equipment and will be well below the Federal General Conformity Rule de minimis thresholds. No further evaluation is required. The project is in compliance with the Clean Air Act.



You are here: EPA Home > Green Book > >National Area and County-Level Multi-Pollutant Information >Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

## Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of January 31, 2024

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

\* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m<sup>3</sup>) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:

Important Notes

Download National Dataset: [dbf](#) | [xls](#) | [Data dictionary \(PDF\)](#)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/Part County	Population (2010)	State/County FIPS Codes
<b>PUERTO RICO</b>								
Arecibo Municipio	Lead (2008)	Arecibo, PR	1112131415161718192021222324	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	929394959697989900010203040506070809	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	18192021222324	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	52,441	72/137

Important Notes

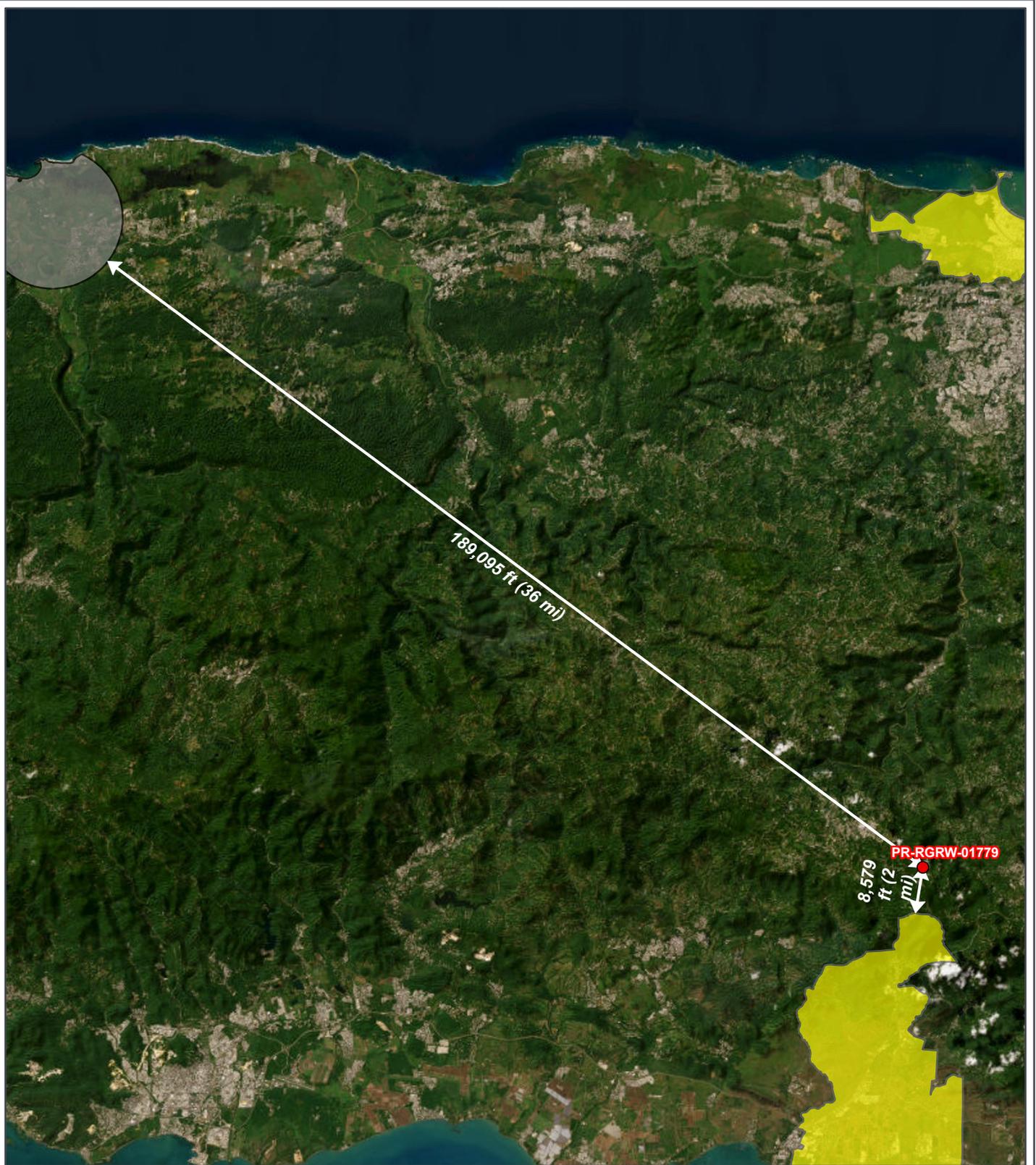
Discover.

Connect.

Ask.

Follow.

2024-01-31



REGROW PROGRAM

**Figure B 4-1:  
Clean Air Map**

Applicant ID: PR-RGRW-01779

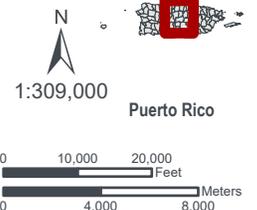


- Site
- 8-Hour Ozone (2015 Standard)\*
- Lead (2008 Standard)
- PM-2.5 (2012 Standard)\*
- Sulfur Dioxide (2010 Standard)

\*No Data in Puerto Rico

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: [https://geopub.epa.gov/arcgis/rest/services/NEPAssist/NEPAVELayersPublic\\_fgdb/MapServer](https://geopub.epa.gov/arcgis/rest/services/NEPAssist/NEPAVELayersPublic_fgdb/MapServer)  
Base Map: ESRI ArcGIS Online, accessed April 2024  
Updated: 4/15/2024  
Layout: Clean Air  
Aprx: 72428\_ReGrowTier2Maps



## **Attachment 5**

# **Coastal Zone Management Partner Worksheet and Coastal Zone Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Coastal Zone Management Act (CEST and EA) – PARTNER

<https://www.onecpd.info/environmental-review/coastal-zone-management>

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samona	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

**1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?**

Yes → Continue to Question 2.

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.

**2. Does this project include activities that are subject to state review?**

Yes → Continue to Question 3.

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

**3. Has this project been determined to be consistent with the State Coastal Management Program?**

Yes, with mitigation. → The RE/HUD must work with the State Coastal Management Program to develop mitigation measures to mitigate the impact or effect of the project.

Yes, without mitigation. → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

No → Project cannot proceed at this location.

**Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

**Include all documentation supporting your findings in your submission to HUD.**

The project site is not located within the Puerto Rico Coastal Management Zone. The closest coastal zone area is located 53,389 ft (10 mi) from the project site. No further evaluation is required. The project is in compliance with the Coastal Zone Management Act.



REGROW PROGRAM

**Figure B 5-1: Coastal Zone Management Map**

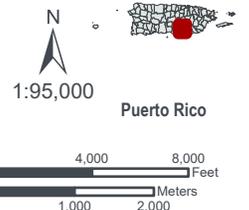
Applicant ID: PR-RGRW-01779



- Site
- Coastal Management Zone

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://coast.noaa.gov/arcgis/rest/services/Hosted/CoastalZoneManagementAct/BaseMap>: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: Coastal Zone Management  
Aprx: 72428\_ReGrowTier2Maps



## **Attachment 6**

# **Contamination and Toxics Substances Partner Worksheet, Radon Agency Correspondence, and Map**



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Contamination and Toxic Substances (Multifamily and Non-Residential Properties) – PARTNER

<https://www.hudexchange.info/programs/environmental-review/site-contamination>

**1. How was site contamination evaluated? <sup>1</sup> Select all that apply.**

- ASTM Phase I ESA
- ASTM Phase II ESA
- Remediation or clean-up plan
- ASTM Vapor Encroachment Screening
- None of the above

*à Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.*

*Continue to Question 2.*

**2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

- No **à Explain below.**

The Environmental Site Inspection and Desktop Review did not reveal any potential contamination or hazards.

*à If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

- Yes *à Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

**3. Can adverse environmental impacts be mitigated?**

---

<sup>1</sup> HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD’s toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

Adverse environmental impacts cannot feasibly be mitigated → HUD assistance may not be used for the project at this site. Project cannot proceed at this location.

Yes, adverse environmental impacts can be eliminated through mitigation.  
à *Provide all mitigation requirements<sup>2</sup> and documents. Continue to Question 4.*

**4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls<sup>3</sup>, or use of institutional controls<sup>4</sup>.**

[Click here to enter text.](#)

**If a remediation plan or clean-up program was necessary, which standard does it follow?**

- Complete removal  
 Risk-based corrective action (RBCA)

à *Continue to the Worksheet Summary.*

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

The project site was evaluated for potential contamination by conducting a field site inspection on February 15, 2024 to identify any onsite hazards including, but not limited to, soil staining, above ground storage tanks, signs of underground storage tanks, odors, hazardous debris etc.

The site inspection did not identify any onsite hazards, stained soil or vegetation and the project is in compliance with contamination and toxic substances requirements.

The project does not involve any occupied structures, and therefore, is exempt from considering radon as part of the site contamination analysis as per HUD Notice CDP- 23-103.

In addition, a desktop review of USEPA databases, NEPAAssist, and other sources was conducted to determine if the project site was located near dump sites, junk yards, landfills, hazardous waste sites, or

---

<sup>2</sup> Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

<sup>3</sup> Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

<sup>4</sup> Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

industrial sites, including USEPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. The parcel has been used for agricultural purposes and there has been no change in land use in the last 20 years. The project is located in a rural area of Aibonito Municipio and will continue to be used for agricultural purpose.

The desktop review did not find any of the above-listed toxic, hazardous or radioactive substances in or within 3,000 feet of the project area. The project is in compliance with contamination and toxic substances requirements.

**Radon**  
**Attachments**



August 20, 2024

Mrs. Carmen R. Guerrero Pérez
Director
Caribbean Environmental Protection Division
City View Plaza II – Suite 7000
#48 Rd. 165 km 1.2
Guaynabo, PR 00968-8069

Via email: guerrero.carmen@epa.gov

RE: Request for information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

This Notice emphasizes the importance of radon testing and mitigation in ensuring safe living environments, particularly in HUD-assisted properties. PRDOH, as the grantee of the Community Development Block Grant for Disaster Recovery and Mitigation (CDBG-DR/MIT), is responsible for ensuring compliance with environmental requirements under CDBG-DR/MIT programs. To fulfill our obligations under this Notice, we must compile comprehensive and up-to-date information on radon levels, testing practices, and any mitigation efforts within the islands of Puerto Rico.

Specifically, we are seeking for possible availability of the following information:

Radon testing data – Results from radon testing conducted within your agency's purview, including details on location, testing methods, and recorded radon levels.

Reports and assessments – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.

Policies and guidelines – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

Historical data – If available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

[Handwritten signature]

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc: Mr. Oleg Povelko, Povelko.Oleg@epa.gov
Mr. Matthew Lautita, lautita.matthew@epa.gov



August 20, 2024

Dr. Silvina Cancelos
Professor
College of Engineering
University of Puerto Rico – Mayagüez Campus
259 Norte Blvd. Alfonso Valdés Cobián
Mayagüez, Puerto Rico

Via email: silvina.cancelos@upr.edu

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Sincerely,

[Handwritten signature]

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc: Dr. Carlos Marín, carlos.marin3@upr.edu



August 20, 2024

Dr. Jessica Izarry  
Director  
Office of Island Affairs  
U.S. Centers for Disease Control and Prevention  
1324 CII Canada, San Juan, 00920  
Guaynabo, PR 00968-8069

Via email: [OIA@cdc.gov](mailto:OIA@cdc.gov)

**RE: Request for Information regarding available data on radon testing and levels within Puerto Rico**

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Sincerely,

  
William O. Rodríguez Rodríguez, Esq.  
Secretary

August 20, 2024

Mrs. Anais Rodríguez  
Secretary  
Puerto Rico Department of Natural Resources  
Carretera 8838, km. 6.3, Sector El Cinco,  
Río Piedras San Juan, PR 00926

Via email: [anais.rodriguez@dma.pr.gov](mailto:anais.rodriguez@dma.pr.gov)

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Sincerely,

  
William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. Luis Márquez, [secretariogaire@dma.pr.gov](mailto:secretariogaire@dma.pr.gov)  
Eng. Amarilys Rosario, [aire@dma.pr.gov](mailto:aire@dma.pr.gov)  
Mrs. Elid Ortega, [ortega@dma.pr.gov](mailto:ortega@dma.pr.gov)



August 20, 2024

Dr. Carlos R. Mellado López  
Secretary  
Puerto Rico Department of Health  
PO Box 70184  
San Juan, PR 00936-8184

Via email: [drCarlos.mellado@salud.pr.gov](mailto:drCarlos.mellado@salud.pr.gov)

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**Reports and assessments** – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.



August 20, 2024

Mrs. Holly Weyers  
Regional Director, Southeast – Puerto Rico  
US Geological Survey  
3916 Sunset Ridge Road  
Raleigh, NC 27607

Via email: [hswyers@usgs.gov](mailto:hswyers@usgs.gov)

**RE: Request for Information regarding available data on radon testing and levels within Puerto Rico**

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. Raúl Hernández Dabla, [rahernandez2@salud.pr.gov](mailto:rahernandez2@salud.pr.gov)

**Policies and guidelines** – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

**Historical data** – If available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. R. Randall Schumann, [rschumann@usgs.gov](mailto:rschumann@usgs.gov)

**From:** Charp, Paul (CDC/NCEH/DEHSP) <pac4@cdc.gov>  
**Sent:** Tuesday, September 3, 2024 6:36 AM  
**To:** Miranda, Sandra (CDC/PHIC/DPS); Irizarry, Jessica (CDC/PHIC/DPS); Rzeszotarski, Peter (CDC/NCEH/DEHSP); Vinson, D. Aaron (CDC/NCEH/DEHSP)  
**Cc:** Kostak, Liana (CDC/PHIC/DPS); Vazquez, Germaine (CDC/NCEH/DEHSP)  
**Subject:** RE: REHi: Puerto Rico Request for Information- Randon testing and levels

Good morning, Sandra and others,

In response to the request from Mr. William Rodriguez of the Department of Housing, Government of Puerto Rico, I have reviewed all the available data within the CDC National Environmental Public Health Tracking Network system for data related to radon in Puerto Rico. In addition to the tracking data available on the internet, I also reached out to Mr. Aaron Vinson of the NCEH Tracking Branch.

I was not able to find any data in the CDC systems and this was confirmed by Mr. Vinson. We also reached out the US Environmental Protection Agency who indicated they had no radon data in their systems. Please relay this information to Mr. Rodriguez in your response to his requests

If you have any additional questions, please contact me.

Thank you and best regards,

Paul A. Charp, Ph.D., Fellow, HPS  
Senior Health Physicist  
Emerging Environmental Hazards and Health Effects Branch (EEHHEB)  
Division of Environmental Health Science and Practice (DEHSP)  
National Center for Environmental Health (NCEH)  
Centers for Disease Control and Prevention (CDC)  
pcharp@cdc.gov  
770-488-0723 office  
404.388.0614 Cell



**From:** Schumann, R. Randall <rschumann@usgs.gov>  
**Sent:** Wednesday, August 21, 2024 4:39 PM  
**To:** Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Weyers, Holly S <hsweyers@usgs.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>  
**Subject:** RE: Request for Information- Radon testing and levels

Dear Ms. Medina Smaine,

In the early 1990s the U.S. Geological Survey (USGS) conducted geologic assessments of radon potential for all 50 states and the territories of Guam and Puerto Rico, in collaboration with the U.S. EPA. I conducted the geologic radon potential assessment for Puerto Rico. The PDF file of the report is too large to attach to this message but it can be obtained at <https://pubs.usgs.gov/of/1993/0292k/report.pdf>. The USGS did not conduct indoor radon testing and we did not conduct field studies associated with this assessment; it was based on existing data. Mr. David Saldana of the Puerto Rico Department of Health kindly provided us with data for 610 homes that were tested for indoor radon by his agency between 1993 and 1995, which are summarized in the report. I am not aware of any other radon-related geologic studies conducted in the Commonwealth of Puerto Rico by the U.S. Geological Survey.

Best regards,

R. Randall Schumann  
Scientist Emeritus  
U.S. Geological Survey  
Geosciences and Environmental Change Science Center  
Denver, Colorado, USA  
[rschumann@usgs.gov](mailto:rschumann@usgs.gov)  
<https://www.usgs.gov/staff-profiles/r-randall-schumann>

-----

**From:** Raul Hernandez Doble <rhernandez2@salud.pr.gov>  
**Sent:** Wednesday, August 21, 2024 2:13:31 PM  
**To:** Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Dr. Carlos Mellado <drcarlos.mellado@salud.pr.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Mayra Toro Tirado <mtoro@salud.pr.gov>  
**Subject:** RE: [EXTERNAL]Request for Information- Randon testing and levels

Good afternoon. Ms. Medina

I regret to inform that we do not have any recent information on radon testing, since we do not have a certified radiation laboratory certified for radon testing. There are companies that sell test kits available online that can be done and mailed to a testing laboratory. There are also lists of radon contractors and these companies that process radon testing cartridges with instructions, on the Environmental Protection Agency Indoor air Quality web page. The last radon study in Puerto Rico done by the PR Department of Health was done on the year 1993.

Raul Hernandez Doble  
Director, Seccion Salud Radiologica  
Division de Salud Ambiental  
Secretaria Auxiliar para la Vigilancia y la Proteccion de la Salud Publica  
[rhernandez2@salud.gov.pr](mailto:rhernandez2@salud.gov.pr)  
Phone: (787)765-2929 ext. 3210

---

**From:** Reyes, Brenda <Reyes.Brenda@epa.gov>  
**Sent:** Wednesday, September 18, 2024 11:48 AM  
**To:** Cesar O Rodriguez Santos <cesarrodriguez@drna.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Silvana Cancelos Mancini <silvana.cancelos@upr.edu>; Melanie Medina Smaine <mmedina@vivienda.pr.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Povetko, Oleg (he/him/his) <Povetko.Oleg@epa.gov>  
**Subject:** RE: Request for Information- Randon testing and levels

Saludos.

La EPA esta trabajando una respuesta a su petición. Se sometió borrador a la directora y el subdirector para su aprobación y firma.

Brenda Reyes Tomassini  
Public Affairs  
U.S. EPA  
Region 2  
Caribbean Environmental Protection Division  
(787) 977-5869/(787) 977-5865  
Mobile: 202-834-1290

---

**From:** Silvana Cancelos Mancini <[silvana.cancelos@upr.edu](mailto:silvana.cancelos@upr.edu)>  
**Sent:** Friday, September 6, 2024 15:04  
**To:** Melanie Medina Smaine <[mmedina@vivienda.pr.gov](mailto:mmedina@vivienda.pr.gov)>  
**Cc:** Elaine Dume Mejia <[Edume@vivienda.pr.gov](mailto:Edume@vivienda.pr.gov)>; Luz S Colon Ortiz <[Lcolon@vivienda.pr.gov](mailto:Lcolon@vivienda.pr.gov)>; Aldo A. Rivera-Vazquez <[aarivera@vivienda.pr.gov](mailto:aarivera@vivienda.pr.gov)>; Maritza Rosa Olivares <[maritzarosaolivares@drna.pr.gov](mailto:maritzarosaolivares@drna.pr.gov)>; Reyes, Brenda <[Reyes.Brenda@epa.gov](mailto:Reyes.Brenda@epa.gov)>; Povetko, Oleg <[Povetko.Oleg@epa.gov](mailto:Povetko.Oleg@epa.gov)>  
**Subject:** Re: Request for Information- Randon testing and levels

Estimada Melanie Medina

Quería dejarte saber que recibimos su correo el 21 de agosto al igual que el de Maritza Rosa el pasado 4 de septiembre. Ya las personas involucradas de EPA, junto conmigo y el Dr. Marín estamos al tanto del asunto y estamos trabajando para poder enviarles la información.

Atentamente

Silvana Cancelos  
Professor  
Associate Director  
Mechanical Engineering Department  
University of Puerto Rico - Mayaguez  
Call BOX 9000 Mayaguez PR 00680  
Tel: 787-832-4040 ext 5956  
email: [silvana.cancelos@upr.edu](mailto:silvana.cancelos@upr.edu)



Bubble Dynamics Lab  
University of Puerto Rico - Mayaguez



EPA REGION 2  
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION

September 23, 2024

**VIA EMAIL**

William O. Rodriguez Rodriguez, Esq.  
Secretary  
Puerto Rico Department of Housing  
Barbosa Ave. 606 Building Juan C. Cordero  
San Juan, PR 00917  
Email: W.Rodriguez@vivienda.pr.gov

**RE: EPA Response to August 20, 2024 request for information of data on radon testing and levels in Puerto Rico**

Dear Honorable Secretary Rodriguez Rodriguez:

This communication is in response to your letter of August 20, 2024 addressed to the Puerto Rico Department of Natural and Environmental Resources (DNER) and referred to the U.S. Environmental Protection Agency (EPA) regarding available data on radon testing and levels within Puerto Rico.

EPA's National Radon Action Plan 2021–2025 sets a goal for the nation to find, fix and prevent high indoor radon levels in 8 million buildings by 2025 and prevent 3,500 lung cancer deaths per year. Under this Plan, leaders from across multiple sectors are working together to plan, guide, and sustain nationwide action to prevent exposure to radon.

Due to the lack of data in Puerto Rico, EPA undertook an investigation in collaboration with the University of Puerto Rico-Mayaguez (UPRM) Campus, Departments of Civil Engineering and Surveying and Mechanical Engineering, to find out if radon presented a problem in Puerto Rico. Up until 2021, the only data we had for Puerto Rico was a 1993-1995 mail-in radon screening study referred to by the U.S. Geological Survey report (USGS, 1995) in which the USGS concluded that several areas of Puerto Rico have the geologic potential to generate indoor radon levels exceeding the EPA Action Level of 4 pCi/L (picocuries per liter), perhaps locally reaching very high levels above 50 pCi/L, if a house construction and

ventilation allow for soil-gas radon to enter and concentrate within the structure.<sup>1</sup> According to the USGS report, most of these areas are located in the northwest part of the island. Please note that the actual 1993-1995 study documentation is not available to the EPA.

Typical radon testing technology used in mainland United States (charcoal canisters or electric-powered devices) are impractical in Puerto Rico because of high humidity and power outages. The recovery and rebuilding of communities following the aftermath of 2017 Hurricanes Irma and Maria presented an opportunity to develop radon prevention and mitigation strategies in 2019. Initially, EPA sampled indoor radon air in over 170 single-family residences in the municipalities of San Sebastian, Lares, Ciales, Arecibo, Morovis, Camuy, and Hatillo and later expanded the project to other municipalities such as Rincon, Aguada, Aguadilla, Isabela, Quebradillas, Barceloneta and Vega Baja. The quality assurance protocols were anchored in American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) standards of practice (ANSI/AARS, 2019). The sampling was designed in two stages: scoping and confirmatory sampling. The scoping sampling was conducted using Corentium Home (CH) electronic monitors and E-Perm systems. Locations measuring above the EPA Action Level of 4 pCi/L with CH were measured at the second stage of the sampling using RAD7 and Corentium Pro Continuous Radon Monitors (CRMs). Nationally certified radon sampling professionals led by one such professional from the UPRM conducted confirmatory sampling in the second stage. Also, during the study, the nationally certified radon mitigation professionals inspected several homes with elevated indoor radon levels.

Mapping radon in Puerto Rico proved to be a complicated endeavor given the COVID-19 pandemic in 2020. EPA and UPRM continue to work on the project, however, results have not been finalized, and no scientific report has been published yet. Unfortunately, EPA cannot share preliminary data at this time because it contains privileged information. Nevertheless, preliminary data from the study does show homes with levels over 4 pCi/L (EPA Action Level) that might need mitigation to protect the health of their inhabitants.

Although many states have developed laws and regulations governing radon disclosure, certification, and mitigation, Puerto Rico lacks legislation or mandatory radon testing provisions for new construction, remodeling, selling or buying homes. Given this loophole and aiming to answer your request, the EPA can provide information on Best Management Practices for sampling indoor radon in Puerto Rico.

<sup>1</sup> Reference: USGS. Geologic Radon Potential of Guam and Puerto Rico, Report 93-292-K. Washington, DC: USGS. Retrieved 9/11/2024, from <https://pubs.usgs.gov/of/1993/0292k/report.pdf>.

CITY VIEW PLAZA II BUILDING, 7<sup>TH</sup> FLOOR  
ROUTE 185 GUAYNABO, PR 00988

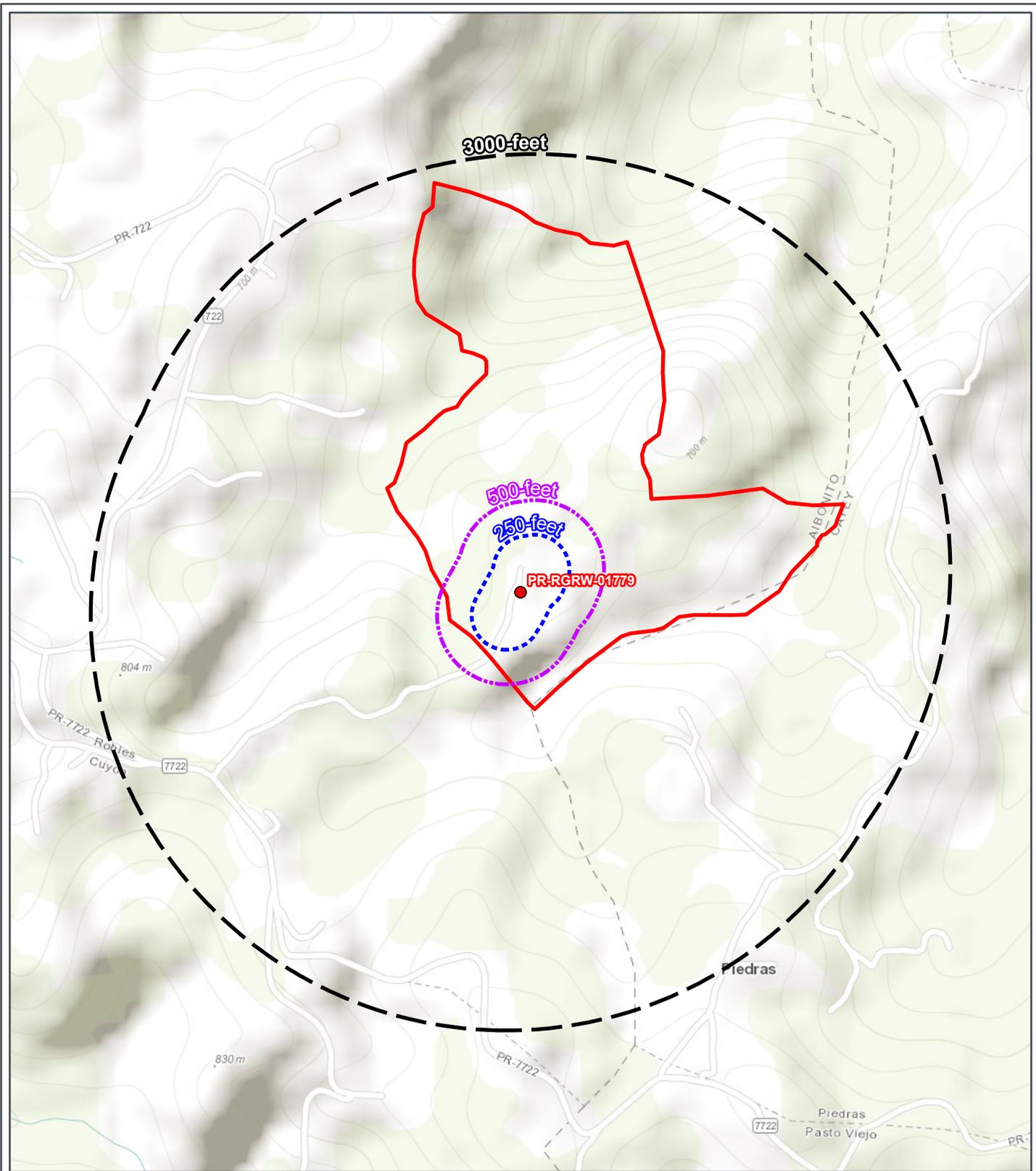
2

If you have any questions or need any additional information, please contact me at 787-977-5865 or [guerrero.carmen@epa.gov](mailto:guerrero.carmen@epa.gov) or have your staff contact Reyes, Brenda at [reyes.brenda@epa.gov](mailto:reyes.brenda@epa.gov) or (787) 977-5869.

Sincerely,  
**CARMEN GUERRERO PEREZ**  
Carmen R. Guerrero Pérez  
Director

Digitally signed by  
CARMEN GUERRERO PEREZ  
Date: 2024.09.23 09:41:39  
-04'00'

cc: Roberto Mendez, Esq (Acting Secretary, PR Department of Natural and Env. Resources)  
Melany Medina: [mmedina@vivienda.pr.gov](mailto:mmedina@vivienda.pr.gov)  
Elaine Dume Mejia: [Edume@vivienda.pr.gov](mailto:Edume@vivienda.pr.gov)  
Luz S Colon Ortiz: [Lcolon@vivienda.pr.gov](mailto:Lcolon@vivienda.pr.gov)  
Aldo A. Rivera-Vazquez: [aarivera@vivienda.pr.gov](mailto:aarivera@vivienda.pr.gov)  
Cesar O. Rodriguez: [cesarrodriquez@drna.pr.gov](mailto:cesarrodriquez@drna.pr.gov)  
Marita Rosa Olivares: [maritzarosaolivares@drna.pr.gov](mailto:maritzarosaolivares@drna.pr.gov)



REGROW PROGRAM

**Figure B 6-1:  
Contamination and  
Toxic Substances Map**

Applicant ID: PR-RGRW-01779



- Site
- ▭ Site Parcel
- ▭ Buffer (250-feet)
- ▭ Buffer (500-feet)
- ▭ Buffer (3000-feet)
- ▭ Water dischargers

- ▭ Toxic Substances Control Act
- ▭ Toxic releases
- ▭ Superfund
- ▭ Hazardous waste
- ▭ Brownfields
- ▭ Air pollution

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://geopub.epa.gov/arcgis/rest/services/EMEF/MapServer>  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: Contamination and Toxic Substances

1:12,000

Puerto Rico

## **Attachment 7**

**Endangered Species Act Partner  
Worksheet, Threatened and Endangered  
Species Technical Memorandum,  
USFWS IPaC Species List and Critical  
Habitat Map**



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Endangered Species Act (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/endangered-species>

### 1. Does the project involve any activities that have the potential to affect species or habitats?

No, the project will have No Effect due to the nature of the activities involved in the project.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

**Explain your determination:**

Click here to enter text.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

Yes, the activities involved in the project have the potential to affect species and/or habitats. → Continue to Question 2.

### 2. Are federally listed species or designated critical habitats present in the action area?

Obtain a list of protected species from the Services. This information is available on the [FWS Website](#).

No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.

Yes, there are federally listed species or designated critical habitats present in the action area. → Continue to Question 3.

**3. Recommend one of the following effects that the project will have on federally listed species or designated critical habitat:**

No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Informal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Formal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

**Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

**Include all documentation supporting your findings in your submission to HUD.**

No suitable habitat for any federally listed species is present within the proposed project location and no tree clearing or vegetation removal is proposed as a part of construction activities; therefore, project activities will have *no effect* to any federal listed species or critical habitat. The project site is 4 miles (18,631 feet) away from the closest final designated critical habitat. See the attached Threatened and Endangered Species Technical Memorandum.



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Caribbean Ecological Services Field Office  
Bayamón | Mayagüez | Maricao | Río Grande | St Croix  
P.O. Box 491  
Boquerón, Puerto Rico 00622



In Reply Refer to:  
FWS/R4/CESFO/72009-Gen

Submitted Via Electronic Mail: [jcperez@vivienda.pr.gov](mailto:jcperez@vivienda.pr.gov)

Juan Carlos Pérez-Bofill, PE, MEng.  
Director – Disaster Recovery CDBG-DR Program  
Puerto Rico Department of Housing  
P.O. Box 21365  
San Juan, P.R 00928-1365

Re: CDBG-DR PR-RGRW-01779 Jardín Tierra  
Adentro, Aibonito, Puerto Rico

Dear Mr. Pérez-Bofill

Thank you for your letter dated August 02, 2024, requesting informal consultation on the above referenced project. As per your request, our comments are provided under the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The Puerto Rico Department of Housing (PRDOH) is proposing the installation of a new photovoltaic system on a 138- acre property located on State Road PR-7722, Km. 5.8 Int., Robles Ward, La Sierra Sector (18°07'09.7"N 66°13'36.5"W) in the municipality of Aibonito. No tree clearing or vegetation removal will be required.

Using the U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) system, the PRDOH has determined that the proposed project site is located within the range of Puerto Rican boa (*Chilabothrus inornatus*) and palo de ramón (*Banara vanderbiltii*).

PRDOH used the Caribbean Determination Key (DKey) in the IPaC application to evaluate the potential impacts of the proposed project on federally listed species (Project code: 2024-0055696). Based on the answers provided, a consistency letter was obtained for the Puerto Rican boa, which determined that the proposed actions for this project may affect, but is likely to adversely affect (MLAA) this species.

However, based on the nature of the project, scope of work, information available, and analysis of the existing habitat (open, barren ground), PRDOH has determined that the proposed project may affect, but is not likely to adversely affect (NLAA) the Puerto Rican boa instead of the MLAA obtained using the DKey. Conservation measures developed by the Service for the Puerto Rican

boa will be implemented in case an encounter with this species occur. As for palo de ramón, PRDOH has determined the proposed actions has no effect (NE) on this species due to the lack of suitable habitat.

We acknowledge receipt of PRDOH's NE determination for palo de ramón. Currently, we do not have information to refute that determination. Because the PRDOH made a NE determination, PRDOH is not required to conduct formal or informal section 7 consultation with the Service, and the Service is not required to concur with PRDOH's NE determination.

As for the Puerto Rican boa we have reviewed the information provided and our files, and concur with PRDOH's determination that the proposed project may affect, but is not likely to adversely affect this species with the implementation of the conservation measures.

In view of this, we believe that requirements of section 7 of the Endangered Species Act (Act) have been satisfied. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impact of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.

Thank you for the opportunity to comment on this project. If you have any questions or require additional information, please contact us via email at [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov) or by phone at (786) 244-0081.

Sincerely,

**LOURDES  
MENA**

Digitally signed by  
LOURDES MENA  
Date: 2024.08.22  
14:00:29 -04'00'

Lourdes Mena  
Field Supervisor

drr

cc:  
SWCA  
HUD  
DNER  
COR3



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

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Houston, Texas 77040  
Tel 281.617.3217 Fax 281.617.3227  
www.swca.com

June 5, 2024

Robert Tawes  
Division Supervisor, Environmental Review  
U.S. Fish and Wildlife Service  
Southeast Regional Office  
1875 Century Boulevard  
Atlanta, GA 30345  
Email: [robert\\_tawes@fws.gov](mailto:robert_tawes@fws.gov)

**Re: Federally Listed Threatened and Endangered Species Evaluation for the Puerto Rico Department of Housing ReGrow PR-RGRW-01779 Project/ SWCA Project No. 72428**

Dear Mr. Tawes:

SWCA Environmental Consultants (SWCA), on behalf of the Puerto Rico Department of Housing, is requesting informal consultation under Section 7(a)(2) of the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 *et seq.*), and in accordance with the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) for the proposed ReGrow PR-RGRW-01779 Project (project). The Project is located on 138-acre Barrio Robles, Sector La Sierra Carretera 7722, KM 5.8 Interior Aibonito, PR 00705 (66.224932°W 18.122148°N).

The proposed project involves the installation of a new photovoltaic system. No tree clearing or vegetation removal will be required for construction.

Using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, we have determined that the proposed project lies within the range of the following federally listed species:

Species	Listing Status
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered
Palo de Ramón ( <i>Banara vanderbiltii</i> )	Endangered

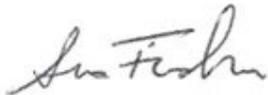
No designated or proposed critical habitat for any listed species was identified within the project area. Based on the nature of the project, scope of work, information available, and a careful analysis of the existing habitat, we have made the following effects determinations:

Species	Effect Determination	Conservation Measures to be Implemented
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Not likely to adversely affect (NLAA)	Puerto Rican Boa General Project Design Guidelines
Palo de Ramón ( <i>Banara vanderbiltii</i> )	No effect (NE)	No Conservation Measures

In accordance with the 2024 Puerto Rican Boa General Project Design Guidelines, if a Puerto Rican Boa (PR Boa) is found in the project action site, work shall cease until the individual moves off on its own. If the PR Boa does not move off, the construction manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the PR Boa.

In order to complete the informal consultation process, we are requesting your concurrence for the NLAA determinations included in this letter. Attached to this letter, we are including the documents used to reach our effect determinations for the listed species. If you have any questions or require any additional information, please contact me at (346) 388-1157 or [susan.fischer@swca.com](mailto:susan.fischer@swca.com).

Sincerely,



Susan Fischer  
Wildlife Ecologist  
SWCA Environmental Consultants

Attachments: Threatened and Endangered Species Technical Memorandum

## TECHNICAL MEMORANDUM

**To:** Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boquerón, Puerto Rico 00622

**From:** Susan Fischer, Project Biologist on behalf of the Puerto Rico Department of Housing

**Date:** June 5, 2024

**Re:** **Threatened and Endangered Species Evaluation for the Puerto Rico Department of Housing ReGrow PR-RGRW-01779 Project/ SWCA Project No. 72428**

---

### Project Description

Jardin Tierra Adentro, the applicant, is proposing installation of a new photovoltaic system on a 138-acre parcel in the Municipio of Aibonito, Puerto Rico (project) (Appendix A, Figure 1). The project is located at Barrio Robles, Sector La Sierra Carretera 7722, KM 5.8 Interior Aibonito, PR 00705, in a rural area. The estimated dimensions of the proposed photovoltaic system are expected to be no larger than 30 feet (ft) by 16 ft with a height of 5 ft. It will be placed on top of a platform, which is expected to be approximately 576 square feet (sq ft) (32 ft x 18 ft) and will be elevated from the ground using poles that enter the ground at a maximum depth of 2 ft (Appendix A, Figure 2).

### Existing conditions

The existing habitat conditions at the project location consist of a mix of cleared and agricultural areas. The proposed project area consists of open, barren ground. There is one stream mapped along the southeastern boundary of the subject property, approximately 584 feet southeast of the project area (Appendix A, Figure 3). Representative photographs of the proposed location are provided in Appendix B.

### Federally Protected Species

SWCA obtained a federal threatened and endangered species list from the USFWS (2024a) Information for Planning and Consultation (“IPaC”) website for a 100-foot buffer around the photovoltaic system (review area) (Appendix C). The IPaC automatically generates a list of species and other resources of concern, such as critical habitat, that are known or expected to be in the specified area and could potentially be directly or indirectly affected. According to the IPaC query for the project, two federally listed endangered species has the potential to occur in the review area; the Puerto Rican boa (*Chilabothrus inornatus*), and palo de Ramón (*Banara vanderbiltii*) SWCA also evaluated the review area for potential habitat for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) as they are protected by the Bald and Golden Eagle Protection Act of 1940 (“BGEPA”).

The bald and golden eagle’s range do not extend into Puerto Rico (Cornell Lab of Ornithology 2024); therefore, these species were eliminated from further analysis for this project. Table 1 identifies the species carried forward for further evaluation and summarizes each species’ habitat requirements, potential for occurrence in the project area, and determination of effects.

**Table 1. Federally Listed Species Range and/or Habitat Requirements**

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effects/Impacts
<b>Reptiles</b>				
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	FE	Considered to be a habitat generalist, the Puerto Rican boa tolerates a wide variety of terrestrial and arboreal habitats, including rocky areas, haystack hill, trees and branches, rotting stumps, caves, plantations, various types of forested areas such as karst and mangrove forests, forested urban and rural areas, and along streams and road edges (USFWS 2011).	<i>May occur.</i> The proposed project area consists of open barren ground, but is adjacent to forested areas.	<i>May affect, but not likely to adversely affect.</i> See discussion below.
<b>Plants</b>				
Palo de Ramón ( <i>Banara vanderbiltii</i> )	FE	Semi-evergreen forest of the subtropical moist forest life zone on the limestone hills of the northwest coast at elevations of 100 to 150 meters and on the mountains of volcanic origin in central Puerto Rico at elevations of more than 800 meters (USFWS 1991).	<i>Unlikely to occur.</i> The proposed project area consists of open mowed lawn.	<i>No effect.</i> There is no suitable habitat for palo de Ramón in the project area. Project area is already cleared.

\*Status Definitions:  
FE = Federally listed endangered

Based on a site visit and habitat evaluations, the palo de Ramón is considered unlikely to occur due to lack of suitable habitat within the project area. The Caribbean Determination Key (DKey) was completed for the project, which generated a *may affect* determination for the Puerto Rican boa (Appendix D). The applicant will employ the conservation measures outlined in the 2024 USFWS General Project Design Guidelines for the Puerto Rican boa (Appendix E), including but not limited to issuing a stop work if a Puerto Rican boa were to occur within the project area, and contacting the Puerto Rico Department of Natural and Environmental Resources for safe capture and relocation of the individual if such action is required. As such, it is anticipated that the project will have *no effect* on the palo de Ramón and *may affect, but is not likely to adversely affect* the Puerto Rican boa.

### Critical Habitat and National Wildlife Refuges

Potential effects to habitat(s) within the project area critical to endangered species must be analyzed along with the endangered species themselves, while any activity proposed on National Wildlife Refuge lands must undergo a compatibility determination conducted by the Refuge. No designated critical habitats are present within 100-feet of any of the proposed project location options (Appendix A, Figure 4) (USFWS 2024b).

## LITERATURE CITED

- Cornell Lab of Ornithology. 2024. All About Birds. Available at: <https://www.allaboutbirds.org/guide/>. Accessed April 2024.
- U. S. Fish and Wildlife Service (USFWS). 1991. Recovery Plan *Banara vanderbiltii*. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, Georgia.
- . 2011. *Puerto Rican Boa (Epicrates inornatus) 5-Year Review: Summary and Evaluation*. U.S. Fish and Wildlife Service, Southeast Region. Boquerón, Puerto Rico.
- . 2024a. Information for Planning and Consultation System (IPaC). Available at: <http://ecos.fws.gov/ipac/>. Accessed March 2024.
- . 2024b. Critical Habitat for Threatened & Endangered Species [USFWS]. Available at: <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>. Accessed March 2024.

## **APPENDIX A**

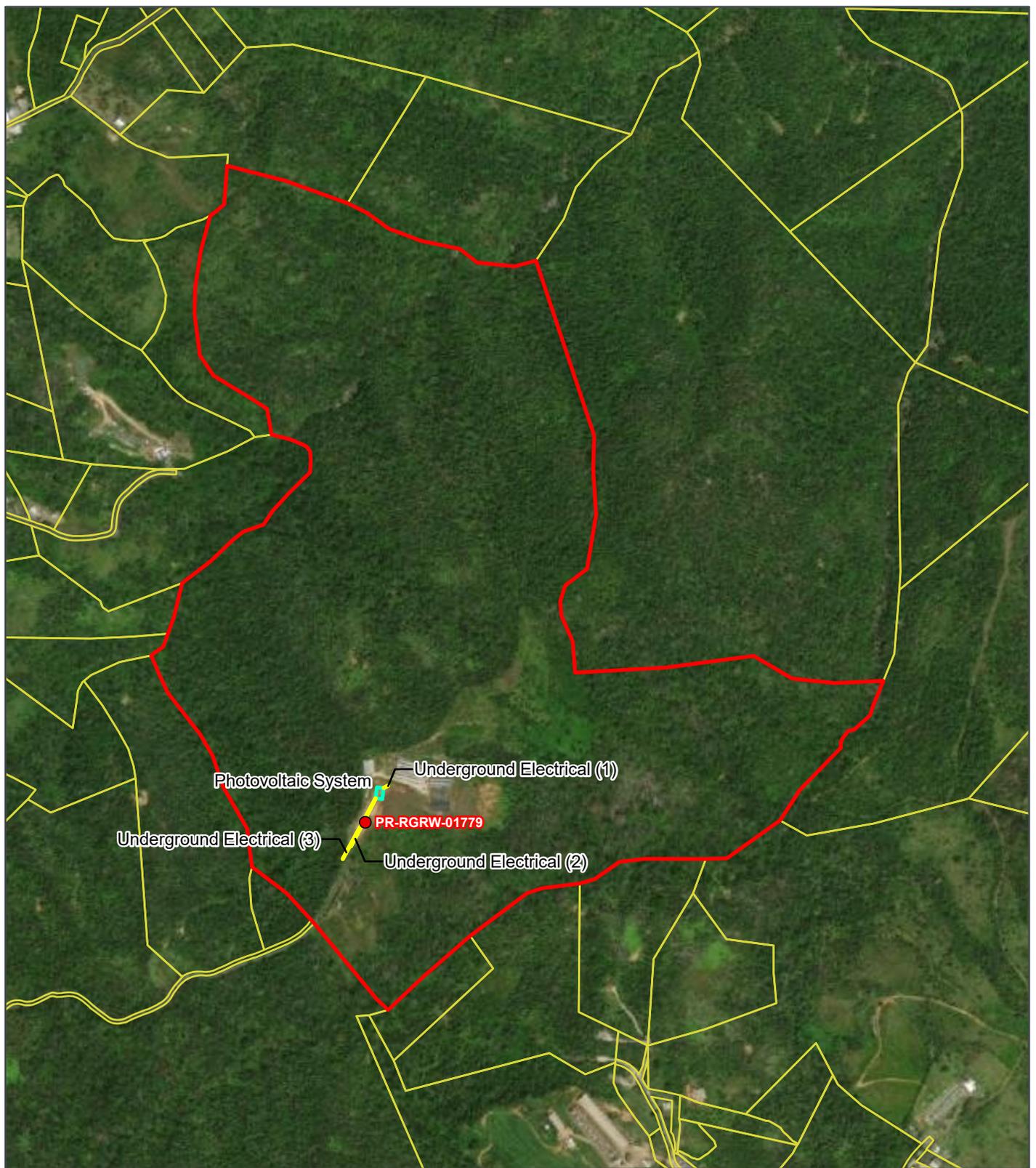
### **Maps**

**Figure 1**

**USGS Topographic Map**



**Figure 2**  
**Site Vicinity Map**



REGROW PROGRAM

**Site Vicinity**

Applicant ID: PR-RGRW-01779

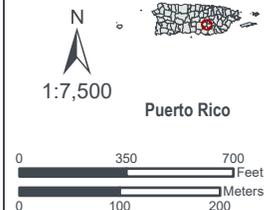


- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.224932°W 18.122148°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: Site Vicinity  
Aprx: 72428\_ReGrowTier2Maps



**Figure 3**  
**Wetlands Map**



REGROW PROGRAM

### Wetlands Protection Map

Applicant ID: PR-RGRW-01779

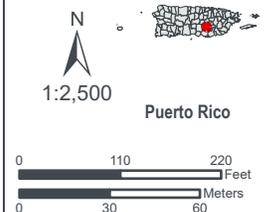


- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line
- NHD Stream
- Estuarine and Marine Deepwater

- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.226906°W 18.119242°N

Data Source: <https://apps.nationalmap.gov/downloader/#/>  
<https://www.fws.gov/program/national-wetlands-inventory/data-download>  
Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/23/2024  
Layout: Wetlands Protection



**Figure 4**  
**Critical Habitat Map**



REGROW PROGRAM

**Critical Habitat Map**

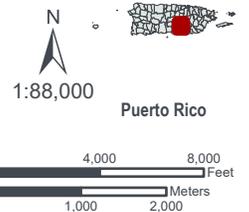
Applicant ID: PR-RGRW-01779



- Site
- Site Parcel
- Critical Habitat - Final
- National Wildlife Refuges

Barrio Robles Sector la Sierra,  
 Carretera 7722 Km 5.8 Interior  
 Aibonito, Puerto Rico 00705  
 Parcel ID: 323-000-002-06-001  
 Parcel Center:  
 66.258748°W 18.103632°N

Data Source: [https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS\\_Critical\\_Habitat/](https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS_Critical_Habitat/)  
 Base Map: ESRI ArcGIS Online, accessed February 2024  
 Updated: 2/19/2024  
 Layout: Critical Habitat  
 Aprx: 72428\_ReGrowTier2Maps



## **APPENDIX B**

### **Photographic Log**

Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 01	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Northeast		
<b>Description:</b> Overview photo taken from the southwest corner of the proposed photovoltaic system (PV system). This photo shows a large, open area and one of the stakes the applicant used to mark the proposed corners of the installation. One of the sources that will be powered by the PV system, the greenhouses, is shown here.		

<b>Photo #:</b> 02	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> Overview photo taken from the northeast corner of the proposed PV system. This photo shows a large, open area and three of the stakes the applicant used to mark the proposed corners of the installation. This is facing the road into the property and the water holding tank and well.		

Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 03	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> East	
<b>Description:</b> This photo shows another view of the greenhouses/nursery which are one of the sources which the PV system will provide water to, as viewed from the approximate proposed PV system location.	



<b>Photo #:</b> 04	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> North	
<b>Description:</b> This photo shows a pre-existing storage warehouse which will be another item powered by the proposed PV system, as viewed from the approximate proposed PV system location.	



Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 05	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> East/northeast	
<b>Description:</b> This photo shows the pre-existing deep water well (500 ft. deep) for which a water pump will be powered by the proposed PV system. The greenhouses can be seen in the background, and the empty space on the left where the PV system would be installed.	



<b>Photo #:</b> 06	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> Southwest	
<b>Description:</b> This is a photo showing the location of a water holding tank which the well water is pumped into, about 125-150 ft from the associated photo point. It is in good condition.	



## **APPENDIX C**

### **USFWS Information for Planning and Consultation**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Caribbean Ecological Services Field Office  
Post Office Box 491  
Boqueron, PR 00622-0491  
Phone: (787) 834-1600 Fax: (787) 851-7440  
Email Address: [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

In Reply Refer To:  
Project Code: 2024-0055696  
Project Name: PR-RGRW-01779

February 28, 2024

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Caribbean Ecological Services Field Office**

Post Office Box 491

Boqueron, PR 00622-0491

(787) 834-1600

## PROJECT SUMMARY

Project Code: 2024-0055696  
Project Name: PR-RGRW-01779  
Project Type: Disaster-related Grants  
Project Description: Installation of a photovoltaic system.  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.119356099999997,-66.22689807314059,14z>



Counties: Aibonito County, Puerto Rico

## ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## REPTILES

NAME	STATUS
Puerto Rican Boa <i>Chilabothrus inornatus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/4OJKRSUOIZC3XHUX4OQ6S3QVDI/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/4OJKRSUOIZC3XHUX4OQ6S3QVDI/documents/generated/7159.pdf</a>	Endangered

## FLOWERING PLANTS

NAME	STATUS
Palo De Ramon <i>Banara vanderbiltii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8113">https://ecos.fws.gov/ecp/species/8113</a>	Endangered

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## **IPAC USER CONTACT INFORMATION**

Agency: SWCA

Name: Kaitie Wilms

Address: 911 Hammond Drive

City: North Augusta

State: SC

Zip: 29841

Email: kaitie.wilms@swca.com

Phone: 8436930711

**APPENDIX D**

**USFWS Consistency Letter**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Caribbean Ecological Services Field Office  
Post Office Box 491  
Boqueron, PR 00622-0491  
Phone: (787) 834-1600 Fax: (787) 851-7440  
Email Address: [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

In Reply Refer To:  
Project code: 2024-0055696  
Project Name: PR-RGRW-01779

February 28, 2024

Subject: Consistency letter for the project named 'PR-RGRW-01779' for specified threatened and endangered species, that may occur in your proposed project location, pursuant to the IPaC determination key titled Caribbean Determination Key (DKey).

Dear Applicant:

Thank you for using the assisted evaluation keys in IPaC. This letter is provided pursuant to the Service's authority under the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531et seq.). On February 28, 2024, Kaitie Wilms used the Caribbean DKey; dated January 19, 2024, in the U.S. Fish and Wildlife Service's online [IPaC application](#) to evaluate potential impacts to federally listed species, from a project named 'PR-RGRW-01779'. The project is located in Aibonito County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.119356099999997,-66.22689807314059,14z>



The following description was provided for the project 'PR-RGRW-01779':

Installation of a photovoltaic system.

Based on your answers and the assistance of the Service's Caribbean DKey, you made the following effect determination(s) for the proposed Action:

<b>Species</b>	<b>Listing Status</b>	<b>Determination</b>
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered	May affect

**Consultation with the Service is not complete.** Further consultation with the Caribbean Ecological Services office is required for those species with a determination of "may affect" listed above. Please contact the Caribbean Ecological Services office to discuss methods to avoid or minimize potential adverse effects to those species.

We appreciate your interest in protecting endangered species and their habitats. It is the Service's mission to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of our people. If you have any questions or require additional information, please contact our office at [Caribbean\\_es@fws.gov](mailto:Caribbean_es@fws.gov).

**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

PR-RGRW-01779

**2. Description**

The following description was provided for the project 'PR-RGRW-01779':

Installation of a photovoltaic system.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.119356099999997,-66.22689807314059,14z>



## QUALIFICATION INTERVIEW

1. Is the proposed project an EPA Multi-Sector General Permit (MSGP) renewal for an existing project? ([MSGP Fact Sheet](#))

*No*

2. Is the proposed project within an urban developed area? (i.e., cities, downtowns, shopping malls etc.)

**Note:** Urban and developed areas has one or more of the following characteristics: Presence of existing buildings, residential areas, and commercial establishments. Well-established infrastructure including roads, utilities, and urban facilities. High population density. Established neighborhoods and urban amenities ("urbanizaciones"). Developed landscape with paved surfaces, parking lots, and industrial areas. Signs of human activity and urbanization, such as shopping centers and recreational facilities. Location within the boundaries of a city or town ("casco urbano"). High concentration of built-up structures and limited open spaces. Aerial imagery might be requested to the applicant. .

*No*

3. Does the proposed project consist of rehabilitation or demolition of existing single-family homes and buildings?

*No*

4. Does the proposed project consist of improvements to existing facilities?

**Note:** Examples of facilities are occupied single family homes, and buildings; existing recreational facilities, including the installation of roofs to existing basketball courts, etc.

*No*

5. Does the proposed project consist of repavement or repair of existing roads and installing transit signage or guardrails?

*No*

6. Does the proposed project consist of the construction of gutters and/or sidewalks along existing roads, and developments?

*No*

7. Does the proposed project consist of replacement or repair of existing bridges which include cutting vegetation or earth movement?

*No*

8. Does the proposed project consist of activities within existing Right of Ways (ROWs) along roads which include cutting vegetation or earth movement?

*No*

9. Is the proposed project located within a rural area covered by grassland (pasture lands "pastos")?

*No*

10. Is the proposed project adjacent or within a forested area?

**Note:** Examples of immediately adjacent to forested areas are rock walls and haystack hills (“mogotes”), wet montane forest, lowland wet forest, remnant coastal, mangrove forest, damp and dry limestone karst forests, pastureland with patches of exotic trees.

*No*

11. Is the proposed project an existing facility or the expansion of an existing facility within the footprint of the already developed area?

*No*

12. Is the proposed project a new facility which would require earth moving, vegetation clearing, or debris removal using heavy machinery, the use of staging areas, construction of temporary access roads?

*No*

13. [Hidden Semantic] Does the proposed project intersect the Puerto Rican boa area of influence?

**Automatically answered**

*Yes*

## **IPAC USER CONTACT INFORMATION**

Agency: SWCA

Name: Kaitie Wilms

Address: 911 Hammond Drive

City: North Augusta

State: SC

Zip: 29841

Email: kaitie.wilms@swca.com

Phone: 8436930711

## **LEAD AGENCY CONTACT INFORMATION**

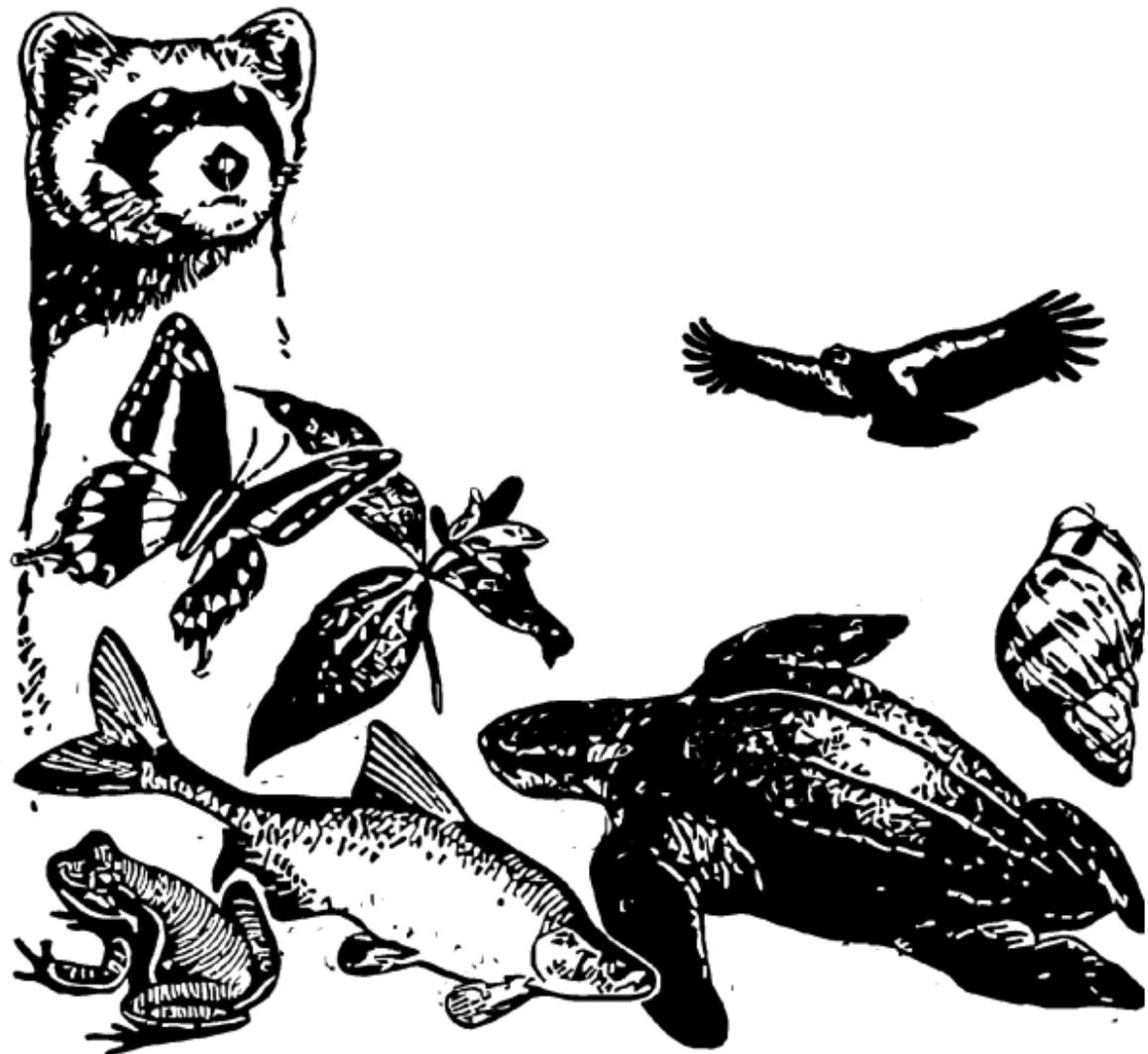
Lead Agency: Department of Housing and Urban Development

## **APPENDIX E**

### **Project Design Guidelines**

# General Project Design Guidelines (1 Species)

Generated February 28, 2024 08:02 PM UTC, IPaC v6.105.1-rc1



# Table of Contents

Species Document Availability .....	<a href="#">1</a>
Puerto Rican Boa - Caribbean Ecological Services Field Office .....	<a href="#">2</a>

# Species Document Availability

## Species with general design guidelines

Puerto Rican Boa *Chilabothrus inornatus*

## Species without general design guidelines available

Palo De Ramon *Banara vanderbiltii*

# General Project Design Guidelines - Palo De Ramon and 1 more species

Published by Caribbean Ecological Services Field Office for the following species included in your project

Palo De Ramon *Banara vanderbiltii*

Puerto Rican Boa *Chilabothrus inornatus*

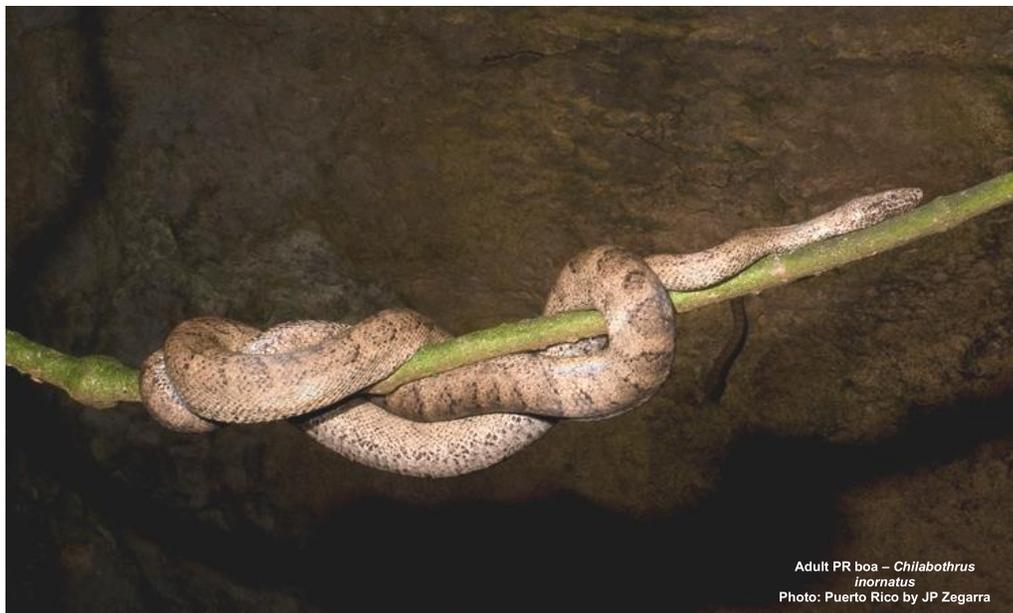


## U.S. FISH AND WILDLIFE SERVICE CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

### Conservation Measures for the Puerto Rican boa (*Chilabothrus inornatus*)

Section 7 (a)(1) of the Endangered Species Act (ESA) charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect federally listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa is subject to penalties under the ESA. If Federal funds or permits are needed, the funding or permitting agency should initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species.

The endangered Puerto Rican (PR) boa (*Chilabothrus inornatus*, formerly *Epicrates inornatus*) is the largest endemic snake species that inhabits Puerto Rico. The PR boa is non-venomous and does not pose any life threatening danger to humans, but some individuals may try to bite if disturbed or during capture or handling. Its body color ranges from tan to dark brown with irregular diffuse marking on the dorsum, but some individuals lack marking and are uniformly dark. Juveniles may have a reddish color with more pronounced markings. In general, as they mature, their body color tends to darken.



The PR boa was federally listed in 1970. Currently, the species has an island-wide distribution and occurs in a wide variety of habitat types, ranging from wet montane to subtropical dry forest and can be found from mature forest to areas with different degrees of human disturbance such as roadsides or houses, especially if near their habitat in rural areas. The PR boa is considered mostly nocturnal, remaining less active, concealed or basking under the sun during the day.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the PR boa and its habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional conservation measures can be implemented besides the ones presented in this document.

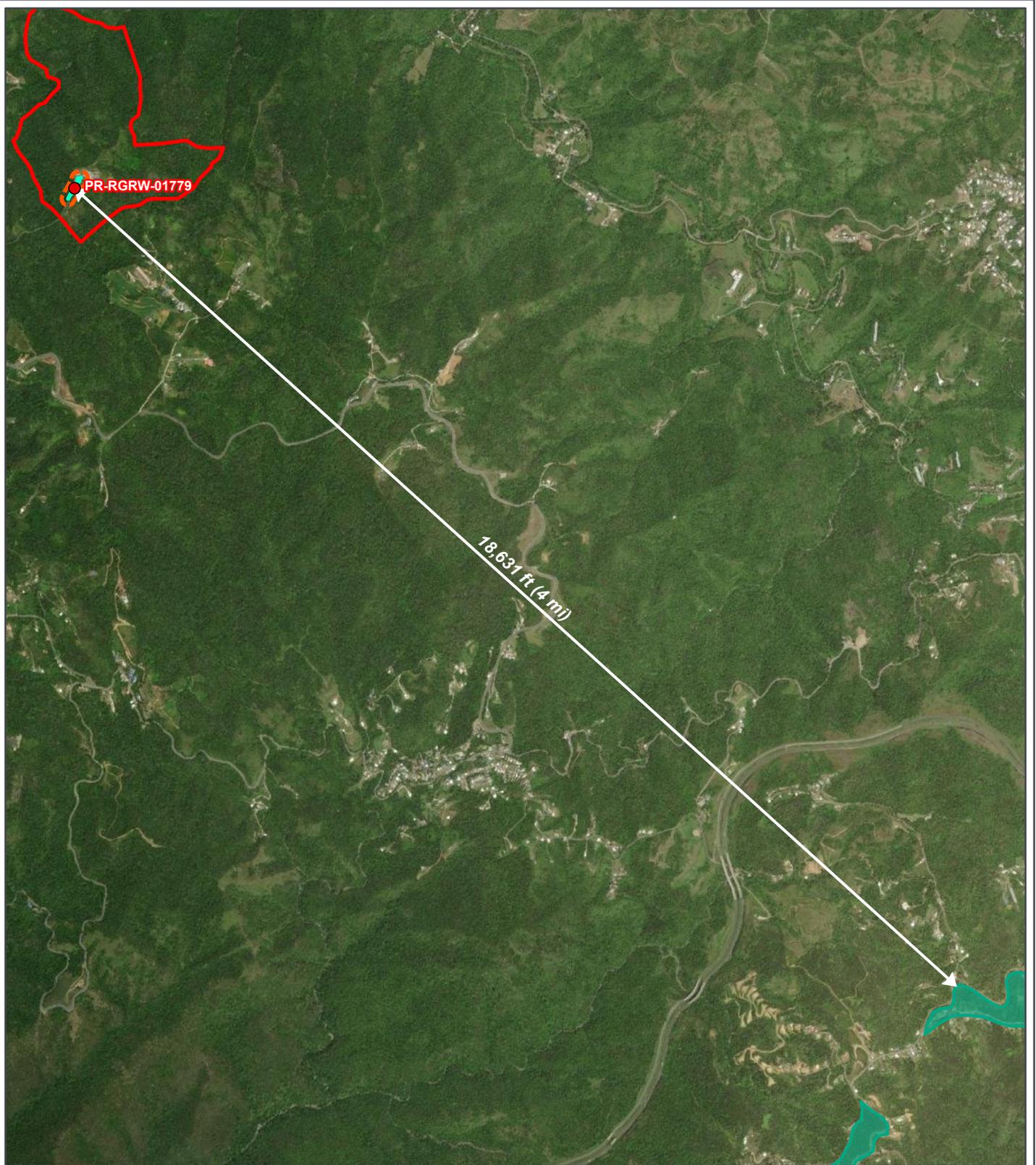
#### Conservation Measures:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.
2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.
3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or project personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.
4. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #5). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #: (787) 724-5700, (787) 230-5550, (787) 771-1124). **If immediate relocation is not an option, project-related activities at that area must stop until the boa moves out of harm's way on its own.** Activities at other work sites, where no boas have been found after surveying the area, may continue.
5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.

6. If a PR boa is captured by PRDNER personnel, record the name of that person and information on where the PR boa will be taken. This information should be reported to the Service.
7. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal, and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #4). If not possible, the animal should be left alone until it leaves the vehicle on its own.
8. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.
9. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #5). If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.
10. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.

If you have any questions regarding the above conservation measures, please contact the Service:

- José Cruz-Burgos, Endangered Species Program Coordinator
  - Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)
  - Office phone (305) 304-1386
- Jan Zegarra, Fish and Wildlife Biologist
  - Email: [jan\\_zegarra@fws.gov](mailto:jan_zegarra@fws.gov)
  - Office phone (786) 933-1451



REGROW PROGRAM

**Figure B 7-1:  
Critical Habitat Map**

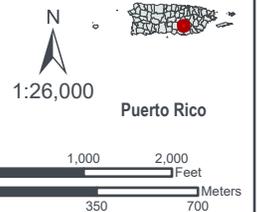
Applicant ID: PR-RGRW-01779



- Site
- Site Parcel
- Buffer (100-ft)
- Critical Habitat - Final
- National Wildlife Refuges

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: [https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS\\_Critical\\_Habitat/](https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS_Critical_Habitat/)  
Base Map: *ESRI ArcGIS Online*,  
accessed April 2024  
Updated: 4/15/2024  
Layout: Critical Habitat  
Aprx: 72428\_ReGrowTier2Maps



**Attachment 8**  
**Explosive and Flammable Hazards Partner**  
**Worksheet**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

**Explosive and Flammable Hazards (CEST and EA) – PARTNER**

<https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities>

- 1. Does the proposed HUD-assisted project include a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

No

→ Continue to Question 2.

Yes

**Explain:**

Click here to enter text.

→ Continue to Question 5.

- 2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

Yes → Continue to Question 3.

- 3. Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers:**

- Of more than 100-gallon capacity, containing common liquid industrial fuels OR
- Of any capacity, containing hazardous liquids or gases that are not common liquid industrial fuels?

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.

Yes → Continue to Question 4.

- 4. Is the Separation Distance from the project acceptable based on standards in the Regulation?**

Please visit HUD’s website for information on calculating Acceptable Separation Distance.

Yes

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

*Provide map(s) showing the location of the project site relative to any tanks and your separation distance calculations. If the map identifies more than one tank, please identify the tank you have chosen as the “assessed tank.”*

No

*→ Continue to Question 6.*

*Provide map(s) showing the location of the project site relative to any tanks and your separation distance calculations. If the map identifies more than one tank, please identify the tank you have chosen as the “assessed tank.”*

**5. Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

Please visit HUD’s website for information on calculating Acceptable Separation Distance.

Yes

*→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

*Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*

No

*→ Continue to Question 6.*

*Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*

**6. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to make the Separation Distance acceptable, including the timeline for implementation. If negative effects cannot be mitigated, cancel the project at this location.**

Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an unacceptable separation distance, provide approval from a licensed professional engineer.

[Click here to enter text.](#)

**Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

**Include all documentation supporting your findings in your submission to HUD.**

The project includes the new construction of a photovoltaic system, the purchase of a rotary tiller, and a tractor. The project itself is not the development of a hazardous facility nor will the project increase

residential densities. No further evaluation is required. The project is in compliance with explosive and flammable hazard requirements.

**Attachment 9**  
**Farmlands Protection Partner Worksheet**  
**and Prime Farmland Map**



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Farmlands Protection (CEST and EA) - PARTNER

<https://www.hudexchange.info/environmental-review/farmlands-protection>

**1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**

Yes à *Continue to Question 2.*

No

*à If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

**2. Does “important farmland,” including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?**

You may use the links below to determine important farmland occurs on the project site:

- Utilize USDA Natural Resources Conservation Service’s (NRCS) Web Soil Survey <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>
- Check with your city or county’s planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
- Contact NRCS at the local USDA service center <http://offices.sc.egov.usda.gov/locator/app?agency=nrcs> or your NRCS state soil scientist [http://soils.usda.gov/contact/state\\_offices/](http://soils.usda.gov/contact/state_offices/) for assistance

No à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

Yes à *Continue to Question 3.*

**3. Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.**

- Complete form [AD-1006, “Farmland Conversion Impact Rating”](#) and contact the state soil scientist before sending it to the local NRCS District Conservationist.
- Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

**Work with the RE/HUD to determine how the project will proceed. Document the conclusion:**

Project will proceed with mitigation.

**Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

[Click here to enter text.](#)

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Project will proceed without mitigation.

**Explain why mitigation will not be made here:**

[Click here to enter text.](#)

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

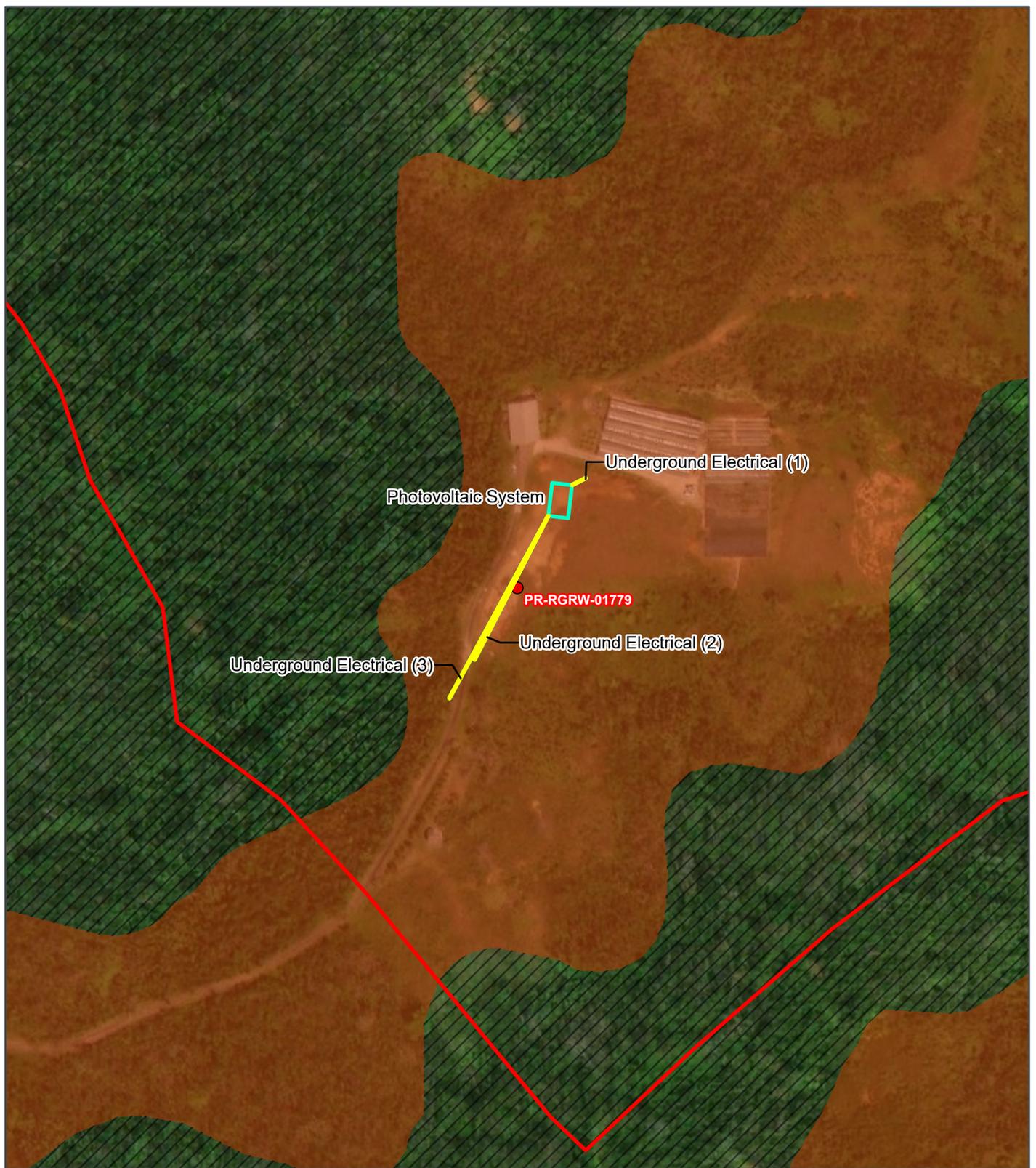
### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

This project does not include any activities that could potentially convert agricultural land to non-agricultural use. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: Caf (Caguabo clay loam, 40 to 60 percent slopes); LsE (Los Guineos clay, 20 to 40 percent slopes); MoF (Maricao clay, 20 to 60 percent slopes). Farmlands of statewide importance are within the project area. Although the project includes new construction, the project is exempt from review under the Farmland Protection Policy Act (FFPA) as the project is limited to construction of on-farm structures needed for farm operations. No further review is required. The project is in compliance with the Farmland Protection Policy Act.



REGROW PROGRAM

**Figure B 9-1:  
Prime Farmland Map**

Applicant ID: PR-RGRW-01779

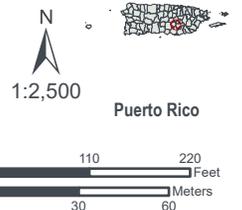


- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line
- All areas are prime farmland
- Farmland of statewide importance
- Farmland of statewide importance, if irrigated

- Prime farmland if drained
- Prime farmland if irrigated
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Not prime farmland
- Not Public Information

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://websoilsurvey.nrcs.usda.gov/app/>  
Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: Prime Farmland  
Aprx: 72428\_ReGrowTier2Maps



## **Attachment 10**

# **Floodplain Management Partner Worksheet and Advisory Base Flood Elevation Map**



This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

**Floodplain Management (CEST and EA)**

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988 Executive Order 13690 42 USC <u>4001-4128</u> 42 USC 5154a	24 CFR 55
<b>Reference</b>		
<a href="https://www.hudexchange.info/environmental-review/floodplain-management">https://www.hudexchange.info/environmental-review/floodplain-management</a>		

1. Does this project meet an exemption at [24 CFR 55.12](#) from compliance with HUD’s floodplain management regulations in Part 55 or utilize the delayed compliance date for certain Office of Housing programs?

Yes

Select the applicable citation at [24 CFR 55.12](#) and provide supporting documentation for the determination if applicable.

- a)  HUD-assisted activities described in 24 CFR 58.34 and 58.35(b)
- b)  HUD-assisted activities described in 24 CFR 50.19, except as otherwise indicated in § 50.19
- c)  The approval of financial assistance for restoring and preserving the natural and beneficial functions and values of floodplains and wetlands, including through acquisition of such floodplain and wetland property, where a permanent covenant or comparable restriction is place on the property’s continued use for flood control, wetland protection, open space, or park land, but only if:
  - (1) The property is cleared of all existing buildings and walled structures; and
  - (2) The property is cleared of related improvements except those which:
    - (i) Are directly related to flood control, wetland protection, open space, or park land (including playgrounds and recreation areas);
    - (ii) Do not modify existing wetland areas or involve fill, paving, or other ground disturbance beyond minimal trails or paths; and
    - (iii) Are designed to be compatible with the beneficial floodplain or wetland function of the property.

- d)  An action involving a repossession, receivership, foreclosure, or similar acquisition of property to protect or enforce HUD's financial interests under previously approved loans, grants, mortgage insurance, or other HUD assistance
- e)  Policy-level actions described at 24 CFR 50.16 that do not involve site-based decisions
- f)  A minor amendment to a previously approved action with no additional adverse impact on or from a floodplain or wetland;
- g)  HUD's or the responsible entity's approval of a project site, an incidental portion of which is situated in the FFRMS floodplain (not including the floodway, LiMWA, or coastal high hazard area) but only if:
  - (1) The proposed project site does not include any existing or proposed buildings or improvements that modify or occupy the FFRMS floodplain except de minimis improvements such as recreation areas and trails; and
  - (2) the proposed project will not result in any new construction in or modifications of a wetland
- h)  Issuance or use of Housing Vouchers or other forms of rental subsidy where HUD, the awarding community, or the public housing agency that administers the contract awards rental subsidies that are not project-based (i.e., do not involve site-specific subsidies)
- i)  Special projects directed to the removal of material and architectural barriers that restrict the mobility of and accessibility to elderly and persons with disabilities.

Exemptions due not apply due to the project activities being the construction of a photovoltaic system.

*Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Yes. Office of Housing programs utilizing the January 1, 2025 compliance date. These reviews must comply with the 2013 version of the Part 55 regulations. Continue to Worksheet Summary for 2013 version to upload supporting documentation.

No. *Continue to Question 2.*

**2. Does the project include a Critical Action?**

Yes. Describe the Critical Action. Examples of Critical Actions include projects involving hospitals, fire and police stations, nursing homes, hazardous chemical storage, storage of valuable records, and utility plants. Continue to Question 4.

No, the project is not a Critical Action as defined in 24 CFR 55.2(b)(3)

No. Continue to Question 3.

**3. Determine the extent of the FFRMS floodplain and provide mapping documentation in support of that determination.**

The extent of the FFRMS floodplain can be determined using a Climate Informed Science Approach (CISA), 0.2 percent flood approach (0.2 PFA), or freeboard value approach (FVA). For projects in areas without available CISA data or without FEMA Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs) or Advisory Base Flood Elevations (ABFEs), use the best available information to determine flood elevation. Include documentation and an explanation of why this is the best available information for the site. Note that newly constructed and substantially improved structures must be elevated to the FFRMS floodplain regardless of the approach chosen to determine the floodplain.

***Select one of the following three options:***

CISA for non-critical actions. If using a local tool, data, or resources, ensure that the FFRMS elevation is higher than would have been determined using the 0.2 PFA or the FVA.

0.2-PFA. Where FEMA has defined the 0.2-percent-annual-chance floodplain, the FFRMS floodplain is the area that FEMA has designated as within the 0.2-percent-annual-chance floodplain.

FVA. If neither CISA nor 0.2-PFA is available, for non-critical actions, the FFRMS floodplain is the area that results from adding two feet to the base flood elevation as established by the effective FIRM or FIS or—if available—a FEMA-provided preliminary or pending FIRM or FIS or advisory base flood elevations, whether regulatory or informational in nature. However, an interim or preliminary FEMA map cannot be used if it is lower than the current FIRM or FIS.

**a. Does your project occur in the FFRMS floodplain?**

Yes, continue to part b.

No. Review for floodplain management is complete.

**b. Is your project located in any of the floodplain categories below? Select all that apply. If none apply, continue to question 7.**

Floodway: *Continue to Question 5. Floodways.*

Coastal High Hazard Area (V Zone) or Limit of Moderate Wave Action (LiMWA): *Continue to Question 6. Coastal High Hazard Areas and LiMWAs.*

**4. Determine the extent of the FFRMS floodplain and provide mapping documentation in support of that determination.**

The extent of the FFRMS floodplain can be determined using a Climate Informed Science Approach (CISA), or the higher of the 0.2 percent flood approach (0.2 PFA), or freeboard value approach (FVA). For projects in areas without available CISA data or without FEMA Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs) or Advisory Base Flood Elevations (ABFEs), use the best available information to determine flood elevation. Note that newly constructed and substantially improved structures must be elevated to the FFRMS floodplain regardless of the approach chosen to determine the floodplain.

**Utilize CISA to determine the FFRMS floodplain for critical actions**

CISA for Critical Actions. If using a local tool, ensure that the FFRMS elevation provided is higher than the 0.2 PFA or 3' above the base flood elevation.

**OR;**

**Choose the higher of 0.2 PFA or FVA elevations**

0.2-PFA. Where FEMA has defined the 0.2-percent-annual-chance floodplain, the FFRMS floodplain is the area that FEMA has designated as within the 0.2-percent-annual-chance floodplain.

FVA. For critical actions, the FFRMS floodplain is the area that results from adding three feet to the base flood elevation as established by the effective FEMA FIRM or FIS or—if available—a FEMA-provided preliminary or pending FIRM or FIS or advisory base flood elevations, whether regulatory or informational in nature. However, an interim or preliminary FEMA map cannot be used if it is lower than the current FIRM or FIS.

**a. Does your project occur in the FFRMS floodplain?**

Yes, continue to part b.

No. Review for floodplain management is complete.

**b. Is your project located in any of the floodplain categories below? Select all that apply. If none apply, continue to question 7.**

Floodway: *Continue to Question 5. Floodways.*

Coastal High Hazard Area (V Zone) or LiMWA: *Continue to Question 6. Coastal High Hazard Areas and LiMWAs.*

**5. Floodways**

**Do the floodway exemptions at [55.8](#) or [55.21](#) apply?**

Yes

The 8-Step Process is required. Document mitigation measures necessary to meet the requirements in 55.8 or 55.21. Provide a completed 8-Step Process, including the early public notice and the final notice.

*Continue to Question 7. 8-Step Process.*

No

**Federal assistance may not be used at this location.** You must either choose an alternate site or cancel the project at this location.

**6. Coastal High Hazard Area (V Zone) and LiMWAs**

**Do the exemptions at [55.8](#) or [55.21](#) apply?**

Yes

The 8-Step Process is required. Document mitigation measures necessary to meet the requirements in 55.8 or 55.21. Provide a completed 8-Step Process, including the early public notice and the final notice.

*Continue to Question 7. 8-Step Process.*

No

Federal assistance may not be used at this location. You must either choose an alternate site or cancel the project at this location.

## 7. 8-Step Process.

**Does the 8-Step Process apply? Select one of the following options:**

8-Step Process is inapplicable per 55.13.

Select the applicable citation:

- (a) HUD's mortgage insurance actions and other financial assistance for the purchasing, mortgaging, or refinancing of existing one- to four-family properties in communities that are in the Regular Program of the NFIP and in good standing ( i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24), where the action is not a critical action and the property is not located in a floodway, coastal high hazard area, or LiMWA;
- (b) Financial assistance for minor repairs or improvements on one- to four-family properties that do not meet the thresholds for "substantial improvement" under § 55.2(b)(12);
- (c) HUD or a recipient's actions involving the disposition of individual HUD or recipient held, one- to four-family properties;
- (d) HUD guarantees under the Loan Guarantee Recovery Fund Program (24 CFR part 573), where any new construction or rehabilitation financed by the existing loan or mortgage has been completed prior to the filing of an application under the program, and the refinancing will not allow further construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance;
- (e) The approval of financial assistance to lease units within an existing structure located within the floodplain, but only if;
  - (1) The structure is located outside the floodway or coastal high hazard area, and is in a community that is in the Regular Program of the NFIP and in good standing ( i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24); and
  - (2) The project is not a critical action; and
  - (3) The entire structure is or will be fully insured or insured to the maximum extent available under the NFIP for at least the term of the lease.
- (f) Special projects for the purpose of improving efficiency of utilities or installing renewable energy that involve the repair, rehabilitation, modernization, weatherization, or improvement of existing structures or infrastructure, do not meet the thresholds for "substantial improvement" under § 55.2(b)(12), and do not include the installation of equipment below the FFRMS floodplain elevation.

*Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

5-Step Process is applicable per 55.14.

Provide documentation of 5-Step Process.

Select the applicable citation:

- (a) HUD actions involving the disposition of HUD-acquired multifamily housing projects or “bulk sales” of HUD-acquired one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24).
- (b) HUD's actions under the National Housing Act (12 U.S.C. 1701) for the purchase or refinancing of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, and intermediate care facilities, in communities that are in good standing under the NFIP.
- (c) HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, intermediate care facilities, and one- to four-family properties, in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and are in good standing, provided that the number of units is not increased more than 20 percent, the action does not involve a conversion from nonresidential to residential land use, the action does not meet the thresholds for “substantial improvement” under § 55.2(b)(10), and the footprint of the structure and paved areas is not increased by more than 20 percent.
- (d) HUD's (or the recipient's) actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing nonresidential buildings and structures, in communities that are in the Regular Program of the NFIP and are in good standing, provided that the action does not meet the thresholds for “substantial improvement” under § 55.2(b)(10) and that the footprint of the structure and paved areas is not increased by more than 20 percent
- (e) HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, or replacement of existing nonstructural improvements including streets, curbs and gutters, where any increase of the total impervious surface area of the facility is de minimis. This provision does not include critical actions, levee systems, chemical storage facilities (including any tanks), wastewater facilities, or sewer lagoons.

*Continue to Question 8. Mitigation.*

8-Step Process applies.

Provide a completed 8-Step Process, including the early public notice and the final notice.

*Continue to Question 8. Mitigation.*

## **8. Mitigation**

**For the project to comply with this section, all adverse impacts must be mitigated. Explain in detail the measures that must be implemented to mitigate the impact or effect, including the timeline for implementation. Note: newly constructed and substantially improved structures within the FFRMS floodplain must be elevated to the FFRMS floodplain elevation or floodproofed, if applicable.**

N/A

**Which of the following if any mitigation/minimization measures have been identified for this project in the 8-Step or 5-Step Process? Select all that apply.**

- Buyout and demolition or other supported clearance of floodplain structures
- Insurance purchased in excess of statutory requirement under the Flood Disaster Protection Act of 1973
- Permeable surfaces
- Natural landscape enhancements that maintain or restore natural hydrology
- Planting or restoring native plant species
- Bioswales
- Stormwater capture and reuse
- Green or vegetative roofs with drainage provisions
- Natural Resources Conservation Service conservation easements or similar easements
- Floodproofing of structures as allowable (e.g. non-residential floors)
- Elevating structures (including freeboard above the required base flood elevations)
- Levee or structural protection from flooding
- Channelizing or redefining the floodway or floodplain through a Letter of Map Revision (LOMR)

*Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

### **Worksheet Summary**

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- FIRM panel numbers
- CISA data or maps
- Information on other data or tools used or accessed
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

**Include all documentation supporting your findings in your submission to HUD**

See below.

**Worksheet Summary for 2013 Version**  
**Compliance Determination**

Attach 'Floodplain Management Partner Worksheet' (OMB No. 2506-0177), FIRM map indicating project location, and summary of 8-step or 5-step decision making process if applicable.

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

**Include all documentation supporting your findings in your submission to HUD**

An Advisory Base Flood Elevation (ABFE) map was developed by FEMA, which shows the project sites are in Flood Zone X. The project is not located in the 100-year floodplain or ABFE special flood hazard area. The extent of the FFRMS floodplain was determined using the 0.2 percent flood approach. The project is in compliance with Executive Order 11988, as amended by Executive Order 13690 particularly section 2(a); 24 CFR Part 55.

PFIRMs in Puerto Rico were only developed for certain sections of the municipalities of Carolina, Canovanas, Loiza, San Juan and Trujillo Alto. The proposed project is located in the municipality of Aibonito; therefore, PFIRM information was not available for the area and therefore not considered in the review.

HUD implemented new floodplain regulations under 89 FR 30850 effective June 24, 2024 which created the Federal Flood Risk Management Standard (FFRMS). The current project comprises non-critical actions that lie outside the 0.2-percent-annual-chance (500-year flood elevation), which is the approach used for this project to comply with the FFRMS; therefore, mitigation is not required and the project is in compliance with 24 CFR Part 55.



REGROW PROGRAM

**Figure B 10-1:  
Advisory Base Flood  
Elevation For 100-Year  
Floodplain Map**

Applicant ID: PR-RGRW-01779



- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line
- Advisory Base Flood Elevation (ABFE)
- 0.2% Annual Chance Flood
- 1% Annual Chance Flood
- Zone A
- Zone A-Floodway
- Zone AE
- Coastal A Zone
- Coastal A Zone and Floodway
- Zone AE-Floodway
- Zone AO
- Zone VE
- Zone X (500-year floodplain)
- Zone/BFE Boundary

Barrio Robles Sector la Sierra, Carretera  
7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: [https://gis.fema.gov/arcgis/rest/services/DR/PuertoRico\\_ABFE\\_1PCT/MapServer](https://gis.fema.gov/arcgis/rest/services/DR/PuertoRico_ABFE_1PCT/MapServer)  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/19/2024  
Layout: ABFE 1Pct  
Aprx: 72428\_ReGrowTier2Maps

N

1:2,500 Puerto Rico

**Attachment 11**  
**Historic Preservation Partner Worksheet**  
**and SHPO Consultation**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Historic Preservation (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/historic-preservation>

### Threshold

#### Is Section 106 review required for your project?

- No, because a Programmatic Agreement states that all activities included in this project are exempt. (See the [PA Database](#) to find applicable PAs.)

**Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:**

Click here to enter text.

→ *Continue to the Worksheet Summary.*

- No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

**Either provide the memo itself or a link to it here. Explain and justify the other determination here:**

Click here to enter text.

→ *Continue to the Worksheet Summary.*

- Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

#### **The Section 106 Process**

After determining the need to do a Section 106 review, HUD or the RE will initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.

Step 1: Initiate consultation

Step 2: Identify and evaluate historic properties

Step 3: Assess effects of the project on historic properties

Step 4: Resolve any adverse effects

Only RE or HUD staff may initiate the Section 106 consultation process. Partner entities may gather information, including from SHPO records, identify and evaluate historic properties, and make initial assessments of effects of the project on properties listed in or eligible for the National Register of Historic Place. Partners should then provide their RE or HUD with all of their analysis and documentation so that they may initiate consultation.

## Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the [When To Consult With Tribes checklist](#) within [Notice CPD-12-006: Process for Tribal Consultation](#) to determine if the RE or HUD should invite tribes to consult on a particular project. Use the [Tribal Directory Assessment Tool \(TDAT\)](#) to identify tribes that may have an interest in the area where the project is located. Note that only HUD or the RE may initiate consultation with Tribes. Partner entities may prepare a draft letter for the RE or HUD to use to initiate consultation with tribes, but may not send the letter themselves.

**List all organizations and individuals that you believe may have an interest in the project here:**  
Applicant only unless PRDOH determines that there are other interested parties based on prior consultation.

→ *Continue to Step 2.*

## Step 2 - Identify and Evaluate Historic Properties

**Provide a preliminary definition of the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE.** Attach an additional page if necessary.

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is the location of the photovoltaic system base and the underground electrical connection, plus a 15-meter horizontal buffer to allow for some variation in final placement during construction and the visual APE is the viewshed of the proposed project.

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register. Refer to HUD's website for guidance on identifying and evaluating historic properties.

**In the space below, list historic properties identified and evaluated in the APE.**

Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

Existing information on previously identified historic properties has been reviewed to

determine if any such properties are located within the APE of this undertaking. The review of this existing information by a Program contracted archaeologist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) who searched the records at the SHPO and the Instituto de Cultura Puertorriqueña which shows that there are no previously recorded archaeological sites within a half-mile (mi) radius of the project location. Two archaeological evaluations and three Section 106 studies have been conducted within the 0.5-mi review radius with no cultural resources found.

The previous investigation carried out nearest the project area was SHPO#06-26-13-02, a Section 106 study 0.25 mi to the northwest. It was conducted in 2014 in support of a CDBG project for road repavement. The next nearest investigation was ICP-CAT-AI-03-05-06, a Phase IB archaeological evaluation conducted 0.43 mi southwest of the project area in 2003 in support of an infrastructure project to widen a highway. ICP-CAT-AI-02-05-05 was a Phase IA archaeological evaluation carried out in support of the same project in 2002. SHPO#02-04-15-01 was a Section 106 study carried out in 2015 0.49 mi west of the project location in support of a project to repave municipal roads. Finally, Section 106 study SHPO#06-03-16-10 was carried out in 2016 to repave municipal roads 0.49 mi southwest of the project area.

The proposed project is located in the south-central region of Puerto Rico, at an elevation of 2,277 ft (694 meters [m]) above mean sea level. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: Caf (Caguabo clay loam, 40 to 60 percent slopes); LsE (Los Guineos clay, 20 to 40 percent slopes); MoF (Maricao clay, 20 to 60 percent slopes). The project area APE is in the western region of Aibonito. The general project area is located on a ridgetop within the mountainous region, within a rural agricultural setting. The closest freshwater source is an unnamed freshwater stream, located 0.14 mi ( 0.22 kilometers [km]) southeast of the project area. The Caribbean coast is approximately 13 mi (20.9 km) from the project area.

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) shows that the project area is not within the boundaries of the National Register of Historic Places (NRHP)-eligible /listed Traditional Urban Center / Historic District. There have been three Section 106 surveys in the area: SHPO#06-26-13-02, SHPO#02-04-15-01, and SHPO#06-03-16-10, all of which are discussed in the preceding section. No historic properties were recorded as a result of these studies.

The project parcel is located in a rural mountainous area of Aibonito. The landscape is characterized by densely wooded foothills. The project area is secluded, and has been previously cleared for concentrated agricultural activity. No structures appear on the parcel in historic aerials (GoogleEarth.com; <https://earthexplorer.usgs.gov>; HistoricAerials.com) prior to 2004, with aerials from 1994 showing the project area to be void of structures. The structures on the parcels are agricultural buildings and greenhouses of modern construction.

The project on the parcel includes rotary tiller, a tractor, and the construction and

installation of a photovoltaic system consisting of approximately 30 solar panels. A significant portion of the work will be underground. There will be no impact of the project on historic structures, as the property is isolated and surrounded by trees, and none of the buildings on the parcel are of historic age.

*Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.*

**Was a survey of historic buildings and/or archeological sites done as part of the project?**

If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, [Guidance on Archeological Investigations in HUD Projects](#).

Yes → *Provide survey(s) and report(s) and continue to Step 3.*

Additional notes:

[Click here to enter text.](#)

No → *Continue to Step 3.*

**Step 3 - Assess Effects of the Project on Historic Properties**

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. ([36 CFR 800.5](#)) Consider direct and indirect effects as applicable as per HUD guidance.

**Choose one of the findings below to recommend to the RE or HUD.**

**Please note: this is a recommendation only. It is **not** the official finding, which will be made by the RE or HUD, but only your suggestion as a Partner entity.**

No Historic Properties Affected

**Document reason for finding:**

No historic properties present.

Historic properties present, but project will have no effect upon them.

No Adverse Effect

**Document reason for finding and provide any comments below.**

Comments may include recommendations for mitigation, monitoring, a plan for unanticipated discoveries, etc.

[Click here to enter text.](#)

Adverse Effect

**Document reason for finding:**

Copy and paste applicable Criteria into text box with summary and justification.

Criteria of Adverse Effect: [36 CFR 800.5](#)]

[Click here to enter text.](#)

**Provide any comments below:**

Comments may include recommendations for avoidance, minimization, and/or mitigation.

Click here to enter text.

*Remember to provide all documentation that justifies your National Register Status determination and recommendations along with this worksheet.*



# GOVERNMENT OF PUERTO RICO

## STATE HISTORIC PRESERVATION OFFICE

Executive Director | Carlos A. Rubio Cancela | [carubio@prshpo.pr.gov](mailto:carubio@prshpo.pr.gov)

Wednesday, March 20, 2024

### Lauren B Poche

269 Avenida Ponce de Leon, San Juan, PR, 00917

SHPO-CF-03-17-24-07 PR-RGRW-01779 (Aibonito), Jardín Tierra Adentro

Dear Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the National Historic Preservation Act) and 36 CFR Part 800: Protection of Historic Properties. Our records support your finding of no historic properties affected for this undertaking. Please note that should you discover other historic properties at any point during project implementation, you should notify the SHPO immediately. If you have any questions regarding our comments, please do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio Cancela

State Historic Preservation Officer

CARC/GMO/MB



Cuartel de Ballajá (Tercer Piso), Calle Norzagaray, Esq. Beneficencia, Viejo San Juan, PR 00901 | PO Box 9023935, San Juan, PR 00902-3935

March 18, 2024

Carlos A. Rubio Cancela  
State Historic Preservation Officer  
Puerto Rico State Historic Preservation Office  
Cuartel de Ballajá (Tercer Piso)  
San Juan, PR 00902-3935

**Puerto Rico Disaster Recovery, CDBG-DR Re-Grow PR Urban-Rural Agricultural (Re-Grow PR) Program**

**Section 106 NHPA Effect Determination Submittal: PR-RGRW-01779 – Jardín Tierra Adentro– Barrio Robles, Sector La Sierra Carretera 7722, Km 5.8 Int, Aibonito, Puerto Rico – *No Historic Properties Affected***

Dear Architect Rubio Cancela,

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, HORNE is providing information for your review and requesting your concurrence regarding the above-referenced projects on behalf of the Puerto Rico Department of Housing (PRDOH). On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds were approved by the United States Department of Housing and Urban Development (HUD) under the Federal Register Volume 83, No. 28, 83 FR 5844, to assist the Commonwealth of Puerto Rico in meeting unmet needs in the wake of Hurricanes Irma and Maria. On August 14, 2018, an additional \$8.22 billion recovery allocation was allocated to Puerto Rico under the Federal Register Volume 83, No. 157, 83 FR 40314. With these funding allocations, the Puerto Rico Department of Housing (Housing) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents.

On behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, HORNE is submitting documentation for activities proposed by Jardín Tierra Adentro located at Barrio Robles, Sector La Sierra Carretera 7722, Km 5.8 int, in the municipality of Aibonito. The undertaking for this project includes the construction of a photovoltaic system consisting of approximately 30 solar panels and the installation of three below-line electric lines. The proposed photovoltaic system is expected to be no larger than 30 feet (ft) by 16 ft with a height of 5 ft. It will be placed on top of a platform. It is expected that the area of the platform will be approximately 576 square feet (sq ft) (32 ft x 18 ft), and will be elevated from the ground using posts that enter the ground at a maximum depth of 2 ft. The area where the photovoltaic system will be installed is vacant and flat, therefore grading will not be required. The new solar panels will provide electricity for the existing greenhouses, water well, water tank, and storage warehouse through three new below-ground electric lines measuring approximately 12 ft, 121 ft, and 156

ft in length; trenches will be no larger than 2 ft wide by 2 ft deep. The electrical connections are not part of the Intended Use of Grant Funds. Ground disturbance is limited to the installation of posts associated with the photovoltaic system and trenches for the underground electrical connection, no tree clearing or pruning is required.

Based on the submitted documentation, the Program requests a concurrence that a determination of No Historic Properties Affected is appropriate for this proposed project.

Please contact me by email at [lauren.poche@horne.com](mailto:lauren.poche@horne.com) or phone at 225-405-7676 with any questions or concerns.

Kindest regards,



**Lauren Bair Poche, M.A.**

Architectural Historian, EHP Senior Manager  
LBP/JLE

Attachments

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REgROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>		
<b>Applicant:</b> Jardín Tierra Adentro		
<b>Case ID:</b> PR-RGRW-01779		<b>City:</b> Aibonito

<b>Project Location:</b> Barrio Robles, Sector La Sierra Carretera 7722, Km 5.8 int, Aibonito, PR, 00705	
<b>Project Coordinates:</b> (as provided by applicant during field visit) <b>Photovoltaic System:</b> 18.119603, -66.22672 <b>Underground Electrical (1):</b> 18.119681, -66.226639 <b>Underground Electrical (2):</b> 18.119242, -66.226931 <b>Underground Electrical (3):</b> 18.119162, -66.226986	
<b>TPID (Número de Catastro):</b> 323-000-002-06-001	
<b>Type of Undertaking:</b> <input type="checkbox"/> Substantial Repair/Improvements <input checked="" type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> Buildings on the Project Parcel: ca. 1994	<b>Property Size (acres): 138.47 acres total</b> <b>Photovoltaic System:</b> 0.034436 acre (1,500 sq. ft) <b>Underground Electrical (1):</b> 0.00054 (24 sq. ft) <b>Underground Electrical (2):</b> 0.005573 (243 sq. ft) <b>Underground Electrical (3):</b> 0.007156 (312 sq. ft)

<b>SOI-Qualified Architect/Architectural Historian:</b> Ella McIntire, MA
<b>Date Reviewed:</b> February 21, 2024
<b>SOI-Qualified Archaeologist:</b> Brian McNamara, M.A., R.P.A.
<b>Date Reviewed:</b> February 21, 2024

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the Program is responsible for identifying historic properties listed in the NRHP and any properties not listed that would be considered eligible for listing that are located within the geographic area of potential effects (APE) of the proposed project and assessing the potential effects of its undertakings on these historic properties.

### Project Description (Undertaking)

The proposed project includes the construction and installation of a photovoltaic system consisting of approximately 30 solar panels.

The proposed photovoltaic system is expected to be no larger than 30 feet (ft) by 16 ft with a height of 5 ft. It will be placed on top of a platform, though the details of which are unknown at this point. It is expected that the area of the platform will be approximately 576 square feet (sq ft) (32 ft x 18 ft), and will be elevated from the ground using poles that enter the ground at a maximum depth of 2 ft. The area where the photovoltaic system will be installed is vacant and flat, therefore grading will not be required.

The new solar panels will provide electricity for the greenhouses, water well, water tank, and storage warehouse via underground connections that will be no wider than 2 ft and approximately 2 ft deep. Underground Electrical trench #1 will be 0.00054 (24 sq. ft),

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REgROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>		
<b>Applicant:</b> Jardín Tierra Adentro		
<b>Case ID:</b> PR-RGRW-01779		<b>City:</b> Aibonito

underground Electrical trench #2 will be 0.005573 (243 sq. ft) and underground Electrical trench #3 will be 0.007156 (312 sq. ft).

The electrical connections are not part of the Intended Use of Grant Funds.

Ground disturbance is limited to the installation of poles associated with the photovoltaic system and underground electrical connection, no tree clearing or pruning is required. The applicant owns the property and currently uses it for agricultural use; therefore, no acquisition or conversion is required.

**Area of Potential Effects**

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is the location of the photovoltaic system base and the underground electrical connection, plus a 15-meter horizontal buffer to allow for some variation in final placement during construction and the visual APE is the viewshed of the proposed project.

**Identification of Historic Properties - Archaeology**

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information by a Program contracted archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61) who searched the records at the SHPO and the Instituto de Cultura Puertorriqueña which shows that there are no previously recorded archaeological sites within a half-mile (mi) radius of the project location. Two archaeological evaluations and three Section 106 studies have been conducted within the 0.5-mi review radius with no cultural resources found.

The previous investigation carried out nearest the project area was SHPO#06-26-13-02, a Section 106 study 0.25 mi to the northwest. It was conducted in 2014 in support of a CDBG project for road repavement. The next nearest investigation was ICP-CAT-AI-03-05-06, a Phase IB archaeological evaluation conducted 0.43 mi southwest of the project area in 2003 in support of an infrastructure project to widen a highway. ICP-CAT-AI-02-05-05 was a Phase IA archaeological evaluation carried out in support of the same project in 2002. SHPO#02-04-15-01 was a Section 106 study carried out in 2015 0.49 mi west of the project location in support of a project to repave municipal roads. Finally, Section 106 study SHPO#06-03-16-10 was carried out in 2016 to repave municipal roads 0.49 mi southwest of the project area.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>ReGROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant:</b> Jardín Tierra Adentro	
<b>Case ID:</b> PR-RGRW-01779	<b>City:</b> Aibonito

The proposed project is located in the south-central region of Puerto Rico, at an elevation of 2,277 ft (694 meters [m]) above mean sea level. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: Caf (Caguabo clay loam, 40 to 60 percent slopes); LsE (Los Guineos clay, 20 to 40 percent slopes); MoF (Maricao clay, 20 to 60 percent slopes). The project area APE is in the western region of Aibonito. The general project area is located on a ridgetop within the mountainous region, within a rural agricultural setting. The closest freshwater source is an unnamed freshwater stream, located 0.14 mi ( 0.22 kilometers [km]) southeast of the project area. The Caribbean coast is approximately 13 mi (20.9 km) from the project area.

### **Identification of Historic Properties - Architecture**

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) shows that the project area is not within the boundaries of the National Register of Historic Places (NRHP)-eligible /listed Traditional Urban Center / Historic District. There have been three Section 106 surveys in the area: SHPO#06-26-13-02, SHPO#02-04-15-01, and SHPO#06-03-16-10, all of which are discussed in the preceding section. No historic properties were recorded as a result of these studies.

The project parcel is located in a rural mountainous area of Aibonito. The landscape is characterized by densely wooded foothills. The project area is secluded, and has been previously cleared for concentrated agricultural activity. No structures appear on the parcel in historic aerials (GoogleEarth.com; <https://earthexplorer.usgs.gov>; HistoricAerials.com) prior to 2004, with aerials from 1994 showing the project area to be void of structures. The structures on the parcels are agricultural buildings and greenhouses of modern construction.

The project on the parcel includes rotary tiller, a tractor, and the construction and installation of a photovoltaic system consisting of approximately 30 solar panels. A significant portion of the work will be underground. There will be no impact of the project on historic structures, as the property is isolated and surrounded by trees, and none of the buildings on the parcel are of historic age.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGrow PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant:</b> Jardín Tierra Adentro	
<b>Case ID:</b> PR-RGRW-01779	<b>City:</b> Aibonito

**Determination**

The following historic properties have been identified within the APE:

- Direct Effect:
  - None
- Indirect Effect:
  - None

Based on the results of our historic property identification efforts, the Program has determined that project actions will not affect historic properties that compose the Area of Potential Effect. The project area is not within or adjacent to the boundaries of a National Register of Historic Places (NRHP)-eligible or listed historic district or Traditional Urban Center. There are no reported archaeological materials or significant cultural properties within a half-mile radius of the proposed project location. No known archaeological sites or NRHP listed/eligible historic properties are within or adjacent to the property or the parcel in which the Area of Potential Effect of case PR-RGRW-01779 is located. The closest freshwater body is approximately 0.14 mi ( 0.22 kilometers [km]) southeast of the project area. The size of the proposed project activities is very small (138.47 acres) and construction of public roads/residential structures/agricultural infrastructure has impacted the surrounding terrain. Therefore, no historic properties will be affected by the proposed project activities.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>		
<b>Applicant:</b> Jardín Tierra Adentro		
<b>Case ID:</b> PR-RGRW-01779	<b>City:</b> Aibonito	

**Recommendation (Please keep on same page as SHPO Staff Section)**

The Puerto Rico Department of Housing requests that the Puerto Rico SHPO concur that the following determination is appropriate for the undertaking (Choose One):

- No Historic Properties Affected
- No Adverse Effect  
     Condition (if applicable):
- Adverse Effect  
     Proposed Resolution (if applicable)

**This Section is to be Completed by SHPO Staff Only**

The Puerto Rico State Historic Preservation Office has reviewed the above information and:	
<input type="checkbox"/> <b>Concurs</b> with the information provided. <input type="checkbox"/> <b>Does not concur</b> with the information provided.	
<b>Comments:</b>   	
Carlos Rubio-Cancela State Historic Preservation Officer	Date:

Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

### Project (Parcel) Location – Area of Potential Effect Map (Aerial)



REGROW PROGRAM

#### Project Location Area of Potential Effects (APE) Map

Applicant ID: PR-RGRW-01779

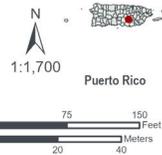


- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ Underground Electrical Line
- ▭ APE (Buffer (15-meters))

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.226906°W 18.119242°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: APE  
Aprx: 72428\_ReGrowTier2Maps

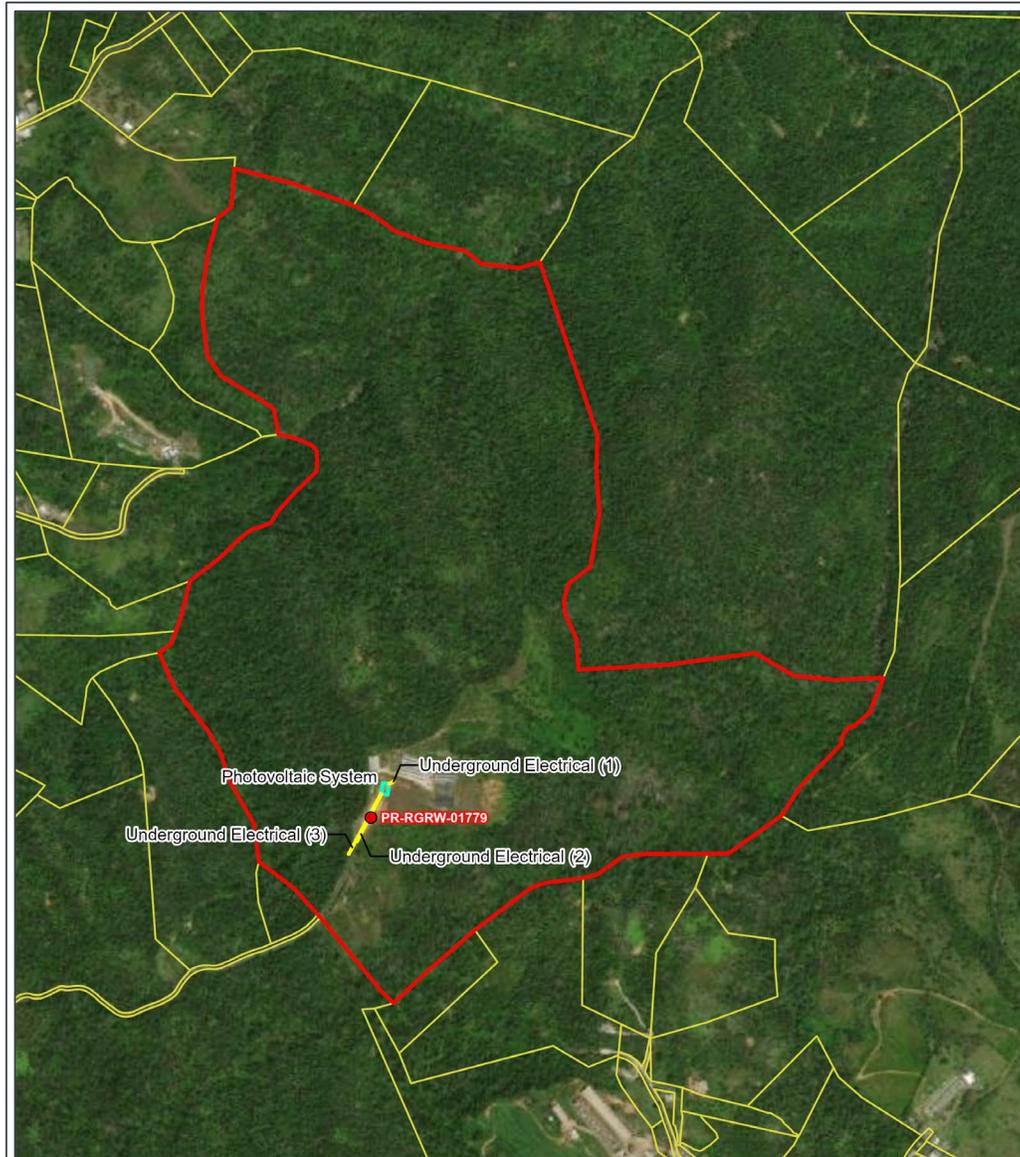


Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

### Project (Parcel) Location - Aerial Map



REGROW PROGRAM

**Figure A-2:  
Site Vicinity**

Applicant ID: PR-RGRW-01779

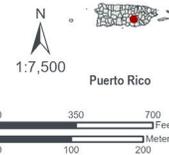


- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ Underground Electrical Line

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.224932°W 18.122148°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: Site Vicinity  
Aprx: 72428\_ReGrowTier2Maps

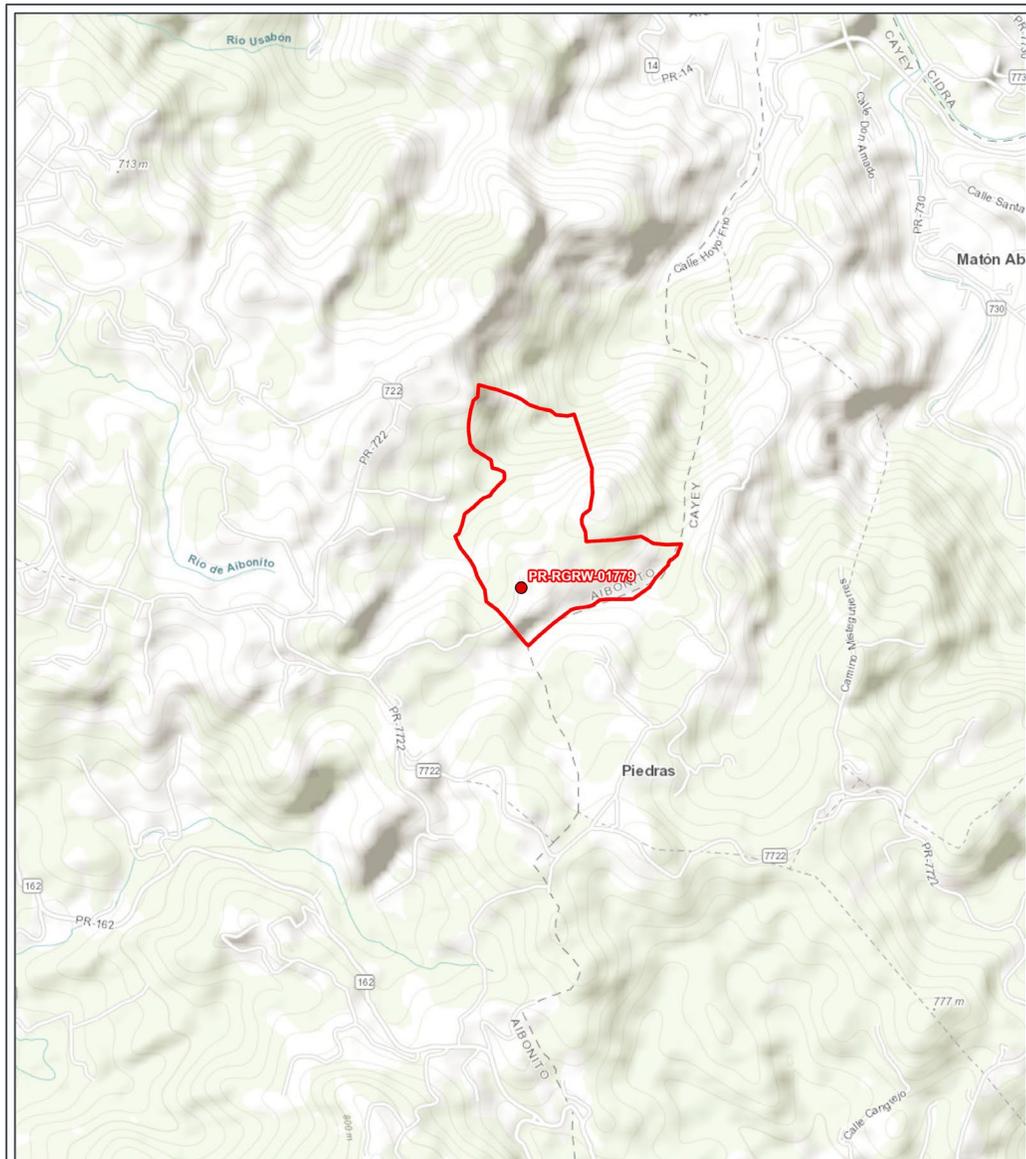


Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

Project (Parcel) Location - USGS Topographic Map



REGROW PROGRAM

Figure A-1:  
Site Location

Applicant ID: PR-RGRW-01779



- Site
- Site Parcel

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705

Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.226906°W 18.119242°N

Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024

Layout: Site Location  
Aprx: 72428\_ReGrowTier2Maps

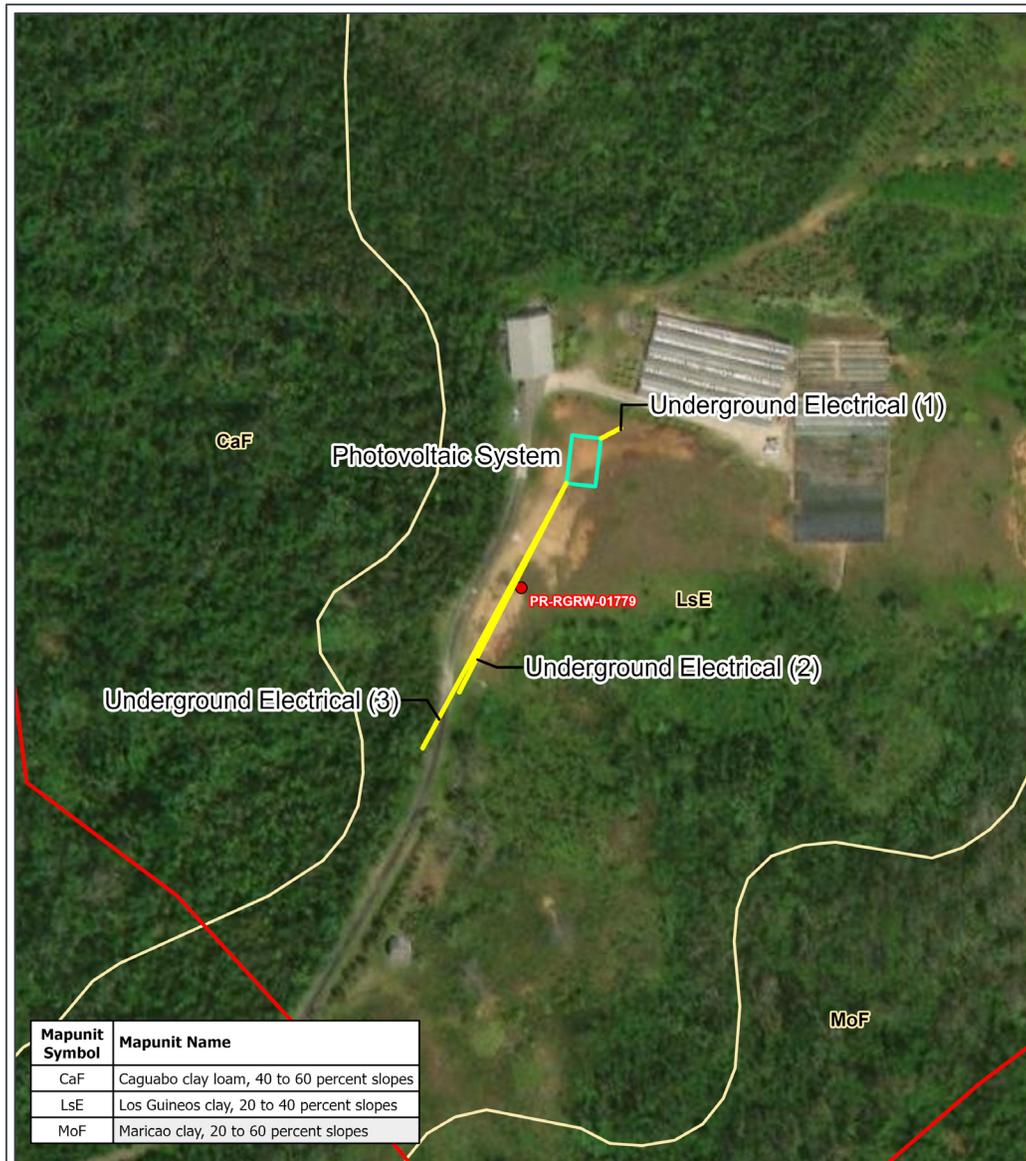


Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

Project (Parcel) Location – Soils Map



Mapunit Symbol	Mapunit Name
CaF	Caguabo clay loam, 40 to 60 percent slopes
LsE	Los Guineos clay, 20 to 40 percent slopes
MoF	Maricao clay, 20 to 60 percent slopes

REGROW PROGRAM

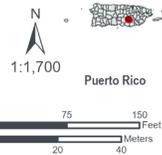
USDA Soils Map

Applicant ID: PR-RGRW-01779



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ Underground Electrical Line
- ▭ Soil Mapunit

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.226906°W 18.119242°N



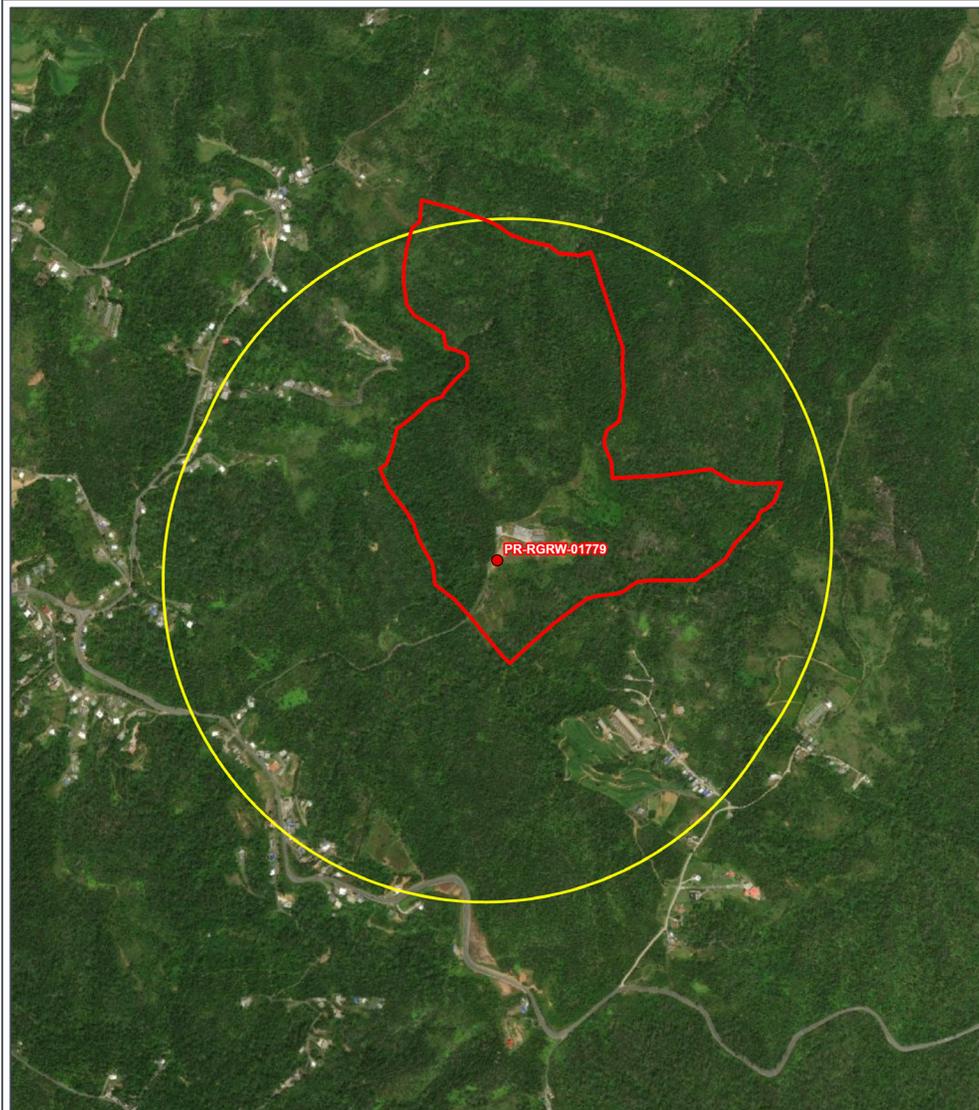
Data Source: <https://weboilsurvey.mrc.usda.gov/app/>  
Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: Soils  
Aprx: 72428\_ReGrowTier2Maps

Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

### Project (Parcel) Location with Previous Investigations - Aerial Map



REGROW PROGRAM

#### Previous Investigation Map

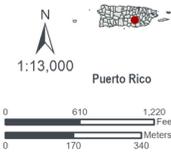
Applicant ID: PR-RGRW-01779



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- Buffer (0.5-mile)
- ▭ Previously Recorded Survey
- ▭ MIPR Arqueologia
- ▭ Traditional Urban Centers

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
Parcel Center:  
66.226906°W 18.119242°N

Data Source: State Historic  
Preservation Office and Puerto Rico  
Institute of Culture  
Base Map: ESRI ArcGIS Online,  
accessed February 2024  
Updated: 2/19/2024  
Layout: Previous Investigation  
Aprx: 72428\_RegrowTier2Maps

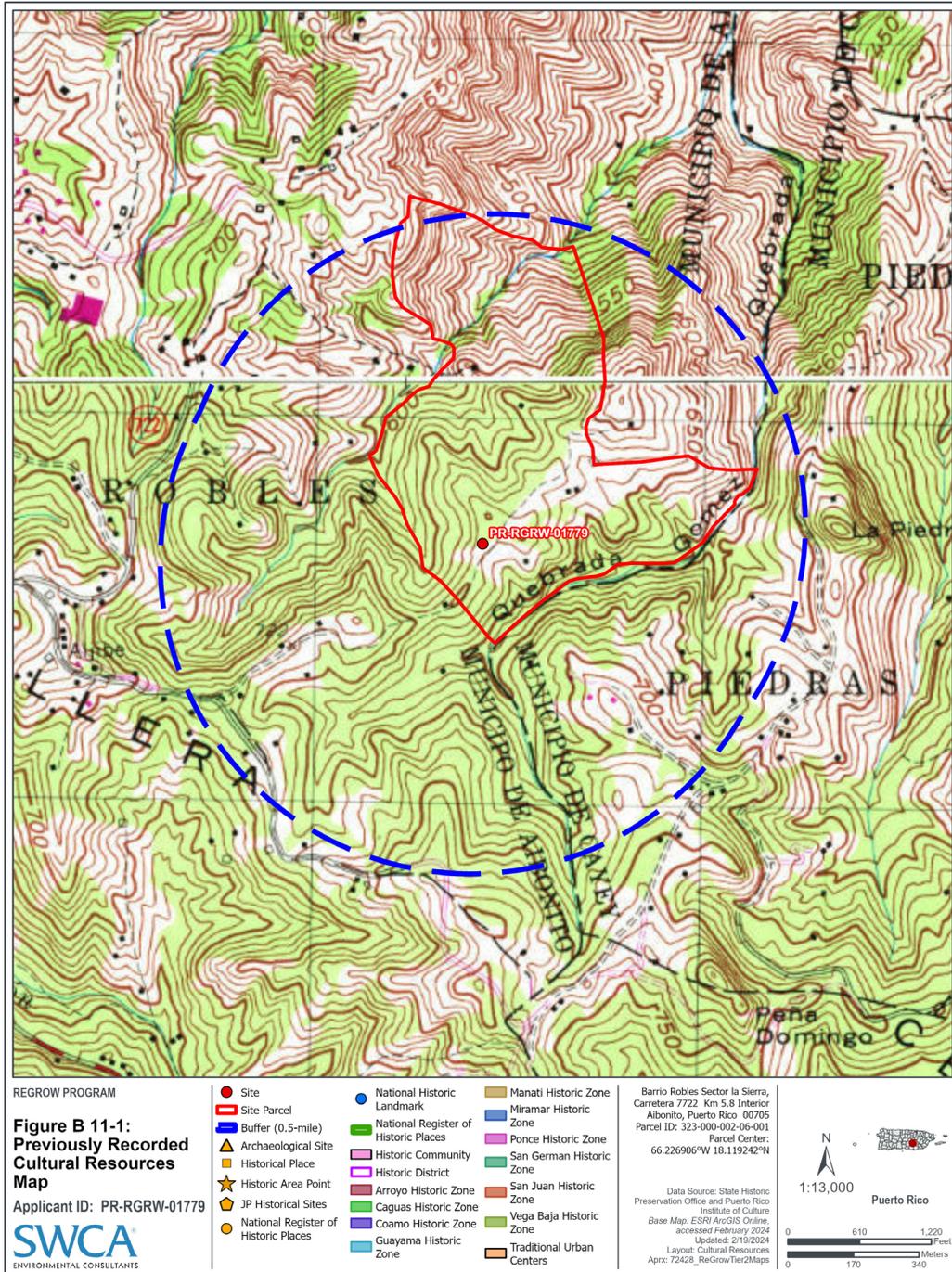


Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

**Project (Parcel) Location with Previously Recorded Cultural Resources  
USGS Topographic Map**

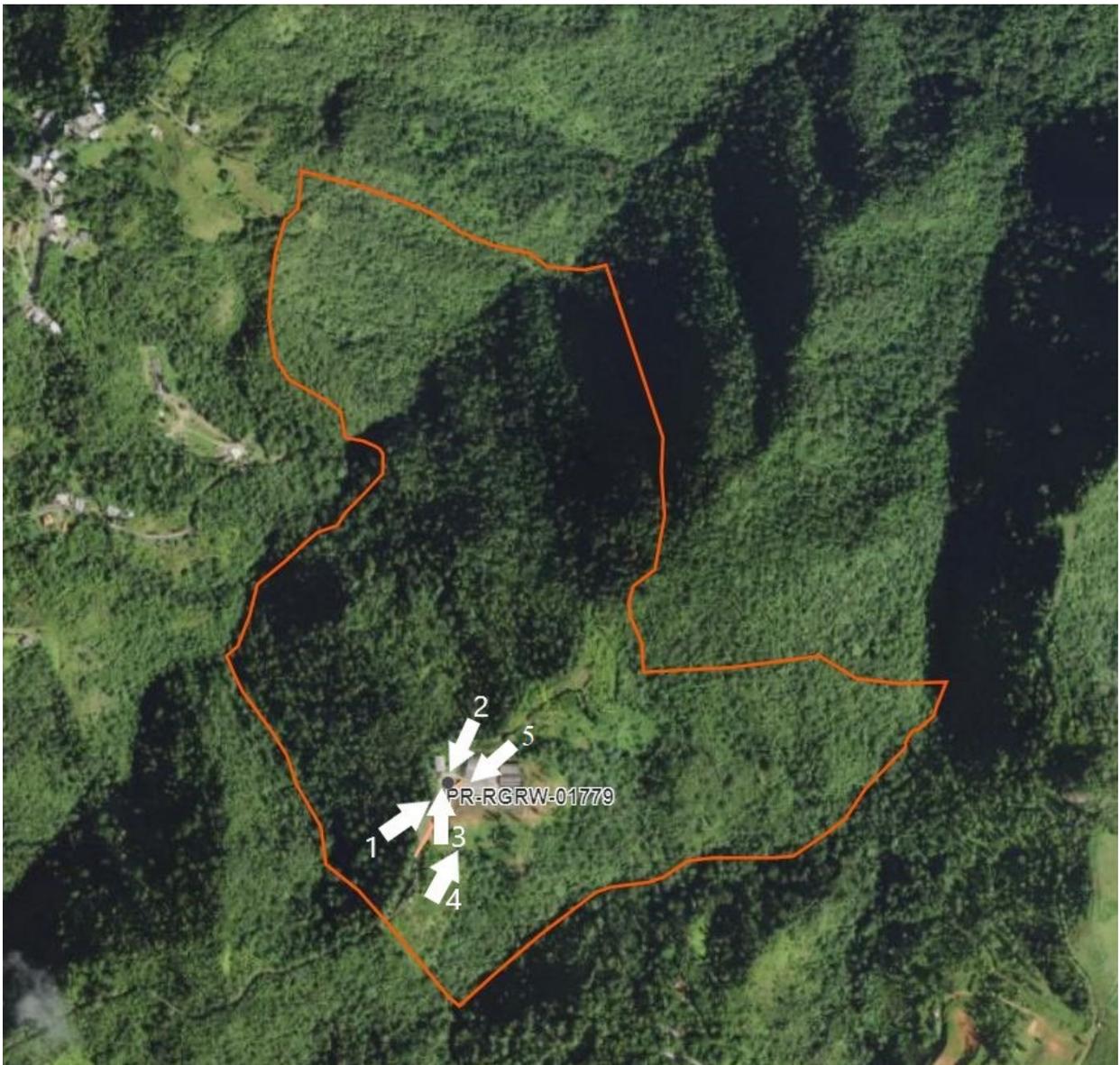


Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

### Photograph Key



Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

<b>Photo #:</b> 01	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Northeast		
<b>Description:</b> Overview photo taken from the southwest corner of the proposed photovoltaic system (PV system). This photo shows a large, open area and one of the stakes the applicant used to mark the proposed corners of the installation. One of the sources that will be powered by the PV system, the greenhouses, is shown here.		

<b>Photo #:</b> 02	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> Overview photo taken from the northeast corner of the proposed PV system. This photo shows a large, open area and three of the stakes the applicant used to mark the proposed corners of the installation. This is facing the road into the property and the water holding tank and well.		

Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

<p><b>Photo #:</b> 03</p>	<p><b>Date:</b> 02/15/24</p>	
<p><b>Photo Direction:</b> North</p>		
<p><b>Description:</b> This photo shows a pre-existing storage warehouse which will be another item powered by the proposed PV system, as viewed from the approximate proposed PV system location.</p>		
<p><b>Photo #:</b> 04</p>	<p><b>Date:</b> 02/15/24</p>	
<p><b>Photo Direction:</b> East/northeast</p>		
<p><b>Description:</b> This photo shows the pre-existing deep water well (500 ft. deep) for which a water pump will be powered by the proposed PV system. The greenhouses can be seen in the background, and the empty space on the left where the PV system would be installed.</p>		

Applicant: Jardín Tierra Adentro

Case ID: PR-RGRW-01779

City: Aibonito

<b>Photo #:</b> 05	<b>Date:</b> 02/15/24
-----------------------	--------------------------

**Photo Direction:**  
Southwest

**Description:**  
This is a photo showing the location of a water holding tank which the well water is pumped into, about 125-150 ft from the associated photo point. It is in good condition.





October 20, 2022

**Arch. Carlos A. Rubio Cancela**

Executive Director

State Historic Preservation Officer

Cuartel de Ballajá Bldg.

San Juan, Puerto Rico

**Re: Authorization to Submit Documents**

Dear Arch. Rubio Cancela:

The U.S. Department of Housing (HUD) approved the allocations of Community Development Block Grant (CDBG-DR) funds on February 9, 2018. It also approved the allocation of Community Development Block Grant Mitigation (CDBG-MIT) funds on January 27, 2020. The purpose of these allocations is to address unsatisfied needs as a result of Hurricanes Irma and Maria in September 2017; and to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

To comply with the environmental requirements established by HUD, the Department of Housing of Puerto Rico (PRDOH) contracted Horne Federal LLC to provide environmental registry review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

In line to expedite the processes, Horne Federal LLC, is authorized to submit to the State Historic Preservation Officer, documentation of projects related to both the CDBG-DR and CDBG-MIT on behalf of PRDOH.

Cordially,

Juan C. Pérez Bofill, P.E. M.Eng

Director of Disaster Recovery

CDBG DR-MIT

**Attachment 12**  
**Sole Source Aquifer Worksheet and**  
**Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## **Sole Source Aquifers (CEST and EA) - PARTNER**

<https://www.hudexchange.info/environmental-review/sole-source-aquifers>

### **1. Is the project located on a sole source aquifer (SSA)<sup>1</sup>?**

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project or jurisdiction in relation to the nearest SSA.*

Yes → *Continue to Question 2.*

### **2. Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?**

Yes → *The review is in compliance with this section. Continue to the Worksheet Summary below.*

No → *Continue to Question 3.*

### **3. Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?**

Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.

Yes → *Continue to Question 4.*

No → *Continue to Question 5.*

### **4. Does your MOU or working agreement exclude your project from further review?**

Yes → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

No → *Continue to Question 5.*

### **5. Will the proposed project contaminate the aquifer and create a significant hazard to public health?**

Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area.

---

<sup>1</sup> A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

EPA will also want to know about water, storm water and waste water at the proposed project. Follow your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination.*

Yes → *The RE/HUD will work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied. Continue to Question 6.*

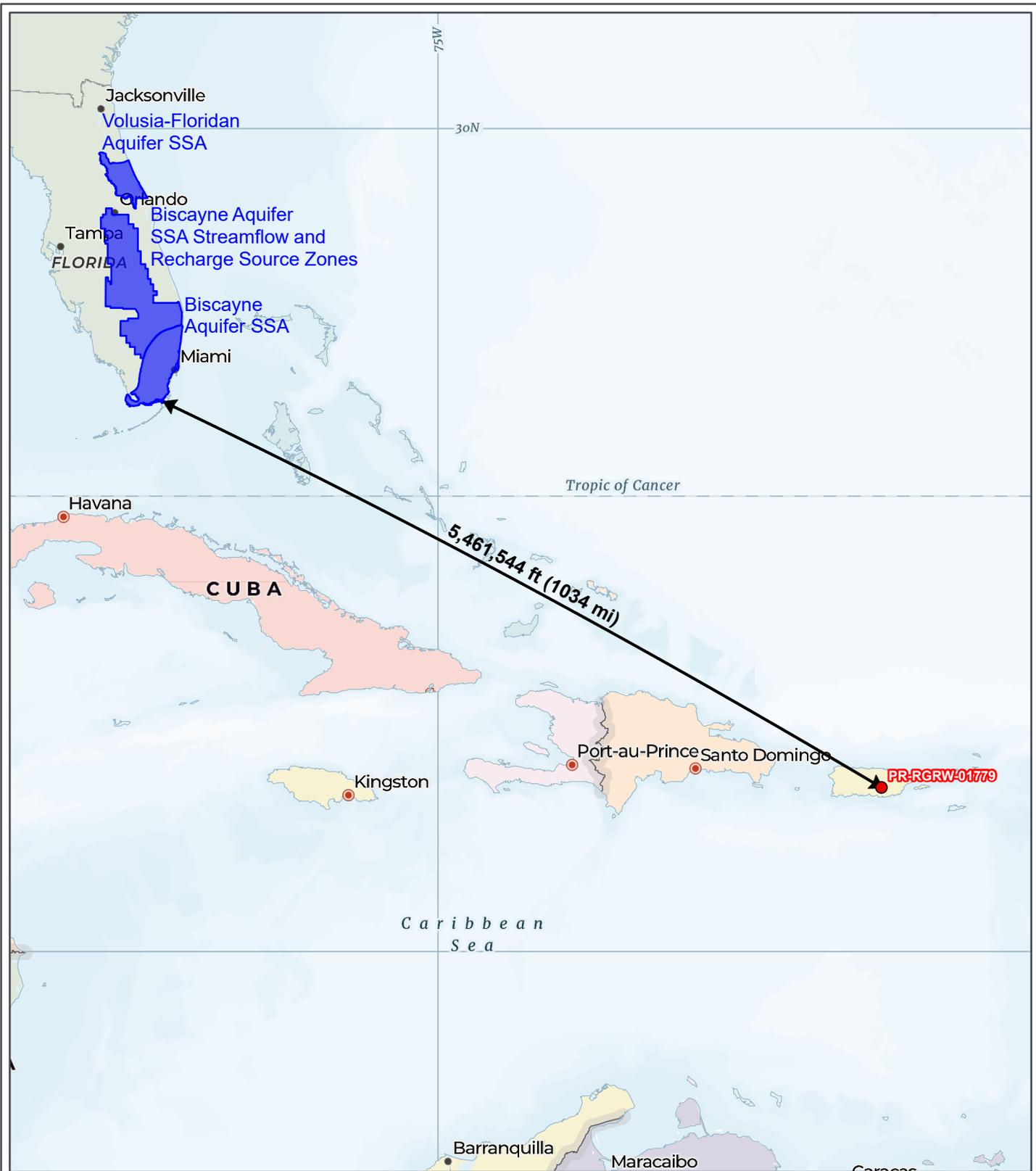
### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

According to the USEPA's Source Water Protection, Sole Source Aquifer Protection Program, there are no sole source aquifers in Puerto Rico. No further evaluation is required. The project is in compliance with the Safe Drinking Water Act.



REGROW PROGRAM

**Figure 12-1: Sole Source Aquifers Map**

Applicant ID: PR-RGRW-01779

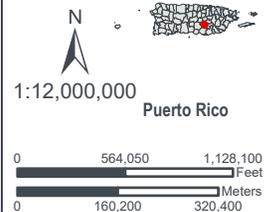


- Site
- Sole Source Aquifers

**\*There are no Sole Source Aquifers in Puerto Rico.**

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://services.arcgis.com/cJ9YHowT8TU7DUyn/arcgis/rest/services/SoleSourceAquifers/FeatureServer>  
Base Map: *ESRI ArcGIS Online*,  
accessed February 2024  
Updated: 2/23/2024  
Layout: Sole Source Aquifers  
Aprx: 72428\_ReGrowTier2Maps



**Attachment 13**  
**Wetlands Protection Partner Worksheet**  
**and Map**



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**  
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

## Wetlands (CEST and EA) – Partner

<https://www.hudexchange.info/environmental-review/wetlands-protection>

**1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building’s footprint, or ground disturbance?**

The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any any structures or facilities.

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Yes → *Continue to Question 2.*

**2. Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?**

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

Yes → *Work with HUD or the RE to assist with the 8-Step Process.* *Continue to Question 3.*

**3. Does Section 55.12 state that the 8-Step Process is not required?**

No, the 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD’s elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

5-Step Process is applicable per 55.12(a).

**Provide the applicable citation at 24 CFR 55.12(a) here.**

[Click here to enter text.](#)

→ *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

8-Step Process is inapplicable per 55.12(b).

**Provide the applicable citation at 24 CFR 55.12(b) here.**

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

8-Step Process is inapplicable per 55.12(c).

**Provide the applicable citation at 24 CFR 55.12(c) here.**

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

### **Include all documentation supporting your findings in your submission to HUD.**

The project site was reviewed for wetlands using the U.S. Fish and Wildlife Service (USFWS) Wetland Inventory Mapper and a visual confirmation during the field site inspection. A riverine wetland is present 584 ft southeast of the project site. Due to the distance and intervening forest vegetation, further evaluation is not required. The project is in compliance with Executive Order 11990.



REGROW PROGRAM

**Figure B 13-1:  
Wetlands Protection  
Map**

Applicant ID: PR-RGRW-01779

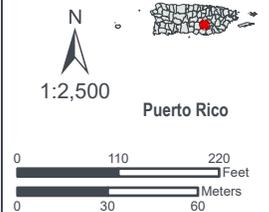


- Site
- Site Parcel
- Project Footprint (Option)
- Underground Electrical Line
- NHD Stream
- Estuarine and Marine Deepwater

- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: <https://apps.nationalmap.gov/downloader/#/>  
<https://www.fws.gov/program/national-wetlands-inventory/data-download>  
 Base Map: ESRI ArcGIS Online,  
 accessed February 2024  
 Updated: 2/23/2024  
 Layout: Wetlands Protection



## **Attachment 14**

# **Wild and Scenic Rivers Partner Worksheet and Wild and Scenic Rivers Map**

## Wild and Scenic Rivers (CEST and EA) – PARTNER

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
References		
<a href="https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers">https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers</a>		

### 1. Is your project within proximity of a NWSRS river as defined below?

**Wild & Scenic Rivers:** These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational

Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

No

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.

Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

→ Continue to Question 2.

**2. Could the project do *any* of the following?**

- Have a direct and adverse effect within Wild and Scenic River Boundaries,
- Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
- Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.

Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

- No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

- Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *The RE/HUD must work with the Managing Agency to identify mitigation measures to mitigate the impact or effect of the project on the river.*

## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

A review of the USFWS National Wild and Scenic River mapper identified no Wild and Scenic Rivers or National Rivers Inventory (NRI) rivers present in Aibonito Municipio. The closest Wild and Scenic River segment is located 159,241 ft (30 mi) from the project site. No further evaluation is required. The project is in compliance with the Wild and Scenic Rivers Act.

**Are formal compliance steps or mitigation required?**

Yes

No



REGROW PROGRAM

**Figure B 14-1:  
National Wild and  
Scenic River Map**

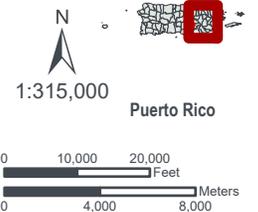
Applicant ID: PR-RGRW-01779



- Site
- National Wild and Scenic River

Barrio Robles Sector la Sierra,  
Carretera 7722 Km 5.8 Interior  
Aibonito, Puerto Rico 00705  
Parcel ID: 323-000-002-06-001  
66.226906°W 18.119242°N

Data Source: [https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW\\_WildScenicRiverSegments\\_01/mapserver](https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW_WildScenicRiverSegments_01/mapserver)  
Base Map: ESRI ArcGIS Online, accessed February 2024  
Updated: 2/23/2024



**Attachment 15**  
**Environmental Justice Partner Worksheet**  
**and EJScreen Report**



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-1000

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## Environmental Justice (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/environmental-justice>

**HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.**

**1. Were any adverse environmental impacts identified in any other compliance review portion of this project’s total environmental review?**

Yes à *Continue to Question 2.*

No à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

**2. Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?**

Yes

**Explain:**

Click here to enter text.

à *The RE/HUD must work with the affected low-income or minority community to decide what mitigation actions, if any, will be taken. Provide any supporting documentation.*

No

**Explain:**

Click here to enter text.

à *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

### **Worksheet Summary**

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

**Include all documentation supporting your findings in your submission to HUD.**

The ReGrow Program intends to alleviate negative economic impacts to, and strengthen, the agricultural industry in Puerto Rico. The project's direct and indirect impacts are limited to a small area on a single land parcel. The project will benefit the farm owner by providing access to electricity for improving agricultural use and production. The project would not facilitate development that would negatively affect human health or result in disproportionate adverse environmental impacts to low-income or minority populations. The project is in compliance with Executive Order 12898.



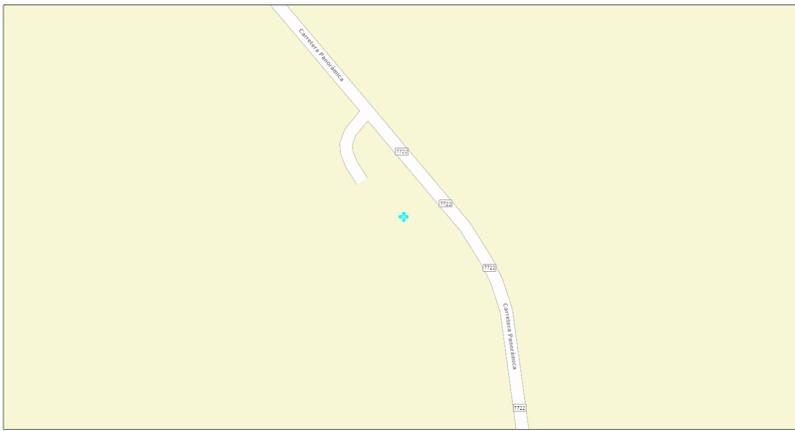
# EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

## Aibonito Municipio, PR

1 mile Ring Centered at 18.114486,-66.232648  
 Population: 660  
 Area in square miles: 3.14

A3 Landscape



February 22, 2024  
 Search Result (point)

Esri, Community Maps Contributors, Esri, TomTom, Garmin, Puntoparc, SafeGraph, GeoTechniques, Inc, METRACIA, USGS, NPS, US Census Bureau, USFWS

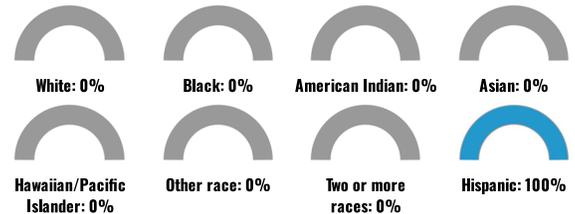
### COMMUNITY INFORMATION



### LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	1%
Spanish	99%
Total Non-English	99%

### BREAKDOWN BY RACE



### BREAKDOWN BY AGE



### LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

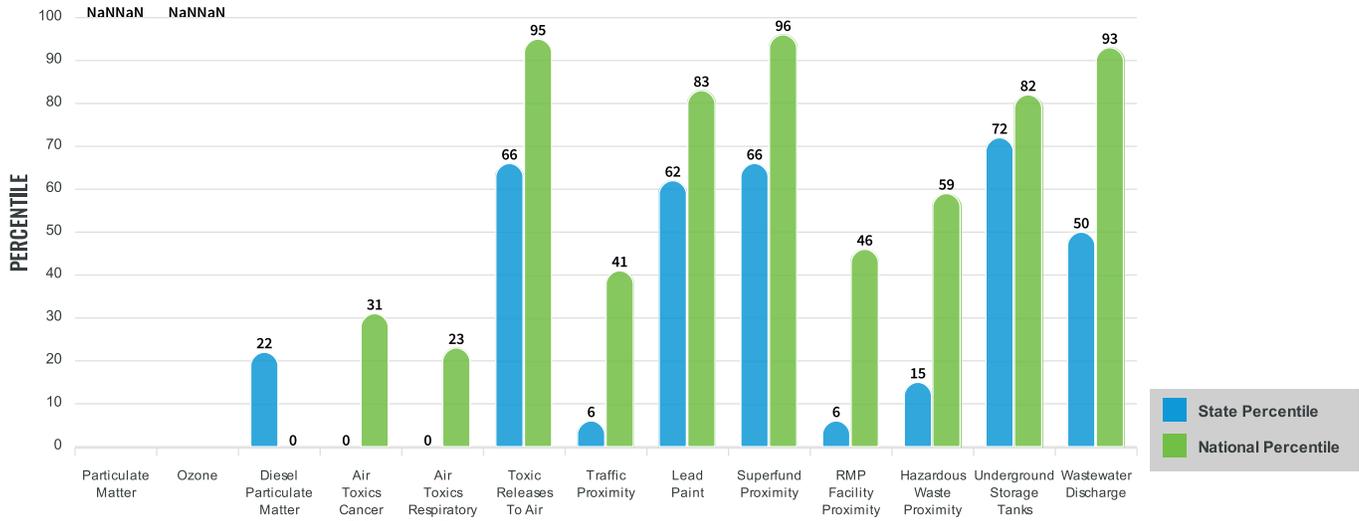
# Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

## EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

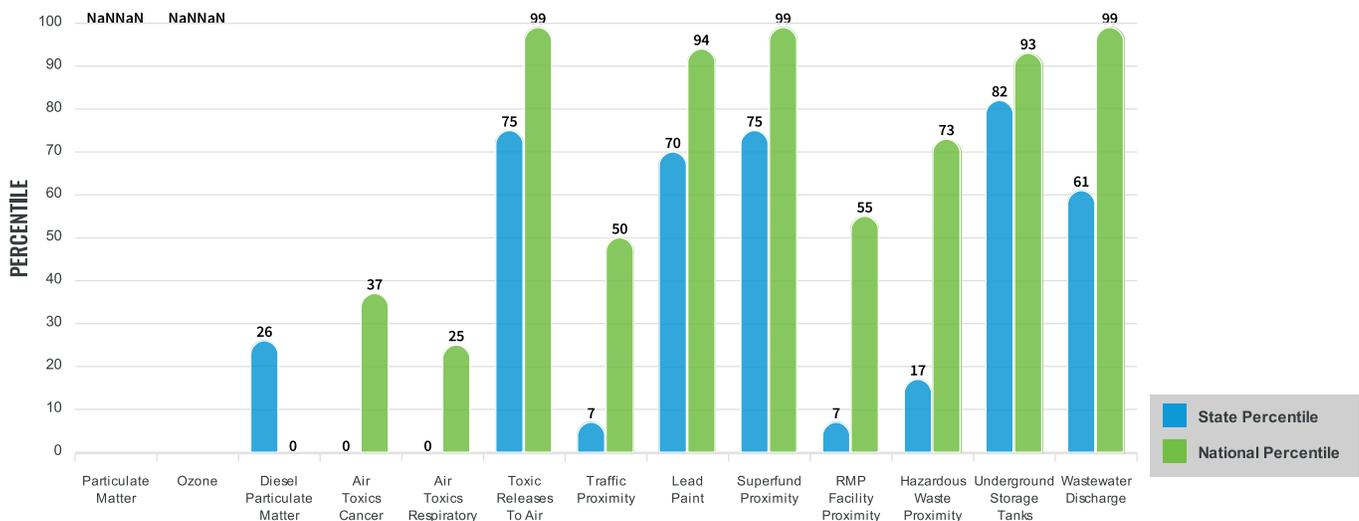
### EJ INDEXES FOR THE SELECTED LOCATION



## SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 1 mile Ring Centered at 18.114486,-66.232648

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>POLLUTION AND SOURCES</b>					
Particulate Matter (µg/m <sup>3</sup> )	N/A	N/A	N/A	8.08	N/A
Ozone (ppb)	N/A	N/A	N/A	61.6	N/A
Diesel Particulate Matter (µg/m <sup>3</sup> )	0.0186	0.0667	19	0.261	0
Air Toxics Cancer Risk* (lifetime risk per million)	11	20	0	25	1
Air Toxics Respiratory HI*	0.11	0.19	0	0.31	1
Toxic Releases to Air	1,000	4,300	59	4,600	59
Traffic Proximity (daily traffic count/distance to road)	5.4	180	7	210	12
Lead Paint (% Pre-1960 Housing)	0.12	0.16	57	0.3	37
Superfund Proximity (site count/km distance)	0.1	0.15	61	0.13	66
RMP Facility Proximity (facility count/km distance)	0.052	0.47	5	0.43	11
Hazardous Waste Proximity (facility count/km distance)	0.091	0.76	14	1.9	18
Underground Storage Tanks (count/km <sup>2</sup> )	0.44	1.7	62	3.9	38
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0036	2.3	50	22	59
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index	96%	83%	86	35%	99
Supplemental Demographic Index	56%	43%	84	14%	99
People of Color	100%	96%	31	39%	98
Low Income	92%	70%	85	31%	99
Unemployment Rate	11%	15%	47	6%	85
Limited English Speaking Households	89%	67%	92	5%	99
Less Than High School Education	32%	21%	79	12%	93
Under Age 5	0%	4%	0	6%	0
Over Age 64	21%	22%	47	17%	70
Low Life Expectancy	N/A	N/A%	N/A	20%	N/A

\* Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

**Sites reporting to EPA within defined area:**

Superfund .....	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities .....	0
Water Dischargers .....	0
Air Pollution .....	0
Brownfields .....	0
Toxic Release Inventory .....	0

**Other community features within defined area:**

Schools .....	0
Hospitals .....	0
Places of Worship .....	0

**Other environmental data:**

Air Non-attainment .....	No
Impaired Waters .....	Yes

Selected location contains American Indian Reservation Lands* .....	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community .....	Yes
Selected location contains an EPA IRA disadvantaged community .....	Yes

Report for 1 mile Ring Centered at 18.114486,-66.232648

## EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	N/A	N/A	N/A	20%	N/A
Heart Disease	N/A	N/A	N/A	6.1	N/A
Asthma	N/A	N/A	N/A	10	N/A
Cancer	N/A	N/A	N/A	6.1	N/A
Persons with Disabilities	20.5%	21.6%	43	13.4%	87

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	N/A	N/A	N/A	12%	N/A
Wildfire Risk	N/A	N/A	N/A	14%	N/A

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	50%	32%	81	14%	98
Lack of Health Insurance	5%	7%	38	9%	38
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 1 mile Ring Centered at 18.114486,-66.232648

**Appendix C**  
**Environmental Site Inspection Report**



<b>Applicant Name:</b>	Francisco Mendoza Perez		
<b>App ID:</b>	PR-RGRW-01779	<b>RFA</b>	005
<b>Project Name:</b>	Jardin Tierra Adentro	<b>Municipio:</b>	Aibonito
<b>Address:</b>	Barrio Robles Sector la Sierra, Carretera 7722 Km 5.8 Interior	<b>Zip Code:</b>	00705
<b>Parcel ID(s):</b>	323-000-002-06-001	<b>Lat:</b>	18.119716
<b>Project Budget:</b>	\$99,595.00	<b>Long:</b>	-66.26761

**\*\*\*Pay attention to the color coding – this will indicate what you are responsible for filling in\*\*\***

Task:	Name:	Date Completed:	Notes:	
➤ <b>Pre-Site Inspector</b>	Karina Morales	2/12/24		
❖ <b>Site-Inspector</b>	Karina Morales	2/15/24		
<b>Communication Log:</b> (this is used by anyone who wants to record contact with the applicant)	Staff who called or emailed	Date & Time	Form of communication (email, phone, etc.) and which email /number/etc.used)	
	Karina Morales	2/9/24 16:00	Primary # 787-375-3980	Scheduled SI and pre-site interview
	Karina Morales	2/12/24 14:00	Primary # 787-375-3980	Pre-site interview conducted

**Canopy Document Notes/Summary:**

▪ <b>EA Preparer</b>	Hannah Danek			
<b>Scope of Work from IUGE:</b>	Photovoltaic System, rotary tiller, and a tractor			
<ul style="list-style-type: none"> <li>- Will the PV system be on a foundation?</li> <li>- Not sure where the PV system will be, but there is a riverine wetland at the southeastern border and through the northwestern part of the parcel</li> <li>- Is there already an agriculture business of this type established here?</li> </ul>				
▪ <b>GIS review Wetlands?</b>	Within parcel	Yes	next to parcel	Y
❖ <b>Were any onsite wetlands identified?</b>	None were identified during inspection but were during desktop review. None within project activity location.			
❖ <b>Will project activities occur within any wetlands?</b>	No			



▪ GIS review Floodplain?	Floodway on/near parcel	N	100-year on/near parcel	N	500-year on/near parcel	N
❖ Will project activities occur within a Floodway?			N			
❖ Will project activities occur within a 100-year Floodplain?			N			

❖ Site-Visit Form

❖ General Site Conditions and Field Notes:			
Does the address match the parcel location?	Yes	Does the lat/long match the parcel location?	Yes
Comments on location:			
<b><u>Question</u></b>	<b><u>Yes/No</u></b>	<b><u>Comments:</u></b>	
<b>Was property accessible by vehicle?</b>	Yes		
<b>Were there any access issues?</b> Examples of access issues: Dogs, Locked gate, Traffic hazards, Uncooperative residents, Confrontational Neighbors, *If no access issues please indicate with "None"	No		
<b>Are water wells present?</b> *please include lat/long of water well so it can be denoted on the sitemap	Yes	Deep water well, 500 ft. deep, photo #05	
<b>Are creeks or ponds present?</b> *please include lat/long of water well so it can be denoted on the sitemap	No	None within project activity locations	
<b>Are any potential wetlands on-site or visible on adjacent parcel?</b> *please include lat/long of water well so it can be denoted on the sitemap	No	None seen during site inspection within areas assessed.	



❖ **Parcel Conditions**

Note – for Any Yes answers specify type, contents, and location (get photo points)  
(These questions are mostly concerned with contamination – all HUD activities must be “free and clear of contamination” and while it’s important to be able to show there is no site-contamination we also have to keep in mind what the HUD funded project is and the regulatory requirements of the activity)

<b>Are commercial or industrial hazardous facilities at parcel or within visual sight?</b>	No	
<b>Are there signs of underground storage tanks?</b>	No	
<b>Are any above-ground tanks (relevant to the activities in the IUGF *unless they are a source of contamination) &gt;10 gallons present? If yes, what are the contents and conditions of each tank?</b>	Yes	In great condition, water holding tank, photo #06
<b>Are 55-gallon drums present? If yes, what are the content and conditions of each tank?</b>	No	
<b>Are abandoned vehicles or electrical equipment present?</b>	No	
<b>Are there any signs of illegal dumping within or next to the applicant parcel?</b>	No	



<b>Is other potential environmentally hazardous debris on the parcel?</b>	No	
<b>Is there non-environmentally hazardous debris on the parcel?</b>	No	
<b>Are any leaks, soil stains, or stressed vegetation present? If yes, what is the source of the staining/stress?</b>	No	
<b>Are there any pungent, foul, or noxious odors?</b>	No	
<b>Other Components Related to Project</b> (e.g., gas tanks, cisterns, water tanks, abandoned vehicles, etc.)		
<b>Type</b>	<b>Details</b>	
Water tank	Established 2002-2004	
Deep water well	Established 2002-2004	
<b>Are there any potentially hazardous trees that could fall?</b>	No	
<b>Are any bird nests visible?</b>	No	None evident- lots of avian activity
<b>Are there any animal burrows visible?</b>	No	None evident
<b>Are there any signs of potential/preferred T&amp;E habitat in the area?</b>	Yes	Potential Puerto Rican Boa and Palo de Ramon ( <i>B. vanderbiltii</i> ) habitat but none within project activity location.



**Natural Resources** (e.g., endemic plants, endangered species, water bodies, wetlands, etc.) {include the ones inside the property and in direct sight view of the site location}

Type or Species	Description

**Are there any buildings in direct visual sight of the project locations?** Take photo and ask applicant when the structure was built)

No

**Structures** (e.g., residences, commercial buildings, etc.) {include the ones inside the property and in direct sight view of the site location}

Built Date	Type of Construction
Constructed overtime since 2000	Greenhouses- 11 structures, constructed overtime since 2000
2004	Storage building

❖ **Additional Environmental Hazards Analysis**

**Based on the above findings, does additional information need to be obtained from the applicant to determine whether an environmental hazard is present?**

No

I verify that I have physically visited this property and that the findings outlined above are accurate.



*Karina Morales*

Karina Morales

February 15<sup>th</sup>, 2024

Following pages are used for:

Location Map with parcel boundaries and building point (Aerial base with streets labelled)

Photos taken during inspection, with Date / Type / Direction associated with the photo



**Site-Visit Tips:**

Tips before going to the field:

1. Confirm with the applicant the appointment the same week, the day prior, or the same day hours before leaving for the site inspection.
2. Check the vehicle, and equipment (e.g. did you download the field map)
3. Don't leave the field without the contact information of the applicant, you may need directions along the way.
4. Make sure you read the Pre-Site Environmental Questionnaire.
  - a. It is good practice to ask the EA writer and the Project Manager (PM) if they want us to pay attention or to ask something in particular.
5. The RFA document might give you what the funds were requested for, this is important because sometimes the applicants will keep talking about the projects, but not mention who's going to pay what.
6. Sign the JHA; make sure the PM has the time to prepare the document.

For the following always take pictures:

1. If there is a sign of site preparation, please ask when it happened and what they did (e.g. grading, filling, etc.)
2. Tree clearing – ask them about permits, and what type of tree it is.
3. When an applicant is not sure about the exact location of the project, make sure you take several overview pictures or a central point with N, E, S, and W views.
  1. Please be prepared to let the applicant know where wetlands are located within their parcel boundaries. This will help ensure they do not try and plan to locate any activities within wetlands (and/or ensure we know which permits will be required).
4. Ask about any organic debris (grasses, dirt, etc.) and other materials such as construction materials, buckets, tarps, etc., and what they plan to do to them.
5. Structures with a direct view of the project (ask when it was built).
6. Natural resources – water bodies, burrows, birds or nests, wetlands, erosion, landslides, etc.

Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

Frame #	View	Description
01	NE	Overview photo taken from the southwest corner of the proposed photovoltaic system (PV system). This photo shows a large, open area and one of the stakes the applicant used to mark the proposed corners of the installation. One of the sources that will be powered by the PV system, the greenhouses, is shown here.
02	SW	Overview photo taken from the northeast corner of the proposed PV system. This photo shows a large, open area and three of the stakes the applicant used to mark the proposed corners of the installation. This is facing the road into the property and the water holding tank and well.
03	E	This photo shows another view of the greenhouses/nursery which are one of the sources which the PV system will provide water to, as viewed from the approximate proposed PV system location.
04	N	This photo shows a pre-existing storage warehouse which will be another item powered by the proposed PV system, as viewed from the approximate proposed PV system location.
05	ENE	This photo shows the pre-existing deep water well (500 ft. deep) for which a water pump will be powered by the proposed PV system. The greenhouses can be seen in the background, and the empty space on the left where the PV system would be installed.
06	SW	This is a photo showing the location of a water holding tank which the well water is pumped into, about 125-150 ft from the associated photo point. It is in good condition.

Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 01	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Northeast		
<b>Description:</b> Overview photo taken from the southwest corner of the proposed photovoltaic system (PV system). This photo shows a large, open area and one of the stakes the applicant used to mark the proposed corners of the installation. One of the sources that will be powered by the PV system, the greenhouses, is shown here.		

<b>Photo #:</b> 02	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> Overview photo taken from the northeast corner of the proposed PV system. This photo shows a large, open area and three of the stakes the applicant used to mark the proposed corners of the installation. This is facing the road into the property and the water holding tank and well.		

Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 03	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> East	
<b>Description:</b> This photo shows another view of the greenhouses/nursery which are one of the sources which the PV system will provide water to, as viewed from the approximate proposed PV system location.	



<b>Photo #:</b> 04	<b>Date:</b> 02/15/24
<b>Photo Direction:</b> North	
<b>Description:</b> This photo shows a pre-existing storage warehouse which will be another item powered by the proposed PV system, as viewed from the approximate proposed PV system location.	



Project #: PR-RGRW-01779	Photographer: Karina Morales
Location Address: Barrio Robles Sector la Sierra, Carretera 7722, km 5.8 Interior	Coordinates: 18.119716, -66.226761

<b>Photo #:</b> 05	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> East/northeast		
<b>Description:</b> This photo shows the pre-existing deep water well (500 ft. deep) for which a water pump will be powered by the proposed PV system. The greenhouses can be seen in the background, and the empty space on the left where the PV system would be installed.		

<b>Photo #:</b> 06	<b>Date:</b> 02/15/24	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> This is a photo showing the location of a water holding tank which the well water is pumped into, about 125-150 ft from the associated photo point. It is in good condition.		