

# **Environmental Assessment**

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

### **24 CFR Part 58**

#### **Project Information**

**Project ID:** PR-RGRW-04340

**Project Name:** Hacienda Agroecológica El Edén

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

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

**State/Local Identifier:** Puerto Rico / Las Marias, PR

**Preparer:** Patricia Carmenatty

**Certifying Officer Name and Title:** Permit and Environmental Compliance Officers: Sally Acevedo Cosme, Pedro de León Rodríguez, Ivelisse Lorenzo, Janette Cambrelen, Santa Ramirez, Limary Vélez Marrero, Mónica M. Machuca Ríos, Javier Mercado-Barrera, Abdul Feliciano Plaza and Priscilla Toro Rivera. María T. Torres Bregón - Environmental Manager, Angel G. Lopez Guzman - Deputy Director, Aldo A. Rivera-Vazquez – Director for Program Management, and Juan Carlos Perez Bofill - Director for Disaster Recovery CDBG Program.

**Consultant:** Behar Ybarra & Associates LLC

**Direct Comments to:** Puerto Rico Department of Housing:  
([environmentcdbg@vivienda.pr.gov](mailto:environmentcdbg@vivienda.pr.gov))

#### **Project Location:**

Carr 124 KM 12.9, Barrio Cerrote Solar 10, Las Marias, PR 00670

Cistern location: latitude 18.228256 longitude -66.930894

Parcel cadastral #: 211-000-006-25-000

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

The proposed activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. The farm and maintenance tools includes: two trimmers, blower backpack, chain saw, industrial pruner, two back spray pump, two motorized atomizers, two sprayers, two dorsal applicators and two dispensers. The

installation of the cistern will require ground disturbance. The cistern and pump will be installed on a concrete slab measuring 15 feet by 15 feet with a depth of 8 inches at the applicant's expense. Minimal ground disturbance will be required to level the soil. There's no need for the removal of vegetation like shrubs or trees as the current area to be worked on consists solely of grass. The cistern will be supplied with rainwater, and the power to operate the pump for water distribution will be from a portable diesel generator supplied by the applicant. The water pipes to be used to water the crops will all be installed above the ground, not anchored to it. The location of the water pipes will depend on where the new fruit trees will be planted. No new electricity or water connection will be necessary. Based on a review of historical aerial imagery, the location for the proposed activities has been used for agricultural purposes for the past 10 years.

The Area of Potential Effect (APE) has been defined as the area potentially impacted by ground disturbing activities related to the construction of the new 15' x 15' concrete slab for the cistern and pump. 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 cistern and pump plus a 15-meter buffer and the visual APE is the viewshed of the proposed project.

A site Map is included in Figure 1, illustrating the location of the cistern and pump on the property. Photos of the location are included in Section 106 documentation, Appendix 1. Refer to Appendix 3 for Site Inspection Report.

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

In 2017, Hurricanes Irma and María devastated Puerto Rico's agriculture, destroying 80% of crop value and causing \$780 million in damages. The storms severely impacted food security and agricultural businesses. In response, the Re-Grow Puerto Rico Urban-Rural Agriculture Program was launched, funded by Community Development Block Grant – Disaster Recovery (CDBG-DR).

The Re-Grow Puerto Rico Urban-Rural Agriculture Program (RGRW) will increase agricultural capacity while promoting and increasing food security island wide. This Program will enhance and expand agricultural production related to economic revitalization and sustainable development activities. This agricultural project associated with the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts are in keeping with the overall objectives of the Economic Development Program.

**Existing Conditions and Trends [24 CFR 58.40(a)]:**

The project area is located in the mountainous area of Las Marias with irregular topography. The new cistern and pump will be installed in a flat area covered with grass. Currently the use that is being given to the Farm is to plant fruit trees. There's no need for the removal of vegetation like shrubs or trees as the current area to be worked on consists

solely of grass. Therefore, there is little to no change in land use associated with these placements.

**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 Planning and Development (CPD) / Community Development Block Grant - Disaster Recovery (CDBG-DR)	\$11,938,162,230.00

**Estimated Total HUD Funded Amount:** \$ 36,284.01

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$ 36,284.01.

**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 of 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"/>	This project is the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will have no impact on any Airports. The site is located 73,803 feet from the nearest major civil airport

		(Eugenio Maria de Hostos in Mayaguez) and 326,367 feet from the nearest military airport (Luis Muñoz Marín International Airport in San Juan). This topic is in compliance with the HUD's Airport Hazard regulations without further evaluation. See the attached Airport map Runway Protection Zone, Figure 2.
<p><b>Coastal Barrier Resources</b></p> <p>Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>This project is not located in a CBRS Unit. The project is located 86,124 feet northeast of the nearest Coastal Barrier Resource System, PR-72. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act. See the attached CBRS map, Figure 3.</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>The project is located in Zone X, Panel 72000C1035H, 4/19/2005 on the FEMA FIRM. The project does not require flood insurance or is excepted from flood insurance. See attached Flood Map, Figure 4. The project is in compliance with the Flood Insurance without further evaluation.</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>This project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts for an agricultural site located in the Municipio of Las Marias. The project is not located in a nonattainment municipality of Puerto Rico (Arecibo, Bayamón, Cataño, Guaynabo, Salinas, San Juan, Toa Baja). The installation and operation of this project will have no impact and is in compliance with the Clean Air Act without further evaluation. See attached published list of Puerto Rico Nonattainment/Maintenance Status for</p>

		each country by year for all criteria pollutants in Appendix 2.
<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 is located 82,983 feet from the nearest Coastal Zone Management Area and does not affect a Coastal Zone as defined in the state Coastal management Plan. The project is in compliance with the Coastal Zone Management Act. See the attached CZMA map, Figure 5.</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>This project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts for an agricultural project. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. There are no sites of environmental concern identified within 3,000 feet near the proposed cistern location.</p> <p>After reviewing the aerial history of the project site over the past 20 years, it has consistently been used for agricultural purposes. The area remains rural, with no significant changes during this period that raise any contamination concerns.</p> <p>HUD's environmental regulations at 24 CFR 58.5(i)(2)(i) and (ii)4 state that, [i]t is HUD's policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property. The project does not involve any occupied structures, and therefore, is exempt from considering radon as part</p>

		<p>of the site contamination analysis as per HUD Notice CDP- 23-103.</p> <p>The project is in compliance with Contamination and Toxic Substances requirements. See attached Toxics Map, Figure 6. See Appendix 3 for Site Inspection Report.</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>After reviewing data from the United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) and the Puerto Rico Department of Natural and Environmental Resources (DNER) database, the Puerto Rican boa (<i>Chilabothrus inornatus</i>) and the Puerto Rican Harlequin Butterfly (<i>Atlantea tulita</i>) could be found in the project area. The scope of work includes continued agricultural use of the property with no intention of cutting down trees where the cistern will be installed, and it has been maintained that way for agricultural purposes.</p> <p>The nature of the project, scope of work, information available, a careful analysis of the IpaC, the Puerto Rico Boa conservation measures, the Caribbean Dkey in the US Fish and Wildlife Service's online IPaC application, and the observations during the field visit on September 9, 2023, were used to evaluate the potential impacts to federally listed species from this project. Based on that information and the answer inputted into the Dkey, it was determined that the proposed action will have "May affect but is not likely to adversely affect" (NLAA) determination on the Puerto Rican Boa.</p> <p>An Informal Consultation was submitted to USFWS on 4/18/2024 and Concurrence Letter was received on 6/23/2024. The Service acknowledges receipt of the NLAA DKey consistency letter for the</p>

Puerto Rican boa. Based on the nature of the project, scope of work, information available and existing habitat, PRDOH together with USFWS determined that the proposed project may affect but is not likely to adversely affect the Puerto Rican harlequin butterfly since the project location is 20,914 feet from its critical habitat. The PRDOH's Effect Determination Acceptance letter was received on 7/22/2024.

If a Puerto Rican Boa is found in the project activity 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. As established by the USFWS Puerto Rican Boa Conservation Measures Guideline.

<https://ipac.ecosphere.fws.gov/guideline/design/population/156/office/41430.pdf>

The USFWS has developed the following conservation measures for the harlequin butterfly:

1. All project construction personnel must be informed about the potential presence of the PR harlequin butterfly or its occupied host plant, prickly bush (*Oplonia spinosa*), in the project areas and the need to avoid harming the species and its occupied host plant. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act. Educational material (e.g., posters, flyers, or signs with photos or illustrations of all the life stages of the PR harlequin butterfly (i.e., eggs, caterpillar, chrysalis, and adult) as well as its host plant, should

be prepared and available to all personnel for reference.

2. Before starting any project activity, including removal of vegetation and earth movement, the boundaries of the work area in the field clearly delineate to avoid unnecessary habitat impacts. Once the project areas are clearly marked, and before any work activity, including site preparation, personnel with knowledge and ability to identify the PR harlequin butterfly (all life stages) and the prickly bush must survey the areas where the work will be performed for the presence of the species and its host plant.

It is important to note that the PR harlequin butterfly can be observed year-round in all its life stages; thus, oviposition (egg-laying) may occur at any time during the year.

3. If the prickly bush is present on the project site, try to avoid cutting it off, even if no eggs, caterpillars, or chrysalis are present.

4. If there is no prickly bush within the project area, and the butterfly is observed flying within the project area, do not harass, harm, pursue, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, the species.

5. Adult butterflies are often observed flying near the host plant as part of their mating behavior and laying eggs. Project-related activities must stop if the prickly bush is found in the project area and the PR harlequin butterfly is observed flying in that same area where the plant is located. A temporary 50-meter (164 feet) buffer zone of no activity or human disturbance should be established and



clearly marked around that prickly bush until the butterfly moves out on its own.

6. Once the PR harlequin butterfly has moved away, within a period of 24 to 36 hours, a search of the prickly bush that has been buffered should be conducted to determine the presence of eggs, caterpillars, or chrysalids of the butterfly on the plant. The contractor or the Applicant should send a report of the observation and its findings to [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov) after the 36-hour search is concluded.

7. If, after the initial search or after the 24 to 36-hour search, any life stage of the PR harlequin butterfly is found in the prickly bush, take the following actions:

- Clearly mark the host plant with flagging tape
- Establish a 10-meter (32-foot) buffer zone around the bush to protect it.
- Eggs are typically found on the prickly bush's newly grown, tender branches. Once an egg hatches, the caterpillar moves and feeds throughout the plant. Therefore, avoid cutting off the prickly bush within the project site even if no eggs, caterpillars, or chrysalids are present.
- Work within the 10-meter buffered area may resume when no signs of any live life stage of the butterfly are detected, which usually takes approximately 60 to 120 days.

8. For all PR harlequin butterfly sightings (all life stages), the time and date of the sighting and the specific location where the butterfly was found must be recorded. Data should also include a

		<p>photo of the butterfly (if possible) and the habitat where it was observed, site GPS coordinates, and comments on how the butterfly was detected and its behavior. All PR harlequin butterfly sighting reports should be sent to the U.S. Fish and Wildlife Service, Caribbean Ecological Service Field Office at caribbean_es@fws.gov.</p> <p>9. For questions regarding the PR harlequin butterfly, the Point of Contact is:</p> <ul style="list-style-type: none"> <li>• José Cruz-Burgos, Threatened and Endangered Species Program Coordinator: <ul style="list-style-type: none"> <li>• Mobile: 305-304-1386</li> <li>• Office phone: 786-244-0081</li> <li>• Office Direct Line: 939-320-3120</li> </ul> </li> </ul> <p>Email: jose_cruz-burgos@fws.gov</p> <p>This project is in compliance with the Endangered Species Act. See attached USWFS Informal Consultation Package and supporting documents in Appendix 4. See attached Endangered Species map, Figure 7.</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>This project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts and does not include development, construction or rehabilitation that will increase residential density. This project is in compliance with Explosive and Flammable hazards without further evaluation.</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. The project activities will occur in an area designated as not prime farmland. The scope of work includes the purchase and installation of a cistern, and this is a</p>

		<p>construction limited to on-farm structures needed for farm operations. The project is in compliance with the Farmland Protection Policy Act. See the attached Farmlands map, Figure 8.</p>
<p><b>Floodplain Management</b></p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes    No  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project is not located in the 100-year floodplain or ABFE special flood hazard area; therefore, no further action is required.</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 Las Marias; therefore, PFIRM information was not available for the area and therefore not considered in the review.</p> <p>The Department of Housing and Urban Development (HUD) introduced new floodplain regulations under 89 FR 30850, effective June 24, 2024, establishing the Federal Flood Risk Management Standard (FFRMS). The current project involves non-critical actions that are located outside the 0.2-percent-annual-chance floodplain (500-year flood elevation). This approach ensures compliance with the FFRMS, meaning no mitigation is required, and the project adheres to the regulations set forth in 24 CFR Part 55.</p> <p>The project is in compliance with Executive Order 11988, as amended by Executive Order 13690. See attached ABFE Map (Figure 9).</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  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The site was visited on January 26, 2024, by SOI-qualified archaeologist. Based on the nature and scope of the undertaking, the APE has been defined as the area potentially affected by ground-disturbing activities related to the construction of</p>

		<p>the concrete slab for the cistern. Documentation with photographs and maps was subsequently submitted to SHPO (attached Appendix 1). In a response from PR SHPO dated April 2, 2024, SHPO concurred with a finding of <b>No Historic Properties Affected</b> within the project's Area of Potential Effects (see attached Appendix 1). The property is not considered historic or contributing to an historic district (See attached Historic map, Figure 10). Therefore, this activity is in compliance with National Historic Preservation Act.</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  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>This project consists of the purchase and installation of a 600 gallons cistern and jet pump ¼ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts for an agricultural site. The project does not include new construction for residential use or rehabilitation of an existing residential property. The site is rural in nature and there will be no impact to or from the surrounding area from a noise perspective. This topic is in compliance with Noise abatement and Control without further evaluation.</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  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>There are no EPA Sole Source Aquifers in Puerto Rico. The project is in compliance with Sole Source aquifers without further evaluation. See attached Sole Source Aquifers maps, Figure 11.</p>
<p><b>Wetlands Protection</b></p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes    No  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>There are no wetlands in or near the proposed project area, therefore, no wetland will be affected by the project undertaking. The project is in compliance with Executive Order 11990. See the attached Wetlands map, Figure 12.</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>This project is not within proximity of the NWSRS river. The project is located 397,412 feet from the nearest Wild and Scenic River. The project is in compliance with the Wild and Scenic Rivers Act. See Map, Figure 13.</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>Based on the scope of work for this project, there will be no additional impact on low-income or minority residents. This proposed activity will not have a negative impact on Environmental Justice. Therefore, the proposed activity complies with this section.</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 of 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
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**LAND DEVELOPMENT**

<p>Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design</p>	<p>2</p>	<p>The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts and continued agricultural use of property which is compatible with a zoning code of A-P (Agricultura Productive) and existing land use of SREP-AH (Specially Protected Agricultural and hydric Rustic Land). There is no urban design associated with this rural, agricultural site.</p>
<p>Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff</p>	<p>2</p>	<p>This project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts and the soil is currently being used for agriculture purposes. There is no change in land use since the land will continue to be used to agriculture purposes. In the project area we have Humatas clay, 40 to 60 percent slopes (HmF2). This soil is deep, very steep, and well drained.</p> <p>The landslide data indicates moderate to very high landslide susceptibility. Despite being a fairly mountainous area, no erosion is expected to occur from this project since where the cistern will be installed is flat. The project will not affect the drainage in the area. There will be no runoff associated with the project. Contractors will be required to use BMPs during construction if erosion impacts occur. The construction manager should investigate if a DNER authorization is required for any land alteration associated with the proposed project activities. See Landslide Susceptibility Map, Figure 14.</p>
<p>Hazards and Nuisances including Site Safety and Noise</p>	<p>2</p>	<p>The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts. There are no specific environmental hazards that have been identified for this site. The site is not in a high Noise Level area. Additionally, the project does not include housing or such to where inhabitants would be affected.</p>

Energy Consumption	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts on an existing agricultural farm. Electricity connection will not be necessary for the proposed project. The cistern will operate with a portable diesel generator supplied by the applicant. The proposed project will have no impact on the energy consumption.
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Environmental Assessment Factor	Impact Code	Impact Evaluation
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**SOCIOECONOMIC**

Employment and Income Patterns	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will result in short-term benefit to employment when contractors are hired for the construction of the storage structure. After construction, there may be a net positive benefit for the farm, a small business receiving this funding for economic development recovery purposes, which will aid in the continued operations of the intended use of the farm which products will be used by Puerto Rico population. 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.
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Demographic Character Changes, Displacement	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will not alter the demographic characteristics of Las Marias, PR. The applicant is already located at this location and the project will provide opportunities for the continuous agricultural growth of the business.
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Environmental Justice	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. In the project area within a one-mile radius:
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		<ul style="list-style-type: none"> <li>• The people of color are 98% compared to PR average of 96%.</li> <li>• 94 % of the people are low income compared to PR average of 70%.</li> <li>• 7% of the people are unemployed compared to PR average of 15%.</li> </ul> <p>The proposed activities of the installation of cistern will have a positive impact on creating jobs for local people. Therefore, the proposed activity complies with this section. See EJSscreen Report in Appendix 3.</p>
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Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site and will have no impact on educational and cultural facilities.
Commercial Facilities	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and may aid in restoring the demand for local commercial services providing local products; however, not to the point of putting undue pressure on commercial facilities.
Health Care and Social Services	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site and will have no impact on Health Care and Social Services.
Solid Waste Disposal / Recycling	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will have no impact on Solid Waste Disposal / Recycling services. The products and by-products are agricultural, and any waste would be biodegradable. The remaining construction solid waste



		materials would be collected for transport to the local landfill.
Wastewater / Sanitary Sewers	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump $\frac{3}{4}$ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and this activity will not produce any wastewater. Based on the scope of work is not expected to result in any changes in wastewater or sanitary sewer generation. The proposed project will have no impact on Wastewater / Sanitary Sewers.
Water Supply	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump $\frac{3}{4}$ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. The cistern will be supplied with rainwater. No water connection is needed for the cistern. The proposed project will have no impact on the local water supply.
Public Safety - Police, Fire and Emergency Medical	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump $\frac{3}{4}$ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site and will have no impact on Public Safety.
Parks, Open Space and Recreation	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump $\frac{3}{4}$ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will have no impact on Parks, Open Space and Recreation. The property being used is agricultural and it will continue as agricultural use.
Transportation and Accessibility	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump $\frac{3}{4}$ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site and will have no impact on transportation and accessibility.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>NATURAL FEATURES</b>		

Unique Natural Features, Water Resources	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will be situated on previous agriculture property and will have no impact on unique natural features or water resources. There are no water sources within or near the project area.
Vegetation, Wildlife	2	The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts and will occur on land previously used for agricultural purposes and will continue in that capacity. There may be wildlife attracted to the cistern but no negative impact on wildlife. There's no need for the removal of vegetation like shrubs or trees as the current area to be worked on consists solely of grass.
Climate Change	2	<p>The project consists of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm &amp; maintenance tools and lime and orange grafts. The Re-Grow Program proposed project aims to increase resiliency in the agricultural industry to prepare for future climate related disasters. The project will not contribute to climate change and will provide a minor net benefit by allowing for increased food production.</p> <p>In terms of the project's susceptibility to climate change, the agricultural components may encounter challenges due to the potential impact of drought conditions. Therefore, while the rainwater collection in the cistern is a valuable resource, it may not fully alleviate the impacts of extreme drought conditions, necessitating proactive measures by the applicant to ensure adequate water provision for the crops.</p>

**Additional Studies Performed:** Not applicable.

**Field Inspection** (Date and completed by): January 26, 2024, Jaqueline Lopez, SOI-Qualified Archaeologist. Site inspection performed by Patricia Carmenatty on September 9, 2023.

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

FAA, National Plan for Integrated Airport Systems:  
[www.faa.gov/airports/planning\\_capacity/npias/reports/NPIAS-Report-2017-2021-Appendix-B-Part6.pdf](http://www.faa.gov/airports/planning_capacity/npias/reports/NPIAS-Report-2017-2021-Appendix-B-Part6.pdf)

John H. Chafee Coastal Barrier Resources System, Puerto Rico map.  
[www.fws.gov/CBRA/Maps/Locator/PR.pdf](http://www.fws.gov/CBRA/Maps/Locator/PR.pdf)

National Park Service, National Registry of Natural Landmarks.  
[www.nature.nps.gov/nnl/docs/NNLRegistry.pdf](http://www.nature.nps.gov/nnl/docs/NNLRegistry.pdf)

US Fish and Wildlife Service, Wild and Scenic Rivers – correspondence to Agency on October 16, 2018

National Wild and Scenic Rivers System: [www.rivers.gov/puerto-rico.php](http://www.rivers.gov/puerto-rico.php)

Puerto Rico Community Development Block Grant Disaster Recovery Action Plan, July 2018. [www.cdbg-dr.pr.gov/en/action-plan/](http://www.cdbg-dr.pr.gov/en/action-plan/)

Programmatic Agreement among the Federal Emergency Management Agency, the Puerto Rico State Historic Preservation Office and the Central Office for Recovery, Reconstruction and Resilience – amended to include the Puerto Rico Department of Housing.

Sierra Research for Office of Mobile Sources. US Environmental Protection Agency. Report No. SR93-03-02, Evaluation of Methodologies to Estimate Nonroad Mobile Source Usage, March 19, 1993: <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100UR51.txt>

US Environmental Protection Agency, National Ambient Air Quality Standards, Nonattainment Areas for Criteria Pollutants (Green Book):  
[www3.epa.gov/airquality/greenbook/anayo\\_pr.html](http://www3.epa.gov/airquality/greenbook/anayo_pr.html)

US EPA, Environmental Topics, Air Topics: [www.epa.gov/environmental-topics/air-topics](http://www.epa.gov/environmental-topics/air-topics)

US Fish and Wildlife Service, Environmental Conservation Online System:  
<https://ecos.fws.gov/ecp0/reports/species-listed-by-state-report?state=PR&status=listed>

Federal Emergency Management Agency, Flood Mapping Service:  
<https://msc.fema.gov/portal/home> (compilation of numerous maps)

Puerto Rico Planning Board, Communication regarding Floodplain Management, November 29, 2018.

US Fish and Wildlife Service, National Wetlands Inventory:  
[www.fws.gov/wetlands/data/mapper.html](http://www.fws.gov/wetlands/data/mapper.html) (compilation of numerous maps)

US Army Corps of Engineers, Jacksonville District, Antilles Section, Communication regarding Wetlands Management, November 13, 2018.

Puerto Rico Coastal Zone Management Program Plan, September 2009.

Puerto Rico Planning Board, Communication regarding Coastal Zone Management,

November 16, 2018 (No response).

US EPA, Sole Source Aquifers. Esri HERE, Garmin, NOAA, USGS, EPA.

US Fish and Wildlife Service, Caribbean Ecological Services Field Office. E-mail communication regarding October 23, 2018 letter on Threatened and Endangered Species and Critical Habitats.

NOAA Fisheries / National Marine Fisheries Service, NEPA Coordinator Southeast Regional Office. Communication on October 16, 2018 regarding designated critical habitat. (No response).

US Geological Survey, Data Release of May Showing Concentration of Landslides Caused by Hurricane Maria, <https://doi:10.5066/F7JD4VRF>

**List of Permits Obtained:** None.

**Public Outreach** [24 CFR 58.43]: The recovery process has seen significant proactive involvement from the local community. Puerto Rico Department of Agriculture has worked closely with the agricultural community. This project will include a FONSI/NOI-RROF in compliance with NEPA regulations for HUD.

**Cumulative Impact Analysis** [24 CFR 58.32]: In accordance with 24 CFR 58.32 (Aggregation), there are no cumulative impacts associated with the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site.

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

The Regrow Program purpose is to enhance and expand agricultural production related to economic revitalization and sustainable development activities while promoting and increasing food security island wide. The "Alternative" action would mean that the applicant would consider other locations for the cistern. However, other locations may result in tree clearing prior to construction and/or need to fill in some steep area and an added cost to the applicant. Any option that requires going off-site would not contribute to the improvement and growth of agricultural production or enable economic development for this applicant. Higher costs related to the acquisition, relocation, or transportation of production supplies may not contribute positively to agricultural production or economic development for the applicant due to potential financial strain, reduced competitiveness, limited expansion opportunities, constrained resource allocation, and increased dependency on external factors. Therefore, careful consideration and strategic planning are necessary to mitigate these challenges and ensure sustainable and profitable operations.

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

The 'No-Action' alternative would mean that the applicant would not receive federal funding to provide the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts for an agricultural site which would inhibit the economic growth opportunity that the applicant would not otherwise have under the PRDOH Re-Grow Puerto Rico program. As a result, these owners may not be able to experience the growth needed to recover and expand their agriculture activities. A provision of the grant allows for economic development for businesses. The No-Action alternative would not allow for economic development for this applicant.

**Summary of Findings and Conclusions:** The proposed activity has been found to not have any adverse effects on the environmental nor is there the requirement for further consultation with any agency. There are no environmental review topics addressed that result in the need for formal compliance steps or the requirement for mitigation.

**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.

Law, Authority, or Factor	Mitigation Measure
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	Soil suitability will be assessed prior to construction. Contractors will be required to use BMPs during construction if erosion impacts occur. The construction manager should investigate if a DNER authorization is required for any land alteration associated with the proposed project activities.
<b>Endangered Species</b> Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	The USFWS has developed the following conservation measures for the Boa:  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 #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 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 are 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.

The USFWS has developed the following conservation measures for the harlequin butterfly:

1. All project construction personnel must be informed about the potential presence of the PR harlequin butterfly or its occupied host plant, prickly bush (*Oplonia spinosa*), in the project areas and the need to avoid harming the species and its occupied host plant. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act. Educational material (e.g., posters, flyers, or signs with photos or illustrations of all the life stages of the PR harlequin butterfly (i.e., eggs, caterpillar, chrysalis, and adult) as well as its host plant, should be prepared and available to all personnel for reference.

2. Before starting any project activity, including removal of vegetation and earth movement, the boundaries of the work area in the field clearly delineate to avoid unnecessary habitat impacts. Once the project areas are clearly marked, and before any work activity, including site preparation, personnel with knowledge and ability to identify the PR harlequin butterfly (all life stages) and the prickly bush must survey the areas where the work will be performed for the presence of the species and its host plant.

It is important to note that the PR harlequin butterfly can be observed year-round in all its life stages; thus, oviposition (egg-laying) may occur at any time during the year.



3. If the prickly bush is present on the project site, try to avoid cutting it off, even if no eggs, caterpillars, or chrysalis are present.

4. If there is no prickly bush within the project area, and the butterfly is observed flying within the project area, do not harass, harm, pursue, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, the species.

5. Adult butterflies are often observed flying near the host plant as part of their mating behavior and laying eggs. Project-related activities must stop if the prickly bush is found in the project area and the PR harlequin butterfly is observed flying in that same area where the plan is located. A temporary 50-meter (164 feet) buffer zone of no activity or human disturbance should be established and clearly marked around that prickly bush until the butterfly moves out on its own.

6. Once the PR harlequin butterfly has moved away, within a period of 24 to 36 hours, a search of the prickly bush that has been buffered should be conducted to determine the presence of eggs, caterpillars, or chrysalids of the butterfly on the plant. The contractor or the Applicant should send a report of the observation and its findings to

caribbean\_es@fws.gov after the 36-hour search is concluded.

7. If, after the initial search or after the 24 to 36-hour search, any life stage of the PR harlequin butterfly is found in the prickly bush, take the following actions:

- Clearly mark the host plant with flagging tape
- Establish a 10-meter (32-foot) buffer zone around the bush to protect it.

	<ul style="list-style-type: none"> <li>• Eggs are typically found on the prickly bush's newly grown, tender branches. Once an egg hatches, the caterpillar moves and feeds throughout the plant. Therefore, avoid cutting off the prickly bush within the project site even if no eggs, caterpillars, or chrysalids are present.</li> <li>• Work within the 10-meter buffered area may resume when no signs of any live life stage of the butterfly are detected, which usually takes approximately 60 to 120 days.</li> </ul> <p>8. For all PR harlequin butterfly sightings (all life stages), the time and date of the sighting and the specific location where the butterfly was found must be recorded. Data should also include a photo of the butterfly (if possible) and the habitat where it was observed, site GPS coordinates, and comments on how the butterfly was detected and its behavior. All PR harlequin butterfly sighting reports should be sent to the U.S. Fish and Wildlife Service, Caribbean Ecological Service Field Office at <a href="mailto:caribbean_es@fws.gov">caribbean_es@fws.gov</a>.</p> <p>9. For questions regarding the PR harlequin butterfly, the Point of Contact is:</p> <ul style="list-style-type: none"> <li>• José Cruz-Burgos, Threatened and Endangered Species Program Coordinator: <ul style="list-style-type: none"> <li>• Mobile: 305-304-1386</li> <li>• Office phone: 786-244-0081</li> <li>• Office Direct Line: 939-320-3120</li> </ul> </li> </ul> <p>Email: <a href="mailto:jose_cruz-burgos@fws.gov">jose_cruz-burgos@fws.gov</a></p>

**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: 10/9/2024

Name/Title/Organization: Patricia Carmenatty / Environmental Specialist/ Behar Ybarra & Associates LLC

Certifying Officer Signature:  Date: 10/28/2024

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).

## Figures

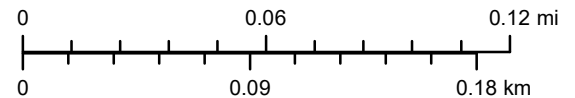
# Figure 1: Location Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
 Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community and Google Earth



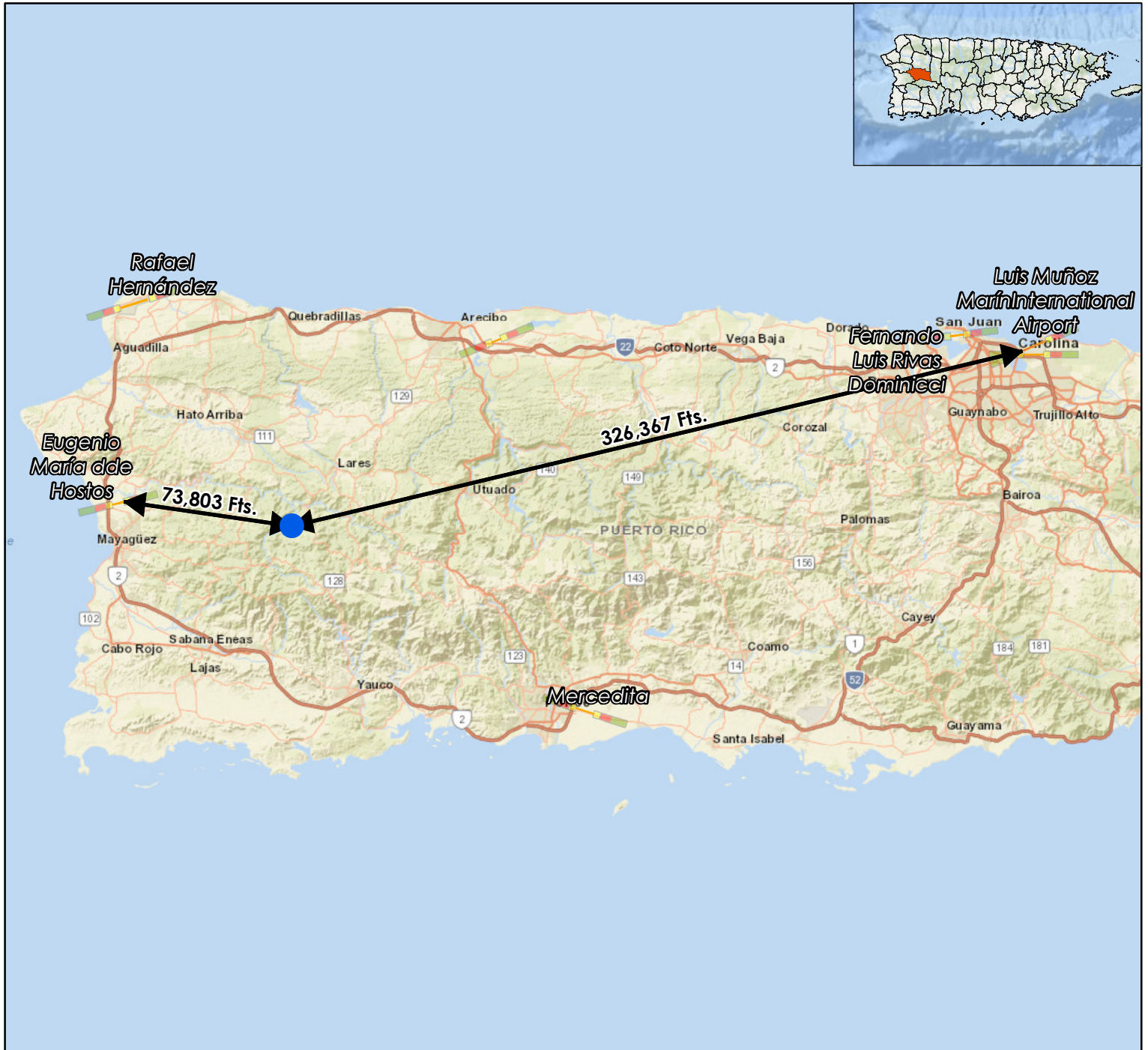
**Source**

Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crimpr.net/cdprpc/>

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marias, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

# Figure 2: Airports

Puerto Rico Department of Housing ReGrow

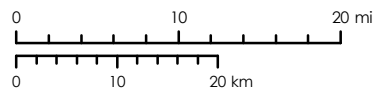


**Legend:**

- PR-RGRW-04340
- SJU Military Runway
- Civil Runway

**Accident Potential Zone**

- APZ 1
- APZ 2
- Clear Zone



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

Federal Aviation Administration (FAA)  
<https://adds-faa.opendata.arcgis.com/>



1:750,000

# Figure 3: Coastal Barrier Resources System

Puerto Rico Department of Housing ReGrow



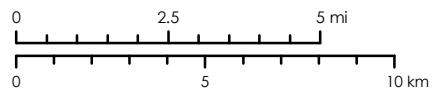
**Legend:**

● PR-RGRW-04340

**Coastal Barrier Resources System (CBRS)**

◻ Otherwise Protected Area

◻ System Unit



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

U.S. Fish and Wildlife Service (FWS)  
<https://www.fws.gov/program/coastal-barrier-resources-act>

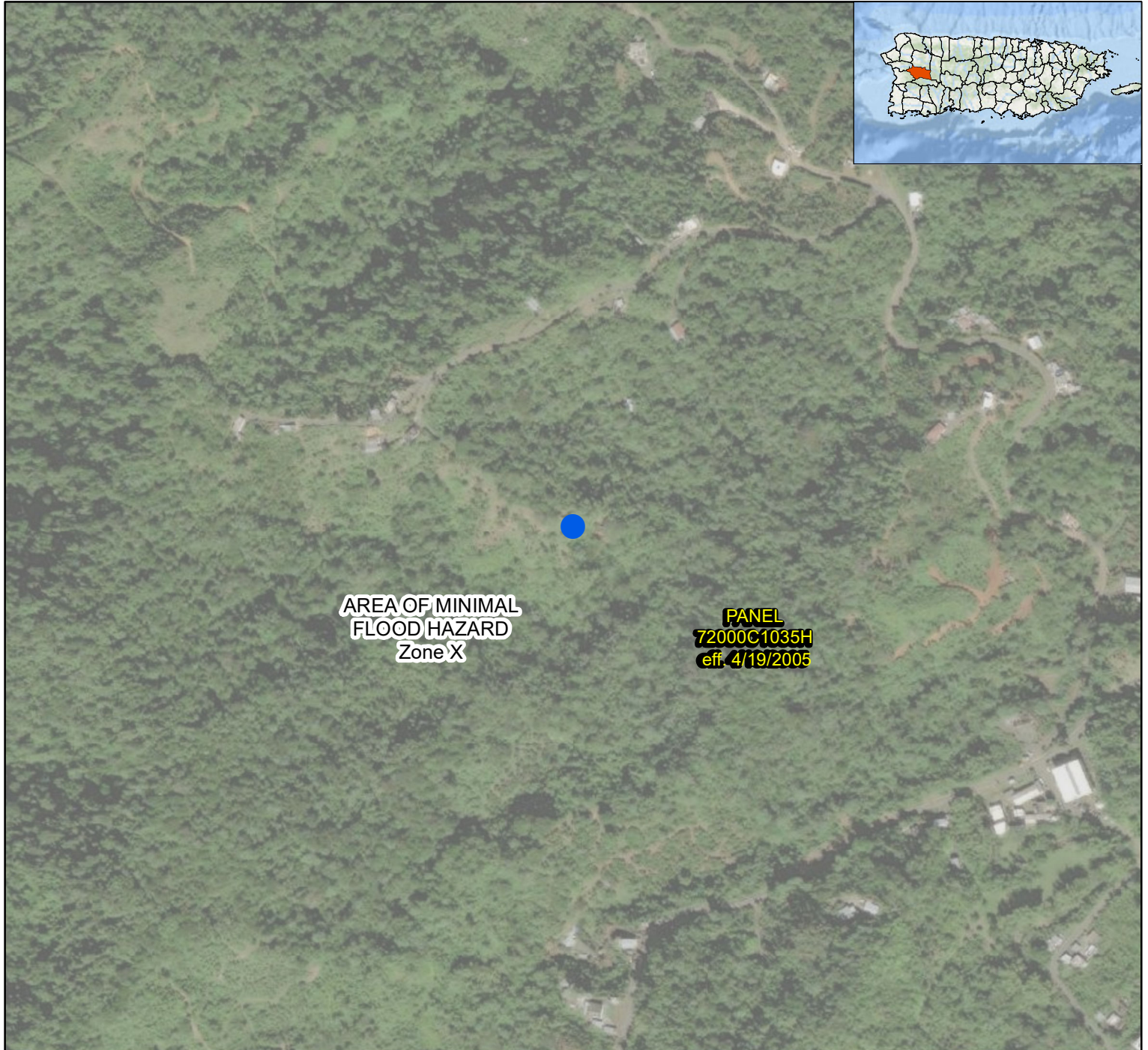


1:200,000




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Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

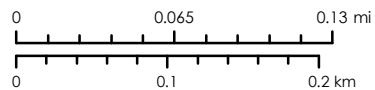
# Figure 4: Flood Insurance Rate Map

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-04340
-  Area of Minimal Flood Hazard Zone X
-  FIRM Panel



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



1:5,000

**Source**

Federal Emergency Management Agency (FEMA)  
<https://msc.fema.gov/portal/home>

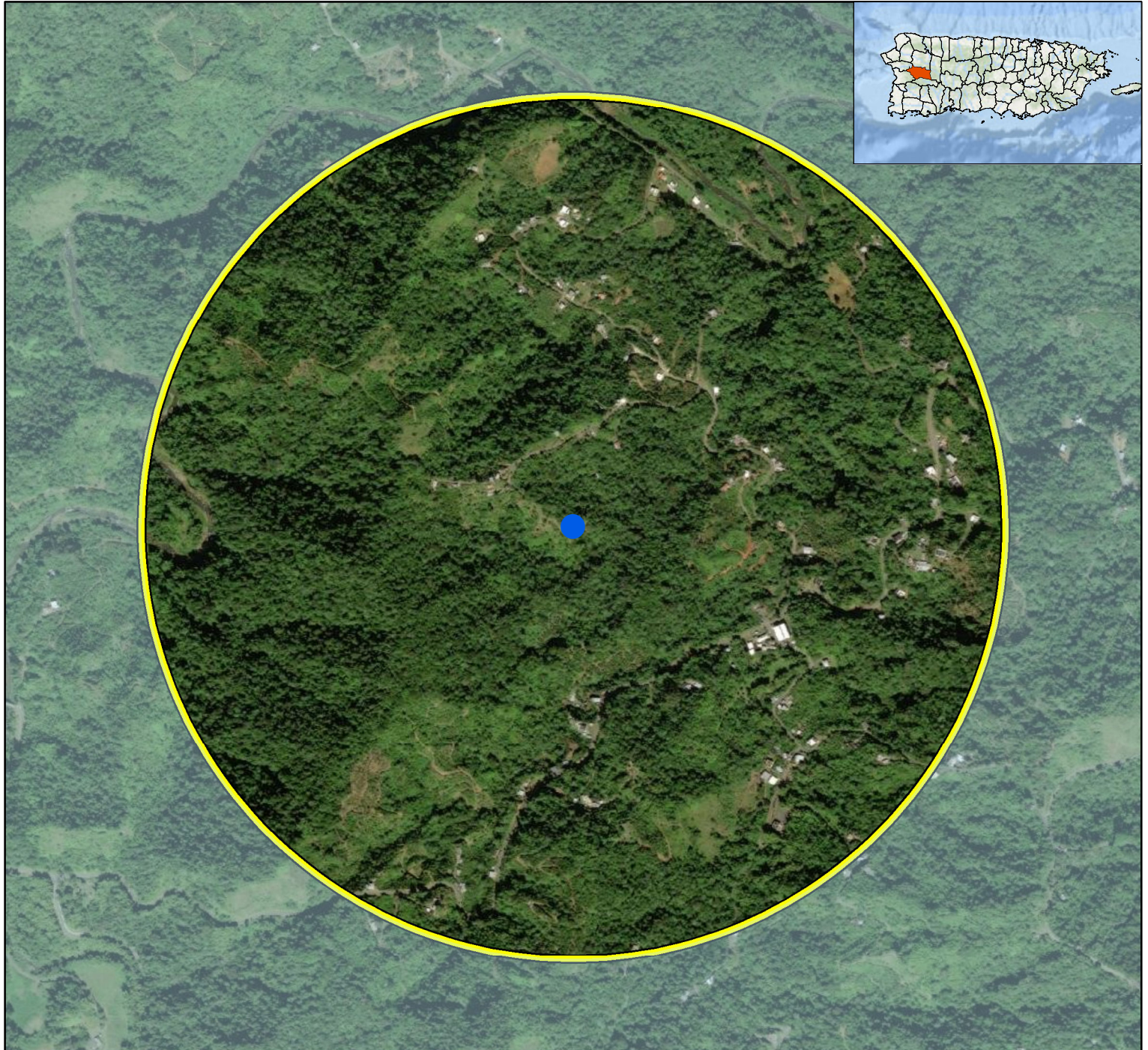




Hacienda Agroecológica El Edén  
 Carr 124 KM 12.9,  
 Barrio Cerrote Solar 10  
 Las Marias, PR 00670  
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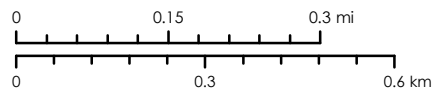
# Figure 6: Toxic and Hazardous Facilities

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
- 3,000 Ft. Buffer
- FACILITY INTERESTS
- ICIS
- NCDB
- NPDES
- ⬠ NPDES MAJOR
- ▲ RCRA
- ▲ RCRA ACTIVE
- ▲ RCRA INACTIVE
- ▲ RCRA LQG



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

EPA Facility Registry Service (FRS)  
<https://www.epa.gov/frs>



1:12,000



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 Barrio Cerrote Solar 10  
 Las Marias, PR 00670  
 Catastro: 211-000-006-25-000  
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# Figure 8: Farmland Protection

Puerto Rico Department of Housing ReGrow

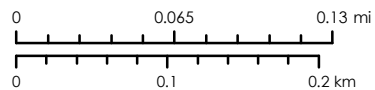


**Legend:**

● PR-RGRW-04340

**Farm Class**

- Farmland of statewide importance
- Not prime farmland



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
 Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



**Source**

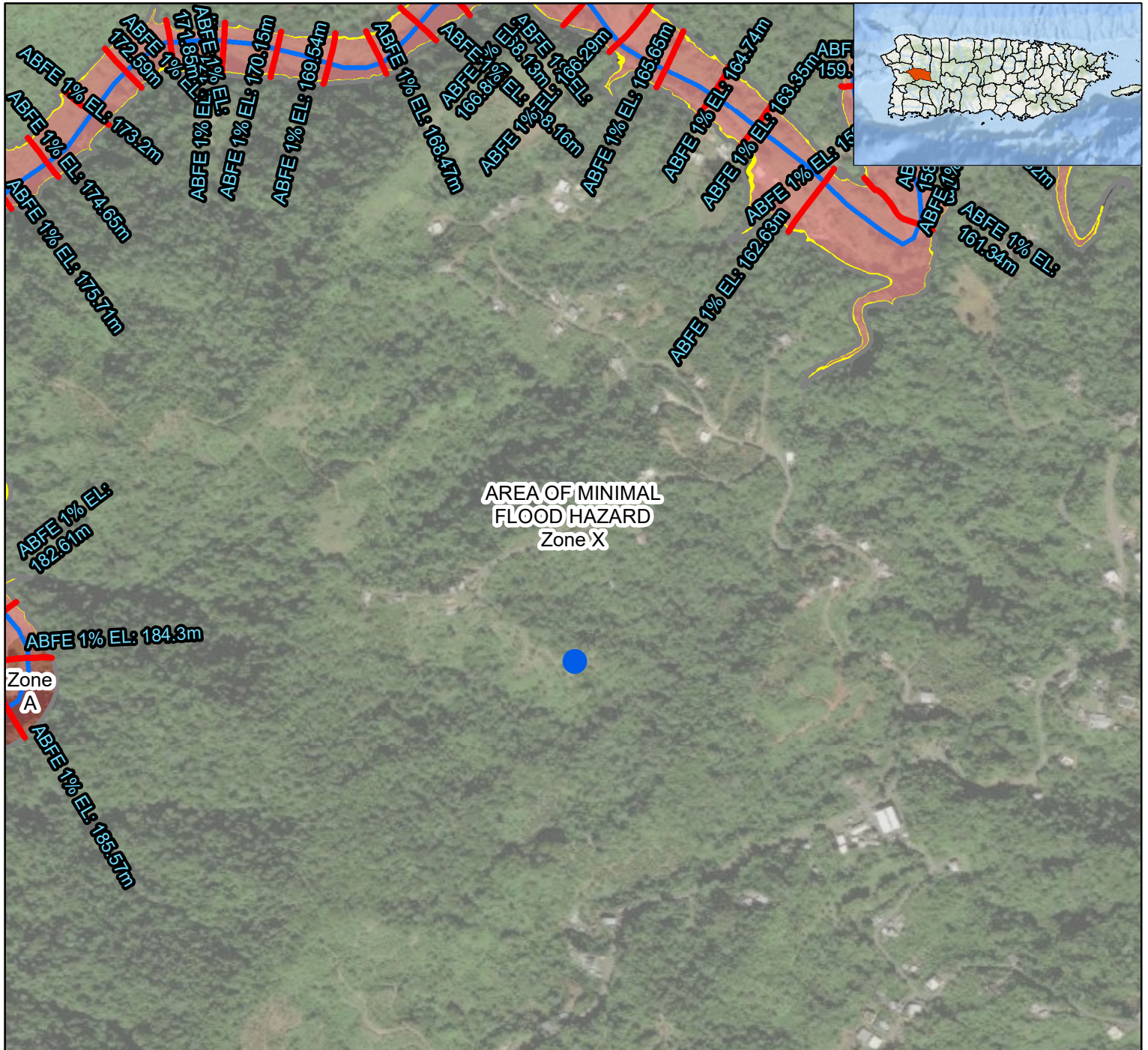
National Resources Conservation Service (NRCS)  
 Gridded Soil Survey Geographic Database (gSSURGO)  
<https://data.nal.usda.gov/dataset/soil-survey-geographic-database-ssurgo>

1:5,000

Hacienda Agroecológica El Edén  
 Carr 124 KM 12.9,  
 Barrio Cerrote Solar 10  
 Las Marias, PR 00670  
 Catastro: 211-000-006-25-000  
 Lat: 18.228256, Long:-66.930894

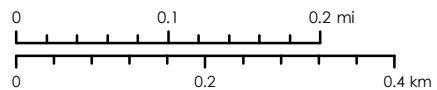
# Figure 9: Advisory Base Flood Elevation

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
  - Advisory Base Flood Elevations (ABFE)
  - Hydrography
  - 0.2-percent annual chance flood
  - 1-percent annual chance flood
- Flood Zone**
- A
  - 0.2% Annual Chance Flood
  - Area of Minimal Flood Hazard Zone X



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
 Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



**Source**

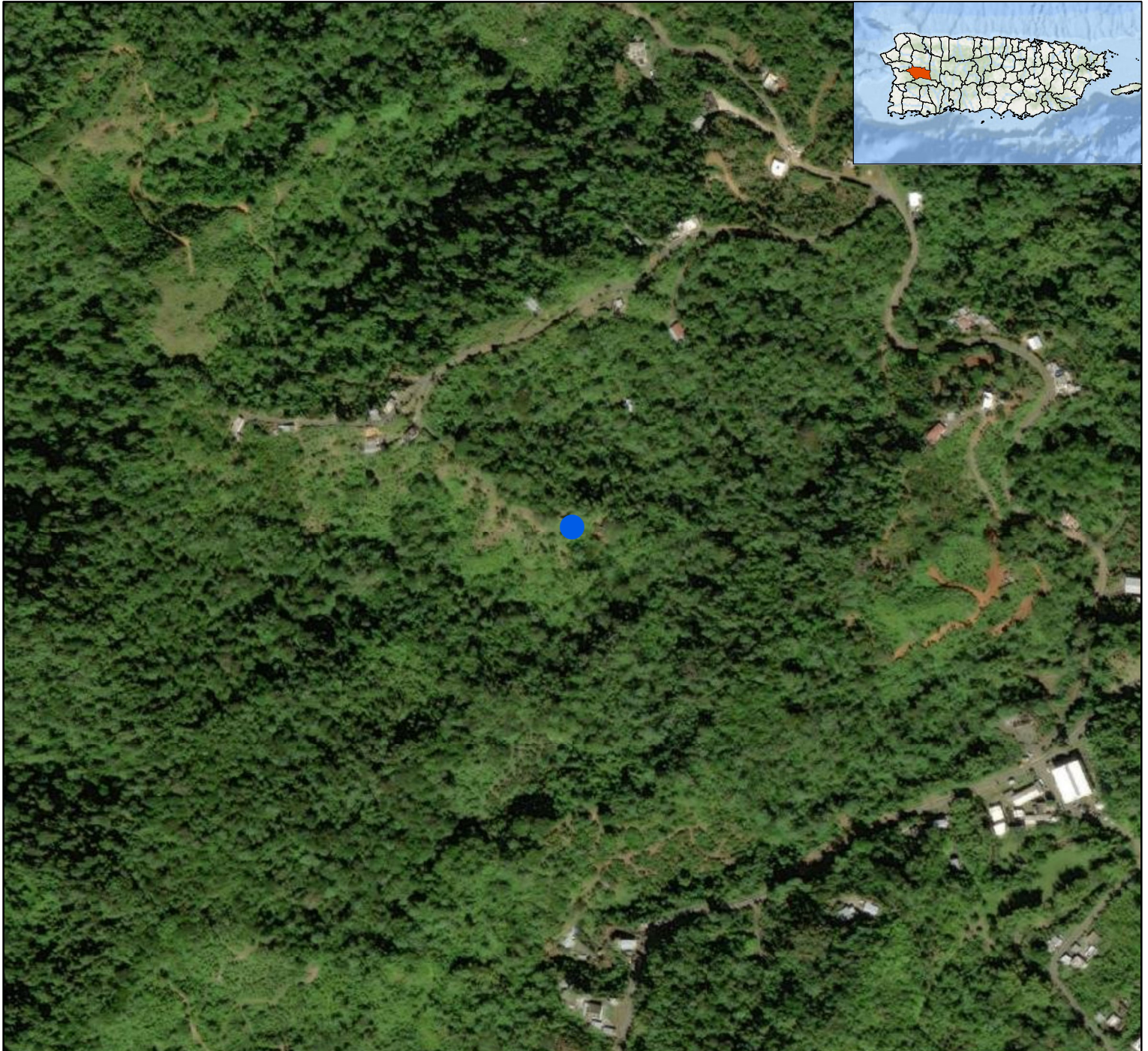
Federal Emergency Management Agency (FEMA),  
 Junta de Planificacion de Puerto Rico (JP),  
 Mapas de Niveles de Inundacion Base Recomendados,  
<https://maps.jp.pr.gov/>

1:8,000

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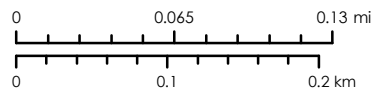
# Figure 10: Historic Preservation Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
- Archaeological Resource Zones
- Traditional Urban Center
- Historic Communities
- Cultural\_Resources - Public Plaza
- Cultural\_Resources - Registry ICP
- Cultural\_Resources - Historic Places JP
- ▲ Cultural\_Resources - Scenic Places
- Cultural\_Resources - Cultural Value Places
- Cultural\_Resources - Railway Vestiges



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
 Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



**Source**

National Park Service (NPS) - National Register of Historic Places(NRHP)  
<https://www.nps.gov/subjects/nationalregister/index.htm>  
 State Historic Preservation Office (SHPO)  
<https://oehc.pr.gov/Pages/default.aspx>

1:5,000



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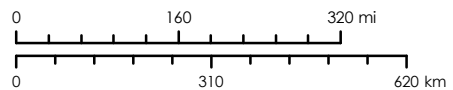
# Figure 11: EPA Sole Source Aquifers

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-04340
-  EPA Sole Source Aquifers



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



**Source**

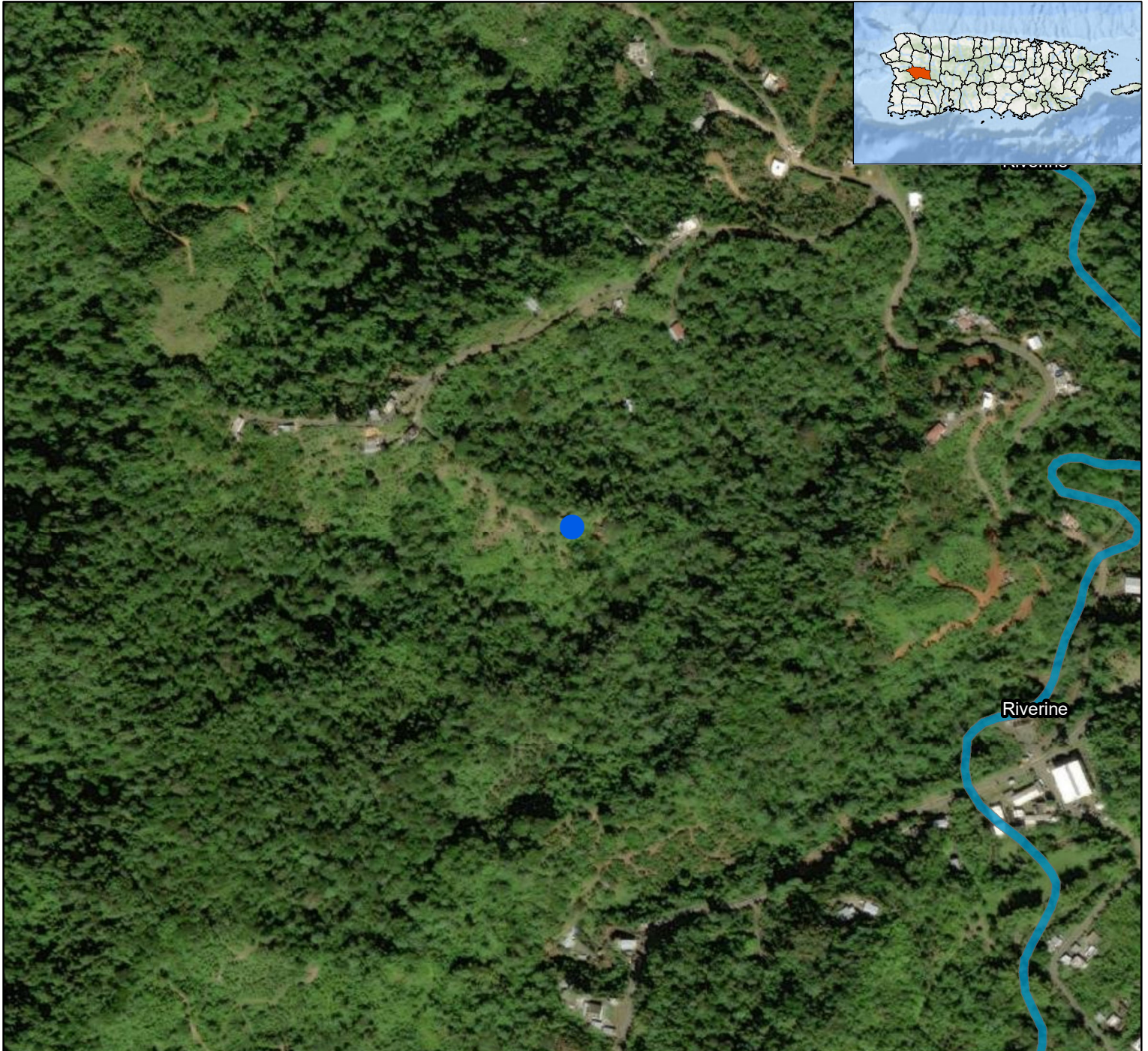
U.S. Environmental Protection Agency  
<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>

1:12,000,000

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marias, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

# Figure 12: Wetlands Map

Puerto Rico Department of Housing ReGrow

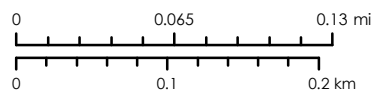


**Legend:**

 PR-RGRW-04340

**National Wetlands Inventory**

 Riverine



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

U.S. Fish and Wildlife Service - National Wetlands Inventory  
<https://www.fws.gov/program/national-wetlands-inventory>



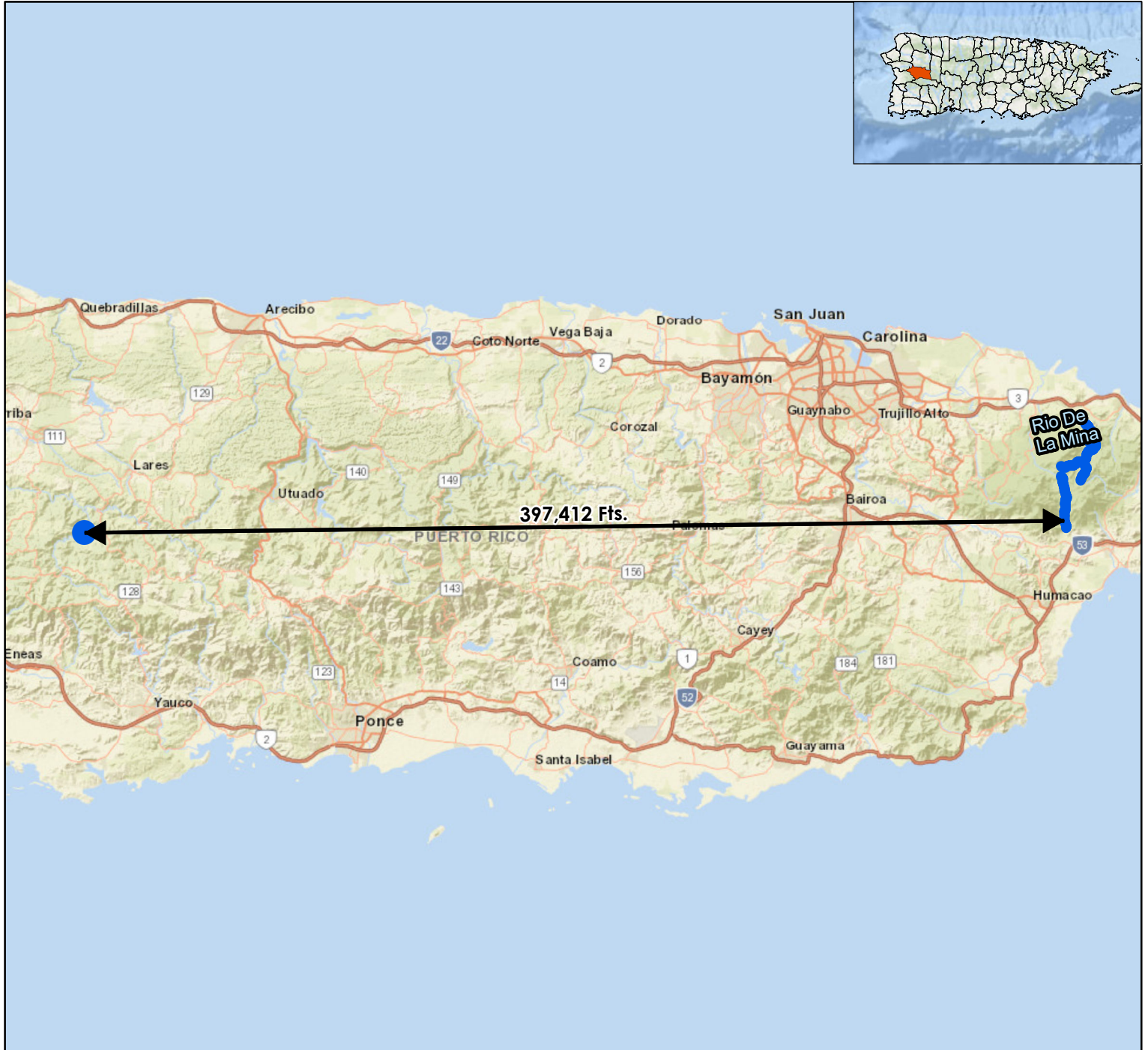
1:5,000



Hacienda Agroecológica El Edén  
 Carr 124 KM 12.9,  
 Barrio Cerrote Solar 10  
 Las Marias, PR 00670  
 Catastro: 211-000-006-25-000  
 Lat: 18.228256, Long:-66.930894

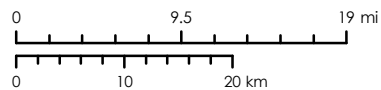
# Figure 13: Wild and Scenic Rivers

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
- Wild and Scenic Rivers



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

FWS National Wild and Scenic Rivers System  
<https://www.rivers.gov/mapping-gis.php>

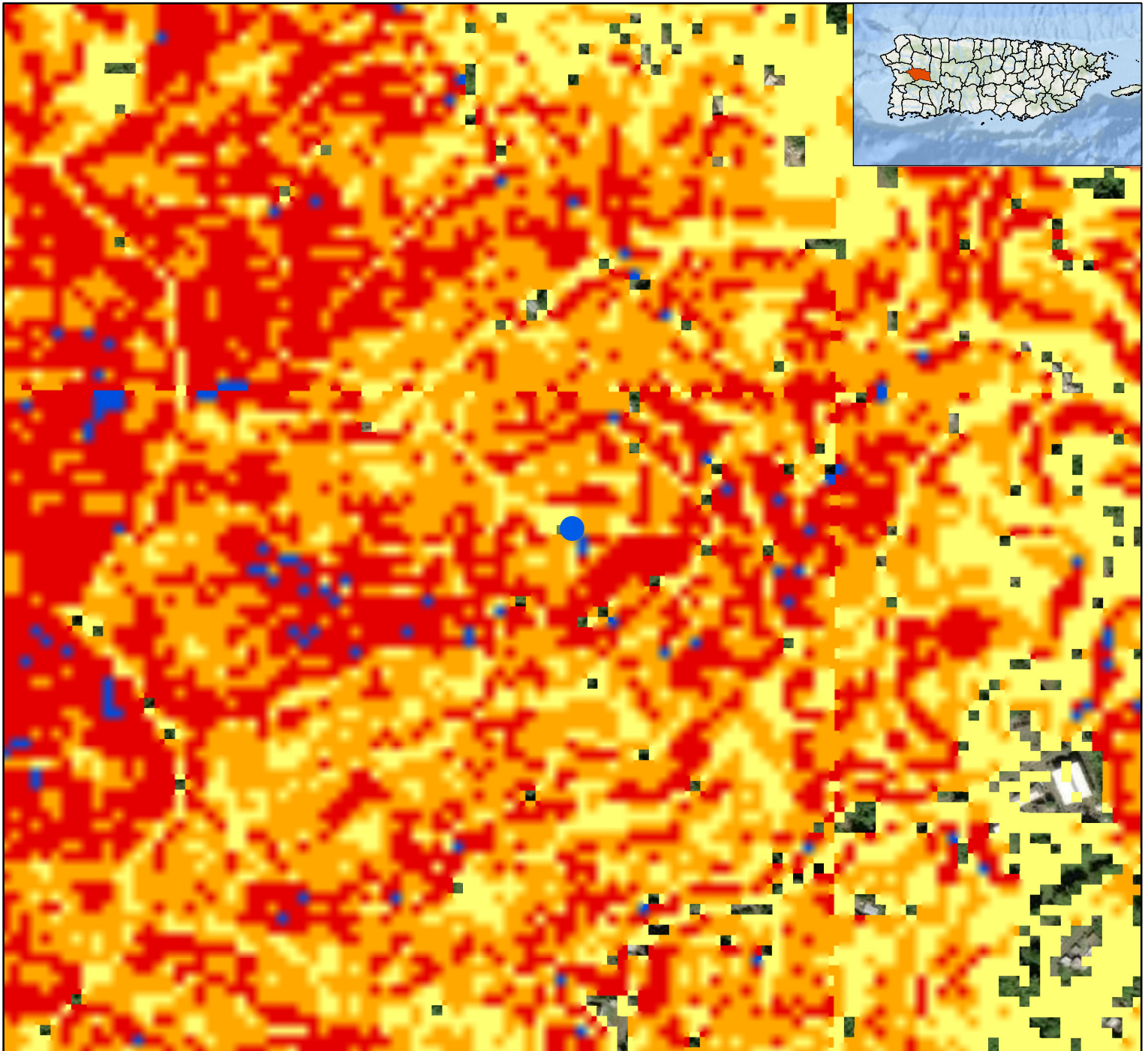


1:700,000







Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marias, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

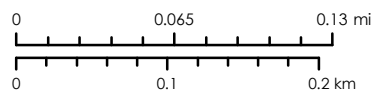
# Figure 14: Landslide Susceptibility

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-04340
-  Low
-  Moderate
-  High
-  Very High
-  Extremely High



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

U.S. Geological Survey (USGS)  
<https://pubs.er.usgs.gov/publication/ofr20201022>



1:5,000

## **Appendix 1: SHPO Consultation Package**



# GOVERNMENT OF PUERTO RICO

## STATE HISTORIC PRESERVATION OFFICE

Executive Director | Carlos A. Rubio Cancela | carubio@prshpo.pr.gov

Tuesday, April 2, 2024

### Lauren B Poche

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

SHPO-CF-03-26-24-02 PR-RGRW-04340 (Las Marías), Hacienda Agroecologica El Eden

Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the National Historic Preservation Act, as amended) and 36 CFR Part 800: Protection of Historic Properties from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

Our records support your finding of no historic properties affected within the project's area of potential effects.

Please note that should the Agency discover other historic properties at any point during project implementation, you should notify the SHPO immediately. If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio Cancela

State Historic Preservation Officer

CARC/GMO/OJR



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

March 26, 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-04340 – Hacienda Agroecológica El Edén – Carr 124 KM 12.9, Barrio Cerrote Solar 10, Las Marías, 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 was 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 Hacienda Agroecológica El Edén located at Carr 124 KM 12.9, Barrio Cerrote Solar 10, in the municipality of Las Marías. The undertaking for this project includes the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. The installation of the cistern will require ground disturbance. The cistern and pump will be installed on a 15' x 15' x 8" concrete slab at the applicant's expense. The cistern will be supplied with rainwater, and the power to operate the pump for water distribution will be from a portable diesel plant supplied by the applicant. The pipes to be used will be installed above the ground. No new electricity or water connection will be necessary.

Based on the submitted documentation, the Program requests a concurrence that a finding 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: Hacienda Agroecológica El Edén</b>		
<b>Case ID: PR-RGRW-04340</b>	<b>City: Las Marías</b>	

<b>Project Location:</b> Carr 124 KM 12.9, Barrio Cerrote Solar 10, Las Marias, PR 00670	
<b>Project Coordinates:</b> 18.228256 -66.930894	
<b>TPID (Número de Catastro):</b> 211-000-006-25-000	
<b>Type of Undertaking:</b> <input type="checkbox"/> Substantial Repair/Improvements <input checked="" type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> n/a	<b>Property Size (acres):</b> 12.21

<b>SOI-Qualified Archaeologist:</b> Jaqueline López Meléndez
<b>Date Reviewed:</b> January 26, 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 activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. The installation of the cistern will require ground disturbance. The cistern and pump will be installed on a 15' x 15' x 8" concrete slab at the applicant's expense. It will take minor ground disturbance to level the soil. The cistern will be supplied with rainwater, and the power to operate the pump for water distribution will be from a portable diesel plant supplied by the applicant. The pipes to be used will be installed above the ground. No new electricity or water connection will be necessary. The project area is located at PR-124 km. 12.9, Barrio Cerrote Solar 10 within the Municipality of Las Marías. Based on a review of historical aerial imagery, the location for the proposed activities has been used for agricultural purposes for the past 10 years.

### 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 new 15' x 15' x 8" concrete slab for the cistern and pump plus a 15-meter buffer and the visual APE is the viewshed of the proposed project.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 <small>GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING</small>
<b>Applicant: Hacienda Agroecológica El Edén</b>	
<b>Case ID: PR-RGRW-04340</b>	<b>City: Las Marías</b>

### **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 Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61), shows that there is one (1) archaeological site reported within 0.50 miles of the project location: Hacienda San Carlos (ICP: LM-20) located 0.46 miles southeast (see table). The proposed project is located in a mountainous area at an elevation of 787 feet (240 meters) above modern sea level. Per the USGS/NRCS Web Soil Survey, the project area is within mapped soil series: Humatas. The project area APE is in HmF2. The closest freshwater source is an unnamed creek, located 0.27 miles northeast and Guaba River located 0.46 miles northeast of the project area. The west coast is approximately 14.73 miles (23.70 km) from the project area.

Within the 0.50 miles radius we have two archaeological studies with negative results. One of the studies conducted by Marisol Martínez (2007) covered the project area with negative results.


The project area is located in the mountainous area of Las Marias with irregular topography. In the project area we have Humatas clay, 40 to 60 percent slopes (HmF2). This soil is deep, very steep, and well drained. It is on the side slopes and ridgetops of humid volcanic uplands. The permeability and available water capacity of this Humatas soil are moderate. Runoff is very rapid, and fertility is medium. Slope and an erosion hazard make this soil poorly suited for cultivated crops. Visual inspection of the APE of the building and its surroundings found no evidence of cultural materials.

### **Determination**


No historic properties were identified within the APE.

Based on the results of our historic property identification efforts, the Program has determined that no previously identified historic properties are located within or adjacent to the proposed project 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. There are no known archaeological sites or NRHP listed/eligible historic properties within or



<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 <small>GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING</small>
<b>Applicant: Hacienda Agroecológica El Edén</b>	
<b>Case ID: PR-RGRW-04340</b>	<b>City: Las Marías</b>

adjacent to the property or the parcel in which the Area of Potential Effect of case PR-RGRW-04340 is located. The closest freshwater body is approximately 0.27 miles northeast of the project area. The construction of public roads and residential structures/agricultural infrastructure has minimally 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: Hacienda Agroecológica El Edén</b>		
<b>Case ID: PR-RGRW-04340</b>	<b>City: Las Marías</b>	


**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:

<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: Hacienda Agroecológica El Edén</b>		
<b>Case ID: PR-RGRW-04340</b>	<b>City: Las Marías</b>	

**Case ID:** PR-RGRW-04340

**Project Coordinates:** 18.228256 -66.930894

**Table of archaeological sites, historic properties and historic districts located within the project area or within a 0.50-miles radius**

Name	SHPO id #	IPRC id #	Distance/Direction	Description	NRHP (listed, eligible, non-eligible, no data)
Hacienda San Carlos	-	LM-20	0.46 mi SE	20 <sup>th</sup> Century hacienda	No data

**Table of cultural resources surveys conducted within the project area or within a 0.50-miles radius.**

Author	Phase/Title	Year	SHPO / IPRC code	Results	Distance/Direction
Ethel Schlafer	IA/ Sistema de Acueductos Barrios Espino y Pezuela de Lares y Barrios Chamorro y Cerrote Las Marías	2010	ICP/CAT-LR-10-07-01	Negative	Within
Marisol Martínez	IA/ Enmienda al Sistema de Distribución de Agua Potable Las Marías-San Sebastián	2007	ICP/CAT-LM-07-03-01, SHPO: 04-24-07-03	Negative	0.22 mi SW

Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Project (PR-RGRW-04340) Location – Area of Potential Effect Map (Aerial)

**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
General: Suite 1000, P.O. Box 10000, San Juan, PR 00906 Tel: (787) 768-2000

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

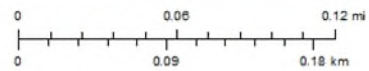
## Area of Potential Effect

Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- Area of Potential Effect 15 Mts.
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, Mapbox, Earthstar Geographics, and the GIS User Community and Google Earth



**Source**

Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crimpr.net/cdprca/>

Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Project (PR-RGRW-04340) Location - Aerial Map

**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Ciudad, Iborra 1 Suite J-3, Calle Ponce 56A, Miraflores, San Juan, PR, 00923 Tel: (787) 753-0292

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Car 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

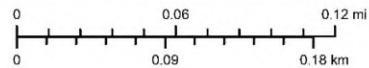
## Location: Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community and Google Earth



**Source**

Carro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crim.net/cdppci/>

Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Project (PR-RGRW-04340) Location - USGS Topographic Map

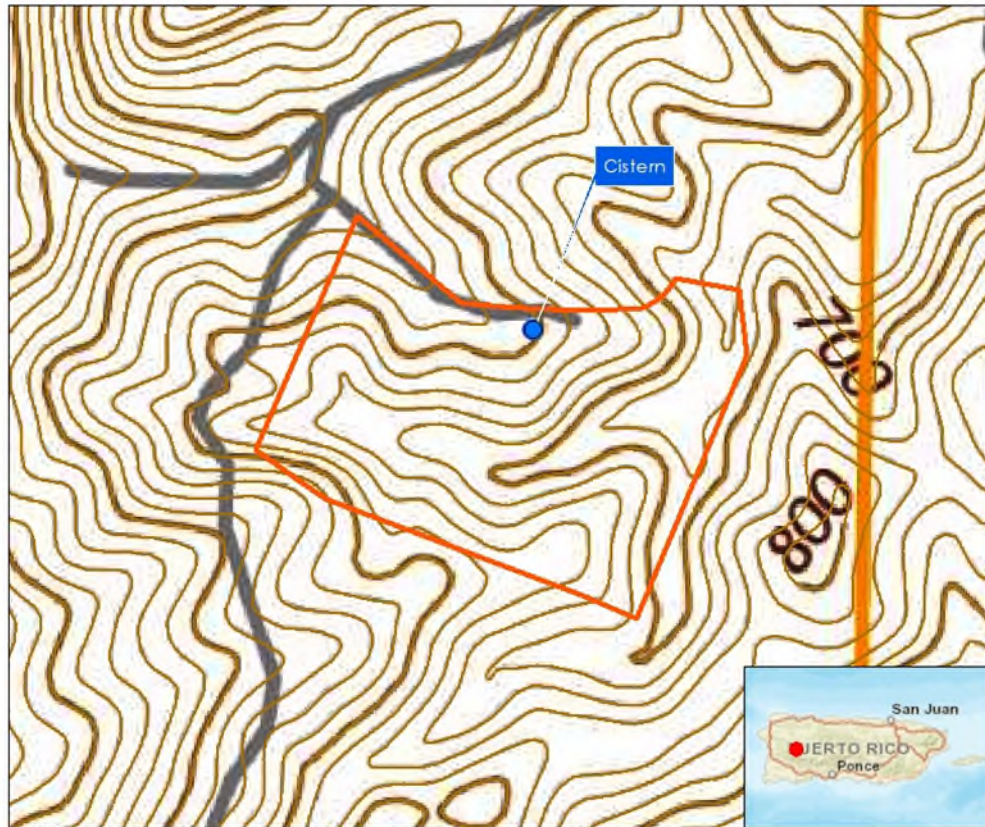
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERING, ARCHITECTS AND PLANNERS  
Carr. 100, Suite 100, San Juan, P.R. 00909 Tel: (787) 482-2222

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

## Location: USGS Topographic Map

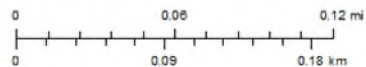
Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- Contour Interval 20 Feet

Quadrangle: Maricao



Service Layer Credits Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri, Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community and Geologic Earth



**Source**

United States Geological Survey (USGS)  
National Geologic Map Database  
[https://ngmdb.usgs.gov/ngmdb/ngmdb\\_home.html](https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html)

Project (PR-RGRW-04340) Location – Soils Map

**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Carretera 100, Suite 200, San Juan, Puerto Rico 00909 Tel: (787) 432-2000

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

**Soils Map**

Puerto Rico Department of Housing ReGrow

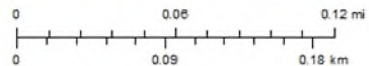


**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- Soil Map Unit Symbol

**Soil Map Unit Symbol**

- CoF2 - Consumo clay, 40 to 60 percent slopes
- HmE2 - Humatus clay, 20 to 40 percent slopes
- HmF2 - Humatus clay, 40 to 60 percent slopes
- Mwf2 - Marado clay loam, 40 to 60 percent slopes
- MxF - Mucara clay, 40 to 60 percent slopes



Service layer Credits Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Source: Esri, Mapbox, Earthstar Geographics, and the GIS User Community and Google Earth

**Source**

Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crimpr.net/cdrpr/>  
Natural Resources Conservation Service (NRCS)  
Gridded Soil Survey Geographic Database (SSURGO)  
<https://data.nal.usda.gov/dataset/soil-survey-geographic-database-ssurgo>





Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Project (PR-RGRW-04340) Location with Previous Investigations - Aerial Map

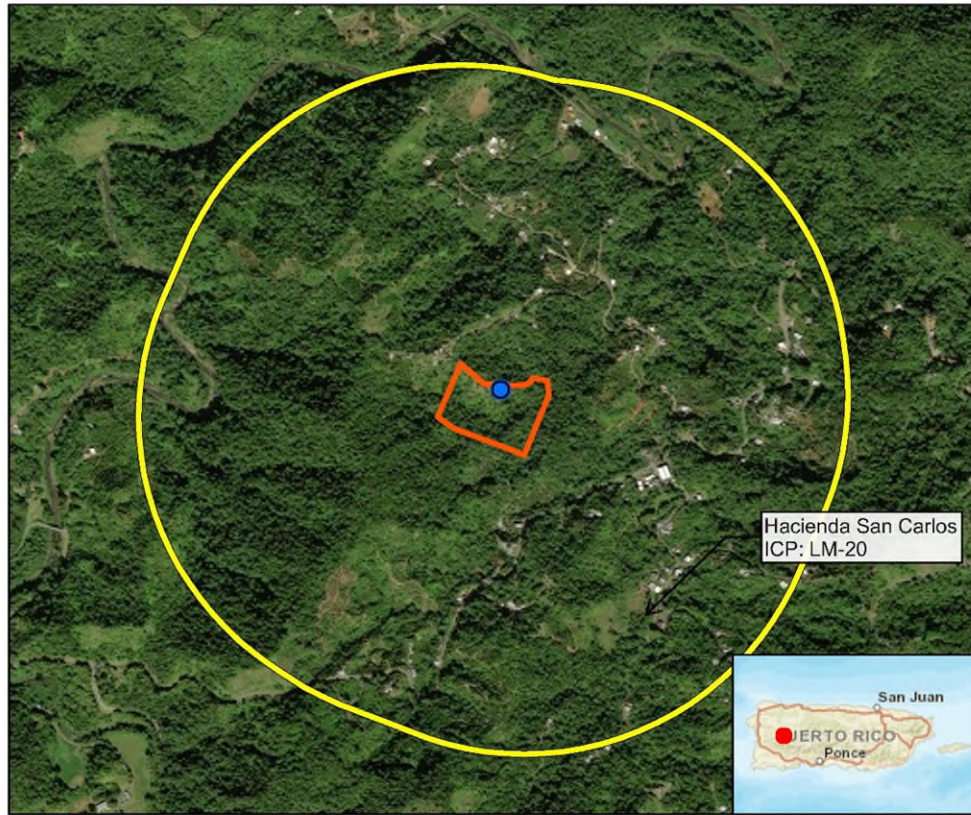
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
COND. IDENR. 1 SUAP-2-3, CAR. PRIMEO SGA, ABOYNS, SAN JUAN, P.R. 00900 TEL:787/763-0290

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

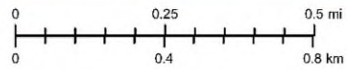
## Previous Investigations: Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- 0.50 Mile (0.80 km) Buffer
- PR-RGRW-04340-Parcel



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community and Google Earth



**Source**

Centro de Recaudación de Ingresos Municipales (CRM)  
<https://catastro.crimpr.pr/cadprpc/>



Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Project (PR-RGRW-04340) Location with Previous Investigations - USGS Topographic Map

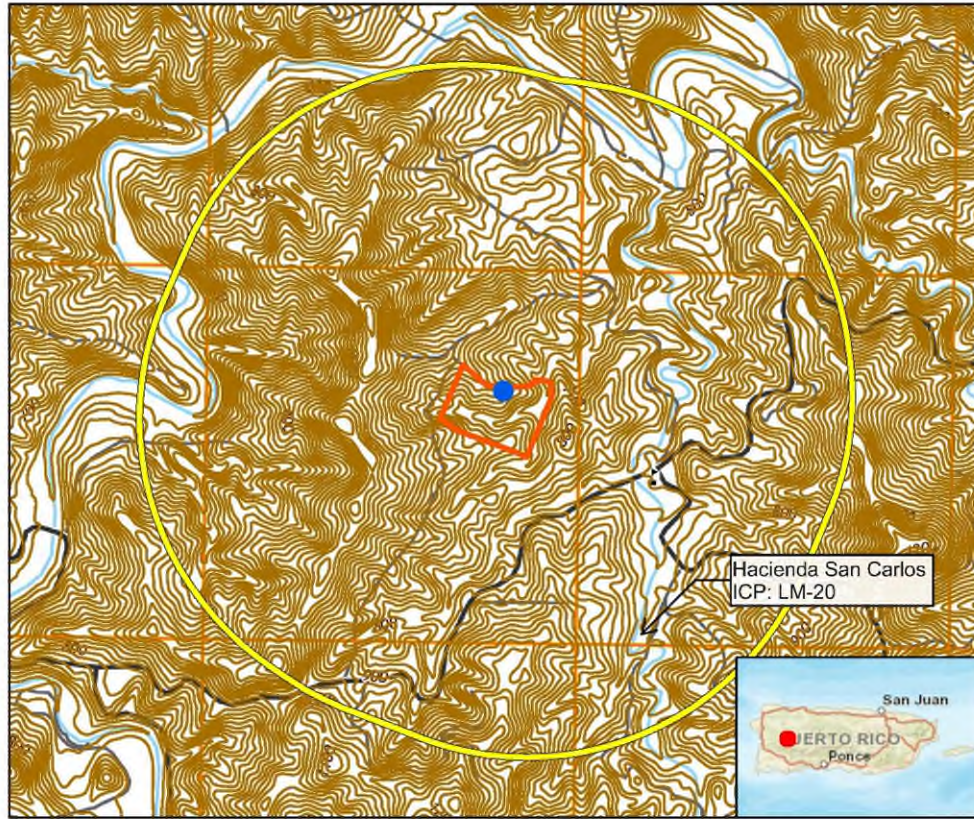
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Carretera Yabucoa-33, Edificio Pinar del Sol, Arecibo, San Juan, PR 00625 Tel: (787) 763-3290

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

### Previous Investigations: USGS Topographic Map

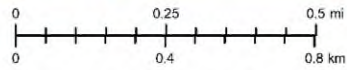
Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- 0.50 Mile (0.80 km) Buffer
- PR-RGRW-04340-Parcel
- Contour Interval 20 Feet

Quadrangle: Maricao



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community and Google Earth



**Source**

United States Geological Survey (USGS)  
National Geographic Map Database  
<https://ngmdb.usgs.gov/ngmdb/home.htm>

Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías

### Photograph Key

**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Ciudad, Iborra 1 Suite J-3, Calle Parado 554, Anápolis, San Juan, P.R. 00950 Tel: (787) 763-0290

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

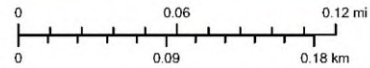
## Location: Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, IBER, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGIS, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community and Google Earth



**Source**

Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://calastro.cimpr.net/cdpppc/>



Applicant: Hacienda Agroecológica El Edén

Case ID: PR-RGRW-04340

City: Las Marías



Photo #:1

Description (include direction): Area where the cistern and pump will be installed, looking southeast.

Date: January 26, 2024



Photo #:2

Description (include direction): Area where the cistern and pump will be installed, looking northeast.

Date: January 26, 2024



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

## **Appendix 2: Puerto Rico Nonattainment/ Maintenance Status for each count by year for all pollutants**



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 March 31, 2023

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

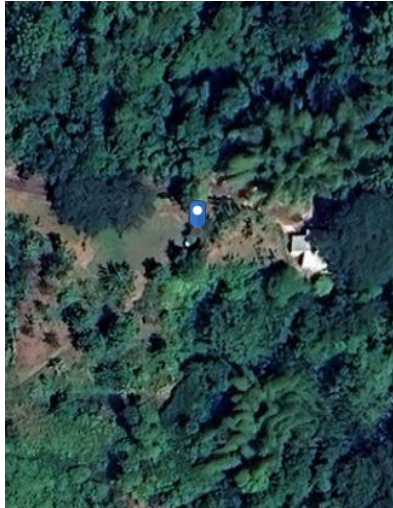
Download National Dataset: [dbf](#) | [xls](#) | [Data dictionary \(PDF\)](#)

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	11121314151617181920212223	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		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	181920212223	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	181920212223	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	52,441	72/137

Important Notes

## **Appendix 3: Site Inspection Report and EJScreen Community Report**

**APPLICANT/LOCATION INFORMATION**

Applicant ID:	PR-RGRW-04340	
Name:	Hacienda Agroecologica El Eden	
Parcel ID:	211-000-006-25	
Latitude:	18.228256	
Longitude:	-66.930894	
Elevation:		
Development		
Street Address:	Carr 124 KM 12.9, Barrio Cerrote Solar 10	
Municipio:	Las Marias	
Zip Code:	00670	
Site Inspector:	Patricia Carmenatty	
Date of Visit:	September 9, 2023	
Time of Visit:	9:00 am	

**FIELD OBSERVATIONS**

Question	Answer	Notes
1. Is the structure in use?	Yes	Warehouse
2. Is the structure a greenhouse?	No	
3. Is Electricity connected? (Utilities or Well)	No	
4. Is water connected? (Utilities or Well)	No	Rain water
5. Are there signs of poor housekeeping on site? (mounds of rubble, garbage, strom debris, solid waste, petroleum products, paint, pesticides, cleaning fluids, vehicle batteries, abandoned vehicles, pits, pools, ponds of hazardous substances, etc.)	No	cistern
Are there any 55-gallon drums visible on site? If yes, are they leaking?	No	
6. Are there any (or signs of any) underground storage tanks on the property?	No	
7. Are there signs of AST on the parcel or adjacent parcel? If yes, list approximate size and contents, if known.	No	
Is there any stained soil or pavement on the parcel?	N/A	
8. Is a water drainage system in use?	No	
9. Is a warehouse in use for storage of Fertilizer or Pesticides?	Yes	
10. Are there any groundwater monitoring wells on the site or adjacent parcel?	No	
11. Is there evidence of a faulty septic system?	No	
12. Is there distressed vegetation on the parcel?	No	
13. Is there any visible indication of mold?	Yes	In the storage structure
14. Is there any visible evidence of asbestos, chipping, and flaking or peeling paint, or hazardous materials present in or on the structure?	Yes	
15. Are any additional site hazards observed?	No	
16. Is there any permanent standing water, such as a pond or stream, located on the site(do not include ponding from recent rain / weather events)?	No	
17. Does the subject property have water frontage?	No	
18. Is there any indication of the presence of wetlands?	No	
19. Are there any obvious signs of animals or birds nesting on or near the site?	No	
20. Is the applicant aware of any significant historcal event or persons associated with the structure, or of it being located in a historic district/ area?	N/A	



Photo Direction: Northwest

Comments: Entrance



Photo Direction: Southeast

Comments: location where the cistern will be installed



Photo Direction: Northeast

Comments: Cistern location



Photo Direction:

Comments: Ground cistern location



Photo Direction: Southwest

Comments: entrance to the existing structure.  
warehouse



Photo Direction: west

Comments: existing warehouse



Photo Direction: Southwest

Comments:



Photo Direction: Southeast

Comments:



Photo Direction:

Comments:



**Streetscape #2**

Photo Direction:

Comments:

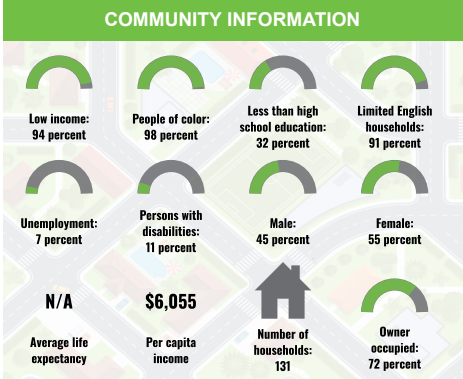
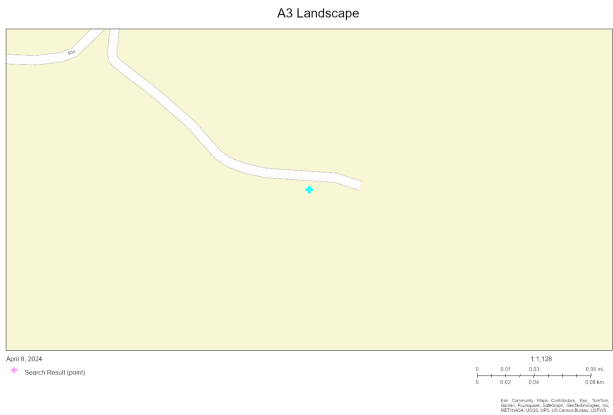


# EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

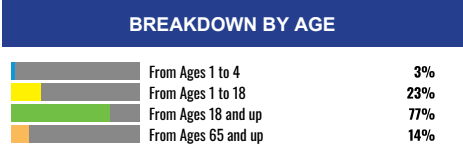
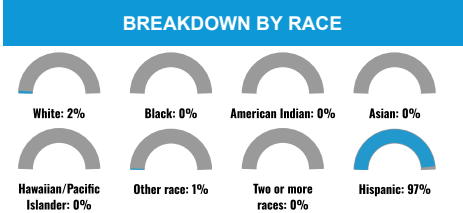
## Las Marías Municipio, PR

1 mile Ring Centered at 18.228256,-66.930894  
 Population: 456  
 Area in square miles: 3.14



### LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	2%
Spanish	98%
Total Non-English	98%



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.

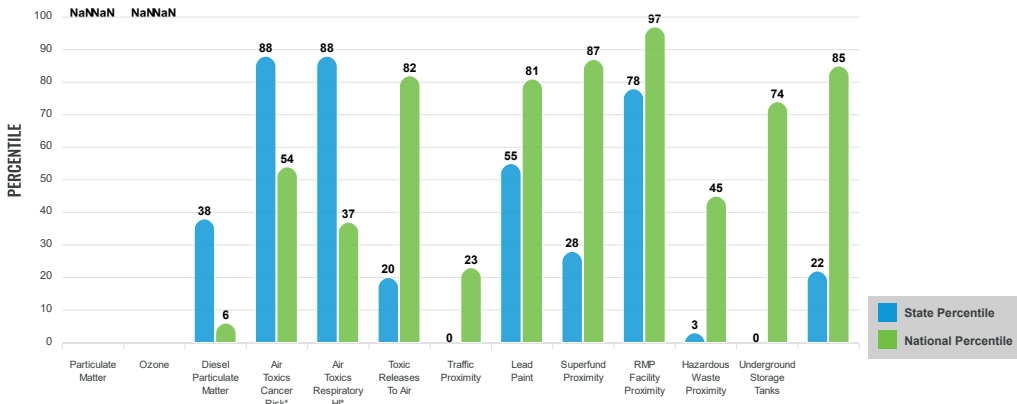
## Environmental Justice & Supplemental Indexes

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.

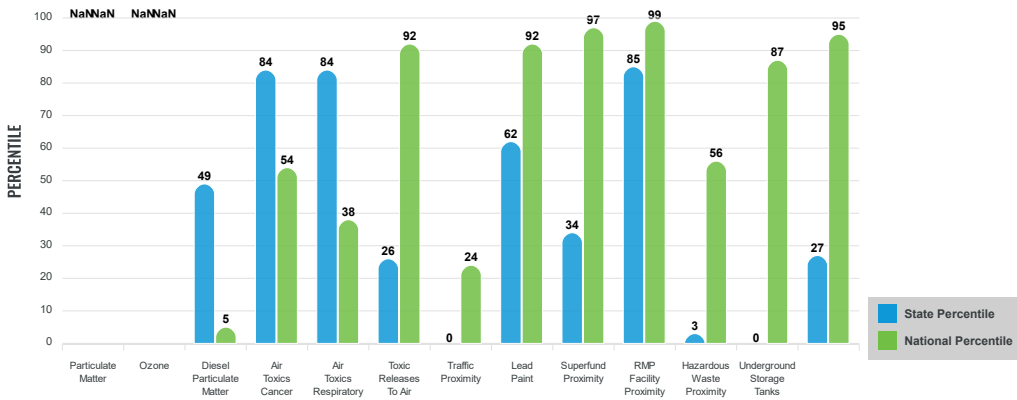
#### EJ INDEXES FOR THE SELECTED LOCATION



### 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 18.228256,-66.930894

# 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/m³)	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/m³)	0.0253	0.0667	34	0.261	1
Air Toxics Cancer Risk* (lifetime risk per million)	20	20	15	25	5
Air Toxics Respiratory HI*	0.2	0.19	17	0.31	4
Toxic Releases to Air	230	4,300	17	4,600	33
Traffic Proximity (daily traffic count/distance to road)	1.2	180	0	210	4
Lead Paint (% Pre-1960 Housing)	0.09	0.16	49	0.3	33
Superfund Proximity (site count/km distance)	0.051	0.15	23	0.13	44
RMP Facility Proximity (facility count/km distance)	0.34	0.47	66	0.43	70
Hazardous Waste Proximity (facility count/km distance)	0.056	0.76	2	1.9	11
Underground Storage Tanks (count/km²)	0.13	1.7	0	3.9	29
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.00032	2.3	19	22	39
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index	96%	83%	88	35%	99
Supplemental Demographic Index	56%	43%	84	14%	99
People of Color	98%	96%	17	39%	95
Low Income	94%	70%	90	31%	99
Unemployment Rate	7%	15%	34	6%	71
Limited English Speaking Households	91%	67%	94	5%	99
Less Than High School Education	32%	21%	79	12%	93
Under Age 5	3%	4%	47	6%	28
Over Age 64	14%	22%	20	17%	44
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 .....	1
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 18.228256, -66.930894



## 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	11.5%	21.6%	8	13.4%	43

### 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	66%	32%	94	14%	99
Lack of Health Insurance	2%	7%	8	9%	15
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 18.228256, -66.930894

## **Appendix 4: USFWS Consultation Package and supporting documentation**

**From:** [Roman, Damaris](#)  
**To:** [environmentcdbg](#)  
**Subject:** Re: [EXTERNAL] RE: CDBG-DR PR-RGRW-04340 Hacienda Agroecológica El Edén  
**Date:** Tuesday, July 23, 2024 10:19:09 AM  
**Attachments:** [image001.png](#)

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Good Morning

This email is to acknowledge receipt of PRDOH letter confirming the Service the implementation of the PR harlequin butterfly conservation measures provided by the Service on June 23, 2024 for the PRDOH consultation of May 02, 2024. Keep this email for your records.

Thanks

**\*\* If you need assistance, please contact me at emails or mobile below. If you are sending a request for technical assistance or Section 7 consultation, please contact us at [Caribbean\\_es@fws.gov](mailto:Caribbean_es@fws.gov)\*\***

**Need a project evaluation? Please visit our [Consultation Guidelines](#) website.**

Cordially,

*Damaris Román Ruíz*

*Biological Science Technician  
US Fish and Wildlife Service  
Caribbean Ecological Service Field Office  
P.O Box 491/Road 301 km 5.1  
Boqueron PR 00622*

*Office Park I  
Suite 303  
State Road #2, Km 156.5  
Mayagüez, PR 00680*

*Office Desk Phone (939) 320-3135  
Mobile (786) 244-0081  
[damaris\\_roman@fws.gov](mailto:damaris_roman@fws.gov)  
[caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)*

*Office Homepage: <https://www.fws.gov/southeast/caribbean/>*

Facebook: <https://www.facebook.com/USFWSCaribbean?ref=hl>

Flicker: <https://www.flickr.com/photos/usfwssoutheast/sets/72157626859158391/>

---

**From:** environmentcdbg <environmentcdbg@vivienda.pr.gov>

**Sent:** Tuesday, July 23, 2024 9:59 AM

**To:** Caribbean ES, FW4 <Caribbean\_ES@fws.gov>

**Cc:** Roman, Damaris <damaris\_roman@fws.gov>

**Subject:** [EXTERNAL] RE: CDBG-DR PR-RGRW-04340 Hacienda Agroecológica El Edén

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

To whom it may concern:

In order to complete the environmental review process, attached please find a letter of acceptance by PRDOH regarding the case PR-RGRW-04340 for the CDBG-DR Re-Grow PR Urban-Rural Agriculture Program. This document contains the confirmation of the implementation of the conservation measures regarding this case.

Should you need additional information, do not hesitate to contact our office.

Cordially,

**Permits and Environmental Compliance Division**

Disaster Recovery Office

[environmentcdbg@vivienda.pr.gov](mailto:environmentcdbg@vivienda.pr.gov) | 787.274.2527

Visit us: [recuperacion.pr.gov](http://recuperacion.pr.gov)

Contact us: [infocdbg@vivienda.pr.gov](mailto:infocdbg@vivienda.pr.gov)

DEPARTAMENTO DE LA  
**VIVIENDA**



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**From:** Roman, Damaris <damaris\_roman@fws.gov>

**Sent:** Monday, June 24, 2024 11:43 AM  
**To:** Juan C. Perez-Bofill <jcperez@vivienda.pr.gov>  
**Cc:** environmentcdbg <environmentcdbg@vivienda.pr.gov>  
**Subject:** CDBG-DR PR-RGRW-04340 Hacienda Agroecológica El Edén

Mr. Pérez

See attached file regarding the referenced project. Should you have any questions, contact us at [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)

Thanks

**\*\* If you need assistance, please contact me at emails or mobile below. If you are sending a request for technical assistance or Section 7 consultation, please contact us at [Caribbean\\_es@fws.gov](mailto:Caribbean_es@fws.gov)\*\***

**Need a project evaluation? Please visit our [Consultation Guidelines](#) website.**

Cordially,

*Damaris Román Ruiz*

*Biological Science Technician  
US Fish and Wildlife Service  
Caribbean Ecological Service Field Office  
P.O Box 491/Road 301 km 5.1  
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*Office Park I  
Suite 303  
State Road #2, Km 156.5  
Mayagüez, PR 00680*

*Office Desk Phone (939) 320-3135  
Mobile (786) 244-0081  
[damaris\\_roman@fws.gov](mailto:damaris_roman@fws.gov)  
[caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)*

*Office Homepage: <https://www.fws.gov/southeast/caribbean/>  
Facebook: <https://www.facebook.com/USFWSCaribbean?ref=hl>  
Flicker: <https://www.flickr.com/photos/usfwssoutheast/sets/72157626859158391/>*

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July 22, 2024

Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boquerón, Puerto Rico 00622  
Email: [caribbean@es@fws.gov](mailto:caribbean@es@fws.gov)

**Re: Puerto Rico Department of Housing / Re-Grow Program  
Hacienda Agroecológica el Edén | PR-RGRW-04340  
Effect Determination Acceptance**

To whom it may concern:

The Puerto Rico Department of Housing (PRDOH) acknowledges receipt of the U.S. Fish and Wildlife Service correspondence dated on May 2, 2024 for the project PR-RGRW-04340 According to Section 7(a)(2) of the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), PRDOH confirms the implementation of the pertinent conservation measures for the Puerto Rican Harlequin Butterfly.

As it is stated, with this communication, the PRDOH completes its responsibility under Section 7 of the Endangered Species Act with the Services' requirements for concurrence.

Should you need additional information, do not hesitate to contact our office.

Sincerely,

Permits and Environmental Compliance Division  
Disaster recovery Office  
[environmentcdbg@vivienda.pr.gov](mailto:environmentcdbg@vivienda.pr.gov) | (787)274-2527 ext. 4320



## 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/72083-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-04340 Hacienda  
Agroecológica El Edén, Las Marías, Puerto Rico

Dear Mr. Pérez-Bofill

Thank you for your letter dated May 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 purchase and installation of a 600 gallons cistern on a concrete slab (15 feet (Ft) x 15 Ft x 8 inches depth) and jet pump ¾ HP, fertilizer, tractor with cutter, farm & maintenance tools (two trimmers, blower backpack, chain saw, industrial pruner, two back spray pump, two motorized atomizers, two sprayers, two dorsal applicators and two dispensers).and lime and orange grafts. The installation of the cistern will require minimal ground disturbance will be required to level the soil. No vegetation removal (trees or shrubs) will occur since the current area to be worked on consists solely of grass. The proposed project will be located at State Road PR-124, Km 12.9, Bo. Cerrote Solar 10 (18°13'41.7"N 66°55'51.2"W) in the municipality of Las Marías.

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 (*Epicrates inornatus* now known as *Chilabothrus inornatus*) and Puerto Rican harlequin butterfly (*Atlantea tulita*).

PRDOH then 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: 2024-0072850). 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 not likely to adversely affect (NLAA) this species. Conservation measures for the Puerto Rican boa will be implemented. The

Service acknowledges receipt of the NLAA DKey consistency letter for the Puerto Rican boa with the implementation of the conservation measures.

Based on the nature of the project, scope of work, information available and existing habitat, the PRDOH has determined that the proposed project may affect, but is not likely to adversely affect the Puerto Rican harlequin butterfly.

We have reviewed the information provided and our files, and concur with PRDOH's determination that the proposed actions may affect but are not likely to adversely affect the Puerto Rican harlequin butterfly if PRDOH agrees to implement the following conservation measures for this species:

1. The contractor must inform all personnel about the potential presence of the Puerto Rican harlequin butterfly or its occupied host plant "prickly bush" (*Oplonia spinosa*) in the project areas. A pre-work meeting should inform all project personnel about the need to avoid harming this butterfly and its occupied host plant. Educational material (e.g., posters, flyers or signs with photos or illustrations of all the life stages of the Puerto Rican harlequin butterfly (i.e., eggs, caterpillar, chrysalids and adult, and its host plant) should be prepared and available to all personnel for reference.
2. Before starting any project activity, including removal of vegetation and earth movement, the contractor must clearly delineate the boundaries of the working area in the field to avoid unnecessary habitat impacts. Once the project areas are clearly marked, and before any work activity, including site preparation, personnel with knowledge and ability to identify the Puerto Rican harlequin butterfly (all life stages) and the "prickly bush" must survey the areas where the work will be performed for the presence of the species and its host plant. It is important to note that the Puerto Rican harlequin butterfly can be observed year-round in all its life stages; thus, oviposition (egg-laying) may occur at any time during the year.
3. If the "prickly bush" is present on the project site, try to avoid cutting it off, even if no eggs, caterpillars, or chrysalids are present.
4. If there is no prickly bush within the project area, and the butterfly is observed flying within the project area, do not harass, harm, pursue, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, the species.
5. Adult butterflies are often observed flying near the host plant as part of their mating behavior and laying eggs. Project-related activities must stop if the prickly bush is found in the project area and the Puerto Rican harlequin butterfly is observed flying in that same area. A temporary 50-meter (164 feet) buffer zone of no activity or human disturbance should be established and clearly marked around that prickly bush until the butterfly moves out on its own.
6. Once the Puerto Rican harlequin butterfly has moved away, within a period of 24 to 36 hours, a search of the prickly bush that has been buffered should be conducted to determine

the presence of any eggs, caterpillars, or chrysalids of the butterfly on the plant. The contractor or the Applicant should send a report of the observation and its findings to [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov) after the 36-hour search is concluded.

7. If, after the initial search or after the 24 to 36-hour search, any life stage of the Puerto Rican harlequin butterfly is found in the prickly bush, take the following actions:
  - Clearly mark the host plant with flagging tape.
  - Establish a 10-meter (32-foot) buffer zone around the bush to protect it.
  - Eggs are typically found on the prickly bush's newly grown, tender branches. Once an egg hatches, the caterpillar moves and feeds throughout the bush. Therefore, avoid cutting off the prickly bush within the project site even if no eggs, caterpillars, or chrysalids are present.
  - Work within the 10-meter buffered area may resume when no signs of any live life stage of the butterfly are detected, which usually takes approximately 60 to 120 days.
8. For all Puerto Rican harlequin butterfly sightings (all life stages), the time and date of the sighting and the specific location where the butterfly was found must be recorded. Data should also include a photo of the butterfly (if possible) and the habitat where it was observed, site GPS coordinates, and comments on how the butterfly was detected and its behavior. All Puerto Rican harlequin butterfly sighting reports should be sent to the USFWS Caribbean Ecological Service Field Office at [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov).
9. For questions regarding the Puerto Rican harlequin butterfly, the Point of Contacts are:
  - José Cruz-Burgos, Endangered Species Coordinator:
    - Mobile: 305-304-1386
    - Office phone: 786-244-0081
    - Office Direct Line: 939-320-3120
    - Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)

This consultation will be completed once we receive PRHOD's confirmation of the implementation of the above mentioned conservation measures for the Puerto Rican harlequin butterfly.

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,

Silmarie Padrón  
Acting Field Supervisor

drr



April 18, 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

***RE: Informal Consultation for Case PR-RGRW-04340 at Carr 124 KM 12.9, Barrio Cerrote Solar 10, Las Marias, PR 00670.***

Dear Mr. Tawes:

The Puerto Rico Department of Housing is requiring 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 project PR-RGRW-04340, located at coordinates for a water cistern: latitude 18.228256, longitude -66.930894; on Carr 124 KM 12.9, Barrio Cerrote Solar 10, Las Marias, PR 00670, see Figure 1: Location Map and Figure 2: Topographic Map. The project is part of the Re-Grow Puerto Rico Urban-Rural Agriculture Program (RGRW) that aims to increase agricultural capacity while promoting and increasing food security inland wide. This Program will enhance and expand agricultural production related to economic revitalization and sustainable development activities.

The proposed activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts. The farm and maintenance tools includes: two trimmers, blower backpack, chain saw, industrial pruner, two back spray pump, two motorized atomizers, two sprayers, two dorsal applicators and two dispensers. The installation of the cistern will require ground disturbance. The cistern and pump will be installed on a concrete slab measuring 15 feet by 15 feet with a depth of 8 inches at the applicant's expense. Minimal ground disturbance will be required to level the soil. There's no need for the removal of vegetation like shrubs or trees as the current area to be worked on consists solely of grass. The cistern will be supplied with rainwater, and the power to operate the pump for water distribution will be from a portable diesel generator supplied by the applicant. The water pipes to be used to water the crops will all be installed above the ground. The location of the water pipes will depend on where the new fruit trees will be planted. No new electricity or water connection will be necessary. Based on a review of historical aerial imagery, the location for the proposed activities has been used for agricultural purposes for the past 10 years. The Area of Potential Effect (APE) has been defined as the area potentially impacted by ground disturbing activities related to the installation of a water cistern, see Figure 3: Area of Potential Effect.

**Existing Conditions and Trends:**

For the proposed project parcel 211-000-006-25-000, the area is designated as not prime farmland. The proposed project is located in a mountainous area of Las Marias. The area for the proposed cistern has a flat topography, covered in grass, refer to Photo 1 and Photo 2. In the project area we have Humatas

clay, 40 to 60 percent slopes (HmF2). This soil is deep, very steep, and well drained. It is on the side slopes and ridgetops of humid volcanic uplands. The land has been used for agricultural uses for the past 10 years and the proposed project will not change the land use associated with these placements. The closer Final Critical Habitat is located 20,914 feet from the project location, see Figure 5: Critical Habitats Map. There are no wetlands located on or near the project activity area, see Figure 6: Wetlands Map.

Using the Information for Planning and Consultation (IPaC) system (See Exhibit B), we have determined that the proposed project lies within the range of the following federally listed species and critical habitats:

Name of species	Threatened/Endangered/Candidate
<b>Reptiles</b>	
Puerto Rican boa ( <i>Chilabothrus inornatus</i> )	Endangered
<b>Insects</b>	
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	Threatened
<b>Critical Habitat</b>	
There are no critical habitats within the project area.	

The nature of the project, scope of work, information available, a careful analysis of the IpaC, the Puerto Rico Boa conservation measures, the Caribbean Dkey dated April 18, 2024, in the US Fish and Wildlife Service’s online IPaC application, and the observations during the field visit, were used to evaluate the potential impacts to federally listed species from this project. Based on that information and the answer inputted into the Dkey, it was determined that the proposed action will have “May Affect, but is Not Likely to Adversely Affect” (NLAA) determination on the Puerto Rican Boa, see Exhibit B. Based on the provided information and the observations in the filed visit it was determined that can be also a "NLAA" for the Puerto Rican Harlequin Butterfly, since the proposed location for the water cistern it is 20,914 feet from the Critical habitat for this species.

Name of the species	Effect Determination	Conservation Measures that will be implemented
Puerto Rican boa ( <i>Chilabothrus inornatus</i> )	May Affect, but is Not Likely to Adversely Affect (NLAA)	USFWS Boa Conservation measures (Revised: January 2024)
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	May Affect, but is Not Likely to Adversely Affect (NLAA)	No conservation measures
<b>Critical Habitats</b>		
There are no critical habitats within the project area.		

In order to complete the informal consultation process, we are requesting your concurrence for the NLAA determination for the Puerto Rican Boa and Puerto Rican Harlequin Butterfly. Attached to this letter, we are including the documents used to reach our effect determinations for the listed species.

Should you require any additional information, please contact Allison Cullett at [allison.cullett@horne.com](mailto:allison.cullett@horne.com).

**References:**

**Puerto Rican boa (*Chilabothrus inornatus*)**

Species Profile: <https://ecos.fws.gov/ecp/species/6628>

USFWS Puerto Rican boa Conservation Measures

<https://ipac.ecosphere.fws.gov/project/DL2ACOXYA5ED5AXUNEIT4UZOTA/documents/generated/7159.pdf>

**Puerto Rican Harlequin Butterfly (*Atlantea tulita*)**

Species profile: <https://ecos.fws.gov/ecp/species/9005>

**Exhibit A: Figures**



**Application ID: PR-RGRW-04340**

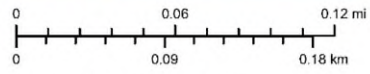
Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

**Location: Aerial Map**  
Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, MEL, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community and Google Earth

**Source**  
Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crimpr.net/cdprpc/>

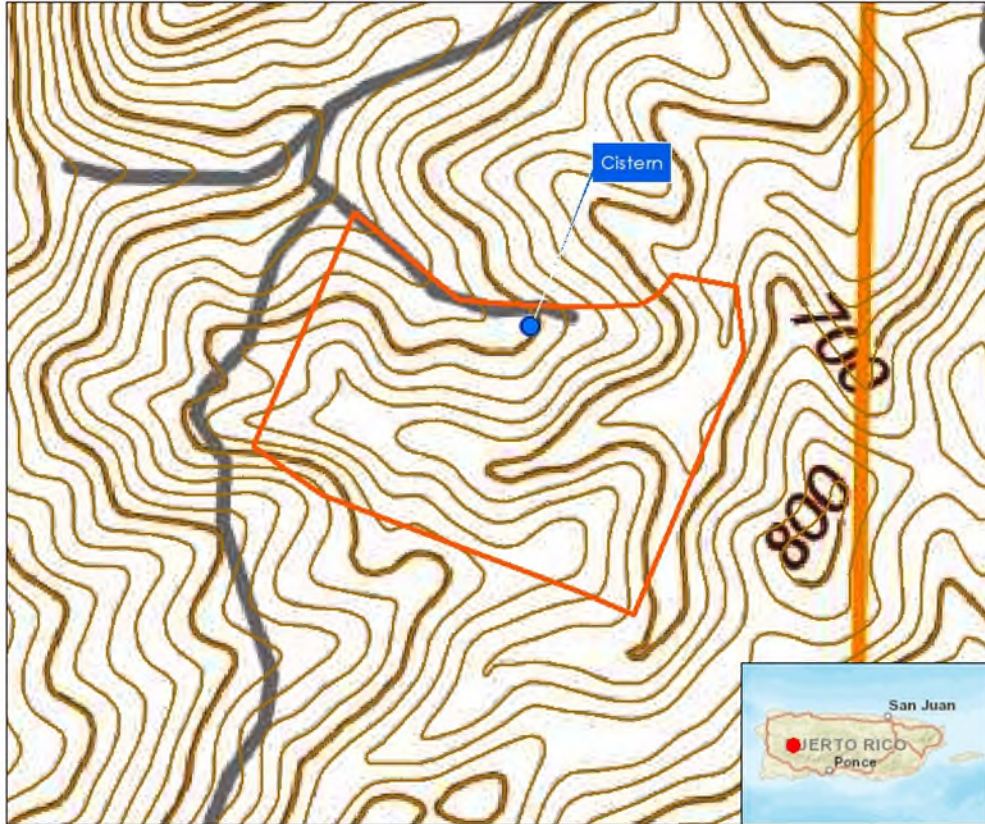
**Figure 1: PR-RGRW-04340 Location Map**

Application ID: PR-RGRW-04340

Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marias, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

### Location: USGS Topographic Map

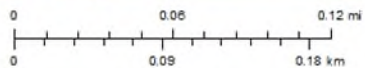
Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- PR-RGRW-04340-Parcel
- Contour Interval 20 Feet

**Quadrangle: Maricao**



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Ireland), NGCC, (c) OpenStreetMap contributors and the GIS User Community and Google Earth



**Source**

United States Geological Survey (USGS)  
National Geographic Data Database  
[https://ngmdb.usgs.gov/ngmdb/ngmdb\\_home.html](https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html)

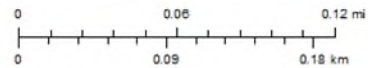
Figure 2: PR-RGRW-04340 Topographic Map

**Area of Potential Effect**  
Puerto Rico Department of Housing ReGrow



**Legend:**

- Applicant Structure
- Area of Potential Effect 15 Mts.
- PR-RGRW-04340-Parcel
- CRIM Parcels



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Source: Esri, DeLorme, Earthstar Geographics, and the GIS User Community and Google Earth



**Source**

Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.sirmp.net/isdprca/>

Figure 3: PR-RGRW-04340 Area of Potential Effect Map

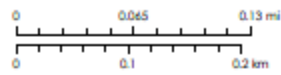
# Farmland Protection

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-04340
- Farm Class**
- Farmland of statewide importance
- Not prime farmland



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

National Resources Conservation Service (NRCS)  
Gridded Soil Survey Geographic Database (gSSURGO)  
<https://data.nrcs.usda.gov/dataset/soil-survey-geographic-database-surge>



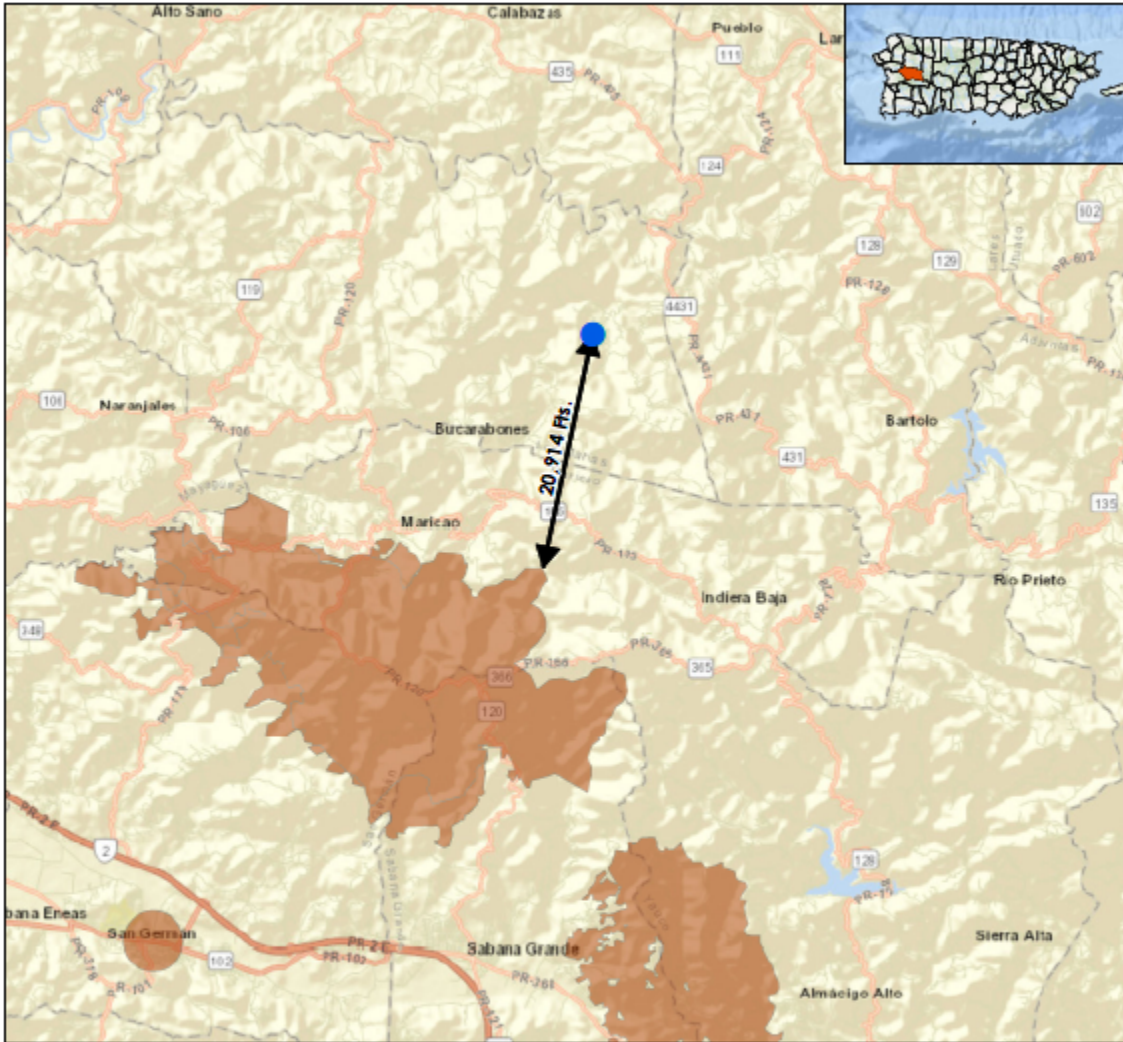
1:5,000

Figure 4: PR-RGRW-04340 Farmland Protection Map

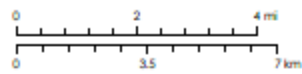
Hacienda Agroecológica El Edén  
Carr 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marias, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long: -66.930894

# Threatened & Endangered Species

Puerto Rico Department of Housing ReGrow



**Legend:**  
● PR-RGRW-04340  
■ Critical Habitat



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Ireland), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**  
NOAA Office of Response and Restoration  
<https://response.restoration.noaa.gov/>



1:150,000

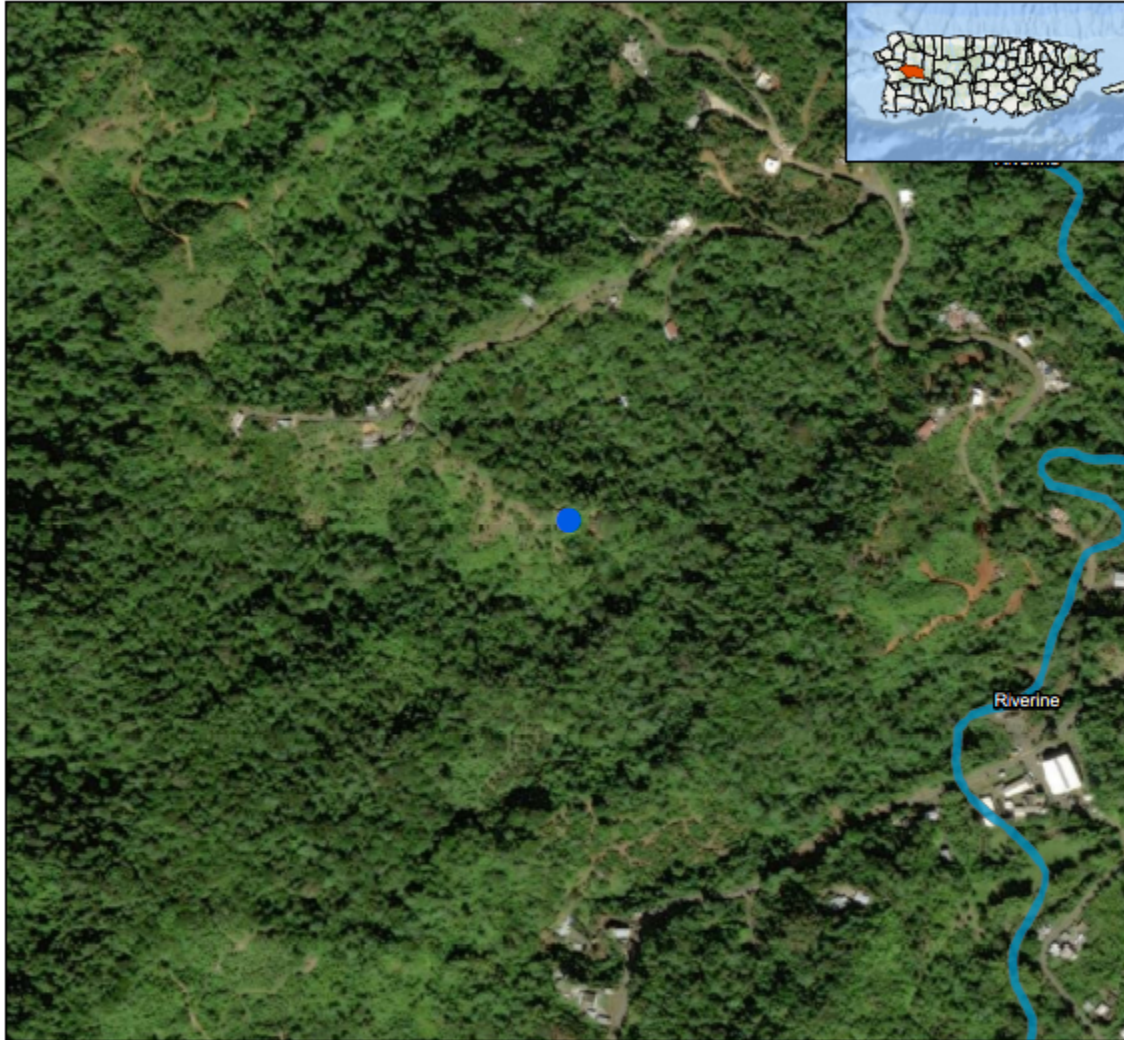
Figure 5: PR-RGRW-04340 Critical Habitats Map

**Application ID: PR-RGRW-04340**

Hacienda Agroecológica El Edén  
Car 124 KM 12.9,  
Barrio Cerrote Solar 10  
Las Marías, PR 00670  
Catastro: 211-000-006-25-000  
Lat: 18.228256, Long:-66.930894

# Wetlands Map

Puerto Rico Department of Housing ReGrow



**Legend:**

● PR-RGRW-04340

**National Wetlands Inventory**

■ Riverine

0 0.045 0.13 mi

0 0.1 0.2 km

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

**Source**

U.S. Fish and Wildlife Service - National Wetlands Inventory  
<https://www.fws.gov/program/national-wetlands-inventory>



1:5,000

Figure 6: PR-RGRW-04340 Wetlands Map

**Exhibit B: Information for Planning and Consultation (IPaC)**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Caribbean Ecological Services Field Office  
Post Office Box 491  
Boqueron, PR 00622-0491  
Phone: (939) 320-3135 Fax: (787) 851-7440  
Email Address: [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

In Reply Refer To:  
Project Code: 2024-0072850  
Project Name: PR-RGRW-04340

04/18/2024 18:25:15 UTC

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 FOLLOWING SPECIES LIST IS NOT A SECTION 7 CONSULTATION. PLEASE CONTACT OUR OFFICE TO COMPLETE THE CONSULTATION PROCESS\***

The purpose of the Endangered Species Act (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 those species and/or their designated critical habitat.

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". The enclosed species list provides information to assist with the U.S. Fish and Wildlife Service (Service) consultation process under section 7 of the Act. However, **the enclosed species list does not complete the required consultation process**. The species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitats, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. A discussion between the Federal agency and the Service should include what types of listed species may occur in the proposed action area and what effect the proposed action may have on those species. This process initiates informal consultation.

Once a species list is obtained for the proposed project, an effect determination for endangered and threatened species should be made. The applicant could make an effect determination by using available keys on IPaC for specific species. For species with no determination keys, the applicant should request concurrence from the Service by sending a project package



to [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov). To obtain guidance for completing this process and the minimum requirements for project packages, please visit:

<https://www.fws.gov/sites/default/files/documents/consultation-under-section-7-of-the-endangered-species-act-with-the-caribbean-ecological%20Services-field-office-template-letter.pdf>

When a federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete, and the proposed project moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (B.A.) to assist in its determination of the project's effects on species and their habitat. However, a B.A. 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 B.A. where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a B.A. are described at 50 CFR 402.12.

If a federal agency determines, based on its B.A. or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further 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 process. 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>

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.

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". Please use this list to determine whether your project requires consultation and to make your effects determination. For more guidance, use the Guideline for Consultation under Section 7 of the Endangered Species Act with the Caribbean Ecological Services Field Office by clicking [here](#).

This species list is provided by:

Caribbean Ecological Services Field Office

[caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)

Post Office Box 491

Boqueron, PR 00622-0491

(786) 244-0081

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

## 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

(939) 320-3135

## PROJECT SUMMARY

Project Code: 2024-0072850

Project Name: PR-RGRW-04340

Project Type: Disaster-related Grants

Project Description: The proposed activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.228049499999997,-66.9311127716103,14z>



Counties: Las Marías 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/WXVDKJT3E5HSLDADIMKGUQTSDE/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/WXVDKJT3E5HSLDADIMKGUQTSDE/documents/generated/7159.pdf</a>	Endangered

## INSECTS

NAME	STATUS
Puerto Rican Harlequin Butterfly <i>Atlantea tulita</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9005">https://ecos.fws.gov/ecp/species/9005</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/WXVDKJT3E5HSLDADIMKGUQTSDE/documents/generated/7168.pdf">https://ipac.ecosphere.fws.gov/project/WXVDKJT3E5HSLDADIMKGUQTSDE/documents/generated/7168.pdf</a>	Threatened

## 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.

## USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

- 
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
  2. The [Migratory Birds Treaty Act](#) of 1918.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Caribbean Ecological Services Field Office  
Post Office Box 491  
Boqueron, PR 00622-0491  
Phone: (939) 320-3135 Fax: (787) 851-7440  
Email Address: [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

In Reply Refer To:

04/18/2024 18:45:08 UTC

Project code: 2024-0072850

Project Name: PR-RGRW-04340

Subject: Consistency letter for the project named 'PR-RGRW-04340' 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 April 18, 2024, Patricia Carmenatty 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-04340'. The project is located in Las Marías County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.228049499999997,-66.9311127716103,14z>



The following description was provided for the project 'PR-RGRW-04340':

The proposed activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts.

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

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

**Consultation with the Service is not complete.** The above effect determination(s) becomes applicable when the lead federal action agency or designated non-federal representative submits them as a request to the Service to rely on the Caribbean DKey in order to satisfy the agency's consultation requirements for this project.

Please provide this consistency letter to the lead federal action agency or its designated non-federal representative with a request for its review, and as the agency deems appropriate, to submit for concurrence verification through the IPaC system. The lead federal action agency or designated non-federal representative should log into IPaC using their agency email account and click "Search by record locator." They will need to enter the record locator **240-141233008**

**Note:** Projects located within the range of the Puerto Rican boa or the Virgin Islands tree boa might encounter these species during project activities. **This letter does not provide take to handle or move these species.** If relocation of the species is needed, please contact either the Puerto Rico Department of Natural Resources (DNER) at 787-724-5700, 787-230-5550, or 787-771-1124 for projects in Puerto Rico, or the Virgin Islands Department of Planning and Natural Resources, Division of Fish and Wildlife (DFW) at 340-775-6762 for projects in the Virgin Islands. Otherwise, contact the Caribbean Ecological Services Field Office ([caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)) to determine whether the consultation needs to be reinitiated.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and **are not** covered by this conclusion. Effects to the other federally listed species or critical habitat as listed below should be considered as part of your ESA review for the project.

- Puerto Rican Harlequin Butterfly *Atlantea tulita* Threatened

If the proposed project is located within species range where a DKey has not been developed for those species, please follow the established guidance for initiating section 7 consultation Caribbean Ecological Services Field Office.

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-04340

**2. Description**

The following description was provided for the project 'PR-RGRW-04340':

The proposed activities for PR-RGRW-04340 consist of the purchase and installation of a 600 gallons cistern and jet pump  $\frac{3}{4}$  HP, fertilizer, tractor with cutter, farm & maintenance tools and lime and orange grafts.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.228049499999997,-66.9311127716103,14z>



## 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?

*Yes*

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

**Automatically answered**

*Yes*

14. Will the proposed project implement the U.S. Fish and Wildlife [Puerto Rican boa Conservation Measures](#)?

*Yes*

**Exhibit C: Field Visit Photos**



**Photo #:1**

**Description (include direction): Area where the cistern and pump will be installed, looking southeast.**

**Date: January 26, 2024**



**Photo #:2**

**Description (include direction): Area where the cistern and pump will be installed, looking northeast.**

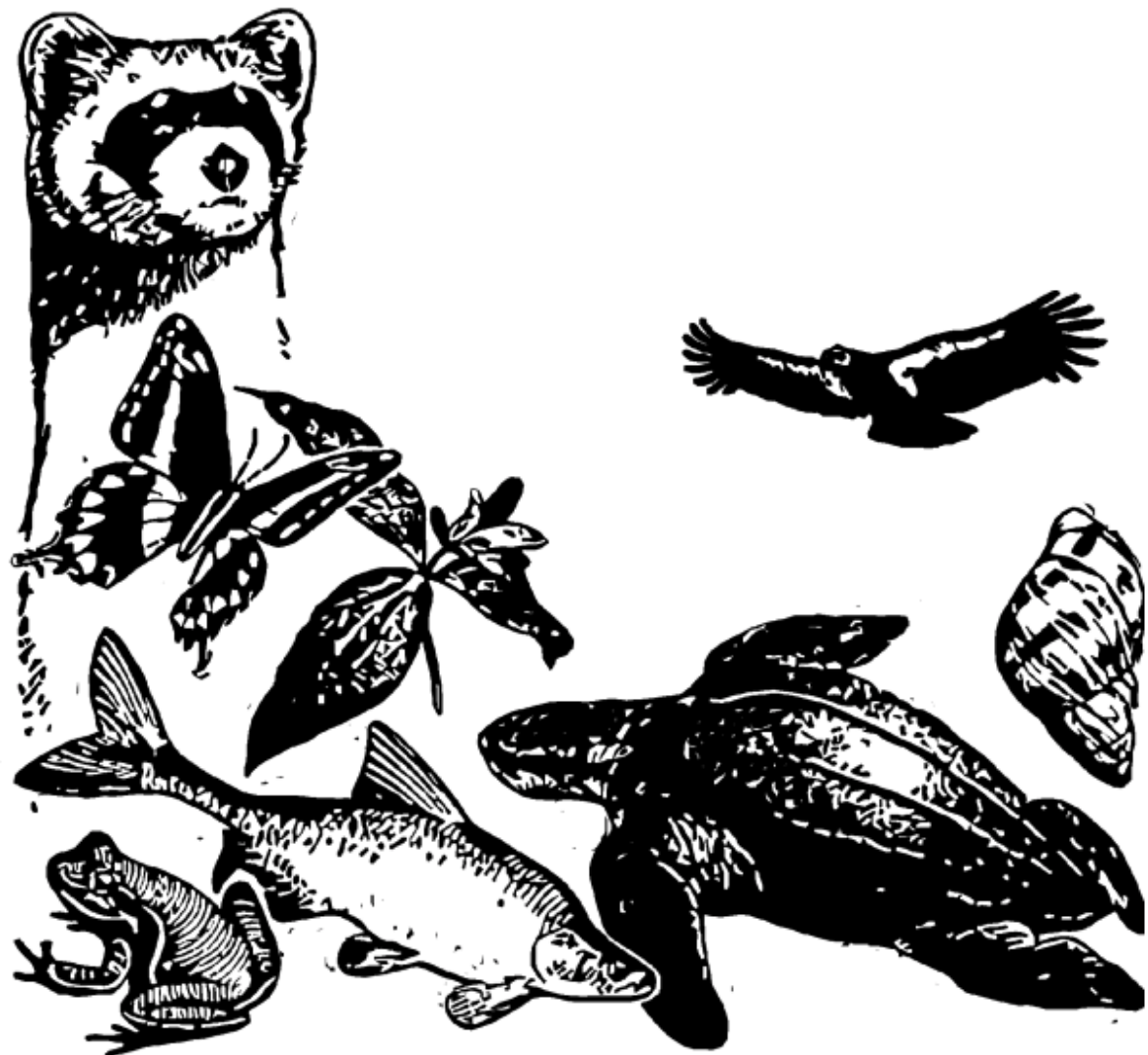
**Date: January 26, 2024**

# Caribbean ES Puerto Rican Boa

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## *Puerto Rican Boa*

Generated August 05, 2024 04:31 PM UTC, IPaC v6.112.0-rc2





## 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



**U.S. FISH & WILDLIFE SERVICE  
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE**

**Conservation Measures for the Puerto Rican harlequin butterfly (*Atlantea tulita*)**

Section 7 (a)(1) of the Endangered Species Act (ESA) mandates Federal agencies to aid in the conservation of federally listed species. Section 7 (a)(2) requires the Federal 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 federally 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 listed species, such as approval of private activities through the issuance of Federal funding, permits, licenses, or any other actions. Any person that injures, captures, or kills a Puerto Rican harlequin butterfly, or destroy it eggs or any other of its life stage (caterpillars, chrysalis) is subject to penalties under the ESA. Thus, Federal Actions agencies must initiate consultation with the Service under Section 7 of the ESA for any action that could affect the Puerto Rican harlequin butterfly. To initiate a consultation under the Section 7 of the ESA, the Federal Action agency must submit a project package to the Service with the established minimum requirements (see below). The conservation measures included below should be incorporated into the project plans to minimize possible impacts to the Puerto Rican harlequin butterfly. Download the [project evaluations fact sheet](#) to learn more about the requirements or visit our [project evaluations webpage](#).



The Puerto Rican (PR) harlequin butterfly (*Atlantea tulita*), is a threatened species endemic to Puerto Rico, whose currently known range is limited to the Northern Karst

physiographic region and the West-central Volcanic-serpentine physiographic region of the Island. Through this range, we have identified six areas occupied by the PR harlequin butterfly that we refer to as a populations: (1) along the coastal cliff in the municipalities of Isabela, Quebradillas, and Camuy; (2) Guajataca in the municipality of Isabela; (3) Río Abajo Commonwealth Forest between the municipalities of Arecibo and Utuado; (4) Río Encantado area along the municipalities of Arecibo, Florida and Ciales; (5) Maricao Commonwealth Forest in the municipality of Maricao; and (6) Susúa Commonwealth Forest between the municipalities of Sabana Grande and Yauco. In addition, adult PR harlequin butterflies have been anecdotally reported in other areas of Puerto Rico, including the municipalities of Aguadilla, Barceloneta, Ciales, Florida, Luquillo, Ceiba, Guánica, San Germán, Las Marias and Lares.

The PR harlequin butterfly is a medium sized butterfly with a life cycle includes four distinct anatomical stages: imago (adult), egg, larva (caterpillar, with several size phases called instars), and chrysalis. The species has a wingspan of about 5.1 to 6 centimeters (cm) (2 to 2.5 inches (in)) wide and is characterized by its orange, brownish-black and beige coloration patterns. The caterpillar (larva) is dark orange with a brownish black to black, thin sub-lateral line, over a thin line of white intermittent dots crossing the body from the head to the anal plate, and has spines with hairs on each body segment. The caterpillar is less than .476 centimeters (cm) (0.19 in) in the first instar (growth stage between molts) and about 3.3 cm (1.29 in) in the fifth instar. Both eggs and caterpillars have been found almost exclusively on the host plant prickly bush (*Oplonia spinosa*). The chrysalis (pupa from which the butterfly (adult, or imago) emerges) of the PR harlequin butterfly is black, with orange and white dashes, and yellow pimples. The size of chrysalis is around 3 cm (1.2 in). In the wild, the chrysalis is more often found attached to branches of plants located close to the host plant, but it has been observed attached to dried twigs of the host plant.

The PR harlequin butterfly is difficult to detect, and the species is easily misidentified with other common butterflies such as the monarch butterfly (*Danaus plexippus portoricensis*), Antillean crescent (*Antillea pelops*), and Gulf fritillary (*Agraulis vanilla insularis*). The PR harlequin butterfly adults seem to be more active in the morning, from 9:00 am to 12:00 pm, when they are often observed flying searching for food or patrolling their territory for mating or laying eggs. The species flies slowly and is weak and fragile; thus, it is considered a poor disperser. There is information that this butterfly can disperse up to 1,026 meters (m) (3366.1 feet (ft)), approximately 1 kilometer (km) (0.6 mile (mi)) from one breeding site to another. The species seems to have specific ecological requirements for reproduction and its dispersion.

The PR harlequin butterfly was federally listed as threatened on January 3, 2023 (87 FR 73655), due to threats related to habitat modification and loss, its small populations size, and because of analyses of projected effects on the species resulting from relevant factors like increment of urban development rate and climate changes, which may negatively influence the continued existence of the species in the foreseeable future.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the PR harlequin butterfly and its

habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional recommendations can be made besides the ones presented in this document.

1. All project construction personnel must be informed about the potential presence of the PR harlequin butterfly or its occupied host plant, prickly bush (*Oplonia spinosa*), in the project areas and the need to avoid harming the species and its occupied host plant. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing species protected under the Endangered Species Act. Educational material (e.g., posters, flyers, or signs with photos or illustrations of all the life stages of the PR harlequin butterfly (i.e., eggs, caterpillar, chrysalis, and adult) as well as its host plant, should be prepared and available to all personnel for reference.
2. Before starting any project activity, including removal of vegetation and earth movement, the boundaries of the work area in the field clearly delineate to avoid unnecessary habitat impacts. Once the project areas are clearly marked, and before any work activity, including site preparation, personnel with knowledge and ability to identify the PR harlequin butterfly (all life stages) and the prickly bush must survey the areas where the work will be performed for the presence of the species and its host plant. It is important to note that the PR harlequin butterfly can be observed year-round in all its life stages; thus, oviposition (egg-laying) may occur at any time during the year.
3. If the prickly bush is present on the project site, try to avoid cutting it off, even if no eggs, caterpillars, or chrysalis are present.
4. If there is no prickly bush within the project area, and the butterfly is observed flying within the project area, do not harass, harm, pursue, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, the species.
5. Adult butterflies are often observed flying near the host plant as part of their mating behavior and laying eggs. Project-related activities must stop if the prickly bush is found in the project area and the PR harlequin butterfly is observed flying in that same area where the plant is located. A temporary 50-meter (164 feet) buffer zone of no activity or human disturbance should be established and clearly marked around that prickly bush until the butterfly moves out on its own.
6. Once the PR harlequin butterfly has moved away, within a period of 24 to 36 hours, a search of the prickly bush that has been buffered should be conducted to determine the presence of eggs, caterpillars, or chrysalids of the butterfly on the plant. The contractor or the Applicant should send a report of the observation and its findings to [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov) after the 36-hour search is concluded.
7. If, after the initial search or after the 24 to 36-hour search, any life stage of the PR harlequin butterfly is found in the prickly bush, take the following actions:
  - Clearly mark the host plant with flagging tape.

- Establish a 10-meter (32-foot) buffer zone around the bush to protect it.
- Eggs are typically found on the prickly bush's newly grown, tender branches. Once an egg hatches, the caterpillar moves and feeds throughout the plant. Therefore, avoid cutting off the prickly bush within the project site even if no eggs, caterpillars, or chrysalids are present.
- Work within the 10-meter buffered area may resume when no signs of any live life stage of the butterfly are detected, which usually takes approximately 60 to 120 days.

8. For all PR harlequin butterfly sightings (all life stages), the time and date of the sighting and the specific location where the butterfly was found must be recorded. Data should also include a photo of the butterfly (if possible) and the habitat where it was observed, site GPS coordinates, and comments on how the butterfly was detected and its behavior. All PR harlequin butterfly sighting reports should be sent to the U.S. Fish and Wildlife Service, Caribbean Ecological Service Field Office at [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov).

9. For questions regarding the PR harlequin butterfly, the Point of Contact is:

- José Cruz-Burgos, Threatened and Endangered Species Program Coordinator:
  - Mobile: 305-304-1386
  - Office phone: 786-244-0081
  - Office Direct Line: 939-320-3120
  - Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)