

# **Environmental Assessment**

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

### **24 CFR Part 58**

#### **Project Information**

**Project ID:** PR-RGRW-03947

**Project Name:** Finca Santa Carmen Inc.

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

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

**State/Local Identifier:** Puerto Rico / Jayuya, 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. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes, Jayuya, PR 00664

Irrigation System location: latitude 18.196090 longitude -66.600146

Parcel cadastral: 242-000-007-13-001

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

The proposed activities for PR-RGRW-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V diesel power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed. Two

cisterns of 600 gallons each will be on the cement slab also, the applicant already has them, they are not part of IUEG. The construction of the cement slab for the power generator will require ground disturbance. The irrigation system pipes will consist of PVC, measuring approximately 900 to 1000 feet in length, and will be installed above ground. The power to provide the energy to operate the water pump will come from the new diesel powered generator. It will not be necessary to install a transfer switch or new connections for electricity. The water needed will be provided by an existing stream on the property. The irrigation system will supply water across the farm, ensuring the fruit trees are properly watered. A franchise from the Puerto Rico Department of Natural and Environmental Resources (DNER) is required to be obtained to extract water from a stream. The project area is located at PR-144 Ramal 528 km. 1.9, interior, Sector Los Ortizes within the Municipality of Jayuya. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 years.

The Area of Potential Effect (APE) has been defined as the area potentially impacted by ground disturbing activities related to the installation of the cement slab for the generator, water pump and cisterns. 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 cement slab for the generator, water pump and cisterns 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 generator, water pump and cisterns 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)]: 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 an irrigation system is 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 rural area of Jayuya with semi-flat topography. The new container will be installed in an areas covered with grass. The area where the concrete slab will be constructed for the water pump and cisterns in a green space covered with grass. The above-ground water pipe will be laid along various paths on the farm to ensure better water distribution. The farm currently cultivates coffee, bananas, and other fruit trees. Therefore, there is little to no change in land use associated with these placements.

## Funding Information

Grant Number	HUD Program	Funding Amount
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:** \$ 18,800.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$ 21,268.72.

## 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 an irrigation system will have no impact on any Airports. The site is located 67,698 feet from the nearest civil airport (Mercedita Airport in Ponce) and 221,288 feet from the nearest major 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 78,327 feet northwest of the nearest Coastal Barrier Resource System, PR-56. 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 installation of the container is within Zone X, Panel 72000C1105H, 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 an irrigation system for an agricultural site located in the Municipio of Jayuya. 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. In accordance with Puerto Rican Permit requirements any generator above 10HP requires an Emergency Generators General Permit of the Puerto Rico Natural and Environmental Resources Department prior to installation. See attached published list of Puerto Rico Nonattainment/Maintenance Status for each country by year for all criteria pollutants in Appendix 2.</p>

<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 74,892 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 an irrigation system 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. After conducting an aerial review history of the project site over the past 30 years, the area has been preserved as green space. It continues to be rural/residential, with no significant changes during this period that raise any contamination concerns.</p> <p>There are no sites of environmental concern identified within 3,000 feet near the proposed container location.</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. For the proposed project, which involves the installation of an irrigation system, radon analysis will not be required. This is because the proposed project qualifies for an exemption, as it does not involve</p>

		<p>any buildings with no enclosed areas having ground contact.</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>), Puerto Rican broad-winged hawk (<i>Buteo platypterus brunnescens</i>), Puerto Rican parrot (<i>Amazona vittata</i>), Puerto Rican sharp-shinned hawk (<i>Accipiter striatus venator</i>) and 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 cement slab and water pump and cisterns will be installed, and it has been maintained that way for agricultural purposes.</p> <p>The closest Critical Habitat is 43,515 feet from the proposed project location.</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 February 13, 2024, 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 "No Effect" determination on the Puerto Rican</p>

broad-winged hawk and Puerto Rican sharp-shinned hawk. Based on the nature of the project, scope of work, information available and existing habitat, the it was determined that the proposed project has NE on the Puerto Rican parrot due to the lack of suitable habitat.

An Informal Consultation was submitted to USFWS on 4/4/2024 and concurrence was received on 5/29/2024. PRDOH determined and USFWS concurred that the proposed project may affect but is not likely to adversely affect (NLAA) Puerto Rican harlequin butterfly since the project area has been used for agricultural purposes for the past 30 years.

The contractor must inform all personnel about the presence of the Puerto Rican harlequin butterfly and its host plant, "prickly bush," through pre-work meetings and educational materials. Before starting any project activity, the contractor must clearly mark the work area boundaries and survey the butterfly and its host plant. If the "prickly bush" is present, avoid cutting it; if the butterfly is observed, stop project activities and establish a 50-meter buffer zone until the butterfly moves away, then conduct a follow-up search for any butterfly life stages and report findings.

For the Puerto Rican Boa, based on the information and the answers inputted into the Dkey the determination for the Puerto Rican boa was "No Effect", but since ground disturbance will occur, the Service recommends that the proposed project may affect but is not likely to adversely affect (NLAA) this species. PRDOH confirms the acceptance to the reconsideration of the No Effect (NE) determination for the Puerto Rican Boa to

		<p>a May Affect, but is Not Likely to Adversely Affect (NLAA) determination, as well as the implementation of the pertinent conservation measures for the Puerto Rican Boa.</p> <p>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.</p> <p><a href="https://ipac.ecosphere.fws.gov/guideline/design/population/156/office/41430.pdf">https://ipac.ecosphere.fws.gov/guideline/design/population/156/office/41430.pdf</a></p> <p>This project is in compliance with the Endangered Species Act. See attached USWFS Informal Consultation 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 an irrigation system and does not include development or construction of a hazardous facility or activities 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 is in an area designated as Not prime farmland. The soil in this area has been classified as Pellejas clay loam, 40 to 60 percent slopes (PeF). This soil is deep, very steep, and somewhat excessively drained.</p>

		<p>The scope of work includes the purchase and installation of an irrigation system, and this is a 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 Jayuya; 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>Yes    No  <input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The site was visited on February 19, 2024, by SOI-qualified archaeologist. Based on the nature and scope of the undertaking,</p>

<p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>		<p>the APE has been defined as the area potentially affected by ground-disturbing activities related to the installation of the concrete slab for the water pump, cisterns and generator. Documentation with photographs and maps was subsequently submitted to SHPO (attached Appendix 1). In a response from PR SHPO dated March 20, 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 an irrigation system 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 is an unnamed creek approximately 120 horizontal feet from where the cement slab will be built. No wetland area will be impacted under this action.</p> <p>The water needed will be provided by an existing small stream on the property. A</p>

		<p>franchise from the Puerto Rico Department of Natural and Environmental Resources (DNER) is required to be obtained to extract water from a stream. Standard BMPs should be applied to mitigate impact on wetlands, like installing erosion controls or diverting runoff (in any) around the areas of ground disturbance.</p> <p>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 290,978 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. See Appendix 3 for EJ Screen Report.</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
<b>LAND DEVELOPMENT</b>		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The project consists of the purchase and installation of an irrigation system and continued agricultural use of property which is compatible with a zoning code of A-4 (Rural General) and existing land use of SREP-A (Rustic Specially Protected Agricultural Land). There is no urban design associated with this rural, agricultural site.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<p>This project consists of the purchase and installation of an irrigation system 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. The soil in this area has been classified as Pellejas clay loam, 40 to 60 percent slopes (PeF). This soil is deep, very steep, and somewhat excessively drained.</p> <p>The landslide data indicates moderate to very high landslide susceptibility; however, no erosion is expected to occur from this project. The area designated for the cement slab is flat, and the PVC pipes for the irrigation system will follow the existing paths on the farm. 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 or applicant should investigate if a DNER authorization is required for any land</p>

		alteration associated with the proposed project activities. See Landslide Susceptibility Map, Figure 14.
Hazards and Nuisances including Site Safety and Noise	2	The project consists of the purchase and installation of an irrigation system. 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.
Energy Consumption	2	The project consists of the purchase and installation of an irrigation system on an existing agricultural farm. The power to provide the energy to operate the water pump will come from the new diesel powered generator. The proposed project will have no impact on the energy consumption.
Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>SOCIOECONOMIC</b>		
Employment and Income Patterns	2	The project consists of the purchase and installation of an irrigation system and will result in short-term benefit to employment when contractors are hired for the construction of the cement slab and installation of the irrigation system. 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.
Demographic Character Changes, Displacement	2	The project consists of the purchase and installation of an irrigation system and will not alter the demographic characteristics of Jayuya, PR. The applicant is already located at this location and the project will provide opportunities for the continuous agricultural growth of the business.

Environmental Justice	2	<p>The project consists of the purchase and installation of an irrigation system. In the project area within a one-mile radius:</p> <ul style="list-style-type: none"> <li>• The people of color are 95% compared to PR average of 97%.</li> <li>• 85 % of the people are low income compared to PR average of 70%.</li> <li>• 25% of the people are unemployed compared to PR average of 14%.</li> </ul> <p>The proposed activities of the installation of the irrigation system will have a positive impact on creating jobs for local people. Therefore, the proposed activity complies with this section. See EJ Screen 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 an irrigation system 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 an irrigation system 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 an irrigation system 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 an irrigation system 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 an irrigation system 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 an irrigation system. The water needed to fill the cisterns will be provided by an existing stream on the property. A franchise from the Puerto Rico Department of Natural and Environmental Resources (DNER) is required to be obtained to extract water from a stream. Best Management Practices (BMPs) should be implemented to mitigate any potential impact on the stream. The proposed project will have no impact on the water supply.
Public Safety - Police, Fire and Emergency Medical	2	The project consists of the purchase and installation of an irrigation system 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 an irrigation system 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 an irrigation system 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 an irrigation system. The proposed project will be situated on previous agriculture property. This property is located in a rural area with a slope towards a creek. Therefore, the significant elevation acts as a protective measure, allowing the project to exist in relative proximity to the wetland while minimizing any adverse

		consequences on it. Additionally, Best Management Practices (BMPs) should be implemented to mitigate any potential impact on the stream that will serve as a source of water.
Vegetation, Wildlife	2	The project consists of the purchase and installation of an irrigation system and will occur on land previously used for agricultural purposes and will continue in that capacity. There may be wildlife attracted to the irrigation system but no negative impact on wildlife. For the proposed project vegetation removal will not be necessary.
Climate Change	2	<p>The project consists of the purchase and installation of an irrigation system. 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 by improving the distribution of water to crops.</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. However, the applicant has water from PRASA on their property in case of need.</p>

**Additional Studies Performed:** Not applicable.

**Field Inspection** (Date and completed by): February 29, 2024, Jaqueline Lopez, SOI-Qualified Archaeologist. Site Inspection performed by Patricia Carmenatty on February 13, 2024.

**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?Dockkey=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 an irrigation system for an agricultural site. The activities involved, such as irrigation system installation, are discrete and confined to the immediate project area. They do not extend beyond the boundaries of the site, minimizing the potential for cumulative effects on surrounding environments. The project's location on an existing agricultural site suggests that the area may have already undergone land use changes and modifications. Also, the withdrawal of water from a stream for irrigation purposes has been considered. The volume of water needed will be within the stream's sustainable yield, and the withdrawal will be regulated to avoid significant impacts on stream flow, aquatic habitats, or downstream users. Appropriate measures will be taken to ensure that water withdrawal does not negatively affect the stream's ecosystem, maintaining environmental balance and minimizing potential impacts.

**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 cement slab for the water pump and cisterns. 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.

**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 an irrigation system 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 environment 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.
<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>	In accordance with Puerto Rican Permit requirements any generator above 10HP requires an Emergency Generators General Permit of the Puerto Rico Natural and Environmental Resources Department prior to installation.
<p><b>Endangered Species</b></p> <p>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p>The USFWS has developed the following conservation measures for the Boa:</p> <p>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</p>

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 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

	<p>within the project site even if no eggs, caterpillars, or chrysalids are present.</p> <ul style="list-style-type: none"> <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>
<p><b>Wetlands Protection</b> Executive Order 11990, particularly sections 2 and 5</p>	<p>Standard BMPs should be applied to mitigate impact on wetlands, like installing erosion controls or diverting runoff (in any) around the areas of ground disturbance.</p>
<p>Water Supply</p>	<p>A franchise from the Puerto Rico Department of Natural and Environmental Resources (DNER) is required to be obtained to extract water from a stream. Best Management Practices (BMPs) should be implemented to mitigate any potential impact on the stream.</p>
<p>Hazards and Nuisances including Site Safety and Noise</p>	<p>While construction is underway, there will be a temporary rise in noise levels. Contractors will be required to comply with the</p>

	applicable local noise ordinances. Noise impacts will be mitigated by restricting construction activities to daylight hours.
<b>Permits or Agency Approvals Required Section</b>	
Permit or Approval	Permit Conditions
Clean Air Act	An Emergency Generators General Permit of the Puerto Rico Natural and Environmental Resources Department prior to installation of any generator above 10HP.
Ground disturbance	Projects whose earthworks are more than 40 m <sup>3</sup> must submit an Incidental Permit. The permit must be submitted via the Single Business Portal to the OGPe to be evaluated and physicalized by the Water Quality Division of the PRDNER. Any necessary permits should be obtained by the applicant and/or contractor prior to construction activities.
Clearing activities	Activities involving the excavation or movement of any component of the terrestrial cortex material that exceeds five hundred (500) cubic meters and up to a maximum of five thousand (5,000) cubic meters require the submittal and approval of a Simple Terrestrial Cortex Removal Permit. Applications are submitted via the Single Business Portal of the OGPe to be evaluated and physicalized by terrestrial Cortex Extraction Permit Division of the PRDNER.
Water Supply – Water resources	The water needed will be provided by an existing stream on the property. A franchise from the Puerto Rico Department of Natural and Environmental Resources (DNER) is required to be obtained to extract water from a stream.
Utility Connections- Water Supply- PRASA	The project does not involve new connections to the local utility services provided by PRASA. The applicant will use water from a stream on his property. However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.
Utility Connections- PREPA/LUMA	The project does not involve new utility connections provided by PREPA/LUMA.

	However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.
--	--

**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: 1/23/2025 Type text here

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

Certifying Officer Signature: \_\_\_\_\_  \_\_\_\_\_ Date: 1/30/2025

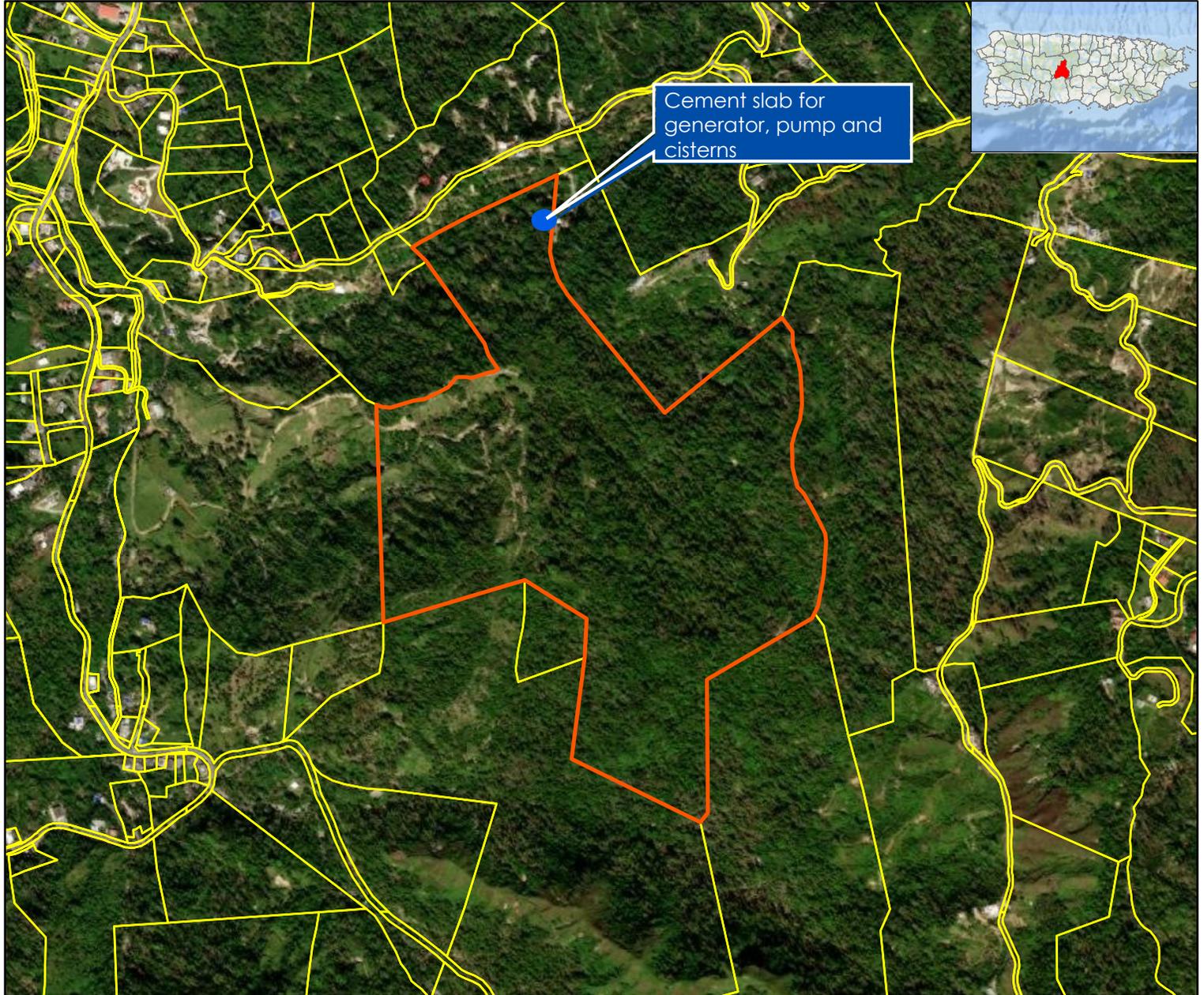
Name/Title: Priscilla M. Toro Rivera/ Environmental Specialist

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

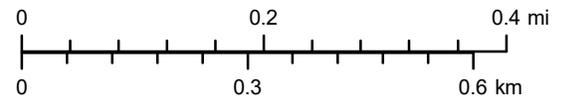
# Figure 1: Location Aerial Map

Puerto Rico Department of Housing ReGrow



### Legend:

-  PR-RGRW-03947
-  Parcel-03947
-  CRIM\_Parcels\_2018



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Esri, Garmin, GEBCO, NOAA NGDC, and other contributors and Google Earth



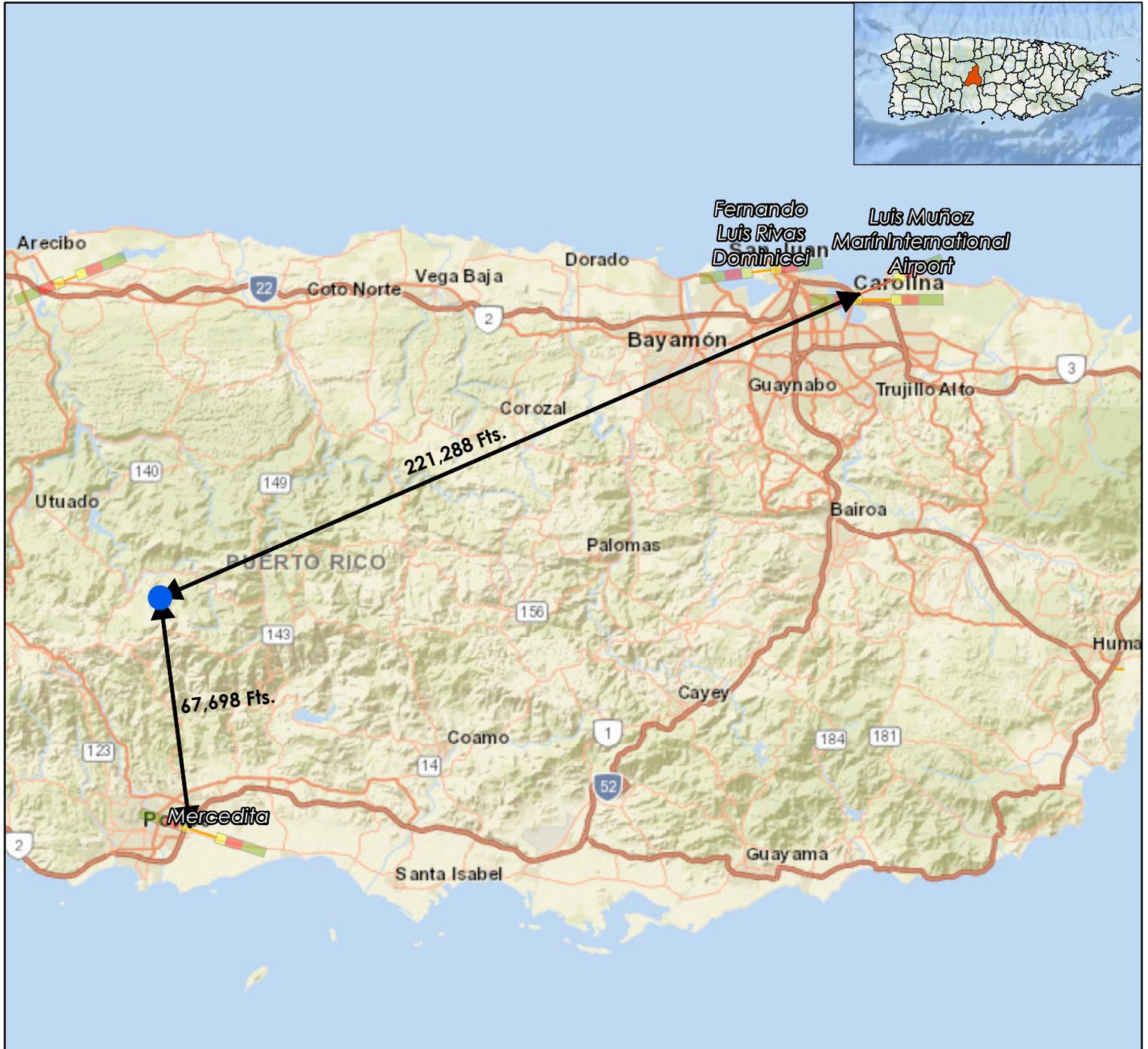
1:10,000

### Source

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

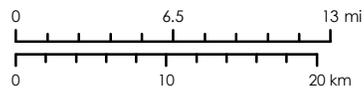
Finca Santa Carmen Inc.  
 Carr. 144 Ramal 528 Km 1.9 Interior,  
 Sector Los Ortizes,  
 Jayuya, PR 00664  
 Catastro: 242-000-007-13-001  
 Lat:18.196411, Long: -66.599963

**Figure 2: Airports**  
 Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- SJU Military Runway
- Civil Runway
- Accident Potential Zone**
- APZ 1
- APZ 2
- Clear Zone



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**Source**

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

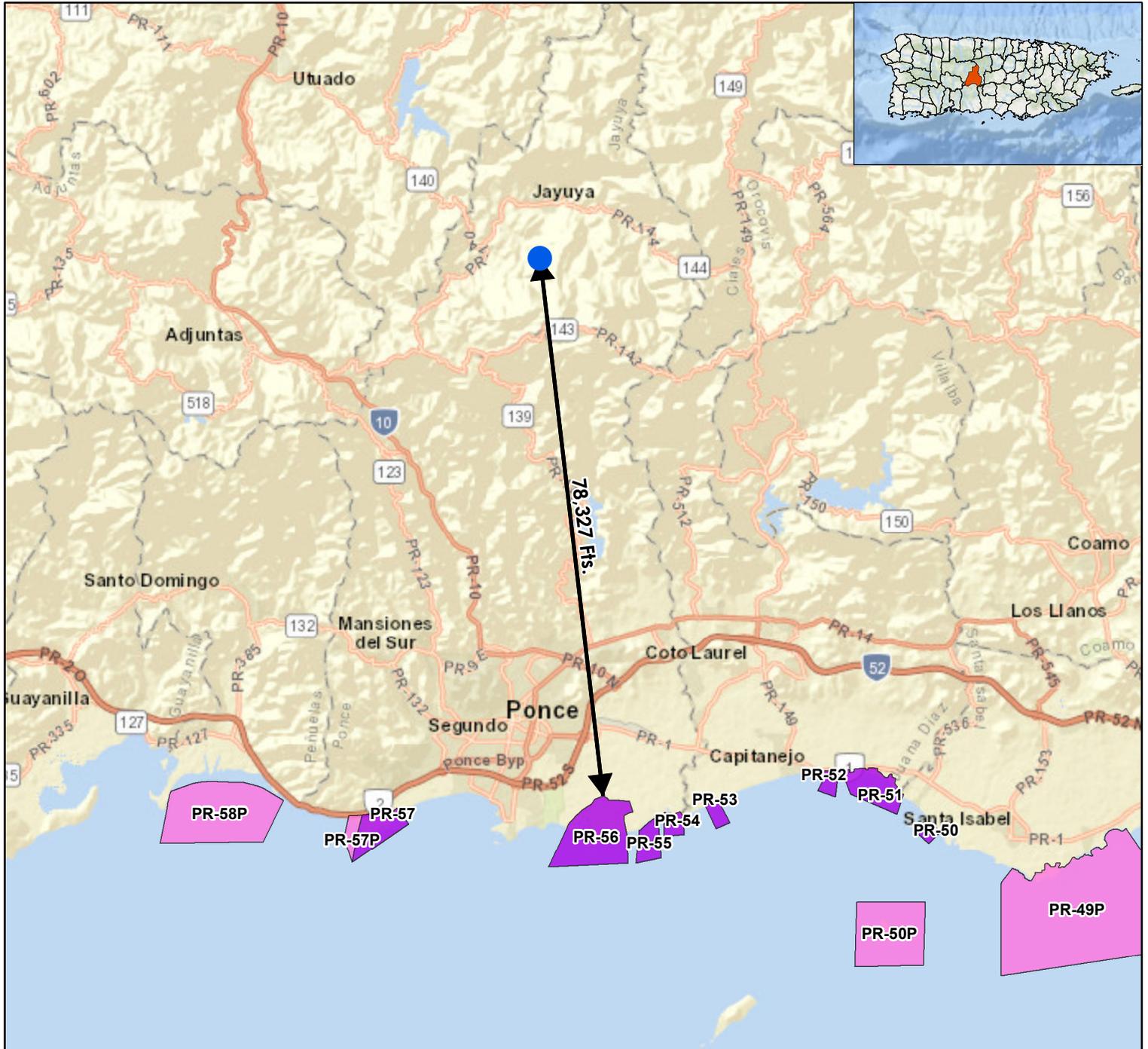


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# Figure 3: Coastal Barrier Resources System

Puerto Rico Department of Housing ReGrow



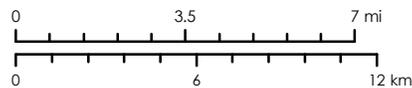
**Legend:**

● PR-RGRW-03947

**Coastal Barrier Resources System (CBRS)**

█ Otherwise Protected Area

█ System Unit



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**Source**

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

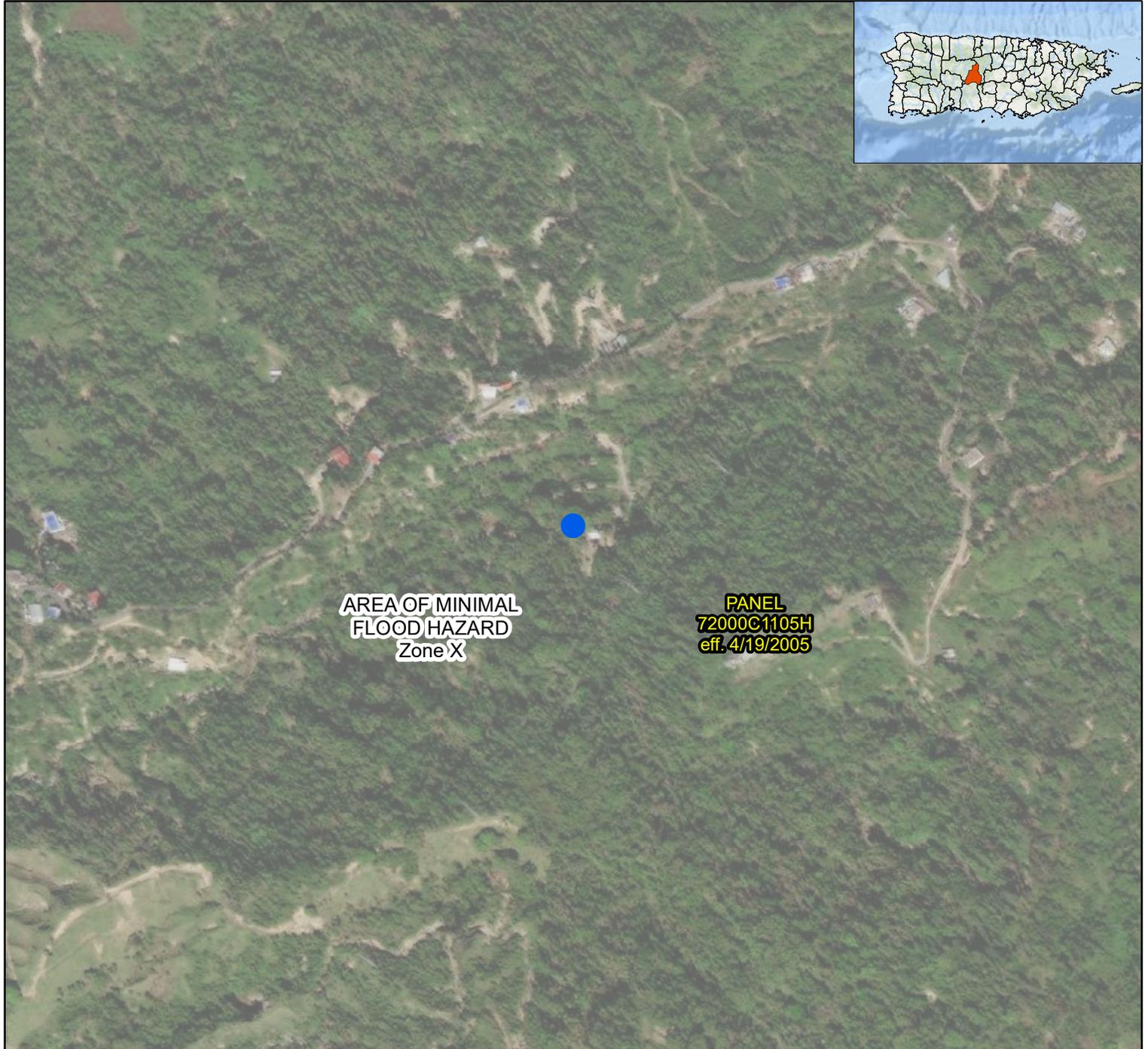


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# Figure 4: Flood Insurance Rate Map

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-03947
-  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



**Source**

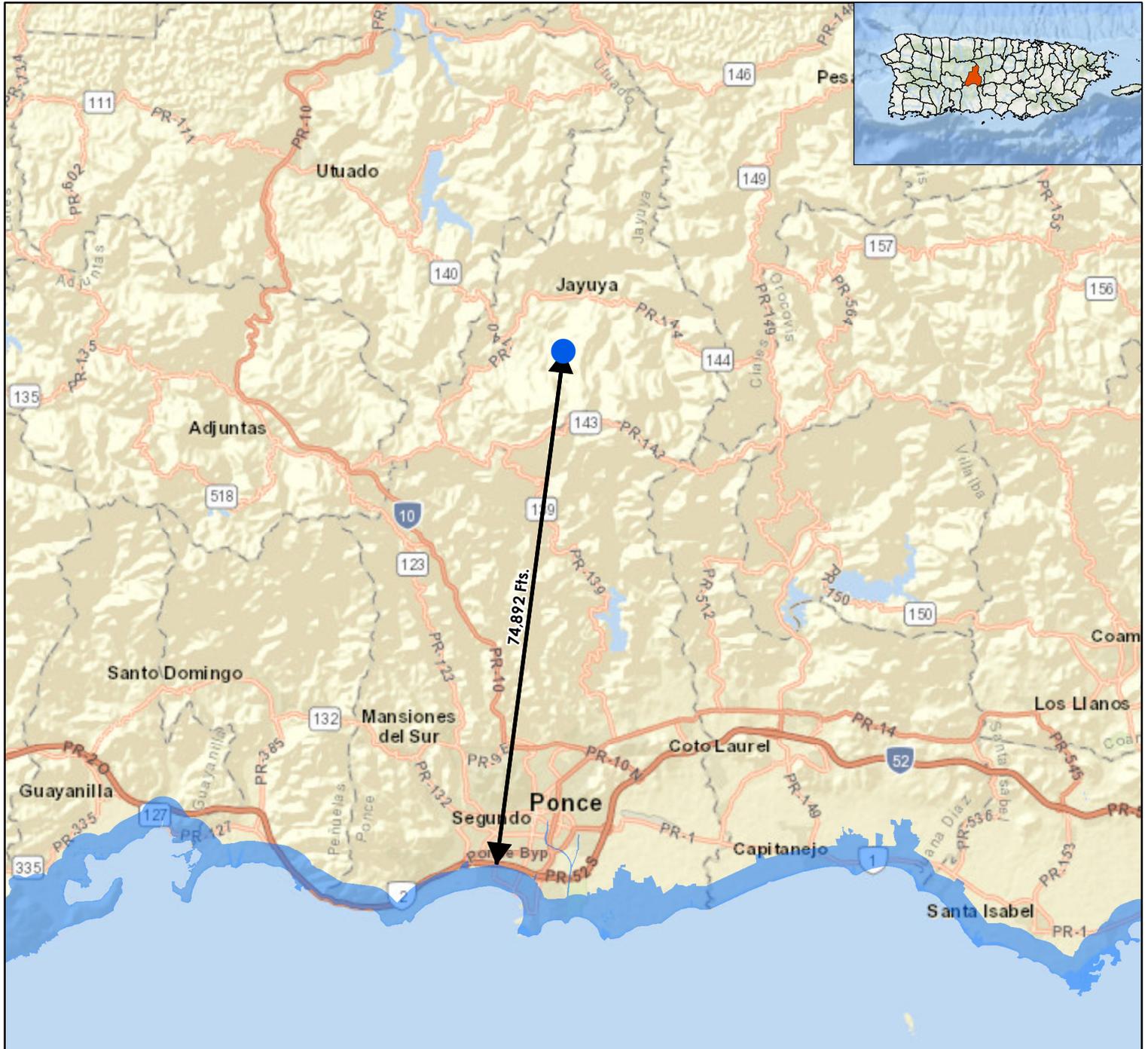
Federal Emergency Management Agency (FEMA)  
<https://msc.fema.gov/portal/home>

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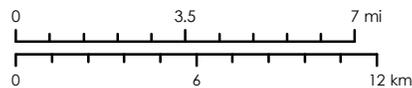
# Figure 5: Coastal Zone Management

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Coastal Zone Management Act Boundary



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**Source**

NOAA Office for Coastal Management (NOAA/OCM)  
<https://www.fisheries.noaa.gov/inport/item/53132>

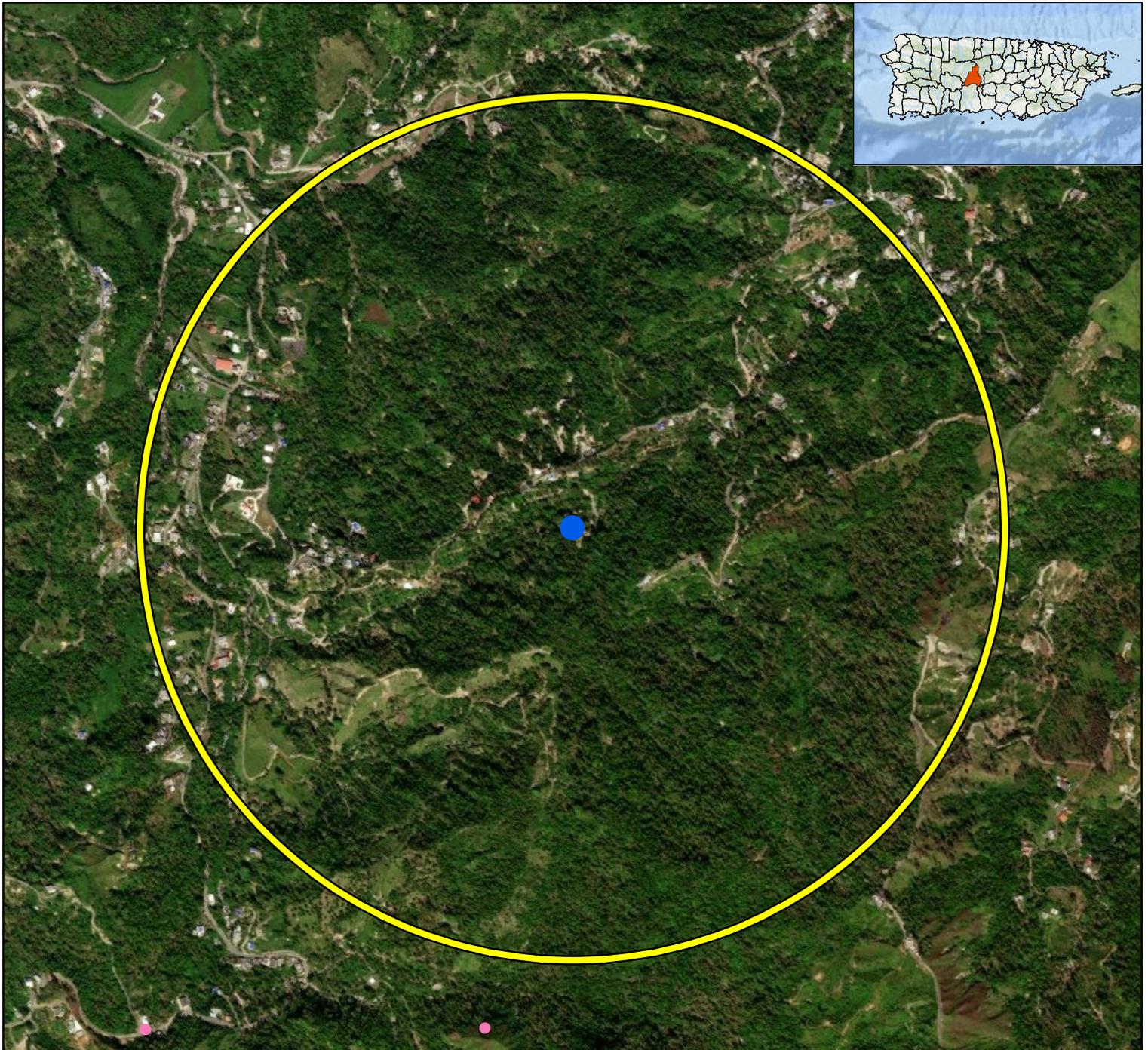


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# Figure 6: Toxic and Hazardous Facilities

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-03947
-  3,000 Ft. Buffer
-  AIR\_MAJOR
-  NCDB
-  RCRA
-  RCRA\_LQG



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**Source**

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



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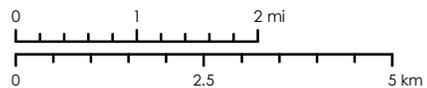
# Figure 7:Threatened & Endangered Species

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Critical Habitat



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**Source**

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

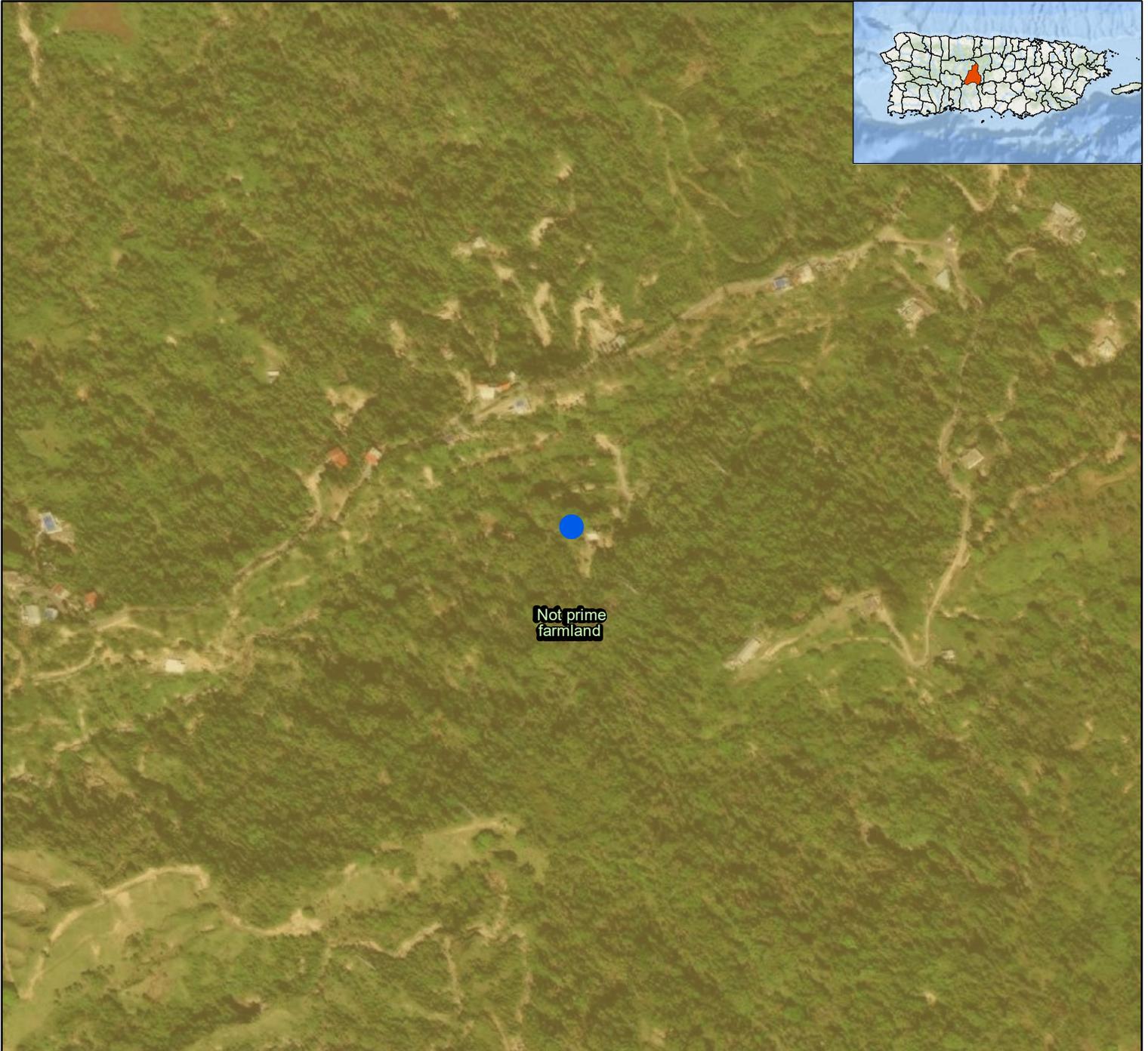


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# Figure 8: Farmland Protection

Puerto Rico Department of Housing ReGrow



## Legend:

 PR-RGRW-03947

## Farm Class

 Not prime farmland



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## Source

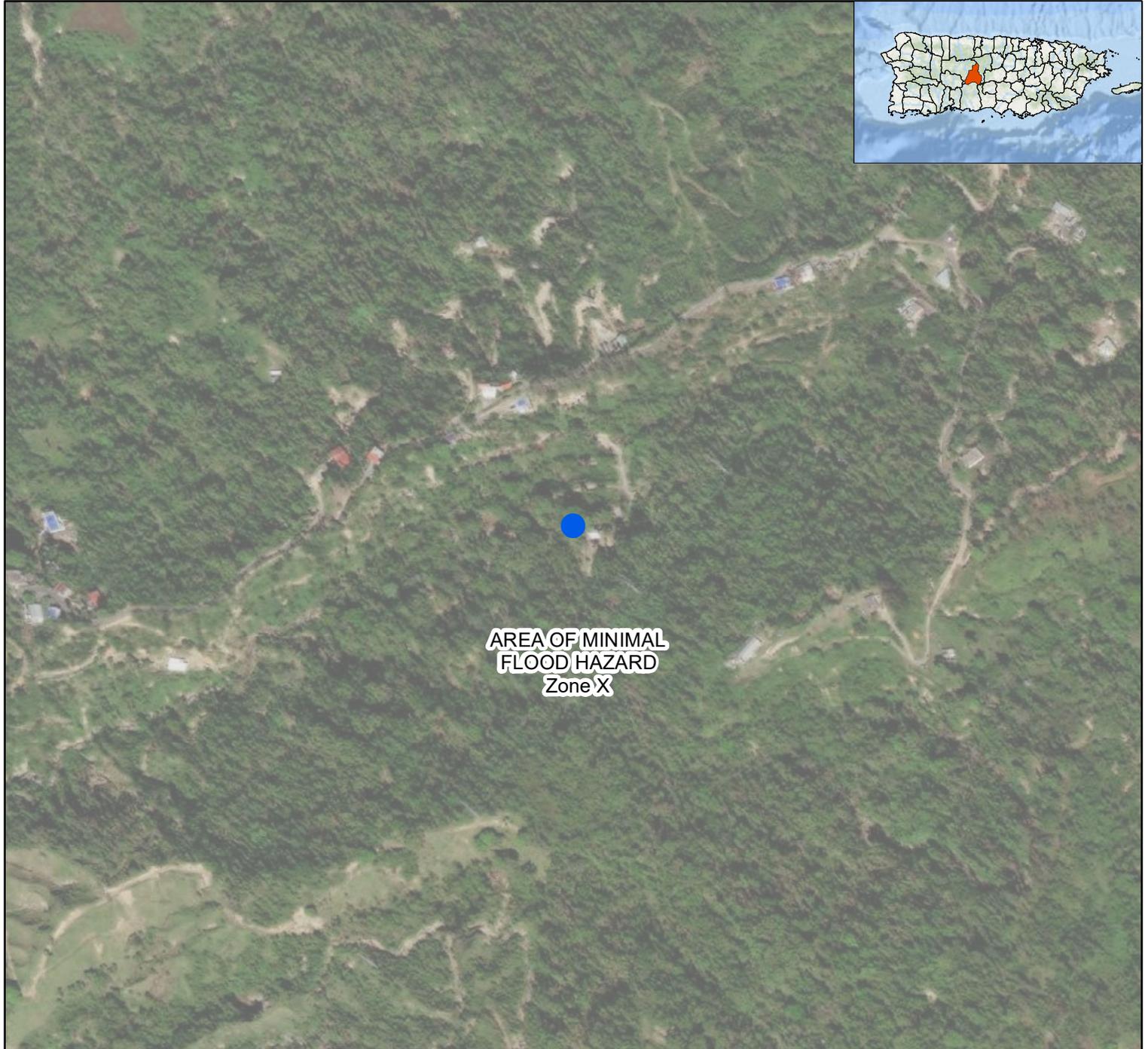
National Resources Conservation Service (NRCS)  
Gridded Soil Survey Geographic Database (gSSURGO)  
<https://data.nal.usda.gov/dataset/soil-survey-geographic-database-ssurgo>

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# Figure 9: Advisory Base Flood Elevation

Puerto Rico Department of Housing ReGrow



**Legend:**

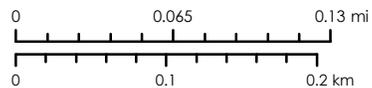
 PR-RGRW-03947

**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/>

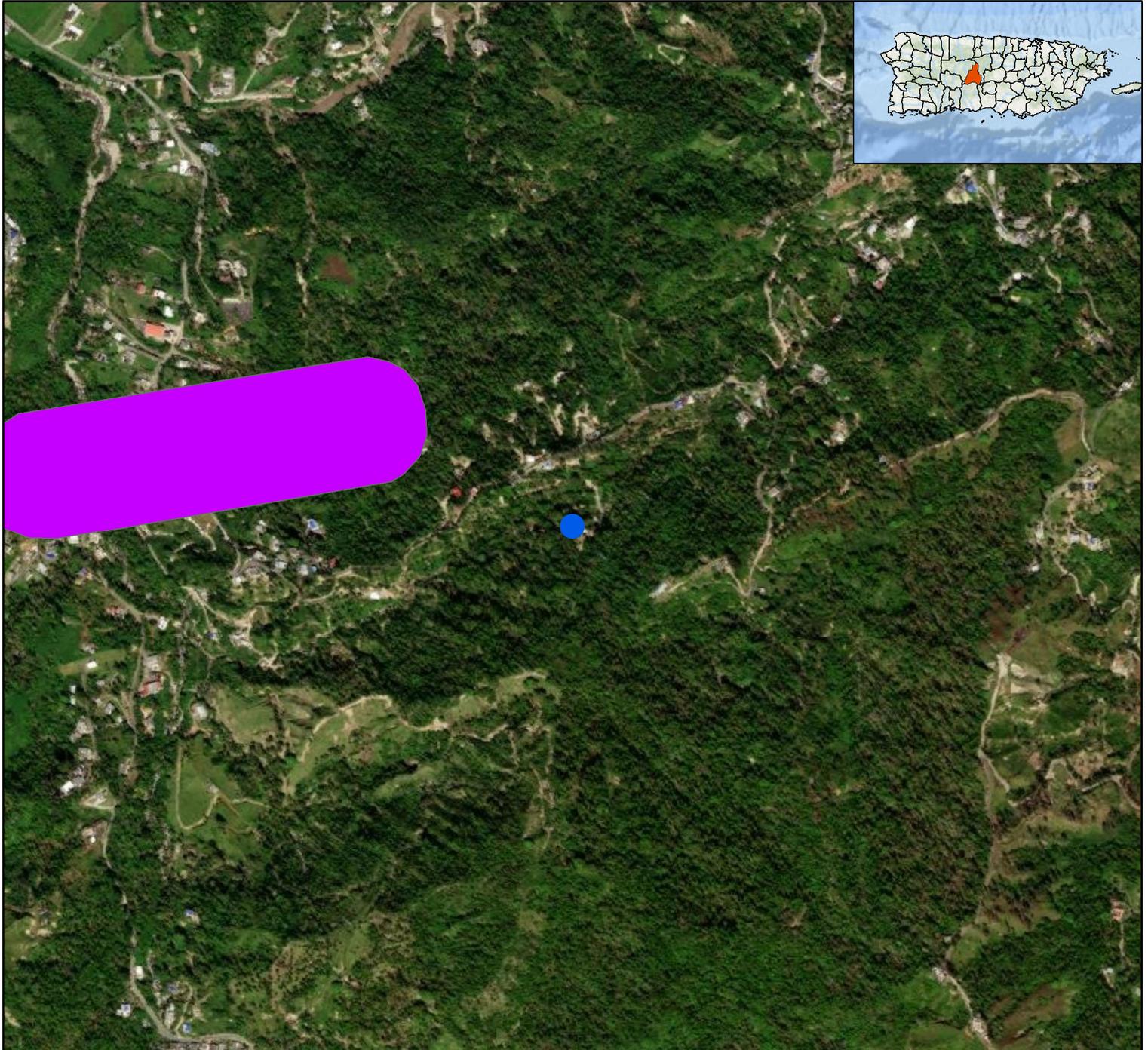


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 Sector Los Ortizes,  
 Jayuya, PR 00664  
 Catastro: 242-000-007-13-001  
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# Figure 10: Historic Preservation Map

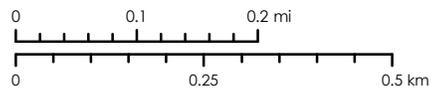
Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Archaeological Resource Zones
- Traditional Urban Center
- Historic Communities

- P 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



1:10,000

**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>

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Catastro: 242-000-007-13-001  
Lat:18.196411, Long: -66.599963

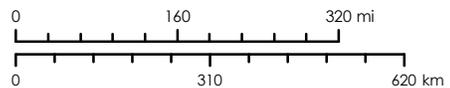
# Figure 11: EPA Sole Source Aquifers

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-03947
-  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



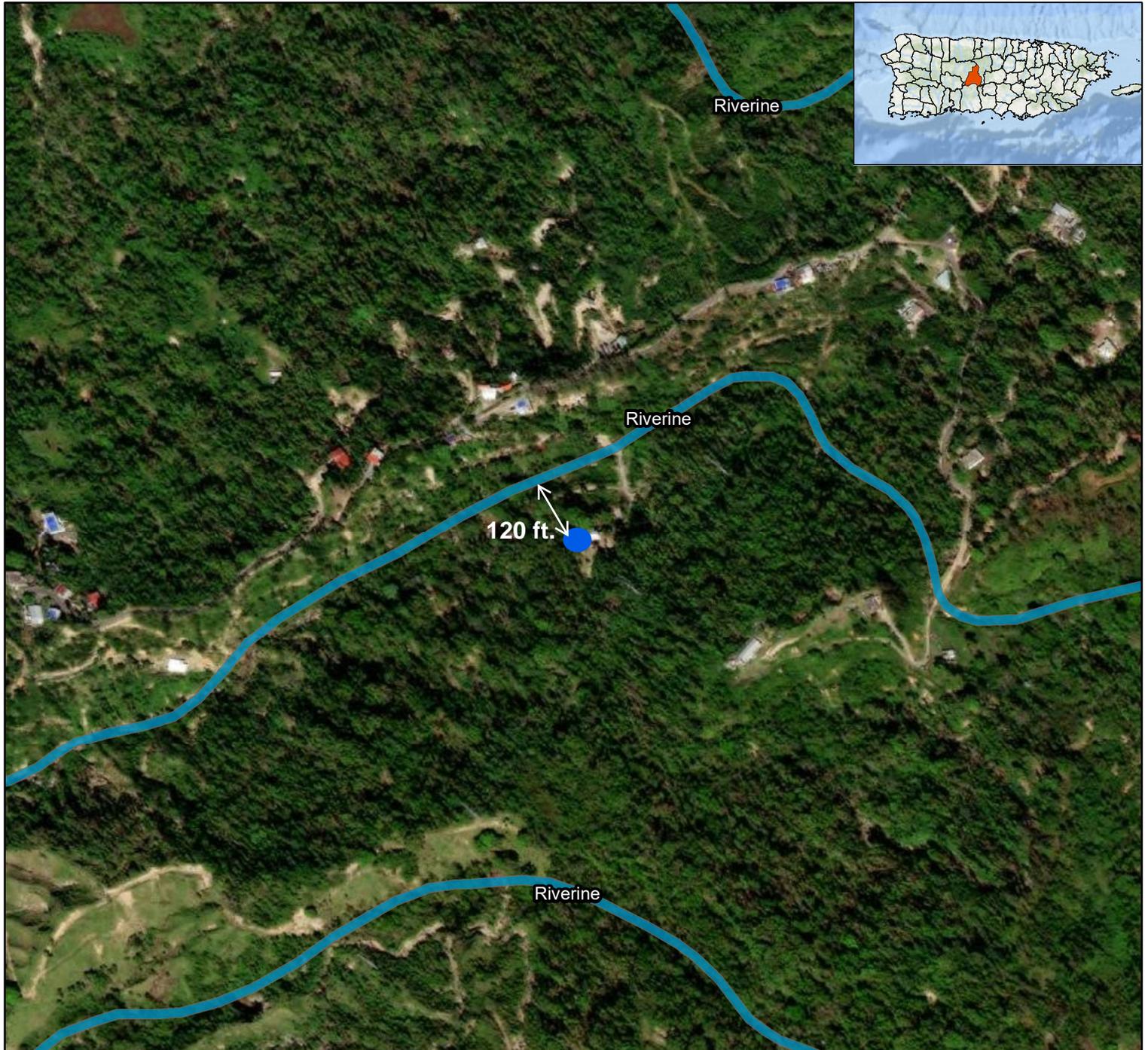
**Source**

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

1:12,000,000

# Figure 12: Wetlands Map

Puerto Rico Department of Housing ReGrow



## Legend:

 PR-RGRW-03947

## 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>

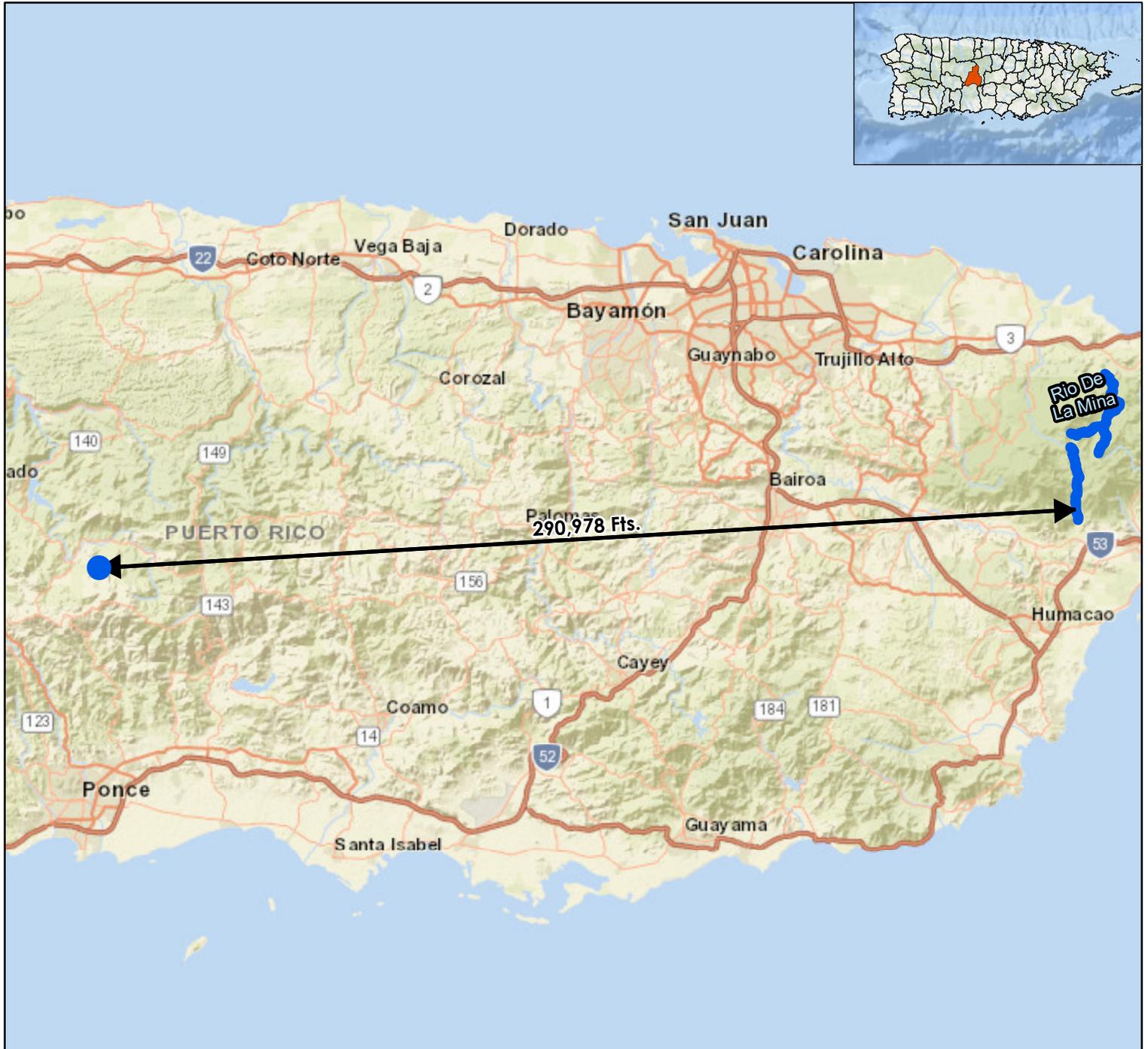


1:5,000

Finca Santa Carmen Inc.  
 Carr. 144 Ramal 528 Km 1.9 Interior,  
 Sector Los Ortizes,  
 Jayuya, PR 00664  
 Catastro: 242-000-007-13-001  
 Lat:18.196411, Long: -66.599963

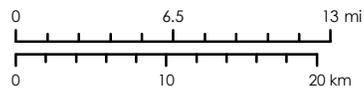
# Figure 13: Wild and Scenic Rivers

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- ▬ Wild and Scenic Rivers



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © 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>

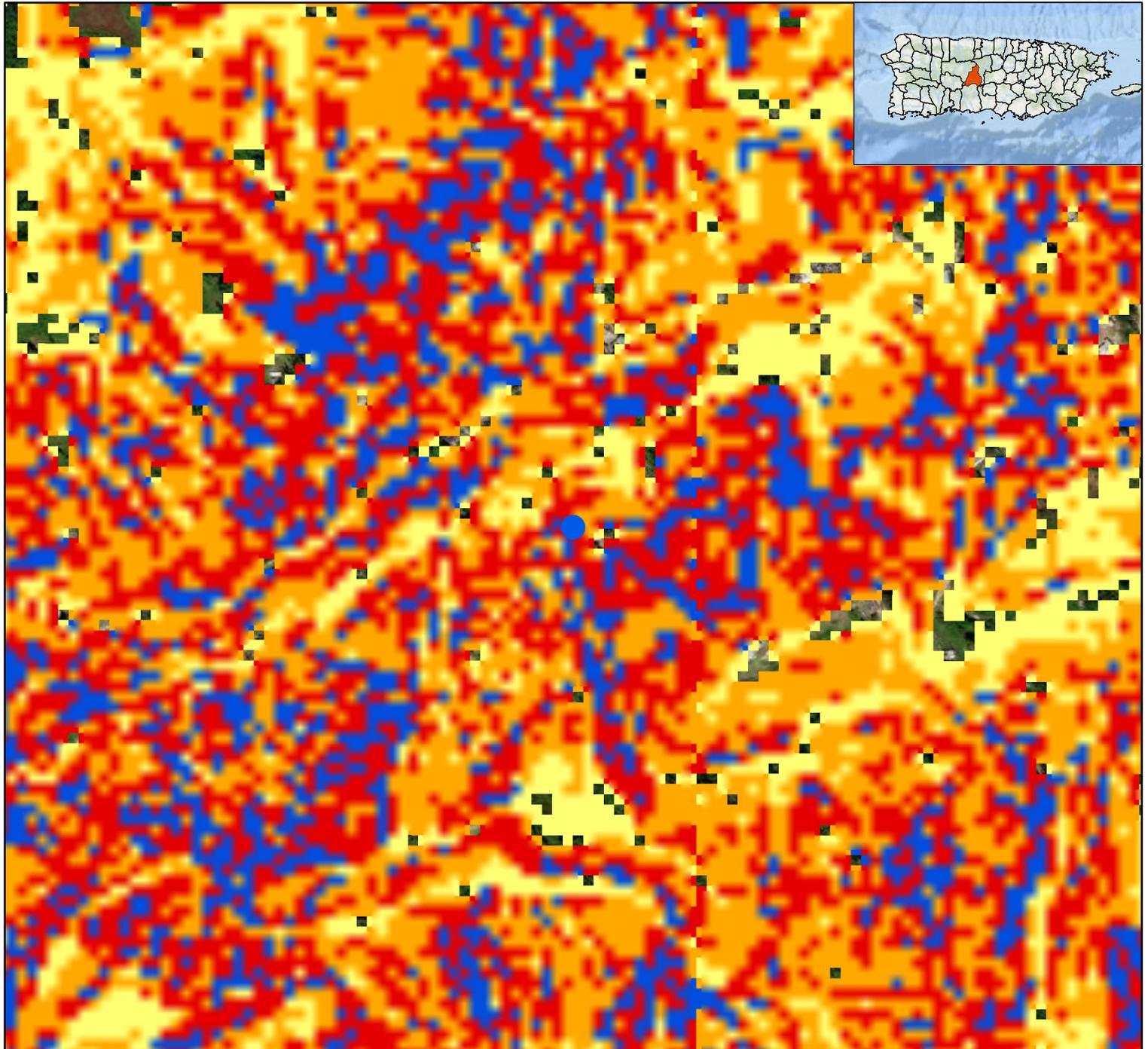


1:500,000

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat:18.196411, Long: -66.599963

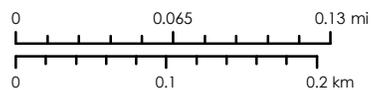
# Figure 14: Landslide Susceptibility

Puerto Rico Department of Housing ReGrow



**Legend:**

-  PR-RGRW-03947
-  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

Wednesday, March 20, 2024

### Lauren B Poche

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

SHPO-CF-03-17-24-05 PR-RGRW-03947 (Jayuya), Finca Santa Carmen Inc

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 18, 2024

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

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

**Section 106 NHPA Effect Determination Submittal: PR-RGRW -03947 – Finca Santa Carmen Inc. - Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes, Jayuya, 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) and the Home Repair, Reconstruction, or Relocation (R3) Program. On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds were approved by the United States Department of Housing and Urban Development (HUD) under the Federal Register Volume 83, No. 28, 83 FR 5844, to assist the Commonwealth of Puerto Rico in meeting unmet needs in the wake of Hurricanes Irma and Maria. On August 14, 2018, an additional \$8.22 billion recovery allocation was allocated to Puerto Rico under the Federal Register Volume 83, No. 157, 83 FR 40314. With these funding allocations, the Puerto Rico Department of Housing (Housing) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents.

On behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, we are submitting documentation for activities proposed by: Finca Santa Carmen Inc. at Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes in the municipality of Jayuya. The undertaking for this project includes the installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed

above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property.

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

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

Kindest regards,

A handwritten signature in cursive script that reads 'Lauren Bair Poche'.

**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: Finca Santa Carmen Inc.</b>			
<b>Case ID: PR-RGRW-03947</b>		<b>City: Jayuya</b>	
<b>Project Location:</b> Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes, Jayuya, PR 00664			
<b>Project Coordinates:</b> 18.196090 -66.600146			
<b>TPID (Número de Catastro):</b> 242-000-007-13-001			
<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> 102.86	
<b>SOI-Qualified Archaeologist:</b> Jaqueline López Meléndez			
<b>Date Reviewed:</b> February 19, 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-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property. The project area is located at PR-144 Ramal 528 km. 1.9, interior, Sector Los Ortizes within the Municipality of Jayuya. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 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 construction of the cement slab for the irrigation system generator 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>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant: Finca Santa Carmen Inc.</b>	
<b>Case ID: PR-RGRW-03947</b>	<b>City: Jayuya</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 are one reported archaeological site within a half-mile (0.50 miles) radius of the project location, the Pre-Columbian site Batey Zamas I, (SHPO: JY0100003), located 0.26 miles northwest. JY0100003 consists of a batey or plaza with petroglyphs, pictographs, lithics and ceramics in the Capá, Ostiones and Santa Elena styles. The proposed project is located in the mountainous area of Jayuya at an elevation of 1,936 feet above sea level. Per the USGS/NRCS Web Soil Survey, the project area is within mapped soil series: Pellejas clay loam. The project area APE is in PeF. The closest freshwater sources are Zamas River located 0.03 miles northwest and an unnamed creek, located 0.20 miles south of the project area. The south coast is approximately 14.79 miles (23.80 km) from the project area.

There are no cultural resource studies within a half-mile radius of the property.

The soil in this area has been classified as Pellejas clay loam, 40 to 60 percent slopes (PeF). This soil is deep, very steep, and somewhat excessively drained. It is on the side slopes and ridgetops of uplands. The permeability is moderate in the upper layers and rapid in the lower layers. The available water capacity is moderate. Runoff is very rapid. Natural fertility is low to medium.

Visual inspection of the APE 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 APE. The project area is not within or adjacent to the boundaries of a National Register of Historic Places 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 are within or adjacent to the property or the parcel in which the Area of Potential Effect of case PR-RGRW-03947 is located. The closest freshwater body is approximately 0.03 miles northwest 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>		 <small>GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING</small>
<b>Applicant: Finca Santa Carmen Inc.</b>		
<b>Case ID: PR-RGRW-03947</b>		<b>City: Jayuya</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: Finca Santa Carmen Inc.</b>		
<b>Case ID: PR-RGRW-03947</b>	<b>City: Jayuya</b>	

**Case ID:** PR-RGRW-03947

**Project Coordinates:** 18.196090 -66.600146

**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)
None	-	-	-	-	-

**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
None	-	-	-	-	-

Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location – Area of Potential Effect Map (Aerial)

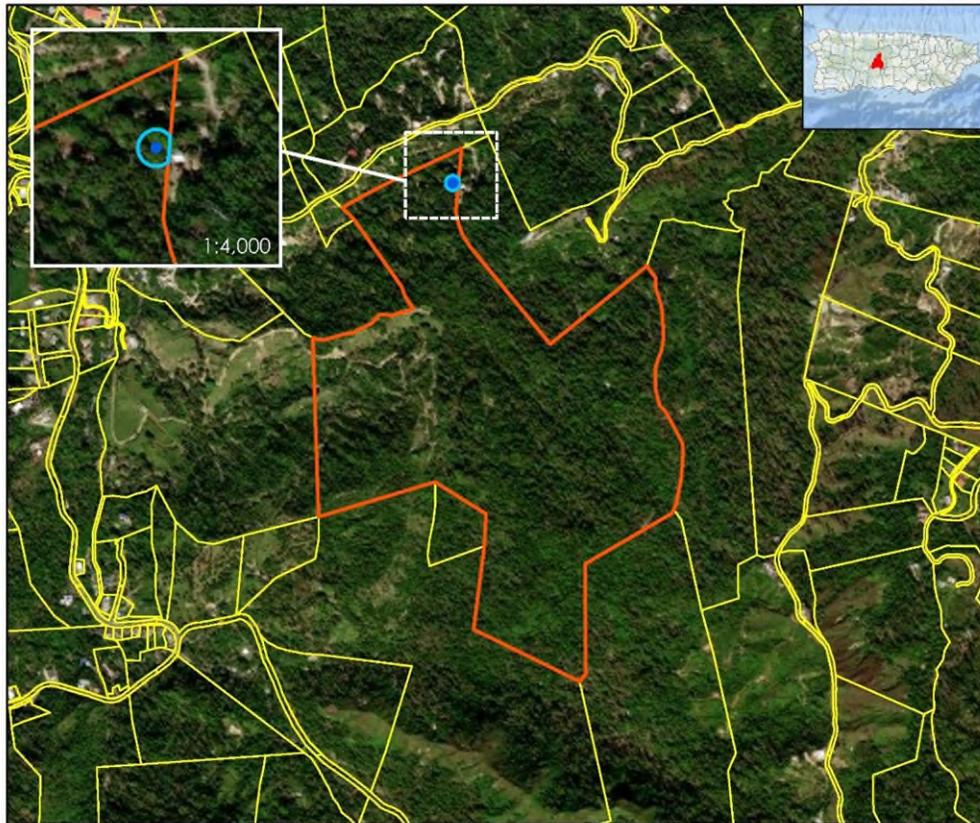
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Carr. 100, Edif. 1 Suite 2-3, Calle Pardo 55A, Arroyo, San Juan, PR, 00920 Tel: (787) 763-0290

Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizos,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

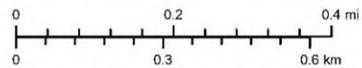
## Area of Potential Effect

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Area of Potential Effect
- Parcel-03947
- CRIM\_Parcels\_2018



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



1:10,000

**Source**

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

Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location - Aerial Map

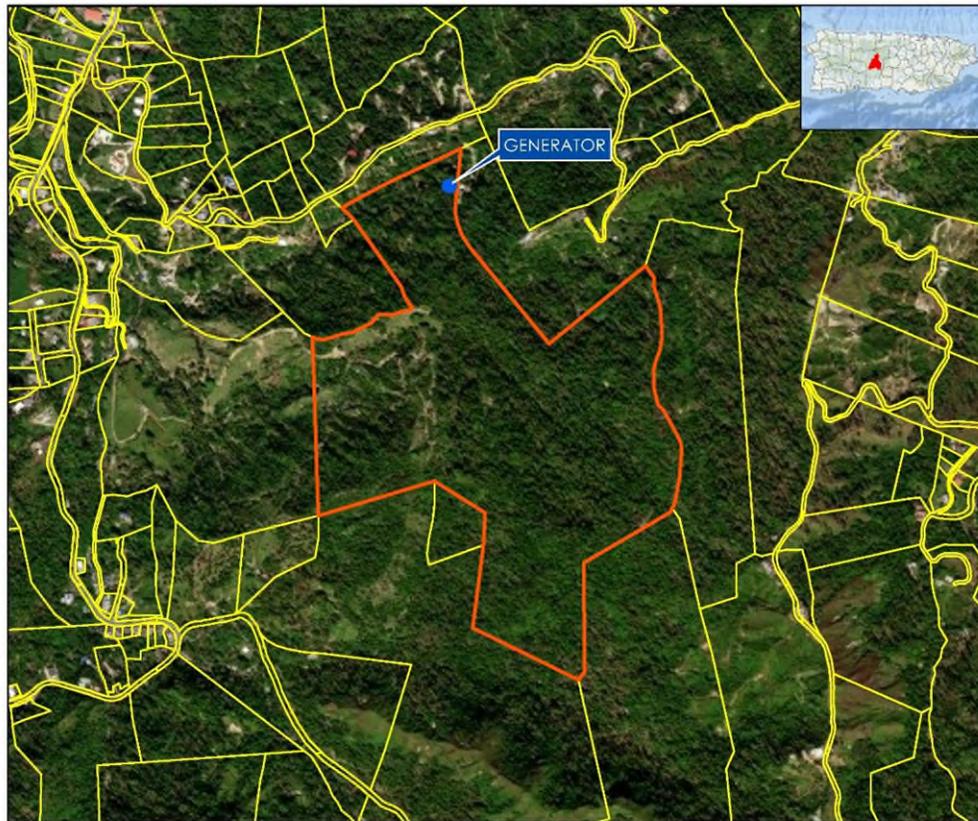
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Carretera Ybarrá, Suite 203, Calle Ponce 554, Aguadilla, P.R. 00603 Tel: (787) 753-0290

Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

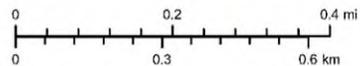
### Location: Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Parcel-03947
- CRIM\_Parcels\_2018



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



1:10,000

**Source**

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



Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location - USGS Topographic Map

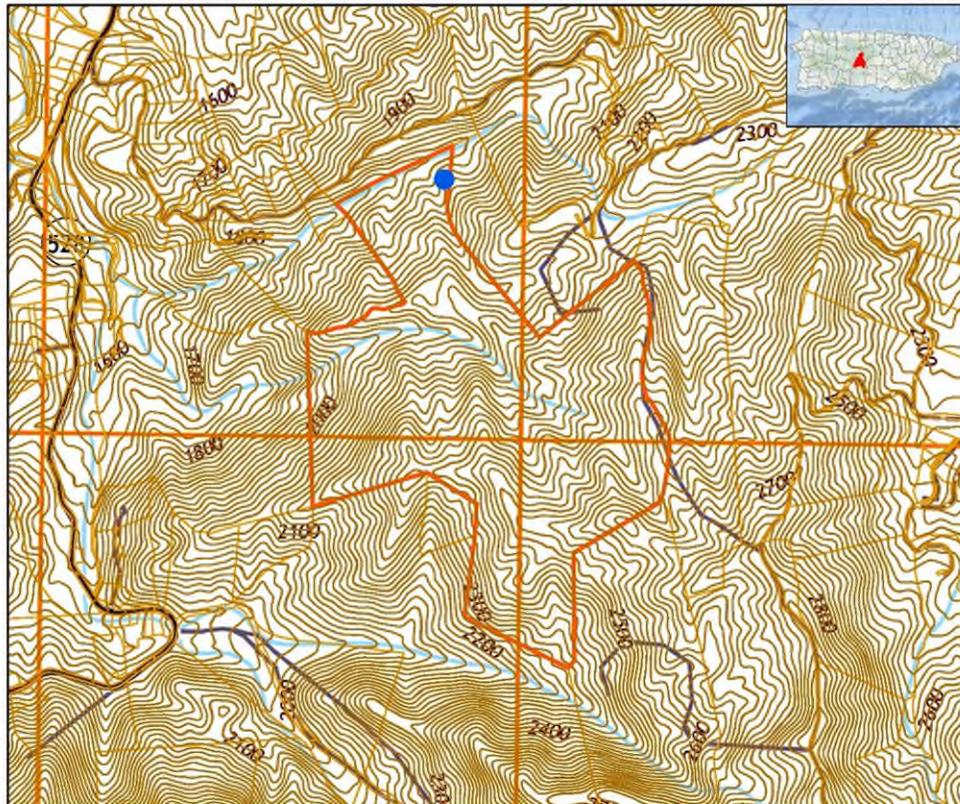


Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

### Location: USGS Topographic Map

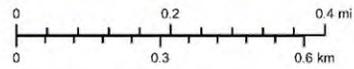
Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Contour Interval 20 Feet
- Parcel-03947
- CRIM\_Parcels\_2018

**Quadrangle: Jayuya**



Service Layer Credits: Esri, Garmin, GEBCO, NOAA, NGDC, and other contributors and Google Earth



1:10,000

**Source**

United States Geological Survey (USGS)  
National Geo.org: Map Database  
[https://ngmdb.usgs.gov/ngmdb/ngmdb\\_home.html](https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html)  
Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.crim.net/prpc/>

Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location – Soils Map

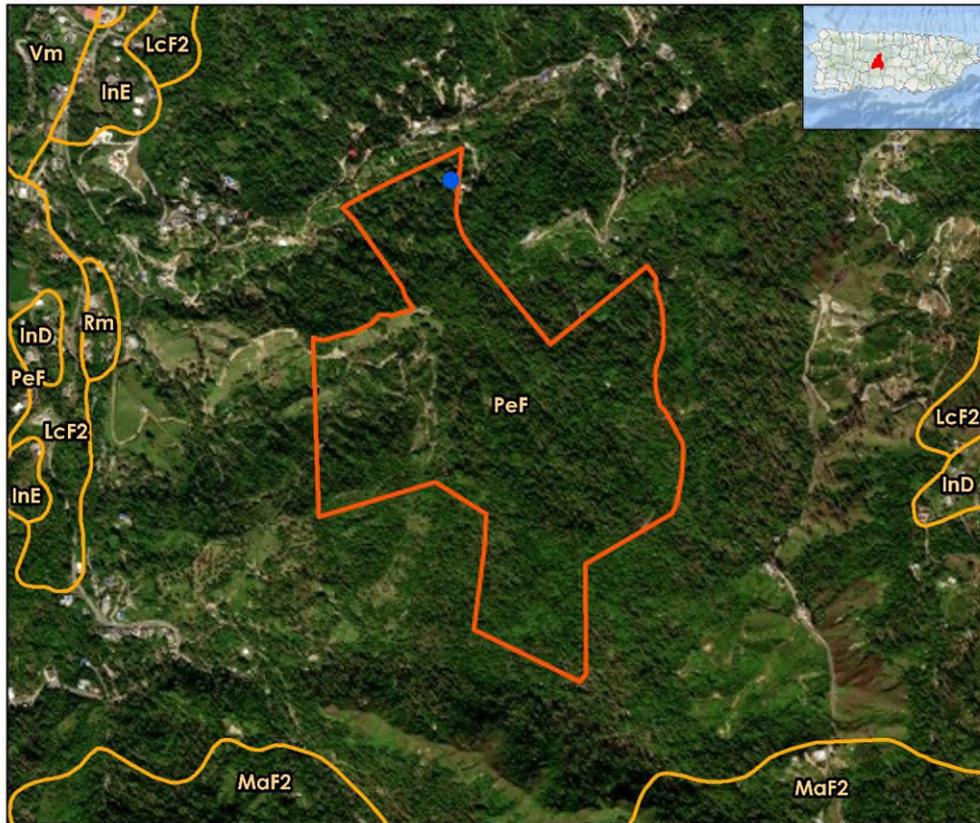
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Ciudad, Ibañeta 1 Suite J-3, Calle Ponce 554, Arroyito, San Juan, P.R. 00920 Tel: (787) 763-0290

Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090. Long: -66.600146

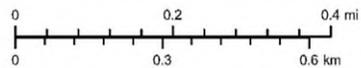
## Soils Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Parcel-03947
- Soil Map Unit Symbol



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



1:10,000

**Source**

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

Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location with Previous Investigations - Aerial Map

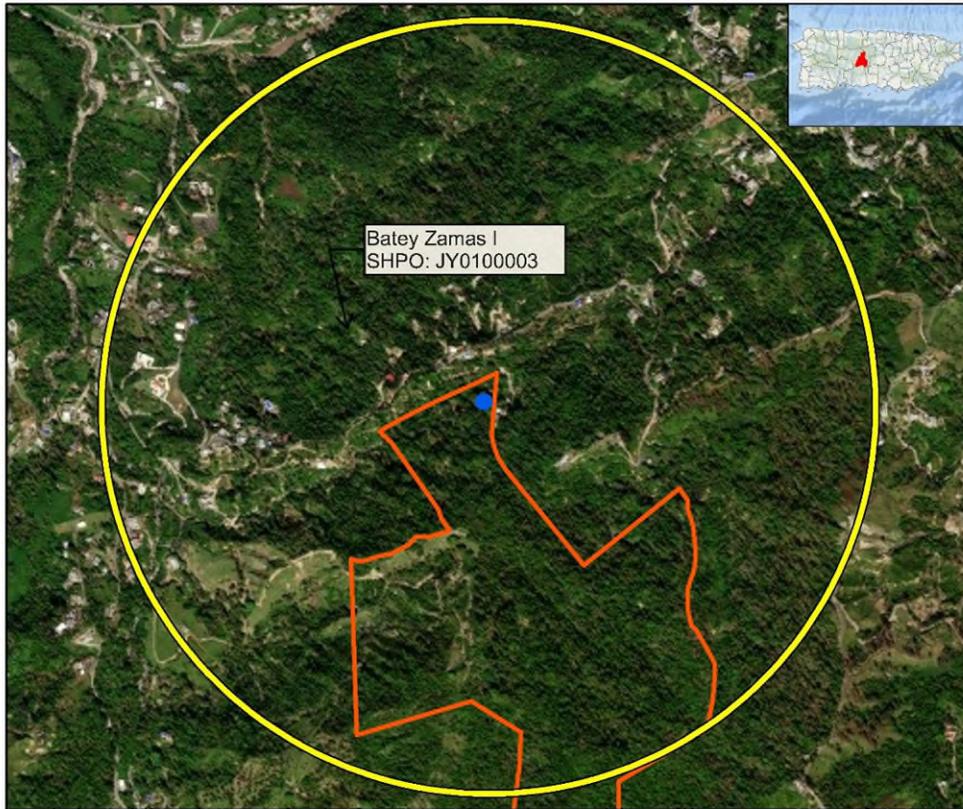
**BYA** BEHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
EDMRS. 1000011 1000012 1000013 1000014 1000015 1000016 1000017 1000018 1000019 1000020

Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

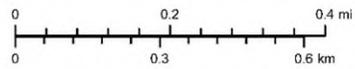
## Previous Investigations: Aerial Map

Puerto Rico Department of Housing ReGrow



#### Legend:

- PR-RGRW-03947
- 0.50 Mile (0.8 Km) Buffer
- Parcel-03947



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



Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Project (PR-RGRW-03947) Location with Previously Investigation USGS Topographic Map

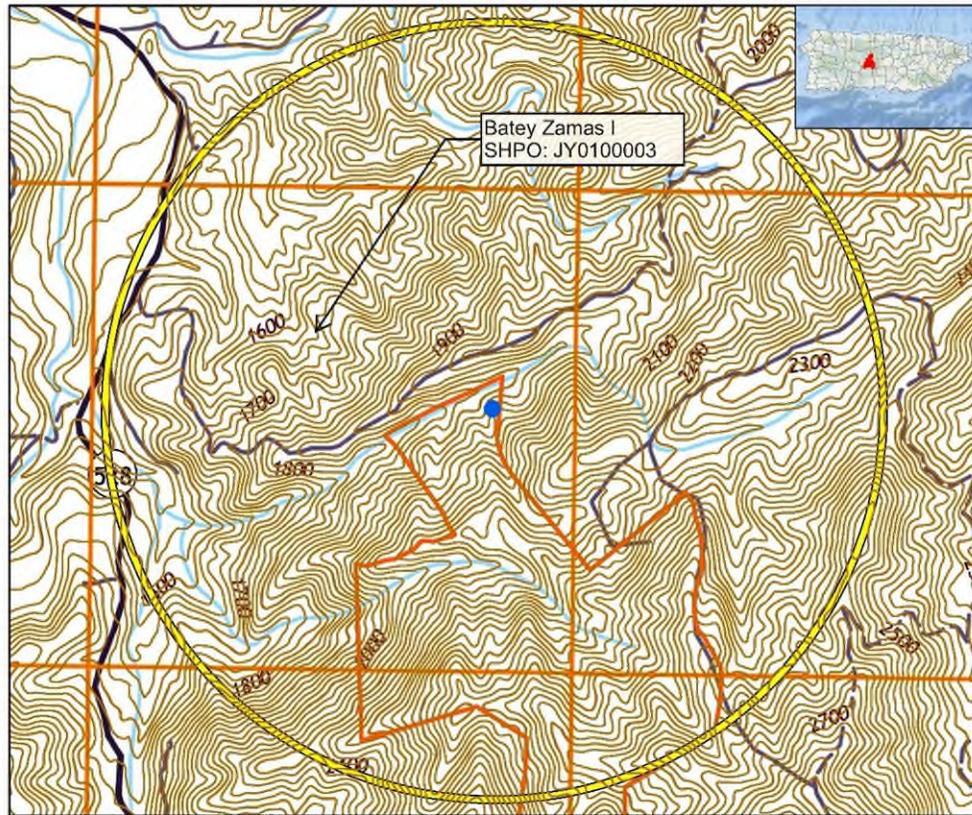
**BYA** BEIHAR-YBARRA & ASSOCIATES LLC  
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS  
Carretera 1, Edif. 2.0, Calle Ponce 184, Aguadilla, San Juan, P.R. 00922 Tel: (787) 219-0200

Application ID: PR-RGRW-03947

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

### Previous Investigations: USGS Topographic Map

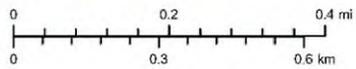
Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Contour Interval 20 Feet
- Parcel-03947
- 0.50 Mile (0.8 Km) Buffer

**Quadrangle: Jayuya**



Service Layer Credits: Esri, Garmin, GEBCO, NOAA, NGDC, and other contributors and Google Earth



**Source**

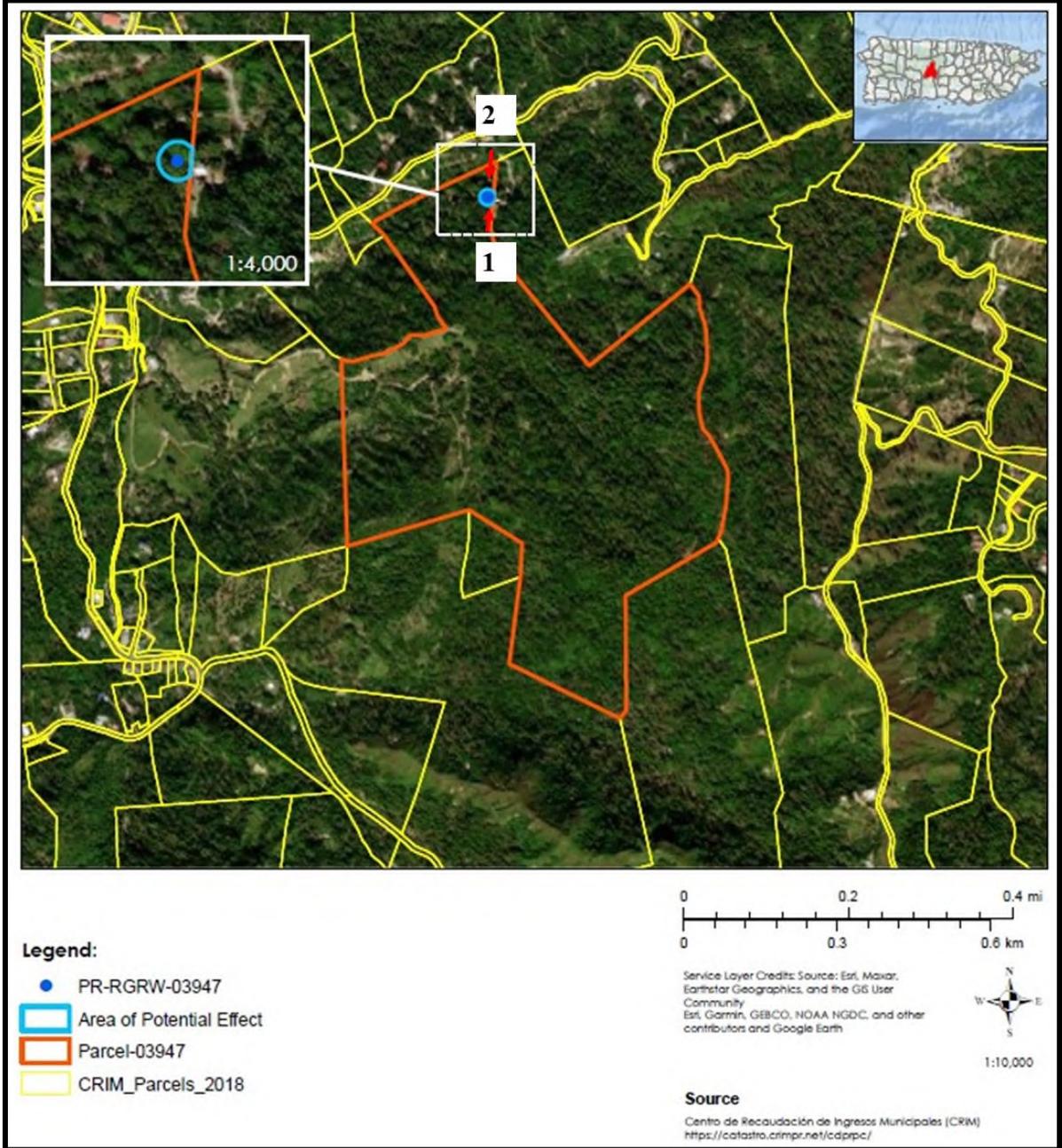
United States Geological Survey (USGS)  
National Geographic Map Database  
[https://ngmdb.usgs.gov/ngmdb/frgmetb\\_home.htm](https://ngmdb.usgs.gov/ngmdb/frgmetb_home.htm)

Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya

### Photograph Key





Applicant: Finca Santa Carmen Inc.

Case ID: PR-RGRW-03947

City: Jayuya



Photo #:1

Description (include direction): Area where the cisterns and generator will be installed, looking north.

Date: February 16, 2024



Photo #:2

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

Date: February 16, 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

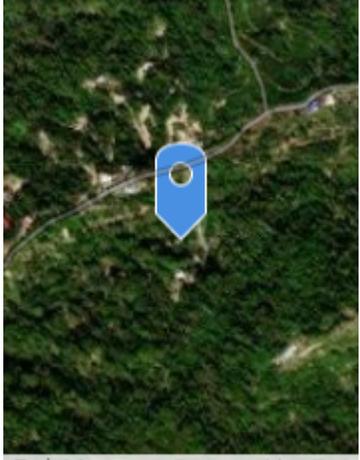
Download National Dataset: [dbf](#) | [xls](#) | [Data dictionary \(PDF\)](#)

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-03947
Name:	Finca Santa Carmen Inc.
Parcel ID:	242-000-007-13-001
Latitude:	18.196090
Longitude:	-66.600146
Elevation:	586.3436737640731
Development	
Street Address:	Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes
Municipio:	Jayuya
Zip Code:	00664
Site Inspector:	Patricia Carmenatty
Date of Visit:	February 13, 2024
Time of Visit:	10:50

**FIELD OBSERVATIONS**

Question	Answer	Notes
A. Is the structure in use?	No	
B. Is the structure a greenhouse?	No	
C. Is Electricity connected? (Utilities or Well)	No	
D. Is water connected? (Utilities or Well)	No	
1. 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	
2. Are there any 55-gallon drums visible on site? If yes, are they leaking?	No	
3. Are there any (or signs of any) underground storage tanks on the property?	No	
4. Are there signs of AST on the parcel or adjacent parcel? If yes, list approximate size and contents, if known.	No	
5. Is there any stained soil or pavement on the parcel?	No	
6. Is a water drainage system in use?	No	
7. Is a warehouse in use for storage of Fertilizer or Pesticides?	No	
8. Are there any groundwater monitoring wells on the site or adjacent parcel?	No	
9. Is there evidence of a faulty septic system?	No	
10. Is there distressed vegetation on the parcel?	No	
11. Is there any visible indication of mold?	No	
12. Is there any visible evidence of asbestos, chipping, and flaking or peeling paint, or hazardous materials present in or on the structure?	No	
13. Are any additional site hazards observed?	No	
14. 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	
15. Does the subject property have water frontage?	No	
16. Is there any indication of the presence of wetlands?	No	
17. Are there any obvious signs of animals or birds nesting on or near the site?	No	
18. 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?	No	

Photo Direction: Southeast

Comments: cement slab



Photo Direction: Southeast

Comments:



Photo Direction: Northwest

Comments: where the two cistern will be placed  
600 gal



Photo Direction: N/A

Comments:



Photo Direction: West

Comments: elevation in the terrain



Photo Direction: Northeast

Comments: cisterns location



Photo Direction: West

Comments:



Photo Direction: Southwest

Comments: water pipes above ground



Photo Direction: South

Comments: stream



**Streetscape #2**

Photo Direction: West

Comments: roads on the farm where the water pipes will be placed



Photo Direction: Southwest

Comments: roads on the farm where the water pipes will be placed



Evidence Photo 1

Photo Direction: N/A

Photo Description: roads on the farm where the water pipes will be placed



Evidence Photo 2

Photo Direction: N/A

Photo Description:



Evidence Photo 3

Photo Direction: Southeast

Photo Description:



Evidence Photo 4

Photo Direction: West

Photo Description:



**Evidence Photo 5**

Photo Direction: Northeast

Photo Description: roads on the farm where the water pipes will be placed



**Evidence Photo 6**

Photo Direction: Northwest

Photo Description: coffee trees



**Evidence Photo 7**

Photo Direction: Northeast

Photo Description: roads on the farm where the water pipes will be placed



**Evidence Photo 8**

Photo Direction: Northwest

Photo Description: roads on the farm where the water pipes will be placed



**Evidence Photo 9**

Photo Direction: West

Photo Description: roads on the farm where the water pipes will be placed, near coffee trees



**Evidence Photo 10**

Photo Direction: N/A

Photo Description:



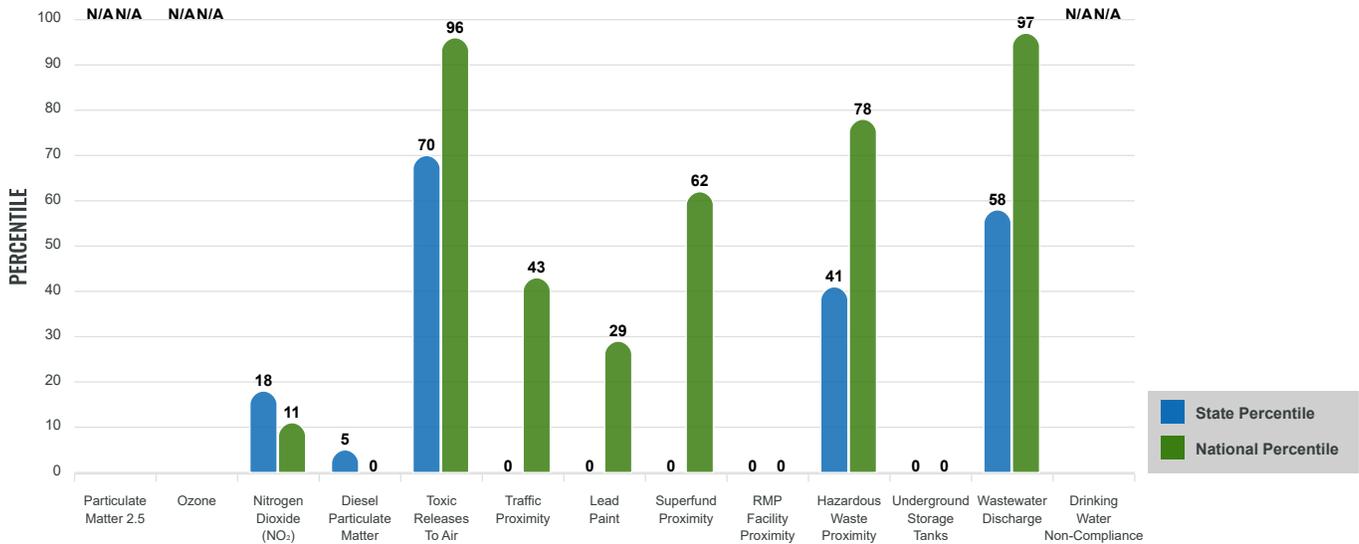
# Environmental Justice & Supplemental Indexes

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.

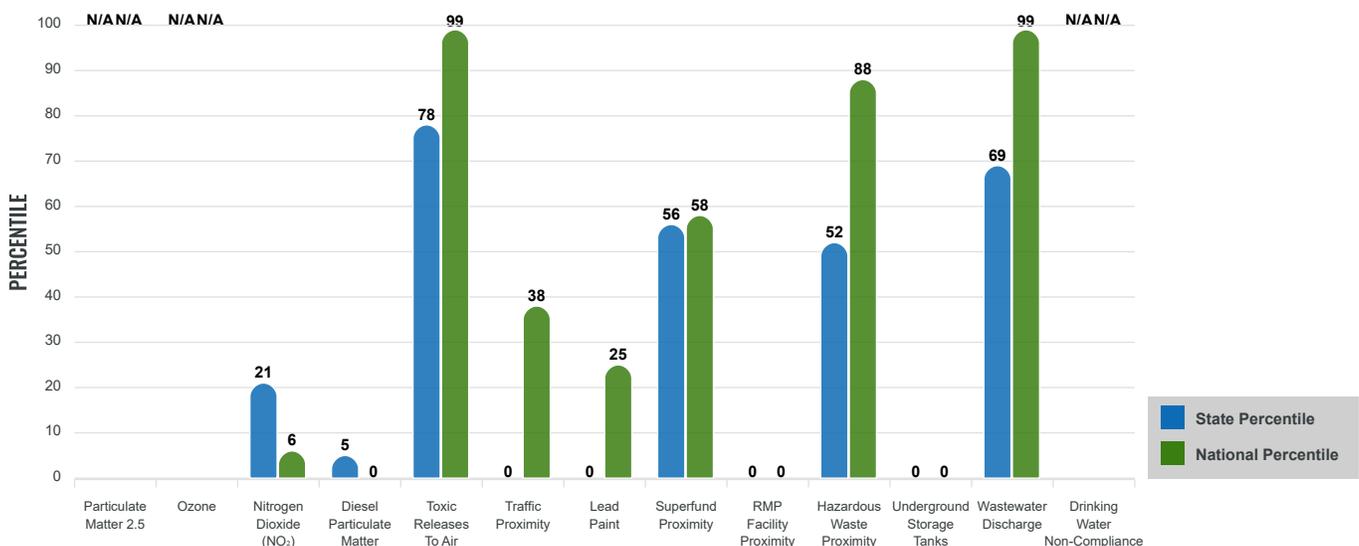
### EJ INDEXES FOR THE SELECTED LOCATION



## 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 18.196089,-66.600146

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>ENVIRONMENTAL BURDEN INDICATORS</b>					
Particulate Matter 2.5 (µg/m <sup>3</sup> )	N/A	N/A	N/A	8.45	N/A
Ozone (ppb)	N/A	N/A	N/A	41	N/A
Nitrogen Dioxide (NO <sub>2</sub> ) (ppbv)	2.1	5.5	17	7.8	2
Diesel Particulate Matter (µg/m <sup>3</sup> )	0.0109	0.0618	4	0.191	0
Toxic Releases to Air (toxicity-weighted concentration)	1,400	4,300	68	4,600	66
Traffic Proximity (daily traffic count/distance to road)	42,000	1,100,000	1	1,700,000	11
Lead Paint (% Pre-1960 Housing)	0.021	0.16	21	0.3	19
Superfund Proximity (site count/km distance)	0.067	0.23	0	0.39	0
RMP Facility Proximity (facility count/km distance)	0	0.66	0	0.57	0
Hazardous Waste Proximity (facility count/km distance)	0.59	1.2	38	3.5	36
Underground Storage Tanks (count/km <sup>2</sup> )	0	0	0	3.6	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	830	670000	54	700000	72
Drinking Water Non-Compliance (points)	N/A	N/A	N/A	2.2	N/A
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index USA	3.5	N/A	N/A	1.34	98
Supplemental Demographic Index USA	4.63	N/A	N/A	1.64	99
Demographic Index State	4.92	4.63	59	N/A	N/A
Supplemental Demographic Index State	3.23	2.72	73	N/A	N/A
People of Color	95%	97%	7	40%	92
Low Income	85%	70%	72	30%	98
Unemployment Rate	25%	14%	83	6%	97
Limited English Speaking Households	62%	66%	33	5%	99
Less Than High School Education	25%	20%	65	11%	87
Under Age 5	5%	3%	75	5%	54
Over Age 64	17%	23%	27	18%	54

\*Diesel particulate matter index is 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. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

**Sites reporting to EPA within defined area:**

Superfund .....	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities .....	0
Water Dischargers .....	0
Air Pollution .....	0
Brownfields .....	0
Toxic Release Inventory .....	0

**Other community features within defined area:**

Schools .....	0
Hospitals .....	0
Places of Worship .....	0

**Other environmental data:**

Air Non-attainment .....	No
Impaired Waters .....	Yes

Selected location contains American Indian Reservation Lands* .....	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community .....	Yes
Selected location contains an EPA IRA disadvantaged community .....	Yes

Report for 1 mile Ring Centered at 18.196089,-66.600146

## 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	5.8	N/A
Asthma	N/A	N/A	N/A	10.3	N/A
Cancer	N/A	N/A	N/A	6.4	N/A
Persons with Disabilities	31.5%	22.7%	89	13.7%	98

### 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	34%	29%	66	13%	93
Lack of Health Insurance	8%	7%	68	9%	55
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	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 18.196089,-66.600146  
Report produced using EJScreen

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

**From:** [Roman, Damaris](#)  
**To:** [environmentcdbg](#)  
**Cc:** [Ninotchka Rodriguez-Camacho](#)  
**Subject:** Re: [EXTERNAL] RE: CDBG-DR PR-RGRW-03947 Finca Santa Carmen Inc., Jayuya  
**Date:** Tuesday, July 23, 2024 1:54:18 PM  
**Attachments:** [image001.png](#)

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To whom it may concern:

This email is to acknowledge receipt of PRDOH letter confirming the acceptance of the Service the changes in effect determination for the PR boa from NE to NLAA and the implementation of the PR boa conservation measures provided by the Service on May 29, 2024 for the PRDOH consultation of April 04, 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*

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

*Office Desk Phone (939) 320-3135  
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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 11:03 AM  
**To:** Caribbean ES, FW4 <Caribbean\_ES@fws.gov>  
**Cc:** Roman, Damaris <damaris\_roman@fws.gov>  
**Subject:** [EXTERNAL] RE: CDBG-DR PR-RGRW-03947 Finca Santa Carmen Inc., Jayuya

**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-03947 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:** Thursday, May 30, 2024 11:26 AM  
**To:** Juan C. Perez-Bofill <jcperez@vivienda.pr.gov>  
**Cc:** environmentcdbg <environmentcdbg@vivienda.pr.gov>  
**Subject:** CDBG-DR PR-RGRW-03947 Finca Santa Carmen Inc., Jayuya

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 Ruíz*

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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  
Finca Santa Carmen Inc. | PR-RGRW-03947  
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-03947 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 acceptance to the reconsideration of the No Effect (NE) determination for the Puerto Rican Boa to a May Affect, but is Not Likely to Adversely Affect (NLAA) determination, as well as the implementation of the pertinent conservation measures for the Puerto Rican Boa.

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/72073-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-03947 Finca Santa  
Carmen Inc., Jayuya, Puerto Rico

Dear Mr. Pérez-Bofill

Thank you for your letter dated April 04, 2024, requesting informal consultation on the above referenced project. As per your request, our comments are provided under the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The Puerto Rico Department of Housing (PRDOH) is proposing the installation of an irrigation system with a 13kVA 230V power generator. A cement slab (24 feet x 24 feet) will be constructed to place the generator, which will require ground disturbance. The proposed project will be located at State Road PR-144, Ramal 528 km 1.9 interior, sector Los Ortizes (18°11'45.9"N 66°36'00.5"W) in the municipality of Jayuya.

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*), Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*), Puerto Rican parrot (*Amazona vittata*), Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*) and Puerto Rican harlequin butterfly (*Atlantea tulita*).

PRDOH used the Caribbean Determination Key (DKey) in the IPaC application to evaluate the potential impacts of the proposed project on federally listed species (Project code: 2024-0064338). Based on the answers provided, a consistency letter was obtained for the Puerto Rican boa, Puerto Rican broad-winged hawk and Puerto Rican sharp-shinned hawk, which determined that the proposed actions for this project would have "No Effect" (NE) for these species. The Service

acknowledges receipt of the NE DKey consistency letter for the Puerto Rican broad-winged hawk and Puerto Rican sharp-shinned hawk.

Based on the nature of the project, scope of work, information available and existing habitat, the PRDOH has determined that the proposed project has NE on the Puerto Rican parrot due to the lack of suitable habitat. The Service acknowledges receipt of PRDOH's NE determination for the Puerto Rican parrot. Currently, we do not have information to refute that determination. Because the PRDOH made a NE determination, the PRDOH is not required to conduct formal or informal section 7 consultation with the Service, and the Service is not required to concur with PRDOH's NE determination.

As for the Puerto Rican harlequin butterfly, PRDOH has determined that the proposed project may affect, but is not likely to adversely affect the Puerto Rican harlequin butterfly since the project area has been used for agricultural purposes for the past 30 years. Conservation measures previously provided by the Service will be implemented in case an encounter with the species occur.

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 with the implementation of the conservation measures.

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

However, for the Puerto Rican boa, since ground disturbance will occur, the Service believes that the proposed project may affect but is not likely to adversely affect (NLAA) this species. Therefore, the NE consistency letter obtained using the DKey for the Puerto Rican boa is nullified. Thus, the Service recommends PRDOH to reconsider its NE determination for this species to a NLAA and implement the following Puerto Rican boa 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

4. 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.
5. 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: (787) 999-2200 ext. 2911. 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.
6. 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.
7. 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.
8. 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 animals should be left alone until it leaves the vehicle on its own.
9. 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.
10. 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.
11. 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

This consultation will be completed once we receive PRHOD's confirmation of the NLAA determination for the Puerto Rican boa as well as the implementation of the above mentioned conservation measures.

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,

**ROBERT  
TAWES**

Digitally signed by  
ROBERT TAWES  
Date: 2024.05.29  
10:40:36 -04'00'

Robert Tawes  
Acting Field Supervisor

drr

cc:

Allison Cullet, [allison.cullet@horne.com](mailto:allison.cullet@horne.com)

March 22, 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-03947 located at Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes, Jayuya, PR 00664.***

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-03947, located at coordinates for a new power generator: latitude 18.196090, longitude -66.600146 on Carr. 144 Ramal 528 KM 1.9 Interior, Sector Los Ortizes, Jayuya, PR 00664, 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-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 years. The Area of Potential Effect (APE) has been defined as the area potentially impacted by ground disturbing activities related to the construction cement slab for the irrigation system generator, see Figure 3: Area of Potential Effect.

#### **Existing Conditions and Trends:**

The proposed project parcel 242-000-007-13-001 is designated as Not Prime Farmland, See Figure 4: Farmland Protection Map. The project area is located in the mountainous area of Jayuya. The area where the concrete slab will be placed has a semi flat topography, refer to Photo 1 and Photo 2. The soil in this area has been classified as Pellejas clay loam, 40 to 60 percent slopes (PeF). This soil is deep, very steep, and somewhat excessively drained. It is on the side slopes and ridgetops of uplands. The land has been

used for agricultural uses for more than 30 years and the proposed project will not change the land use associated with these placements. The closer Final Critical Habitat is located 43,515 feet from the project location, see Figure 5: Critical Habitats Map. There is an unnamed creek approximately 120 feet from where the cement slab will be built, 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>Birds</b>	
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	Endangered
Puerto Rican Parrot ( <i>Amazona vittata</i> )	Endangered
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</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 March 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 “No Effect” determination on the Puerto Rican Boa, Puerto Rican Broad-winged Hawk and Puerto Rican Sharp-shinned Hawk, see Exhibit B. Based on the provided information and the observations in the filed visit it was determined that it will also be a "No Effect" for the Puerto Rican Parrot, since it will only require a limited area of land to carry out the project, in which is only grass.

Name of the species	Effect Determination	Conservation Measures that will be implemented
Puerto Rican boa ( <i>Chilabothrus inornatus</i> )	No Effect (NE)	No conservation measures
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	No Effect (NE)	No conservation measures
Puerto Rican Parrot ( <i>Amazona vittata</i> )	No Effect (NE)	No conservation measures
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	No Effect (NE)	No conservation measures

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 NE determination for the Puerto Rican Parrot and a NLAA determination for the 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

**Puerto Rican Broad-winged Hawk (*Buteo platypterus brunescens*)**

Species Profile: <https://ecos.fws.gov/ecp/species/5512>

**Puerto Rican Parrot (*Amazona vittata*)**

Species profile: <https://ecos.fws.gov/ecp/species/3067>

**Puerto Rican Sharp-shinned Hawk (*Accipiter striatus venator*)**

Species profile: <https://ecos.fws.gov/ecp/species/604>

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

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

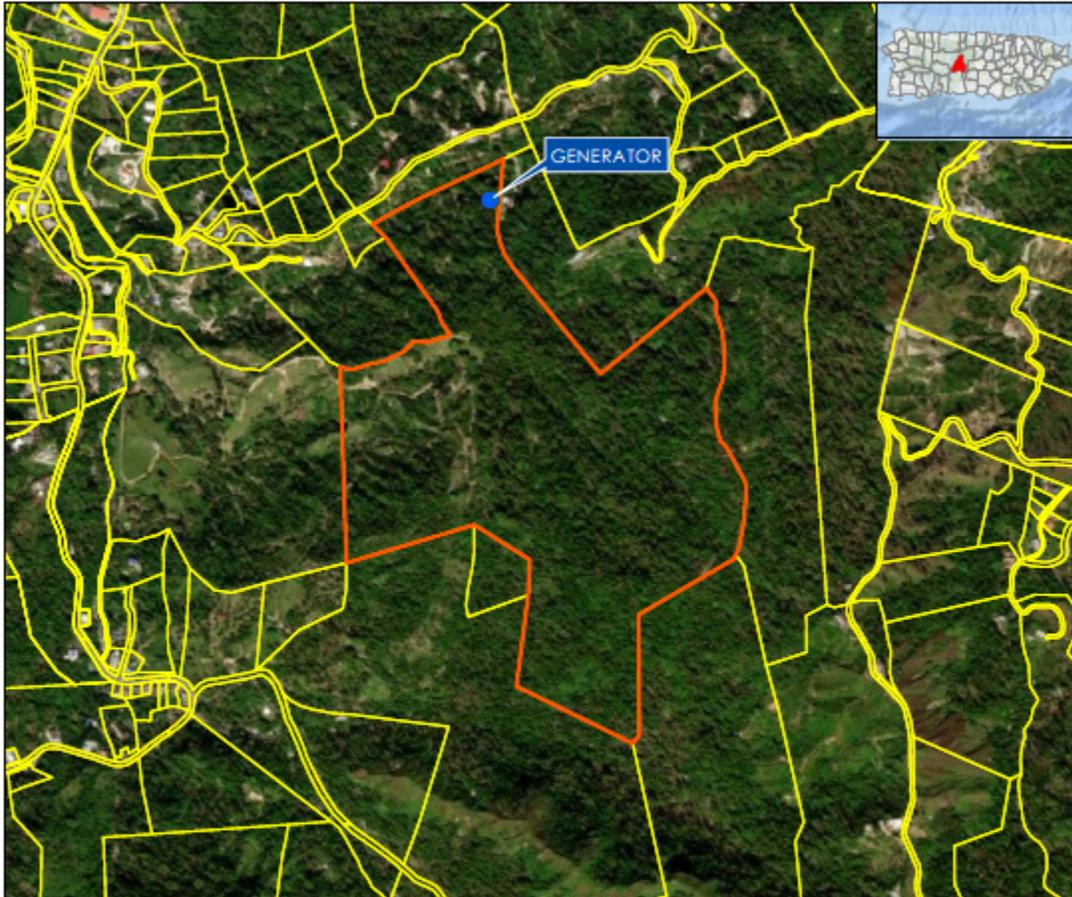
## **Exhibit A: Figures**

**Application ID: PR-RGRW-03947**

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146

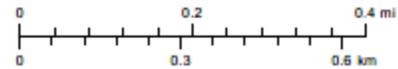
# Location: Aerial Map

Puerto Rico Department of Housing ReGrow



**Legend:**

- PR-RGRW-03947
- Parcel-03947
- CRIM\_Parcels\_2018



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



1:10,000

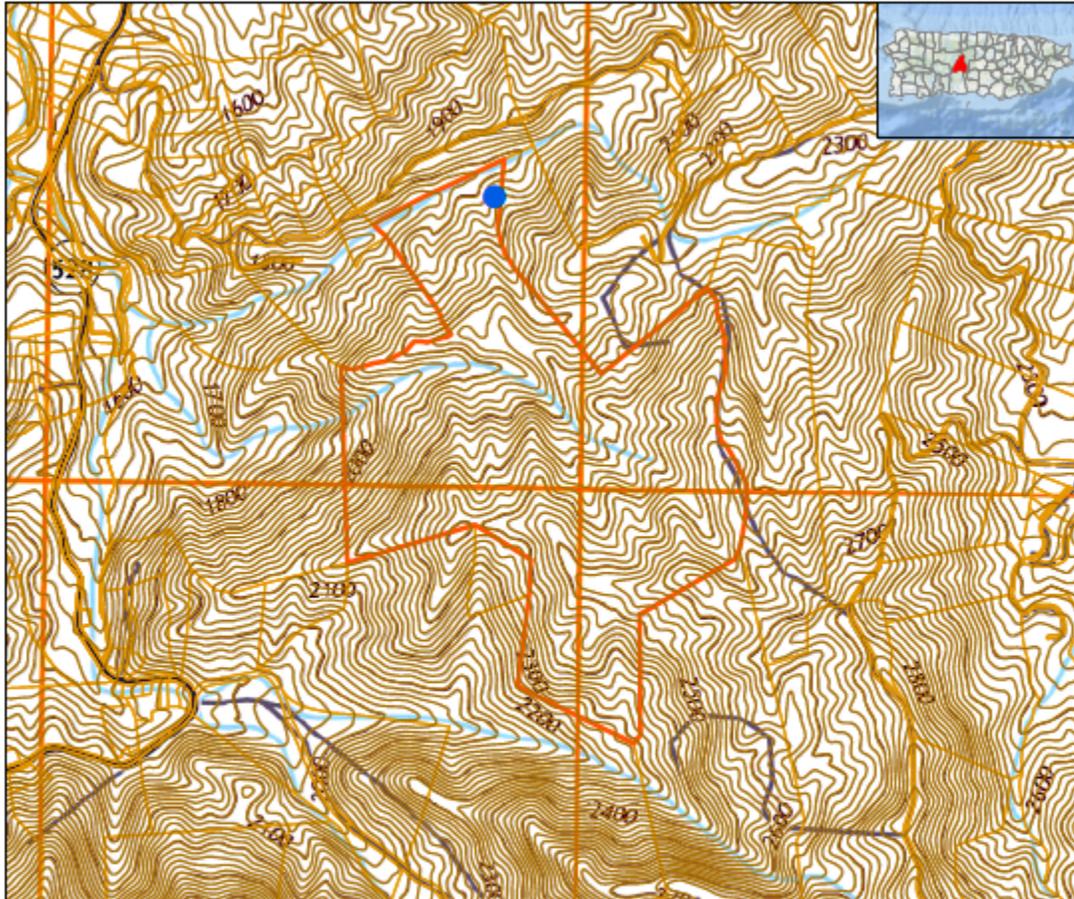
**Source**

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

Figure 1: PR-RGRW-03947 Location Map

**Location: USGS Topographic Map**  
Puerto Rico Department of Housing ReGrow

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Orlices,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat: 18.196090, Long: -66.600146



**Legend:**

- PR-RGRW-03947
- Contour Interval 20 Feet
- Parcel-03947
- CRIM\_Parcels\_2018

**Quadrangle: Jayuya**



Service Layer Credits: Esri, Garmin, GEBCO, NOAA, NGDC, and other contributors and Google Earth



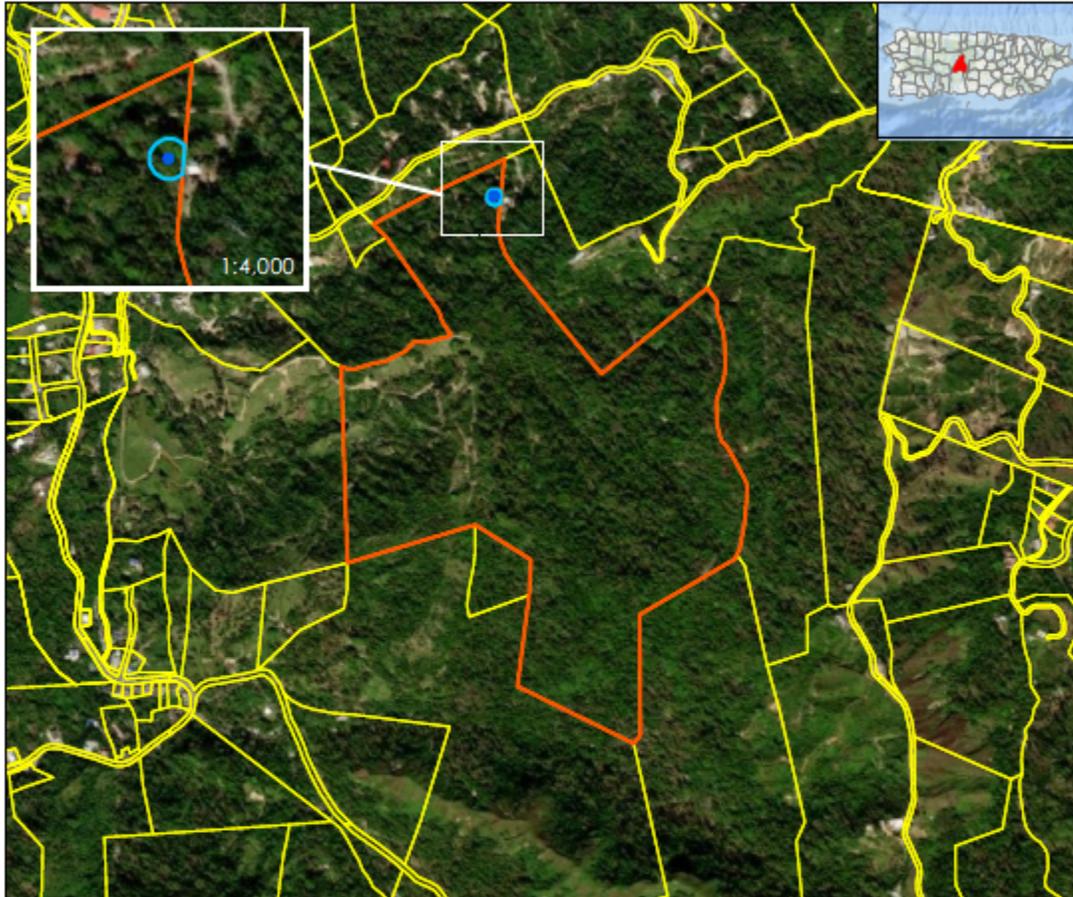
1:10,000

**Source**

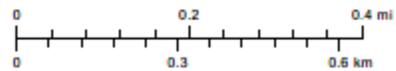
United States Geological Survey (USGS)  
National Geologic Map Database  
[https://ngmdb.usgs.gov/ngmdb/ngmdb\\_home.html](https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html)  
Centro de Recaudación de Ingresos Municipales (CRIM)  
<https://catastro.cimmar.net/catastro/>

Figure 2: PR-RGRW-03947 Topographic Map

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



- Legend:**
- PR-RGRW-03947
  - Area of Potential Effect
  - Parcel-03947
  - CRIM\_Parcels\_2018



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



1:10,000

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

Figure 3: PR-RGRW-03947 Area of Potential Effect Map

**Application ID: PR-RGRW-03947**

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Orfizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat:18.196411, Long:-66.599963

# Farmland Protection

Puerto Rico Department of Housing ReGrow



**Legend:**

● PR-RGRW-03947

**Farm Class**

■ 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-surgo>



1:5,000

Figure 4: PR-RGRW-03947 Farmland Protection Map

Finca Santa Carmen Inc.  
Carr. 144 Ramal 528 Km 1.9 Interior,  
Sector Los Ortizes,  
Jayuya, PR 00664  
Catastro: 242-000-007-13-001  
Lat:18.196411, Long: -66.599963

# Threatened & Endangered Species

Puerto Rico Department of Housing ReGrow



- Legend:**
- PR-RGRW-03947
  - Critical Habitat

0 1 2 mi  
0 2.5 5 km

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox, Swisstopo, Swisstopo, Swisstopo, Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

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

1:100,000

Figure 5: PR-RGRW-03947 Critical Habitats 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:

03/18/2024 18:44:37 UTC

Project Code: 2024-0064338

Project Name: PR-RGRW-03947

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

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

This species list is provided by:

**Caribbean Ecological Services Field Office**

Post Office Box 491

Boqueron, PR 00622-0491

(939) 320-3135

## PROJECT SUMMARY

Project Code: 2024-0064338

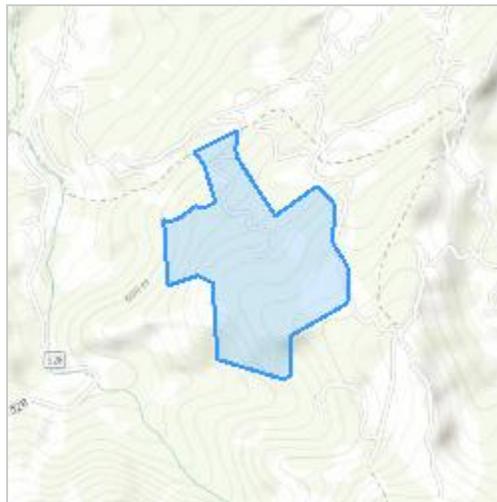
Project Name: PR-RGRW-03947

Project Type: New Constr - Above Ground

Project Description: The proposed activities for PR-RGRW-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property. The project area is located at PR-144 Ramal 528 km. 1.9, interior, Sector Los Ortizes within the Municipality of Jayuya. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 years.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.19201355,-66.59948058477465,14z>



Counties: Jayuya County, Puerto Rico

## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 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.

**BIRDS**

NAME	STATUS
Puerto Rican Broad-winged Hawk <i>Buteo platypterus brunnescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5512">https://ecos.fws.gov/ecp/species/5512</a>	Endangered
Puerto Rican Parrot <i>Amazona vittata</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3067">https://ecos.fws.gov/ecp/species/3067</a>	Endangered
Puerto Rican Sharp-shinned Hawk <i>Accipiter striatus venator</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/604">https://ecos.fws.gov/ecp/species/604</a>	Endangered

**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/2GC3TDQC4RAQDLU63C3MCSYCRM/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/2GC3TDQC4RAQDLU63C3MCSYCRM/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/2GC3TDQC4RAQDLU63C3MCSYCRM/documents/generated/7168.pdf">https://ipac.ecosphere.fws.gov/project/2GC3TDQC4RAQDLU63C3MCSYCRM/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.



## 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: 2024-0064338  
Project Name: PR-RGRW-03947

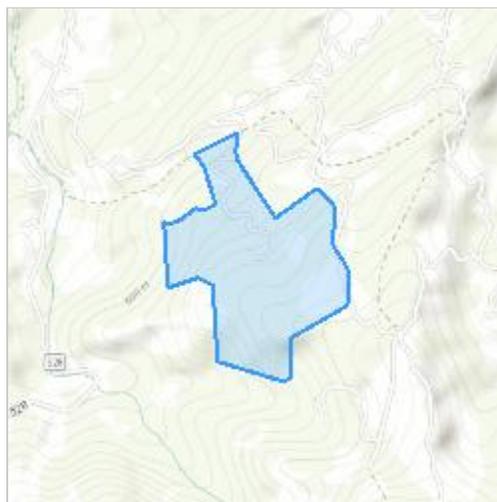
03/18/2024 18:45:46 UTC

Subject: Consistency letter for the project named 'PR-RGRW-03947' 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 March 18, 2024, Egon Gonzalez 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-03947'. The project is located in Jayuya County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.19201355,-66.59948058477465,14z>



The following description was provided for the project 'PR-RGRW-03947':

The proposed activities for PR-RGRW-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property. The project area is located at PR-144 Ramal 528 km. 1.9, interior, Sector Los Ortizes within the Municipality of Jayuya. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 years.

Based on your answers and the assistance of the Service's Caribbean DKey, you determined the proposed Action will have "No Effect" on the following species:

<b>Species</b>	<b>Listing Status</b>	<b>Determination</b>
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered	No effect
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	Endangered	No effect
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	Endangered	No effect

Thank you for informing the Service of your "No Effect" determination(s) for this project. No further consultation/coordination for this project is required for these species. However, be aware that reinitiation of consultation may be necessary if later modifications are made to the project so that it no longer meets the criteria or outcome described above, or if new information reveals effects of the action that could affect listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed.

This letter serves as documentation of your consideration of the federally listed species as required under section 7 of the ESA. However, effects to the other federally listed species or critical habitat as listed below from the "IPaC print-out for the project" (see below) should be considered as part of your ESA review for the project.

The Service will notify you within 30 calendar days if we determine that this proposed Action does not meet the criteria for a "No Effect" (NE) determination for Federally listed species in the Caribbean. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NE concurrence provided here. This verification period allows the Caribbean Ecological Services Field Office to apply local knowledge to evaluate the Action, as we may identify a small subset of actions having unanticipated impacts. In such instances, the Caribbean Ecological Services Field Office may request additional information to verify the effects determination reached through the DKey.

**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) 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
- Puerto Rican Parrot *Amazona vittata* Endangered

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.

## Action Description

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

### 1. Name

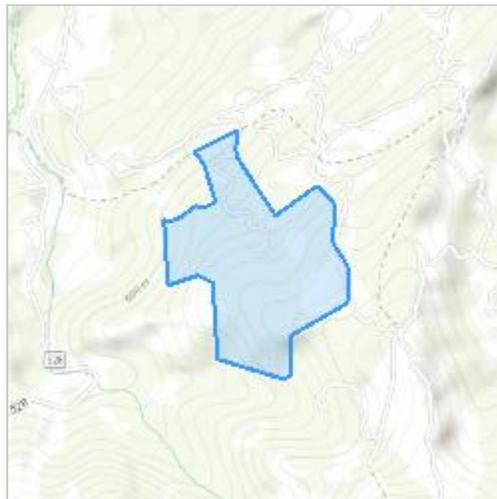
PR-RGRW-03947

### 2. Description

The following description was provided for the project 'PR-RGRW-03947':

The proposed activities for PR-RGRW-03947 consist of installation of an irrigation system. Included with the irrigation system is a 13kVA 230V power generator which will provide the energy to operate the water pump and carry the necessary water through the PVC tubes that will be placed above the ground. The applicant will provide a cement slab measuring approximately 24' x 24' on which the generator will be installed and two cisterns of 600 gallons each, which the applicant already has. The construction of the cement slab for the power generator will require ground disturbance. The pipes for the irrigation system will be made of PVC and will measure around 900 - 1000 feet long and will be installed above the ground. The power needed to operate the generator will be provided by an existing PREPA/LUMA connection on the property. The water needed will be provided by an existing stream on the property. The project area is located at PR-144 Ramal 528 km. 1.9, interior, Sector Los Ortizes within the Municipality of Jayuya. Based on a review of historical aerial imagery, the general area has been used for agricultural purposes for over the past 30 years.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.19201355,-66.59948058477465,14z>



## 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")?

*Yes*

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

**Automatically answered**

*Yes*

11. Does the proposed project intersect the Puerto Rican sharp-shinned hawk area of influence?

**Automatically answered**

*Yes*

12. Does the proposed project intersect the Puerto Rican Broad-winged hawk area of influence?

**Automatically answered**

*Yes*

**Exhibit C: Field Visit Photos**



**Photo #:1**

**Description (include direction):** Area where the cisterns and generator will be installed in the cement slab, looking north.

**Date:** February 16, 2024



**Photo #:**2

**Description (include direction):** Area where cement slab will be constructed for the cistern and the generator, looking south.

**Date:** February 16, 2024



**Transmittal Letter**

July 24, 2024

**To: José Luis Rivera Rivera**  
Deputy Director for Economic Recovery Grant Management  
Re-Grow PR Urban Rural Agriculture Program

**Re: Endangered Species Concurrence - Conservation Measures Implementation**  
**Finca Santa Carmen Inc. | PR-RGRW-03947**

Dear Mr. Rivera:

This memorandum is to notify the Re-Grow PR Urban-Rural Agriculture Program (Re-Grow Program) that on April 4, 2024, for the case **PR-RGRW-03947**, the CDBG-DR/MIT Permits and Environmental Compliance Division submitted an 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 of the installation of a irrigation system and new slab for a generator, for Finca Santa Carmen Inc, an agricultural business, located at carretera PR-144, barrio Ramal, 528 km 1.9 interior, sector Los Ortizes, Jayuya PR 00664; 18.196090, -66.600146.

Using the Information for Planning and Consultation (IPaC) system, the proponent has determined that the proposed project lies within the range of the following federally listed species:

Name of Species	Status
Puerto Rican Boa (Chilabothrus inornatus)	Endangered
Puerto Rican Harlequin Butterfly (Atlantea tulita)	Threatened
Puerto Rican Sharp-shinned Hawk (Accipiter stiauis venator)	Endangered
Puerto Rican Broad-winged Hawk (Buteo platypterus brunnescens)	Endangered
Puerto Rican Parrot (Amazona vittate)	Endangered

*There were no Critical Habitats noted within the project area.*

The United States Fish and Wildlife Service (USFWS) Caribbean Ecological Services Field Office reviewed the information provided and their files, and on **No Effect (NE)** on the Puerto Rican Broad-winged Hawk, Puerto Rican Sharp-shinned Hawk and Puerto Rican Parrot. Also, the PRDOH together with the USFWS have determined that the proposed project **May Affect, but is Not Likely to Adversely Affect (NLAA)** the Puerto Rican Boa and Puerto Rican Harlequin Butterfly.

The USFWS NLAA concurrence is conditioned to the following: (1) if a Boa is encountered, the Conservation Measures will be in accordance with the USFWS Puerto Rican Boa Conservation Measures 2024, (2) if a Puerto Rican Parrot is encountered on the site, the USFWS Caribbean Office will be notified immediately, (3) if a Puerto Rican Broad-winged Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately, (4) if a Puerto Rican Sharp-shinned Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately and (5) if a Puerto Rican Harlequin Butterfly is encountered in the site, the Conservation Measures will be in accordance with the USFWS Puerto Rican Harlequin Butterfly Conservation Measures.

Obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.

In conclusion, the USFWS concurred with the CDBG-DR/MIT Permits and Environmental Compliance Division NLAA determination. However, **the applicant must be informed about the conditions of the determination of concurrence and implement them as described.**

In order to facilitate the species identification, please, find attached the Caribbean Endangered and Threatened Animals Fact Sheets for: Puerto Rican Boa, Puerto Rican Parrot, Puerto Rican Broad-winged Hawk, Puerto Rican Sharp-shinned Hawk and Puerto Rican Harlequin Butterfly.

USFWS Caribbean Ecological Services Field Office key contact information:

- José Cruz-Burgos, Endangered Species Coordinator  
Office phone (786) 244-0081 or mobile (305) 304-1386  
Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)

Sincerely,

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

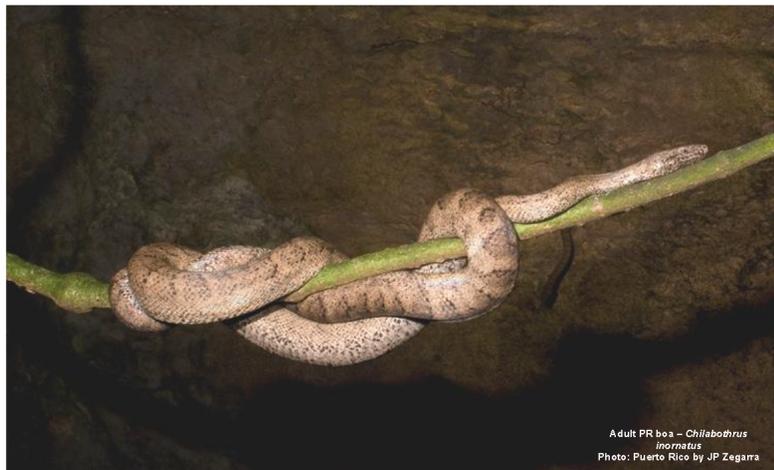


## U.S. FISH AND WILDLIFE SERVICE CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

### 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.



Last Revised: January 2024

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.

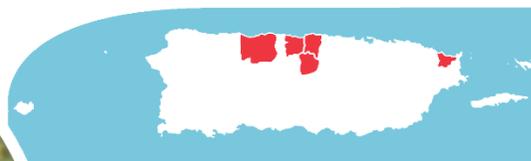
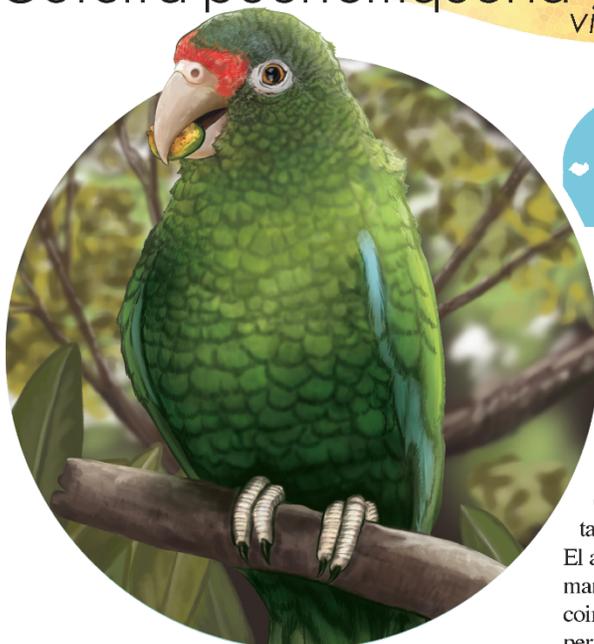
6. If a PR boa is captured by PRDNER personnel, record the name of that person and information on where the PR boa will be taken. This information should be reported to the Service.
7. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on 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

# Cotorra puertorriqueña

*Amazona vittata vittata*



Distribución ■

**Familia:** Psittacidae  
**Orden:** Psittaciformes

## Descripción

La cotorra puertorriqueña o Iguaca, como la llamaban los indios taínos, es un ave verde brillante con una mancha roja en la frente, un anillo blanco alrededor del ojo y plumas primarias azules. Su pico es color marfil y el borde de su cola es redondo. Los juveniles son bastante parecidos a los adultos. Tanto hembras como machos son parecidos y miden cerca de doce pulgadas (aprox. 30 centímetros). A veces, la franja roja en la frente es más ancha en los machos que en las hembras. Mientras vuela emite un fuerte y ruidoso "kar...kar." Este sonido se escucha a gran distancia. Emite otros sonidos para comunicarse con otras cotorras y para defender su territorio.

## Información biológica

### Reproducción

La cotorra puertorriqueña alcanza su edad reproductiva entre los 3 a 5 años. Las cotorras usualmente forman

parejas que perduran por mucho tiempo, normalmente de por vida. Las parejas permanecen juntas casi todo el año, excepto cuando la hembra está incubando y el macho asume la responsabilidad de proveer alimento. La cotorra usa como nido las cavidades que se encuentran en árboles de gran tamaño como el palo colorado (*Cyrilla racemiflora*), entre otros. De ser necesario, también podría anidar en las cavidades de roca caliza. El anidamiento comienza en los meses de febrero y marzo, hasta junio. Tradicionalmente, la anidación coincide con el período más seco del año y durante el período de fructificación (producir frutos) de plantas cuyas semillas, frutas y hojas le sirven de alimento.

### Dieta

La cotorra come plantas tales como: palma de sierra, palma real, maricao, maria, guaba, cupey, guaraguao y yagrumo, entre otros árboles.

### Distribución

La cotorra puertorriqueña, ave endémica a Puerto Rico fue abundante en Puerto Rico, incluyendo las islas de Culebra, Vieques y Mona. Esta cotorra es la última especie de psitácidos existentes y originaria en territorio de los Estados Unidos. Los psitácidos son la familia de aves, en su mayoría tropicales, con plumas de colores vivos y pico corto, alto y muy encorvado (ej. guacamayo y cotorra). La población silvestre de cotorras puertorriqueñas se limita actualmente a la Sierra de Luquillo, mayormente en el Bosque Nacional El Yunque, al este de Puerto Rico y en el Bosque Estatal de Río Abajo, en el norte central de Puerto Rico, entre Arecibo y Utuado. Al menos tres de las cotorras liberadas en Río Abajo se han dispersado y en 2012 fueron vistas entre Morovis, Vega Baja y Manatí.

EN PELIGRO

## Amenazas

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Además de tener una población pequeña y una distribución limitada, la especie también se ve afectada por el zorzal pardo (*Margarops fuscatus*) quien mata los huevos y pichones de la cotorra para usar el nido. El guaraguao colirojo (*Buteo jamaicensis*), el guaraguaito de bosque (*Buteo platypterus brunnescens*) y las ratas (*Rattus rattus* y *R. norvegicus*) son depredadores mortales de cotorras juveniles y adultas. Las moscas parasíticas (*Philornis pici*) depositan sus larvas en los pichones de aves para completar su ciclo de desarrollo. Estas moscas enferman y matan a los pichones. Las abejas europeas y africanas (*Apis mellifera*) invaden los nidos de la cotorra para formar adentro sus colmenas. También pueden matar a los pichones. Los huracanes y otros eventos climatológicos pueden afectar la estabilidad de la especie en su estado natural. La pérdida de hábitat por la deforestación es una amenaza que siempre está presente y limita las opciones de lugares aptos para reintroducir la cotorra a la vida silvestre.

## Medidas de conservación

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La cotorra puertorriqueña fue designada como especie en peligro de extinción en el año 1967, antes de que la Ley de Especies en Peligro de Extinción de 1973 entrara en vigor. Existe un Acuerdo Cooperativo entre el Servicio Federal de Pesca y Vida Silvestre, el Departamento de Recursos Naturales y Ambientales y el Servicio Forestal de los Estados Unidos para manejar de forma conjunta la recuperación de la cotorra puertorriqueña. Las tres agencias constituyen el Comité de Recuperación de la Cotorra Puertorriqueña. Inicialmente, se estableció un programa de propagación en cautiverio que, con el tiempo, ha crecido para incluir liberaciones de cotorras al estado silvestre, monitoreo de las poblaciones silvestres, manejo del hábitat e investigación. Otras entidades privadas y académicas se han unido a los esfuerzos para realizar investigaciones y educar.

El Comité realiza censos de cotorras periódicamente y estima que existen entre 18 a 22 cotorras en El Yunque y cerca de 60 a 70 en Río Abajo. Los biólogos de campo utilizan múltiples estrategias para manejar el hábitat. La escasez de árboles maduros con cavidades

requiere que se construyan e instalen nidos artificiales para que la cotorra puertorriqueña anide. También, los expertos controlan las poblaciones de las especies depredadoras, cuando es necesario, para asegurar el desarrollo normal de los huevos y de los pichones.

La población en cautiverio se mantiene para varios propósitos: reproducir cotorras y aumentar su número, asegurar poblaciones adicionales, particularmente en el caso de una catástrofe natural tal como un huracán, y para, eventualmente, poder proveer aves para reintroducirlas a los bosques donde habitaban. En los aviarios, se utilizan técnicas avanzadas para diagnosticar enfermedades y proveer tratamiento. Actualmente, hay cerca de 350 cotorras entre el Aviario Iguaca, manejado por el Servicio Federal de Pesca y Vida Silvestre en El Yunque, y en el Aviario José L. Vivaldi, manejado por el Departamento de Recursos Naturales y Ambientales de Puerto Rico, en el Bosque Estatal Río Abajo.

La Ley Federal de Especies en Peligro de Extinción de 1973, según enmendada, prohíbe matar, dañar, molestar, atrapar, comprar o vender una especie, así como partes o productos derivados de ellas

## Referencias

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Snyder, N.F., J.W. Wiley, and C.B. Kepler. 1987. The parrots of Luquillo: Natural history and conservation of the Puerto Rican parrot. West. Found. Vet. Zool., Los Angeles.

U.S. Fish and Wildlife Service. 2009. Revisión final al Plan de Recuperación para la Cotorra Puertorriqueña (*Amazona vittata*).

Thomas H. White, Jr. and Fernando Núñez-García. "From Cage to Rainforest" U. S. Fish and Wildlife Service. 2008-06-04

## Información adicional

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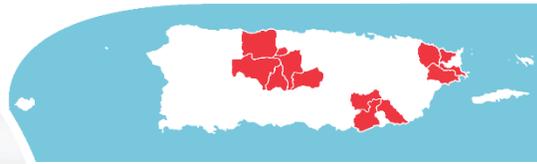
Oficina de Servicios Ecológicos del Caribe  
Dirección: PO Box 491, Boquerón, PR 00622  
Teléfono: 787-851-7297 / Fax: 787-851-7440  
Internet: [www.fws.gov/caribbean](http://www.fws.gov/caribbean)



EN PELIGRO

# Guaraguao de bosque

*Buteo platypterus brunnescens*



Distribución ■

## Información biológica

### Reproducción

Esta especie anida en bosques secundarios maduros y plantaciones antiguas. En el Bosque Estatal de Río Abajo (RACF, por sus siglas en inglés), los sitios de anidación están caracterizados por la presencia de árboles tales como el palo María (*Calophyllum antillanum*), la teca (*Tectona grandis*), la caoba hondureña (*Swietenia macrophylla*) y la majagua (*Hibiscus elatus*). Los guaraguao de bosque colocan sus nidos en la parte superior de árboles grandes que sobrepasan la cubierta forestal. Información recientemente recopilada sobre la abundancia y características demográficas del guaraguao de bosque en RACF indica un alto nivel de fidelidad entre parejas; una tasa de sobrevivencia en nidos de 0.67 a través de la temporada de reproducción; y una productividad de 1.1 crías por nido. Entre los años 2001 a 2003, se marcaron con radio transmisores y se colocaron bandas en las patas a varias crías de guaraguao en el RACF. En 2013, al visitar el área donde se marcaron, se documentó que seguían vivas (Llerandi-Román and Ríos-Cruz pers. comm.). Por ejemplo, una hembra joven que fue marcada entre el 2001 al 2003 en el RACF fue documentada anidando exitosamente entre los años 2007 al 2009. (Ríos-Cruz pers. comm.)

### Hábitat

Esta especie habita en bosques enanos, bosques de palmas de sierra, de caimitillo-granadillo y de tabonuco. Estos bosques se encuentran en las reservas forestales del Bosque Estatal de Carite, Bosque Estatal Toro Negro, Bosque Los Tres Picachos y el Bosque Nacional El Yunque. También habita en

**Familia:** Accipitridae  
**Orden:** Falconiformes

## Descripción

El guaraguao de bosque de Puerto Rico o guaraguaito es de color marrón oscuro con barras blancas y rojizas en la parte ventral. Es una subespecie endémica de Puerto Rico de tamaño mediano, que mide aproximadamente 39 centímetros (15.5 pulgadas). Es más pequeño que el *Buteo platypterus platypterus* pero más grande que la subespecie que ocurre en las Antillas Menores. El guaraguao de bosque es la subespecie de halcón de ala ancha más oscuro. En los adultos, la cola es de un color negro claro con bandas blancas horizontales en la base, medio y extremo de la cola, y esto, junto con el pecho rojizo, caracteriza a la especie. Los machos y las hembras son muy similares en apariencia, pero las hembras son un poco más grandes. Las aves juveniles tienen barras oscuras en el pecho y no tienen las bandas distintivas en la cola. La población del guaraguao de bosque de Puerto Rico oscila cerca de los 125 individuos.

AMENAZADA

plantaciones madereros maduros, en cafetales bajo sombra y en bosques secundarios maduros del área de carso al norte-central de Puerto Rico dentro y cerca del Bosque Estatal de Río Abajo y el área de Río Encantado entre los pueblos de Florida y Ciales. La topografía húmeda de los bosques del carso le provee al guaraguao de bosque otra alternativa como área para anidar. En estudios recientes, se han documentado miembros de una especie similar de guaraguao (guaraguao de cola roja; *Buteo jamaicensis*) anidando en las laderas del carso adyacentes al RACF.

### Distribución

El guaraguao de bosque es un ave de rapiña poco común y extremadamente localizado, que se encuentra en los bosques montañosos de tierra alta de Puerto Rico. Las poblaciones existentes se hallan principalmente dentro de cinco bosques: el RACF, el Bosque Estatal Carite, el Bosque Estatal Toro Negro, el Bosque Los Tres Picachos y el Bosque Nacional El Yunque. Llerandi-Román (2006) halló trece territorios de guaraguao de bosque justo fuera de los límites de RACF, en seis sitios diferentes con hábitat apropiado para los guaraguao de bosque. Los territorios se encuentran a lo largo del valle del Río Tanamá, al noroeste del RACF

### Amenazas

La abundancia y la distribución del guaraguao de bosque es limitada. Cualquier amenaza que atente contra su población y su hábitat puede resultar en detrimento para esta especie. De forma natural, los huracanes constituyen una amenaza ya que destruyen su hábitat debido a las intensas lluvias y a los fuertes vientos. No obstante, existe una gran variedad de actividades humanas que también amenazan las poblaciones de esta especie. La construcción de instalaciones recreativas, de estructuras para energía y comunicaciones y de carreteras contribuye a la destrucción y fragmentación de su hábitat. De igual manera, la caza ilegal, las malas prácticas de manejo y la carencia de planes de manejo para los bosques públicos también afectan las poblaciones del guaraguao de bosque. Los bajos números poblacionales de esta especie pueden, por sí mismos, estar afectando la población ya que se pierde la variación genética de esta.

### Medidas de conservación

El guaraguao de bosque está incluido en la lista de especies amenazadas desde el 1994. La Ley Federal de Especies en Peligro de Extinción de 1973, según enmendada, prohíbe matar, dañar, molestar, atrapar, comprar o vender una especie, así como partes o productos derivados de ellas. El tener la especie en la lista federal fomenta y ayuda a crear acciones de conservación por las agencias federales, estatales, privadas, y por grupos e individuos particulares. La Ley de Especies En Peligro fomenta la compra de terrenos y la cooperación con el Estado, y requiere que se ejecuten acciones de recuperación en relación a todas las especies listadas. Entre las medidas esenciales para proteger el hábitat y fomentar el crecimiento de las poblaciones existentes están: la protección de los sitios de anidamiento y alimento en las áreas públicas y privadas, el mejoramiento de los hábitats, la reforestación en áreas abiertas, la actualización de la información acerca de la distribución y la identificación o creación de corredores biológicos entre poblaciones cercanas (tales como RACF, Los Tres Picachos y Toro Negro) con tal de facilitar el movimiento de los guaraguao de bosque entre los bosques.

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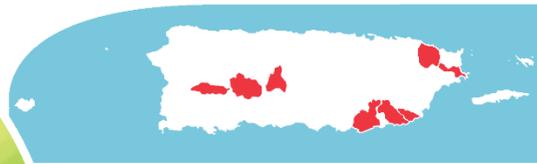
### **Puerto Rican Harlequin Conservation Measures**

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:
  - o Clearly mark the host plant with flagging tape.
  - o 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)

# Falcón de sierra

*Accipiter striatus venator*



Distribución ■

## Hábitat

El falcón de sierra es una subespecie endémica en Puerto Rico que se encuentra en áreas boscosas asociadas a las zonas de vida conocidas como bosque húmedo subtropical montano bajo y bosque húmedo subtropical (ej. bosque enano, palma de sierra, caimitillo-granadillo y tabonuco).

## Dieta

Se alimenta primordialmente de aves pequeñas tales como: el comeñame (*Loxigilla portoricensis*), la reinita común (*Coereba flaveola*) y la llorosa (*Nesospingus speculiferus*).

## Distribución

Las únicas cinco poblaciones existentes de falcón de sierra se encuentran en los bosques montañosos del Bosque Nacional El Yunque y los Bosques Estatales de: Maricao, Toro Negro, Guilarte y Carite. En el año 1992, se estimó una población general de 150 individuos para estos bosques. En censos hechos entre 2012 y 2013 se nota una disminución significativa de individuos en varios de los bosques.

## Amenazas

La destrucción y la modificación del hábitat en Puerto Rico es uno de los factores más importantes que ha afectado el número y la distribución del falcón de sierra. La distribución tan limitada de esta especie puede haber sido resultado de la fragmentación de áreas forestadas que ha ocurrido durante este siglo. Esta ave ha experimentado una merma poblacional de un 60% en el Bosque de Carite y de un 93% en el Bosque Nacional El Yunque. La causa de esta merma es desconocida para los investigadores.

**Familia:** Accipitridae  
**Orden:** Falconiformes

## Descripción

El falcón de sierra de Puerto Rico es un ave de rapiña que tiene un tamaño de aproximadamente 11 a 13 pulgadas (28 a 33 centímetros). Los adultos tienen la región dorsal del cuerpo de color gris pizarra y la región ventral con barras densas de color rubio-rojizo. Los juveniles son de color marrón claro por encima y densamente listados por debajo. Al vuelo, esta ave muestra las alas cortas, de forma redondeada y la cola estrecha. El falcón de sierra vuela alternando el batir de las alas con el planeo.

## Información biológica

### Reproducción

Esta ave construye sus nidos de varitas en lo alto de los árboles y pone en ellos tres huevos blancos con manchas pequeñas. La temporada de anidamiento del falcón de sierra comienza en marzo y continúa hasta julio.

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Entre las amenazas que se han identificado para esta especie se encuentran: prácticas de manejo y cultivo de madera en los bosques, construcción de veredas y carreteras en los bosques, construcción de facilidades recreativas, aumento en el uso de los bosques para fines recreativos y la posibilidad de cacería furtiva. Se ha identificado el parasitismo por la mosca parasítica del género *Philornis* como un factor de mortandad para pichones del falcón de sierra en Maricao. El falcón de sierra también es susceptible a disturbios naturales tales como las tormentas tropicales fuertes y los huracanes ya que le modifican su hábitat. Sin embargo, el problema principal del falcón de sierra es su baja densidad y lo limitado de su distribución. Esto hace a esta subespecie extremadamente vulnerable a la pérdida de un individuo.

## Medidas de conservación

El falcón de sierra fue incluido en la lista federal de especies en peligro de extinción en 1994 y el plan de recuperación se escribió en 1997. La medida principal que se debe tomar para la conservación del falcón de sierra es la protección de los individuos restantes y de su hábitaculo. Debido a que se encuentra en áreas públicas, es imprescindible la implementación de planes de manejo adecuados para asegurar la supervivencia de esta subespecie en los bosques.

La Ley Federal de Especies en Peligro de Extinción de 1973, según enmendada, prohíbe matar, dañar, molestar, atrapar, comprar o vender una especie, así como partes o productos derivados de ellas.

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