

# **Environmental Assessment**

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

### **24 CFR Part 58**

#### **Project Information**

**Project ID:** PR-RGRW-04113

**Project Name:** Angel M Rivera Arroyo

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

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

**State/Local Identifier:** Puerto Rico/Barranquitas, PR/ Comerío, PR

**Preparer:** Andrew McCadden

**Certifying Officer Name and Title:** Permit and Compliance Officers: Pedro A. De León Rodríguez.

**Consultant** (if applicable): Tetra Tech, 251 Calle Recinto Sur, Ste. 202, San Juan, PR 00091

**Direct Comments to:** PRDOH (environmentcdbg@vivienda.pr.gov)

#### **Project Location:**

The property is a 61.7-acre site located at Carr 749 km 2.5 Int. Bo. Quebrada Grande in the Municipalities of Barranquitas and Comerío, Puerto Rico (Parcel ID# 247-000-004-30). The coordinates of the project site are 18.211720, -66.267136.

The proposed project site for the greenhouse is an area that has not been developed with brush and grass grown up.

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

The proposed use of grant funds is for the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor.

The applicant plans to purchase and install a greenhouse (SOW-1) at coordinates 18.212098, -66.267690 to produce sweet peppers. The proposed greenhouse is a metal structure covered with plastic and Saran sheet that has an approximate footprint of 70-foot (ft) x 30 ft. The greenhouse will be supported by posts anchored approximately 2 ft into the ground. Ground clearance and leveling are anticipated as part of the secure installation of the new structure.

The proposal includes the purchase and installation of a standby generator (SOW-2) to be installed at coordinates 18.211622, -66.267029 in a new on-site poured concrete pad measuring 5 ft x 5 ft. This generator will provide power to an existing pump at an existing water well located at coordinates 18.212542, -66.267500 (northeast of the greenhouse location) that will be used to supply water to the new greenhouse.

The power for the water pump will be provided by connecting the pump to the new generator with an approximately 375 ft long underground electric conduit to be installed at a depth of 3 ft. Water connection to the new greenhouse will be achieved using 170 ft of PVC above-ground tube pipe between the existing well and new greenhouse. No ground disturbance is anticipated for the installation of the aboveground water line. While the applicant plans to pay for this activity themselves and no HUD funds would be utilized for this portion of work, the potential impacts from this action are included in the analyses below and it is contained within the delimited Area of Potential Effect (APE). This APE has been extended to the applicant residence to allow for utility connections. The visual APE is the viewshed of the proposed project. The proposed APE is approximately 0.26 acres.

Site photos are included in **Appendix A**. A site map (Figure 1) is included in **Appendix B**.

#### **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. The purpose of this project is to increase the productivity of the farm. This agricultural project associated with the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor in keeping with the overall objectives of the Economic Development Program.

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

The land proposed for the installation of the greenhouse it is an area that has not been developed with brush and grass grown up. The generator will be installed close to the applicant residence structure, next to the electric meter pedestal of the farm. The proposed SOW seeks to use the parcel for agricultural purposes. Some ground disturbance will be required.

#### **Structure of this Environmental Review Report (ERR).**

This ERR discusses the Funding Information immediately below. The environmental impacts of the proposed action are discussed in the Compliance with 24 CFR 58.5 and 58.6 Laws and Authorities checklist and Environmental Factors checklist. The listing of Additional Studies Performed, and Sources, Agencies and Persons Consulted follows the checklists. The discussions of Public Outreach, Cumulative Impacts, Alternatives,

and Summary of Findings and Conclusions are presented at the end of the ERR, before the listing of Mitigation Measures and Determination signatures. The appendices contain detailed information.

- Appendix A – Site Inspection
- Appendix B – Maps
- Appendix C – Additional Documentation
- Appendix D – Endangered Species
- Appendix E – SHPO Consultation

### **Funding Information**

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

**Estimated Total HUD Funded Amount:** \$48,832.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$48,832.00

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

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits 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"/>	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The nearest civil airport is the Fernando Luis Ribas Dominicci, located approximately 104,671 feet from the proposed site. The Luis

		Muñoz Marín is the nearest military airport, located approximately 119,221 feet from the proposed site. The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is in compliance with Airport Hazards requirements. Refer to Figure 2 in <b>Appendix B</b> .
<b>Coastal Barrier Resources</b>  Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	Puerto Rico has various Coastal Barrier Resources Systems (CBRS). The project is in the “Cordillera Central” region of Puerto Rico. The distance to the nearest CBRS unit (PR-47) is 92,428 feet. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act. Refer to Figure 3 in <b>Appendix B</b> .
<b>Flood Insurance</b>  Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The Project site is located in Zone X, area of minimal flood hazard, as per Floodplain Insurance Map 72000C1160H, effective date April 19, 2005. This project is in compliance with Floodplain Insurance requirements. (See Figures 4 and 5 in <b>Appendix B</b> .)

<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.5</b>		
<b>Clean Air</b>  Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The Project site is located in a county or air quality management district that is in attainment status for all criteria pollutants. The Barranquitas and Comerío municipalities are not listed in the EPA Green Book “Puerto Rico Nonattainment/Maintenance Status for Each County by Year for all Criteria Pollutants” (See the List in <b>Appendix C</b> ). The purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor would have no impact on air quality. The project is in compliance with Clean Air Act. Refer to EPA listing in <b>Appendix C</b> .
<b>Coastal Zone Management</b>  Coastal Zone Management Act, sections 307(c) & (d)	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project is located 82,705 feet from the nearest Coastal Zone Management area and does not affect a Coastal Zone as defined in the PR Coastal Zone Management Plan. The project

		is in compliance with the Coastal Zone Management Act. See Figure 7 in <b>Appendix B</b> .
<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>A site visit conducted on September 29, 2023, no debris or rubbish or visible signs vegetative stress, contamination, or toxic substances were noted at the project site.</p> <p>Site contamination was evaluated through online data searches to determine if toxic sites are located within 3,000-feet of the proposed project.</p> <p>There are no sites of environmental concern identified within 3,000 feet of the project site.</p> <p>The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. Refer to Figures 8 and 9 in <b>Appendix B</b>. The project is in compliance with Contamination and Toxic Substances.</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 type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor located in an area proposed to be used for agricultural purposes.</p> <p>According to EPA NEPAAssist Enviromapper, the nearest critical or proposed critical habitat is 57,001 feet to the southeast of the project location. The Official Species List from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website lists the Puerto Rican plain pigeon and Puerto Rican boa as being able to be found in the area, but there are no critical habitats for them at this location.</p> <p>A site-specific review of endangered species was conducted, for SOW-1 and SOW-2, in accordance with the Fish and Wildlife Act (47 Stat. 401, as amended: 16 U.S.C. 661 et seq.) (See <b>Appendix D</b>).</p> <p>The proposed project will have No Effect on listed species or habitats. Based on the nature of the project, scope of work, information available, and a careful analysis of the Project Site, and IPaC</p>

		<p>species list, it was determined that there would be No Effect for any of the listed species.</p> <p>If a Puerto Rican plain pigeon is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #s: ((787) 724-5700, (787) 230-5550, (787) 771-1124).</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.</p> <p>Conservation measures are included in the ESA Package and IPaC Report included in Appendix D. Refer to Figures 10 and 11 in <b>Appendix B</b>. This project is in compliance with the Endangered Species Act.</p>
<p><b>Explosive and Flammable Hazards</b></p> <p>24 CFR Part 51 Subpart C</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The project does not include development, construction, or rehabilitation that will increase residential density.</p> <p>The project is in compliance with Explosive and Flammable Hazard requirements.</p> <p>Refer to site visit report in <b>Appendix A</b>.</p>
<p><b>Farmlands Protection</b></p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project site is not designated as farmland of statewide importance. The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The project does not include any activities that could potentially convert agricultural land to nonagricultural use. Although the project includes new construction, the project is exempt from review under the Farmland Protection Policy Act (FFPA) as the project is limited to</p>

		<p>construction of on-farm structures needed for farm operations. No further review is required.</p> <p>This project is in compliance with the Farmland Protection Policy Act. Refer to Figure 12 in <b>Appendix B</b>.</p>
<p><b>Floodplain Management</b></p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The Project site is not located in a 100-year floodplain per Floodplain Insurance Map 72000C1160H, effective date April 19, 2005. The project site is not located in Preliminary Firm or an Advisory Base Flood Elevation (ABFE) special flood hazard area. See Figures 4, 5 and 6 in <b>Appendix B</b>. This project is in compliance with Executive Order 11988</p>
<p><b>Historic Preservation</b></p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The site was evaluated on October 17, 2023, by an SOI Qualified Architect/Architectural Historian. Additionally, the site was evaluated on October 20, 2023, by an SOI Qualified Archaeologist. (<b>Appendix E</b>). SHPO concurred with a finding of <b>No Historic Properties Affected</b> within the project’s Area of Potential on Effects on November 22, 2023.</p> <p>Refer to Figure 13 in <b>Appendix B</b> and the report in <b>Appendix E</b>. This project is in compliance with Historic Preservation requirements.</p>
<p><b>Noise Abatement and Control</b></p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>HUD’s noise regulations protect residential properties from excessive noise exposure. The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor at a farm site. HUD noise regulations do not apply as the project does not include new construction for residential use or rehabilitation of an existing residential property. The proposed project is in compliance with Noise Abatement and Control.</p>
<p><b>Sole Source Aquifers</b></p> <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>There are no EPA sole source aquifers in Puerto Rico. The project is in compliance with Sole Source Aquifer requirements.</p>

<p><b>Wetlands Protection</b></p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>The southern coast is 86,467 feet southwest of the property. The closest fresh-water bodies include an unnamed creek 196 feet southwest, Quebrada Grande 1,748 feet west of the property, and Rio Frio 2,200 feet north of the property.</p> <p>The NWI maps indicated that the unnamed creek located 196 feet to the southwest of project area is identified as a riverine wetland. No wetlands are located within the proposed project area.</p> <p>Standard construction BMPs would be used to control erosion and runoff during construction. With these mitigations the construction of the greenhouse would not impact any wetlands and includes no activities that would require further evaluation under this section.</p> <p>The project is in compliance with Executive Order 11990. Refer to Figure 14 in <b>Appendix B</b>.</p>
<p><b>Wild and Scenic Rivers</b></p> <p>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>This project is not within proximity of a National Wild and Scenic River (WSR). The distance to the nearest WSR is approximately 175,734 feet. The project is in compliance with the Wild and Scenic Rivers Act. Refer to Figure 15 in <b>Appendix B</b>.</p>

<p><b>ENVIRONMENTAL JUSTICE</b></p>		
<p><b>Environmental Justice</b></p> <p>Executive Order 12898</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>No adverse environmental impacts were identified in any other compliance review portion of this project that may disproportionately be high for low-income and/or minority communities. Therefore, this topic complies with Executive Order 12898.</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 proposed project is located on a private farm. The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The project site is zoned as "Rural General (R-G)." The proposed action is compliant with the agricultural land use of the Project area.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<p>The proposed project is located in relatively flat terrain. Soils in the proposed project area are classified Naranjito silty clay (NaF), Humatas clay (HtF), and Mucara Cay (MxF) all with 40 to 60 percent slopes, surrounded by forests and residences, 560 meters above mean sea level.</p> <p>The proposed project area for SOW 1 is located in a grassy planted area, within a cleared and maintained field. The proposed project for SOW 2 is located near the applicant's residence, on a flat, mowed surface. No trees will be removed during this project.</p> <p>The project site area is rated "moderate" for landslide susceptibility (see Figure 16 in <b>Appendix B</b>).</p> <p>Standard construction BMPs would be used to control erosion and runoff during construction.</p> <p>There will be little to no additional runoff associated with the project.</p>

Hazards and Nuisances including Site Safety and Noise	2	<p>During implementation of the project, construction activities may result in temporary elevation of ambient noise levels in immediate areas around active construction areas. The only nearby receptors are the residents of the farm.</p> <p>There is no access to the project area by the public. Standard BMPs, such as construction fencing, would be applied to protect the farm residents and public from typical construction hazards.</p>
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Environmental Assessment Factor	Impact Code	Impact Evaluation
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**SOCIOECONOMIC**

Employment and Income Patterns	2	<p>Temporary employment of workers related to construction activities would result, but no new permanent jobs would be created as a result of this project. These workers are expected to come from the local region. However, since the project will include an economic component, it may aid in restoring some employment opportunities and increase income.</p> <p>The proposed project would not negatively impact employment or income patterns.</p>
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Demographic Character Changes, Displacement	2	<p>The proposed project would not result in demographic character changes or displacement. Given the nature of the project area, no relocations or demolition of residential structures or businesses would occur as part of this project.</p>
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Environmental Justice	2	<p>In the area (one mile radius) in which project will occur.</p> <p>99% are people of color compared to PR average of 96%</p> <p>80% are low income compared to PR average of 70%</p> <p>28% are unemployed compared to PR average of 15%</p> <p>The proposed purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor will result in restoration and increase in income and potential employment opportunities in the local area. The impacts would be beneficial.</p> <p>See EJSscreen Report in <b>Appendix C</b></p>
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Environmental Assessment Factor	Impact Code	
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		Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The project would not result in any change to regional or local area educational and cultural facilities or increase demand for them.
Commercial Facilities	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The agricultural activity of the project property will improve. Other commercial facilities would not be impacted by the proposed project.
Health Care and Social Services	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. Health care and social services facilities would not be impacted by the proposed project. The project would not increase demand for health care and social services facilities.
Solid Waste Disposal / Recycling	2	Waste vegetation from clearing activities will either be composted on site or at regional composting centers. Soil from grading would be recycled on the farm as fill. Left over construction materials that could be reused on the farm (e.g., piping, structural materials, greenhouse covering fabrics) would be stored for later use. The remaining construction solid waste materials would be collected for transport to the local landfill. The amount of impact of solid waste resulting from the construction of the proposed project would be minor. During operations, the products and by-products would be agricultural, which waste would be biodegradable.
Wastewater / Sanitary Sewers	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed project would not include any bathrooms, wastewater, or sewage facilities. Current farm conditions would remain unchanged.
Water Supply	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. Applicant has access to a water supply from an existing water well located onsite. The proposed project will have minor impact on water usage.

Public Safety – Police, Fire and Emergency Medical	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed project would not create any new demand for emergency or health services.
Parks, Open Space and Recreation	2	The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed project would not create or destroy any new parks, open space, or recreational activities. It also would not increase use of those facilities.
Transportation and Accessibility	2	The proposed project would not involve the creation of new roads nor any increase in long-term traffic on existing roads. There would be some minor use of the existing road during construction. All residents and businesses would retain access to their properties during and after the project.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>NATURAL FEATURES</b>		
Unique Natural Features, Water Resources	2	The proposed project will be situated on a land with an unknown past use. The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The APE of the SOW-1 is at an estimated distance of 196 ft to the northeast of the identified unnamed creek, inside of the parcel. Natural vegetation buffer zone of equal or greater than 15 meters (50 ft) will be maintained, at all times. No cortex removal, ground disturbances, earth movement, or constructions activities are contemplated nearby a unique natural features or water resources.
Vegetation, Wildlife	2	The proposed project will be situated on a land with an unknown past use. The project consists of the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed location area for the SOW-1 is partially maintained while some area has grown vegetation, brush and some trees. To minimize the possible impact of the construction activities on the present vegetation the greenhouse will be located in its majority to the cleaned area. All vegetative exceedance material resultant from the clearing activities will be disposed as per the Municipal vegetative material management and diversion plan. No vegetative material will be stored or left at site. Proposal does not contemplate cutting,

		pruning or transplanting of trees. The proposed project will have minimal impact on vegetation and no impact on wildlife.
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Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>CLIMATE AND ENERGY</b>		
Climate Change Impacts	2	<p>This is a small agricultural project with no measurable impact on climate change factors.</p> <p>The project area is rural and does not have urban heat island effects.</p> <p>There would be no changes to the site configuration or structure that would specifically address the possibility and uncertainty of rising sea levels or the possibility of increases in rainfall intensity.</p> <p>With respect to climate change impact on the project, agricultural activities could be affected by drought.</p>
Energy Efficiency/Energy Consumption	2	<p>The use of the generator on an as needed basis will reduce the energy loss that would be experienced through transmission lines to the site.</p> <p>The project would not be connected to the local electricity provider. There would be no change in energy demand in the area.</p>

**Additional Studies Performed:** None required.

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

Site inspection was conducted on September 29, 2023 by Carlos Medina.

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

Puerto Rico State Historic Preservation Office

FAA, National Plan for Integrated Airport Systems:

[www.faa.gov/airports/planning\\_capacity/npas/reports/NPIAS-Report-2017-2021-Appendix-B-Part6.pdf](http://www.faa.gov/airports/planning_capacity/npas/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 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.

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/ecp/report/species-listings-by-state?stateAbbrev=PR&stateName=Puerto%20Rico&statusCategory=Listed>

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

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)

Puerto Rico Coastal Zone Management Program Plan, September 2009.

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

US Geological Survey, Data Release of May Showing Concentration of Landslides Caused by Hurricane Maria,

[www.sciencebase.gov/catalog/item/59de6459e4b05fe04ccd39d8](http://www.sciencebase.gov/catalog/item/59de6459e4b05fe04ccd39d8)

#### **List of Permits Obtained:**

None.

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

The local community has been very proactive in the recovery process. Puerto Rico Department of Agriculture has worked closely with the agricultural community. The 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 proposed project. The growth of agricultural products at the farm would not increase. The project would allow more efficient processing of the agricultural products. Water use would increase to a minor degree in the new greenhouses but would only impact the existing site water supply. There are no other wells nearby to be affected.

The project would not be connected to the local electricity provider. The proposed installation of a power generator will reduce the energy loss that would be experienced through transmission lines to the site and will allow for the water pump and the water well to be operated without representing an additional demand to the local utility. The project does not contemplate electrical connection to the new greenhouse. There would be no change in energy demand in the area.

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

The RGRW Program's goal is to increase agricultural capacity while promoting and increasing food security island-wide. This Program seeks to enhance and expand agricultural production related to economic revitalization and sustainable development activities. The applicant submitted a proposal to initiate agricultural production on their property. The proposed use of grant funds will allow the applicant to initiate the cultivation, processing, and delivery of agricultural products through the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor. Any alternative that would involve an off-property location would not enhance and expand agricultural production or allow for the economic development for this applicant. The actions are proposed in a property owned by the applicant and a field area that has been already cleared and maintained located proximate to the existing residence and the existing onsite water well. While the proposed location has the facilities to be used for storage of equipment, among the possible impacts of alternative location, the location of the new greenhouse and generator off-property will require transportation of equipment and products in and out of property creating an increase in traffic and other vial impacts due to the transportation of materials and heavy equipment. Alternative locations off and on property may represent an impact to undisturbed and/or uneven ground which could require heavier clearing and grading activities. On the other hand, the property already has a drilled well. An offsite alternative could require the drilling of a new well or the need to connect the facilities to local utility services if available. Given the above-mentioned possible impacts of an alternative location, an off-property alternative was not selected.

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

Under the No Action Alternative, the applicant would not receive federal funding for the purchase and installation of a greenhouse (SOW-1), a standby generator (SOW-2), and the purchase of a lawn tractor, 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 the 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 federal agencies

associated with the topics evaluated above. There are no environmental review topics addressed above that result in the need for additional formal compliance steps with federal agencies or the requirement for mitigations other than those listed below. There may be additional approvals or permits from local agencies. For example, permits may be required from PRDNER for any water or other utility connections and the Office of Permit Management (OGPe) is responsible for granting permits, licenses, certifications, consultations, construction, and any other procedure necessary for business development and land use in Puerto Rico. The appropriate and necessary permits should be obtained by the applicant and/or contractor, from the appropriate Department or concerned agency, prior to construction activities.

**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	Standard construction BMPs would be used to control erosion and runoff during construction.
Wetlands Protection	Standard construction BMPs would be used to control erosion and runoff during construction.
Endangered Species	Implement Puerto Rican Boa and the Puerto Rican plain pigeon conservation measures included in Appendix D, prior to and during construction to avoid or minimize impacts to this species.
<b>Permits or Agency Approvals Required</b>	
Permit or Approval	Permit Conditions
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.
Utility Connections- LUMA/PRASA	The project does not involve new utility connections. Facilities have local utility services connections. However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.
Power generator	The SOW includes a power generator installation. Electricity generators with motor capacity equal or higher than 10 horsepower (HP) require the submittal and approval of an Electric Generator Permit. Applications are submitted via the

	Single Business Portal of the OGPe to be evaluated and physicalized by the Air Quality Division of the PRDNER. Required permit should be obtained by the applicant prior to construction activities.
Well	Well or water intake activities require a construction and operation permit form the Water Permits and Franchises Division (DPFA) of the PRDRNER. The SOW does not involve the drilling, construction or installation of the existing well. However, the applicant is responsible for any permits or actions to ensure legalization (if needed) of existing well usage. 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.

**Determination:**

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

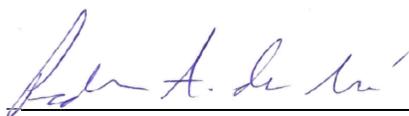
The project will not result in a significant impact on the quality of the human environment.

**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: 1/26/2024

Name/Title/Organization: Andrew McCadden, Senior Biologist, Tetra Tech Inc.

Certifying Officer Signature:  Date: 3/2/2024

Name/Title: Pedro A. de León Rodríguez, MSEM/Permits and Environmental Compliance Specialist

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

# **APPENDIX A**

## **Site Inspection and Photos**

## Environmental Field Observation - Puerto Rico Department of Housing

APPLICANT INFORMATION			
Application ID	PR-RGRW-04113		
Applicant Name	Angel M Rivera Arroyo		
Property Address	Carr 749 km 2.5 Int. Bo. Quebrada Grande		
Parcel ID	247-000-004-30		
Coordinates	18.212098, -66.267690		
Inspector Name	Carlos O. Medina		
Inspection Date	09/29/2023		
Building Type	vacant		
Number of Units	1		
Number of Stories	1		
Year Built; Data Source	----; Historian		
ENVIRONMENTAL OBSERVATIONS (attach photos and notes, as necessary, for any YES answers)			
OBSERVATION ITEMS	YES	NO	COMMENTS
A. Is the <b>structure in use</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Is <b>structure a greenhouse</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Is <b>Electricity connected</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. Is <b>water connected</b> ? (Utilities or Well)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1. Are there signs of <b>poor housekeeping</b> on site? (mounds of rubble, garbage, storm debris, solid waste, petroleum products, paint, pesticides, cleaning fluids, vehicle batteries, abandoned vehicles, pits, pools, ponds of hazardous substances, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Are there any <b>55-gallon drums</b> visible on site? If yes, are they leaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Are there any (or signs of any) <b>underground storage tanks</b> on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Are there signs of <b>ASTs</b> on the parcel or adjacent parcel? If yes, list approximate size and contents, if known.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. Is there any <b>stained soil or pavement</b> on the parcel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Is a water <b>drainage system</b> in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is a warehouse in use for storage of <b>Fertilizer or Pesticides</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. Are there any <b>groundwater monitoring wells</b> on the site or adjacent parcel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing water well.
9. Is there evidence of a <b>faulty septic system</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Is there <b>distressed vegetation</b> on the parcel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. Is there any visible indication of <b>MOLD</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

12. Is there any visible evidence of <b>asbestos, chipping, flaking or peeling paint, or hazardous materials</b> present in or on the structure?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13. Are any <b>additional site hazards</b> observed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
14. Is there any <b>permanent standing water</b> , such as a pond or stream, located on the site (do not include ponding from recent rain / weather events)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15. Does the subject property have <b>water frontage</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
16. Is there any indication of the presence of <b>Wetlands</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
17. Are there any obvious signs of <b>animals or birds nesting</b> on or near the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
18. Is the applicant aware of any <b>significant historical event or persons</b> associated with the structure, or of it being located in a historic district/area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
19. Is a <b>historic marker</b> present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Additional Notes:**

Case: PR-RGRW-04113  
Project Name: Angel M Rivera Arroyo  
Coordinates: 18.212086, -66.267348

Is the field graded? For what purpose the field was graded? Month, Year: none

Scope of Work: The scope includes the purchase and installation of a greenhouse, a generator and a tractor.

Land current in use for: vacant

Past Land use was: unknown

The applicant plans to do: installation of a greenhouse and a generator with a concrete pad of 5' x 5'.

Where the applicant plans to do the ground disturbances for the scopes of work, add the coordinates, descriptions and approximately the measurements:

Scope of work 1: installation of a greenhouse  
18.212098, -66.267690

Installation of a greenhouse of 70' x 30' in metal, plastic and saran. This greenhouse will be use for the production of sweet peppers in tables.

Scope of work 2: installation of a generator  
18.211622, -66.267029

Installation of a generator in a concrete pad of 5' x 5'. This generator will provide power to an existing water well.

Any new water connection or power connection?

Water: water for the greenhouse will be provided from an existing water well located at 18.212542, -66.267500. Overground PVC tubes will be installed from the water well to the greenhouse, approximately 170' long.

Power: power for the water well will be provided by a generator. A connection thru an electric conduit underground at 3' with a distance of approximately 375' long.

## Site Sketch



**Front of Structure**

Photo Direction: West



**Facing Away From Front**

Photo Direction: East



**Side #1 of Structure**

Photo Direction: East



**Facing Away From Side #1**

Photo Direction: West



**Back of Structure**

Photo Direction: North



**Facing Away From Back**

Photo Direction: South



**Side #2 of Structure**

Photo Direction: Northeast



**Facing Away From Side #2**

Photo Direction: Southwest



**Streetscape #1**

Photo Direction: Northeast



**Streetscape #2**

Photo Direction: Southwest



**Address**

Photo Direction: Southwest



Outbuildings

Photo Description: Applicant house

Photo Direction: Southwest



Structural Details

Photo Description: Architectural details

Photo Direction: West



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: North



Structural Details

Photo Description: Architectural details

Photo Direction: East



Structural Details

Photo Description: Architectural details

Photo Direction: West



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

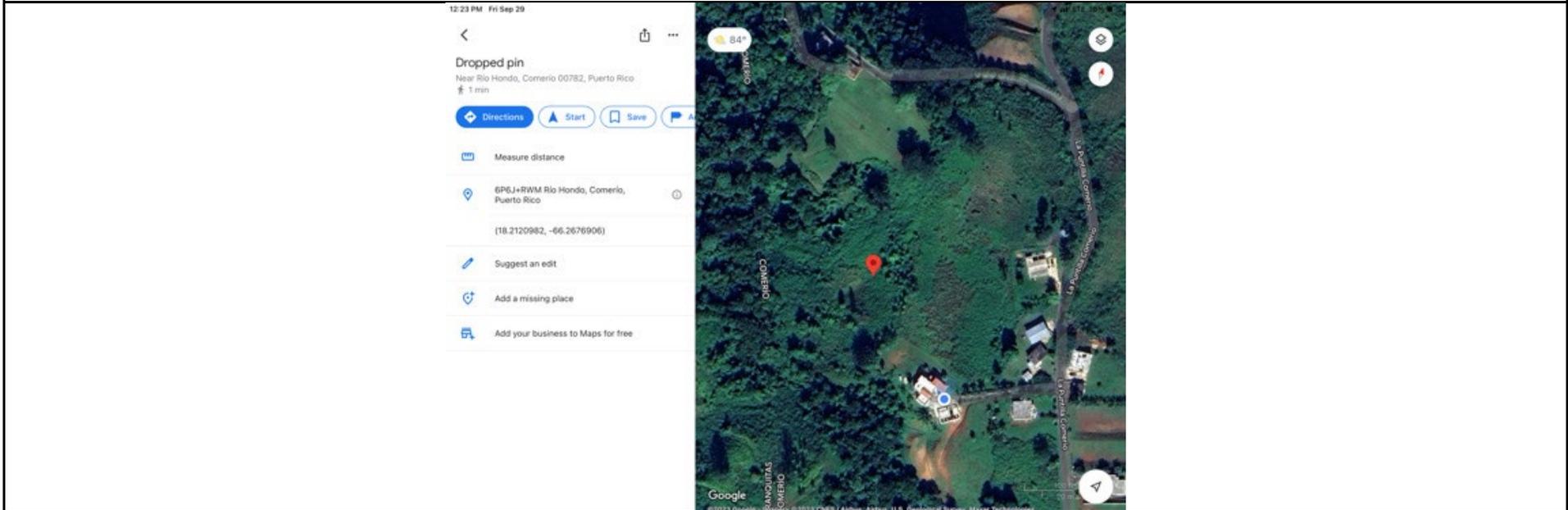
Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: North



Groundwater Monitoring Well

Photo Description: Existing water well

Photo Direction: South



**Scope Of Work**

Photo Description: Scope of work 1: installation of a greenhouse

Photo Direction: South



**Scope Of Work**

Photo Description: Scope of work 1: installation of a greenhouse

Photo Direction: Northwest



**Scope Of Work**

Photo Description: Scope of work 1: installation of a greenhouse

Photo Direction: West



**Scope Of Work**

Photo Description: Scope of work 1: water connection for greenhouse

Photo Direction: Southeast



**Scope Of Work**

Photo Description: Scope of work 2: installation of a generator

Photo Direction: North



**Scope Of Work**

Photo Description: Scope of work 2: installation of a generator

Photo Direction: East



**Scope Of Work**

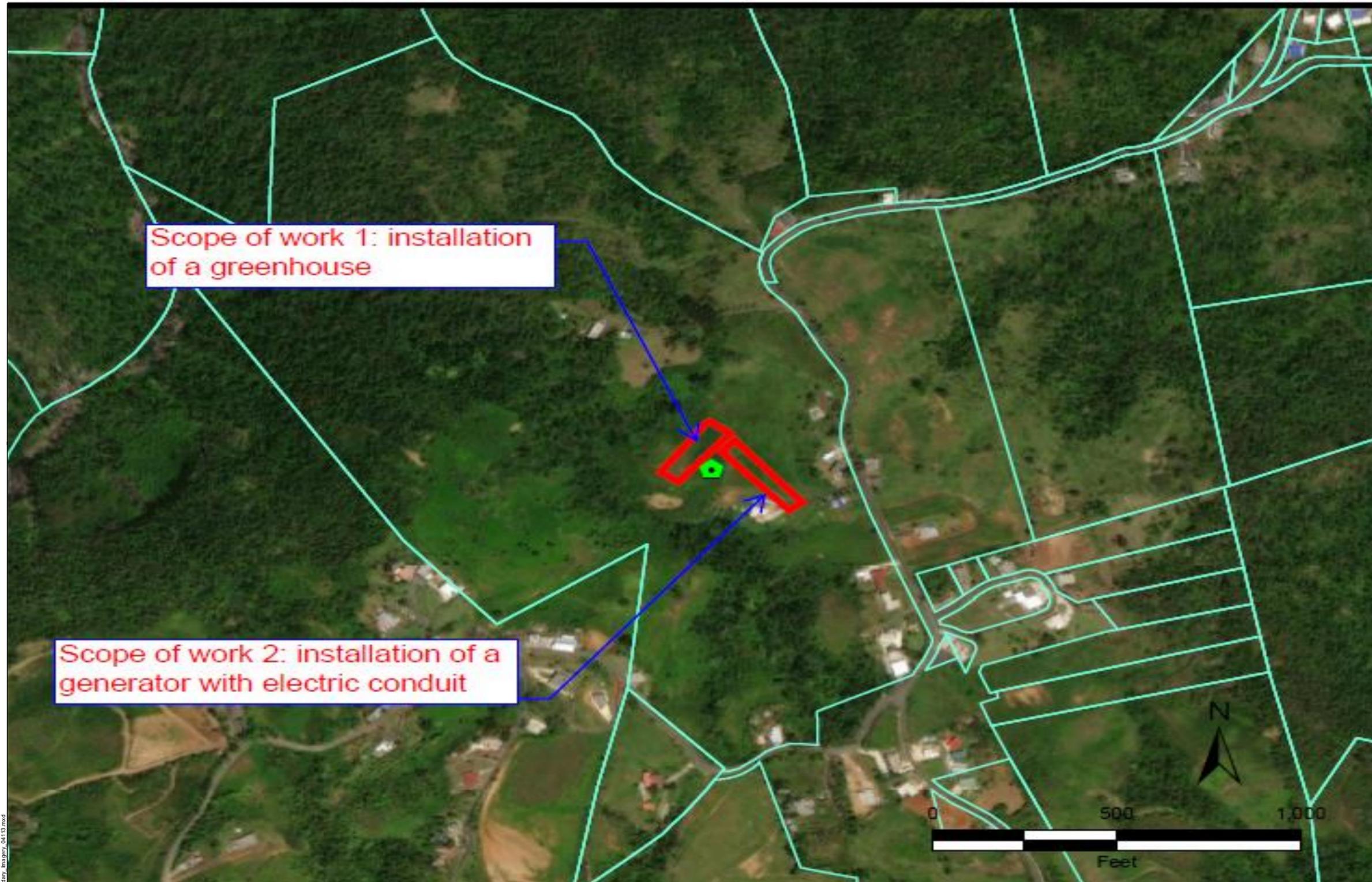
Photo Description: Scope of Work 2: installation of a generator

Photo Direction: Southeast



# APPENDIX B

## Maps



- Legend**
- ◆ Project Parcel
  - Parcels
  - Area of Potential Effect

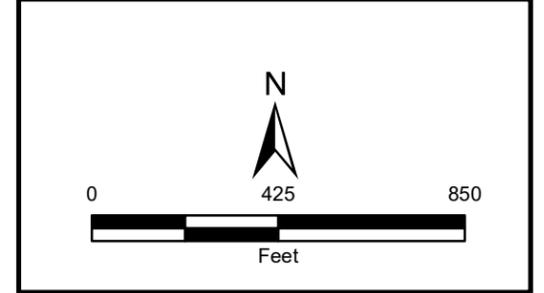
**PUERTO RICO**



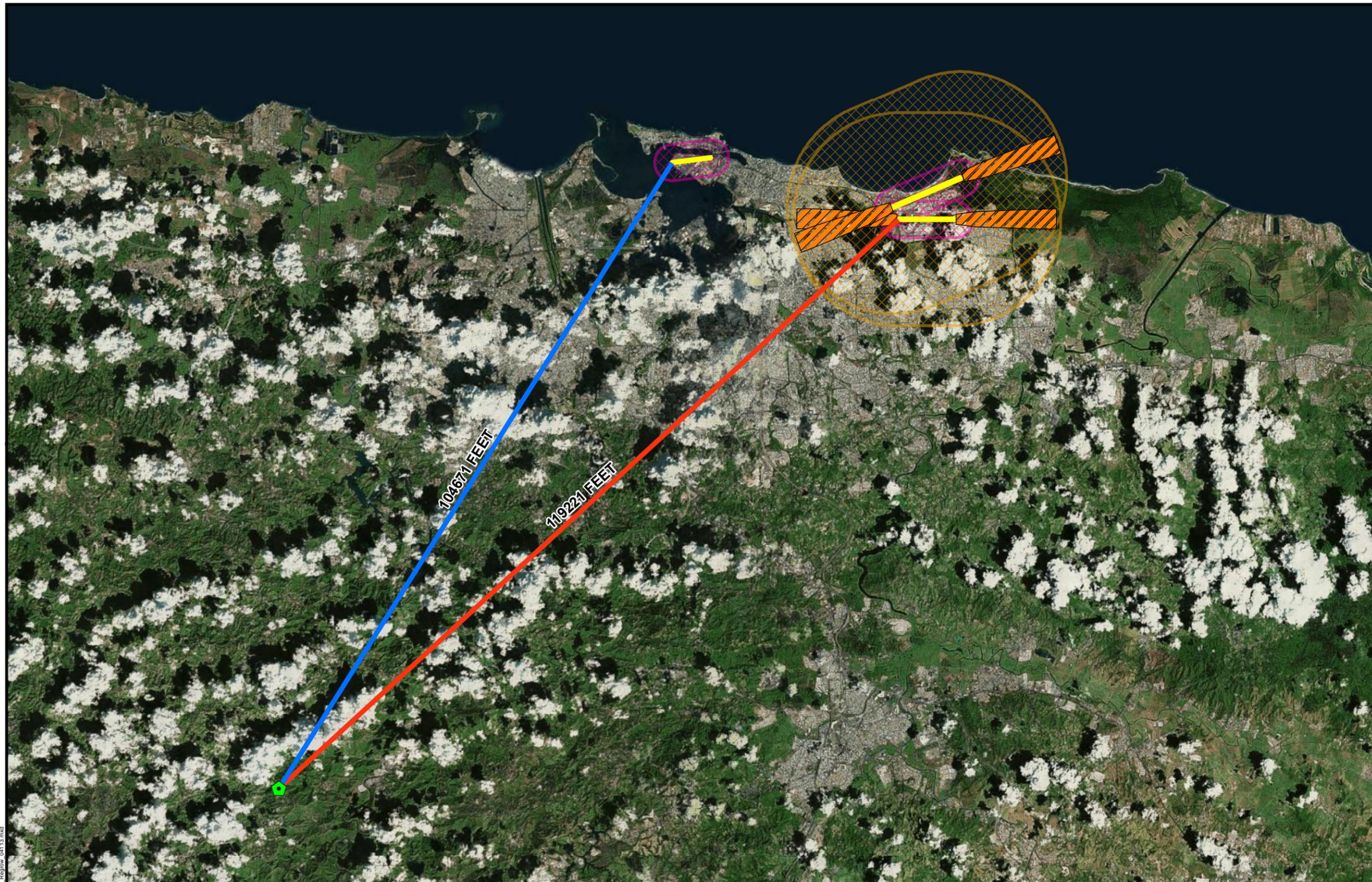
**Figure 1: PROJECT LOCATION**  
**APPLICANT ID: PR-RGRW-04113**  
 ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
 Name of Development: Angel M Rivera Arroyo  
 Parcel Coordinates: 18.212098, -66.267690



Source: CRIM  
<https://catastro.crimpr.net/cdprpc/>  
 Author: TG      Date: 10/26/2023



File Path: Z:\data\USPRT\ar\Regrow\imp\PR\BOC\_Regrow\_Secordary\_Images\04113.mxd



**Legend**

-  Civilian Runway Protection Zones
-  Military Accident Potential Zones
-  Airport Runways
-  Civilian Airport 2,500 Feet Buffer
-  Military Airport 15,000 Feet Buffer

**Distance to Nearest Airport  
in Feet: 104671**

**PUERTO RICO**



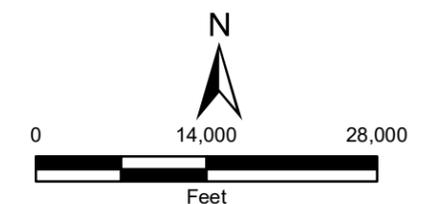
**Figure 2: AIRPORT ZONES**  
**APPLICANT ID: PR-RGRW-04113**

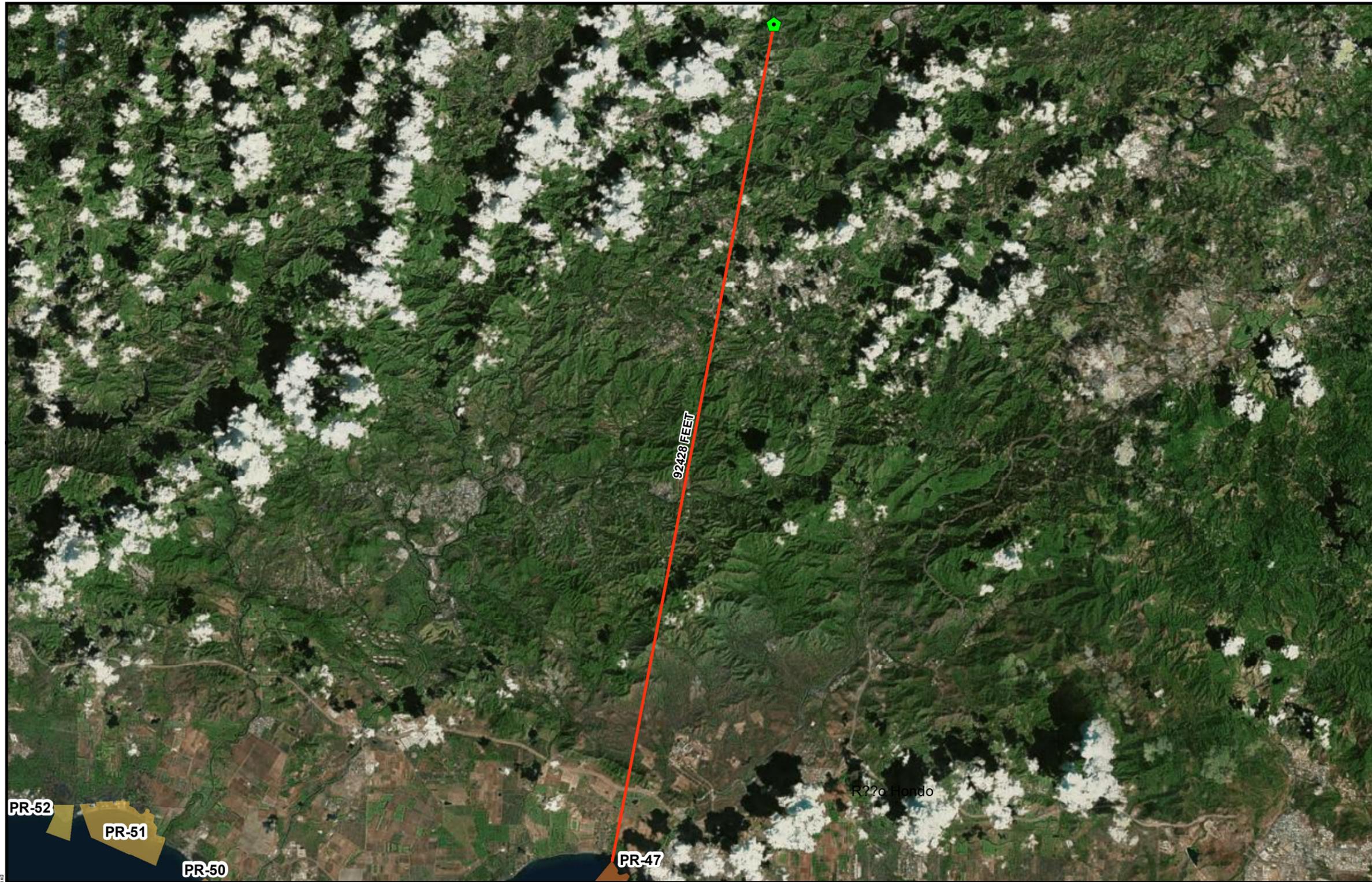
**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
**Name of Development:** Angel M Rivera Arroyo  
**Parcel Coordinates:** 18.212098, -66.267690



Source: USDOT  
<https://www.faa.gov>

Author: TG Date: 10/9/2023





**Legend**

Project Parcel

**Coastal Barrier Resources System Boundary**

**Unit**

PR-47

PR-50

PR-51

PR-52

Distance to Nearest Coastal Barrier Resources System in Feet:  
92428 Feet

**PUERTO RICO**



PR-52  
PR-51  
PR-50

PR-47

R??o Hondo

92428 FEET



Source: U. S. Fish & Wildlife Service  
<https://www.fws.gov>

Author: TG Date: 6/29/2023

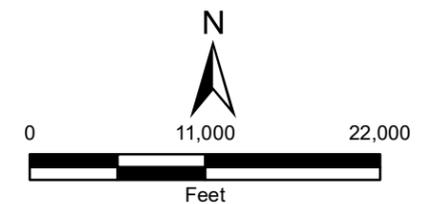
**Figure 3: COASTAL BARRIERS IMPROVEMENT ACT**

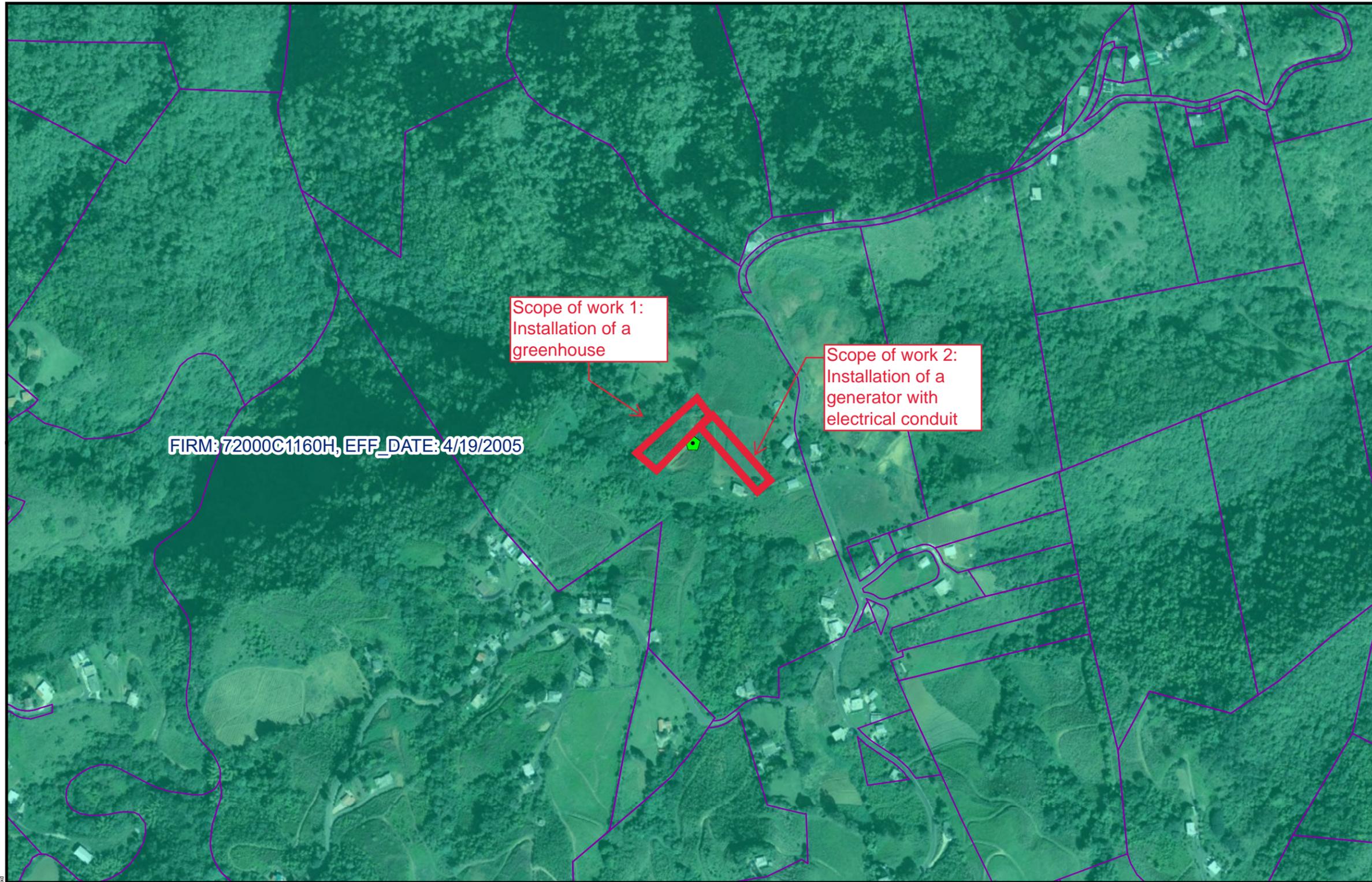
**APPLICANT ID: PR-RGRW-04113**

ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

Name of Development: "Angel M Rivera Arroyo"

Parcel Coordinates: 18.212098, -66.26769





- Legend**
-  Project Parcel
  -  Parcels
  -  FIRM Panels
  -  Floodway
  -  100 Yr Floodzone
  -  500 Yr Floodzone
  -  Area Of Minimal Flood Hazard
  -  Unmapped for Floodplain
  -  Area of Potential Effect

**PUERTO RICO**



**Figure 4: FLOODPLAIN MANAGEMENT  
 APPLICANT ID: PR-RGRW-04113**

**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

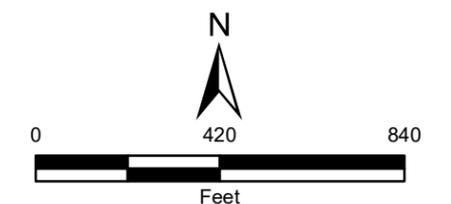
**Name of Development:** Angel M Rivera Arroyo

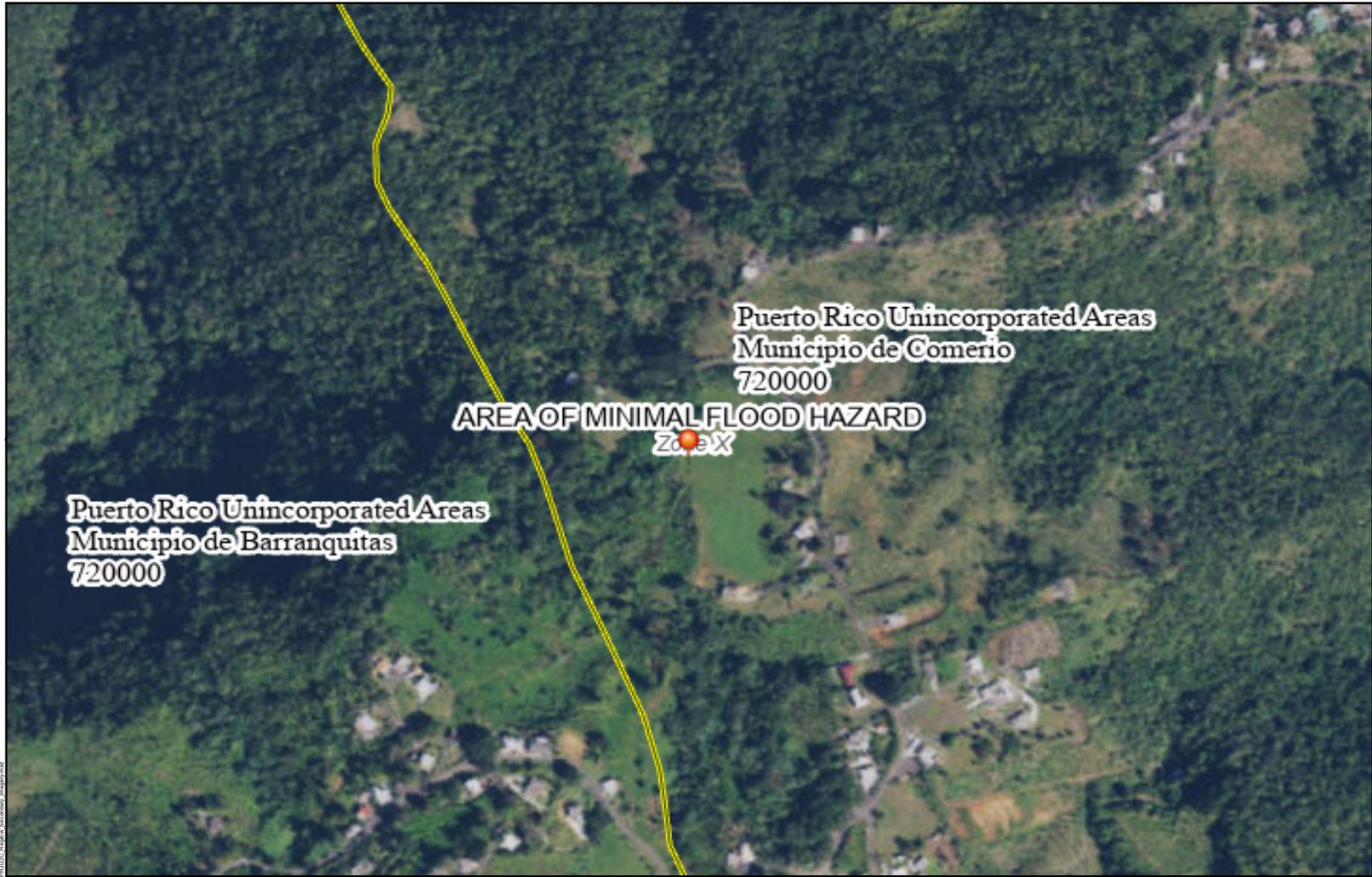
**Parcel Coordinates:** 18.212098, -66.26769



Source: FEMA  
<https://msc.fema.gov>

Author: TG Date: 8/30/2023



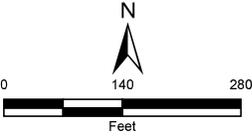


**Legend**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) Zone A, V, AE, AR
  - With BFE or Depth Zone AE, AD, AH, VE, AR
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
  - Future Conditions 1% Annual Chance Flood Hazard Zone X
  - Area with Reduced Flood Risk due to Levee. See Notes. Zone X
  - Area with Flood Risk due to Levee Zone D
- OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard Zone X
  - Effective LOMRs
  - Area of Undetermined Flood Hazard Zone D
- GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES**
- 20.2 Cross Sections with 1% Annual Chance
  - 17.2 Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS**
- Digital Data Available
  - No Digital Data Available
  - Unmapped
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

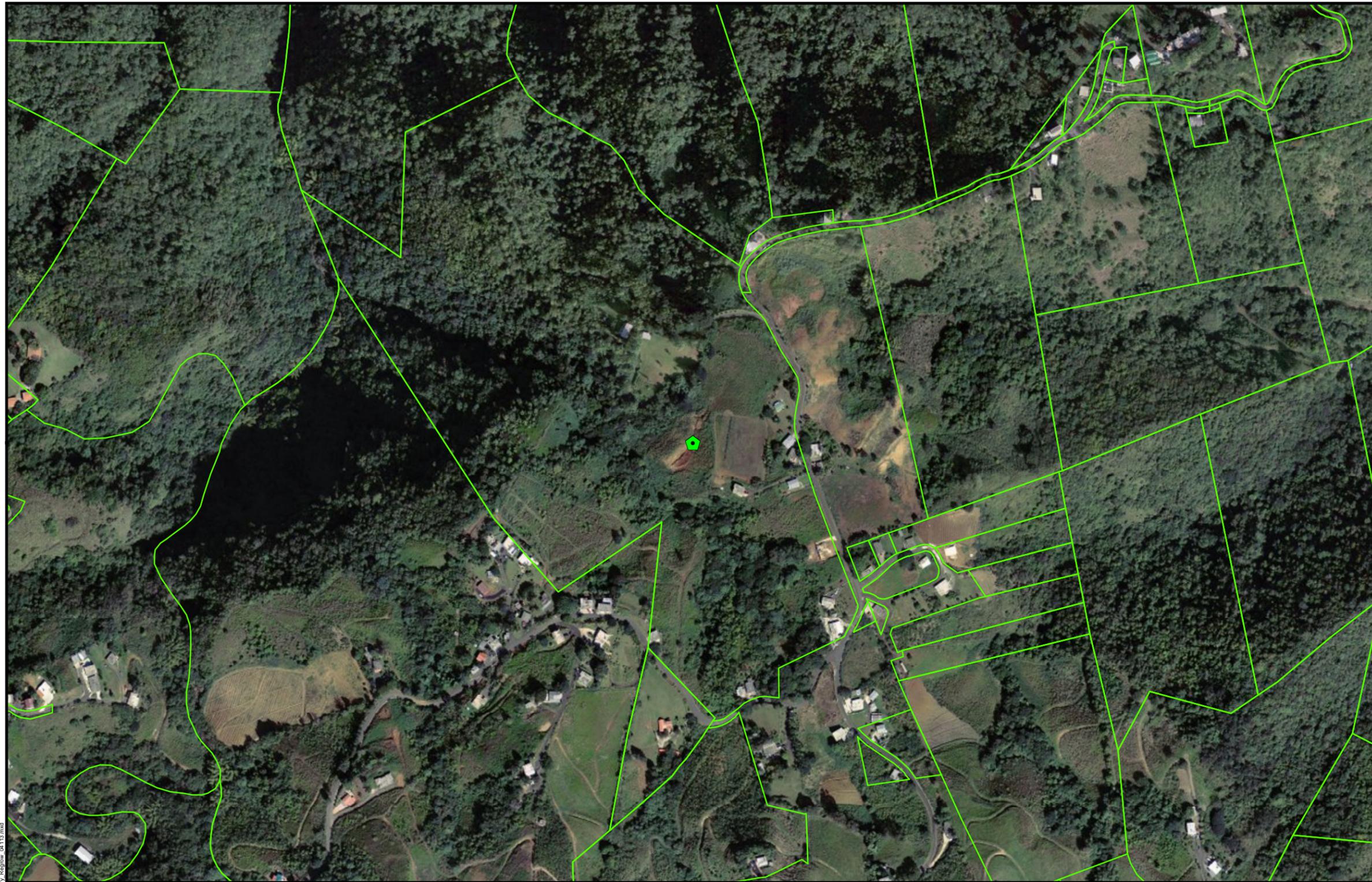
**PUERTO RICO**



**FIGURE 5: NATIONAL FLOOD HAZARD LAYER FIRMETTE**  
**APPLICANT ID: PR-RGRW-04113**  
 ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
 Name of Development: Angel M Rivera Arroyo  
 Parcel Coordinates: 18.212098 , -66.26769

**Tt TETRA TECH**  
 Source: FEMA  
<https://www.msc.fema.gov>  
 Author: TG Date: 5/31/2023

File Path: \\msc\p026\1\COOP\ASGIS\Drawings\041113\FIRM\FIRM\_041113\_001.mxd; Review: Secondary; Imaged: 5/31/2023 10:00:00 AM



- Legend**
- Project Parcel
  - Parcels

**PUERTO RICO**



**Figure 6: ADVISORY BASE FLOOD ELEVATION**  
**APPLICANT ID: PR-RGRW-04113**

ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

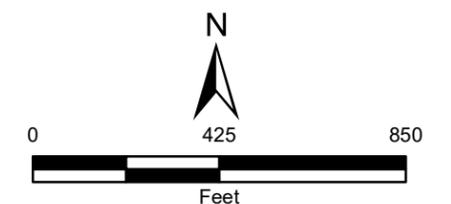
Name of Development: Angel M Rivera Arroyo

Parcel Coordinates : 18.212098, -66.267690



Source: FEMA  
<https://gis.fema.gov>

Author: TG Date: 10/26/2023





**Legend**

-  Project Parcel
-  Coastal Zone Management Boundary

Distance to Nearest Coastal Zone:  
82705 Feet

**PUERTO RICO**



**Figure 7: COASTAL ZONE MANAGEMENT  
APPLICANT ID: PR-RGRW-04113**

ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

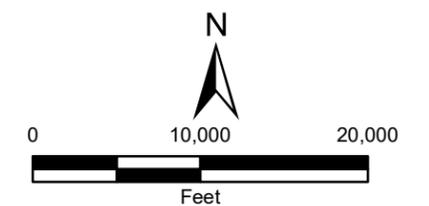
Name of Development: Angel M Rivera Arroyo

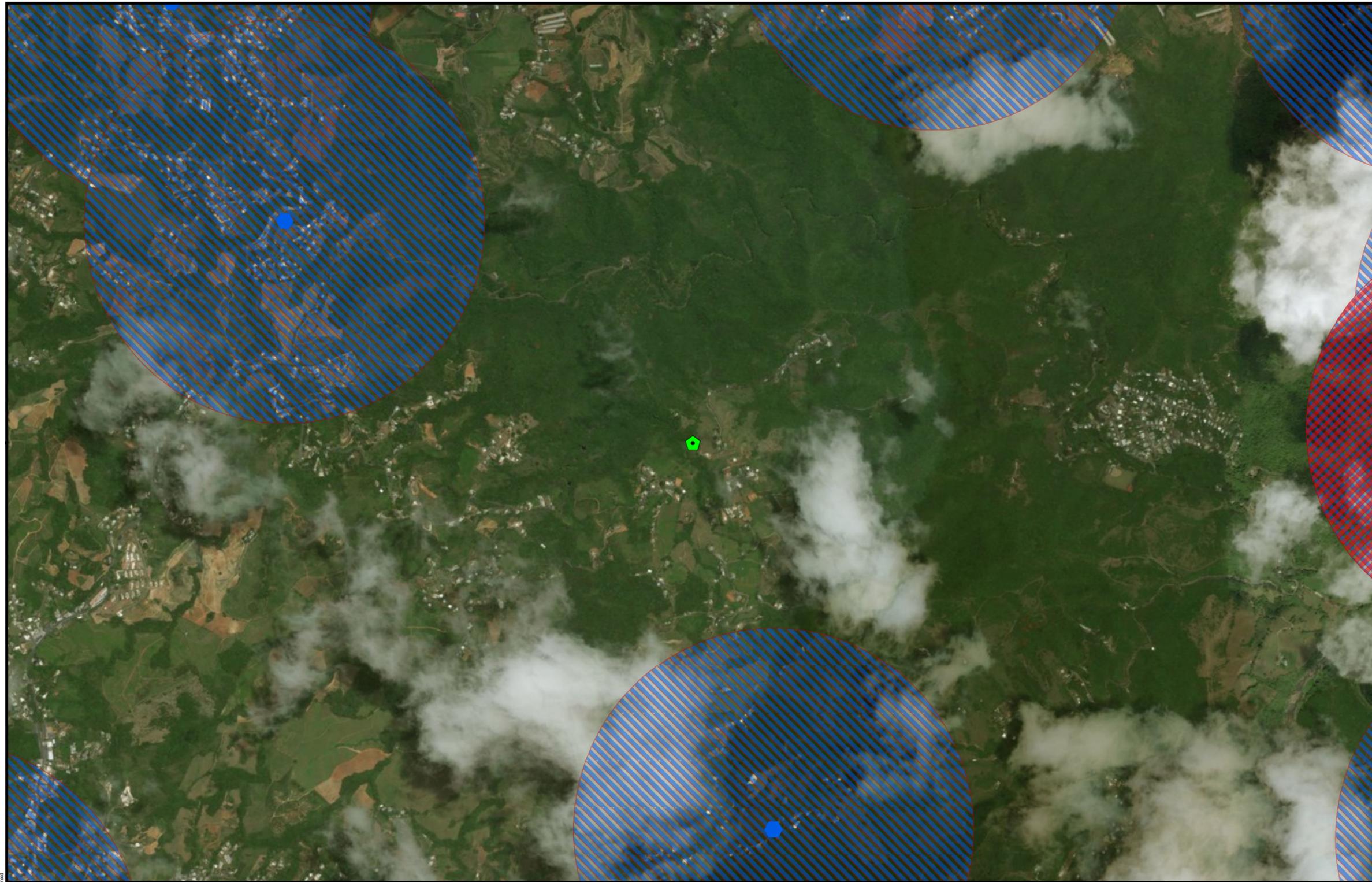
Parcel Coordinates: 18.212098, -66.26769



Source: NOAA's Ocean Service  
<https://data.noaa.gov>

Author: TG Date: 6/29/2023





- Legend**
-  Project Parcel
  -  RCRA
  -  Toxic Release Inventory Site
  -  Superfund Site
  -  Brownfield Sites
  -  ParcelsForMapRun\_WMAS\_ReGrow
  -  3000 Ft Buffer TRI
  -  3000 Ft Buffer Superfund
  -  3000 Ft Buffer RCRA
  -  3000 Ft Buffer Brownfield

**PUERTO RICO**



**Figure 8: TOXIC CHEMICALS AND GASES, HAZARDOUS MATERIALS,  
CONTAMINATION, AND RADIOACTIVE SUBSTANCES**

**APPLICANT ID: PR-RGRW-04113**

**ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794**

**Name of Development: Angel M Rivera Arroyo**

**Parcel Coordinates: 18.212098, -66.26769**

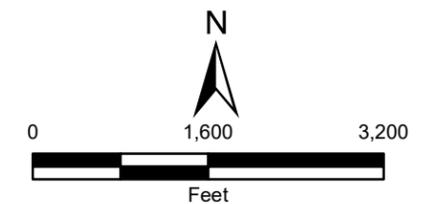


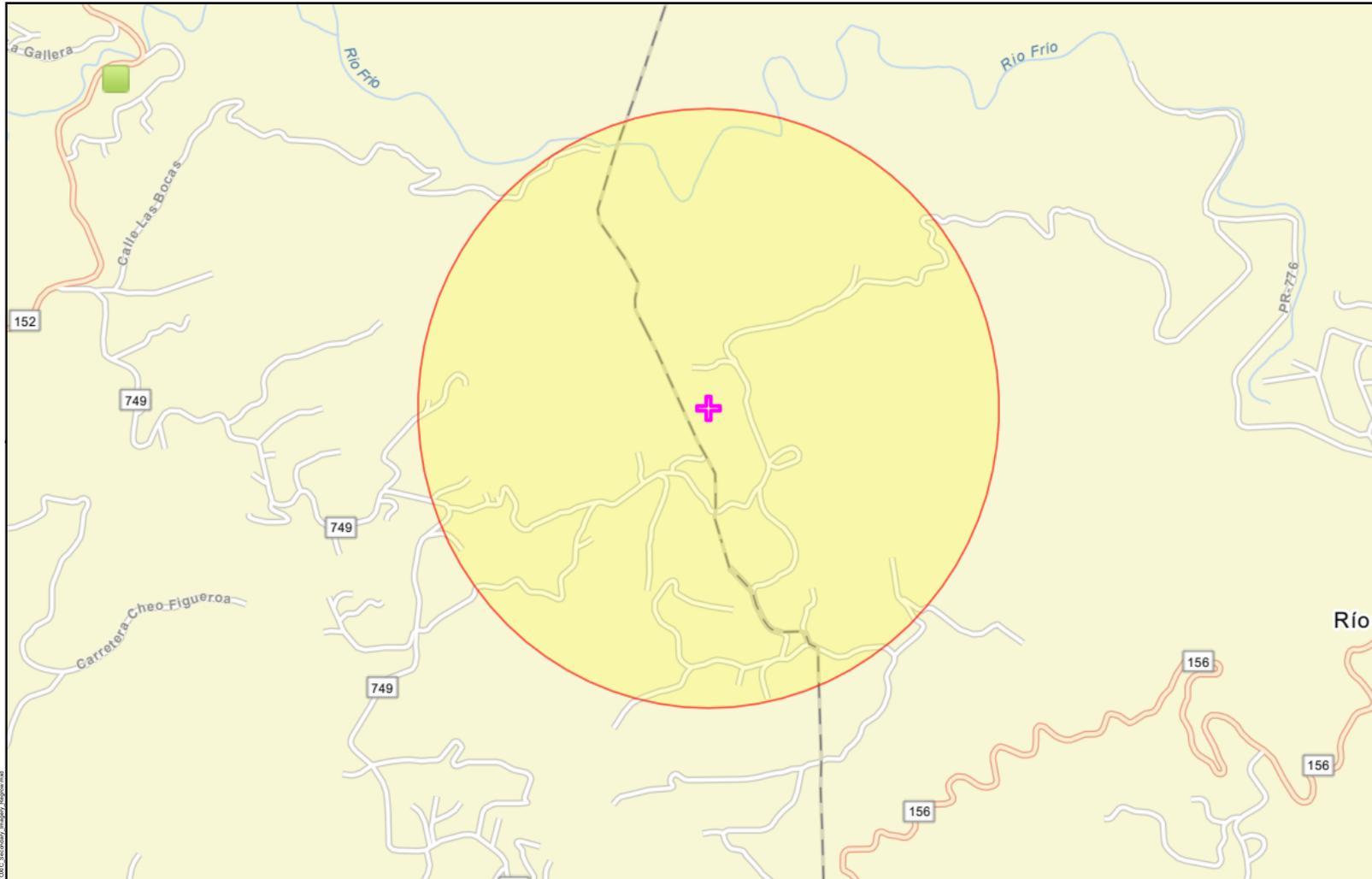
Source: E.P.A.

<https://www.epa.gov/frs/geospatial-data-download-service>

Author: JB/AK

Date: 6/29/2023





**Legend**

- Superfund (NPL)
- Toxic Substances Control Act (TSCA)
- Toxic Releases (TRI)
- Brownfields (ACRES)
- Hazardous Waste (RCRAInfo)
- + Project Parcel

**PUERTO RICO**



**Figure 9: NEPA Assist Map**

**APPLICANT ID: PR-RGRW-04113**

**ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794**

**Name of Development: Angel M Rivera Arroyo**

**Parcel Coordinates: 18.212098 , -66.26769**

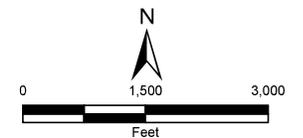


Source: E.P.A.

<https://www.epa.gov/frs/geospatial-data-download-service>

Author: JB/AK

Date: 5/18/2023



All data: USGS National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) data. Imagery: Bing Maps.



- Legend**
-  Project Parcel
  -  Parcels
  -  Area of Critical Hábitat

**PUERTO RICO**



**Figure 10: ENDANGERED SPECIES ACT  
 APPLICANT ID: PR-RGRW-04113**

**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

**Name of Development:** Angel M Rivera Arroyo

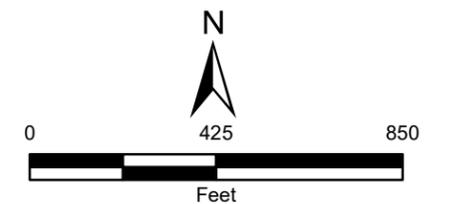
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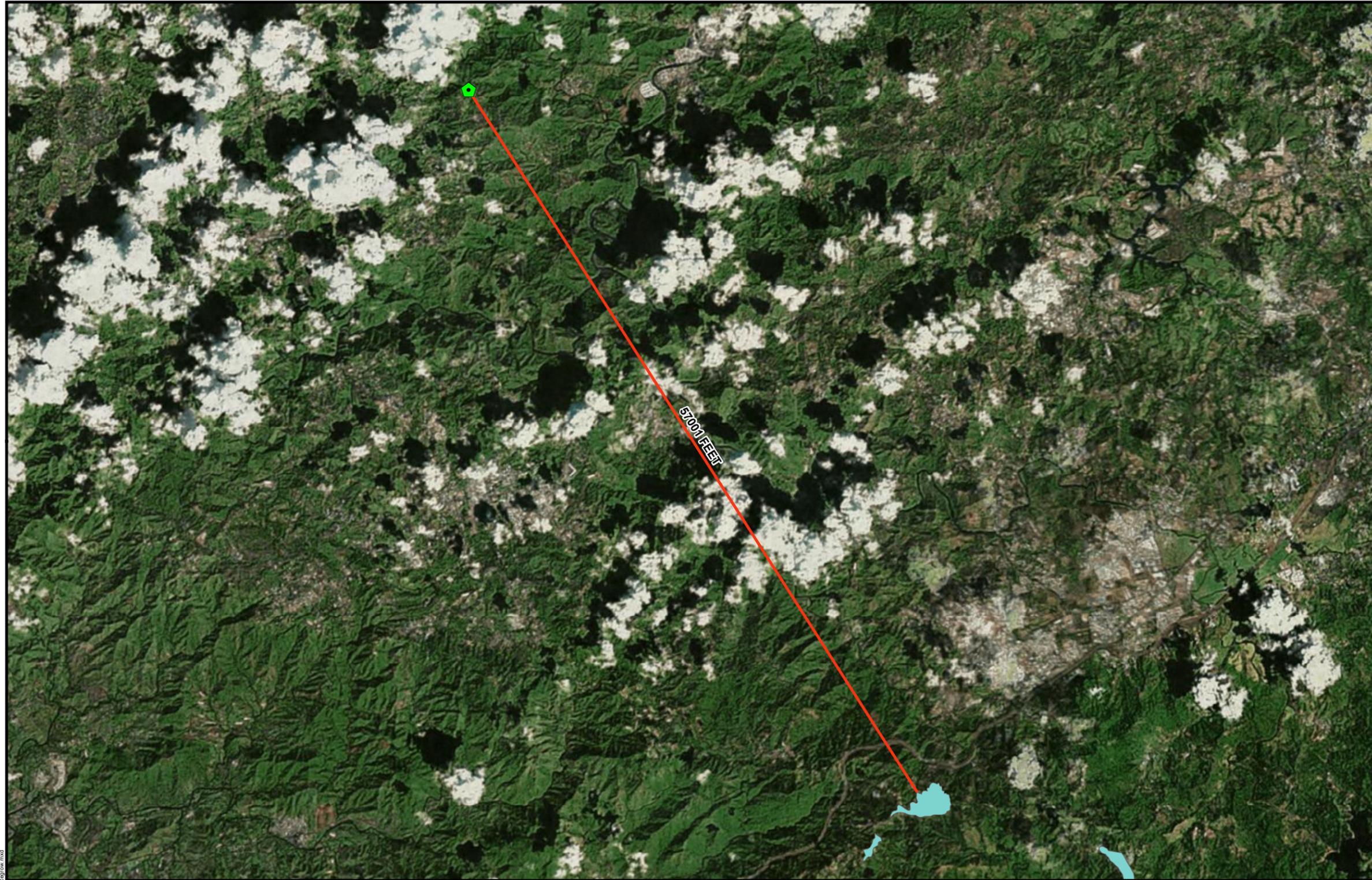


Source: U.S. FISH & WILDLIFE SERVICE  
<https://ecos.fws.gov>

Author: TG

Date: 8/30/2023





**Legend**

-  Project Parcel
- comname**
-  Golden coqui

Distance to Nearest Critical Habitat in Feet:  
57001 Feet

**PUERTO RICO**



**Figure 11: CRITICAL HABITATS**  
**APPLICANT ID: PR-RGRW-04113**

**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

**Name of Development:** Angel M Rivera Arroyo

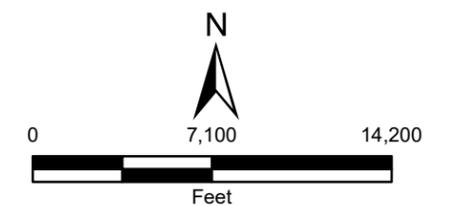
**Parcel Coordinates:** 18.212098, -66.26769

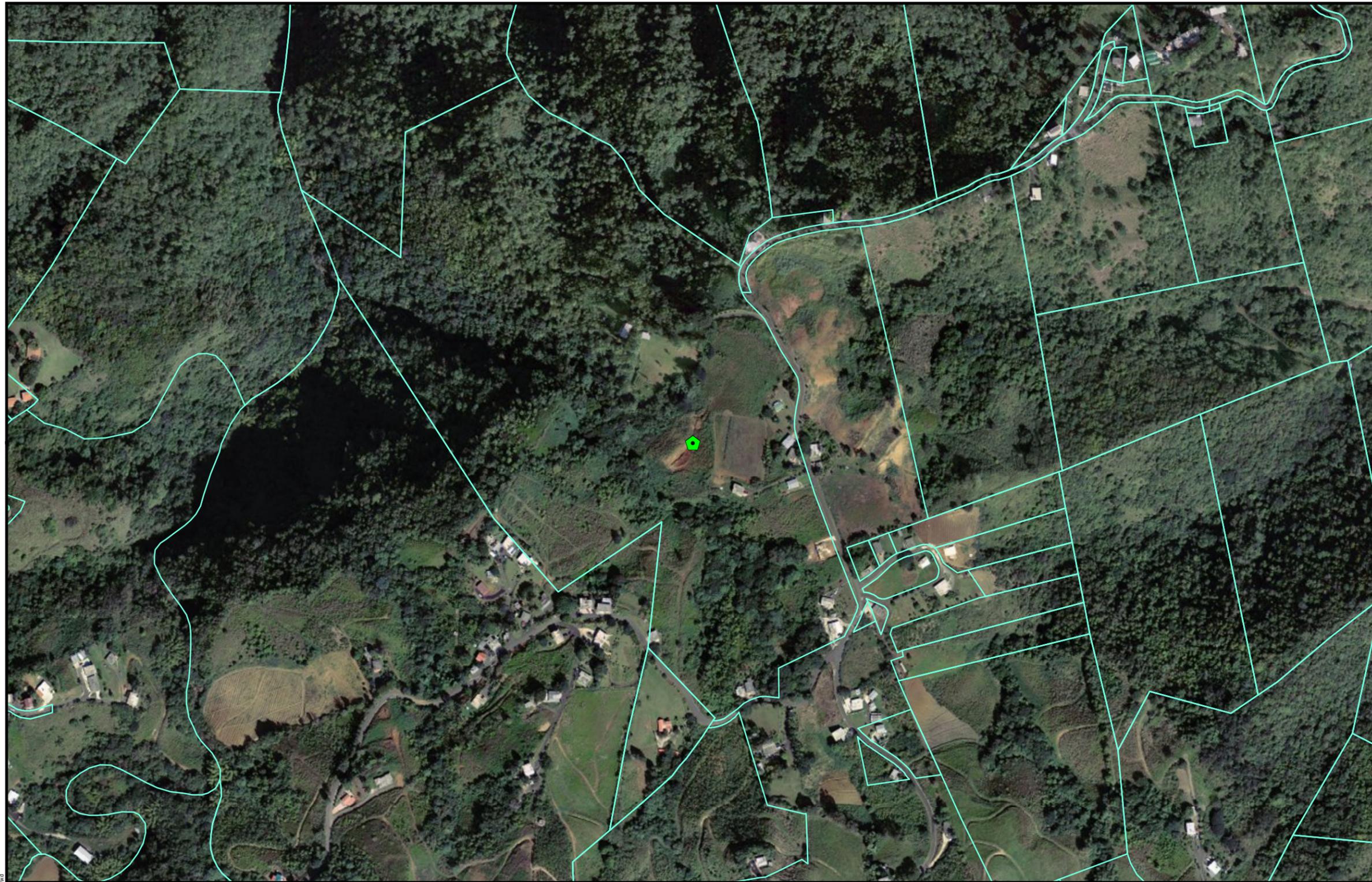


Source: U.S. FISH & WILDLIFE SERVICE  
<https://ecos.fws.gov>

Author: TG

Date: 6/29/2023





**Legend**

- ◆ Project Parcel
- Farm Class**
- All areas are prime farmland
- Farmland of statewide importance
- Farmland of statewide importance, if irrigated
- Prime farmland if drained
- Prime farmland if irrigated
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Prime farmland if protected from flooding or not frequently flooded during the growing season

**PUERTO RICO**



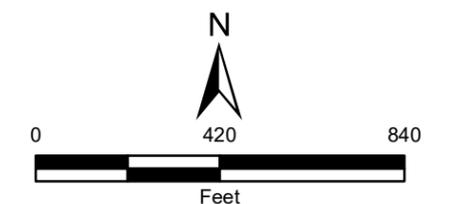
**Figure 12: FARMLAND PROTECTION**  
**APPLICANT ID: PR-RGRW-04113**

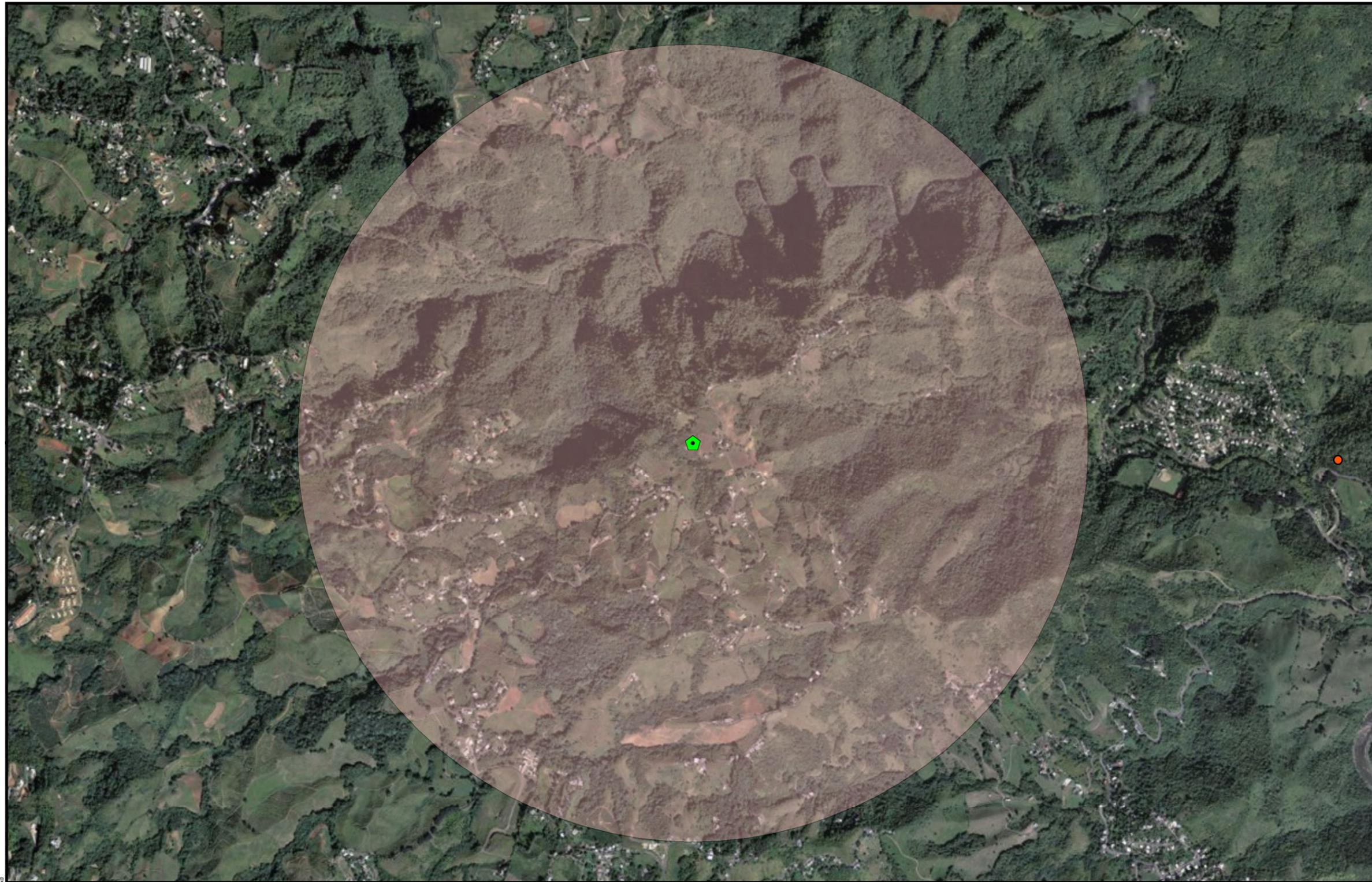
**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
**Name of Development:** Angel M Rivera Arroyo  
**Parcel Coordinates:** 18.212098, -66.26769



Source: USDA  
<https://websoilsurvey.sc.egov.usda.gov>

Author: TG Date: 8/30/2023





**Legend**

-  Project Parcel
-  Historic ICP Sites
-  Cultural Resource Building Point
-  Cultural Resource District Point
-  Cultural Resource Site Point
-  Cultural Resource Structure Point
-  Historic Comunidades
-  Traditional Urban Centers
-  Cultural Resource Building Polygon
-  Cultural Resource District Polygon
-  Cultural Resource Site Polygon
-  Cultural Resource Structure Polygon
-  1 Mile Property Buffer

**PUERTO RICO**



**Figure 13: HISTORIC PRESERVATION  
 APPLICANT ID: PR-RGRW-04113**

**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

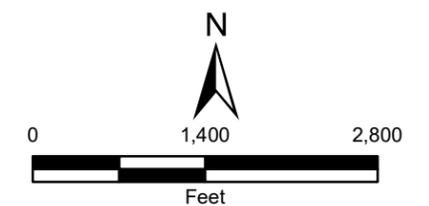
**Name of Development:** Angel M Rivera Arroyo

**Parcel Coordinates:** 18.212098, -66.26769



Source: National Park Service  
<https://www.nps.gov/>

Author: TG Date: 6/29/2023





- Legend**
- Project Parcel
  - Parcels
- WETLAND TYPE**
- Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland
  - Freshwater Emergent Wetland
  - Freshwater Forested/Shrub Wetland
  - Freshwater Pond
  - Lake
  - Riverine
- Area of Potential Effect

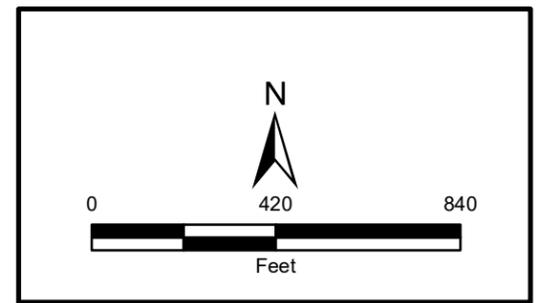
**PUERTO RICO**



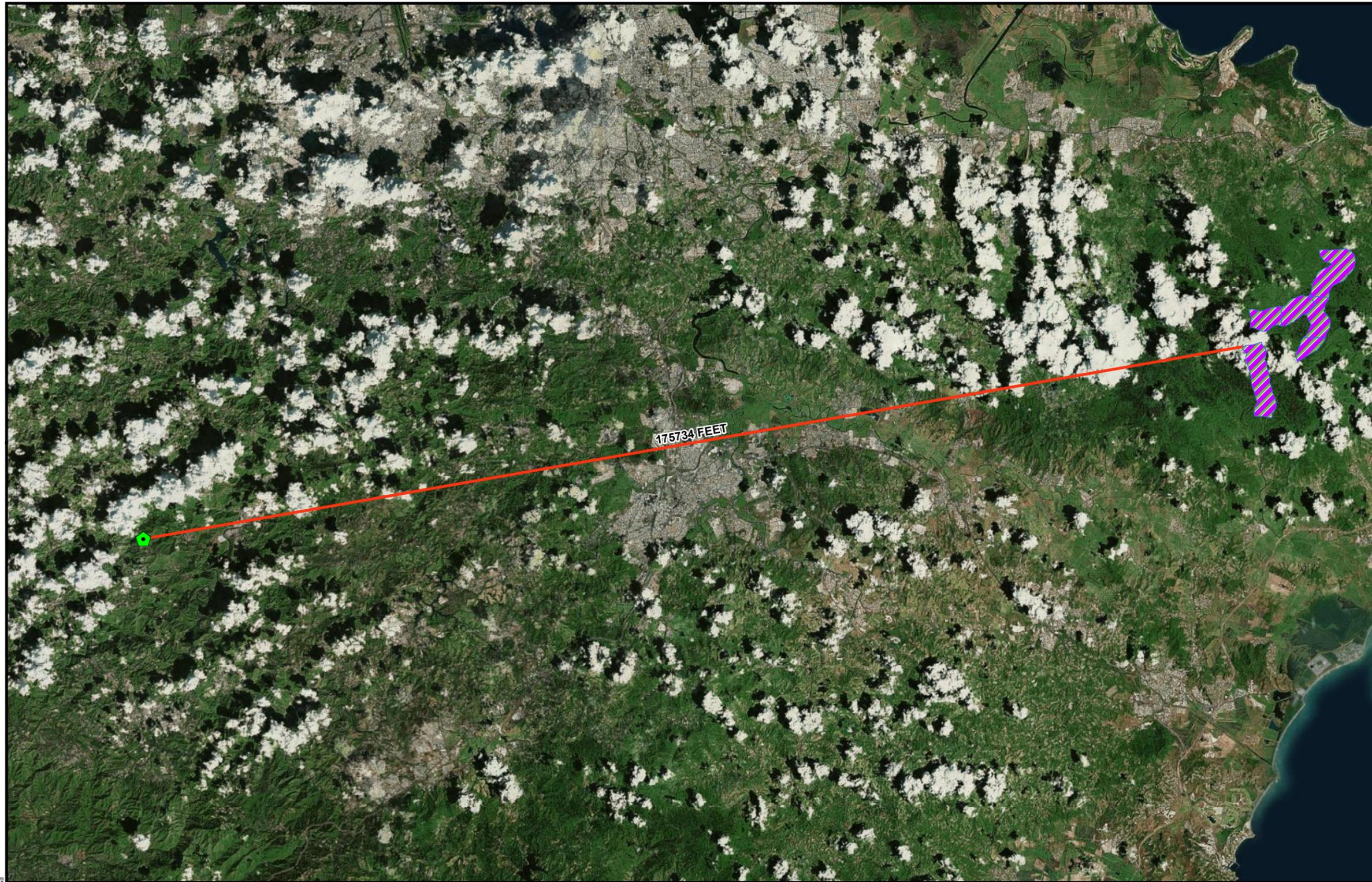
**Figure 14: WETLANDS**  
**APPLICANT ID: PR-RGRW-04113**  
 ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
 Name of Development: Angel M Rivera Arroyo  
 Parcel Coordinates: 18.212098, -66.26769



Source: U. S. Fish & Wildlife Service  
<https://www.fws.gov>  
 Author: TG Date: 8/30/2023



File Path: Z:\data\USFWS\PR\WETLANDS\_Secordary\_Imagery\_Register.mxd



**Legend**

-  Project Parcel
-  Wild and Scenic Rivers

Distance to Nearest Wild and Scenic River in Feet: 175734 Feet

**PUERTO RICO**



**Figure 15: WILD AND SCENIC RIVERS ACT  
APPLICANT ID: PR-RGRW-04113**

**ADDRESS:** Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794

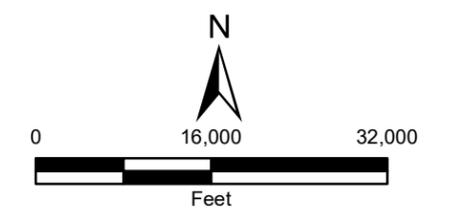
**Name of Development:** Angel M Rivera Arroyo

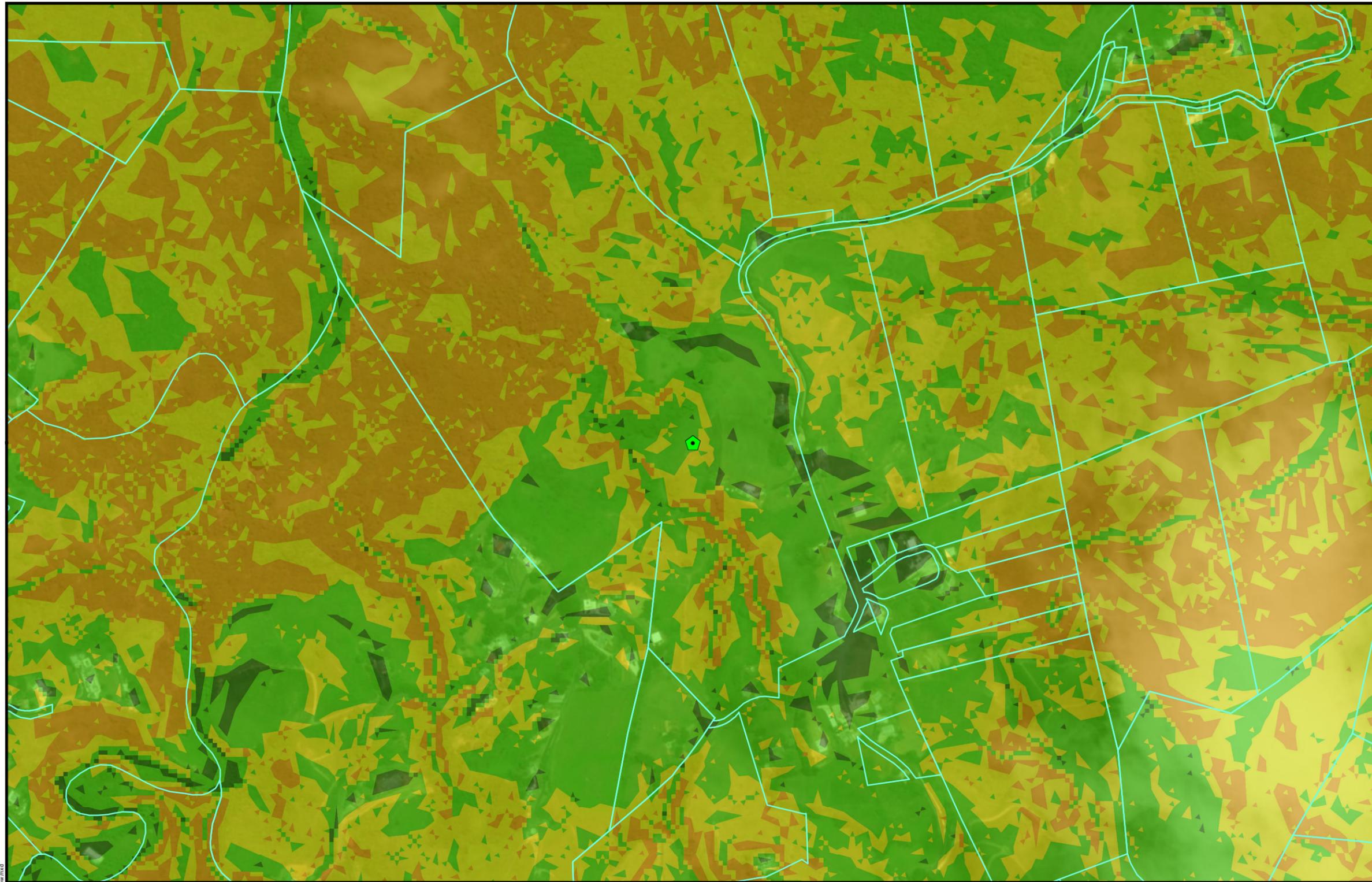
**Parcel Coordinates:** 18.212098, -66.26769



Source: U. S. Forest Service  
<https://www.fs.usda.gov>

Author: TG Date: 6/29/2023





- Legend**
-  Project Parcel
  -  Parcels
- Landslide Susceptibility**
-  Extremely High
  -  Very High
  -  High
  -  Moderate
  -  Low

**PUERTO RICO**

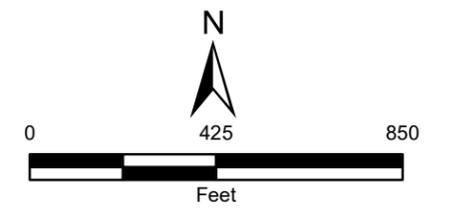


**Figure 16: SLOPE AND EROSION**  
**APPLICANT ID: PR-RGRW-04113**

ADDRESS: Carr 749 km 2.5 Int. Bo. Quebrada Grande, PR 00794  
 Name of Development: Angel M Rivera Arroyo  
 Parcel Coordinates: 18.212098, -66.26769



Source: PRDOH  
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=10506ecc7f15491daee17647f19248ee>  
 Author: TG Date: 8/30/2023



File Path: Z:\data\USPRT\Facilities\Secondary\_Images\22\_8302023

# APPENDIX C

## Additional Documentation



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 December 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:

PUERTO RICO

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

# EJScreen Community Report

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

## Comerío Municipio, PR

1 mile Ring Centered at 18.211719,-66.267136  
 Population: 1,112  
 Area in square miles: 3.14

A3 Landscape

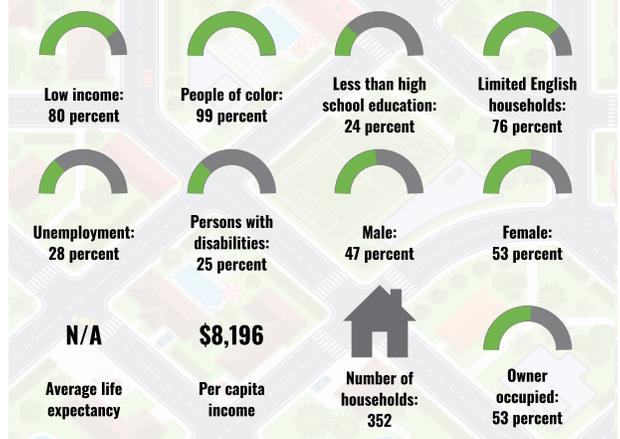


January 3, 2024  
 04113  
 Search Result (point)  
 0 0.01 0.02 0.04 0.08 mi  
 0 0.02 0.04 0.08 km  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, IGC

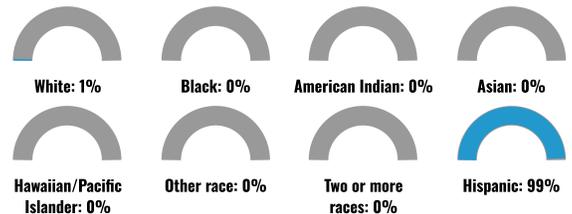
### LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	6%
Spanish	94%
Total Non-English	94%

### COMMUNITY INFORMATION



### BREAKDOWN BY RACE



### BREAKDOWN BY AGE



### LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

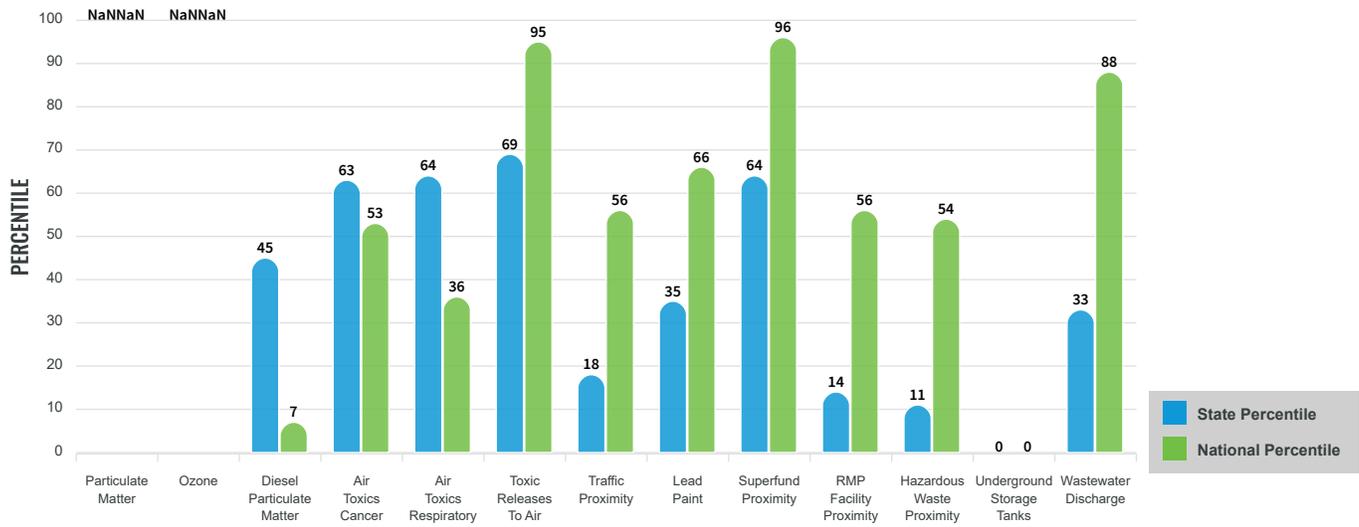
# Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

## EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

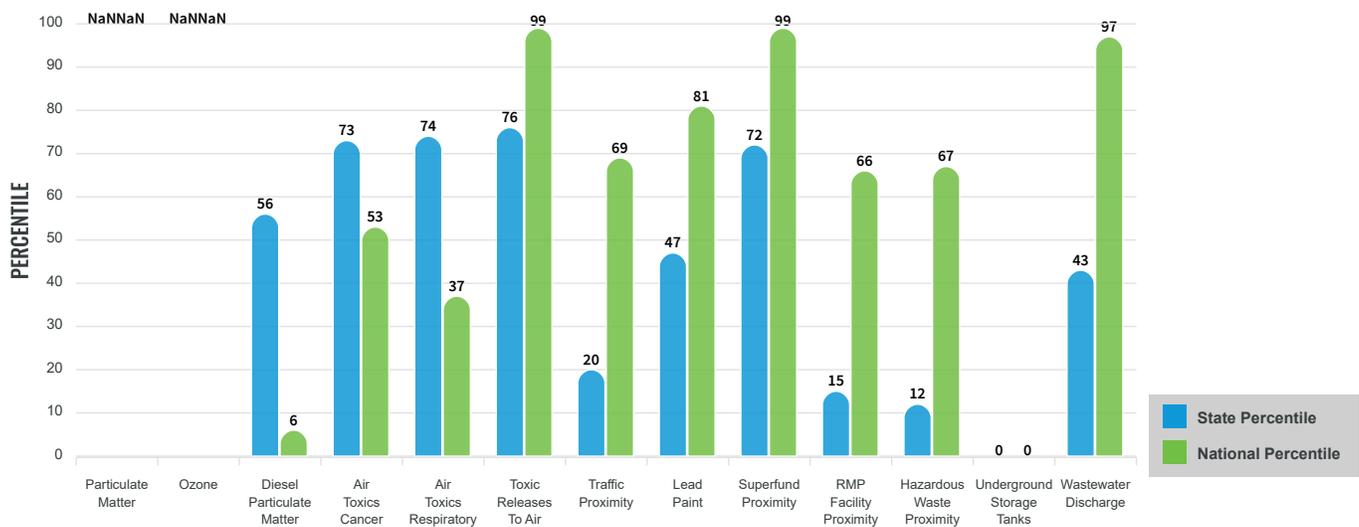
### EJ INDEXES FOR THE SELECTED LOCATION



## SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 1 mile Ring Centered at 18.211719,-66.267136

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>POLLUTION AND SOURCES</b>					
Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	N/A	N/A	N/A	8.08	N/A
Ozone (ppb)	N/A	N/A	N/A	61.6	N/A
Diesel Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	0.0314	0.0667	42	0.261	1
Air Toxics Cancer Risk* (lifetime risk per million)	20	20	15	25	5
Air Toxics Respiratory HI*	0.2	0.19	17	0.31	4
Toxic Releases to Air	1,300	4,300	66	4,600	65
Traffic Proximity (daily traffic count/distance to road)	15	180	18	210	20
Lead Paint (% Pre-1960 Housing)	0.081	0.16	46	0.3	32
Superfund Proximity (site count/km distance)	0.1	0.15	62	0.13	68
RMP Facility Proximity (facility count/km distance)	0.066	0.47	12	0.43	16
Hazardous Waste Proximity (facility count/km distance)	0.081	0.76	10	1.9	16
Underground Storage Tanks (count/km <sup>2</sup> )	0	1.7	0	3.9	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0032	2.3	48	22	58
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index	89%	83%	58	35%	98
Supplemental Demographic Index	51%	43%	71	14%	99
People of Color	99%	96%	23	39%	96
Low Income	80%	70%	59	31%	97
Unemployment Rate	28%	15%	84	6%	98
Limited English Speaking Households	76%	67%	64	5%	99
Less Than High School Education	24%	21%	60	12%	86
Under Age 5	7%	4%	85	6%	68
Over Age 64	16%	22%	26	17%	52
Low Life Expectancy	N/A	N/A%	N/A	20%	N/A

\*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

## Sites reporting to EPA within defined area:

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

## Other community features within defined area:

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

## Other environmental data:

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

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

Report for 1 mile Ring Centered at 18.211719,-66.267136

# EJScreen Environmental and Socioeconomic Indicators Data

## HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	N/A	N/A	N/A	20%	N/A
Heart Disease	N/A	N/A	N/A	6.1	N/A
Asthma	N/A	N/A	N/A	10	N/A
Cancer	N/A	N/A	N/A	6.1	N/A
Persons with Disabilities	21.6%	21.6%	48	13.4%	89

## CLIMATE INDICATORS

INDICATOR	HEALTH 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	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	34%	32%	59	14%	92
Lack of Health Insurance	2%	7%	8	9%	15
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for 1 mile Ring Centered at 18.211719,-66.267136

**APPENDIX D**  
Endangered Species

Date: November 10, 2023

Applicant ID: PR-RGRW-04113

Street Address: Carr 749 km 2.5 Int. Bo. Quebrada Grande

Municipality: Barranquitas

## Subject – Endangered Species No Effect Determination for PR-RGRW-04113 SOW 1

Tetra Tech conducted a site-specific review of endangered species 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 located at Carr. PR-406 Km 3.8 Int. Bo. Anones, in the Municipality of Barranquitas, Puerto Rico (Parcel ID# 247-000-004-30).

The proposed project is for the purchase and installation of a greenhouse at coordinates 18.212098, -66.267690. The proposed greenhouse will be a metal structure covered with plastic and Saran sheet that has an approximate footprint of 70-foot (ft) x 30 ft and be used to grow peppers. Water connection to the new greenhouse will be achieved above-ground using 170 ft of PVC tube pipe. The power for the water pump will be provided by connecting the pump to the new generator (See **Endangered Species No Effect Determination for PR-RGRW-04113 SOW 2**) with an approximately 375 ft long underground electric conduit to be installed at a depth of 3 ft.

The proposed project area is located in a grassy planted area, within a cleared and maintained field. There are residences to the east and south of the proposed project area. A forested area is located to the west, outside of the proposed project area. No trees will be removed during this project.

The National Wetlands Inventory indicated that no wetlands are located within the proposed project area (Figure 14). The proposed project will not affect any wetlands.

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

Species	Status
Puerto Rican Plain Pigeon ( <i>Columba inornate wetmorei</i> )	Endangered
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered

No Critical Habitats were noted within the project area (Figure 10). Based on site review and site photos, no suitable habitat was found within the proposed project area for the listed species. Based on the nature of the project, previous site disturbance, scope of work, information available, and a careful analysis of the Project Site, and IPaC species list, we have made the following effects determinations:

<b>Species</b>	<b>Effect Determination</b>	<b>Conservation Measures to be implemented (if needed)</b>
Puerto Rican Plain Pigeon ( <i>Columba inornate wetmorei</i> )	No Effect	No Conservation Measures
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	No Effect	No Conservation Measures

A 'No Effect' determination has been made based on the lack of suitable habitat for the listed species, as well as previous disturbance and current land use of the proposed project area.

If a Puerto Rican Plain Pigeon is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #s: ((787) 724-5700, (787) 230-5550, (787) 771-1124).

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.

**Attachments:**

IPaC Resource List

Shelby McDowell



B.S. Biologist, Tetra Tech

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Comerío County, Puerto Rico



## Local office

Caribbean Ecological Services Field Office

☎ (787) 834-1600

📅 (787) 851-7440

✉ [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

MAILING ADDRESS

Post Office Box 491

Boqueron, PR 00622-0491

PHYSICAL ADDRESS

Office Park I

State Road #2 Km 156.5, Suite 303}

Mayaguez, PR 00680

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [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.

The following species are potentially affected by activities in this location:

## Birds

NAME	STATUS
Puerto Rican Plain Pigeon <i>Columba inornata wetmorei</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/7955">https://ecos.fws.gov/ecp/species/7955</a>	Endangered

## Reptiles

NAME	STATUS
Puerto Rican Boa <i>Chilabothrus inornatus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a>	Endangered

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

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### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
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Additional information can be found using the following links:

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The [data](#) in this location indicates there are no migratory [birds of conservation concern](#) expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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# Facilities

## National Wildlife Refuge lands

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

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

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

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

### Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Date: November 10, 2023

Applicant ID: PR-RGRW-04113

Street Address: Carr 749 km 2.5 Int. Bo. Quebrada Grande

Municipality: Barranquitas

## Subject – Endangered Species No Effect Determination for PR-RGRW-04113 SOW 2

Tetra Tech conducted a site-specific review of endangered species 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 located at Carr. PR-406 Km 3.8 Int. Bo. Anones, in the Municipality of Barranquitas, Puerto Rico (Parcel ID# 247-000-004-30).

The proposed project is for the purchase and installation of a standby generator and construction of a concrete pad, located at coordinates 18.211622, -66.267029. This generator will provide power to the pump of an existing water well located at coordinates 18.212542, -66.267500 that will be used to supply water to the new greenhouse (See **Endangered Species No Effect Determination for PR-RGRW-04113 SOW 1**).

The proposed project area is located near the applicant's residence, on a flat, mowed surface. No trees will be removed during this project.

The National Wetlands Inventory indicated that no wetlands are located within the proposed project area (Figure 14). The proposed project will not affect any wetlands.

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

Species	Status
Puerto Rican Plain Pigeon ( <i>Columba inornate wetmorei</i> )	Endangered
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered

No Critical Habitats were noted within the project area (Figure 10). Based on site review and site photos, no suitable habitat was found within the proposed project area for the listed species. Based on the nature of the project, previous site disturbance, scope of work, information available, and a careful analysis of the Project Site, and IPaC species list, we have made the following effects determinations:

<b>Species</b>	<b>Effect Determination</b>	<b>Conservation Measures to be implemented (if needed)</b>
Puerto Rican Plain Pigeon ( <i>Columba inornate wetmorei</i> )	No Effect	No Conservation Measures
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	No Effect	No Conservation Measures

A 'No Effect' determination has been made based on the lack of suitable habitat for the listed species, as well as previous disturbance and current land use of the proposed project area.

If a Puerto Rican Plain Pigeon is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #s: ((787) 724-5700, (787) 230-5550, (787) 771-1124).

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.

**Attachments:**

IPaC Resource List

Shelby McDowell



B.S. Biologist, Tetra Tech

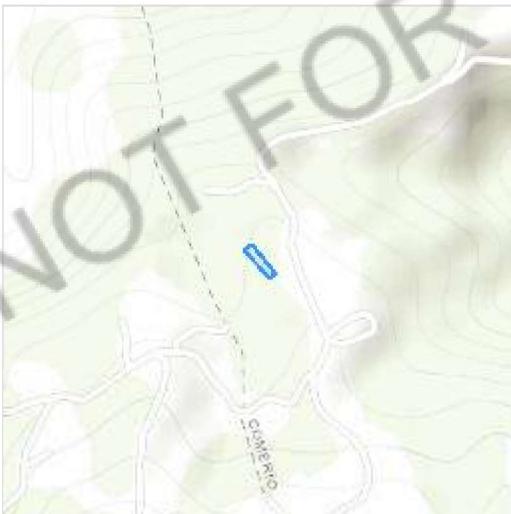
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Comerío County, Puerto Rico



## Local office

Caribbean Ecological Services Field Office

☎ (787) 834-1600

📅 (787) 851-7440

✉ [CARIBBEAN\\_ES@FWS.GOV](mailto:CARIBBEAN_ES@FWS.GOV)

MAILING ADDRESS

Post Office Box 491

Boqueron, PR 00622-0491

PHYSICAL ADDRESS

Office Park I

State Road #2 Km 156.5, Suite 303}

Mayaguez, PR 00680

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [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.

The following species are potentially affected by activities in this location:

## Birds

NAME	STATUS
Puerto Rican Plain Pigeon <i>Columba inornata wetmorei</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/7955">https://ecos.fws.gov/ecp/species/7955</a>	Endangered

## Reptiles

NAME	STATUS
Puerto Rican Boa <i>Chilabothrus inornatus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a>	Endangered

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
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<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

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

### Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

# USFWS Puerto Rican boa Conservation Measures

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## *Puerto Rican Boa*

Generated September 11, 2023 01:39 PM UTC, IPaC v6.97.0-rc3





## 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 listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa is subject to penalties under the ESA. If Federal funds or permits are needed, the funding or permitting agency should initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species.

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



The Puerto Rican 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 like roadsides or houses, especially if near their habitat in rural areas. This 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 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. The PR boa is considered more active at night. Thus, in order to maximize its detection, the species should be searched at nights prior to habitat disturbance.
5. Once the area has been searched for PR boas, vegetation should first be cleared by hand to the maximum extent possible. Vegetation should be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow boas present on site to move away on their own to adjacent available habitat. Any stone walls or naturally occurring rock piles must be carefully dismantled by hand as these are refuges for the snake. This will allow any boas present to vacate the site without injury.
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 found within any of the working or construction areas, activities should stop at that area and information recorded (see #6). **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 this 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.
8. If a PR boa is captured by the PRDNER, record the name of the PRDNER staff and information on where the PR boa will be taken. This information should be reported to the Service.
9. 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 #7). If not possible, the animal should be left alone until it leaves the vehicle on its own.
10. 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.
11. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #6). 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 that 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.
12. 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:

- Marelisa Rivera, Deputy Field Supervisor
  - Email: [marelisa\\_rivera@fws.gov](mailto:marelisa_rivera@fws.gov)
  - Office phone (786) 244-0081 or mobile (305) 304-1814
- José Cruz-Burgos, Endangered Species Coordinator
  - Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)
  - Office phone (786) 244-0081 or mobile (305) 304-1386

## Guidelines for Puerto Rican Plain Pigeon

The Puerto Rican plain pigeon is a large pigeon about the size and shape of a domestic pigeon. At a distance the species appears pale blue-gray. The head, hindneck, breast, and the top central part of the folded wing are washed with a wine color. The wing coverts are margined with white. Legs and feet are dark red. A variety of fruits and seeds, and livestock feed provide nourishment for this species. Approximately 70 percent of the foods come from tree branches, and 30 percent from the ground. Principal foods at Cidra are royal palm (*Roystonea borinquena*); mountain immortelle (*Erythrina poeppigiana*); West Indies trema (*Trema lamarckiana*); and white prickly (*Zanthoxylum martinicense*). Water is usually taken from the axils of bromeliads or from water-retaining blossoms of the African tulip-tree. Nesting occurs primarily in bamboo groves and the hardwood canyons of Cidra.

1. For any project activity that involves construction or tree-disturbing activities, all construction workers will be required to participate in environmental awareness training. The training will educate workers on: (a) special-status species that may occur in the work area, (b) procedures to follow in the event a species is observed, and (c) other environmental BMPs and emergency spill response protocols.
2. All non-emergency work activities will be confined to daylight hours (i.e., sunrise to sunset), unless necessary for assessing or protecting biological resources.
3. Whenever possible, impacts to native nesting birds will be avoided by not conducting Project activities that involve clearing of vegetation, generation of mechanical noise, or tree disturbance during the typical breeding season for this pigeon (late January to early July), if the pigeon is determined to be present.
4. If Project activities must be conducted during the nesting bird season, the Contractor will conduct surveys for nesting birds within a 1,000-ft radius of the construction area. If nests are detected, the Contractor will notify the DNER and establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active nests will be a minimum of 250 feet, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until young have fledged or the nests become inactive.
5. If a pigeon is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #: ((787) 724-5700, (787) 230-5550, (787) 771-1124).

6. Designated critical habitat within the vicinity of project activities will be identified. All Proposed Project actions will be designed to avoid direct and indirect adverse modifications to these areas. Minimization measures, such as establishing and maintaining buffers around areas of designated critical habitat will be implemented in the event that avoidance is not feasible.
7. If critical habitat may be adversely modified by the implementation of Proposed Project actions, the area to be modified will be evaluated by a qualified biologist to determine the potential magnitude of the project effects (e.g., description of primary constituent elements present and quantification of those affected) at a level of detail necessary to satisfy applicable environmental compliance and permitting requirements. This information shall be submitted to the PRDNER as shown in Number 5 above.
8. Projects must comply with all state laws and regulations. Please contact PRDNER for further guidance.

**APPENDIX E**  
SHPO Consultation



**GOVERNMENT OF PUERTO RICO**  
STATE HISTORIC PRESERVATION OFFICE

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

November 22, 2023

**Lauren Bair Poche**

HORNE- Architectural Historian Manager  
10000 Perkins Rowe, Suite 610 Bldg G  
Baton Rouge, LA 70810

SHPO: 11-15-23-07 PUERTO RICO DISASTER RECOVERY, CDBG-DR RE-GROW PR URBAN-RURAL AGRICULTURAL RE-GROW PROGRAM, PR-RGRW-04113, ANGEL M. RIVERA ARROYO, CARR. 749 KM 2.5 INT., BO. QUEBRADA GRANDE, BARRANQUITAS, PUERTO RICO

Dear 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/LGC



November 16, 2023

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-04113 – Angel M Rivera Arroyo – Carr 749 km 2.5 Int. Bo. Quebrada Grande, Barranquitas, Puerto Rico – *No Historic Properties Affected***

Dear Architect Rubio Cancela,

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

On behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, HORNE is submitting documentation for activities proposed by Angel M Rivera Arroyo located at Carr 749 km 2.5 Int. Bo. Quebrada Grande, in the municipality of Barranquitas. The undertaking for this project includes the purchase and installation of a greenhouse (SOW-1) and a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed greenhouse is a metal structure covered with plastic and Saran sheet that has an approximate footprint of 70-foot (ft) x 30 ft. The greenhouse will be supported by posts anchored approximately 2 ft into the ground. Ground clearance and leveling are anticipated as part of the secure installation of the new structure. The proposal includes the purchase and installation of a standby generator (SOW-2) on a new concrete pad measuring 5 ft x 5 ft. This generator will provide power to an existing pump at an existing water well (northeast of the proposed greenhouse location) that will be used to supply water to the new greenhouse via above-ground water lines. The

power for the water pump will be provided by connecting the pump to the new generator with an approximately 375 ft long underground electric conduit to be installed at a depth of 3 ft.

Based on the submitted documentation, the Program requests a concurrence that a finding of no historic properties affected is appropriate for this proposed project.

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

Kindest regards,



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

Architectural Historian, EHP Senior Manager

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>Subrecipient:</b> Angel M Rivera Arroyo		
<b>Case ID:</b> PR-RGRW-04113	<b>City:</b> Barranquitas	

<b>Project Location:</b> Carr 749 km 2.5 Int. Bo. Quebrada Grande	
<b>Project Coordinates:</b> 18.211720, -66.267136	
<b>TPID (Número de Catastro):</b> 247-000-004-30	
<b>Type of Undertaking:</b>	
<input type="checkbox"/> Substantial Repair <input checked="" type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> c1975	<b>Property Size (acres):</b> 61.7

<b>SOI-Qualified Architect/Architectural Historian:</b> Maria F. Lopez Schmid
<b>Date Reviewed:</b> 10/17/2023
<b>SOI-Qualified Archaeologist:</b> Roberto G. Muñoz-Pando, PhD
<b>Date Reviewed:</b> 10/20/2023

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 scope of work (SOW) includes the purchase and installation of a greenhouse (SOW-1) and a standby generator (SOW-2), and the purchase of a lawn tractor. The proposed project site is a vacant lot with an unknown past use.

The applicant plans to purchase and install a greenhouse (SOW-1) at coordinates 18.212098, -66.267690 to produce sweet peppers. The proposed greenhouse is a metal structure covered with plastic and Saran sheet that has an approximate footprint of 70-foot (ft) x 30 ft. The greenhouse will be supported by posts anchored approximately 2 ft into the ground. Ground clearance and leveling are anticipated as part of the secure installation of the new structure.

The proposal includes the purchase and installation of a standby generator (SOW-2) to be installed at coordinates 18.211622, -66.267029 in a new concrete pad measuring 5 ft x 5 ft. This generator will provide power to an existing pump at an existing water well located at coordinates 18.212542, -66.267500 (northeast of the greenhouse location) that will be used to supply water to the new greenhouse. The power for the water pump will be provided by connecting the pump to the new generator with an approximately 375 ft long underground electric conduit to be installed at a depth of 3 ft. Water connection to the new greenhouse will be achieved using 170 ft of PVC above-ground tube pipe between the existing well and

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<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>Subrecipient:</b> Angel M Rivera Arroyo	
<b>Case ID:</b> PR-RGRW-04113	<b>City:</b> Barranquitas

new greenhouse. No ground disturbance is anticipated for the installation of the above-ground water line.

### Area of Potential Effects

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is the location of the proposed concrete pad, the path of the below-ground electric line, and location of the new greenhouse; this APE includes a 15-meter buffer to allow for variation in placement, where not constrained by the landform. The visual APE is the viewshed of the proposed project.

### Identification of Historic Properties - Archaeology

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61), shows that the project area has no previously identified archaeological sites within a half mile radius of the APE. In our research at the archives of the SHPO and the ICPR, no archaeological resource surveys in the area up to a half mile radius from the APE. The soil combination around the APE is Naranjito silty clay (NaF), Humatas clay (HtF), and Mucara Cay (MxF) all with 40 to 60 percent slopes. These data indicates that the probability of finding new, undisturbed, and significant archaeological sites would be low to moderate.

### Identification of Historic Properties - Architecture

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61), shows that the project area is **not** within the boundaries of a National Register of Historic Places (NRHP)-eligible or listed Traditional Urban Center or Historic District. Additionally, there are **no** NRHP-listed historic properties within the quarter mile buffer zone from the APE.

The proposed project is located in a rural, mountainous terrain with mature vegetation and grasslands. The property is located west of La Puntilla Comerío Road in Barranquitas that runs

Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

north south. A circa 1975 building is located near Scope of Work 2 (installation of concrete pad and new electric conduit). This building appears in a 1977 aerial image, shown below, which is the earliest available for the area.



**Figure 1, 2 & 3.** Detail of the 1977, 2015, and 2023 aerial images, showing the building on the property.

The building had a smaller footprint than it is currently. The building is a reinforced concrete house with a flat concrete roof. As it is evident by the aerial images comparing the original house shape to the current one, that the c1975 building has been extensively renovated with the addition of concrete volumes in front and the rear as well as other detached garages. All metal and glass fenestrations appear recently installed, and the design of the building is contemporary in design. These changes and additions were done starting in 2015 according to the aerial images from Google Earth have significantly changed the house to the point where it no longer resembles the c1975 house and is more of a large residence.



**Figure 4 & 5.** Photographs of the buildings on the property, view to the southwest and to the west.

<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>Subrecipient:</b> Angel M Rivera Arroyo	
<b>Case ID:</b> PR-RGRW-04113	<b>City:</b> Barranquitas

The building shown above **does not** meet the requirements to be eligible for listing on the National Register of Historic Places.

### Determination

The following historic properties have been identified within the APE:

- Direct Effect:
  - N/A
- Indirect Effect:
  - N/A

Based on the results of our historic property identification efforts, the Program has determined that the project area is **not** within the boundaries of a National Register of Historic Places (NRHP)-eligible or listed Traditional Urban Center or Historic District. Additionally, there are **no** NRHP-listed historic properties within the quarter mile buffer zone from the APE. Nor were any previously recorded archaeological sites identified within a half mile radius of the project area. The soils around the APE have 4 to 60 percent slopes, making the probability of finding new and significant archaeological sites near the APE low to moderate. 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>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Subrecipient:</b> Angel M Rivera Arroyo	
<b>Case ID:</b> PR-RGRW-04113	<b>City:</b> Barranquitas

**Recommendation**

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:

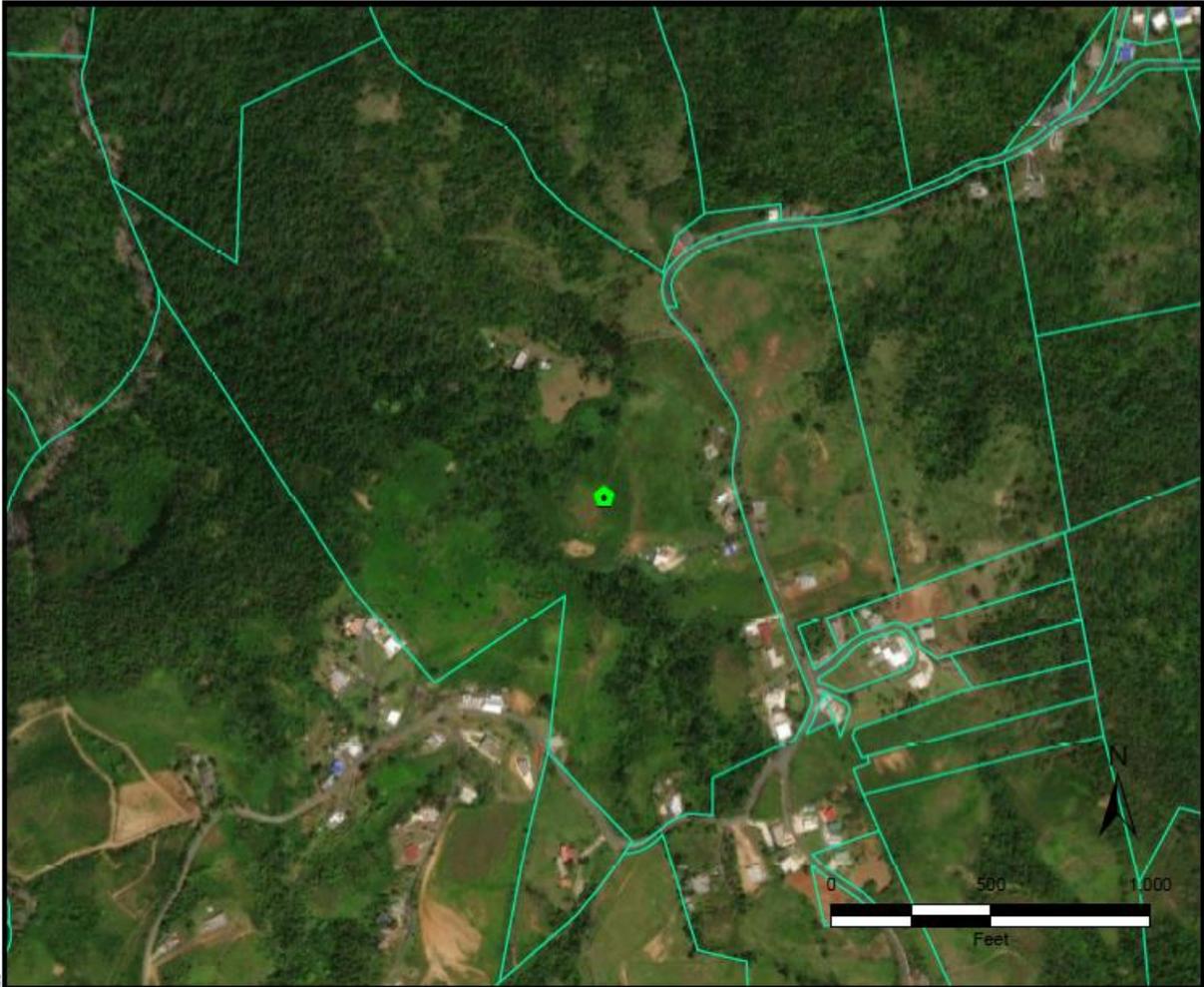


Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

### Project (Parcel) Location - Aerial Map



**TETRA TECH**

Source: CRIM

Author: TG

Date: 8/23/2023

#### Legend

-  Tier 2 Site
-  Historic Comunidades
-  Traditional Urban Centers
-  Cultural Resource District Polygon
-  Parcelario



Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

### Project (Parcel) Location - USGS Topographic Map



Source: USGS

Author: TG

Date: 9/19/2023

#### Legend

-  Tier 2 Site
-  Historic Comunidades
-  Traditional Urban Centers
-  Cultural Resource District Polygon



Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

### Project (Parcel) Location – Soils Map



**TETRA TECH**

Source:USDA

Author: TG

Date: 10/17/2023

**Legend**



Tier 2 Site



Parcelario

**Soil Type**



CaF:Caguabo clay loam, 40 to 60 percent slopes



HtF:Humatas clay, 40 to 60 percent slopes



MxE:Mucara clay, 20 to 40 percent slopes



MxF:Mucara clay, 40 to 60 percent slopes



NaF:Naranjo silt clay loam, 40 to 60 percent slopes



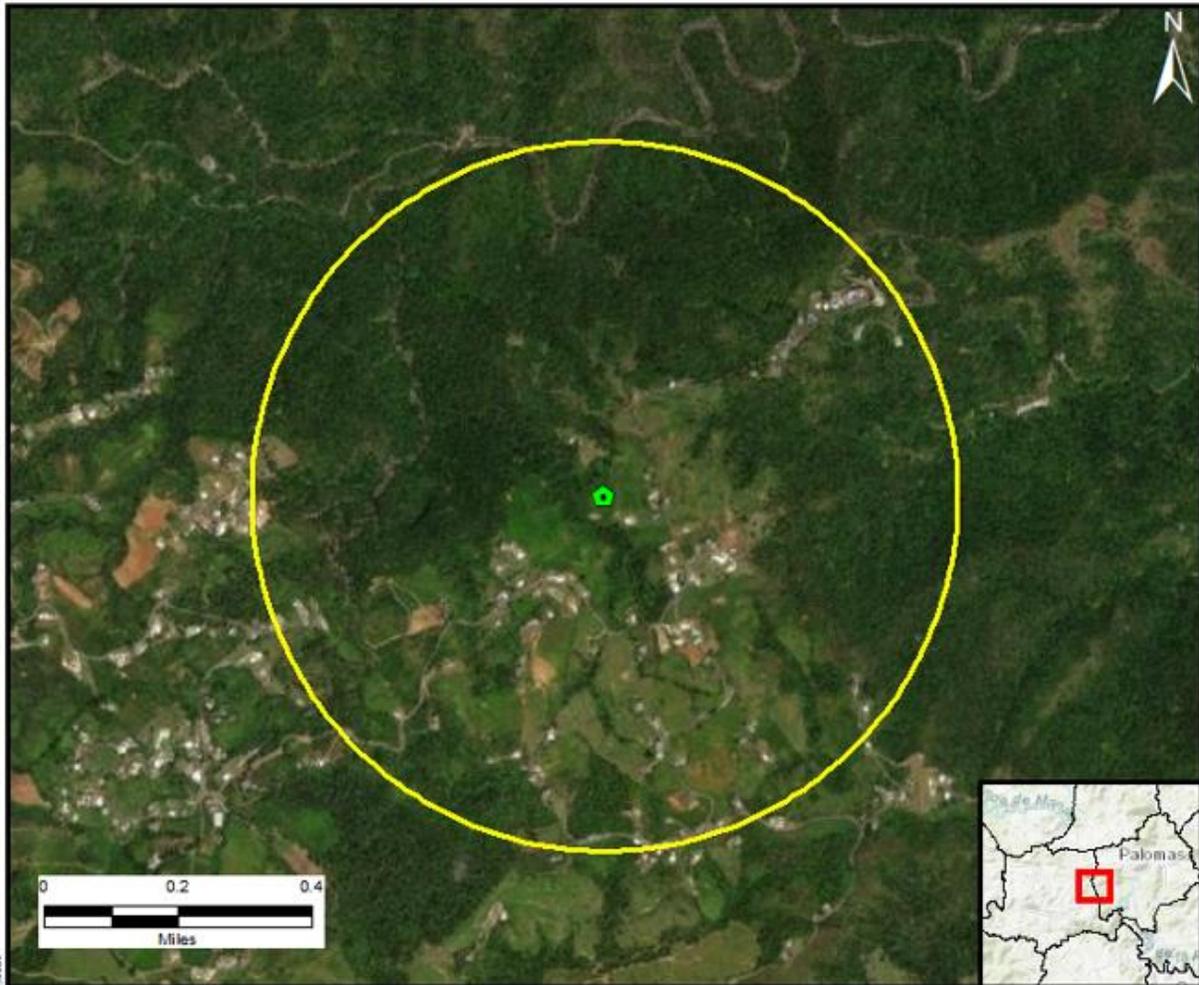
Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

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

### Project (Parcel) Location with Previously Recorded Cultural Resources - Aerial Map



Source: National Park Service

Author: TG

Date: 7/27/2023

Legend

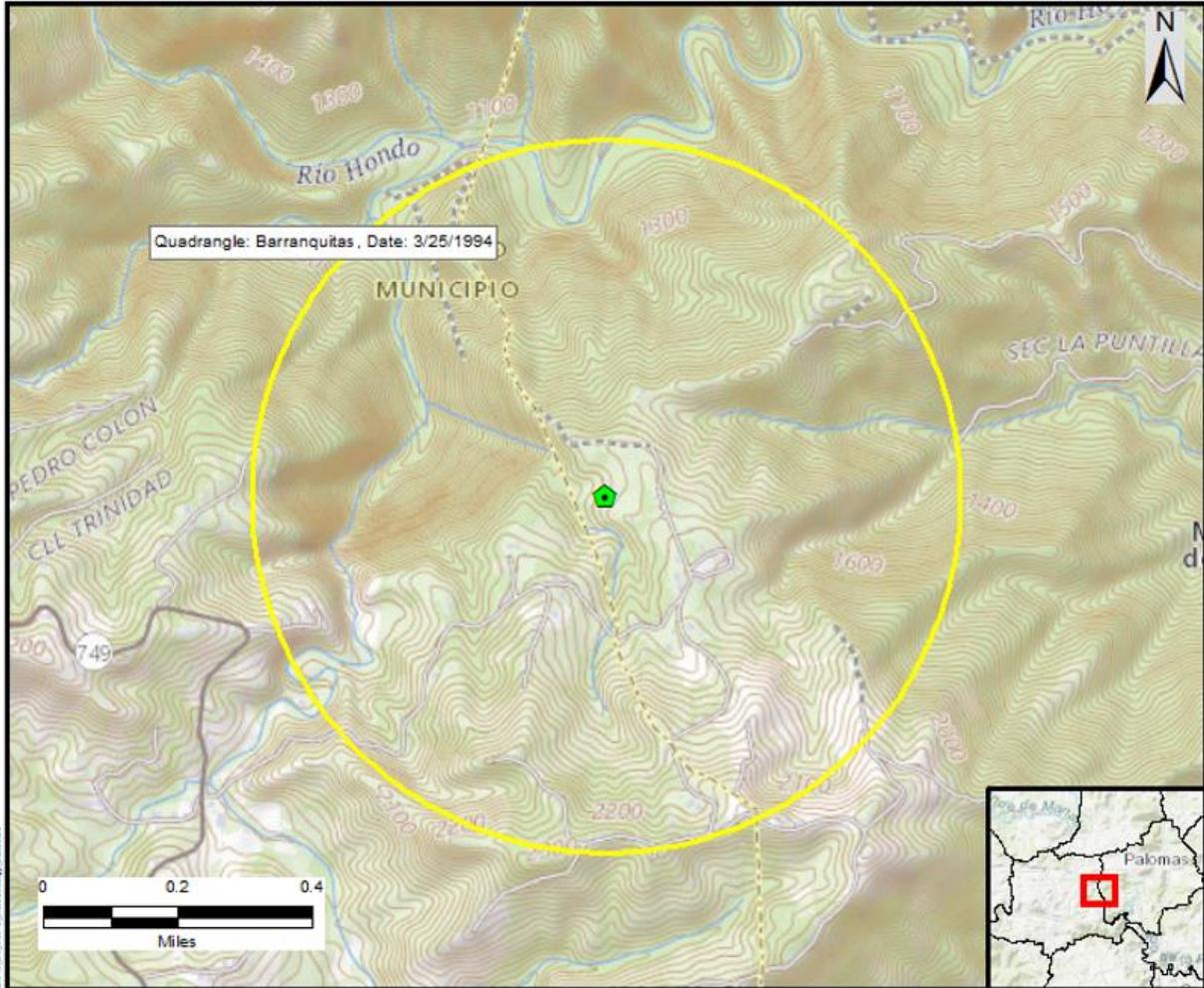
-  Tier 2 Site
-  Half Mile Buffer
-  Historic Comunidades
-  Traditional Urban Centers
-  Cultural Resource District Polygon

Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

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



Source: National Park Service

Author: TG

Date: 7/21/2023

Legend

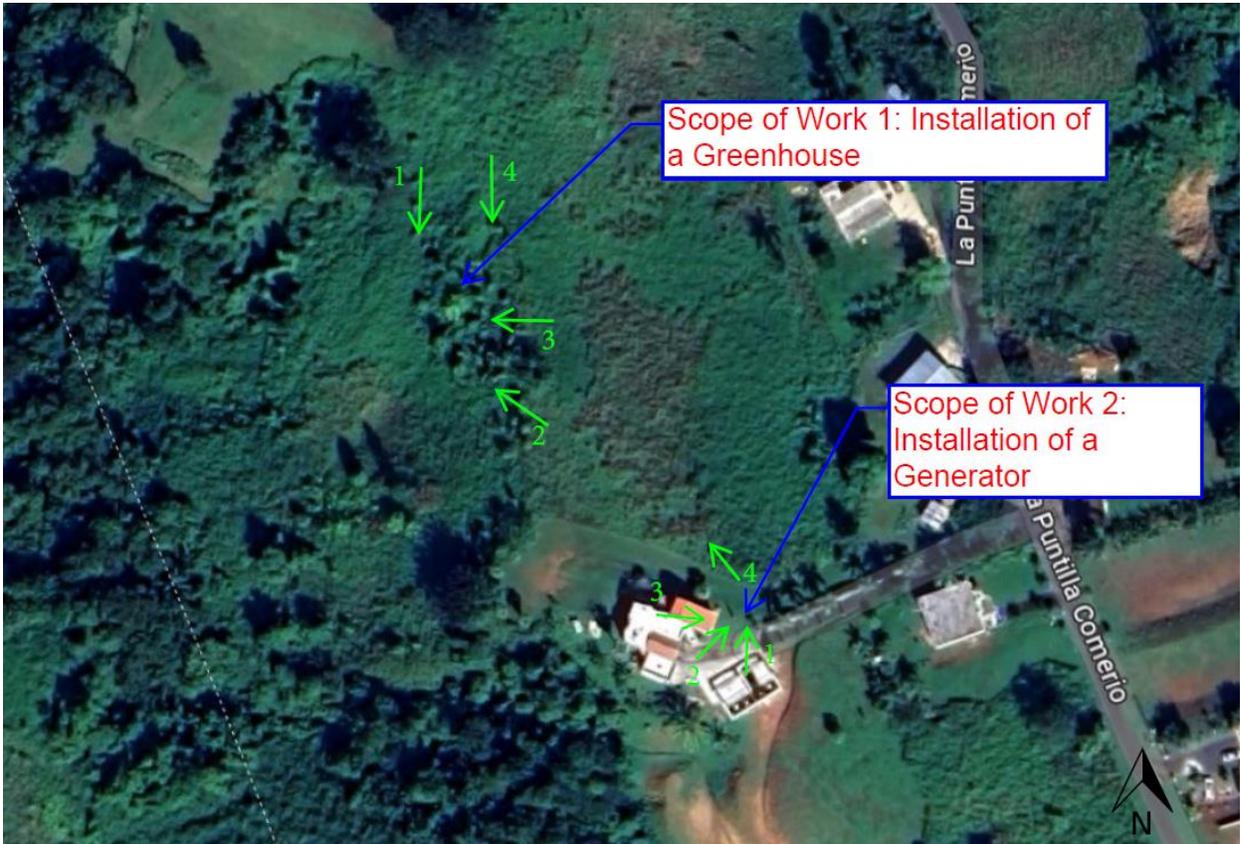
-  Tier 2 Site
-  Half Mile Buffer
-  Historic Comunidades
-  Traditional Urban Centers
-  Cultural Resource District Polygon

Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas

### Photograph Key



Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas



Photo #: 1

Description (include direction): Scope of Work 1: Installation of a Greenhouse, view to the South.

Date: 10/09/2023



Photo #: 2

Description (include direction): Scope of Work 1: Installation of a Greenhouse, view to the Northwest.

Date: 10/09/2023

**Subrecipient:** Angel M Rivera Arroyo

**Case ID:** PR-RGRW-04113

**City:** Barranquitas



**Photo #:** 3

**Description (include direction):** Scope of Work 1: Installation of a Greenhouse, view to the West.

**Date:** 10/09/2023



**Photo #:** 4

**Description (include direction):** Scope of Work 1: Existing water well, view to the South.

**Date:** 10/09/2023

Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas



Photo #: 1

Description (include direction): Scope of Work 2: installation of a generator, view to the North

Date: 10/09/2023



Photo #: 2

Description (include direction): Scope of Work 2: installation of a generator, view to the Northeast

Date: 10/09/2023

Subrecipient: Angel M Rivera Arroyo

Case ID: PR-RGRW-04113

City: Barranquitas



Photo #: 3

Description (include direction): Scope of Work 2: installation of a generator, view to the East

Date: 10/09/2023



Photo #: 4

Description (include direction): Scope of Work 2: Electrical conduit path from the generator to the water well, view to the Northwest

Date: 10/09/2023



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,

A handwritten signature in blue ink, appearing to be 'JB', is written over the printed name of the signatory.

Juan C. Pérez Bofill, P.E. M.Eng

Director of Disaster Recovery

CDBG DR-MIT