

# Environmental Assessment

## Determinations and Compliance Findings for HUD-assisted Projects

### 24 CFR Part 58

#### **Project Information**

**Project ID:** PR-RGRW-01315

**Project Name:** Alfredo Otero Santiago

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

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

**State/Local Identifier:** Puerto Rico/Naranjito, PR

**Preparer:** Gabriela Rodríguez

**Certifying Officer Name and Title:** Permit and Compliance Officers: Sally Acevedo Cosme, Pedro De León Rodríguez, María T. Torres Bregón, Ángel G. López-Guzmán, Ivelisse Lorenzo Torres, Santa Damarys Ramírez Lebrón, Janette I. Cambrelén, Limary Vélez-Marrero, Juan Carlos Perez Bofill, Mónica Machuca Ríos, Javier Mercado Barrera, Abdul Feliciano Plaza, Aldo A. Rivera Vázquez and Priscilla Toro Rivera.

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

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

#### **Project Location:**

The property is a 17.00-acre site located at Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int, in the Municipality of Naranjito, Puerto Rico (Parcel ID# 195-000-003-75-000). The coordinates of the project site are 18.278250, -66.283333.

This land has been used for agricultural purposes with the cultivation of plantains and coffee and is currently used for growing plantains.

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

The intent use of funds includes purchase and installation of a hydroponic system and the purchase of a UTV. The UTV has been submitted and approved as an exempt activity under 24 CFR 58.35 (b)(4) The potential impacts associated to the purchase and installation of the hydroponic system are included in the analyses below.

The new proposed use of grant funds for this project includes the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot (ft) x 21 ft metal structure 63 % covered with plastic

and Saran to produce hydroponic lettuce, recao, and cilantro. The greenhouse will be anchored to the ground with 2 inches diameter pillars at a depth of 2 ft; each pillar will be anchored in concrete. The proposed greenhouse will require at least 24 posts. Height of proposed greenhouse is 8 ft for laterals and 12 ft arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the proposed scope of work. The presented quotation does not specify the type of cover being proposed; however, two main types of plastic are used as ground cover: Polyethylene (PE) and Polyvinyl Chloride (PVC). PE is the most used plastic due to its low cost, flexibility, and resistance to UV radiation degradation. The quote also doesn't specify the anchoring of ground cover. Various mechanisms for anchoring ground cover material are available. Final covering and anchoring will depend on specific area conditions. Typical anchoring methods include metal or plastic stakes, adhesive tape or glue, weights or blocks, and cables and tensioners for areas with extreme weather conditions. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be welded to the structure and the table legs will be buried at a depth of 14 inches. Proposal includes the installation of three 600 gallons water cisterns. Water cisterns will also be buried at a depth of 4 ft.

Water source for the operations comes from an existing water well. Greenhouse will be connected to the well via an aboveground, 10 linear ft PVC pipe. For power supply, a new power connection to the local power service provider PREPA/LUMA is required. Power can be supply from the electrical post located at an approximately distance of 50 ft from greenhouse location via an underground conduit at an approximate depth of 3 ft. While the applicant plans to pay for the utility connections activities and materials themselves and no HUD funds would be utilized for, the potential impacts from this action are included in the analyses below and it is contained within the delimited Area of Potential Effect (APE). An unmet need of \$3,800 for the purchase of the proposed greenhouse, in addition to the cost of materials and installation of utilities, will be assumed by the applicant. As per applicant submitted quotes, utilities connection materials have an estimated cost of \$43.03 for water and \$370.00 for electrical. The applicant is responsible for the payment of an estimated amount of \$ 4,213.03, in addition to the funded amount. The APE for the proposed project is approximately 0.55 acres.

The project site will require clearing, grading, and vegetation removal. However, proposal does not contemplate cutting, pruning or transplanting of trees. 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 installation of a greenhouse is 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 is used for agricultural purposes. Therefore, there is no change in land use associated with the project. Some ground disturbance will be required.

The proposed project is in a mountainous rural residential area surrounded by farmlands and vegetation. The greenhouse is to be built on a grassy section of the parcel, previously used for plantain growing, and routinely clear maintained area. The parcel is currently used to cultivate plantains.

**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:** \$27,100.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$31,313.03

## **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. The nearest civil airport, “Aeropuerto Fernando Luis Ribas Dominicci (SIG)”, is approximately 88,980 feet from the proposed site. The nearest military airport, “Aeropuerto Internacional Luis Muñoz Marín (SJU)”, is approximately 109,143 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 Central Region of Puerto Rico. The distance to the nearest CBRS unit is 74,476 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"/>	A review of the FEMA Flood Insurance Rate Map (FIRM), Community Panel 72000C0695H and effective date April 19, 2005, shows the project site is in Flood Zone X, which is not in a Special Flood Hazard Area (SFHA). Flood insurance is not required. No further evaluation is required.  The project is in compliance with the Flood Disaster Protection Act and National Flood



		Insurance Reform Act. Refer to Figures 4 and 5 in <b>Appendix B.</b>
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<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.5</b>		
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<p><b>Clean Air</b></p> <p>Clean Air Act, as amended, particularly section 176(c) &amp; (d); 40 CFR Parts 6, 51, 93</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The Project site is located in the municipality of Naranjito. The Project site is not located in a county or air quality management district that is non-attainment status for any criteria pollutants. The identified non-attainment areas are in the municipalities of Arecibo, Bayamón, Cataño, Guaynabo, Toa Baja, Guayama-Salinas, and San Juan. The Municipio of Naranjito is not listed in the EPA Green Book “Puerto Rico Nonattainment/Maintenance Status for Each County by Year for all Criteria Pollutants”. The project consists of the purchase and installation of a greenhouse. Project 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></p>
<p><b>Coastal Zone Management</b></p> <p>Coastal Zone Management Act, sections 307(c) &amp; (d)</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project is located 60,154 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>
<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 August 7, 2024, no debris or rubbish or visible signs vegetative stress, contamination, or toxic substances were identified at the project site. The project consists of the purchase and installation of a greenhouse.</p> <p>The proposed action does not include demolition of structures nor mid- to long-term occupation of structures that would require testing for lead-based paint (LBP) and asbestos containing materials (ACM). Therefore, testing for LBP and/or ACM is not required.</p> <p>The proposed action does not include enclosed buildings, residential occupation, or mid- to long-term occupation (more than 4 hours a day) of structures. Therefore, the consideration of radon</p>

		<p>in the contamination analysis is exempted under the CPD Notice #CPD-23-103 and no further consideration or action with respect to radon is needed.</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. There are no sites of environmental concern identified within 3,000 feet of the project site.</p> <p>Refer to Figures 8 and 9 in <b>Appendix B</b> and the Site inspection report and photos in <b>Appendix A</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 checked="" type="checkbox"/>    <input type="checkbox"/></p>	<p>The project consists of the purchase and installation of a greenhouse. The proposed location of project is an area that has been used for agricultural purposes.</p> <p>According to EPA NEPAAssist Enviromapper, the nearest critical or proposed critical habitat is 57,416 feet to the northeast 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 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 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 project is “May affect, but not likely to adversely affect” (NLAA) the Puerto Rican Boa, provided conservation measures are implemented as part of the project. The USFWS concurred with the NLAA determination on October 28, 2024.</p> <p>If a Puerto Rican Boa is encountered, work will cease until it moves off the site or, failing that, the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers will be notified for safe capture and relocation of the</p>

		<p>animal, in accordance with the USFWS Puerto Rican Boa Conservation Measures. PRDNER phone #: ((787) 724-5700, (787) 230-5550, (787) 771-1124.</p> <p>Refer to Figures 10 and 11 in <b>Appendix B</b> and the Endangered Species Package in <b>Appendix D</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. The project does not include development, construction, or rehabilitation of a hazardous site or any construction 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 consists of the purchase and installation of a greenhouse. The project site is not designated as farmland of statewide importance or prime farmland. 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 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, as amended by Executive Order 13690, 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 consists of the purchase and installation of a greenhouse.</p> <p>A review of the FEMA Flood Insurance Rate Map (FIRM), Community Panel 72000C0695H and effective date April 19, 2005, shows the project site is in Flood Zone X, which is not in a Special Flood Hazard Area (SFHA).</p>

		<p>The proposed project is not located in a Federal Flood Risk Management Standard (FFRMS) floodplain. FFRMS was determine using the 0.2-Percent-Annual-Chance (0.2 % PAC) (500- Year) Flood Approach.</p> <p>The Project site is not located in an Advisory Base Flood Elevation (ABFE) special flood hazard area as per ABFE Map, number 72000C0695H, effective date April 18, 2018. Since the project site does not lie within the 0.2 % PAC floodplain on any available map, it is not within the FFRMS.</p> <p>PFIRMs in Puerto Rico were only developed for certain sections of the municipalities of Carolina, Canóvanas, Loiza, San Juan and Trujillo Alto. The proposed project is located in the municipality of Naranjito; therefore, PFIRM information was not available for the area and therefore not considered in the review.</p> <p>This project is in compliance with Executive Order 11988 and Order 13690. Refer to Figure 6 in <b>Appendix B</b>.</p>
<p><b>Historic Preservation</b></p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The site was evaluated on August 13, 2024, by an SOI Qualified Architect/Architectural Historian. Additionally, the site was evaluated on July 20, 2023 and reevaluated on August 13, 2024, by an SOI Qualified Archaeologist. SHPO concurred with a finding of <b>No Historic Properties Affected</b> within the project’s Area of Potential on Effects on September 25, 2024.</p> <p>Refer to Figure 13 in <b>Appendix B</b> and the Section 106 Consultation Package 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>The project consists of the purchase and installation of a greenhouse. 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 nearest Sole Source Aquifer is 5,404,403 feet to the northwest of the project site. The project is in compliance with Sole Source Aquifer requirements.</p> <p>Refer to Figure 17 in <b>Appendix B</b>.</p>
<p><b>Wetlands Protection</b></p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project consists of the purchase and installation of a greenhouse.</p> <p>The closest fresh-water bodies include an unnamed creek located 70 ft east of main power connection in property, tributary of the Río Mavilla located 567 ft northeast of greenhouse proposed location. Several other unnamed creeks are identified outside property and project area.</p> <p>The unnamed creek across the project parcel is identified as a riverine wetland in the NWI map.</p> <p>The identified riverine wetland is located at an estimated distance of 70 ft east of the power main connection location in property. Due to distance and the characteristics of the evaluated area, wetland impacts as a result of erosion, transportation and sedimentation of particulates are not anticipated. However, Standard construction BMPs would be used to control erosion and runoff during construction. An undisturbed natural buffer equal or greater than 70 feet will be kept at all times during ground disturbance activities. APE will be clearly delimited prior to the initiation of the clearing and leveling activities. With these mitigations the construction of the greenhouse would not impact the 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>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 169,949 feet. The</p>

Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)		project is in compliance with the Wild and Scenic Rivers Act. Refer to Figure 15 in <b>Appendix B</b> .
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<b>ENVIRONMENTAL JUSTICE</b>		
<b>Environmental Justice</b>  Executive Order 12898	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	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.  Refer to EJ Report in <b>Appendix C</b> .

**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	<p>The project consists of the purchase and installation of a greenhouse. The proposed project is located on a private farm. The project site is zoned as “Agricola Productivo (A-P)”. The proposed action is compliant with the current agricultural land use of the Project area and will not contribute to urban sprawl.</p>
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<p>The project consists of the purchase and installation of a greenhouse. The proposed project is located in relatively flat terrain, previously used for agricultural purposes, and now used for growing plantains.</p> <p>Soils in the proposed project area are classified as Cucara Clay (MxF), 23 percent slopes, surrounded by young forest vegetation cover further south, 410 meters above mean sea level.</p> <p>Projects larger than 1 acre must comply with the CWA and develop a SWPPP with the NPDES. The proposed project area is approximately 0.55 acres.</p> <p>The project site area has been cleared and maintained as part of farm operations and maintenance. Area will require clearing, grading, and vegetation removal. However, proposal does not contemplate cutting, pruning or transplanting of trees.</p> <p>Activities involving clearing, excavation or movement of more than 40 cubic meters of any component of the terrestrial cortex material require the submittal and approval of the applicable permit by the PRDNER. Applicant is responsible for any permits or actions to ensure legalization of proposed activities.</p> <p>The project site area is rated “low” for landslide susceptibility (see Figure 16 in <b>Appendix B</b>).</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>The project consists of the purchase and installation of a greenhouse. 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. There is no access to the project area by the public.</p>

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>SOCIOECONOMIC</b>		
Employment and Income Patterns	2	<p>The project consists of the purchase and installation of a greenhouse. 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>
Demographic Character Changes, Displacement	2	<p>The project consists of the purchase and installation of a greenhouse. 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>
Environmental Justice	1	<p>In the area (one mile radius) in which project will occur.</p> <p>100% are people of color compared to PR average of 97%</p> <p>75% are low income compared to PR average of 70%</p> <p>21% are unemployed compared to PR average of 14%</p> <p>The project consists of the purchase and installation of a greenhouse. This project will result in restoration and increase in income and potential employment opportunities in the local area. The installation and maintenance of equipment, research and implementation of new techniques, education and training of personnel, and the commercialization and sale of agricultural products are some of the opportunities offered by the agricultural market for new employment opportunities. The multiplier effect estimates 1-3 direct and indirect jobs for every primary job created. The increase in production with the installation of the greenhouse will generate at least 2 employment opportunities. The impacts would be beneficial.</p> <p>See EJSscreen Report in <b>Appendix C</b></p>



Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The project consists of the purchase and installation of a greenhouse. 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. 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. 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	<p>The project consists of the purchase and installation of a greenhouse.</p> <p>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. Other waste components related to the operation of the proposed project includes recyclable materials such as plastics and cardboard. Recyclables will be set aside and dispose according to the local recycling management plan. The remaining municipal solid waste would be collected for the transport to the local landfill.</p>
Wastewater / Sanitary Sewers	2	The project consists of the purchase and installation of a greenhouse. 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.

		Water source for the operations comes from an existing water well. Greenhouse will be connected to the well via an aboveground 10 linear ft PVC pipe. Water intake activities require a construction and operation permit from 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.
Public Safety – Police, Fire and Emergency Medical	2	The project consists of the purchase and installation of a greenhouse. 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. 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 project consists of the purchase and installation of a greenhouse. 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	<p>The project consists of the purchase and installation of a greenhouse. The proposed project will be situated on land previously and currently in use for agricultural purposes.</p> <p>The APE of the power connection of the greenhouse is located at an estimated distance of 70 ft to the east of an unnamed creek, inside of the parcel.</p> <p>Natural vegetation buffer zone of equal or greater than 70 ft together with standard construction BMPs will be maintained, at all times. No cortex removal, ground disturbances, earth</p>

		<p>movement, or constructions activities are contemplated nearby a unique natural features or water resources.</p> <p>The proposed increase in water withdrawal from the stream for the new greenhouse will be controlled under a permit. The impact to water resources will be minor.</p>
Vegetation, Wildlife	2	<p>The project consists of the purchase and installation of a greenhouse.</p> <p>The proposed project will occur on land previously used for agricultural purposes and will continue in that capacity.</p> <p>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. Proposal does not contemplate cutting, pruning or transplanting of trees. The proposed project will have minimal impact on vegetation and no impact on wildlife.</p>

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>CLIMATE AND ENERGY</b>		
Climate Change Impacts	2	<p>The project consists of the purchase and installation of a greenhouse. The project area is rural and does not have urban heat island effects. 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. Proposal includes 600 gallons storage tanks for each hydroponic system that will recirculate water with nutrients. Water will be used on an "as needed" basis to minimize the possible impact of drought. However, due to the location of project in an area of a moist forest, drought is not expected. This is a small agricultural project with no measurable impact on climate change factors.</p>
Energy Efficiency/Energy Consumption	2	<p>The project consists of the purchase and installation of a greenhouse.</p> <p>The project site has electric power connection point available. Electrical services will be provided via a new power connection to the local power service provider PREPA/LUMA. Power can be supply from the electrical post located at an approximately distance of 50 ft from greenhouse location via an underground conduit at an approximate depth of 3 ft. Site planning involved consideration of available land, proximity to existing resources to reduce travel, existing utility connection, and slope. The</p>

		<p>applicant is responsible for any permits or actions with local service provider (PREPA/LUMA) to ensure legalization of utility connections.</p> <p>The proposed project will increase the current energy demand of the area. The proposed project will have minor impact on energy usage.</p>
--	--	--

**Additional Studies Performed:** None required.

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

Site inspection was conducted on August 7, 2024 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/npias/reports/NPIAS-Report-2017-2021-Appendix-B-Part6.pdf](http://www.faa.gov/airports/planning_capacity/npias/reports/NPIAS-Report-2017-2021-Appendix-B-Part6.pdf)

John H. Chafee Coastal Barrier Resources System, Puerto Rico [map](#).

[www.fws.gov/CBRA/Maps/Locator/PR.pdf](http://www.fws.gov/CBRA/Maps/Locator/PR.pdf)

National 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 project consists of the purchase and installation of a greenhouse. The project would allow more efficient processing of the agricultural products.

The possible cumulative impacts associated to the proposed project are related to the increase in energy demand needed to operate and the withdrawal of groundwater to supply water needs for operational purposes. Power demand increase is minor. Water use would increase to a minor degree in the new greenhouses but would only impact the existing site water supply. The withdrawal of water will be contained under a permit that allows a maximum daily flow rate. There are no other wells nearby to be affected.

#### **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 enhance and expand agricultural production on their property. The proposed use of grant funds will allow the applicant to expand the cultivation, processing, and delivery of agricultural products through the purchase and installation of a new greenhouse.

Among the reasonable courses of action, other uses of the subject site, alternative locations (on and off property), and design modifications, were the analyzed alternatives. The actions are proposed in an area that has been used for agricultural

purposes. The alternative to give another use to the subject site could potentially convert agricultural land to nonagricultural use, could delay current agricultural production, and would not increase, enhance or expand agricultural production. This action is not consistent with the Program's goal, the alternative to give another use to the subject site was not selected.

Among the possible impacts of alternative location, the location of the proposed SOW's off property will require transportation of equipment and products in and out of the property creating an increase in traffic and other vial impacts due to the transportation of materials and heavy equipment. Any alternative that would involve an off-property or give other uses to the site might require the relocation of current agricultural activities, purchase of land, the need for storage area, the movement of products, equipment, infrastructure, water and power utility connections, the preparation of cropping areas, among others, representing an additional cost. Given the above-mentioned possible impacts of an alternative location, an off-property alternative was not selected. Alternative locations off and on property, and design modifications to the proposed scopes of works may also represent an impact to undisturbed and/or uneven ground, sloped terrain or within forested areas, which could require heavier clearing and grading activities.

To give other uses to subject site, an alternative on and off property location, and design modifications to proposed scopes of works, will not enhance and expand agricultural production or allow for the economic development for this applicant. Given the above-mentioned possible impacts of the presented courses of action to give other uses to the subject site, an alternative location off and on the property, and design modifications to the proposed scopes of works or were not the selected alternatives.

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

The project consists of the purchase and installation of a greenhouse. Under the No Action Alternative, the applicant would not receive federal funding for the proposed action, 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.

The environmental review topics addressed in this environmental review include all formal compliance steps with federal agencies and mitigations (listed in table below) needed for compliance with 24 CFR 58.

Any permits or approvals that have been issued during the preparation of this environmental review have been included in the evaluation of impacts and mitigations. Any special permit conditions or requirements associated with these permits are listed in the Mitigation Measures and Conditions table below.

Law, Authority, or Factor	Mitigation Measure
Water Supply	Well or water intake activities require a construction and operation permit from 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.
Wetlands Protection	Standard construction BMPs would be used to control erosion and runoff during construction. An undisturbed natural buffer equal or greater than 70 feet, supplemented by standard construction BMPs, and erosion and sediment controls will be kept at all times during ground disturbance activities. APE will be clearly delimited prior to the initiation of the construction activities.
Endangered Species	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:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.
2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.
3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity including removal of vegetation and earth movement), a biologist or project personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.
4. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #5). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: (787) 724-5700, (787) 230-5550, (787) 771-1124). **If immediate relocation is not an option, project-related activities at that area must stop until the boa moves out of harm's way on its own.** Activities at other work sites, where no boas have been found after surveying the area, may continue.
5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.
6. If a PR boa is captured by PRDNER personnel, record the name of that person and information on where the PR boa will be taken. This information should be reported to the Service.
7. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered



	<p>within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal, and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #4). If not possible, the animal should be left alone until it leaves the vehicle on its own.</p> <p>8. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.</p> <p>9. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #5). If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.</p> <p>10. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance. PRDNER phone #s: (787) 724-5700, (787) 230-5550, (787) 771-1124</p> <p>Conservation measures can be found at <a href="#">Caribbean ES Puerto Rican Boa (fws.gov)</a>.</p>
<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.
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.

Well/Stream withdrawal	Well or water intake activities require a construction and operation permit from 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.
Utility Connections- PREPA/LUMA	The project does not involve new utility connections provided by PREPA/LUMA. Facilities have local utility services connection point. However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	All construction or demolition of structures, which do not contain asbestos or lead-containing paint, in surface areas of project of nine hundred (900) square meters or more, in which the total volume of the components of the earth's that are to be used as filler or extracted, stored, disposed, disassembled, piled up or removed exceed forty (40) cubic meters, requires the submittal of a "Permiso Único Incidental (PUI)", including an Erosion and Sedimentation Control Plan (Plan CES, by its acronym in Spanish). A Plan CES must be developed by a Professional Engineer and be submitted via the Single Business Portal to the OGPe to be evaluated, approved and physicalized by 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: 12/10/2024

Name/Title/Organization: Gabriela Rodríguez, Senior Environmental Scientist, Tetra Tech Inc.

Certifying Officer Signature:  Date: 12/30/2024

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

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

# **APPENDIX A**

## **Site Inspection and Photos**

## Environmental Field Observation - Puerto Rico Department of Housing

APPLICANT INFORMATION			
Application ID	PR-RGRW-01315		
Applicant Name	ALFREDO OTERO SANTIAGO DBA		
Property Address	Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int.		
Parcel ID	195-000-003-75-000		
Coordinates	18.278250, -66.283333		
Inspector Name	Carlos O. Medina		
Inspection Date	08/07/2024		
Building Type	vacant		
Number of Units	0		
Number of Stories	0		
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 structure in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Is structure a greenhouse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Is Electricity connected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Power connected
D. Is water connected? (Utilities or Well)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water from existing water well
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"/>	Parcel with an 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-01315  
Project Name: Alfredo Otero Santiago DBA  
Coordinates: 18.278250, -66.283333

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

Scope of Work: The proposed scope of work includes the purchase and installation of a new greenhouse.

Land current in use for: plantains plantation

Past Land use was: plantains and coffee

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 in the coordinates: 18.278250, -66.283333. This greenhouse with an approximately footprint of 98 feet x 21 feet with 24 post in galvanized metal in with plastic cover and seran. Post installation will be with a deep of 24". Main water connection is adjacent to the SOW and is provided by an existing water well, will need a overground PVC tubes connection with approximately length of 10 feet to the greenhouse. For electrical connections, a connection from a near electrical post will be required with conduit underground at 3' with an approximately distance of 50 feet.

The use of this greenhouse will be hydroponics of lettuce, recao and cilantro.

Any new water connection or power connection?

Main water connection is adjacent to the SOW and is provided by an existing water well, will need a overground PVC tubes connection with approximately length of 10 feet to the greenhouse. For electrical connections, a connection from a near electrical post will be required with conduit underground at 3' with an approximately distance of 50 feet.

**Front of Structure**

Photo Direction: Northeast



**Facing Away From Front**

Photo Direction: Southwest





**Side #1 of Structure**

Photo Direction: East



**Facing Away From Side #1**

Photo Direction: West





**Back of Structure**

Photo Direction: Southeast



**Facing Away From Back**

Photo Direction: Northwest



**Side #2 of Structure**

Photo Direction: Northeast



**Facing Away From Side #2**

Photo Direction: Southwest





**Streetscape #1**

Photo Direction: Northeast



**Streetscape #2**

Photo Direction: South



Address

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: Northeast



Structural Details

Photo Description: Architectural details

Photo Direction: North





Structural Details

Photo Description: Architectural details

Photo Direction: South



Structural Details

Photo Description: Architectural details

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: South



Structural Details

Photo Description: Architectural details

Photo Direction: Northeast



Structural Details

Photo Description: Architectural details

Photo Direction: North





Electricity Connected

Photo Description: Power connection

Photo Direction: North



Water Connected

Photo Description: Water connection from existing water well

Photo Direction: North



**Groundwater Monitoring Well**

Photo Description: Existing water well

Photo Direction: North





**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: Northeast



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: East



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: East



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: North





**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: Northeast



**Scope Of Work**

Photo Description: Water connections for the SOW

Photo Direction: North



**Scope Of Work**

Photo Description: Electrical connections for the SOW

Photo Direction: South



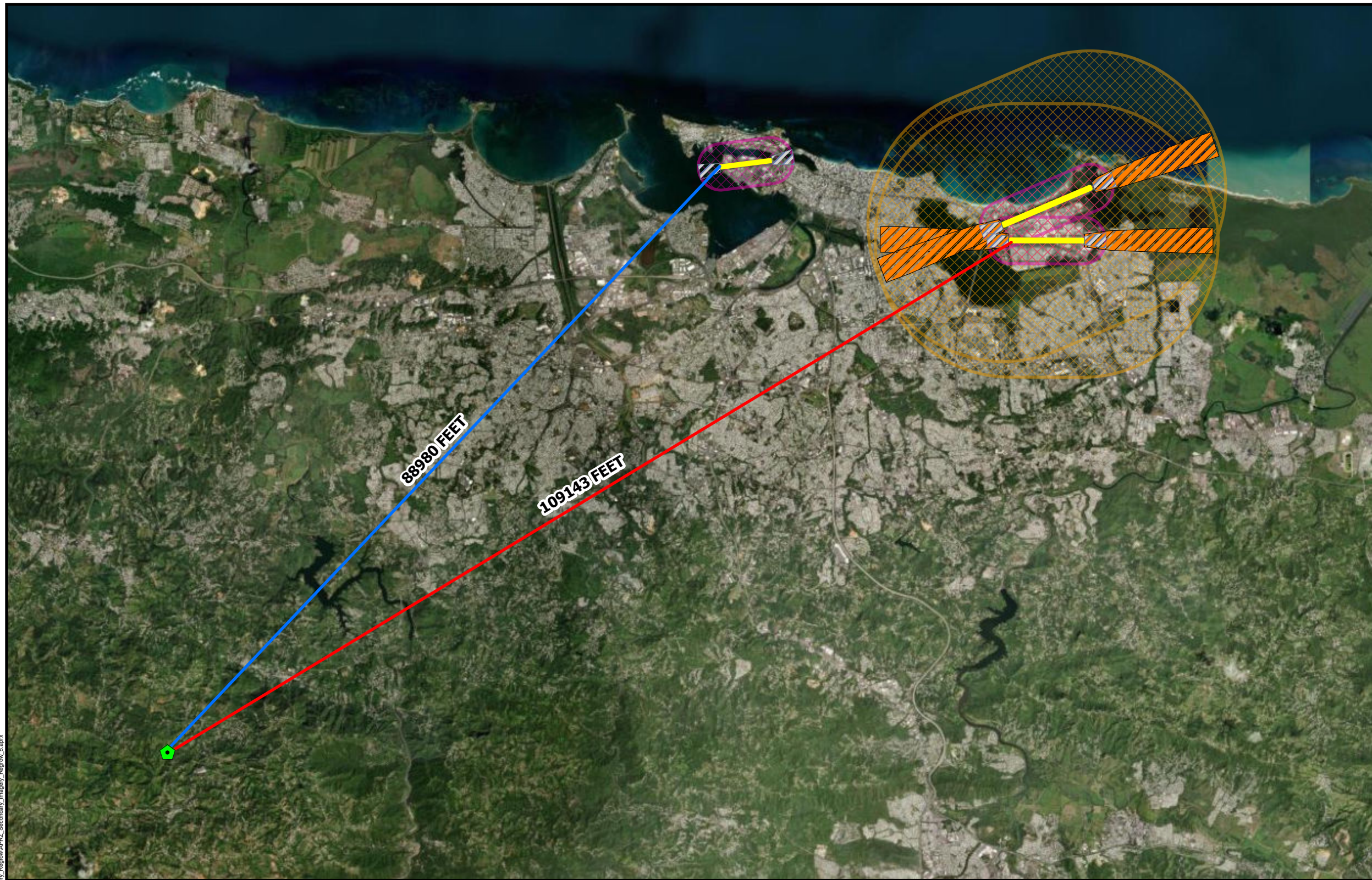
# APPENDIX B

## Maps









**Legend**

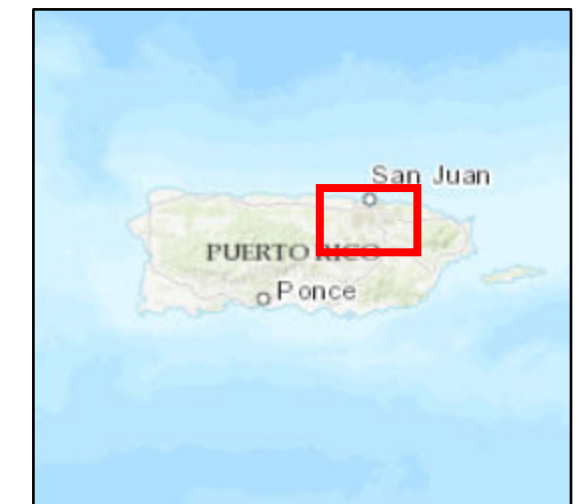
- Project Parcel
- Civilian Runway Protection Zones
- Military Accident Potential Zones
- Airport Runways
- Civilian Airport 2,500 Feet Buffer
- Military Airport 15,000 Feet Buffer

**Distance to Nearest Airport  
in Feet: 88,980**

**Distance to Nearest Civilian Airport  
in Feet: 88,980**

**Distance to Nearest Military Airport  
in Feet: 109,143**

**PUERTO RICO**



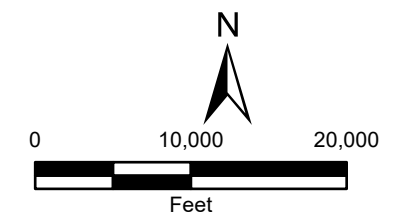
**Figure 2: AIRPORT ZONES  
APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
**Name of Development:** ALFREDO OTERO SANTIAGO DBA  
**Parcel Coordinates:** 18.278250 , -66.283333



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

Author: TG Date: 5/3/2024







**Legend**

Project Parcel

**Coastal Barrier Resources System Boundary**

**Unit**

PR-83

PR-84

PR-86P

Distance to Nearest Coastal Barrier Resources System:  
74476 Feet

**PUERTO RICO**



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

Author: TG

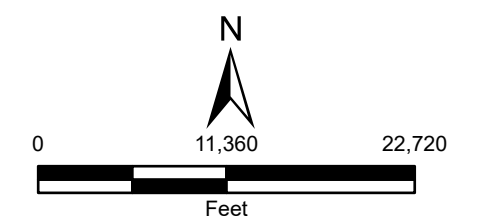
Date: 10/17/2023

**Figure 3: COASTAL BARRIERS IMPROVEMENT ACT**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719**

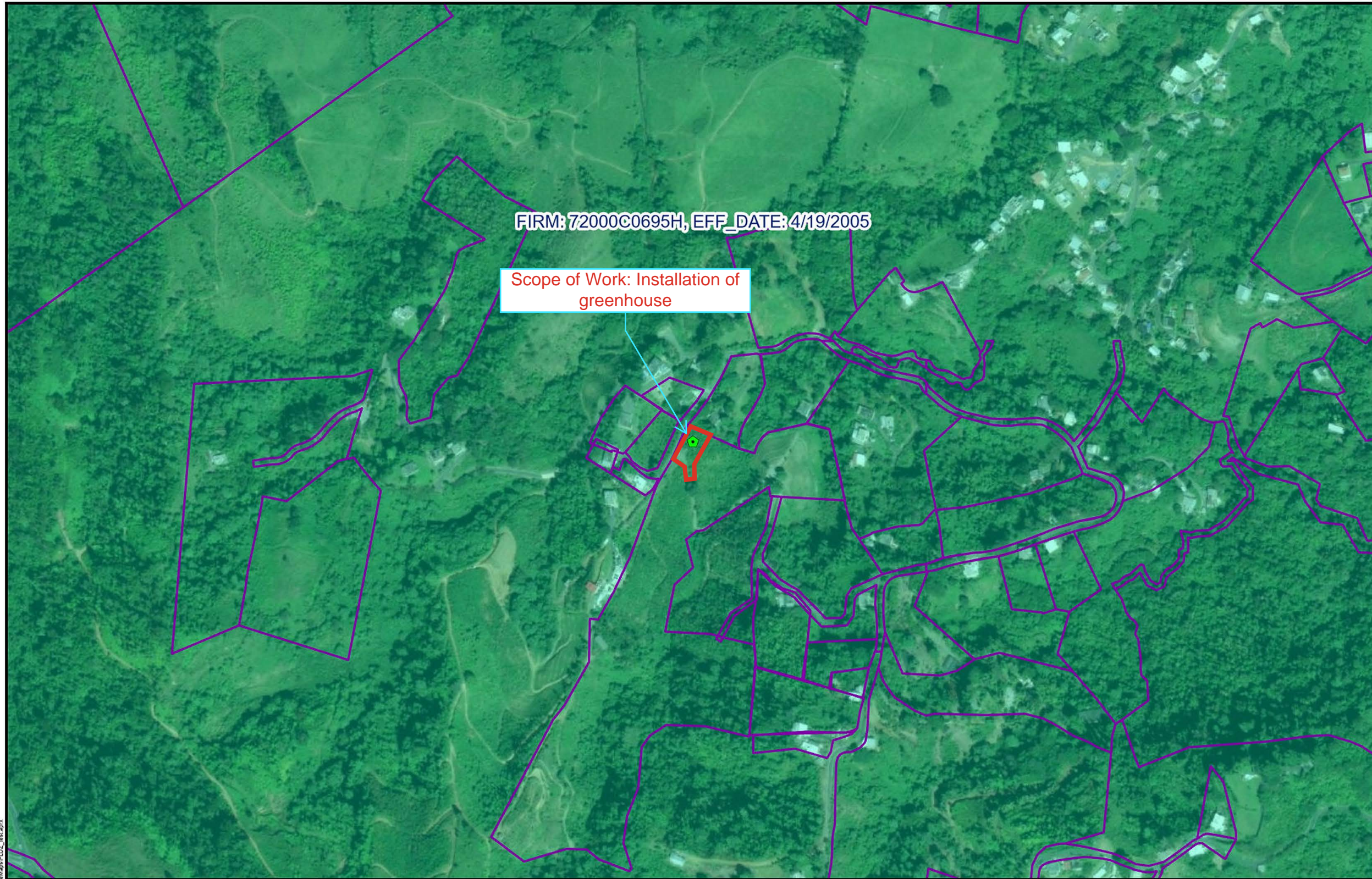
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.278250, -66.283333



File Path: Z:\data\USFWS\Tier2\Regrow\pr\CBRS\_Secondary\_Imagery\_Regrow\_L1.aprx





- 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**



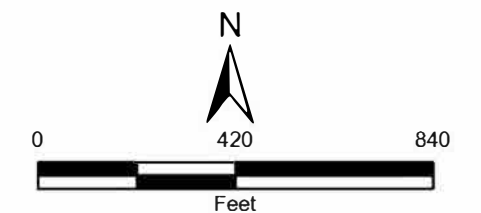
**Figure 4: FLOOD INSURANCE RATE MAP (FIRM)  
APPLICANT ID: PR-RGRW-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates: 18.278250 , -66.283333

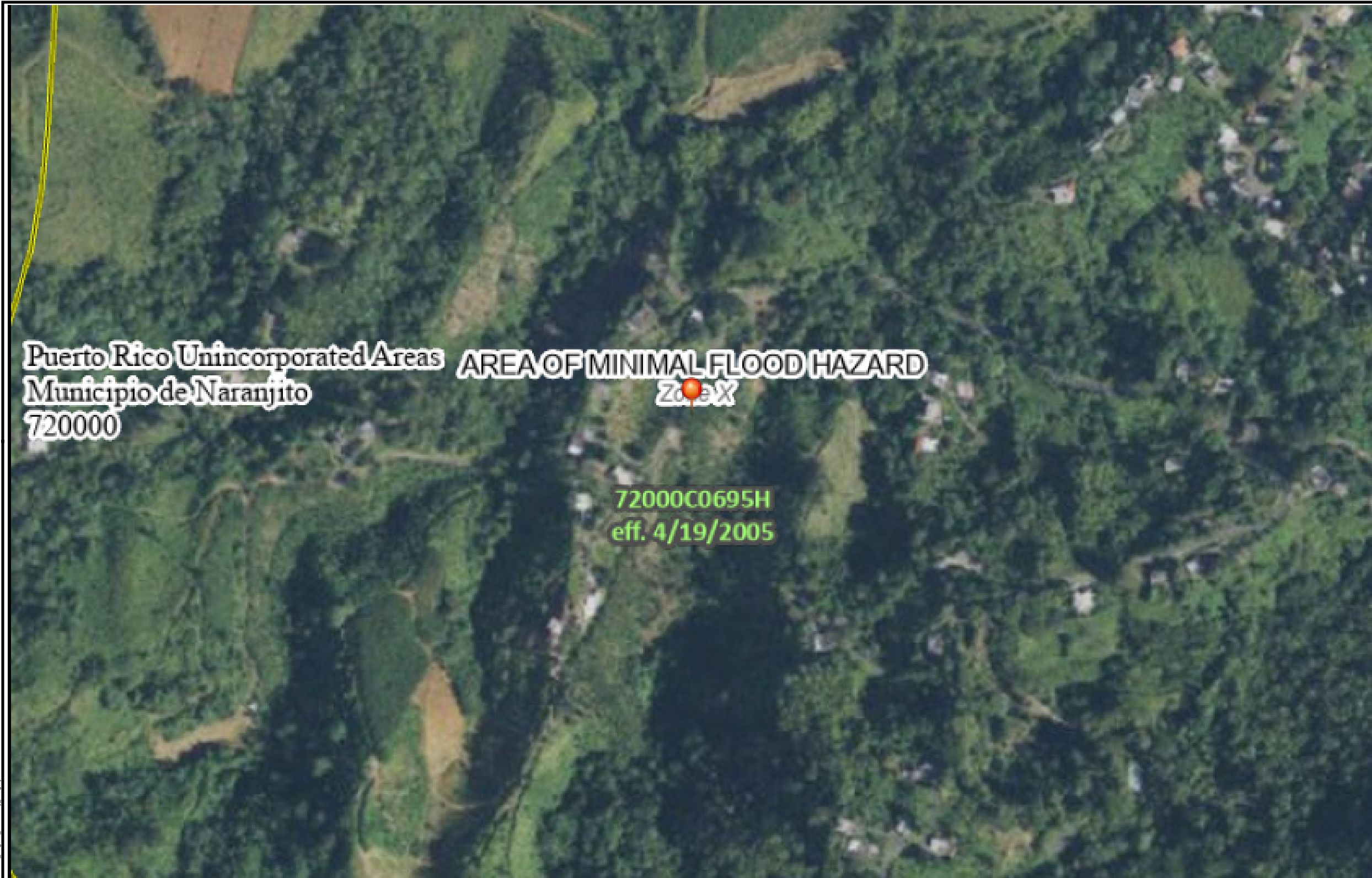


Source: FEMA  
<https://msc.fema.gov>

Author: TG Date: 10/29/2024







Puerto Rico Unincorporated Areas  
 Municipio de Naranjito  
 720000

AREA OF MINIMAL FLOOD HAZARD  
 Zone X

72000C0695H  
 eff. 4/19/2005

### 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, A99
		With BFE or Depth Zone AE, AO, 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		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

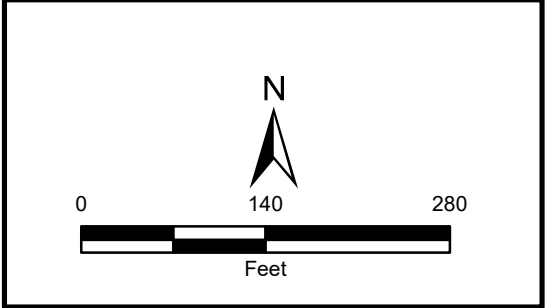
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



## Figure 5: NATIONAL FLOOD HAZARD LAYER FIRMETTE

### APPLICANT ID: PR-RGRW-01315

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates :18.278250 , -66.283333

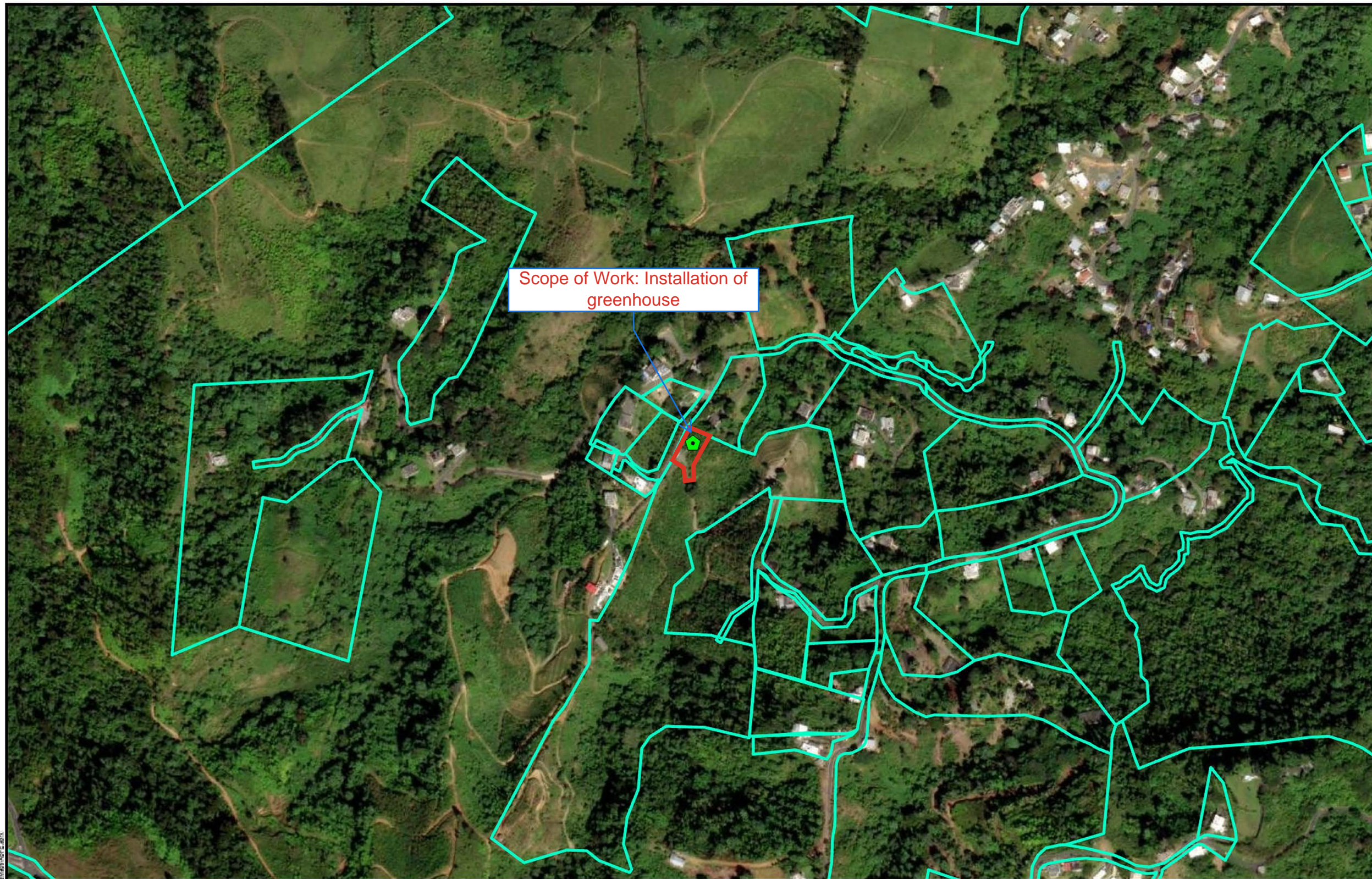


Source: FEMA  
<https://www.msc.fema.gov>

Author: TG Date: 5/31/2023

File Path: \\sala20\gis\GIS\CDR\PR\Acc\GIS\SHAPE\TDR\DATA\USFIRM\FIRM\PR\LOC\_Regrow\_Secondary\_Imagery.mxd





- Legend**
- Project Parcel**
  - Parcels**
  - ABFE Floodzone**
  - A**
  - AE**
  - AO**
  - VE**
  - X (0.2% ACF)**
  - Area of Potential Effect**

**PUERTO RICO**



**Figure 6: ADVISORY BASE FLOOD ELEVATION (ABFE) MAP**  
**APPLICANT ID: PR-RGRW-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

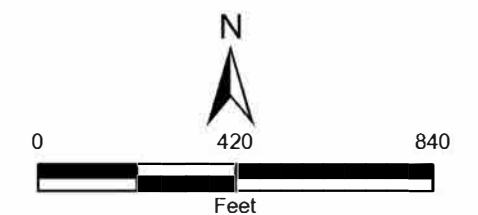
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates :18.278250 , -66.283333

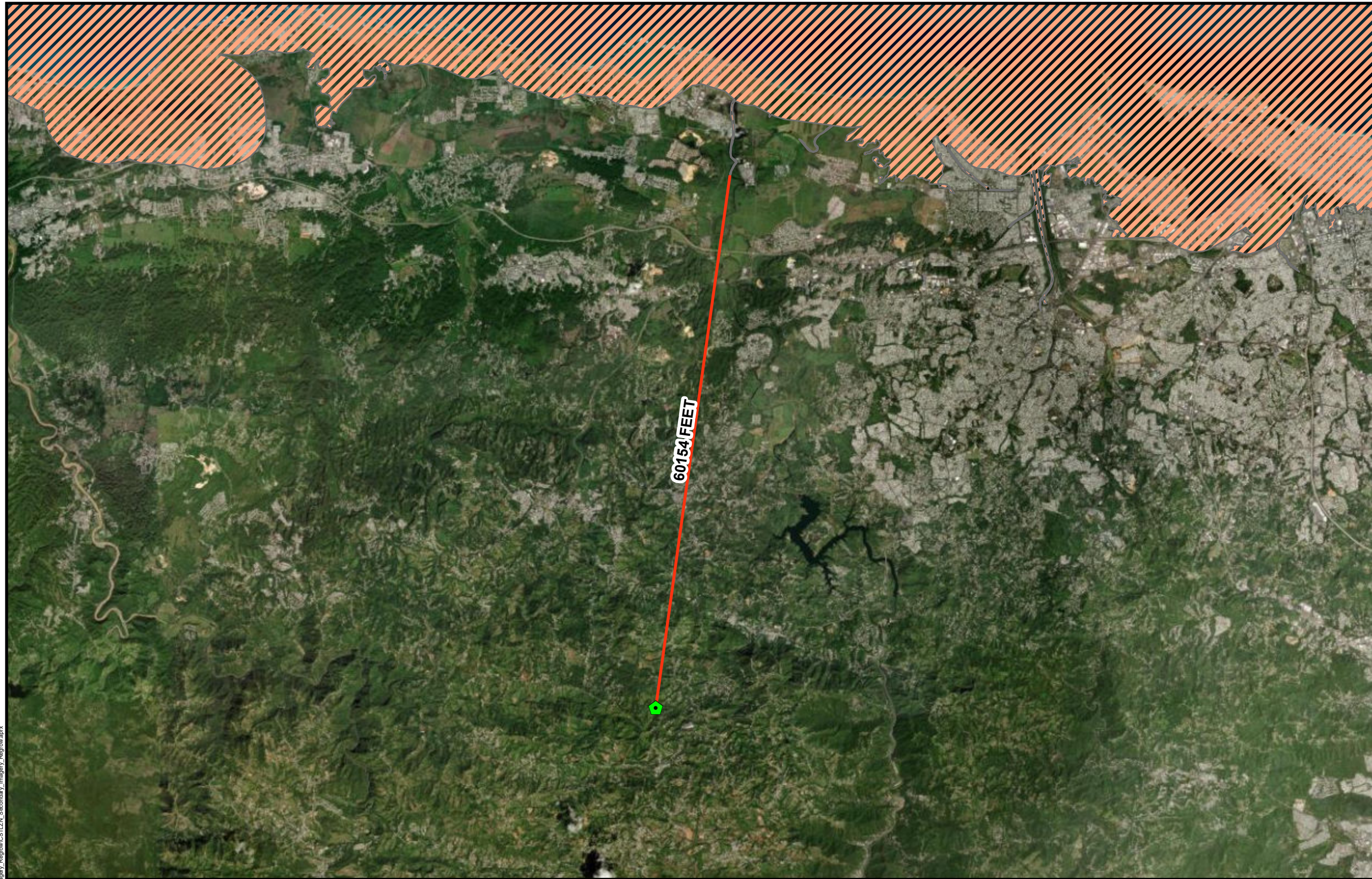


Source: FEMA  
<https://gis.fema.gov>



Author: TG Date: 10/29/2024







**Legend**

-  Project Parcel
-  Coastal Zone Management Boundary

Distance to Nearest Coastal Zone:  
60154 Feet

**PUERTO RICO**



**Figure 7: COASTAL ZONE MANAGEMENT  
APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

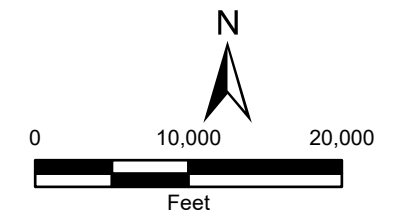
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.278250, -66.283333

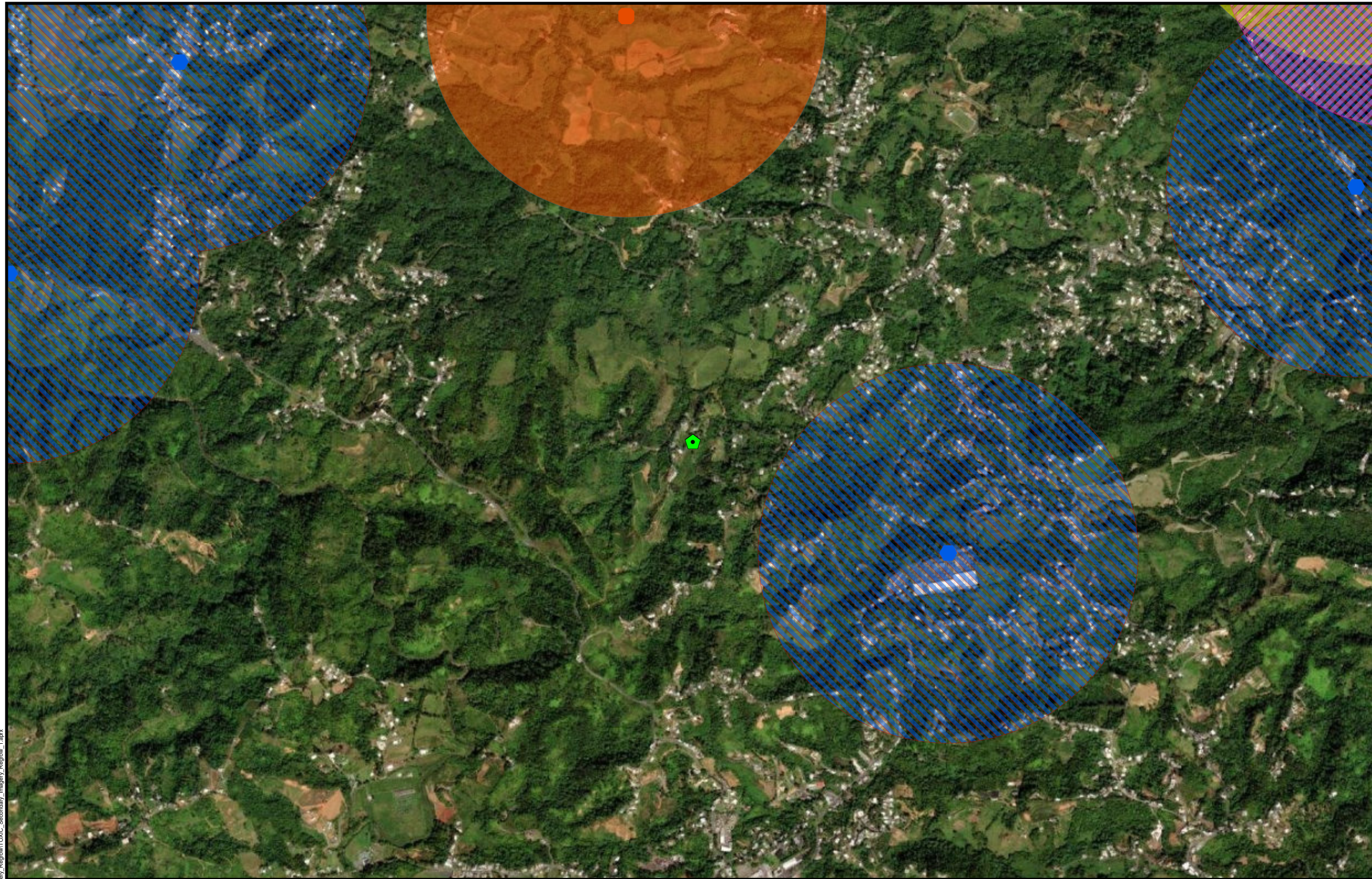


Source: NOAA's Ocean Service  
<https://data.noaa.gov>

Author: TG Date: 10/17/2023







- Legend**
- Project Parcel
  - AIR
  - NPDES
  - RCRA
  - Toxic Release Inventory Site
  - Superfund Site
  - Brownfield Sites
  - 3000 Ft Buffer AIR
  - 3000 Ft Buffer NPDES
  - 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-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.278250, -66.283333

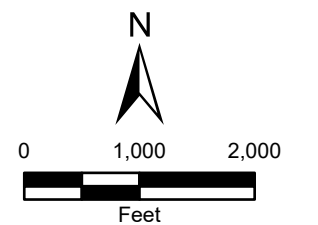


Source: E.P.A.

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

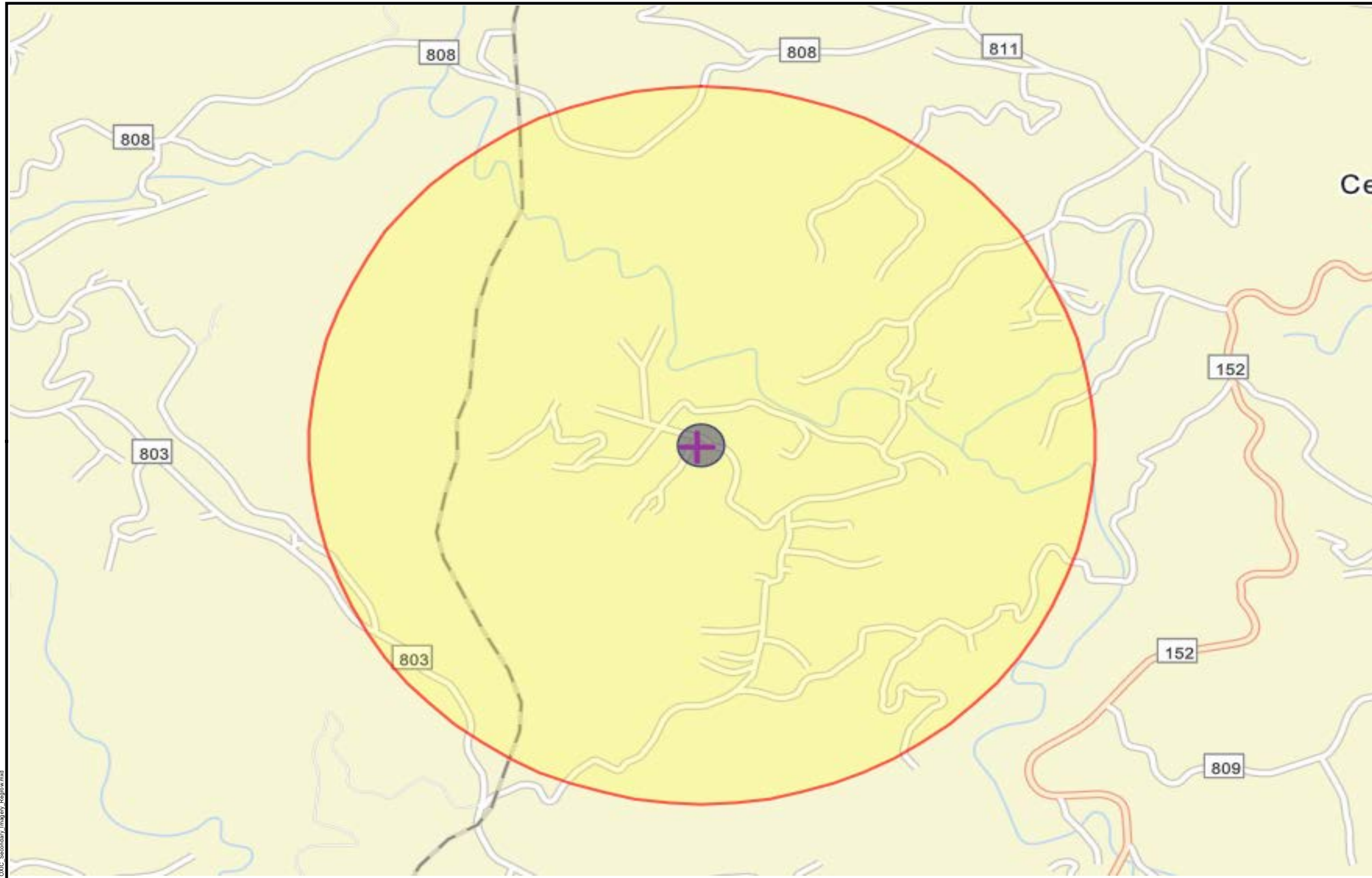
Author: JB/AK

Date: 4/11/2024



File Path: Z:\data\USRT\Tier2\Regrow\TOMIC\_Secondary\_Imagery\_Regrow\TOMIC\_Secondary\_Imagery\_Regrow\_1.aprx





**Legend**

- Superfund (NPL)
- Toxic Substances Control Act (TSCA)
- Toxic Releases (TRI)
- Brownfields (ACRES)
- Hazardous Waste (RCRAInfo)
- 3000 Ft Buffer

**PUERTO RICO**



**Figure 9: NEPA Assist Map**  
**APPLICANT ID: PR-RGRW-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates :18.278250 , -66.283333

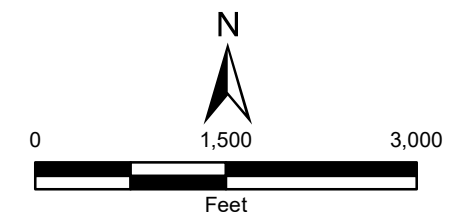


Source: E.P.A.

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

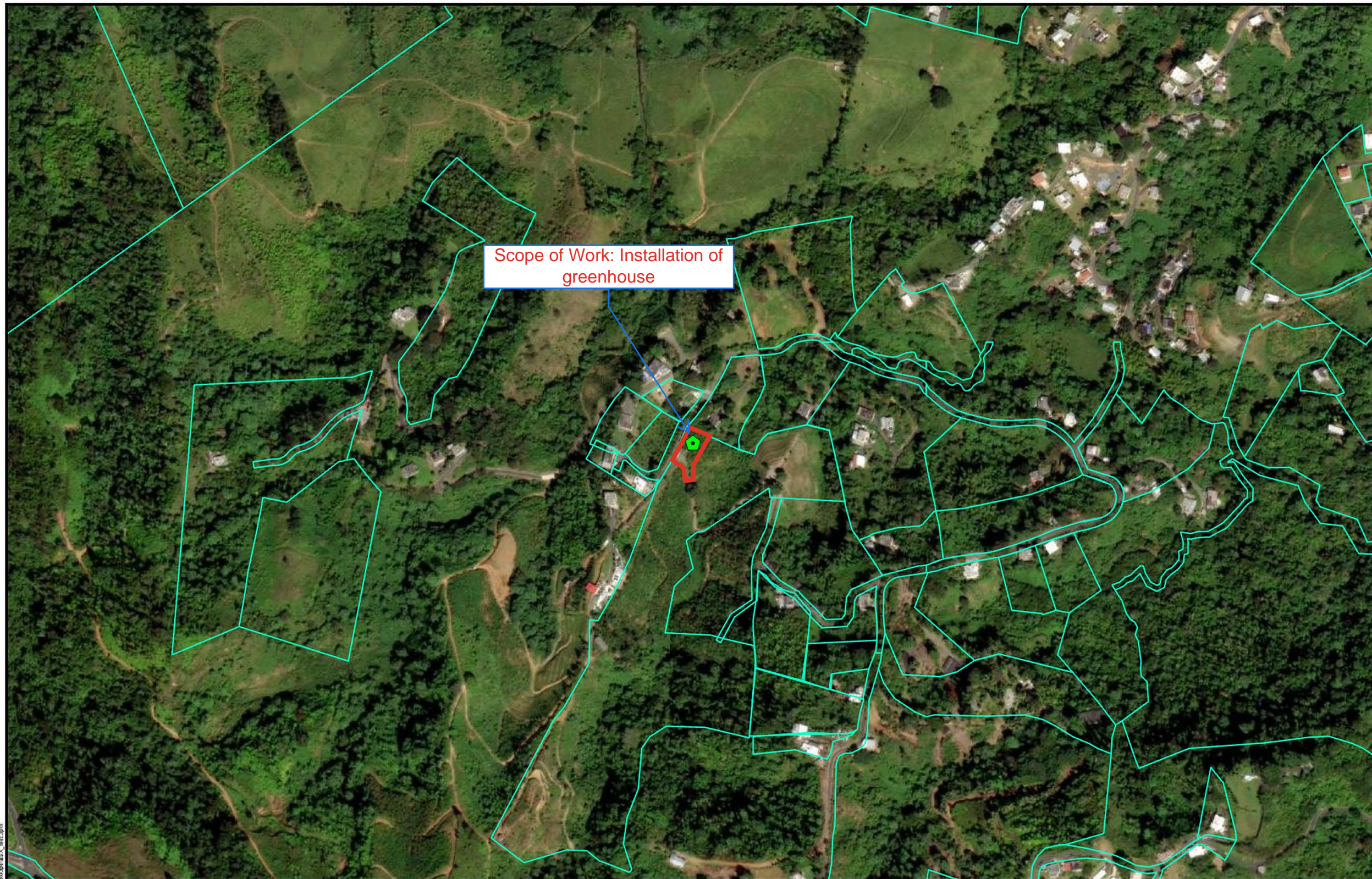
Author: JB/AK

Date: 5/18/2023



File Path: \\slas206\gis\CDR\PR\Acad\Shane\TDR\Output\SPR\Fig9\TOXIC\_Secondary\_Imagery\_Regional.mxd





**Legend**

- Project Parcel
- Parcels
- Area of Critical Habitat
- Area of Potential Effect

Scope of Work: Installation of greenhouse

**PUERTO RICO**



**Figure 10: ENDANGERED SPECIES ACT  
APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

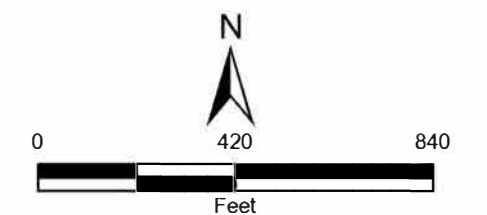
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.278250, -66.283333

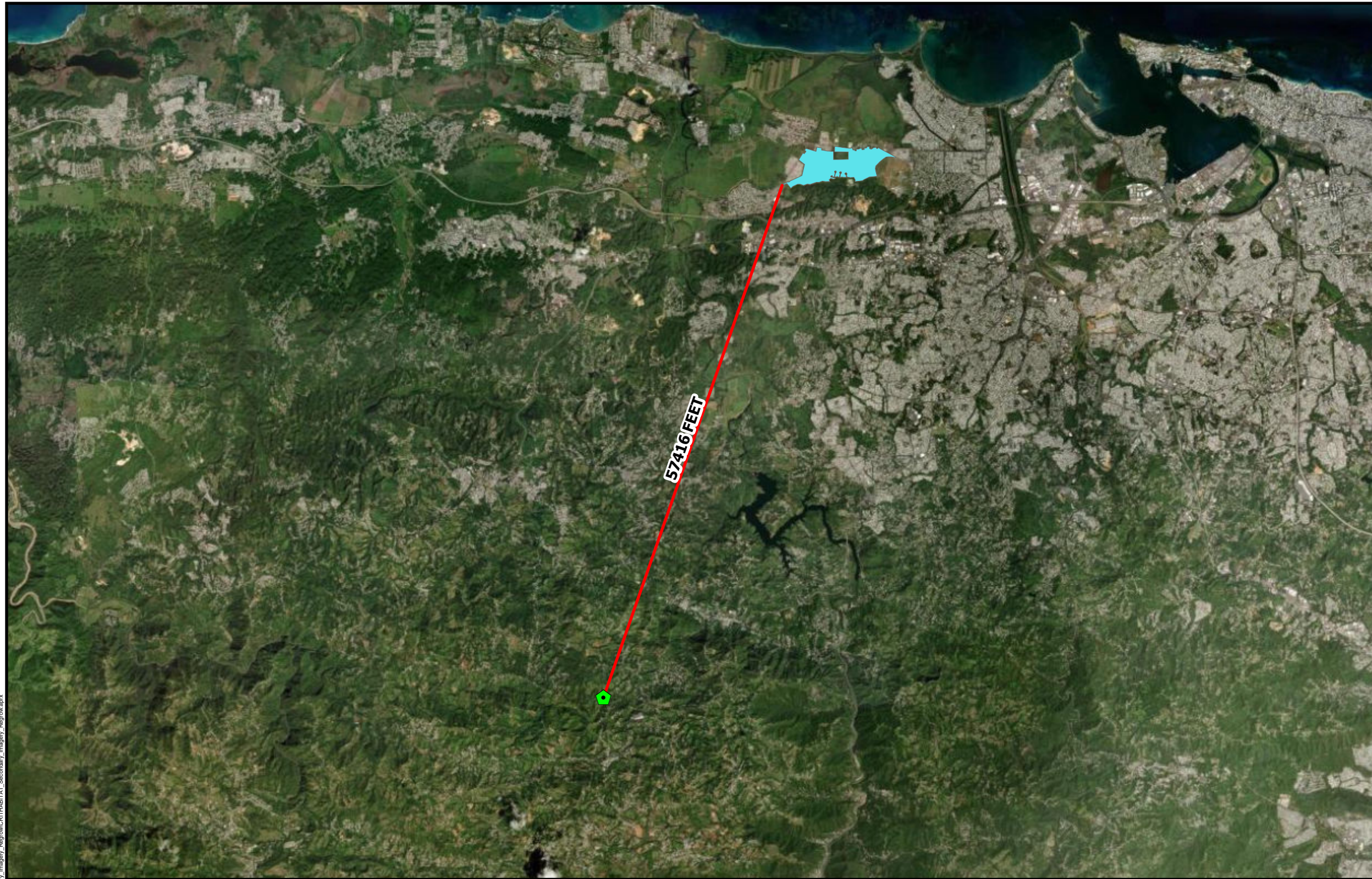


Source: U.S. FISH & WILDLIFE SERVICE  
<LINK><https://ecos.fws.gov></LINK>

Author: TG Date: 10/29/2024







- Legend**
- ▣ Project Parcel
  - Common Name**
  - ▣ Llanero Coqui

**Distance to Nearest Critical Habitat:**  
57416 Feet

**PUERTO RICO**

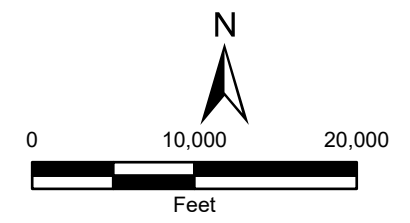


**Figure 11: CRITICAL HABITATS**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
**Name of Development:** ALFREDO OTERO SANTIAGO DBA  
**Parcel Coordinates:** 18.27825, -66.283333

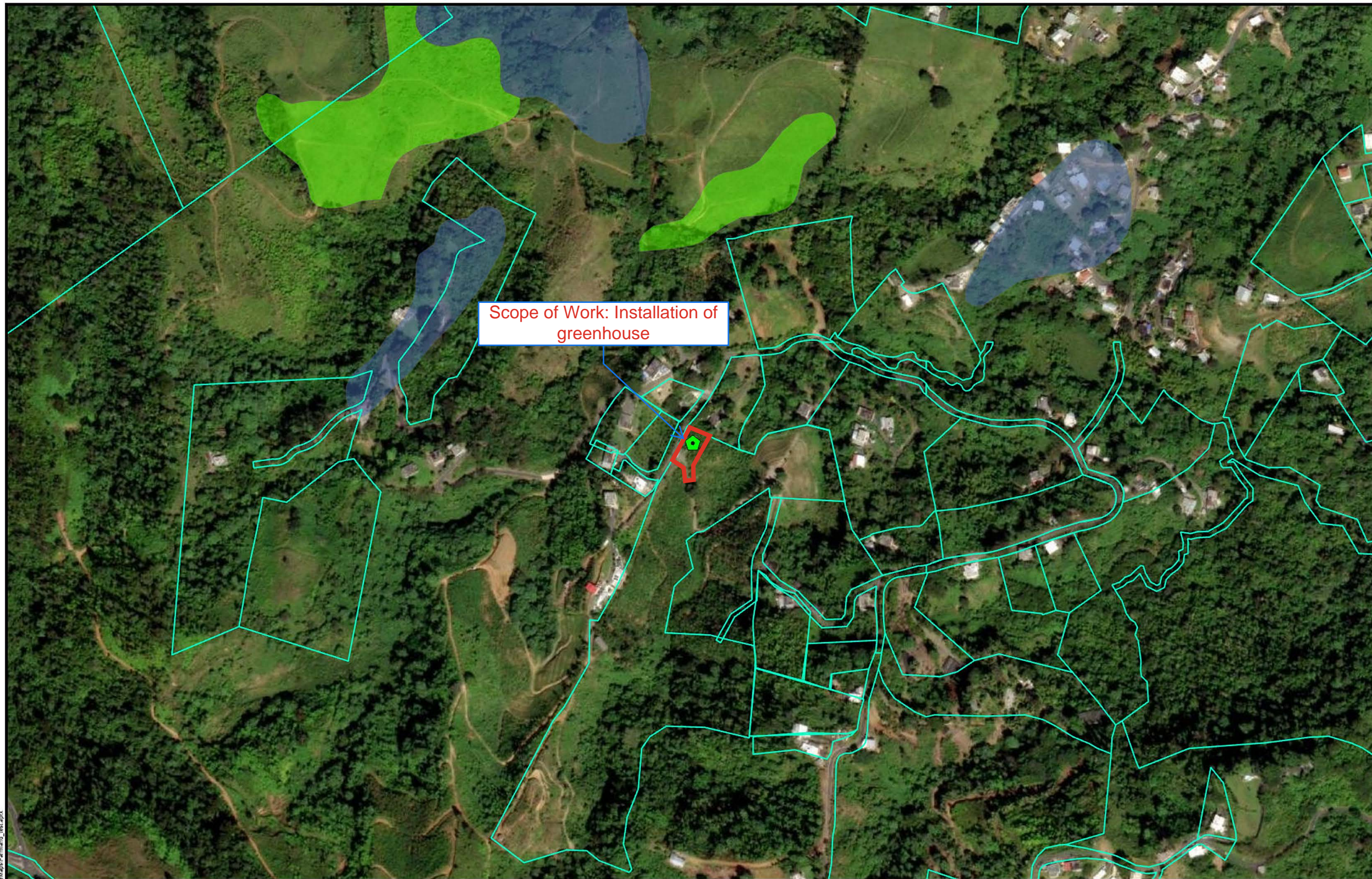


Source: U.S. FISH & WILDLIFE SERVICE  
 <LINK><https://ecos.fws.gov></LINK>  
 Author: TG Date: 11/3/2023



File Path: Z:\data\USFWS\PR\Regrow\CRITICAL\_HABITATS\_Secondary\_Imagery\_Regrow\CRITICAL\_HABITATS\_Secondary\_Imagery\_Regrow.aprx





**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

Area of Potential Effect

**PUERTO RICO**



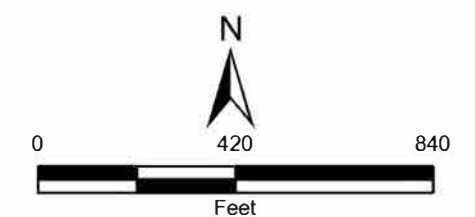
**Figure 12: FARMLAND PROTECTION**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
**Name of Development:** ALFREDO OTERO SANTIAGO DBA  
**Parcel Coordinates:** 18.278250, -66.283333

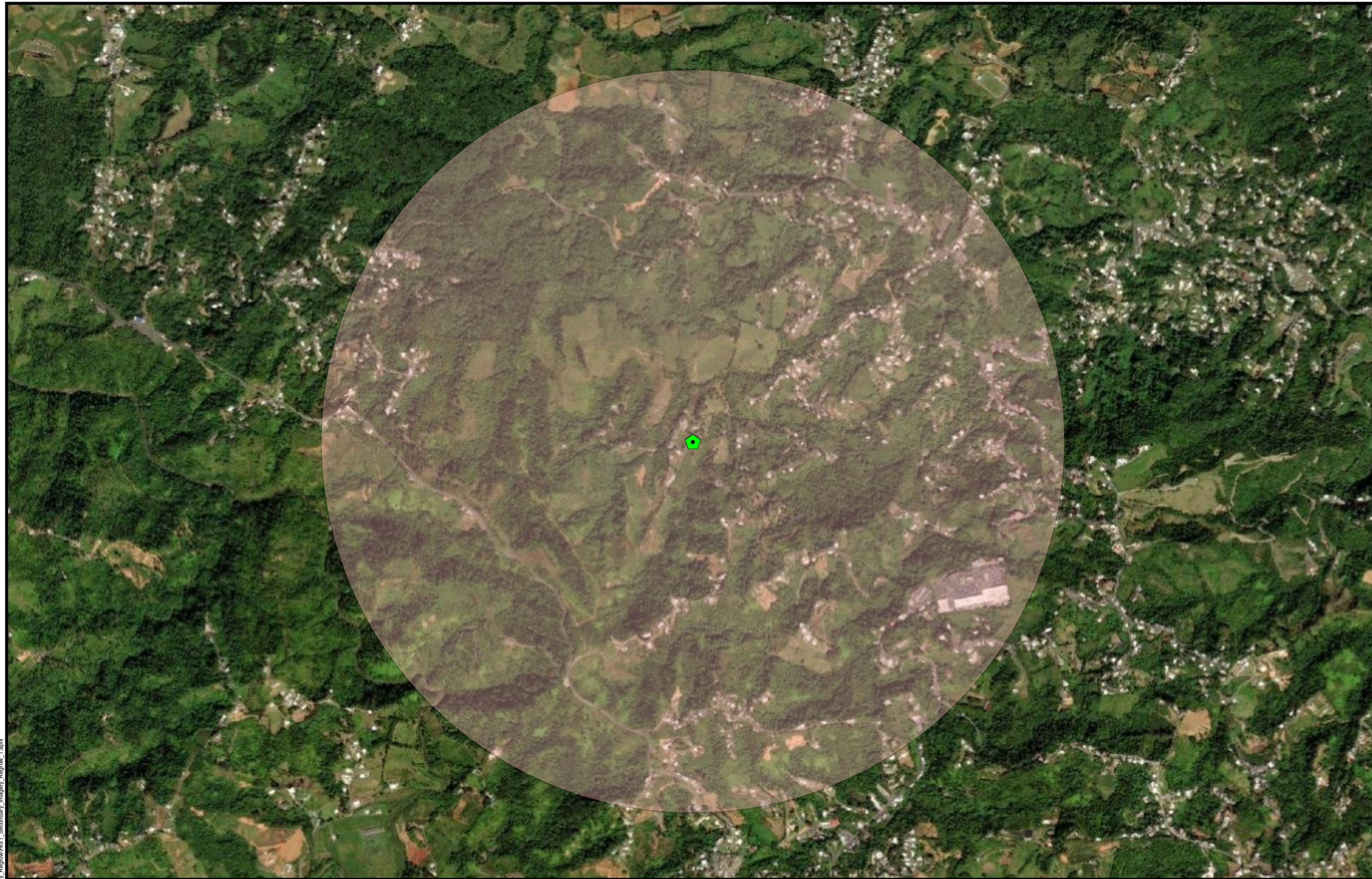


Source: USDA  
<https://websoilsurvey.sc.egov.usda.gov>

Author: TG Date: 10/29/2024







- 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**

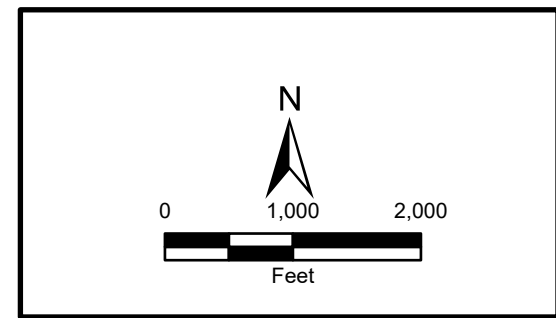


**Figure 13: HISTORIC PRESERVATION**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719**

Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.278250, -66.283333

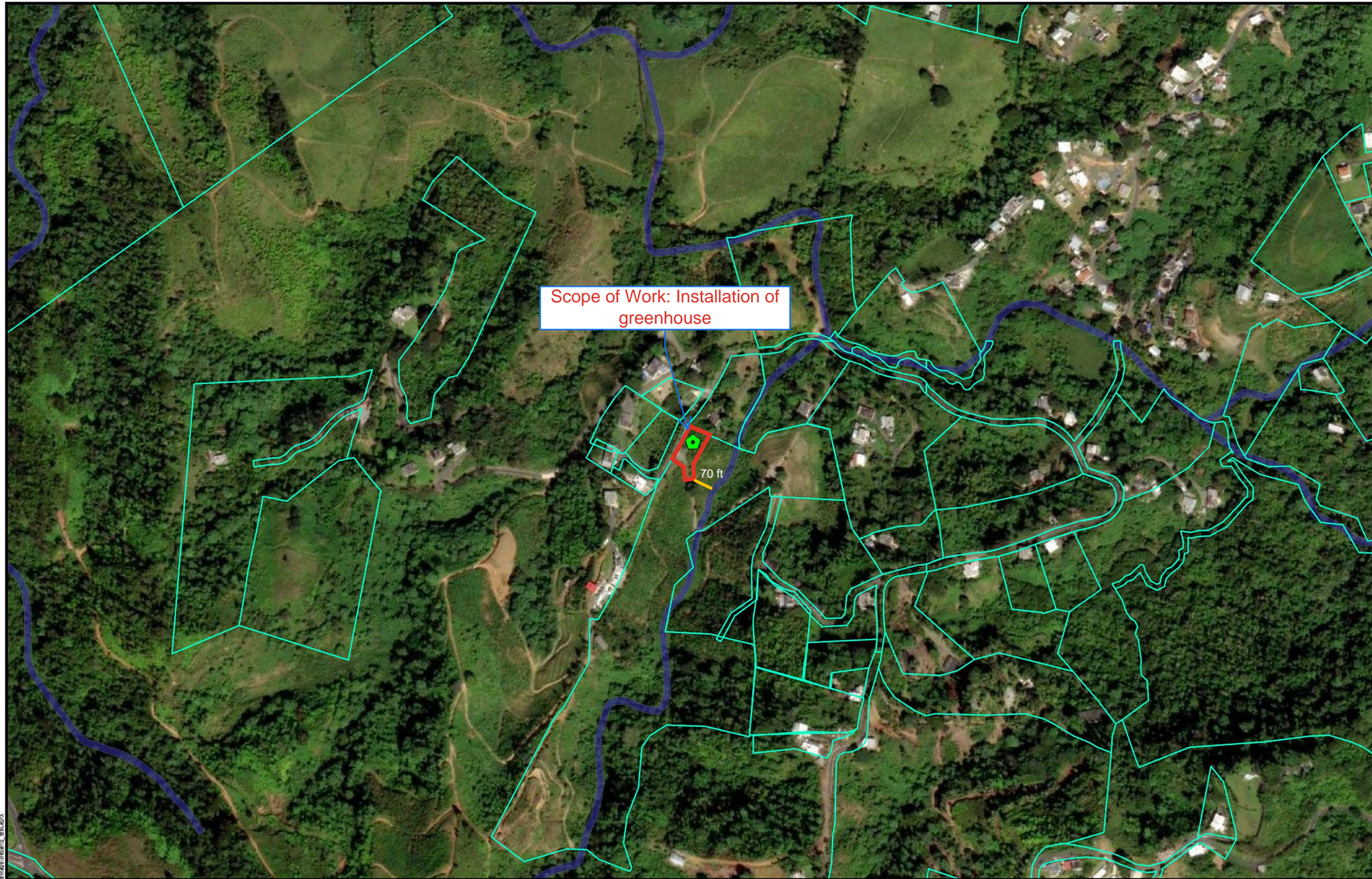


Source: National Park Service  
<https://www.nps.gov/>

Author: TG Date: 4/11/2024

File Path: Z:\data\USPRT\Tier2\Regrow\aparc\HIST\_Secondary\_Imagery\_Regrow\HIST\_Secondary\_Imagery\_Regrow\_1.aprx





- 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
  - Distance to wetland 70 ft

**PUERTO RICO**

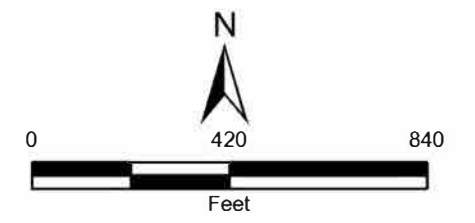


**Figure 14: WETLANDS**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates: 18.278250, -66.283333

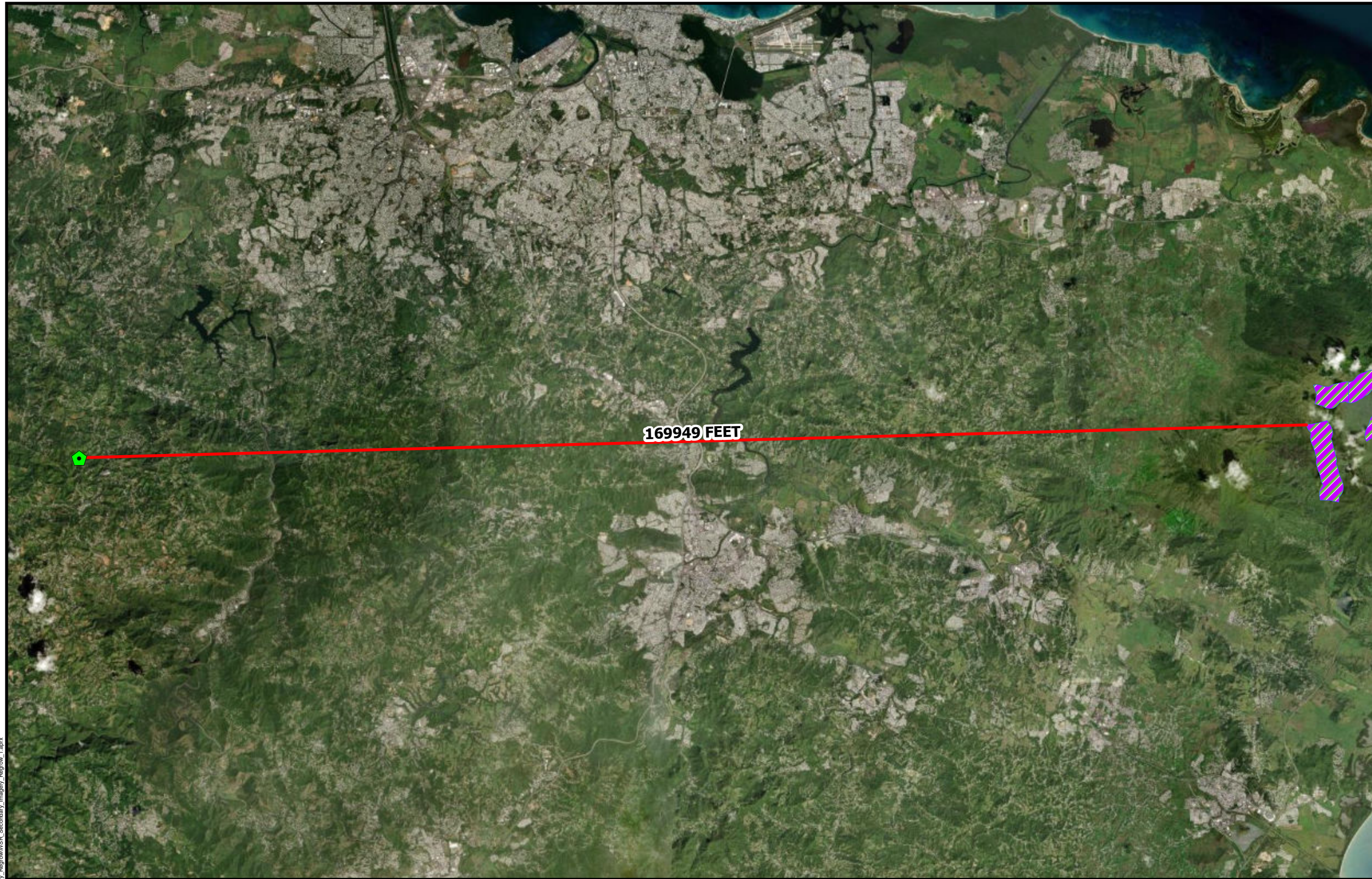


Source: U. S. Fish & Wildlife Service  
 <LINK><https://www.fws.gov></LINK>  
 Author: TG Date: 10/29/2024





File Path: G:\Users\TJ\Documents\GIS\MapDocs\MapDocs\PR-RGRW-01315\Figure\_14\_2024\_10\_29.mxd



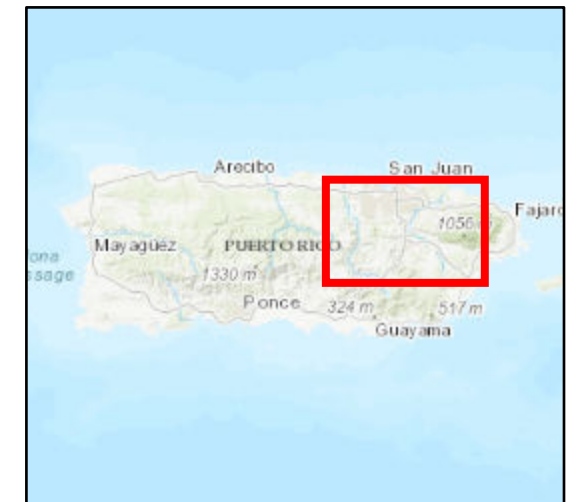


**Legend**

-  Project Parcel
-  Wild and Scenic Rivers

Distance to Nearest Wild and Scenic River: 169949 Feet

**PUERTO RICO**



**Figure 15: WILD AND SCENIC RIVERS ACT  
 APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

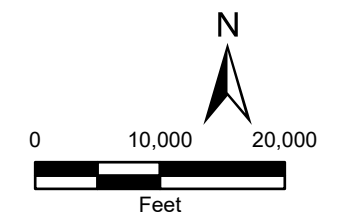
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.27825, -66.283333



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

Author: TG Date: 10/23/2023







- Legend**
- Project Parcel
  - Parcels
  - Landslide Susceptibility**
  - Extremely High
  - Very High
  - High
  - Moderate
  - Low
  - Area of Potential Effect

**PUERTO RICO**



**Figure 16: SLOPE AND EROSION**  
**APPLICANT ID: PR-RGRW-01315**

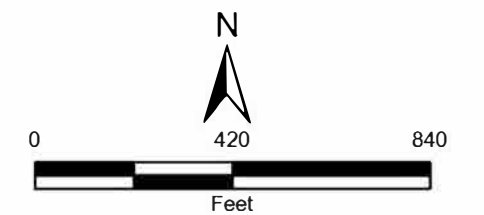
**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

Name of Development:

Parcel Coordinates: ,



Source: PRDOH  
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=10506ecc7f15491daee17647f19248ee>  
 Author: TG Date: 10/29/2024







- Legend**
- ◆ Project Parcel
  - Streamflow and Recharge Source Zones
  - Sole Source Aquifer
  - Biscayne Aquifer SSA

Distance to Nearest Aquifer:  
5,404,403 FT

**PUERTO RICO**



Source: USGS  
<https://catalog.data.gov/dataset/epa-sole-source-aquifers>

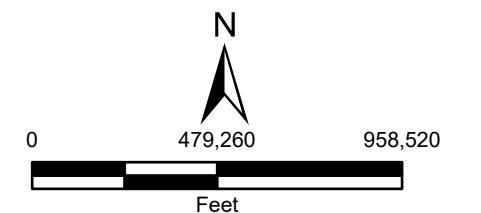
Author: TG Date: 2/27/2024

**Figure 17: SOLE SOURCE AQUIFERS  
 APPLICANT ID: PR-RGRW-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.27825, -66.283333



File Path: Z:\data\USPRT\Tier2\Regrow\SSA\QUIFER\_Secondary\_Imagery\_Regrow\_L1.aprx

# APPENDIX C

## Additional Information



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

Data is current as of July 31, 2024

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

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

Change the State:

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	1112131415161718192021222324	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	929394959697989900010203040506070809	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	18192021222324	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	18192021222324	//		Part	52,441	72/137

Important Notes

Discover.

Connect.

Ask.

Follow.

2024-07-31



# EJScreen Community Report

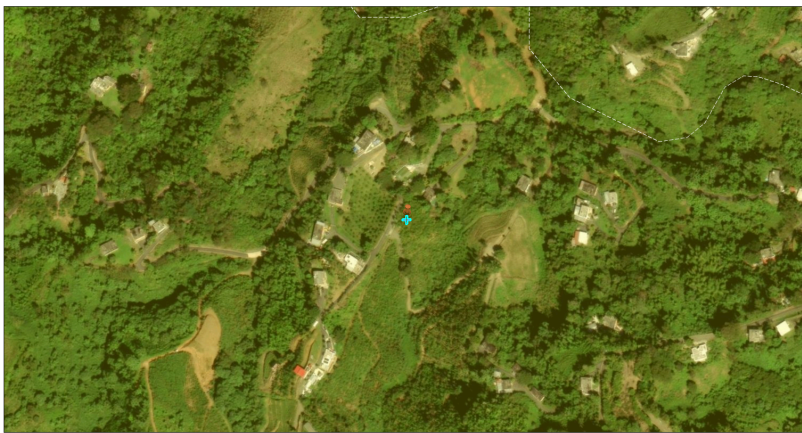
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

## PR-RGRW-01315

1 mile Ring Centered at 18.278244,-66.283333

Population: 2,981

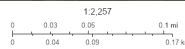
Area in square miles: 3.14



October 30, 2024

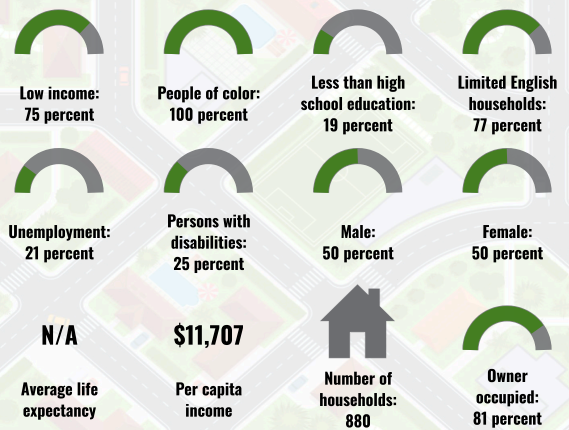
PR-RGRW-01315

Search Result (point)

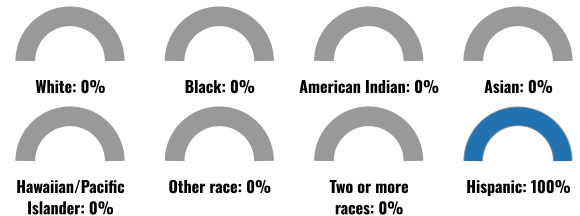


Source: Esri, Microsoft, Earthstar Geographics, and the GIS User Community, Esri, HERE, DeLorme, Inc.

### COMMUNITY INFORMATION



### BREAKDOWN BY RACE



### BREAKDOWN BY AGE



### LIMITED ENGLISH SPEAKING BREAKDOWN



### LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	3%
Spanish	97%
Total Non-English	97%

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) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

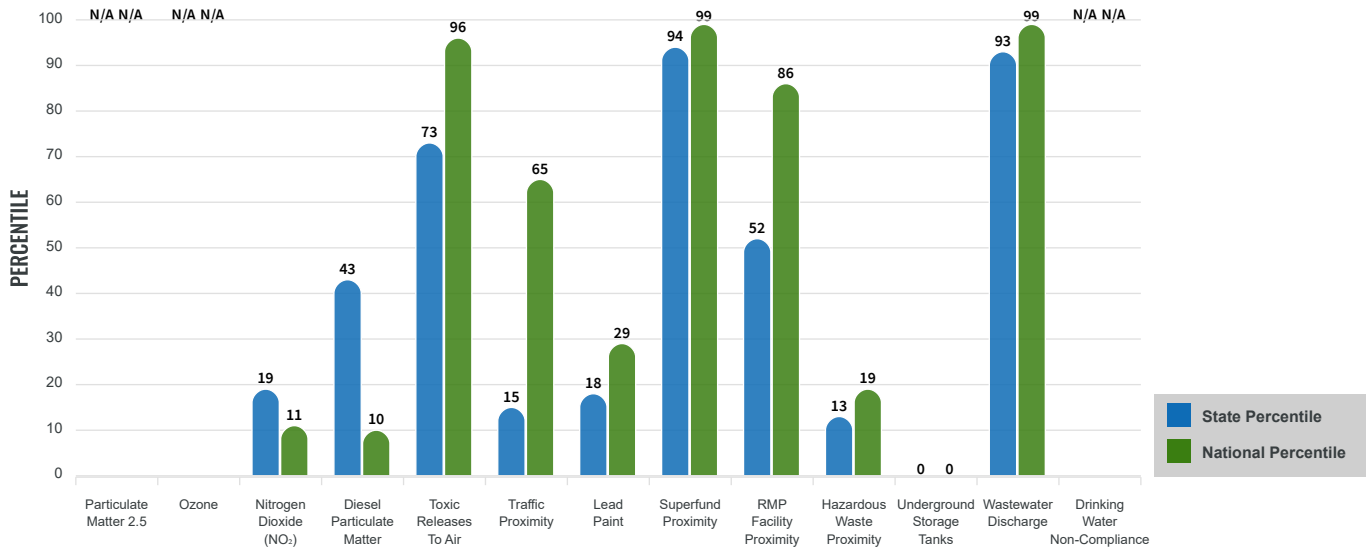
# Environmental Justice & Supplemental Indexes

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.

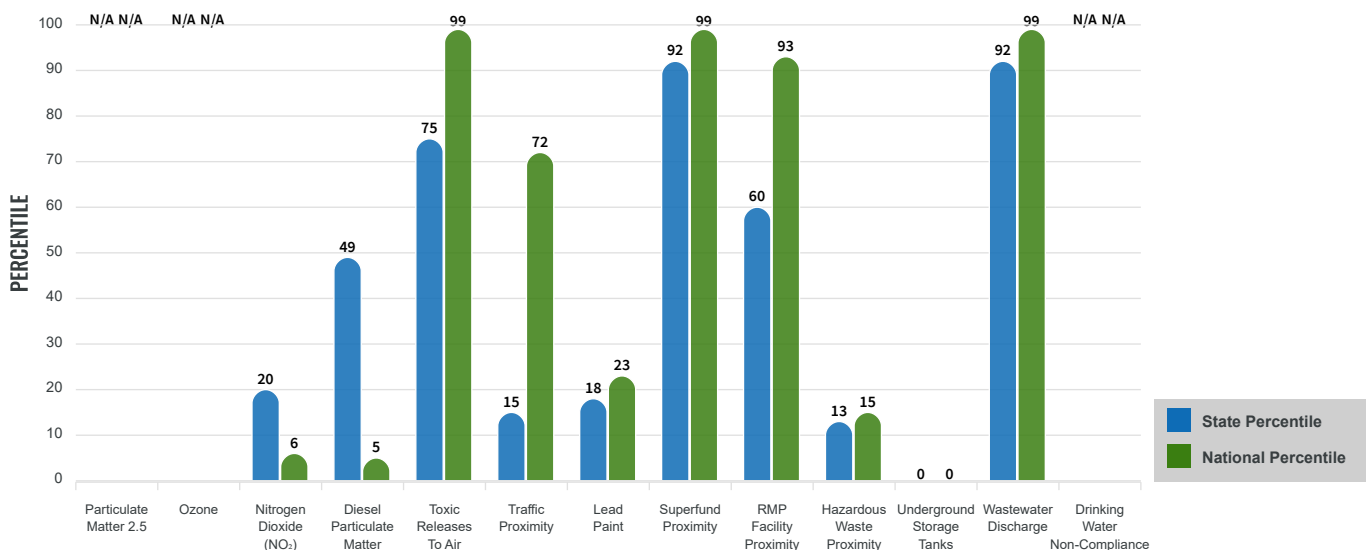
### EJ INDEXES FOR THE SELECTED LOCATION



## SUPPLEMENTAL INDEXES

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

### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for 1 mile Ring Centered at 18.278244,-66.283333

Report produced October 30, 2024 using EJScreen Version 2.3

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>ENVIRONMENTAL BURDEN INDICATORS</b>					
Particulate Matter 2.5 ( $\mu\text{g}/\text{m}^3$ )	N/A	N/A	N/A	8.45	N/A
Ozone (ppb)	N/A	N/A	N/A	61.8	N/A
Nitrogen Dioxide (NO <sub>2</sub> ) (ppbv)	2.2	5.5	18	7.8	2
Diesel Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	0.0295	0.0618	43	0.191	2
Toxic Releases to Air (toxicity-weighted concentration)	1,600	4,300	71	4,600	67
Traffic Proximity (daily traffic count/distance to road)	180,000	1,100,000	14	1,700,000	24
Lead Paint (% Pre-1960 Housing)	0.019	0.16	20	0.3	18
Superfund Proximity (site count/km distance)	0.9	0.23	95	0.39	90
RMP Facility Proximity (facility count/km distance)	0.24	0.66	49	0.57	47
Hazardous Waste Proximity (facility count/km distance)	0.016	1.2	13	3.5	15
Underground Storage Tanks (count/km <sup>2</sup> )	0	0	0	3.6	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	3800000	670000	91	700000	99
Drinking Water Non-Compliance (points)	N/A	N/A	N/A	2.2	N/A
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index USA	3.35	N/A	N/A	1.34	98
Supplemental Demographic Index USA	4.43	N/A	N/A	1.64	99
Demographic Index State	4.85	4.63	51	N/A	N/A
Supplemental Demographic Index State	2.96	2.72	58	N/A	N/A
People of Color	100%	97%	31	40%	98
Low Income	75%	70%	49	30%	96
Unemployment Rate	21%	14%	76	6%	96
Limited English Speaking Households	77%	66%	67	5%	99
Less Than High School Education	19%	20%	48	11%	80
Under Age 5	2%	3%	41	5%	24
Over Age 64	11%	23%	12	18%	29

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

## Sites reporting to EPA within defined area:

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

## Other community features within defined area:

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

## Other environmental data:

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

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

Report for 1 mile Ring Centered at 18.278244,-66.283333

Report produced October 30, 2024 using EJScreen Version 2.3

# EJScreen Environmental and Socioeconomic Indicators Data

## HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	N/A	N/A	N/A	20%	N/A
Heart Disease	N/A	N/A	N/A	5.8	N/A
Asthma	N/A	N/A	N/A	10.3	N/A
Cancer	N/A	N/A	N/A	6.4	N/A
Persons with Disabilities	24.8%	22.7%	63	13.7%	94

## CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	N/A	N/A	N/A	12%	N/A
Wildfire Risk	N/A	N/A	N/A	14%	N/A

## CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	35%	29%	68	13%	94
Lack of Health Insurance	8%	7%	75	9%	60
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 1 mile Ring Centered at 18.278244,-66.283333

Report produced October 30, 2024 using EJScreen Version 2.3

**APPENDIX D**  
Endangered Species





## United States Department of the Interior

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



In Reply Refer to:  
FWS/R4/CESFO/72105-Gen

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

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

Re: CDBG-DR PR-RGRW-01315 Alfredo Otero  
Santiago DBA, Naranjito, Puerto Rico

Dear Mr. Pérez-Bofill

Thank you for your letter dated September 11, 2024, requesting informal consultation on the above referenced project. As per your request, our comments are provided under the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The Puerto Rico Department of Housing (PRDOH) is proposing the purchase and installation of a greenhouse (98-feet (Ft) x 21 Ft metal structure, 63% covered with plastic and saran, 24 posts anchored to the ground), installation of 1,200 square foot of growing tables and installation of three 600-gallon water cisterns (buried at a depth of 4 Ft). The greenhouse will be located on State Road PR-811, Km. 0.6 Int., Cedro Arriba Ward, Sabana Sector (18°16'41.7"N 66°17'00.0"W) in the municipality of Naranjito. The project site will require clearing, grading and vegetation removal. However, the proposal does not contemplate cutting, pruning or transplanting of trees.

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

PRDOH used the Caribbean Determination Key (DKey) in the IPaC application to evaluate the potential impacts of the proposed project on federally listed species (Project code: 2024-0128134). Based on the answers provided, a no effect (NE) consistency letter was obtained for the Puerto Rican boa.

However, based on the nature of the project, scope of work, information available, and analysis of the existing habitat (mountainous rural residential area surrounded by farmlands and vegetation), PRDOH has determined that the proposed project may affect, but is not likely to adversely affect (NLAA) the Puerto Rican boa instead of the NE obtained by using the DKey. Conservation measures developed by the Service for the Puerto Rican boa will be implemented in case an encounter with this species occur.

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


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

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

Sincerely,

LOURDES  
MENA

Lourdes Mena  
Field Supervisor

 Digitally signed by LOURDES MENA  
Date: 2024.10.28 12:35:24 -04'00'

dr

cc:  
SWCA  
HUD



September 11, 2024

Lourdes Mena  
Field Supervisor  
Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
Office Park I, Suite 303  
State Road #2 Km 156.5  
Mayagüez, Puerto Rico 00680  
Email: [Caribbean\\_es@fws.gov](mailto:Caribbean_es@fws.gov); [Lourdes.Mena@fws.gov](mailto:Lourdes.Mena@fws.gov)

**RE: Puerto Rico Department of Housing / Re-Grow Program  
PR-RGRW-01315 – Alfredo Otero Santiago DBA  
Endangered Species Concurrence for NLAA Determination**

Dear Ms. Mena:

The Puerto Rico Department of Housing (PRDOH) is requesting an informal consultation under Section 7 (a)(2) of the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and in accordance with the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 et seq.) for the proposed project PR-RGRW-01315, located at PR-811 Km 0.6 Int., Cedro Arriba Ward, Sabana Sector, Naranjito, PR 00719 (Parcel ID# 195-000-003-75-000).

The project is part of the Re-Grow Puerto Rico Urban-Rural Agriculture Program (RGRW) that aims to increase agricultural capacity while promoting and increasing food security island wide. This Program will enhance and expand agricultural production related to economic revitalization and sustainable development activities.

The proposed activities for PR-RGRW-01315 consist in for the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot x 21-foot metal structure, 63% covered with plastic and Saran to produce hydroponic lettuce, recaó and cilantro. The greenhouse will be anchored to the ground with 2-inch diameter pillars at a depth of 2 feet. Concrete will be poured into the 2-inch boring for the anchoring of the posts and structure. The proposed greenhouse will require at least 24 posts. The height of the proposed greenhouse is 8 feet for laterals with 12-foot arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the scope of work. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be welded to the structure and the table legs will be buried at a depth of 14 inches. The proposal includes the installation of three 600-gallon water cisterns. The water cisterns will also be

buried at a depth of 4 feet. Water source for the operations comes from an existing water well. The greenhouse will be connected to the well via an aboveground, 10 linear feet PVC pipe. For power supply, a new power connection to the local power service provider PREPA/LUMA is required. Power can be supplied from the electrical post located at an approximately distance of 50 feet from the greenhouse location via an underground conduit at an approximate depth of 3 feet.

The proposed project is located in a mountainous rural residential area surrounded by farmlands and vegetation. The greenhouse is to be built on a grassy section of the parcel. The parcel is currently used to cultivate plantains. The project site will require clearing, grading and vegetation removal. However, the proposal does not contemplate cutting, pruning or transplanting of trees. The National Wetlands Inventory indicated that no wetlands are located within the proposed project area.

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:

Name of the species	Threatened/Endangered/Candidate
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered
Critical Habitat	
There are no critical habitats at this location.	

Based on site review and site photos, no suitable habitat was found within the proposed project area for the listed species.

The Puerto Rican Boa habitat requirements per the U.S. Fish and Wildlife Service are as follows: "The Puerto Rican Boa is considered a habitat generalist and tolerates a wide variety of habitat types (terrestrial and arboreal). These include: rocky areas and haystack hills, trees and branches, rotting stumps, caves (entrances and inside), plantations, various types of forested areas such as karst and mangrove forests, forested urban and rural areas, and along streams and road edges. Cave ecosystems and their surrounding forests are considered particularly important because of the availability of such ecological resources such as prey, shelter, thermal gradients, and mates for reproduction."

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:

Name of the species	Effect Determination	Conservation Measures that will be implemented
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Not Likely to Adversely Affect (NLAA)	USFWS Puerto Rican Boa Conservation Measures 2024

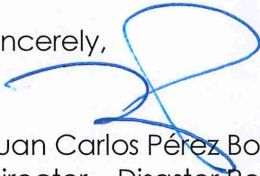
Given the current land use and frequent disturbance and lack of sightings of the listed species within the vicinity, PRDOH has determined that the project is not likely to adversely affect the listed species provided the attached Conservation Measures are implemented as part of the proposed project. The automated informal consultation process was completed on August 8<sup>th</sup> through USFWS Information for Planning and Consultation website (<https://ipac.ecosphere.fws.gov/>).

In order to complete the informal consultation process, we are requesting your concurrence for the NLAA determination included in this letter. Attached to this letter, we are including the documents used to reach our effect determinations for the listed species.

For any questions or clarifications, please do not hesitate to contact us at the information below.

Thank you in advance for your consideration of this issue.

Sincerely,



Juan Carlos Pérez Bofill, PE, MEng.  
Director – Disaster Recovery, CDBG-DR/MIT Program  
[environmentcdbg@vivienda.pr.gov](mailto:environmentcdbg@vivienda.pr.gov) | 787.274.2527 ext. 4320

**Attachments:**

Appendix A:

- Figure 1 – Project Location Map
- Figure 2 – Area of Potential Effect Map
- Figure 3 – Wetland Map
- Figure 4 – Endangered Species Map
- Figure 5 – Critical Habitats Map
- Figure 6 – Farmland Protection Map

Appendix B: Species List Caribbean Ecological Services and Consistency Letter


Appendix C: Site Photos

Appendix D: USFWS Puerto Rican Boa Conservation Measures 2024

## Appendix A: Figures





**Legend**  
 Project Parcel  
 Parcels

Scope of Work: Installation of a Greenhouse

**PUERTO RICO**



**PROJECT LOCATION**

**APPLICANT ID: PR-RGRW-01315**

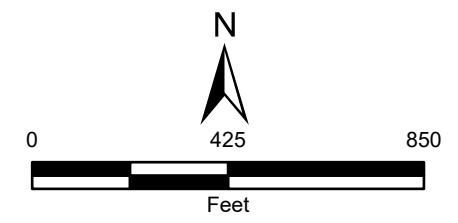
ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719

Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.27825 , -66.283333



Source: ESRI  
<https://catastro.crimpr.net/cdprpc/>  
 Author: TG      Date: 2/13/2024



File Path: Z:\data\USRT\Tier2\Regrow\pr\PRLOC\_Secondary\_Imagery\_Regrow\PRLOC\_Secondary\_Imagery\_Regrow.aprx

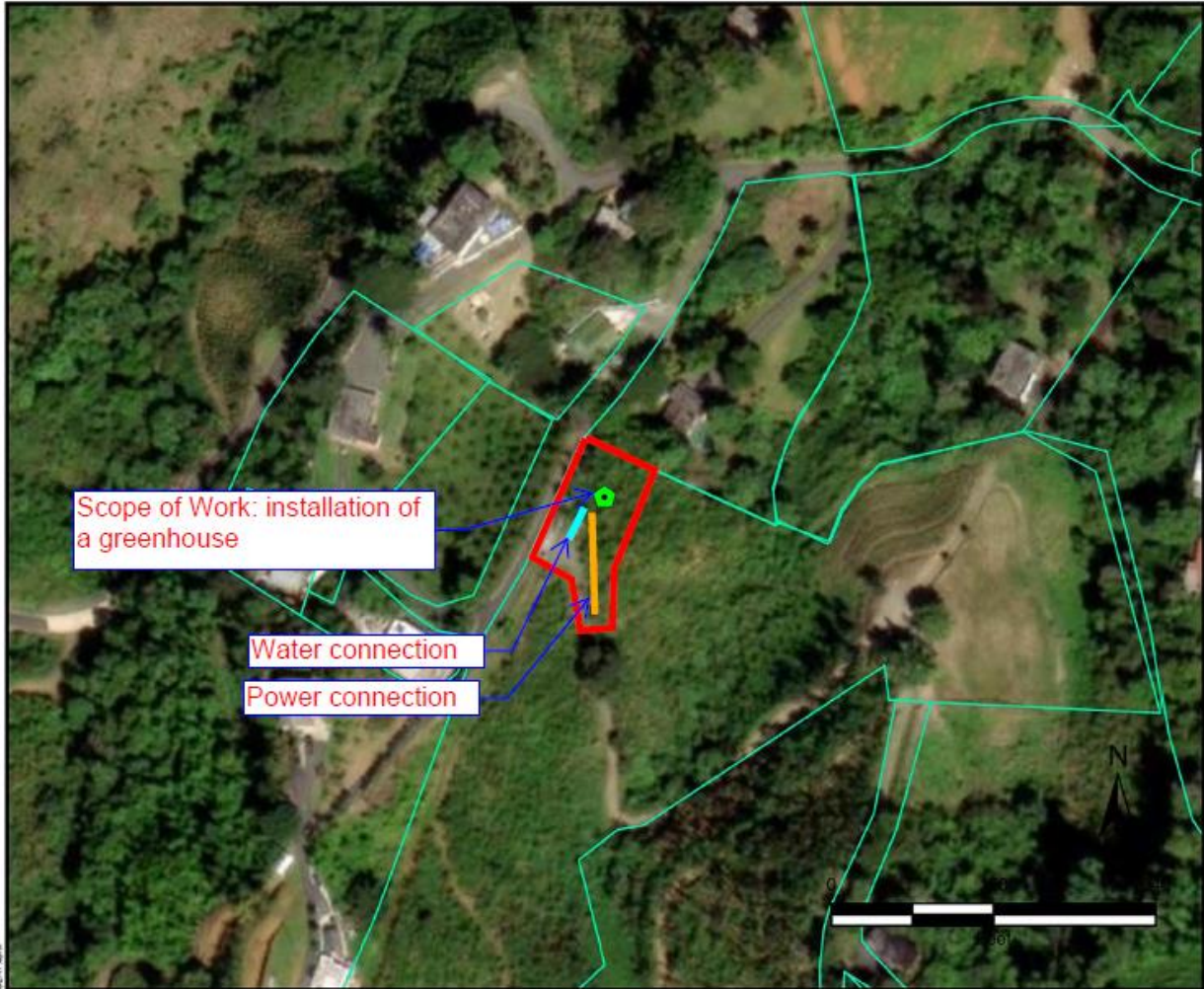


Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Spatial Reference  
Name: WGS 1984 Web Mercator Auxiliary Sphere

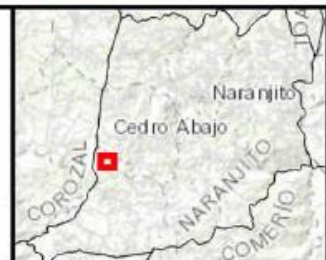


Source: CRIM

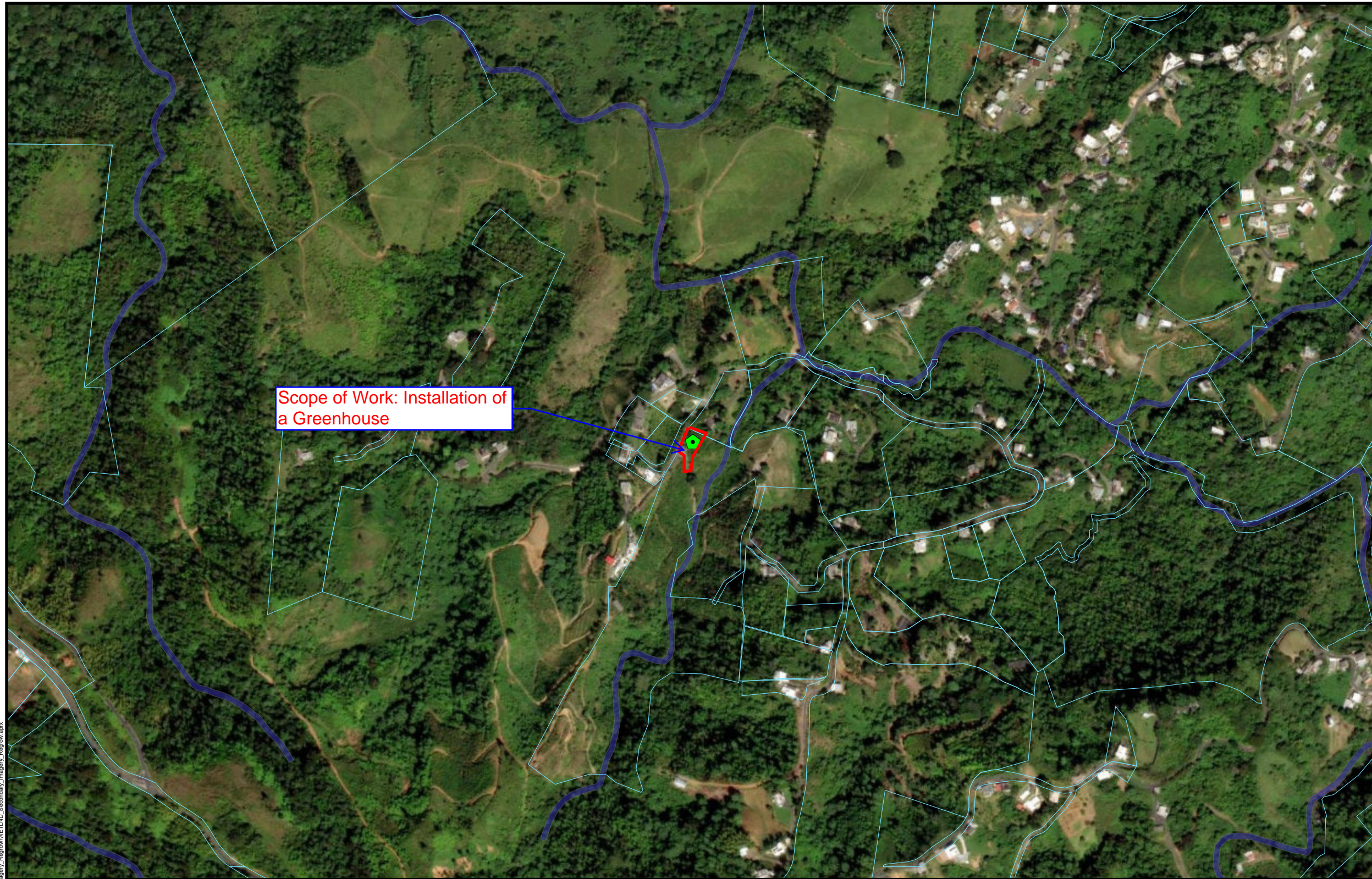
Author: TG

Date: 6/20/2024

- Legend
- Tier 2 Site
  - Area of Potential Effect
  - Parcelario
  - Power connection
  - Water connection







- 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

Scope of Work: Installation of a Greenhouse

**PUERTO RICO**



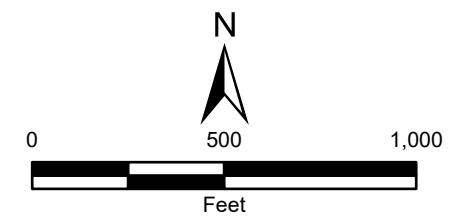
File Path: Z:\data\USFWS\TheRegion\apex\WETLAND\_Secondary\_Imagery\_Regrow\WETLAND\_Secondary\_Imagery\_Regrow.aprx



Source: U. S. Fish & Wildlife Service  
 <LINK><https://www.fws.gov></LINK>  
 Author: TG Date: 4/11/2024

**WETLANDS**  
**APPLICANT ID: PR-RGRW-01315**




ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates: 18.278250, -66.283333



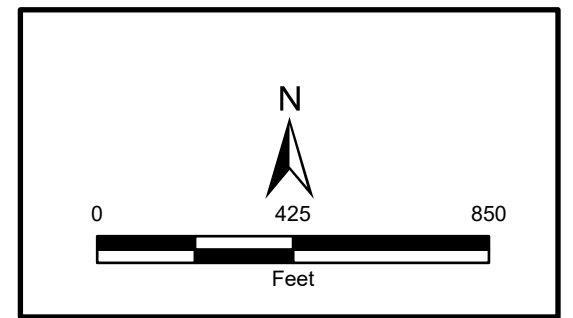




Scope of Work: Installation of a Greenhouse

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

**PUERTO RICO**



**ENDANGERED SPECIES ACT  
 APPLICANT ID: PR-RGRW-01315**

**ADDRESS:** Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates: 18.278250, -66.283333

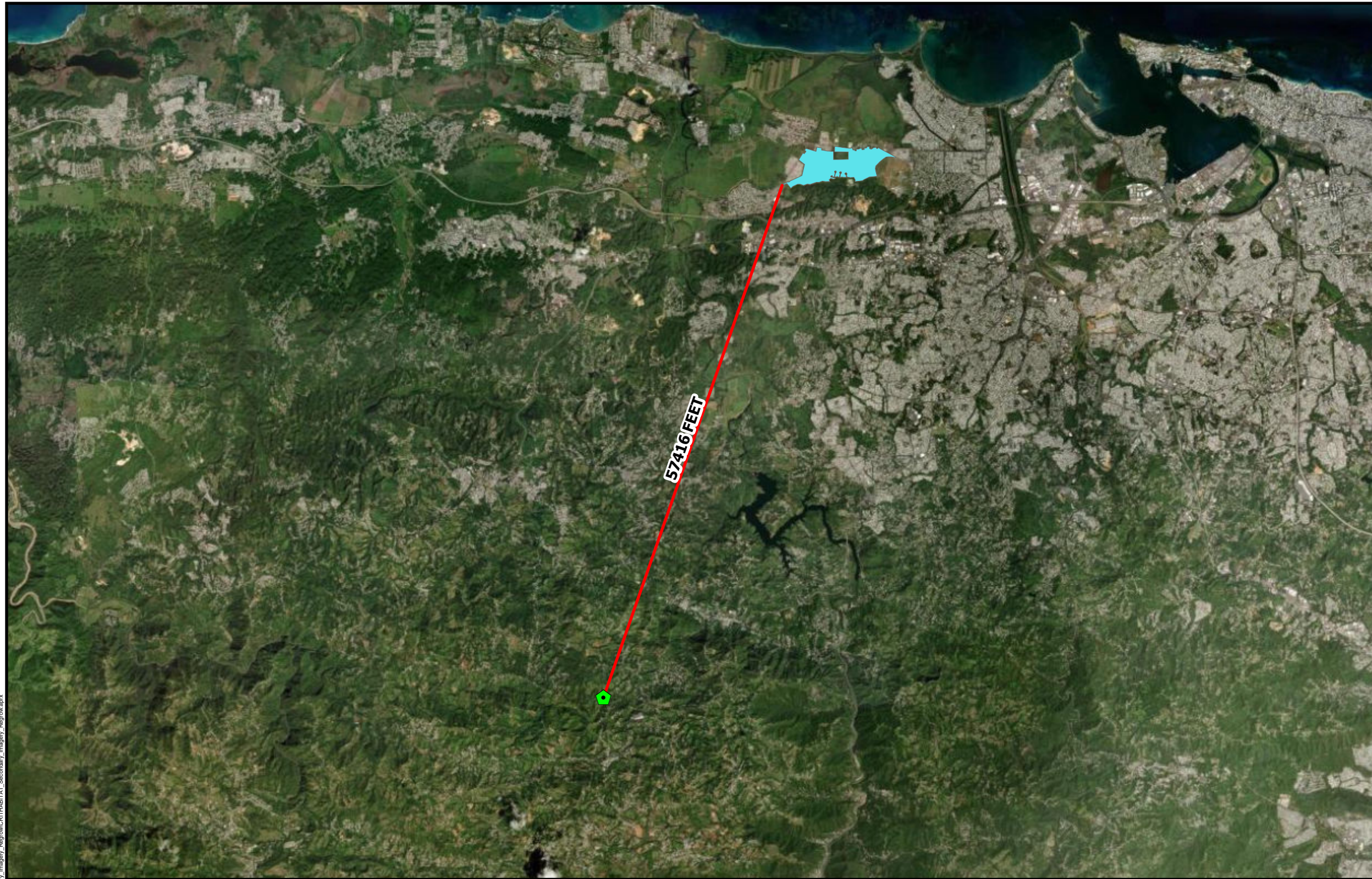


Source: U.S. FISH & WILDLIFE SERVICE  
 <LINK><https://ecos.fws.gov></LINK>

Author: TG Date: 4/11/2024

File Path: Z:\data\USFWS\Tier2\Regrow\ESA\_Secodary\_Imagery\_Regrow.aprx





**Legend**

- ▣ Project Parcel
- Common Name**
- ▣ Llanero Coqui

**Distance to Nearest Critical Habitat:**  
57416 Feet

**PUERTO RICO**



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

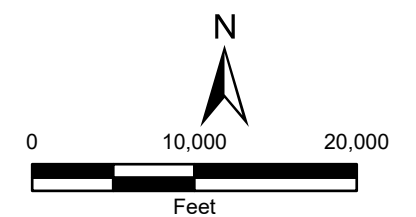
Author: TG Date: 11/3/2023

**CRITICAL HABITATS**  
**APPLICANT ID: PR-RGRW-01315**

**ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719**

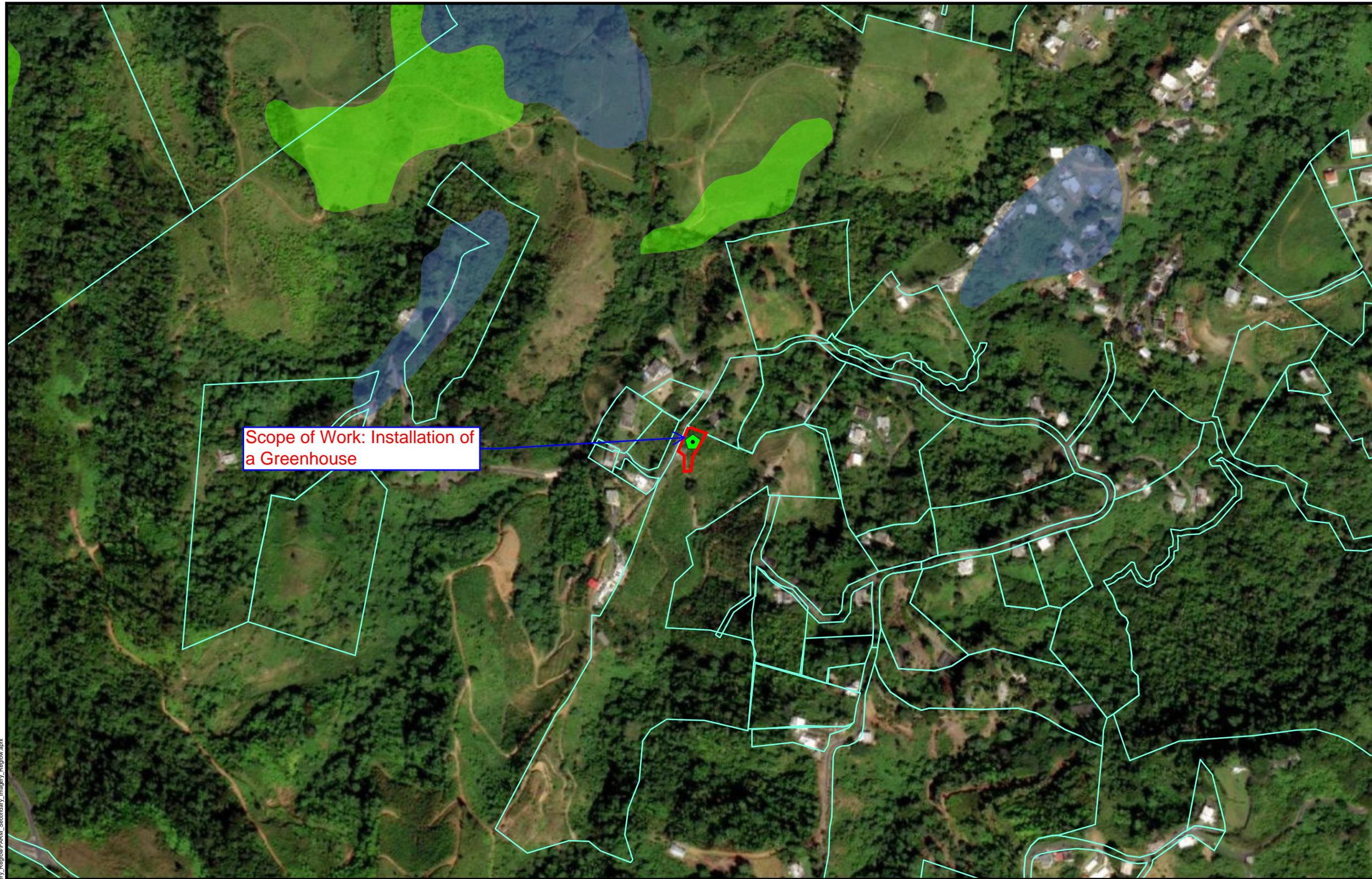
Name of Development: ALFREDO OTERO SANTIAGO DBA

Parcel Coordinates: 18.27825, -66.283333



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**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

Scope of Work: Installation of a Greenhouse

**PUERTO RICO**



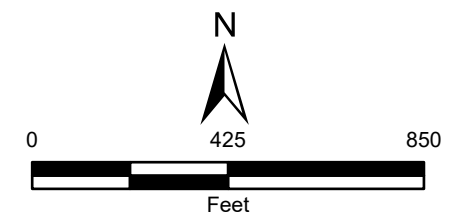
**FARMLAND PROTECTION**  
**APPLICANT ID: PR-RGRW-01315**

ADDRESS: Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., PR 00719  
 Name of Development: ALFREDO OTERO SANTIAGO DBA  
 Parcel Coordinates: 18.27825, -66.283333



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

Author: TG Date: 11/3/2023



File Path: Z:\data\USDT\Tier2\Regrow\aprx\FARM\_Secondary\_Imagery\_Regrow.aprx



Appendix B:  
Species List Caribbean Ecological Services and Consistency Letter



## United States Department of the Interior



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

In Reply Refer To:  
Project Code: 2024-0128134  
Project Name: PR-RGRW-01315

08/08/2024 21:31:59 UTC

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

To Whom It May Concern:

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

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

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

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



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

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

When a federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete, and the proposed project moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (B.A.) to assist in its determination of the project's effects on species and their habitat. However, a B.A. is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a B.A. where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a B.A. are described at 50 CFR 402.12.

If a federal agency determines, based on its B.A. or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation process. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species.

This list is provided pursuant to Section 7 of the Endangered Species Act and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". Please use this list to determine whether your project requires consultation and to make your effects determination. For more guidance, use the Guideline for Consultation under Section 7 of the Endangered Species Act with the Caribbean Ecological Services Field Office by clicking [here](#).

This species list is provided by:

Caribbean Ecological Services Field Office

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

Post Office Box 491

Boqueron, PR 00622-0491

(786) 244-0081

Attachment(s):

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

## OFFICIAL SPECIES LIST

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

This species list is provided by:

**Caribbean Ecological Services Field Office**

Post Office Box 491

Boqueron, PR 00622-0491

(939) 320-3135



## PROJECT SUMMARY

Project Code: 2024-0128134

Project Name: PR-RGRW-01315

Project Type: Restoration / Enhancement - Agricultural

Project Description: The intent use of grant funds for this project includes the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot (ft) x 21 ft metal structure 63 % covered with plastic and Saran to produce hydroponic lettuce, recaon and cilantro. The greenhouse will be anchored to the ground with 2 inches diameter pillars at a depth of 2 ft. Concrete will be poured into de 2 inches boring for the anchoring of the posts and structure. The proposed greenhouse will require at least 24 posts. Height of proposed greenhouse Is 8 ft for laterals with 12 ft arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the SOW. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be welded to the structure and the table legs will be buried at a depth of 14 inches. Proposal includes the installation of three 600 gallons water cistern. Water cisterns will also be buried at a depth of 4 ft.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.2780214,-66.28310803044701,14z>



Counties: Naranjito County, Puerto Rico

## ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

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

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

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

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



## REPTILES

NAME	STATUS
<p>Puerto Rican Boa <i>Chilabothrus inornatus</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/XFGABKLZTJC4VL34XRT2UTD5PI/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/XFGABKLZTJC4VL34XRT2UTD5PI/documents/generated/7159.pdf</a></p>	Endangered

## CRITICAL HABITATS

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

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

## USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

## BALD & GOLDEN EAGLES

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

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

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

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

## MIGRATORY BIRDS

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

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

---

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

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

## WETLANDS

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

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

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

RIVERINE

- R5UBH



## **IPAC USER CONTACT INFORMATION**

Agency: Tetra Tech  
Name: Shelby McDowell  
Address: 2301 Lucien Way #120  
City: Maitland  
State: FL  
Zip: 32751  
Email: shelby.mcdowell@tetrattech.com  
Phone: 4096591563



## United States Department of the Interior



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

In Reply Refer To:  
Project code: 2024-0128134  
Project Name: PR-RGRW-01315

08/08/2024 21:36:34 UTC

Subject: Consistency letter for the project named 'PR-RGRW-01315' for specified threatened and endangered species, that may occur in your proposed project location, pursuant to the IPaC determination key titled Caribbean Determination Key (DKey).

Dear Applicant:

Thank you for using the assisted evaluation keys in IPaC. This letter is provided pursuant to the Service's authority under the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531et seq.). On August 08, 2024, Shelby McDowell used the Caribbean DKey; dated April 03, 2024, in the U.S. Fish and Wildlife Service's online [IPaC application](#) to evaluate potential impacts to federally listed species, from a project named 'PR-RGRW-01315'. The project is located in Naranjito County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.2780214,-66.28310803044701,14z>



The following description was provided for the project 'PR-RGRW-01315':



The intent use of grant funds for this project includes the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot (ft) x 21 ft metal structure 63 % covered with plastic and Saran to produce hydroponic lettuce, recao and cilantro. The greenhouse will be anchored to the ground with 2 inches diameter pillars at a depth of 2 ft. Concrete will be poured into de 2 inches boring for the anchoring of the posts and structure. The proposed greenhouse will require at least 24 posts. Height of proposed greenhouse Is 8 ft for laterals with 12 ft arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the SOW. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be welded to the structure and the table legs will be buried at a depth of 14 inches. Proposal includes the installation of three 600 gallons water cistern. Water cisterns will also be buried at a depth of 4 ft.

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

Species	Listing Status	Determination
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered	No effect

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

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

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

**Note:** Projects located within the range of the Puerto Rican boa or the Virgin Islands tree boa might encounter these species during project activities. **This letter does not provide take to handle or move these species.** If relocation of the species is needed, please contact either the Puerto Rico Department of Natural Resources (DNER) at 787-724-5700, 787-230-5550, or 787-771-1124 for projects in Puerto Rico, or the Virgin Islands Department of Planning and

Natural Resources, Division of Fish and Wildlife (DFW) at 340-775-6762 for projects in the Virgin Islands. Otherwise, contact the Caribbean Ecological Services Field Office ([caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov)) to determine whether the consultation needs to be reinitiated.

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

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



## Action Description

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

### 1. Name

PR-RGRW-01315

### 2. Description

The following description was provided for the project 'PR-RGRW-01315':

The intent use of grant funds for this project includes the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot (ft) x 21 ft metal structure 63 % covered with plastic and Saran to produce hydroponic lettuce, recaon and cilantro. The greenhouse will be anchored to the ground with 2 inches diameter pillars at a depth of 2 ft. Concrete will be poured into de 2 inches boring for the anchoring of the posts and structure. The proposed greenhouse will require at least 24 posts. Height of proposed greenhouse Is 8 ft for laterals with 12 ft arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the SOW. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be welded to the structure and the table legs will be buried at a depth of 14 inches. Proposal includes the installation of three 600 gallons water cistern. Water cisterns will also be buried at a depth of 4 ft.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.2780214,-66.28310803044701,14z>



## QUALIFICATION INTERVIEW

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

*No*

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

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

*No*

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

*No*

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

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

*No*

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

*No*

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

*No*

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

*No*

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

*No*

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

*Yes*



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

**Automatically answered**

*Yes*

## **IPAC USER CONTACT INFORMATION**

Agency: Tetra Tech  
Name: Shelby McDowell  
Address: 2301 Lucien Way #120  
City: Maitland  
State: FL  
Zip: 32751  
Email: shelby.mcdowell@tetrattech.com  
Phone: 4096591563

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Department of Housing and Urban Development



## Appendix C: Site Photos

**Front of Structure**

Photo Direction: Northeast



**Facing Away From Front**

Photo Direction: Southwest





**Side #1 of Structure**

Photo Direction: East



**Facing Away From Side #1**

Photo Direction: West



**Back of Structure**

Photo Direction: Southeast



**Facing Away From Back**

Photo Direction: Northwest





**Side #2 of Structure**

Photo Direction: Northeast



**Facing Away From Side #2**

Photo Direction: Southwest



**Streetscape #1**

Photo Direction: Northeast



**Streetscape #2**

Photo Direction: South





Address

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: Northeast



Structural Details

Photo Description: Architectural details

Photo Direction: North





Structural Details

Photo Description: Architectural details

Photo Direction: South



Structural Details

Photo Description: Architectural details

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: South



Structural Details

Photo Description: Architectural details

Photo Direction: Northeast





Structural Details

Photo Description: Architectural details

Photo Direction: North



Electricity Connected

Photo Description: Power connection

Photo Direction: North





Water Connected

Photo Description: Water connection from existing water well

Photo Direction: North



**Groundwater Monitoring Well**

Photo Description: Existing water well

Photo Direction: North





**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: Northeast



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: East



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: East



**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: North





**Scope Of Work**

Photo Description: Scope of work: Installation of a greenhouse

Photo Direction: Northeast



**Scope Of Work**

Photo Description: Water connections for the SOW

Photo Direction: North



**Scope Of Work**

Photo Description: Electrical connections for the SOW

Photo Direction: South





Appendix D:  
USFWS Puerto Rican Boa Conservation Measures 2024

# Caribbean ES Puerto Rican Boa

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## *Puerto Rican Boa*

Generated August 01, 2024 02:11 PM UTC, IPaC v6.112.0-rc2







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

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

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

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



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

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

#### Conservation Measures:

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



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

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

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

# **APPENDIX E**

## **Section 106 Consultation**





# GOVERNMENT OF PUERTO RICO

## STATE HISTORIC PRESERVATION OFFICE

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

Wednesday, September 25, 2024

Lauren B Poche

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

SHPO-CF-09-12-24-04 PR-RGRW-01315 (Naranjito), Alfredo Otero Santiago

Dear Ms. Poche,

Our Office has received and reviewed the above referenced project in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the National Historic Preservation Act) and 36 CFR Part 800: Protection of Historic Properties.

Our records support your finding of no historic properties affected for this undertaking.

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

Sincerely,

Carlos A. Rubio Cancela

State Historic Preservation Officer

CARC/GMO/MB



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



GOVERNMENT OF PUERTO RICO  
DEPARTMENT OF HOUSING

April 30, 2024

**Arch. Carlos A. Rubio Cancela**

Executive Director

Puerto Rico State Historic Preservation Office

Cuartel de Ballajá, Third Floor

San Juan, Puerto Rico 00901

**Re: Authorization to Submit Documents for Consultation**

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 review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

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,

**Aldo A. Rivera Vázquez, PE**

Director

Division of Environmental Permitting and Compliance

Office of Disaster Recovery



September 12, 2024

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

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

**Section 106 NHPA Effect Determination Submittal: SHPO ID: 02-01-23-04 - PR-RGRW-01315 – Alfredo Otero Santiago – Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int., Naranjito, 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.

Consultation on behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, and Alfredo Otero Santiago, was initiated on February 2, 2024, for the proposed installation of a new generator on a new concrete slab at the property located at Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int. in the municipio of Naranjito (SHPO ID: 02-01-23-04). The PR SHPO, in a letter dated February 6, 2024, concurred that a finding of No Historic Properties Affected was appropriate for the proposed undertaking. Since that time, the previously proposed activities were found to be ineligible for funding. Consultation is therefore being reinitiated for the revised scope of work, located on the same property.

On behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, HORNE is submitting documentation for revised activities proposed by Alfredo Otero Santiago. Located at Bo. Cedro Arriba, Sector

Sabana, Carr. 811 Km 0.6 Int. in the municipio of Naranjito. The revised undertaking for this project includes the purchase and installation of a greenhouse, three cisterns, an above-ground water line, and a below-ground electric line.

The applicant proposes the installation of a 98-foot (ft) x 21 ft metal-framed greenhouse, 63 % covered with plastic and Saran to produce hydroponic lettuce, recaó, and cilantro. The greenhouse will be anchored to the ground with a minimum of 24 2-inch diameter pillars at a depth of 2 ft; each pillar will be anchored in concrete. The proposed greenhouse also includes the installation of 1,200 square feet of growing tables within the greenhouse. The tables will be welded to the structure, and the table legs will be buried at a depth of 14 inches. In addition, three 600-gallon water cisterns will be installed below ground to a depth of 4 ft. The greenhouse will be connected to an existing well via an above-ground, ten linear ft PVC pipe. A new connection to the local electric service provider PREPA/LUMA is required. This connection will be made at an existing electrical post located at an approximate distance of 50 ft from the greenhouse via an underground conduit at an approximate depth of 3 ft. The project site will require clearing, grading, and vegetation removal. However, the scope does not anticipate the cutting, pruning, or transplanting of trees.

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

Kindest regards,




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

Architectural Historian, EHP Senior Manager  
LBP/JLE

Attachments



<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b>		
<b>REGROW PUERTO RICO PROGRAM</b>		
<b>Section 106 NHPA Effect Determination</b>		
<b>Subrecipient:</b> Alfredo Otero Santiago		
<b>Case ID:</b> PR-RGRW-01315	<b>City:</b> Naranjito	

<b>Project Location:</b> Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int.	
<b>Project Coordinates:</b> 18.278250, -66.283333	
<b>TPID (Número de Catastro):</b> 195-000-003-75-000	<b>SHPO ID:</b> 02-01-23-04
<b>Type of Undertaking:</b>	
<input checked="" type="checkbox"/> Substantial Repair <input type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> 2000	<b>Property Size (acres):</b> 17.00

<b>SOI-Qualified Architect/Architectural Historian:</b> Maria Lopez Schmid, MAHP
<b>Date Reviewed:</b> 8/13/2024
<b>SOI-Qualified Archaeologist:</b> Roberto G. Muñoz-Pando, PhD
<b>Date Reviewed:</b> July 20, 2023; 8/13/2024


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

### Previous Consultation

Consultation was initiated on February 2, 2024, on behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, and Alfredo Otero Santiago for the proposed installation of a new generator on a new concrete slab at the property located at Bo. Cedro Arriba, Sector Sabana, Carr. 811 Km 0.6 Int. in the municipio of Naranjito (SHPO ID: 02-01-23-04). The PR SHPO, in a letter dated February 6, 2024, concurred that a finding of No Historic Properties Affected was appropriate for the proposed undertaking. Since that time, the previously proposed activities were found to be ineligible for funding. Consultation is therefore being reinitiated for a revised scope of work located on the same property.

### Project Description (Undertaking)

The new proposed use of grant funds for this project includes the purchase and installation of a greenhouse at coordinates 18.278250, -66.283333. The applicant proposes the installation of a 98-foot (ft) x 21 ft metal structure 63 % covered with plastic and Saran to produce hydroponic lettuce, recaó, and cilantro. The greenhouse will be anchored to the ground with 2 inches diameter pillars at a depth of 2 ft; each pillar will be anchored in concrete. The proposed greenhouse will require at least 24 posts. Height of proposed greenhouse is 8 ft for laterals with 12 ft arcs. The greenhouse includes the installation of ground cover, no concrete pad is included as part of the proposed scope of work. The proposed greenhouse also includes the installation of 1,200 square foot of growing tables. Hydroponic tables will be

<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> Alfredo Otero Santiago	
<b>Case ID:</b> PR-RGRW-01315	<b>City:</b> Naranjito

welded to the structure and the table legs will be buried at a depth of 14 inches. Proposal includes the installation of three 600 gallons water cisterns. Water cisterns will also be buried at a depth of 4 ft.

Water source for the operations comes from an existing water well. Greenhouse will be connected to the well via an aboveground, 10 linear ft PVC pipe. For power supply, a new power connection to the local power service provider PREPA/LUMA is required. Power can be supply from the electrical post located at an approximately distance of 50 ft from greenhouse location via an underground conduit at an approximate depth of 3 ft.

The project site will require clearing, grading, and vegetation removal. However, proposal does not contemplate cutting, pruning or transplanting of trees.


**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 at coordinates 18.278250, -66.283333, with a 15-meter buffer, and the visual APE is the viewshed of the proposed project area.

**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 0.25-mile radius of the APE nor are there any previous reported cultural resource studies performed at 0.25 miles radius of the project area. The soils are of great importance when determining the probability of archaeological site being found in a location. There are three types of soils in or near the APE all with steep to very steep (40 percent to 60 percent) slopes. The slope names are: Naranjito Silty Clay Loam (NaF), Cucara Clay (MxF), and Mucara Claim [see soils map]. After our review, the probability for finding an *in situ* archaeological site are considered low.



<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> Alfredo Otero Santiago	
<b>Case ID:</b> PR-RGRW-01315	<b>City:</b> Naranjito

### 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 **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 surrounding the property. The property is located South of Road 811 in Naranjito. A pumphouse circa 2000, shown below, is located on the property, southeast of the APE. The building appears on a 2004 aerial image, but not a 1995 one. This building is a reinforced concrete pumphouse that has a flat concrete roof, with overhangs and front metal gate.




**Figure 1 & 2.** Photograph of the pumphouse and detail of the 2004 aerial photograph indicating location of the pumphouse on the property.

This building is modern and **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:

<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> Alfredo Otero Santiago	
<b>Case ID:</b> PR-RGRW-01315	<b>City:</b> Naranjito

- N/A

Based on the results of our historic property identification efforts, the Program has determined that the project area **not** within the boundaries of a National Register of Historic Places (NRHP)-eligible or listed Traditional Urban Center or Historic District. In addition, there are no previously identified archaeological sites within a 0.25-mile radius of the APE nor are there any previous reported cultural resource studies performed at 0.25 miles radius of the project area. The soils are of great importance when determining the probability of archaeological site being found in a location. There are three types of soils in or near the APE all with steep to very steep (40 percent to 60 percent) slopes. The slope names are: Naranjito Silty Clay Loam (NaF), Cucara Clay (MxF), and Mucara Claim (MxF) [see soils map]. After our review, the probabilities for finding an *in situ* archaeological site are considered low. Therefore, a finding of No Historic Properties Affected is appropriate for the proposed undertaking.



<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> Alfredo Otero Santiago		
<b>Case ID:</b> PR-RGRW-01315		<b>City:</b> Naranjito

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

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

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

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

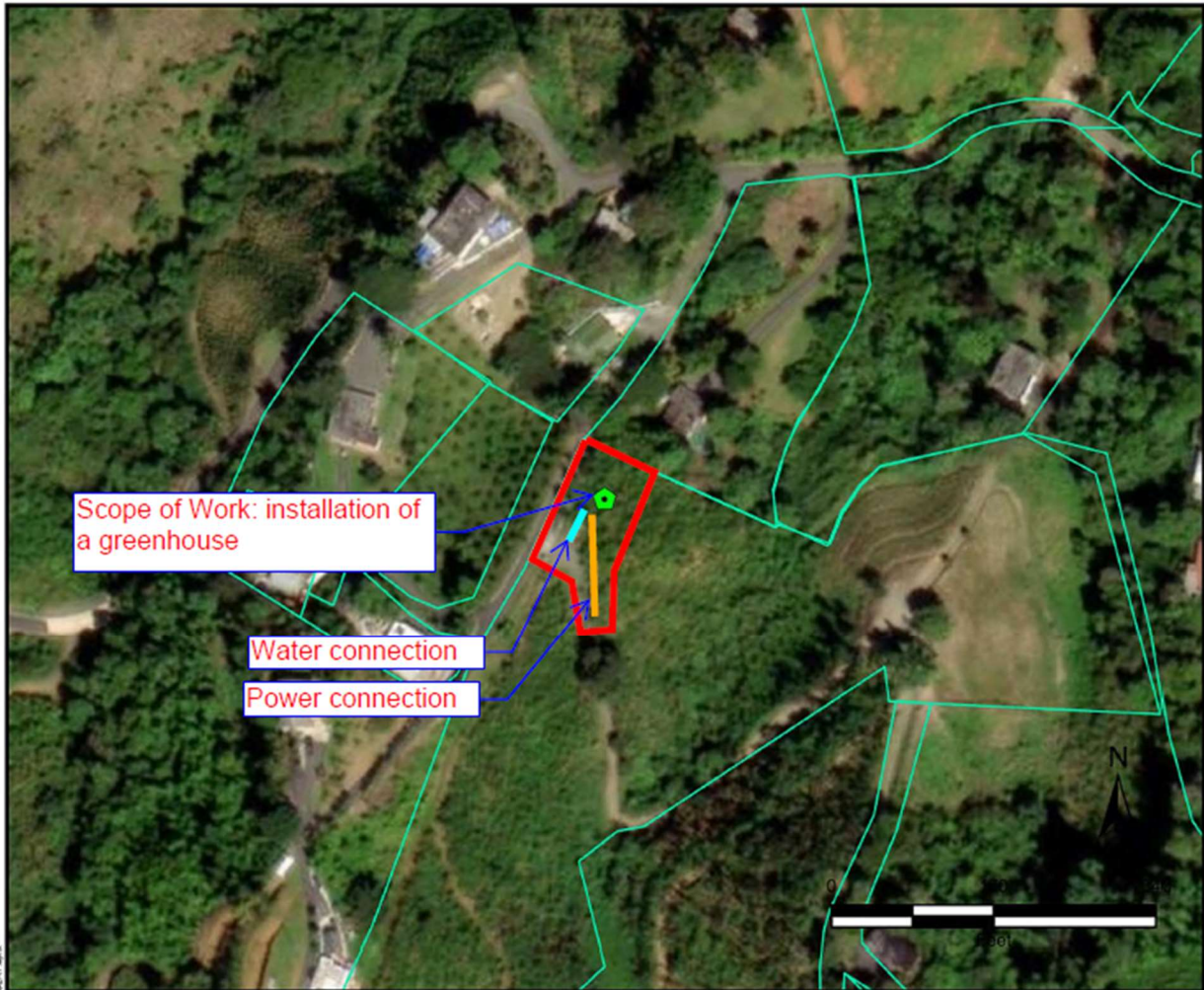
The Puerto Rico State Historic Preservation Office has reviewed the above information and:	
<input type="checkbox"/> <b>Concurs</b> with the information provided. <input type="checkbox"/> <b>Does not concur</b> with the information provided.	
<b>Comments:</b>	
Carlos Rubio-Cancela State Historic Preservation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

Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Spatial Reference  
Name: WGS 1984 Web Mercator Auxiliary Sphere



Source: CRIM

Author: TG

Date: 6/20/2024

- Legend
-  Tier 2 Site
  -  Area of Potential Effect
  -  Parcelario
  -  Power connection
  -  Water connection



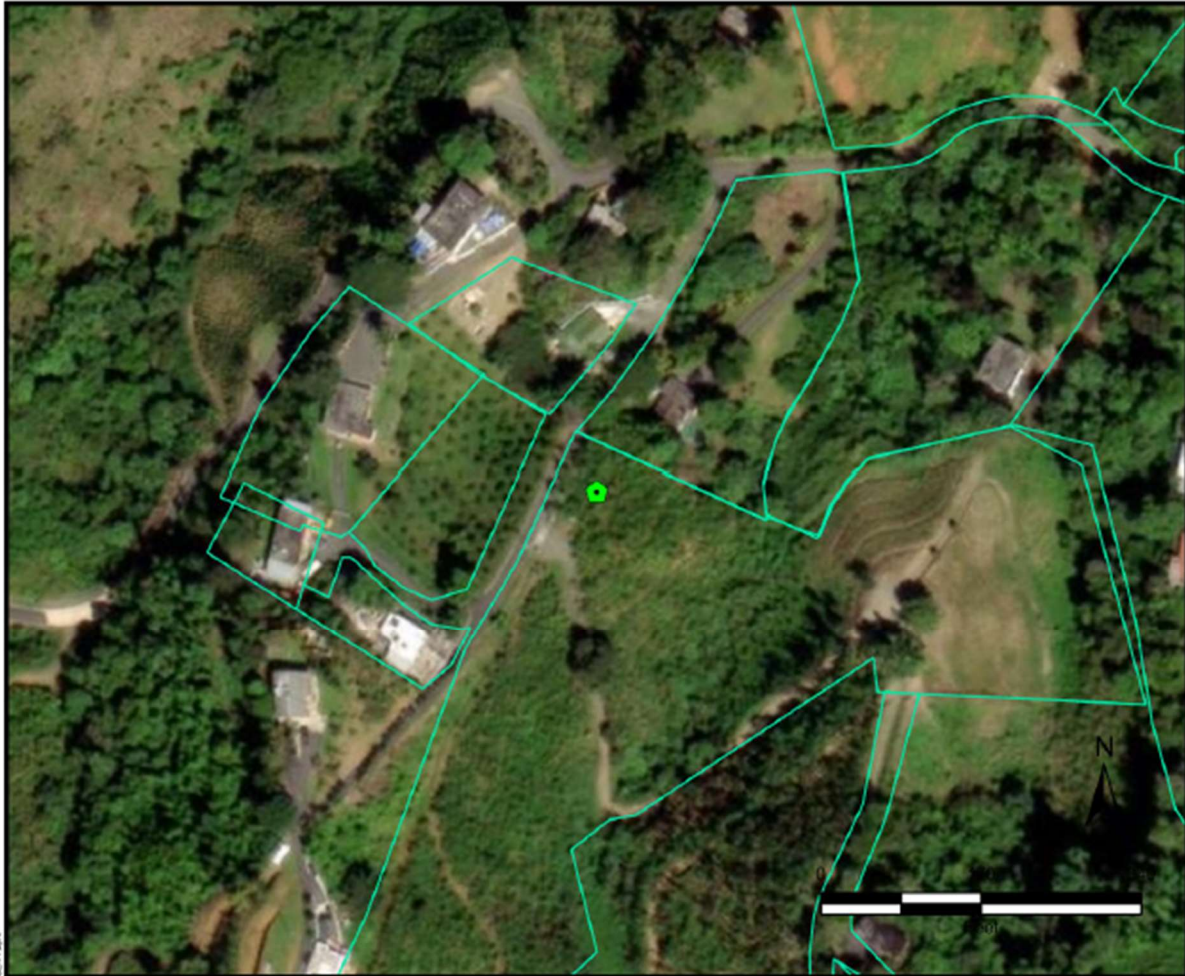


Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Spatial Reference  
Name: WGS 1984 Web Mercator Auxiliary Sphere



Source: CRIM

Author: TG

Date: 6/20/2024

- Legend
- Tier 2 Site
  - Historic Cultural Bldg
  - Traditional Urban Centers
  - Cultural Resources District Polygon
  - Parcelaria

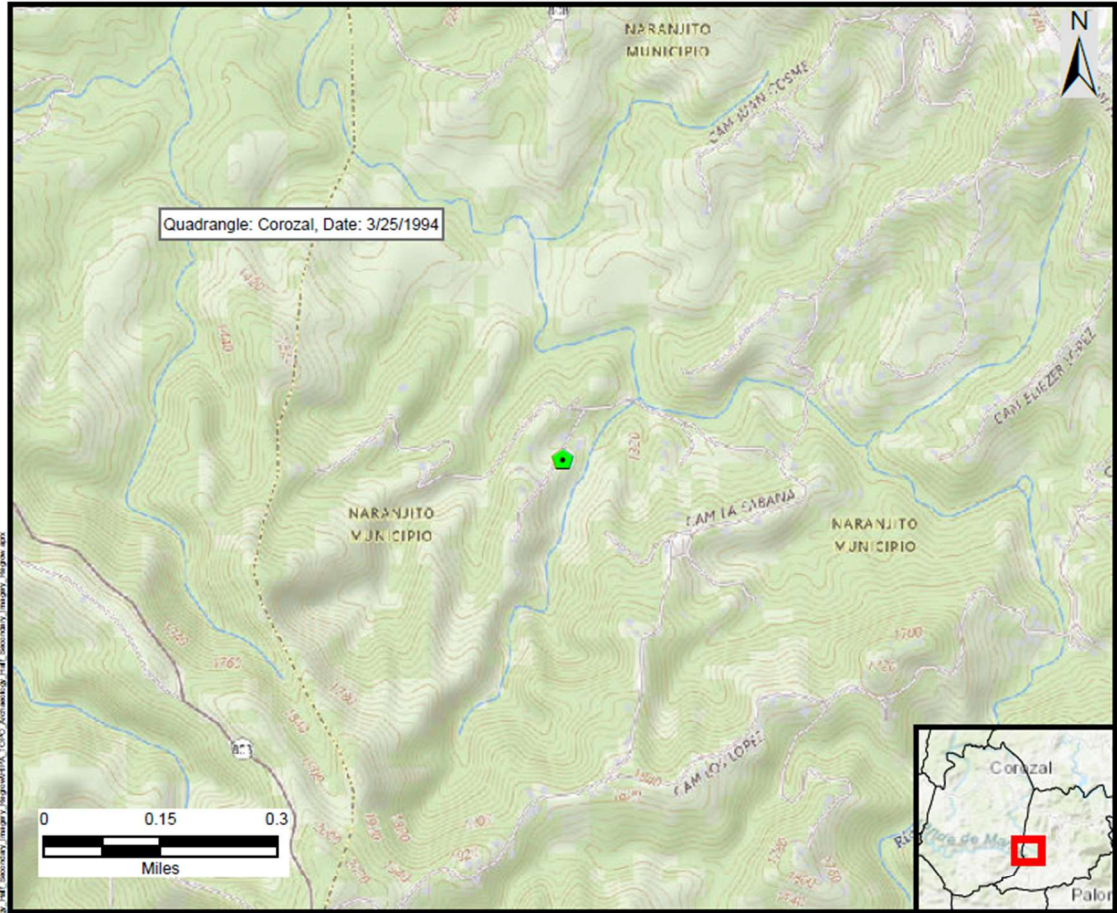


Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Source: National Park Service

Author: TG

Date: 4/11/2024

Legend

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

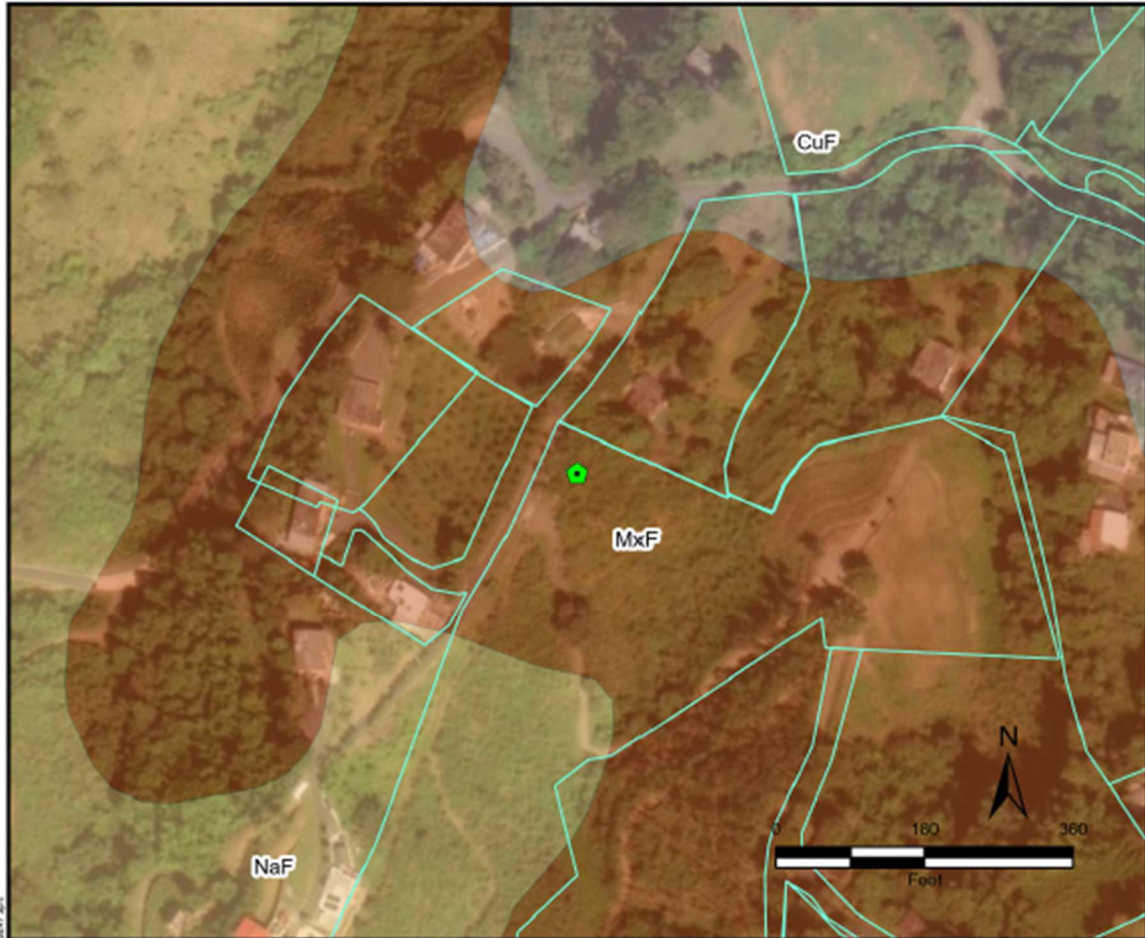


Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

### Soils Map







**Spatial Reference**

Name: WGS 1984 Web Mercator Auxiliary Sphere



**TETRA TECH**

**Legend**

-  Tier 2 Site
-  Parcelario
- Soil Type**
-  CuF, Consumo clay, 40 to 60 percent slopes
-  MxF, Mucara clay, 40 to 60 percent slopes
-  NaF, Naranjito silty clay loam, 40 to 60 percent slopes



Author: TG

Date: 6/20/2024

Source: USDA

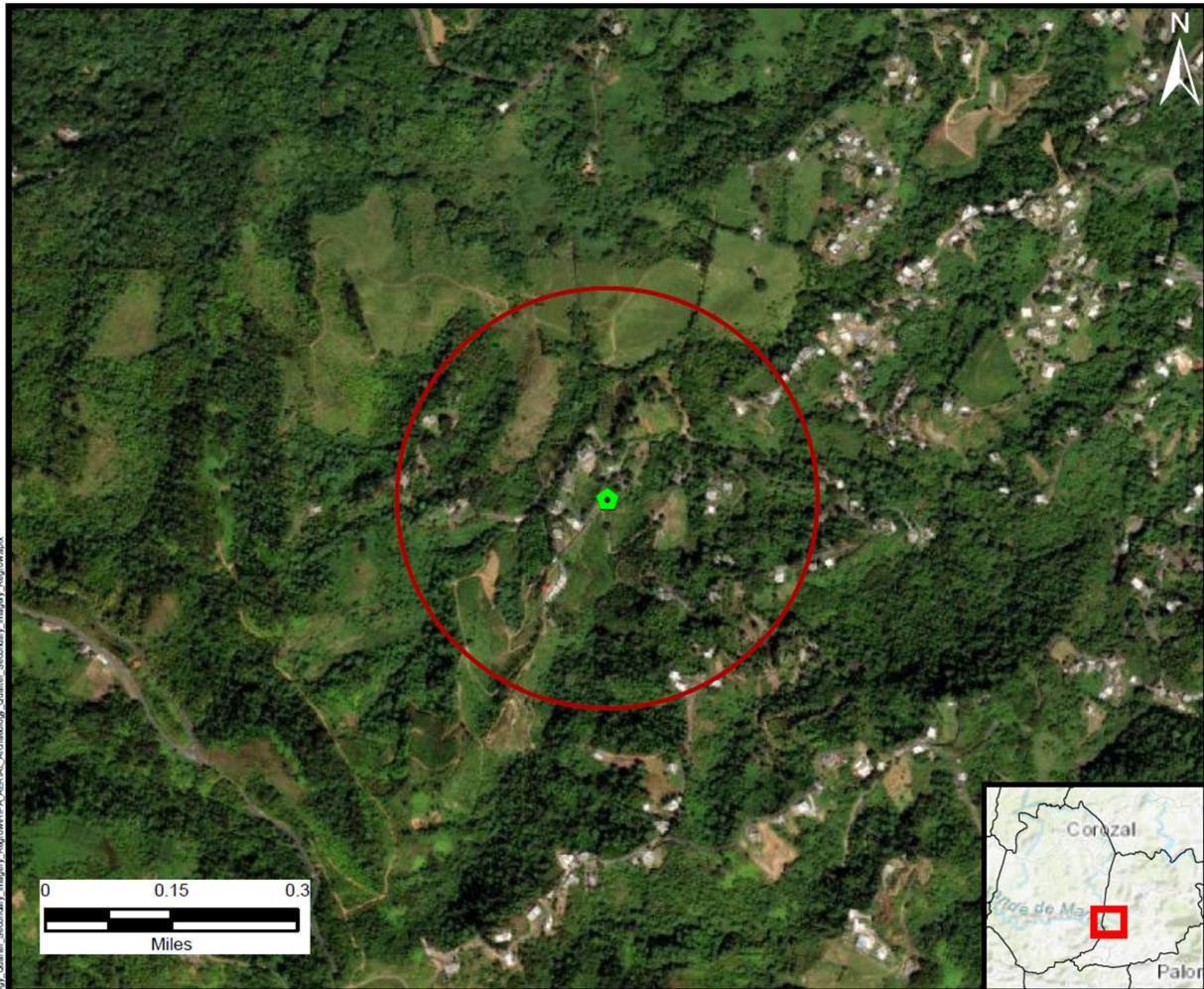
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Source: National Park Service

Legend

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

Author: TG

Date: 4/11/2024

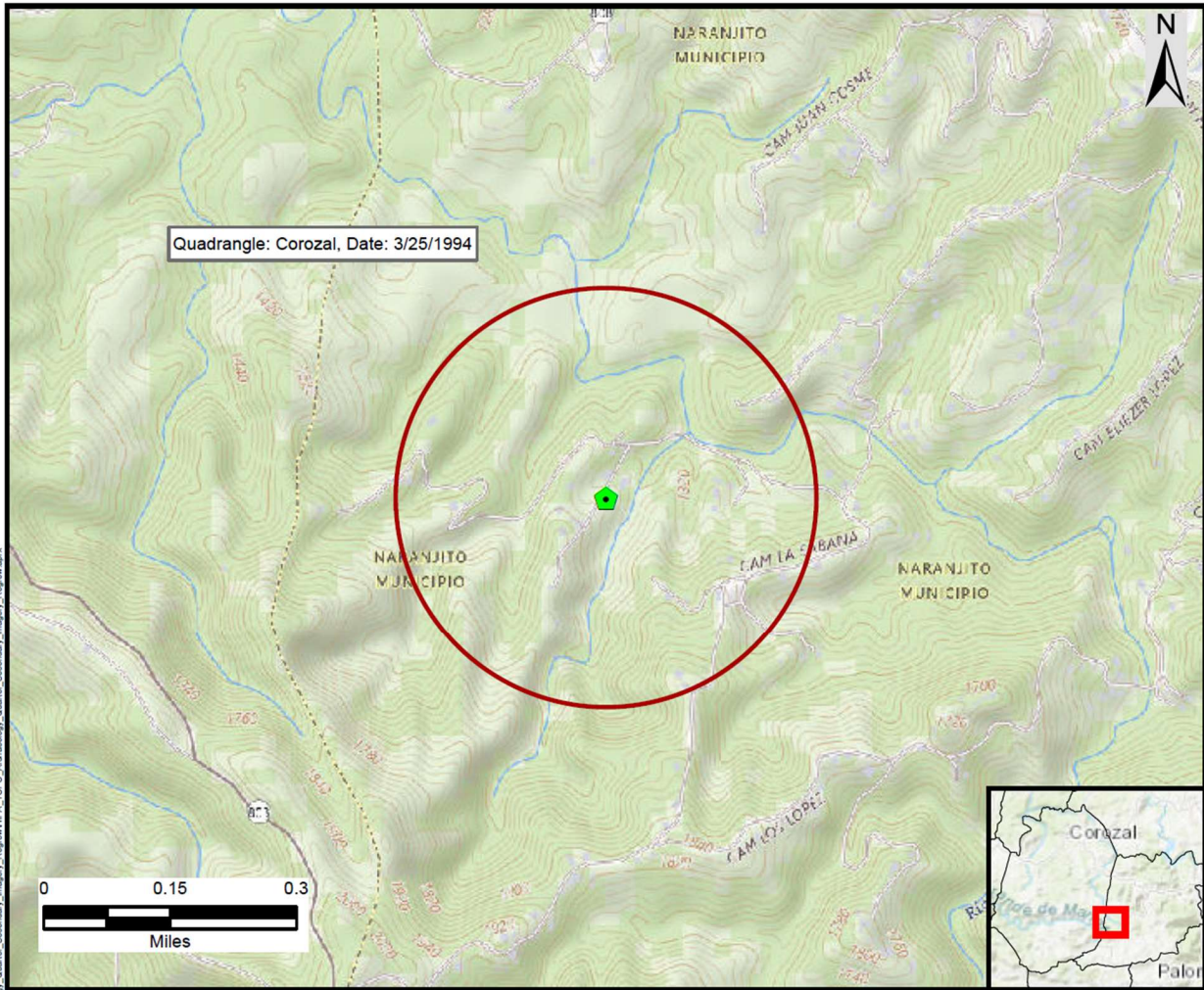


Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

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



Source: National Park Service

Author: TG

Date: 4/11/2024

Legend

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

Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito

### Photograph Key





Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito



Photo #: 1

Description (include direction): Northeast

Date: 8/7/2023

Scope Of Work: Installation of a greenhouse



Photo #: 2

Description (include direction): Northeast

Date: 8/7/2023

Scope Of Work: Installation of a greenhouse

Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito



Photo #: 3

Description (include direction): Northeast

Date: 8/7/2023

Scope Of Work: Installation of a greenhouse



Photo #: 4

Description (include direction): North

Date: 8/7/2023

Scope Of Work: Installation of a greenhouse



Subrecipient: Alfredo Otero Santiago

Case ID: PR-RGRW-01315

City: Naranjito



Photo #: 5

Description (include direction): Northeast

Date: 8/7/2023

Scope of Work: Water connections for the proposed greenhouse



Photo #: 6

Description (include direction): North

Date: 8/7/2023

Scope Of Work: Electrical connection for the proposed greenhouse