

# **Environmental Assessment**

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

### **24 CFR Part 58**

#### **Project Information**

**Project ID:** PR-RGRW-01056

**Project Name:** AGRO EMPRESAS TAVAREZ INC

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

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

**State/Local Identifier:** Puerto Rico/Isabela, 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, and Mónica Machuca Ríos.

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

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

#### **Project Location:**

The property is a 14.0 -acre site located at Carretera 474 Kilometro 0.8 Barrio Mora in the Municipality of Isabela, Puerto Rico (Parcel ID# 007-000-004-04-000). The coordinates of the project site are 18.486036, -67.010827.

The farm has been and currently is in use for agricultural purposes with the production of avocado.

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

The intent use of funds includes the purchase of a Tractor and the installation of a water well. The purchase for the tractor has been submitted and approved as an exempt activity under 24 CFR 58.35 (b)(4). The potential impacts associated to the installation of the water well with a 4 ft X 4 ft on-site poured concrete pad for well delimitation, are included in the analyses below.

The Scope of Work (SOW) for this project consists of the drilling and installation of a water well at coordinates: 18.486036, -67.010827. The proposed is a 500 ft depth, 6 inches steel casing well, with a 5 hp submersible pump. The boring for the installation well will be 8

inches to be reduced to 6 inches. The SOW includes the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation. Thickness of concrete depends on different factors, for the proposed pad the thickness should be in a range of 4 to 6 inches. Typically, the well drilling activities includes the location of a drilling rig at well location, the installation of well casing with the use of a rotary drive, stabilization of well walls, pump installation, and delineation with posts and/or concrete pad. The area where the well is proposed don't have trees and is accessible for the passage and placement of the necessary drilling equipment. The Field is not graded. The project will require clearing, grading, and vegetation removal. However, proposal does not contemplate cutting, pruning or transplanting of trees.

The proposed activities do not include new connections to local power or water utility services. Utilities local services are available for connection of the parcel in the right of way at the entrance of the farm. However, the farm is not currently connected to utilities. The applicant has expressed his intention to install a solar system to provide power for the water pump in the future. The Area of Potential Effect (APE) for the proposed project is approximately 0.25 acres.

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

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

The Re-Grow Puerto Rico Urban-Rural Agriculture Program (RGRW) will increase agricultural capacity while promoting and increasing food security island wide. This Program will enhance and expand agricultural production related to economic revitalization and sustainable development activities. The purpose of this project is to increase the productivity of the farm. This agricultural project associated with the installation of a water well 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 water well and the construction of a concrete pad for its delimitation, is used for agricultural purposes. Therefore, there is no change in land use associated with the project. Some ground disturbance will be required.

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

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

the listing of Mitigation Measures and Determination signatures. The appendices contain detailed information.

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

## **Funding Information**

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

**Estimated Total HUD Funded Amount:** \$40,161.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$40,161.00

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

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

<b>Compliance Factors:</b> Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.6</b>		
<b>Airport Hazards</b>  24 CFR Part 51 Subpart D	Yes    No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The nearest civil airport, the “Aeropuerto Internacional Rafael Hernández”, is approximately 36,064 feet from the proposed site. The nearest military airport, “Aeropuerto Internacional Luis Muñoz Marín”, is

		approximately 344,995 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Puerto Rico has various Coastal Barrier Resources Systems (CBRS). The project is in the north-western region of Puerto Rico. The distance to the nearest CBRS unit is 12,680 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	The Project site is located in Zone X, area of minimal flood hazard, as per Floodplain Insurance Map 72000C0160H, effective date April 19, 2005. This project is in compliance with Floodplain Insurance requirements. (See Figures 4 and 5 in <b>Appendix B.</b> )

<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.5</b>		
<b>Clean Air</b>  Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	The Project site is not located in a county or air quality management district that is non-attainment status for any criteria pollutants. The Municipio of Isabela 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 installation of a water well and the construction of a concrete pad for its delimitation. 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>
<b>Coastal Zone Management</b>  Coastal Zone Management Act, sections 307(c) & (d)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	The project is located 3,891 feet from the nearest Coastal Zone Management area and does not affect a Coastal Zone as defined in the PR Coastal Zone Management Plan. The project is in compliance with the Coastal Zone Management Act. See Figure 7 in <b>Appendix B.</b>

<p><b>Contamination and Toxic Substances</b></p> <p>24 CFR Part 58.5(i)(2)</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>A site visit conducted on December 29, 2023, no debris or rubbish or visible signs vegetative stress, contamination, or toxic substances were identified at the project site. The project consists of the installation of a water well and the construction of a concrete pad for its delimitation.</p> <p>Site contamination was evaluated through online data searches to determine if toxic sites are located within 3,000-feet of the proposed project.</p> <p>There are no sites of environmental concern identified within 3,000 feet of the project site.</p> <p>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 type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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 5,549 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 and the Puerto Rican Harlequin 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>A second site-specific review of available information was conducted in accordance with the Fish and Wildlife Act (47 Stat. 401, as amended: 16 U.S.C. 661 et seq.). Despite the proposal require clearing activities, grading brush, and vegetation removal the proposed</p>

		<p>location of the well and concrete pad is a relatively flat area with low, thin shrubs and grass, on a bumpy landscape.</p> <p>A 'No Effect' determination has been made based on the lack suitable habitat for the listed species as well as previous disturbance and current land use of the proposed project area. The proposed scope of work will require ground vegetation removal but will not require tree removal and will take place on lands that have been frequently disturbed.</p> <p>The proposed project will have No Effect on listed species or habitats. Based on the nature of the project, scope of work, information available, and a careful analysis of the Project Site, and IPaC species list, it was determined that there would be No Effect for any of the listed species.</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 animal, in accordance with the USFWS Puerto Rican Boa Conservation Measures guidelines.</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 does not include development, construction, or rehabilitation that will increase residential density.</p> <p>The project is in compliance with Explosive and Flammable Hazard requirements.</p> <p>Refer to site visit report in <b>Appendix A</b>.</p>
<p><b>Farmlands Protection</b></p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The project site area is not designated as farmland of statewide importance or prime farmland. However, the APE northwest boundary and part of the farm is identified as prime farmland. The project does not include any</p>

		<p>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, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes    No</p> <p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>	<p>The Project site is not located in a 100-year floodplain per Floodplain Insurance Map 72000C0160H, effective date April 19, 2005. The project site is not located in an Advisory Base Flood Elevation (ABFE) special flood hazard area. The proposed project is located in the municipality of Isabela; therefore, PFIRM information was not available for the area and therefore not considered in the review. This project is in compliance with Executive Order 11988. See Figures 4, 5, and 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 February 8, 2024, by an SOI Qualified Architect/Architectural Historian. Additionally, the site was evaluated on February 6, 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 February 29, 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 installation of a water well and the construction of a concrete pad for its delimitation. HUD's noise regulations protect residential properties from excessive noise exposure. HUD noise regulations do not apply as the project does not include new construction for residential use or rehabilitation of an existing</p>

		residential property. The proposed project is in compliance with Noise Abatement and Control.
<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 5,148,787 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 installation of a water well and the construction of a concrete pad for its delimitation.</p> <p>The north coast is 6,990 feet to the northeast of the property. Several unnamed creeks are found within a mile radius distance. The closest one is 1,000 ft to the east of the property.</p> <p>The NWI maps show no wetlands on the or adjacent to the project site. This project does not impact any on or off-site wetlands and includes no activities that would require further evaluation under this section.</p> <p>The project is in compliance with Executive Order 11990. Refer to Figure 14 in <b>Appendix B</b>.</p>
<p><b>Wild and Scenic Rivers</b></p> <p>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>This project is not within proximity of a National Wild and Scenic River (WSR). The distance to the nearest WSR is approximately 427,921 feet. The project is in compliance with the Wild and Scenic Rivers Act. Refer to Figure 15 in <b>Appendix B</b>.</p>

<b>ENVIRONMENTAL JUSTICE</b>		
<p><b>Environmental Justice</b></p> <p>Executive Order 12898</p>	<p>Yes    No</p> <p><input type="checkbox"/>   <input checked="" type="checkbox"/></p>	<p>No adverse environmental impacts were identified in any other compliance review portion of this project that may disproportionately be high for low-income and/or minority communities. Therefore, this topic complies with Executive Order 12898.</p>

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features, and resources of the project area. Each factor has been



evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable, and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

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

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

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>LAND DEVELOPMENT</b>		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The proposed project is located on a private farm. The project site is not zoned or is zoned as “Terreno Urbanizables (UR)”. The proposed action is compliant with the current agricultural land use of the Project area.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The proposed project is located in relatively flat terrain, previously used for agricultural purposes, and now used for growing avocados.  Soils in the proposed project area are classified as San German gravelly clay loam (SaE), 20 to 40 percent slopes, surrounded by farmland with young vegetation cover further south, 80 meters above mean sea level.

		<p>Projects larger than 1 acre must comply with the CWA and develop a SWPPP with the NPDES. The proposed project area is approximately 0.25 acres.</p> <p>The project site will require clearing, grading, and vegetation removal. However, proposal does not contemplate cutting, pruning or transplanting of trees.</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	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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.
Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>SOCIOECONOMIC</b>		
Employment and Income Patterns	2	<p>The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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.

Environmental Justice	2	<p>In the area (one mile radius) in which project will occur.</p> <p>99% are people of color compared to PR average of 96%</p> <p>72% are low income compared to PR average of 70%</p> <p>8% are unemployed compared to PR average of 15%</p> <p>The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. This project will result in restoration and increase in income and potential employment opportunities in the local area. The impacts would be beneficial.</p> <p>See EJSscreen Report in <b>Appendix C</b></p>
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Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>COMMUNITY FACILITIES AND SERVICES</b>		
Educational and Cultural Facilities	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation.</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, others) 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</p>

		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.
Wastewater / Sanitary Sewers	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation. The appropriate permit for the withdrawal of water from the well will be obtained from PRDNER before installation and operation. There would be minor impact to water resources.
Public Safety – Police, Fire and Emergency Medical	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation. 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 installation of a water well and the construction of a concrete pad for its delimitation. The proposed project would not involve the creation of new roads nor any increase in long-term traffic on existing roads. There would be some minor use of the existing road during construction. All residents and businesses would retain access to their properties during and after the project.

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

Unique Natural Features, Water Resources	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The proposed project will be situated on land previously used for agricultural purposes. Operational water demand of the farm is minimal. Well withdrawal will be controlled and contained under a permit that allows a maximum daily flow rate to be established in the permit by the PRDNER. The applicant is responsible for any permits or actions to ensure legalization of well installation and operation. This is a small agricultural project with minimal impact on water resource.
Vegetation, Wildlife	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The proposed project will occur on land previously used for agricultural purposes and will continue in that capacity. All vegetative exceedance material resultant from the clearing activities will be disposed as per the Municipal vegetative material management and diversion plan. No vegetative material will be stored or left at site. Proposal does not contemplate cutting, pruning or transplanting of trees. The proposed project will have minimal impact on vegetation and no impact on wildlife.

Environmental Assessment Factor	Impact Code	Impact Evaluation
<b>CLIMATE AND ENERGY</b>		
Climate Change Impacts	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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. This is a small agricultural project with no measurable impact on climate change factors.
Energy Efficiency/Energy Consumption	2	The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. The proposed project is an agricultural project that does not involve energy use. Applicant has stated his intention to install a Photovoltaic System, in the future, to provide power to the water pump to be used with the well. There would be no change in energy demand in the area.

**Additional Studies Performed:** None required.

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

Site inspection was conducted on December 29, 2023 by Javier Ramos.

**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](http://www.fws.gov/CBRA/Maps/Locator/PR.pdf).  
[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 installation of a water well and the construction of a concrete pad for its delimitation. The project would allow for the farm to have water supply. The possible cumulative impacts associated to the proposed project are related to the increase in energy demand needed to operate the water well, and the withdrawal of groundwater to supply water needs for operational purposes. If applicant decides to connect the farm to the local electric service utility the power demand increase will be minor, and the withdrawal of water will be contained under a permit that allows a maximum daily flow rate to be established in the permit. The applicant has stated his intention to install a PV System for the operation for the water pump. If PV system is installed the operation of the well will not represent an increase in energy demand. 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. Alternative locations off and on property may represent an impact to undisturbed and/or uneven ground, sloped terrain or within forested areas, which could require heavier clearing and grading activities. Any alternative that would involve an off-property location might require the purchase of land, the movement of products, equipment, infrastructure, among others, representing an additional cost. An off-property alternative will not enhance and expand agricultural production or allow for the economic development for this applicant. Given the above-mentioned possible impacts of an alternative location, an off-property alternative was not selected.

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

The project consists of the installation of a water well and the construction of a concrete pad for its delimitation. 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	The appropriate permit will be obtained before installation and operation of the new water well or the withdrawal activities from the stream. Prior to construction, the applicant will contact the DNRNA to determine the required permits and authorizations.
Endangered Species	Implement Puerto Rican Boa and the Puerto Rican Harlequin



	Butterfly conservation measures prior to and during construction to avoid or minimize impacts to this species.
<b>Permits or Agency Approvals Required</b>	
Permit or Approval	Permit Conditions
Ground disturbance	Projects whose earthworks are more than 40 m <sup>3</sup> must submit an Incidental Permit. The permit must be submitted via the Single Business Portal to the OGPe to be evaluated and physicalized by the Water Quality Division of the PRDNER. Any necessary permits should be obtained by the applicant and/or contractor prior to construction activities.
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 form the Water Permits and Franchises Division (DPFA) of the PRDRNER. However, the applicant is responsible for any permits or actions to ensure legalization (if needed) of well usage. Any necessary permits should be obtained by the applicant and/or contractor prior to construction activities.
Utility Connections- Water supply	The project does not involve new connections to the local utility services. However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.
Utility Connections- LUMA/PRASA	The project does not involve new utility connections. Facilities have local utility services connections. However, the applicant is responsible for any permits or actions to ensure legalization of utility connections (if needed) prior to construction activities.


**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.

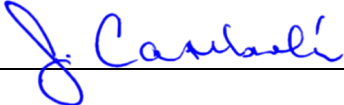
**Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

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

Preparer Signature: 

Date: 4/29/2024

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

Certifying Officer Signature:  Date: 5/17/2024

Name/Title: Janette I. Cambrelén, Permit and Environmental Compliance Specialist

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

# **APPENDIX A**

## **Site Inspection and Photos**

## Environmental Field Observation - Puerto Rico Department of Housing

APPLICANT INFORMATION			
Application ID	PR-RGRW-01056		
Applicant Name	AGRO EMPRESAS TAVAREZ INC		
Property Address	BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR		
Parcel ID	007-000-004-04		
Coordinates	18.486036,-67.010827		
Inspector Name	Javier Ramos		
Inspection Date	12/29/2023		
Building Type	Lean To		
Number of Units	1		
Number of Stories	1		
Year Built; Data Source	----; Historian		
ENVIRONMENTAL OBSERVATIONS (attach photos and notes, as necessary, for any YES answers)			
OBSERVATION ITEMS	YES	NO	COMMENTS
A. Is the <b>structure in use</b> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Storage
B. Is <b>structure a greenhouse</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Is <b>Electricity connected</b> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. Is <b>water connected</b> ? (Utilities or Well)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water meter
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 checked="" type="checkbox"/>	<input type="checkbox"/>	Pesticide storage
8. Are there any <b>groundwater monitoring wells</b> on the site or adjacent parcel?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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-01056

Project Name: Agro Empresas Tavarez. Inc

Coordinates: 18.486036, -67.010827

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

Scope of Work: The proposed project includes the purchase of a tractor and installation of a well.

Land current in use for: The farm is currently used for avocado plantation.

Past Land use was: The farm has always been used for avocado. .

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: coordinates: 18.486036, -67.010827 The proposed project includes the purchase and installation of a well. For the electricity of the water pump, solar panels will be installed in the future. The land will be disturbed to reach the well up of 500 feet and with a diameter of 8", and a concrete slab will be place approximately measuring 4' X 4'.

Any new water connection or power connection?

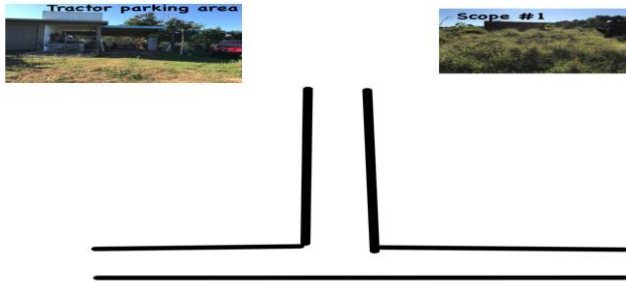
Water: installation of the water well.

Electricity: applicant informed in the future will be installed a solar panels system.

If the scope of work included tools, machinery or farms products, Where the applicant will be storing them?

Tractor will be storage in the coordinates: 18.485827-67.010265

## Site Sketch



**Front of Structure**

Photo Direction: Southwest



**Facing Away From Front**

Photo Direction: Northeast



**Side #1 of Structure**

Photo Direction: West



**Facing Away From Side #1**

Photo Direction: East





**Back of Structure**

Photo Direction: Northeast



**Facing Away From Back**

Photo Direction: Southwest



**Side #2 of Structure**

Photo Direction: Southeast



**Facing Away From Side #2**

Photo Direction: Northwest



**Streetscape #1**

Photo Direction: Northwest



**Streetscape #2**

Photo Direction: Southeast



Address

Photo Direction: Northwest



Outbuildings

Photo Description: Pesticide and stools storage

Photo Direction: Southwest



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: East



Structural Details

Photo Description: Architectural details

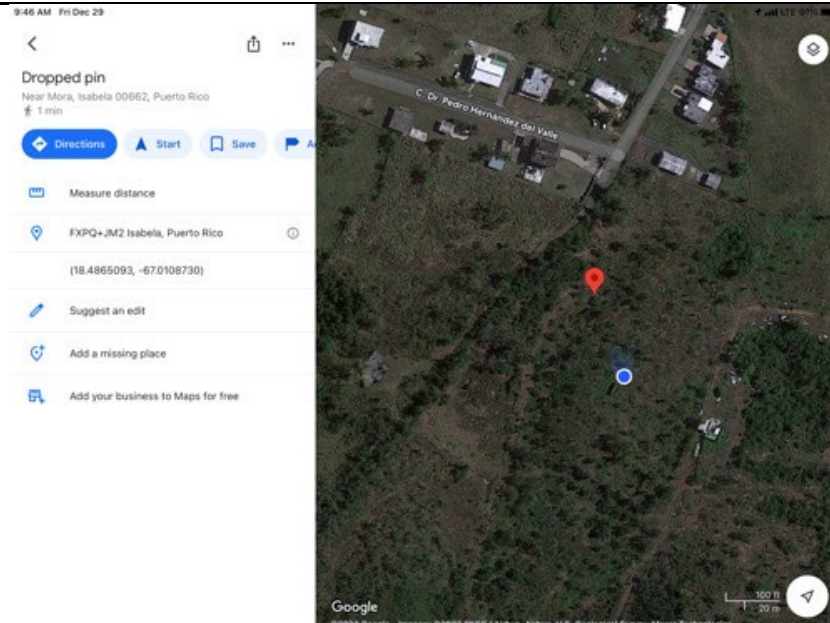
Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: North



Structural Details

Photo Description: Architectural details

Photo Direction: South



Structural Details

Photo Description: Architectural details

Photo Direction: Southeast





Structural Details

Photo Description: Architectural details

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: Southwest



Structural Details

Photo Description: Architectural details

Photo Direction: Southwest



Structural Details

Photo Description: Architectural details

Photo Direction: West



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: Northeast



Structural Details

Photo Description: Architectural details

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: Southeast



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structural Details

Photo Description: Architectural details

Photo Direction: Northwest



Structure Occupied

Photo Description: Storage

Photo Direction: Southwest



Water Connected

Photo Description: Water meter

Photo Direction: Northwest





Warehouse Use

Photo Description: Pesticide storage

Photo Direction: Southwest



**Scope Of Work**

Photo Description: Scope of work 1: Construction of a water well

Photo Direction: Northeast



**Scope Of Work**

Photo Description: Scope of work 1: Construction of a water well

Photo Direction: Southeast



**Scope Of Work**

Photo Description: Scope of work 1: Construction of a water well

Photo Direction: Southwest



**Scope Of Work**

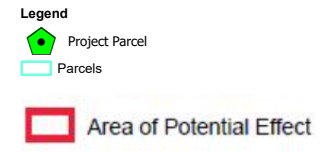
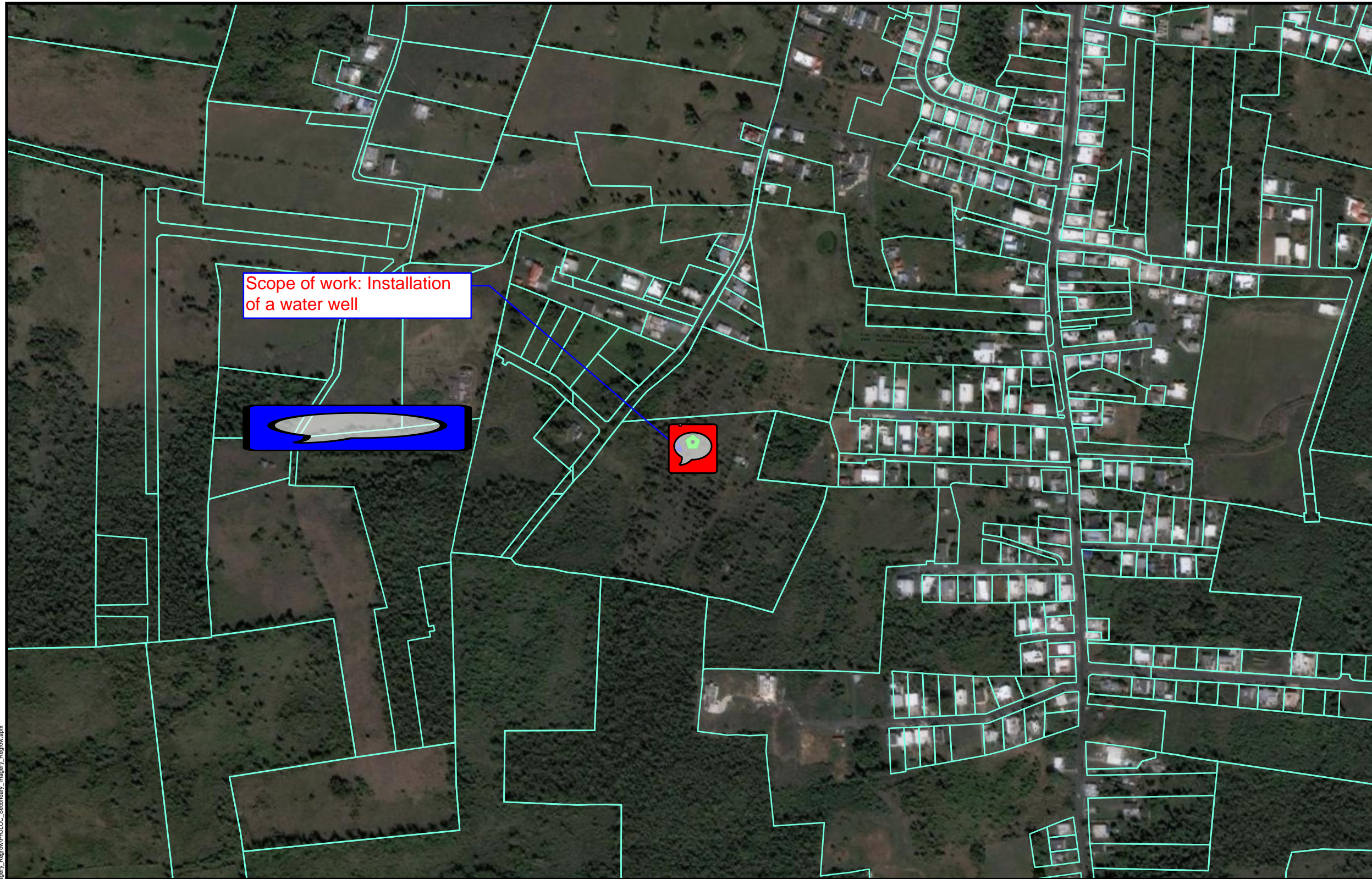
Photo Description: Scope of work 1: Construction of a water well

Photo Direction: Northwest



# APPENDIX B

## Maps



**PUERTO RICO**



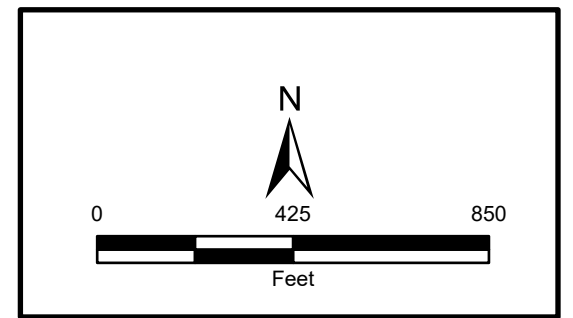
**Figure 1: PROJECT LOCATION**

**APPLICANT ID: PR-RGRW-01056**

ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662

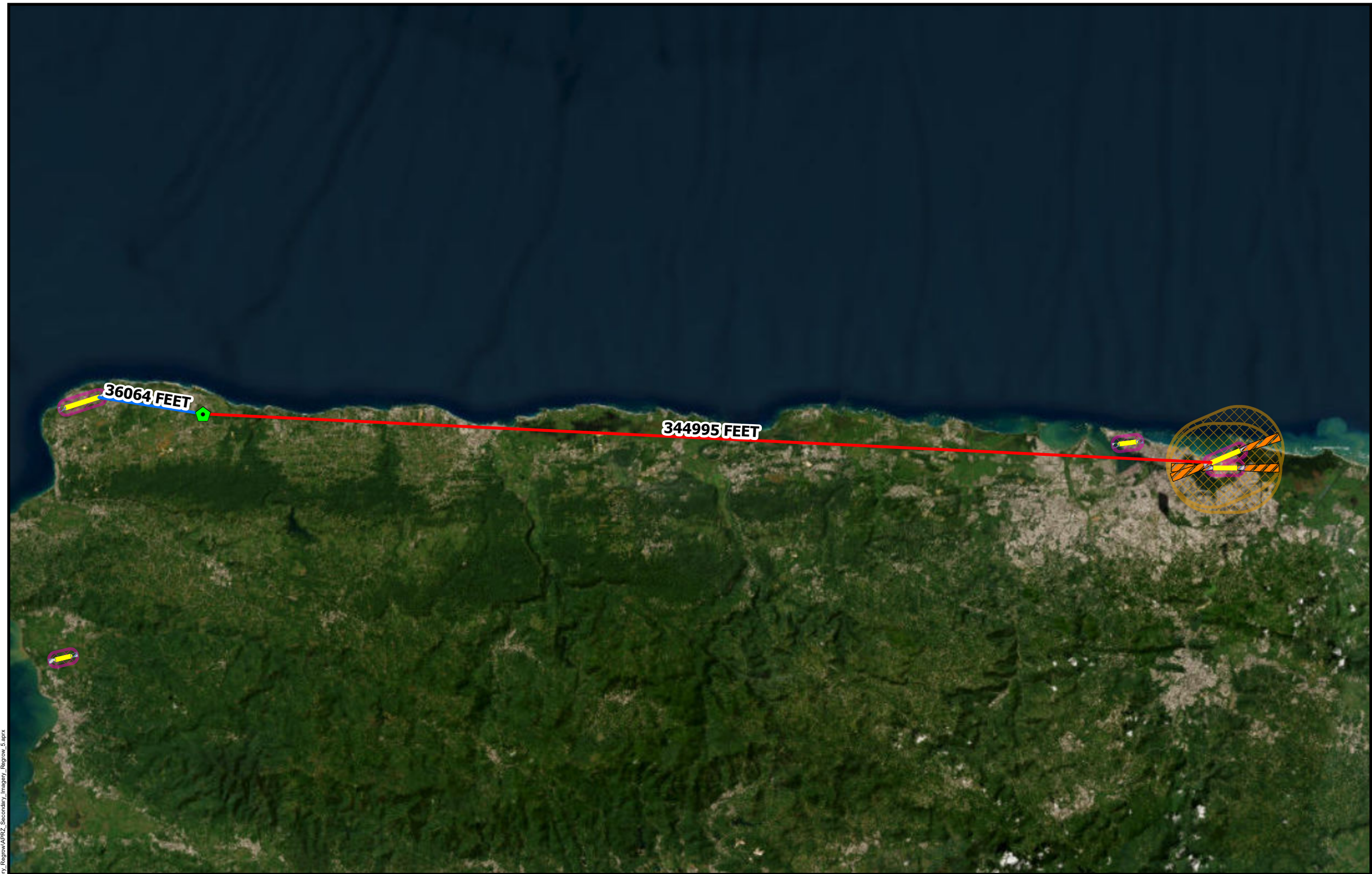
Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036 , -67.010827



Source: CRIM  
<https://catastro.crimpr.net/cdprpc/>  
 Author: TG Date: 10/27/2023

File Path: Z:\data\USRT\Regrow\PR\LOC\_Secondary\_Imagery\_Regrow\PR\LOC\_Secondary\_Imagery\_Regrow.aprx



**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: 36,064**

**Distance to Nearest Civilian Airport  
in Feet: 36,064**

**Distance to Nearest Military Airport  
in Feet: 344,995**

**PUERTO RICO**



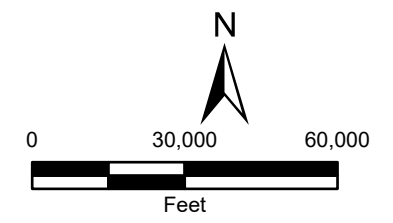
**Figure 2: AIRPORT ZONES  
APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**  
**Name of Development: AGRO EMPRESAS TAVAREZ INC**  
**Parcel Coordinates: 18.486036 , -67.010827**



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

Author: TG Date: 2/14/2024



File Path: Z:\data\USRT\Regrow\PRZ\_Secondary\_Imagery\_Regrow\PRZ\_Secondary\_Imagery\_Regrow\_5.aprx



**Legend**

Project Parcel

**Coastal Barrier Resources System Boundary**

**Unit**

PR-78

Distance to Nearest Coastal Barrier Resources System:  
12680 Feet

**PUERTO RICO**



12680 FEET

PR-78



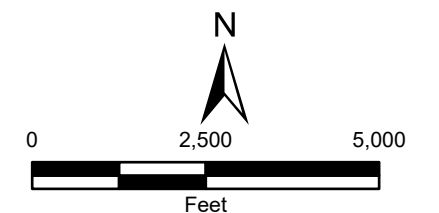
Source: U. S. Fish & Wildlife Service  
<https://www.fws.gov>

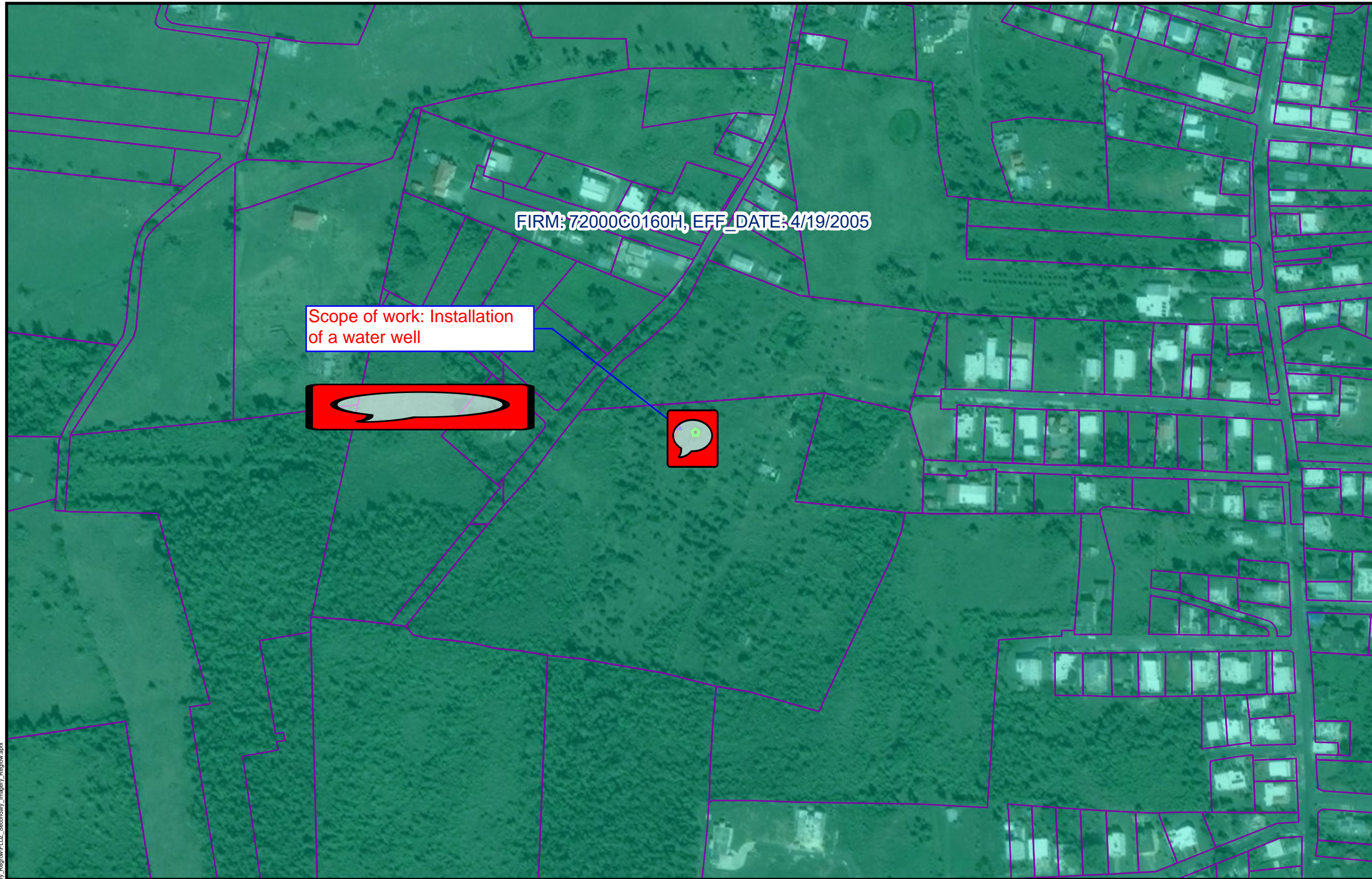
**Figure 3: COASTAL BARRIERS IMPROVEMENT ACT**  
**APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA PR 00662**

Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827





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

**PUERTO RICO**

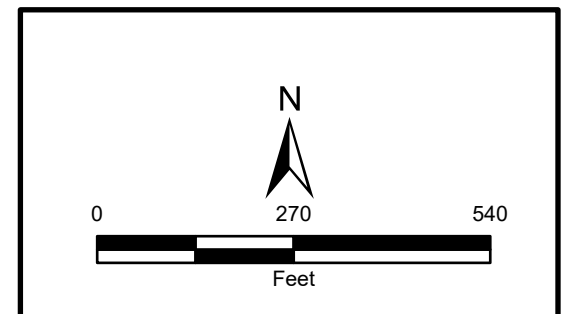


**Figure 4: FLOODPLAIN MANAGEMENT  
APPLICANT ID: PR-RGRW-01056**

ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662

Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827



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

Author: TG Date: 1/4/2024

File Path: Z:\data\USPRTier2Regrow\pr\FLDZ\_Secondary\_Imagery\_Regrow.aprx





### 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, AE2
- 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**

- 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
- 17.2 Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

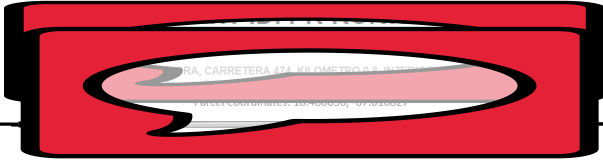
**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped

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

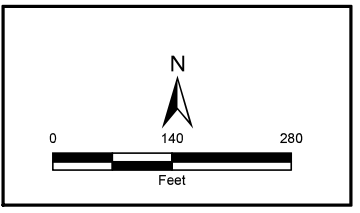


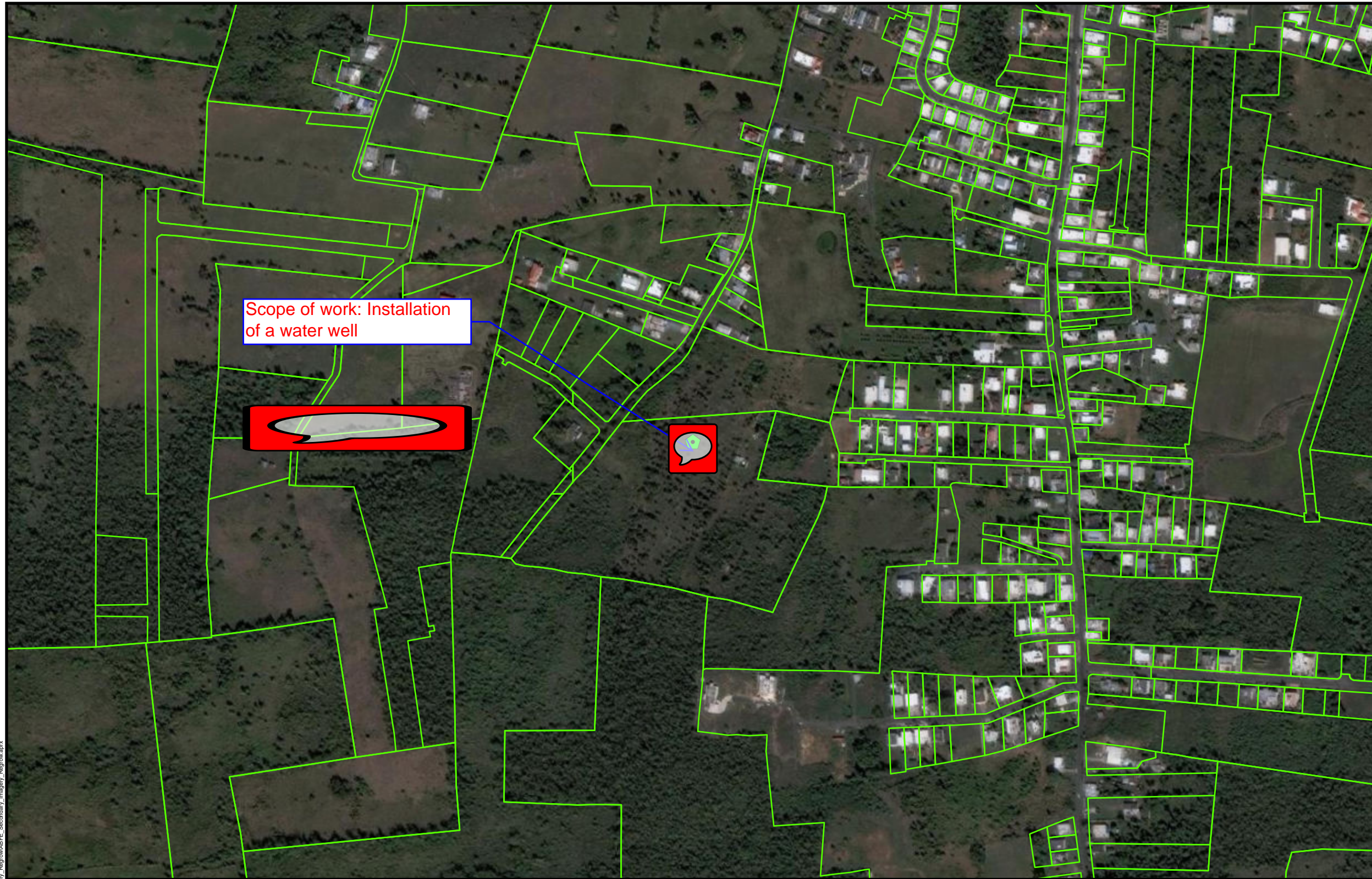
**FIGURE 5: NATIONAL FLOOD HAZARD LAYER FIRMETTE**



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

Author: TG Date: 5/31/2023





- Legend**
- Project Parcel
  - Parcels
  - Area of Potential Effect
- Legend**
- PuertoRico\_ABEFE\_1PCT  
Advisory Base Flood Elevation (zoom in to make visible)
- Flood Hazard Boundary (zoom in to make visible)
- Limit of Moderate Wave Action (LIMWA)
- Flood Hazard Extent
- 1% Annual Chance Flood
  - 0.2% Annual Chance Flood
- Zone/BFE Boundary
- Flood Hazard Area (zoom in to make visible)
- Flood Hazard Zone
- A
  - AO
  - AE
  - Coastal A Zone
  - VE
  - X 0.2% Annual Chance Flood
  - A-Floodway
  - AE-Floodway
  - Coastal A Zone and Floodway

**PUERTO RICO**



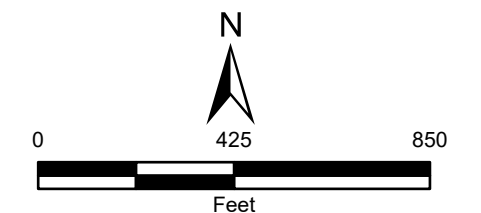
**Figure 6: ADVISORY BASE FLOOD ELEVATION  
APPLICANT ID: PR-RGRW-01056**

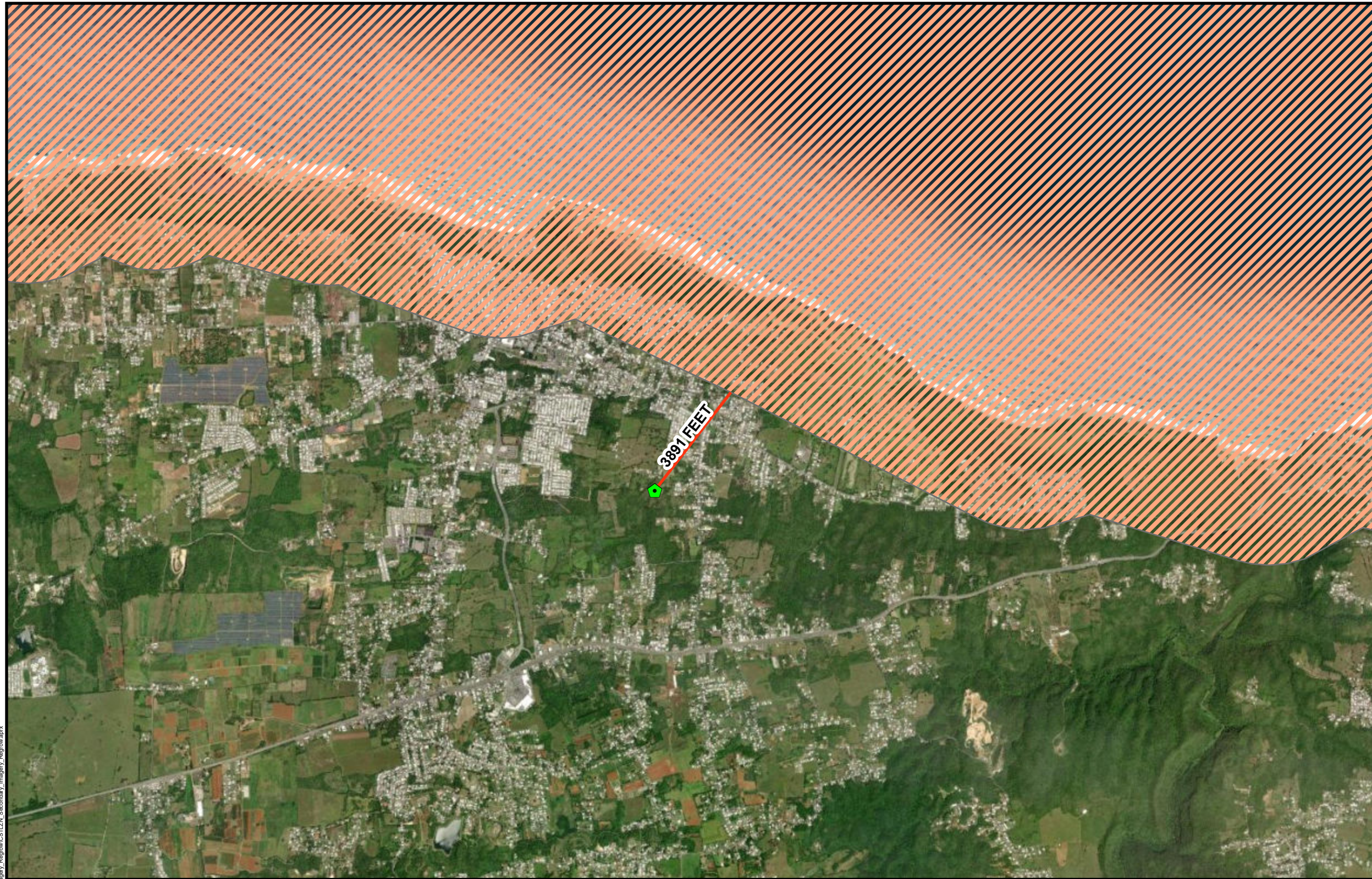
ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662  
 Name of Development: AGRO EMPRESAS TAVAREZ INC  
 Parcel Coordinates :18.486036 , -67.010827





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

Author: TG Date: 10/27/2023





**Legend**

-  Project Parcel
-  Coastal Zone Management Boundary

Distance to Nearest Coastal Zone:  
3891 Feet

**PUERTO RICO**



**Figure 7: COASTAL ZONE MANAGEMENT  
APPLICANT ID: PR-RGRW-01056**

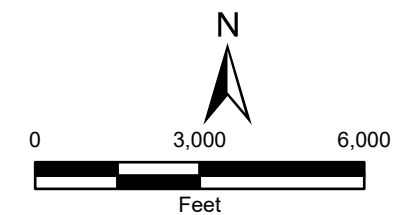
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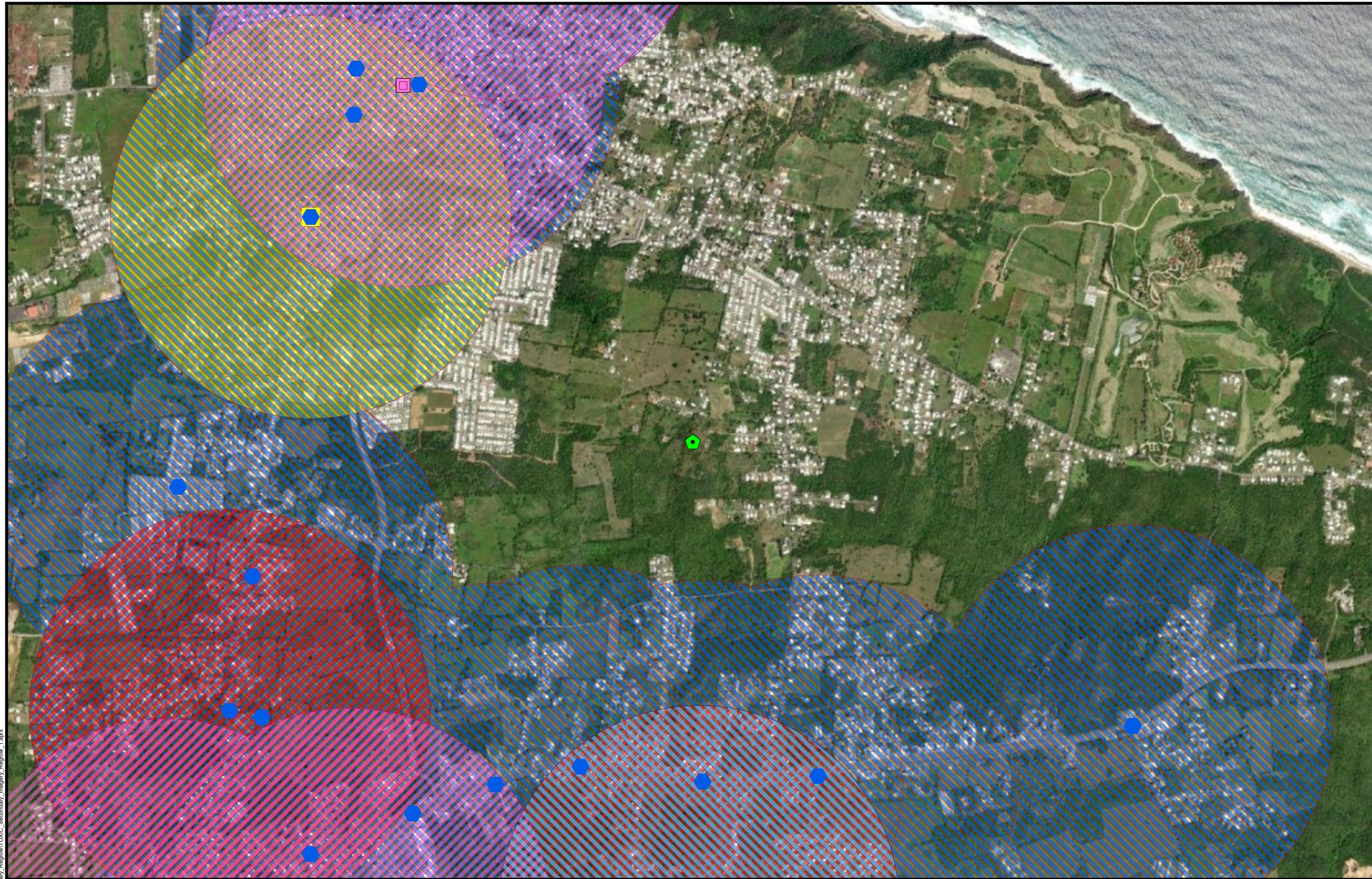
Name of Development: AGRO EMPRESAS TAVAREZ INC  
Parcel Coordinates: 18.486036, -67.010827
















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-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**

Name of Development: AGRO EMPRESAS TAVAREZ INC

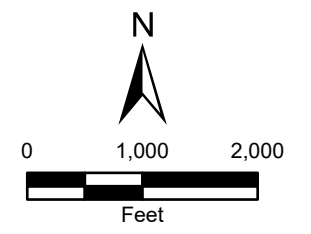
Parcel Coordinates: 18.486036, -67.010827



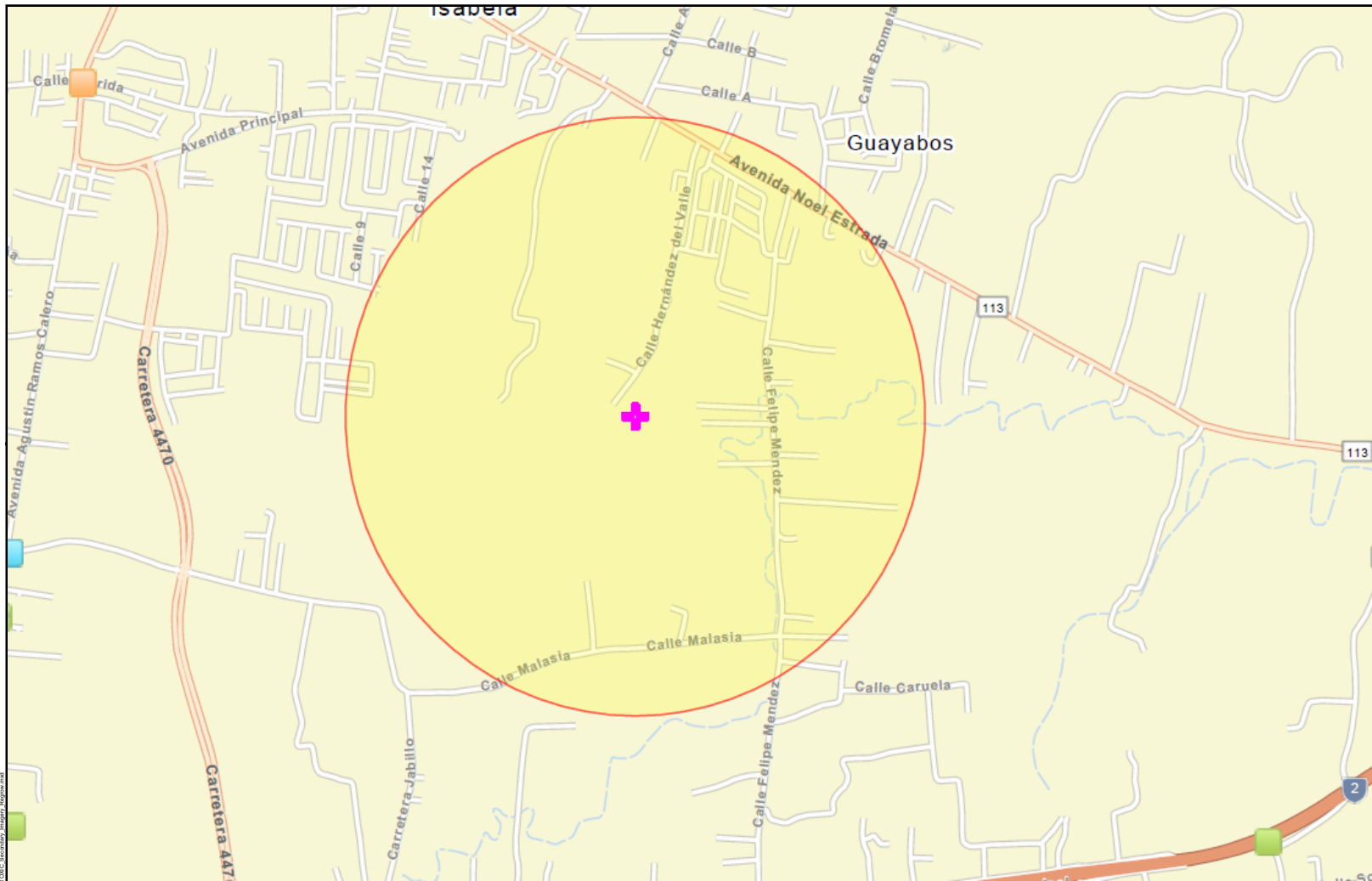
Source: E.P.A.

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

Author: JBI/AK Date: 1/3/2024



File Path: Z:\data\USRT\Tier2\Region\PR\TOXIC\_Secondary\_Imagery\_Regrow\1.aprx



- Legend**
- Superfund (NPL)
  - Toxic Substances Control Act (TSCA)
  - Toxic Releases (TRI)
  - Brownfields (ACRES)
  - Hazardous Waste (RCRAInfo)
  - Water Dischargers (NPDES)
  - Air Pollution (ICIS-AIR)
  - + Project Parcel
  - 3000 Ft Buffer

**PUERTO RICO**



**Figure 9: NEPA Assist Map**

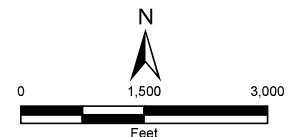


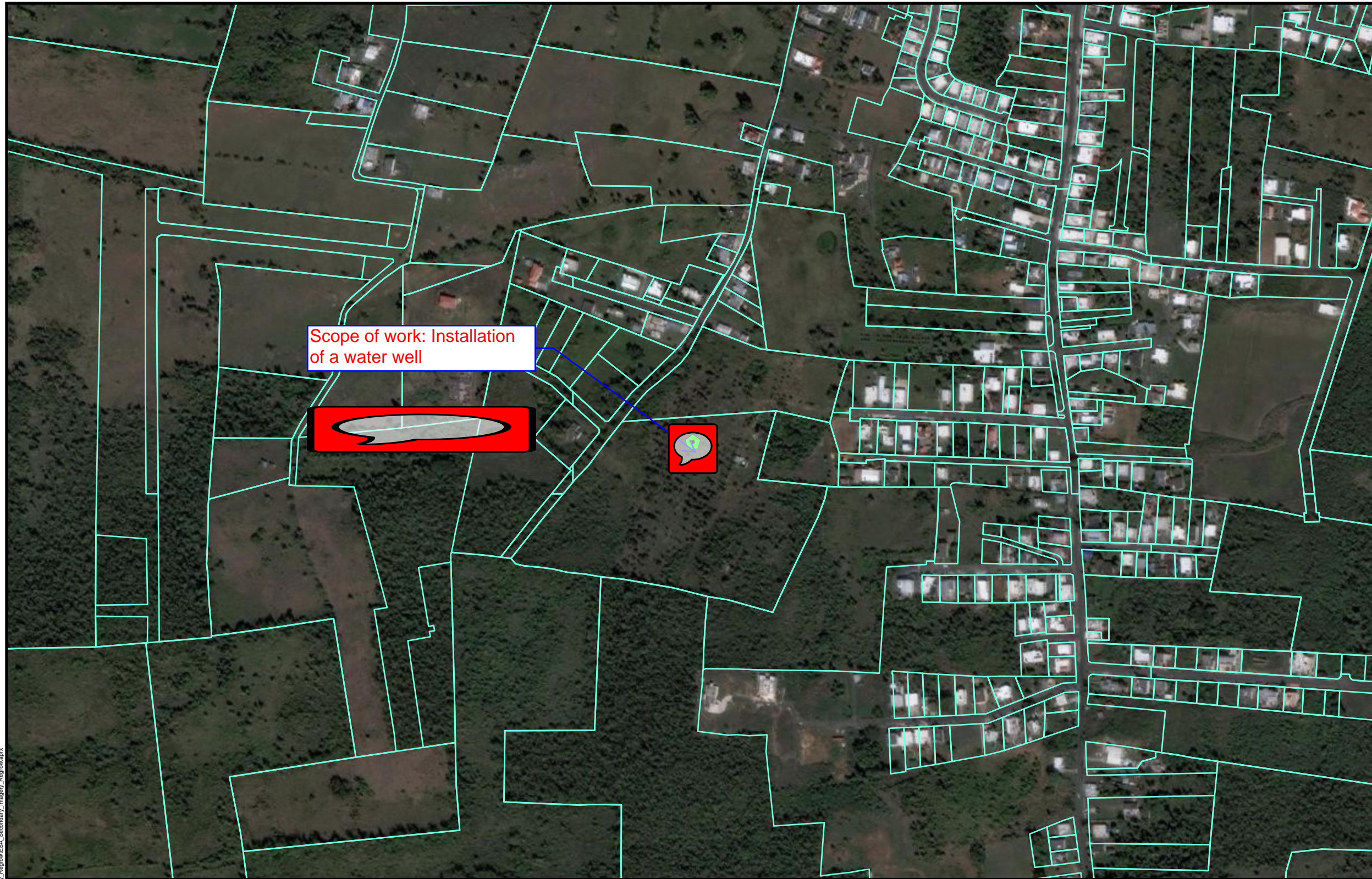
Source: E.P.A.





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

Author: JB/AK

Date: 5/18/2023





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

**PUERTO RICO**

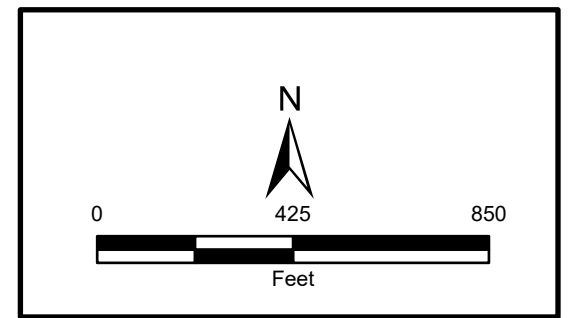


**Figure 10: ENDANGERED SPECIES ACT  
 APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**

Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827



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

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

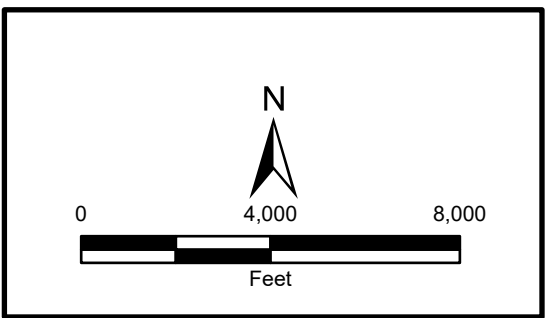
Author: TG Date: 11/27/2023



- Legend**
- ⬠ Project Parcel
  - Common Name**
  - Puerto Rico harlequin butterfly

Distance to Nearest Critical Habitat:  
5549 Feet

**PUERTO RICO**



**Figure 11: CRITICAL HABITATS**  
**APPLICANT ID: PR-RGRW-01056**

ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662

Name of Development: AGRO EMPRESAS TAVAREZ INC

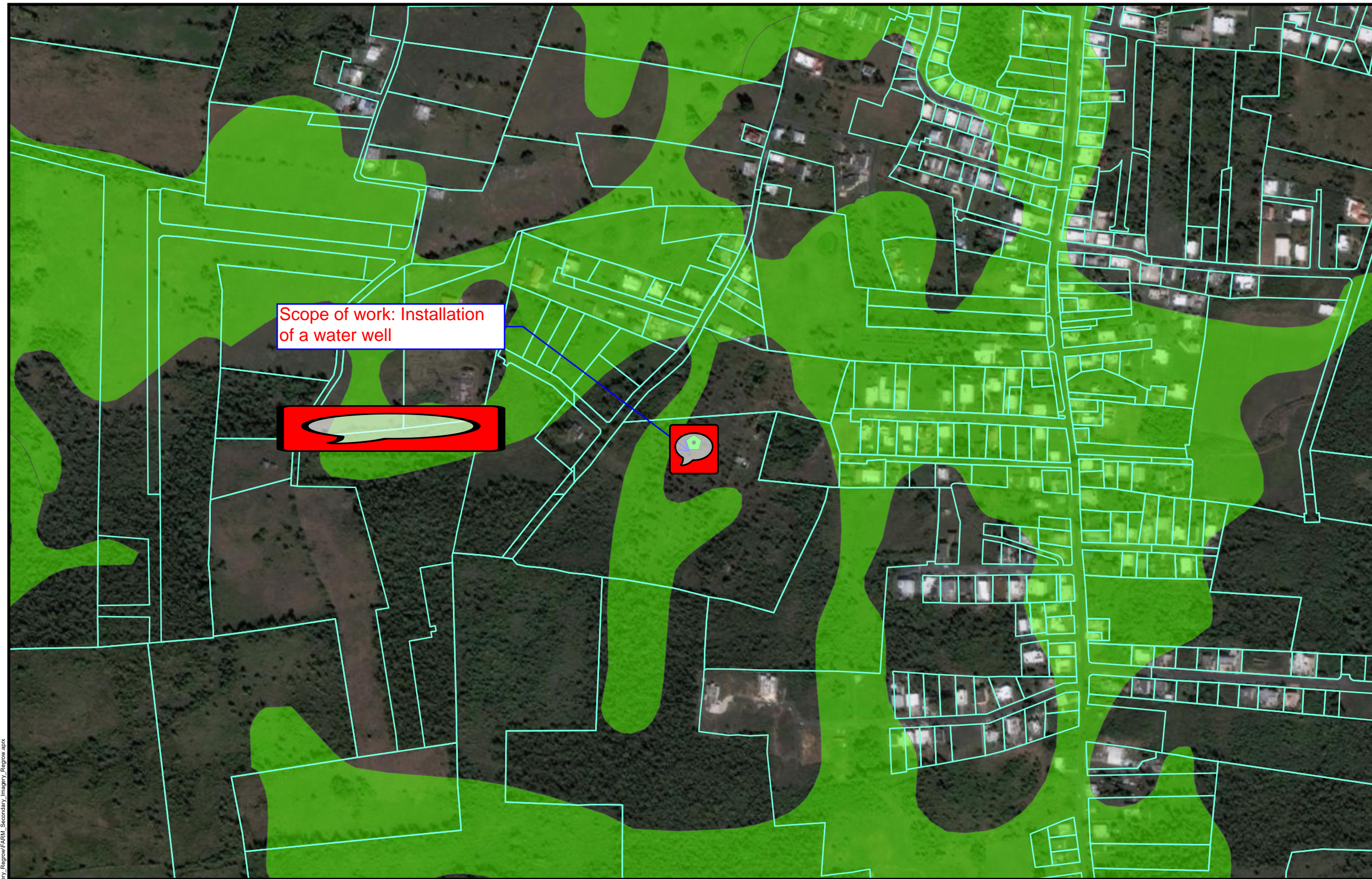
Parcel Coordinates: 18.486036, -67.010827



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

Author: TG Date: 11/3/2023

File Path: Z:\data\USFWS\PR\Regrow\GIS\CriticalHabitats\_Secondary\_Imagery\_Regrow\CriticalHabitats\_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**

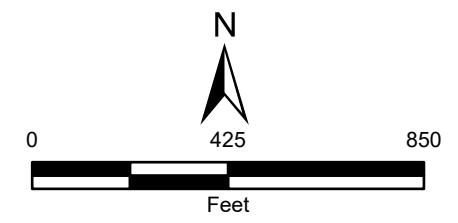


**Figure 12: FARMLAND PROTECTION**  
**APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**  
 Name of Development: AGRO EMPRESAS TAVAREZ INC  
 Parcel Coordinates: 18.486036, -67.010827

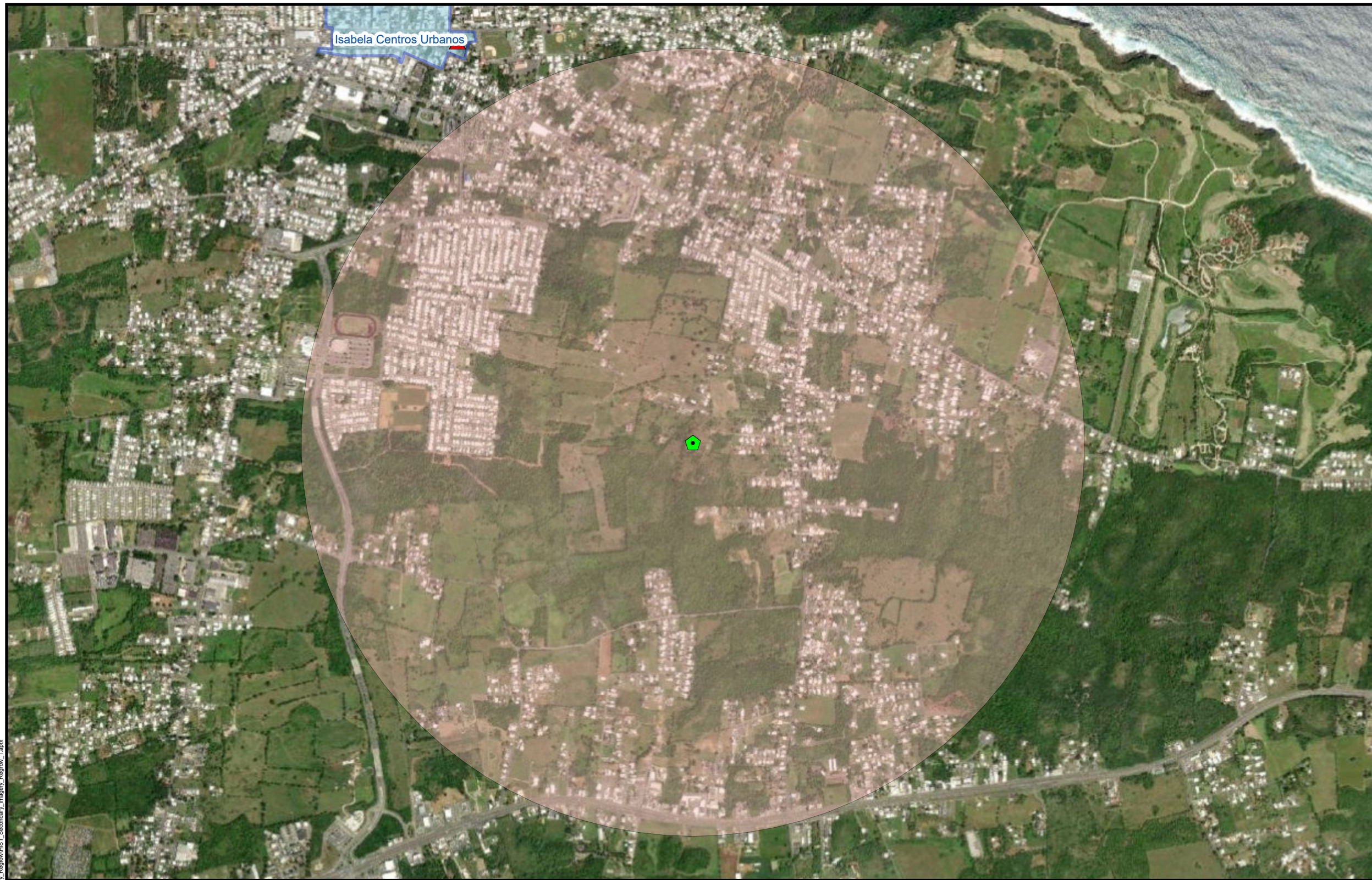


Source: USDA  
<https://websoilsurvey.sc.egov.usda.gov>  
 Author: TG Date: 11/3/2023
















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





**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-01056**

ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662

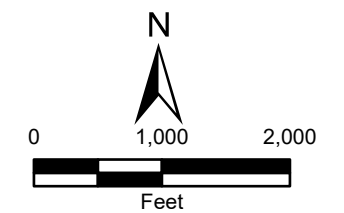
Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827

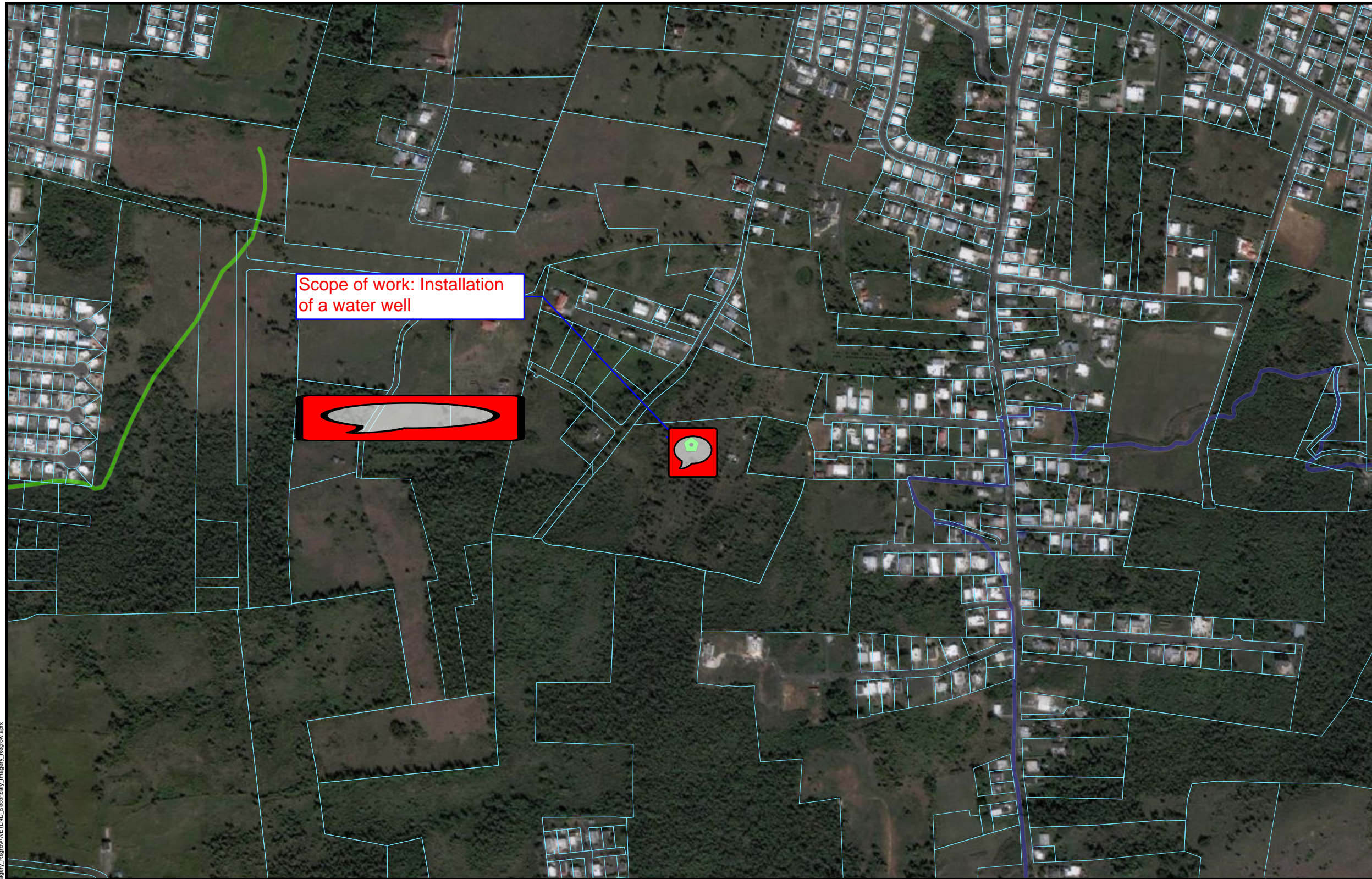


Source: National Park Service  
<https://www.nps.gov/>











Author: TG Date: 11/3/2023



File Path: Z:\data\USPRT\Tier2\Regrow\ap\HIST\_Secundary\_Imagery\_Regrow\HIST\_Secundary\_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

**PUERTO RICO**

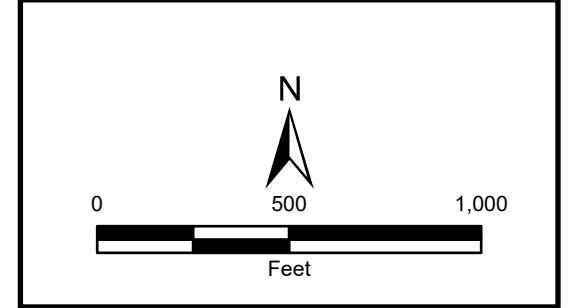


**Figure 14: WETLANDS**  
**APPLICANT ID: PR-RGRW-01056**

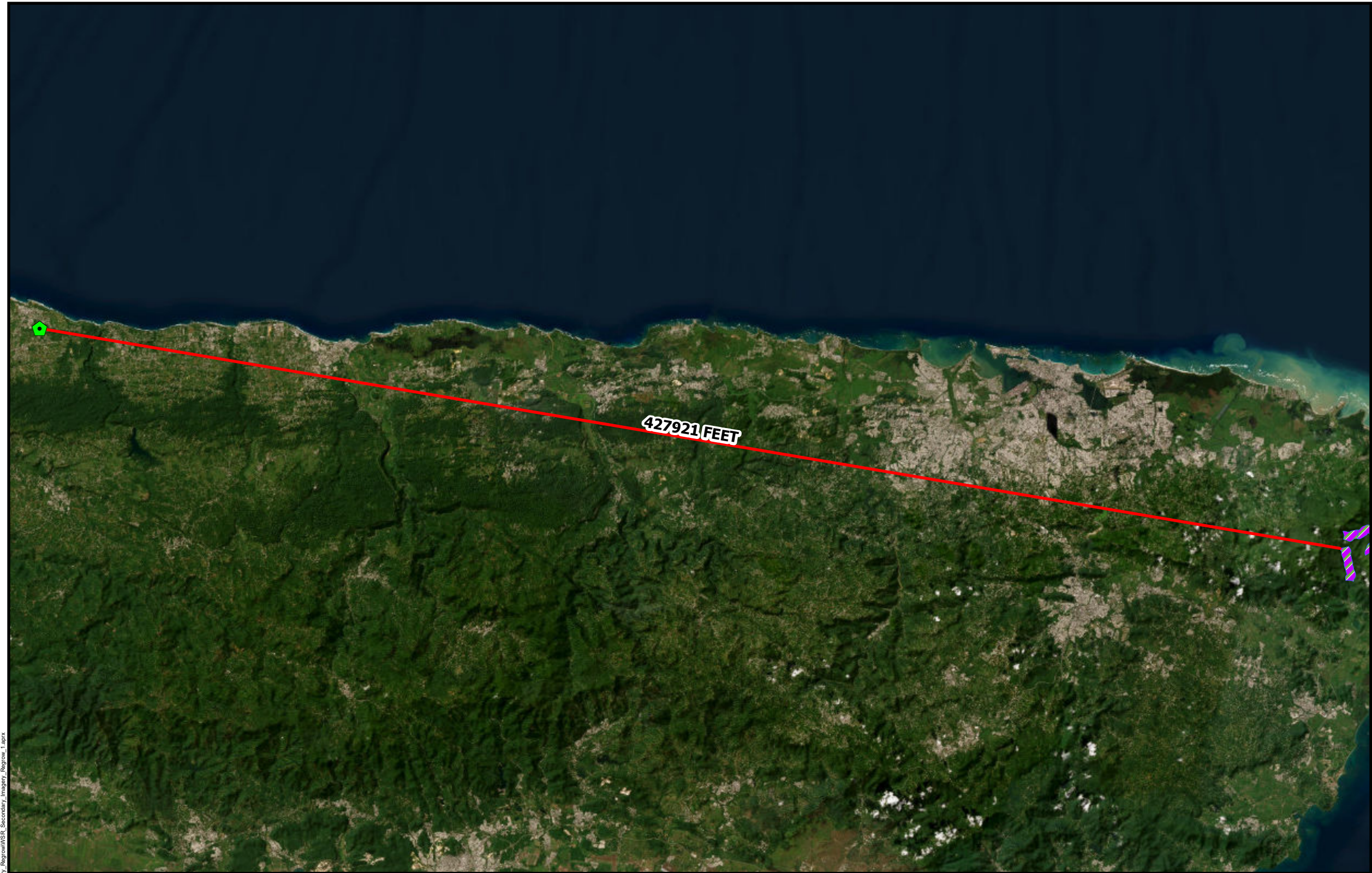
ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662  
 Name of Development: AGRO EMPRESAS TAVAREZ INC  
 Parcel Coordinates: 18.486036, -67.010827





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



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



- Legend**
-  Project Parcel
  -  Wild and Scenic Rivers

Distance to Nearest Wild and Scenic River: 427921 Feet

**PUERTO RICO**



File Path: Z:\data\USFR\Tier2\Regrow\SR\_Secondary\_Imagery\_Regrow\SR\_Secondary\_Imagery\_Regrow\_1.aprx

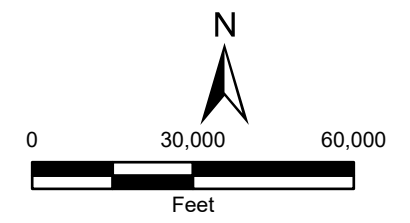


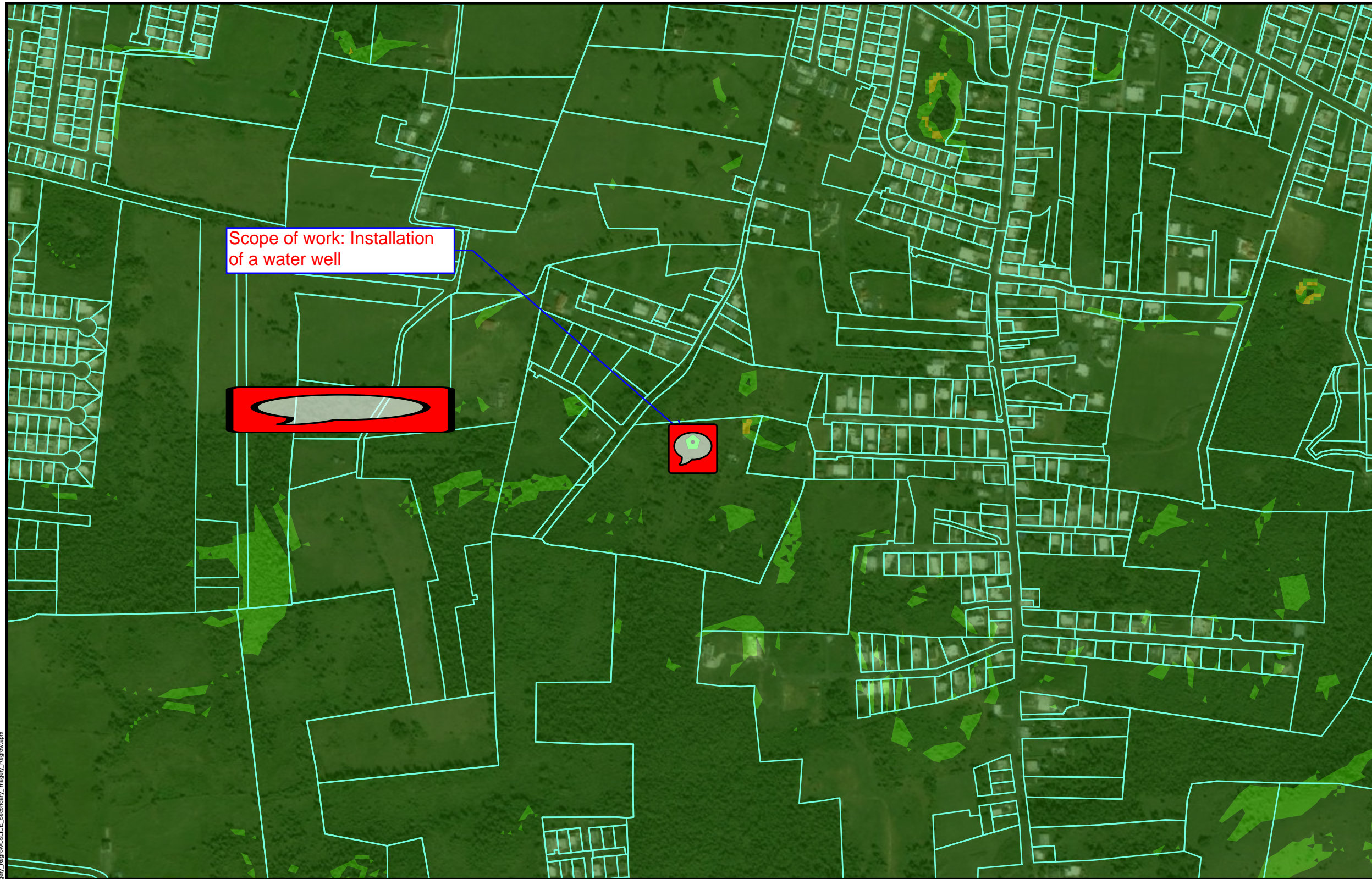
Source: U. S. Forest Service  
<https://www.fs.usda.gov>

Author: TG      Date: 10/23/2023

**Figure 15: WILD AND SCENIC RIVERS ACT  
 APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**  
 Name of Development: AGRO EMPRESAS TAVAREZ INC  
 Parcel Coordinates: 18.486036, -67.010827





- 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-01056**

ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662

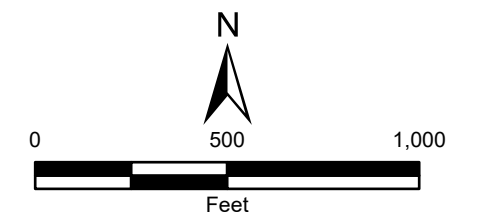
Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827

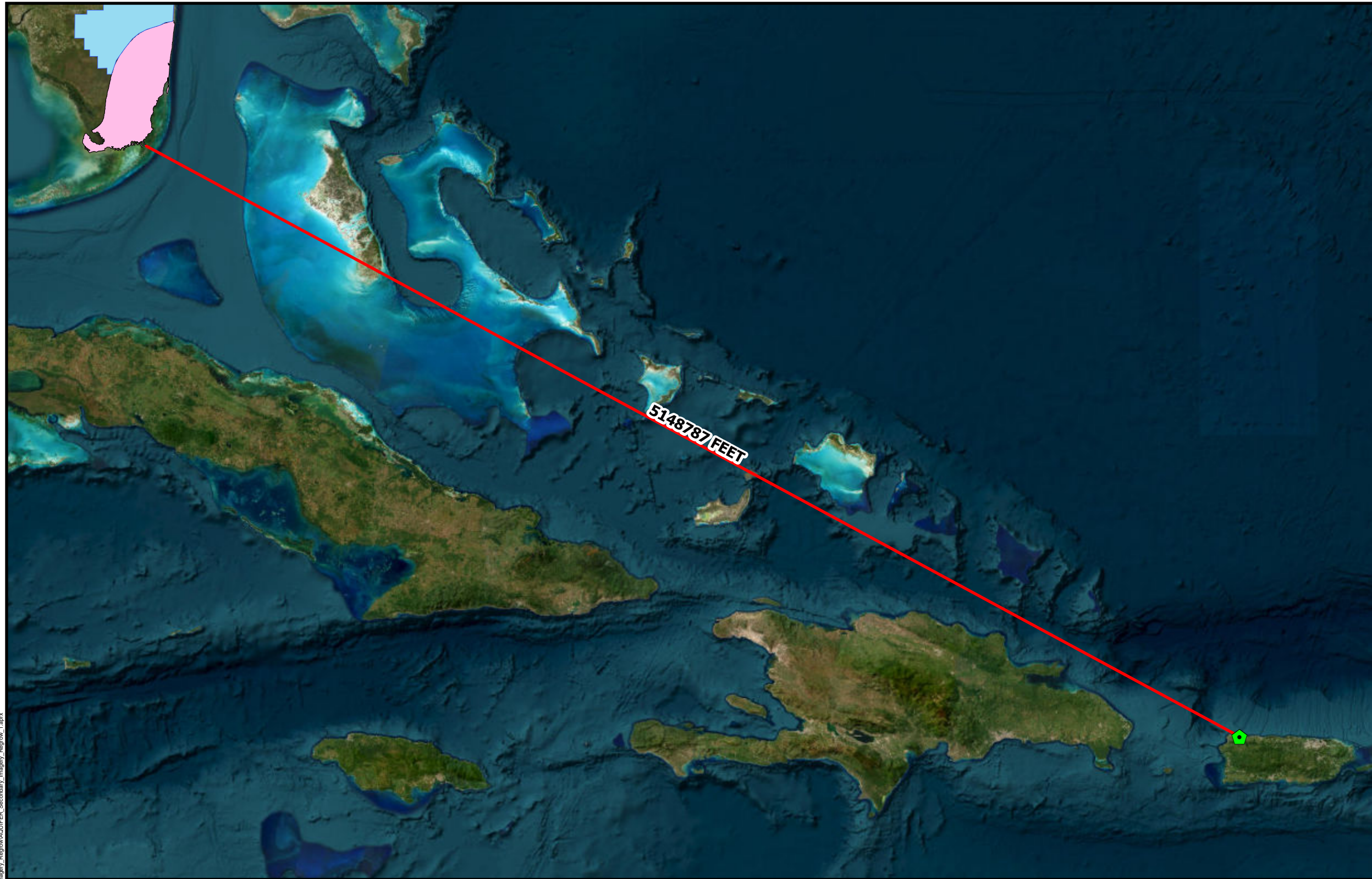


Source: PRDOH  
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=10506ecc7f15491daee17647f19248ee>

Author: TG Date: 11/3/2023



File Path: Z:\data\USPRTier2Regrow\aparc\SLIDE\_Secondary\_Imagery\_Regrow.aprx



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

Distance to Nearest Aquifer:  
5,148,787 FT

**PUERTO RICO**



File Path: Z:\data\USPR\TheRegrow\SSA\QUIFER\_Secundary\_Imagery\_Regrow\_Lairx



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

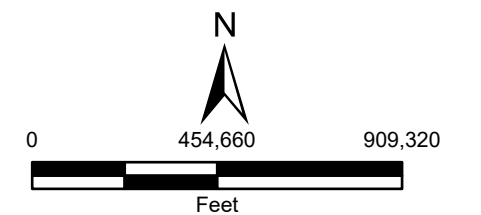
Author: TG Date: 2/21/2024

**Figure 17: SOLE SOURCE AQUIFERS**  
**APPLICANT ID: PR-RGRW-01056**

**ADDRESS: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PR 00662**

Name of Development: AGRO EMPRESAS TAVAREZ INC

Parcel Coordinates: 18.486036, -67.010827



# **APPENDIX C**

## **Additional Information**



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

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

Data is current as of December 31, 2023

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

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

Change the State:

Important Notes

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

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
<b>PUERTO RICO</b>								
Arecibo Municipio	Lead (2008)	Arecibo, PR	11121314151617181920212223	//		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	929394959697989900010203040506070809	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	181920212223	//		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	181920212223	//		Part	52,441	72/137

Important Notes

# EJScreen Community Report

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

## Isabela Municipio, PR

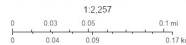
1 mile Ring Centered at 18.486033,-67.010827  
 Population: 7,621  
 Area in square miles: 3.14

A3 Landscape



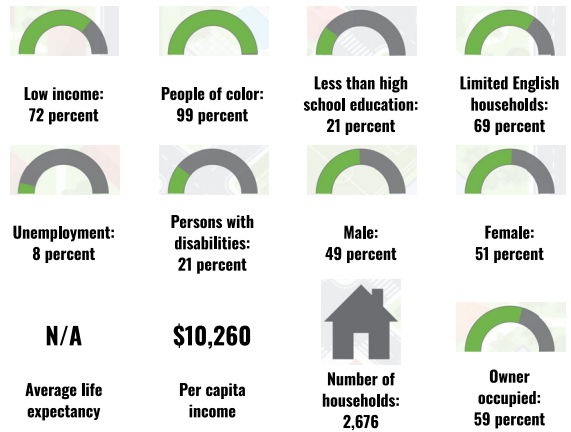
February 13, 2024

Project 2  
 Search Result (point)



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, IBC

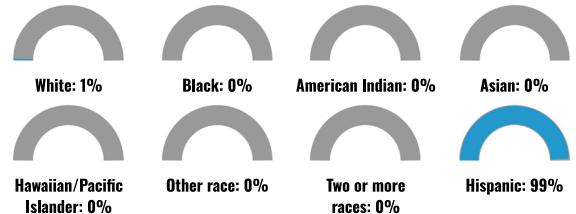
### COMMUNITY INFORMATION



### LANGUAGES SPOKEN AT HOME

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

### BREAKDOWN BY RACE



### BREAKDOWN BY AGE



### LIMITED ENGLISH SPEAKING BREAKDOWN



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



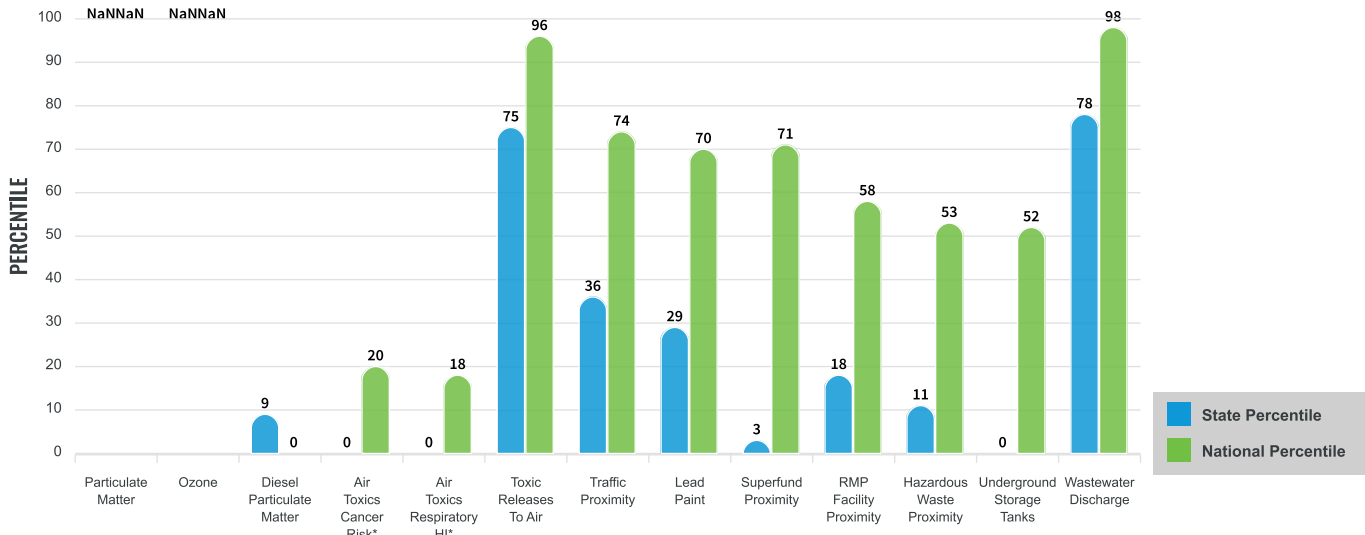
# Environmental Justice & Supplemental Indexes

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

## EJ INDEXES

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

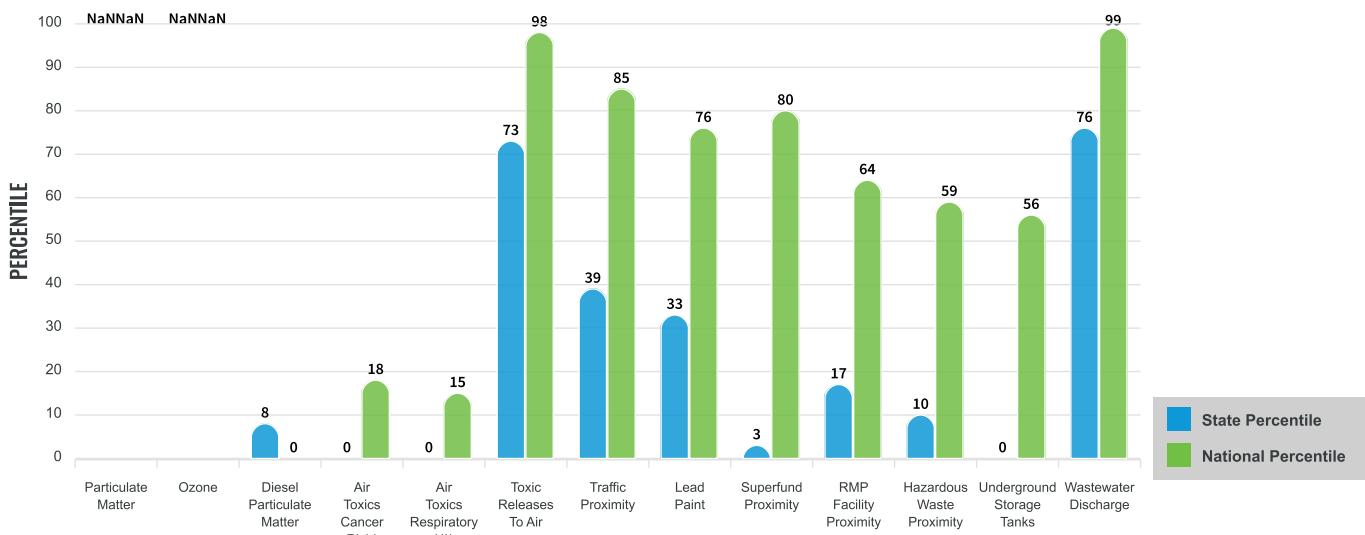
### EJ INDEXES FOR THE SELECTED LOCATION



## SUPPLEMENTAL INDEXES

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

### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



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

Report for 1 mile Ring Centered at 18.486033,-67.010827

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>POLLUTION AND SOURCES</b>					
Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	N/A	N/A	N/A	8.08	N/A
Ozone (ppb)	N/A	N/A	N/A	61.6	N/A
Diesel Particulate Matter ( $\mu\text{g}/\text{m}^3$ )	0.0127	0.0667	8	0.261	0
Air Toxics Cancer Risk* (lifetime risk per million)	10	20	0	25	1
Air Toxics Respiratory HI*	0.1	0.19	0	0.31	1
Toxic Releases to Air	1,700	4,300	76	4,600	70
Traffic Proximity (daily traffic count/distance to road)	39	180	37	210	35
Lead Paint (% Pre-1960 Housing)	0.069	0.16	41	0.3	30
Superfund Proximity (site count/km distance)	0.03	0.15	2	0.13	27
RMP Facility Proximity (facility count/km distance)	0.073	0.47	17	0.43	19
Hazardous Waste Proximity (facility count/km distance)	0.081	0.76	10	1.9	16
Underground Storage Tanks (count/km <sup>2</sup> )	0.24	1.7	60	3.9	33
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.15	2.3	75	22	84
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index	86%	83%	44	35%	97
Supplemental Demographic Index	42%	43%	40	14%	99
People of Color	99%	96%	26	39%	96
Low Income	72%	70%	44	31%	95
Unemployment Rate	8%	15%	38	6%	75
Limited English Speaking Households	69%	67%	47	5%	99
Less Than High School Education	21%	21%	51	12%	82
Under Age 5	6%	4%	76	6%	57
Over Age 64	17%	22%	31	17%	57
Low Life Expectancy	N/A	N/A%	N/A	20%	N/A

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

## Sites reporting to EPA within defined area:

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

## Other community features within defined area:

Schools .....	1
Hospitals .....	0
Places of Worship .....	0

## Other environmental data:

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

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

Report for 1 mile Ring Centered at 18.486033,-67.010827

# EJScreen Environmental and Socioeconomic Indicators Data

## HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	N/A	N/A	N/A	20%	N/A
Heart Disease	N/A	N/A	N/A	6.1	N/A
Asthma	N/A	N/A	N/A	10	N/A
Cancer	N/A	N/A	N/A	6.1	N/A
Persons with Disabilities	19.9%	21.6%	39	13.4%	85

## 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	58%	32%	89	14%	99
Lack of Health Insurance	5%	7%	33	9%	36
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 1 mile Ring Centered at 18.486033,-67.010827

**APPENDIX D**  
Endangered Species

Date: February 6, 2024

Applicant ID: PR-RGRW-01056

Street Address: BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR

Municipality: Isabela

### **Subject – Endangered Species No Effect Determination for PR-RGRW-01056**

Tetra Tech conducted a site-specific review of endangered species in accordance with the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) for the proposed project located at BARRIO MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, in the Municipality of Isabela, Puerto Rico (Parcel ID# 007-000-004-04).

The intent use of funds for the proposed project includes the purchase of a tractor and installation of a water well. The proposed project consists of the drilling and installation of a water well at coordinates: 18.486036, -67.010827. The proposed is a 500 ft depth, 6 inches steel casing well, with a 5 hp submersible pump. The boring for the installation well will be 8 inches to be reduced to 6 inches. The SOW includes the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation. The field is not graded, review of historical imagery shows that the area was cleared in 2021.

Surrounding landscape to the nearby project area is a small forest to the south and west, to the north and east the area is developed into urban communities, to the south there is a residential community. Following the small forest to the south is a heavily developed area with a major highway. No trees are located within the area where the scope of work will take place and therefore there will be no effect to the habitat for arboreal snakes. Ground vegetation removal will be required before the concrete pad is poured.

The National Wetlands Inventory indicated there are no wetlands within the proposed project parcel (Figure 14).

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:

<b>Species</b>	<b>Status</b>
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	Endangered

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

<b>Species</b>	<b>Effect Determination</b>	<b>Conservation Measures to be implemented (if needed)</b>
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	No Effect	No Conservation Measures
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	No Effect	No Conservation Measures

A 'No Effect' determination has been made based on the lack of potential effect to the critical habitat for the Puerto Rican Boa and Puerto Rican Harlequin Butterfly as well as previous disturbance and current land use of the proposed project area. The proposed scope of work will require ground vegetation removal but will not require tree removal and will take place on lands that have been frequently disturbed.

If a Puerto Rican Boa is found in the project activity site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa.

If a worker believes they have spotted a Puerto Rican Harlequin Butterfly, work should cease within the area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #: ((787) 724-5700, (787) 230-5550, (787) 771-1124).

**Attachments:**

IPaC Resource List

Kyle Bartelink



B.S. Biologist, Tetra Tech



## United States Department of the Interior



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

In Reply Refer To:  
Project Code: 2024-0049726  
Project Name: PR-RGRW-01056

February 15, 2024

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

To Whom It May Concern:

**\*THE 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

(787) 834-1600

## PROJECT SUMMARY

Project Code: 2024-0049726

Project Name: PR-RGRW-01056

Project Type: Restoration / Enhancement - Agricultural

Project Description: proposed project includes the purchase of a tractor and installation of a water well. The proposed project consists of the drilling and installation of a water well at coordinates: 18.486036, -67.010827. The proposed is a 500 ft depth, 6 inches steel casing well, with a 5 hp submersible pump. The boring for the installation well will be 8 inches to be reduced to 6 inches. The SOW includes the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation. The field is not graded, review of historical imagery shows that the area was cleared in 2021.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.48604375,-67.01080031307434,14z>



Counties: Isabela County, Puerto Rico

## ENDANGERED SPECIES ACT SPECIES

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

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

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

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

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

## REPTILES

NAME	STATUS
Puerto Rican Boa <i>Chilabothrus inornatus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/XTBKQGJUFZCMXAY4SMWOOUKMSE/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/XTBKQGJUFZCMXAY4SMWOOUKMSE/documents/generated/7159.pdf</a>	Endangered

## INSECTS

NAME	STATUS
Puerto Rican Harlequin Butterfly <i>Atlantea tulita</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9005">https://ecos.fws.gov/ecp/species/9005</a>	Threatened

## CRITICAL HABITATS

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

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

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

## BALD & GOLDEN EAGLES

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

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

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

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

## MIGRATORY BIRDS

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

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

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

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

## WETLANDS

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

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

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

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

## **IPAC USER CONTACT INFORMATION**

Agency: Tetra Tech  
Name: Kyle Bartelink  
Address: 2301 Lucien Way  
City: Maitland  
State: FL  
Zip: 32751  
Email: kyle.bartelink@tetratech.com  
Phone: 4072523619

# USFWS Puerto Rican boa Conservation Measures

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## *Puerto Rican Boa*

Generated August 21, 2023 01:53 PM UTC, IPaC v6.96.0-rc4



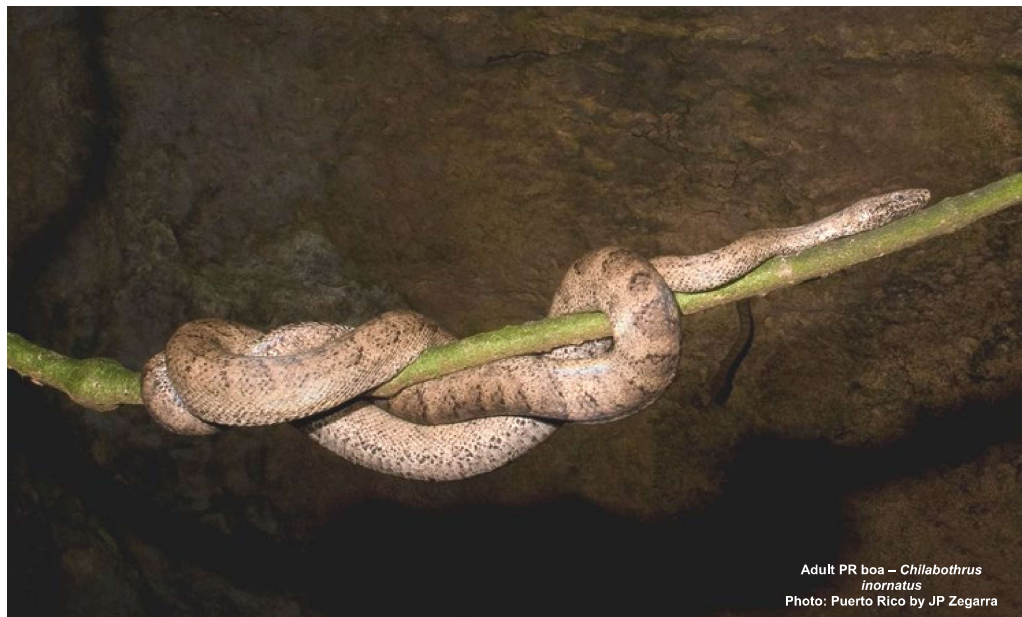


## U.S. FISH AND WILDLIFE SERVICE CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

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

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

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





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

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

#### Conservation Measures:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.
2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.
3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.
4. The PR boa is considered more active at night. Thus, in order to maximize its detection, the species should be searched at nights prior to habitat disturbance.
5. Once the area has been searched for PR boas, vegetation should first be cleared by hand to the maximum extent possible. Vegetation should be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow boas present on site to move away on their own to adjacent available habitat. Any stone walls or naturally occurring rock piles must be carefully dismantled by hand as these are refuges for the snake. This will allow any boas present to vacate the site without injury.
6. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.

7. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #6). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #: ((787) 724-5700, (787) 230-5550, (787) 771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue.
8. If a PR boa is captured by the PRDNER, record the name of the PRDNER staff and information on where the PR boa will be taken. This information should be reported to the Service.
9. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #7). If not possible, the animal should be left alone until it leaves the vehicle on its own.
10. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.
11. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #6). If the PR boa was accidentally? killed as part of the project actions, please include information on what conservation measures had been implemented and what actions that will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.
12. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.

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

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

first discovered in the municipality of Quebradillas. For the purpose of this SSA, we refer to the common name as the Puerto Rican harlequin butterfly (hereafter, PRHB).

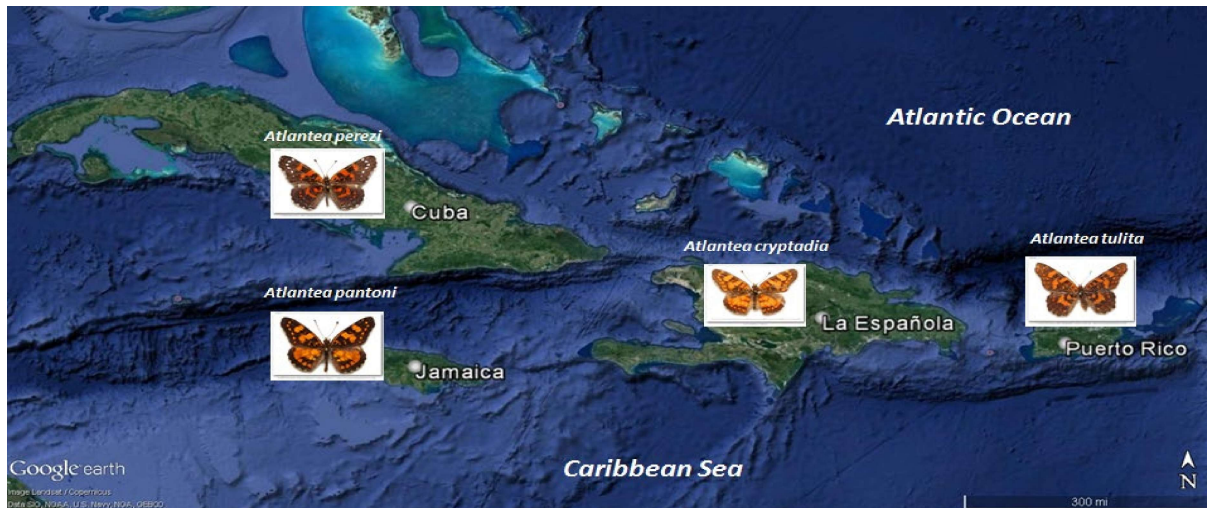


Figure 2-1. Map showing the distribution of the genus *Atlantea* through the Caribbean Region.

## 2.2 Species Description

The PRHB is a medium size butterfly. The species has a wingspan of about 5.1 to 6 centimeters (cm) (2 to 2.5 inches (in)) wide and is characterized by its orange, brownish-black and beige coloration patterns (Figures 2-2 and 2-3). The butterfly is brownish-black at the thorax area with deep orange markings. The male's abdomen is brownish-black on the dorsal side and has orange and brown bands on the ventral side. The female's abdomen is brownish-black with white bands. Wings are largely brownish-black with sub-marginal rows of deep orange spots and beige cells. The dorsal view of the forewings and the hind-wings, the outer margins are brownish-black. The coastal margin is deep orange with brownish-black markings. The inner margin is brownish-black with some deep orange markings at the half basal wing. The hind wing has a wide black border enclosing a set of reddish-bronze sub-marginal points. As a member of the checker-spot butterfly group, rows of deep orange dots (or cells) is a typical pattern on the species' brownish-black wings. The ventral sides of the forewings are similar to the dorsal sides of the forewings, and ventrally the hindwings are brownish-black with orange basal spots, a complete postdiscal beige band with a band of reddish spots distally, and sub-marginal white half-moons.

The chrysalis (pupa from which the butterfly (adult, or imago) emerges) of the PRHB is black, with orange and white dashes, and yellow pimples (Biaggi-Caballero 2009, p. 4) (Figure 2-4). Chrysalis size is around 3 cm (1.2 in).

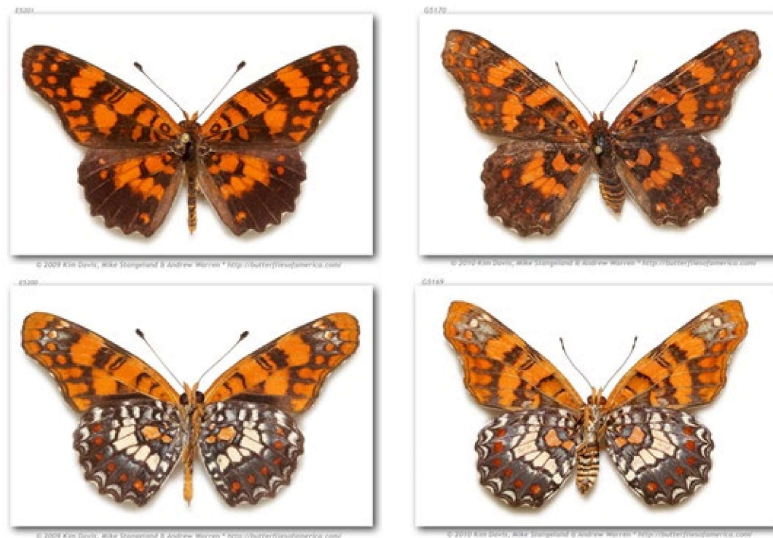


Figure 2-2. Photos showing the dorsal (top) and ventral (bottom) coloration patterns observed in *Atlantea tulita* (Dewitz 1877). Male (left) and female (right). Photo downloaded from <https://www.butterfliesofamerica.com>.

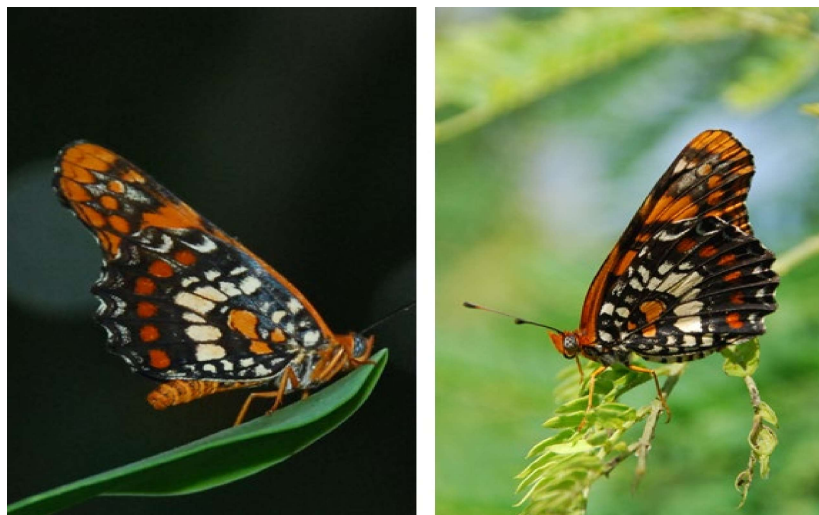


Figure 2-3. Male (left) and female (right) *A. tulita*. The abdomen of the male is a deep orange color with bands, and the abdomen of the female is white with black bands. Source: Carlos Pacheco, Service.

The PRHB caterpillar (larva) is dark orange with a brownish-black to black, thin sub-lateral line, over a thin line of white intermittent dots crossing the body from the head to anal plate (Figure 2-5). The larva is less than 4.76 millimeter (mm)(0.19 in) in first instar (growth stage

between molts) and about 55.8 mm (2 in) in the fifth instar (C. Pacheco, Service, 2018, personal observation). The body of the larva has spines with hairs in each body segment (Figure 2-5).



Figure 2-4. Chrysalis of *Atlantea tulita*. Photos by C. Pacheco, Service.

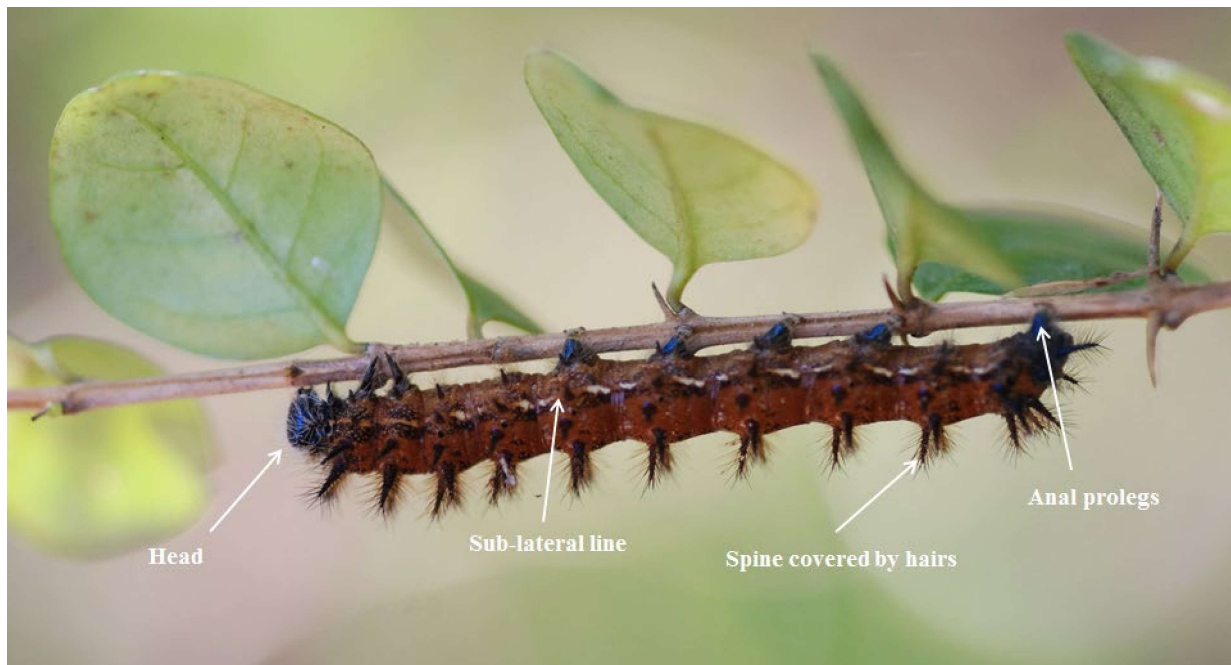


Figure 2-5. *Atlantea tulita* caterpillar. Photo by C. Pacheco, Service.

The eggs of the PRHB are greenish oily spheres, with a yellowish incipient crown (Figure 2-6).



Figure 2-6. Photo (left) showing the yellowish crown on the eggs laid by *Atlantea tulita* on *Oplonia spinosa*. Photo (right) showing the first instars of the *Atlantea tulita*. Photo by C. Pacheco, Service, 2011.

### 2.3. Life History

Most of what is known about PRHB life history, demography and behavior comes from field observations, information gathered from other species from the same family, and expert opinions.

#### 2.3.1 Life Cycle

The life cycle of the PRHB includes four distinct anatomical stages: egg, larva (caterpillar, with several size phases called instars), chrysalis, and imago (adult). It is a general consensus among the species' experts (A. Morales and E. Estremera, Liga Ecológica Quebradillana; H. Torres, former Assistant Professor from the University of Puerto Rico, Mayagüez Campus; and C. Asencio, former professor Universidad Católica de Ponce) that the life cycle of the PRHB (Figure 2-7) from egg to imago in the wild may take around 125 days (Second Technical Meeting Puerto Rican Harlequin Butterfly Working Group, November 3, 2018). These experts also agree that the length of the life cycle can be affected by factors such as temperature and humidity, particularly at the caterpillar stage.

#### 2.3.2 Dispersal, Mating, and Food Sources

PRHB dispersal and mating behavior has not been thoroughly studied. The butterfly flies slowly and is weak and fragile; thus, the species is considered a poor disperser (Carrión-Cabrera 2003, p. 51). However, Monzón (2007, p. 42) found that the butterfly can disperse up to 1,026 meters (m) (3366.1 feet (ft)), approximately 1 kilometer (km) (0.6 mile (mi)) from one breeding site to another. Additionally, the species has specific ecological requirements for reproduction and its dispersion is apparently limited by the monophagous habit of the first instar of the larvae, which feeds only on prickly bush (*Oplonia spinosa*) (Carrión-Cabrera 2003, p. 40; Biaggi-Caballero 2009, p. 4). Mating behavior has been rarely documented. For other species in the family Nymphalidae, the male grasps the female in flight and brings her to a surface, such as a leaf (Figure 2-8) or the ground, where mating occurs. Carrion-Cabrera (2003, p. 60) estimated the sex ratio of the PRHB as 2.67 males per female. It is not well known if the PRHB mates during a

particular month of the year or year-round. However, all life stages of the PRHB are observed year-round, suggesting that mating and oviposition may occur at any time during the year (Figure2-9).

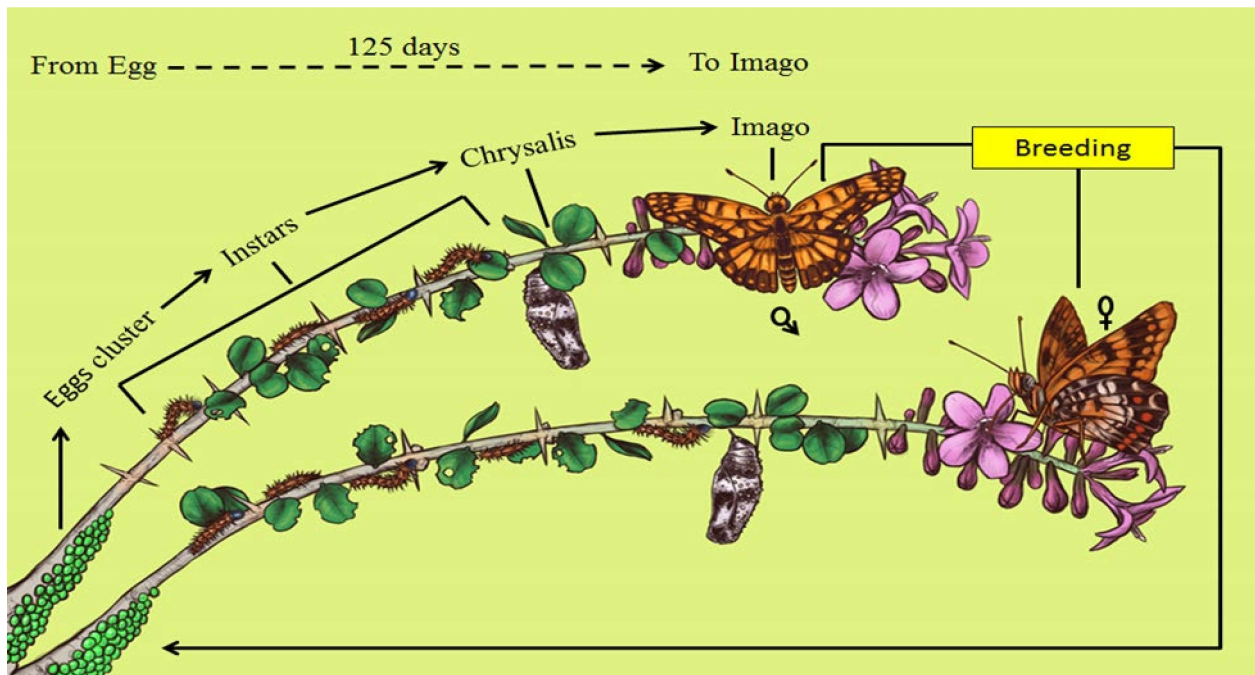


Figure 2-7. Conceptual diagram of the Puerto Rican harlequin life cycle.

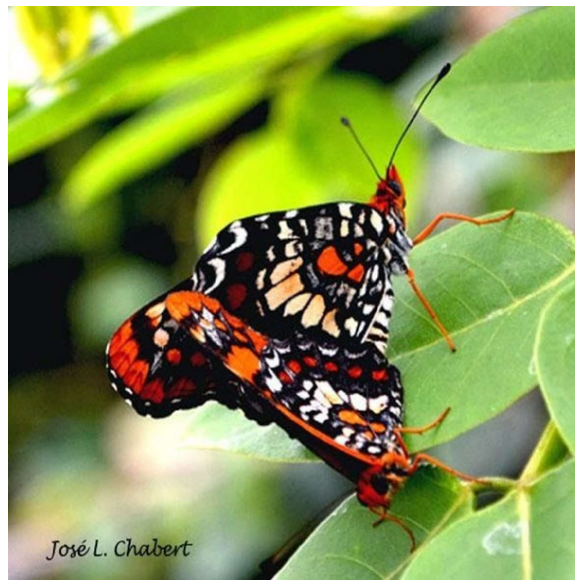


Figure 2-8. Photo of Puerto Rican Harlequin butterfly mating. Photo by José Chabert (President of “Fundación EL Pastillo”) at El Pastillo in the municipality Isabela.

Females are multivoltine ovipositors (they produce several broods in a single season) (Biaggi-Caballero 2009, p. 2; 76 FR 31282, May 31, 2011, p. 31283). Eggs and larvae have been found

almost exclusively on prickly bush (*Oplonia spinosa*) (Figures 2-10 and 2-11). The female lays the eggs in rows singly or in pairs, on the underside of tender twigs of the host plant. The species uses the tender vegetative branches of new growth of the host plant for bearing its eggs and feeding during the larval stages (Carrion-Cabrera 2003, p. 40; Biaggi-Caballero and Lopez 2010, p. 2). New growth of *O. spinosa* is observed a few days after rain events, being more abundant during the wet season (from April to November). The female of the PRHB can lay between 50 to 140 eggs in about 45 minutes (Carrion-Cabrera 2003, p.38; Biaggi-Caballero 2009, p. 4). During this process the female appears to be undisturbed by the presence of humans or any other threats (Barber 2018, p. 2).

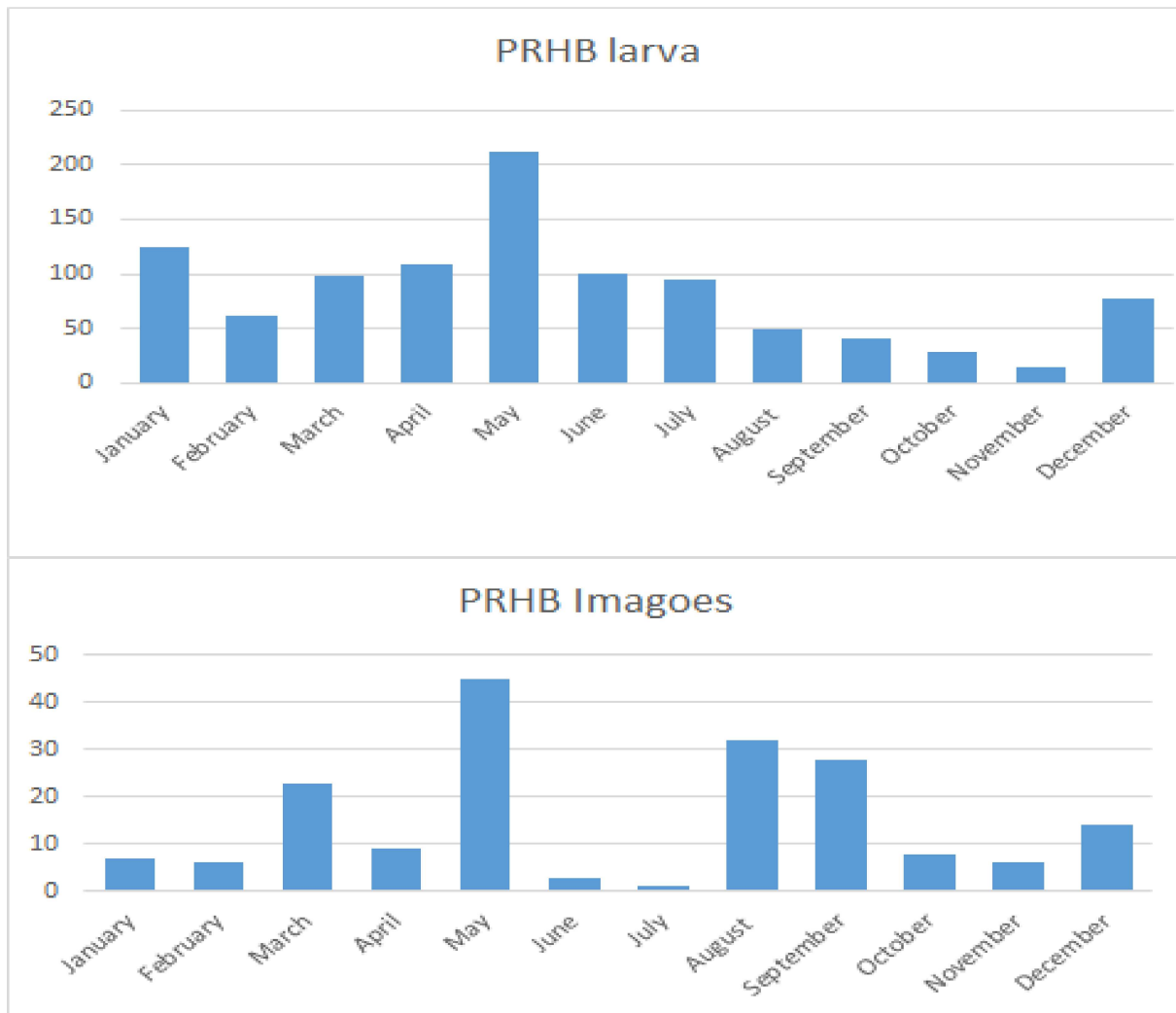


Figure 2-9. Number of observed PRHB larvae (top) and imagoes (bottom) per month throughout the year. Based on information provided by Carrion-Cabreear 2003, Monzon 2007, Biaggi-Caballero 2010, and Barber 2018.

Broods of the PRHB generally contain 50 to 150 eggs, with an average of 102 eggs per brood (Carrion-Cabrera 2003, p.38). The time to egg eclosion and viability (hatching success) rate have not been determined. After egg eclosion, the first instars devour the egg shells and then begin feeding from the most tender parts of the host plant (Biaggi-Caballero and López 2010, p.2). As



the first instar matures, PRHB larvae crawl to the older and woody part of the host plant eating any new growth, including leaves and stems.

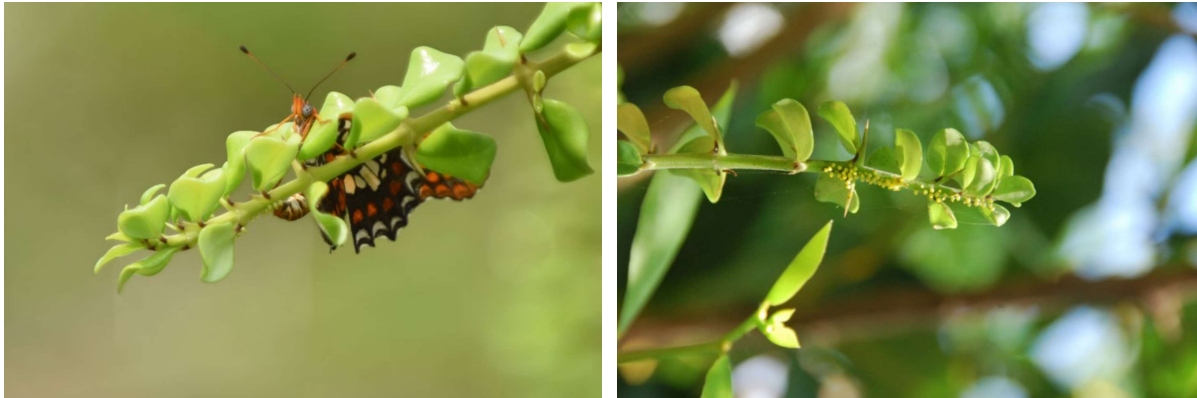


Figure 2-10. Left: female *Atlantea tulita* laying eggs on the host plant, prickly bush (*Oplonia spinosa*). Right: eggs of *Atlantea tulita* laid on the new growth (tender part) of *O. spinosa* branches. Photo by José Vargas, 2018.



Figure 2-11. Prickly bush (*Oplonia spinosa*) (left), Family Acanthaceae; endemic to several Caribbean islands and widely distributed in Puerto Rico. Eggs (right) found on prickly bush. Source: Willie Hernandez, Liga Ecológica Quebradillana, 2009.

Although the PRHB is believed to be a specialist because of its monophagous habit of feeding only on *O. spinosa*, recently Barber (2016, p. 9) documented a PRHB larva feeding on *Odontonema cuspidatum* (commonly known in Puerto Rico as “coral de jardín”) in Quebradillas (Figure 2-12). Like *O. spinosa*, *O. cuspidatum* is in the family Acanthaceae, but it is native to Mexico and has been introduced to the West Indies as an ornamental shrub (Axelrod 2011, p. 50). In addition, Morales and Estremera (2018, unpublished data) found that the PRHB caterpillar also feeds on *Justicia mirabiloides* (commonly known as West Indian water-willow; or in Spanish as papayo montuno). *Justicia mirabiloides*, which is also in the family Acanthaceae, is a perennial herb native to Puerto Rico and the Virgin Islands. These rare observations of the PRHB caterpillar feeding on plants other than *O. spinosa* were of later instars (possibly 4th or 5th instar). Therefore, it is not known whether the first instar can use other plant species as a food source. Regardless, given the paucity of observations of feeding on other plant species, *O. spinosa* is an essential PRHB food source.

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

# **APPENDIX E**

## **Section 106 Consultation**



## GOVERNMENT OF PUERTO RICO

STATE HISTORIC PRESERVATION OFFICE

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

February 29, 2024

### Lauren Bair Poche

HORNE

10000 Perkins Rowe, Suite 610, Bldg G  
Baton Rouge, LA 70810

SHPO-CF-02-27-24-03 SECTION 106 NHPA EFFECT DETERMINATION  
SUBMITTAL: PR-RGRW-01056 – AGRO EMPRESAS TAVAREZ INC – BARRIO  
MORA, CARRETERA 474, KILOMETRO 0.8, INTERIOR, ISABELA, PUERTO RICO

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



February 27, 2024

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

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

**Section 106 NHPA Effect Determination Submittal: PR-RGRW-01322 – Agro Empresas Tavarez Inc. – Barrio Mora, Carretera 474, Kilometro 0.8, Interior, Isabela, Puerto Rico – *No Historic Properties Affected***

Dear Architect Rubio Cancela,

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

On behalf of PRDOH and the subrecipient, the Puerto Rico Department of Agriculture, HORNE is submitting documentation for activities proposed by Agro Empresas Tavarez Inc. located at Barrio Mora, Carretera 474, Kilometro 0.8, Interior, in the municipality of Isabela. The undertaking for this project includes the installation of a water well. The proposed is a 500 ft depth, 6 inches steel casing well, with a 5 hp submersible pump. The boring for the installation well will be 8 inches to be reduced to 6 inches. The SOW includes the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation. The proposed activities do not include new connections to local power or water utility services.

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

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


Kindest regards,



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

Architectural Historian, EHP Senior Manager  
LBP/JLE

Attachments

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b>		
<b>REgROW PUERTO RICO PROGRAM</b>		
<b>Section 106 NHPA Effect Determination</b>		
<b>Subrecipient:</b> AGRO EMPRESAS TAVAREZ INC		
<b>Case ID:</b> PR-RGRW-01056	<b>City:</b> Isabela	

<b>Project Location:</b> Barrio Mora, Carretera 474, Kilometro 0.8, Interior, Isabela, PR 00662	
<b>Project Coordinates:</b> 18.486036, -67.010827	
<b>TPID (Número de Catastro):</b> 007-000-004-04-000	
<b>Type of Undertaking:</b>	
<input type="checkbox"/> Substantial Repair	
<input checked="" type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> c2010	<b>Property Size (acres):</b> 14.0

<b>SOI-Qualified Architect/Architectural Historian:</b> Maria F. Lopez Schmid
<b>Date Reviewed:</b> 2/8/2024
<b>SOI-Qualified Archaeologist:</b> Pollyanna Clark, MA, RPA
<b>Date Reviewed:</b> 2/6/2024


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

### Project Description (Undertaking)

The intent use of funds for the proposed project includes the potential impacts associated with the installation of the agricultural water well are included in the analyses below.

The farm has been and currently is in use for agricultural purposes with the production of avocado. The Scope of Work (SOW) for this project consists of the drilling and installation of a water well at coordinates: 18.486036, -67.010827. The proposed is a 500 ft depth, 6 inches steel casing well, with a 5 hp submersible pump. The boring for the installation well will be 8 inches to be reduced to 6 inches. The SOW includes the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation. Field is not graded.

The proposed activities do not include new connections to local power or water utility services. Utilities local services are available for connection of the parcel in the right of way at the entrance of the farm. However, the farm is not currently connected to utilities. The applicant has expressed his intention to install a solar system to provide power for the water pump in the future.

<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> AGRO EMPRESAS TAVAREZ INC		
<b>Case ID:</b> PR-RGRW-01056		<b>City:</b> Isabela

### Area of Potential Effects

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is the location of the construction of a 4 ft X 4 ft on-site poured concrete pad for well delimitation and the well. Will be located at coordinates 18.486036, -67.010827, plus a 15-meter horizontal buffer to allow for some variation in final placement during construction and the visual APE is the viewshed of the proposed project.

### Identification of Historic Properties - Archaeology

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61), shows that the project area has been previously surveyed with negative findings for archaeological resources, and no previously archaeological sites have been identified within a 0.25-mile radius of the project area.


Two Phase IA-B archaeological studies have been performed within a quarter-mile radius of the APE. In 1980, Antonio Daubón performed a Phase 1A-1B archaeological survey within the project area with negative findings for archaeological resources. The report title is "Phase IA-B, Vicente Geigel Polanco Apartments".

In 1996, Jesus Vega performed a survey 0.21 miles northwest of the project area, with negative findings for archaeological resources, and the recommendation was for construction to proceed as planned. The ID numbers are EAP2061 and ICP/CAT-IS-96-05-07 with the title, "Proyecto Brisas del Mar, R-113 km 2.2". These Phase 1A-B archaeological studies are also listed in Table 1.

Table 1. Cultural Resource Studies Conducted Within a Quarter-Mile Radius of Project Area

Author	Title	Year	SHPO/IPRC ID	Results	Location
Antonio Daubón	Phase 1A-B, Vicente Geigel Polanco Apartments	1980	05-20-80-03	Negative	0.0 mi; within the project area
Jesus Vega	Phase 1A-B, Proyecto Brisas del Mar, R-113 km 2.2	1996	07-09-96-03	Negative	0.21 mi NW



<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> AGRO EMPRESAS TAVAREZ INC	
<b>Case ID:</b> PR-RGRW-01056	<b>City:</b> Isabela

Soils within the APE consist of San German gravelly clay loam (SaE), 20 to 40 percent slopes. The closest fresh water source is quebrada La Sequía 2.23 mi SE (3.59 kilometers) a tributary of the Río Guajataca 3.56 mi E (5.73 kilometers) This soil type with the 20 to 40 percent slopes makes the probability of finding *in situ*, significant, and undisturbed cultural resources low to moderate.

### Identification of Historic Properties - Architecture


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

The proposed project is located in a rural area among single family houses and farmlands. The property lies south of Route PR-113 in Isabela. A circa 2010 building is located east of the APE geocoordinates. The building and it is present on a 2011 aerial image, shown below left, but not on a 2009 aerial image. The concrete building (shown below left) is a pesticide storage and tool shed that has concrete walls, columns, and flat roof with additional metal structure roof on the right side. The center of the building has an enclosed storage area with wood double doors.



**Figure 1 & 2.** Detail of 2011 aerial image showing the building on the property, and front elevation, view to the southwest.

This building is modern, and it **does not** meet the requirements to be eligible for listing on the National Register of Historic Places.

<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> AGRO EMPRESAS TAVAREZ INC	
<b>Case ID:</b> PR-RGRW-01056	<b>City:</b> Isabela


## Determination

The following historic properties have been identified within the APE:

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

Based on the results of our historic property identification efforts, the Program has determined that project actions will not affect the historic properties that compose the Area of Potential Effect. The project area is not within or adjacent to the boundaries of a National Register of Historic Places (NRHP)-eligible or listed historic district or Traditional Urban Center.

Two previous archaeological studies, one directly within the project area, and one 0.21 miles northwest both resulted in negative findings for archaeological resources. There are no reported archaeological materials or significant cultural properties within a quarter mile radius of the proposed project location. No Known archaeological sites or NRHP listed/eligible historic properties are within or adjacent to the property or the parcel in which the Area of Potential Effect is located. The closest freshwater body is approximately 2.23 mi (5.73 km) of the project area. The construction of agricultural infrastructure and cultivation of land has minimally disturbed the surrounding terrain. Therefore, no historic properties will be affected by the proposed project activities.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGrow PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Subrecipient:</b> AGRO EMPRESAS TAVAREZ INC	
<b>Case ID:</b> PR-RGRW-01056	<b>City:</b> Isabela

**Recommendation**

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

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

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

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

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



El Mapa 2. NHPA/SECTION 106-Effect Determination-Section 106-1056






TETRA TECH

Source: CRIM

Author: TG

Date: 1/5/2024

Legend

-  Tier 2 Site
-  Area of Potential Effect
-  Parcelario



Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela

### Project (Parcel) Location - Aerial Map



 <p><b>TETRA TECH</b></p> <p>Source: CRIM</p> <p>Author: TG      Date: 11/16/2023</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"><li> Tier 2 Site</li><li> Historic Comunidades</li><li> Traditional Urban Centers</li><li> Cultural Resource District Polygon</li><li> Parcelario</li></ul>	
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Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela

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







Source: USGS

Author: TG

Date: 9/19/2023

#### Legend

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



Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056






City: Isabela

### Project (Parcel) Location – Soils Map



**TETRA TECH**  
Source: USDA

Author: TG      Date: 11/27/2023

- Legend**
-  Tier 2 Site
  -  Parcelario
  - Soil Type**
  -  BeB;Bejucos sandy loam, 2 to 5 percent slopes
  -  SaE;San German gravelly clay loam, 20 to 40 percent slopes
  -  SeB;Santa Clara silty clay loam, 2 to 5 percent slopes

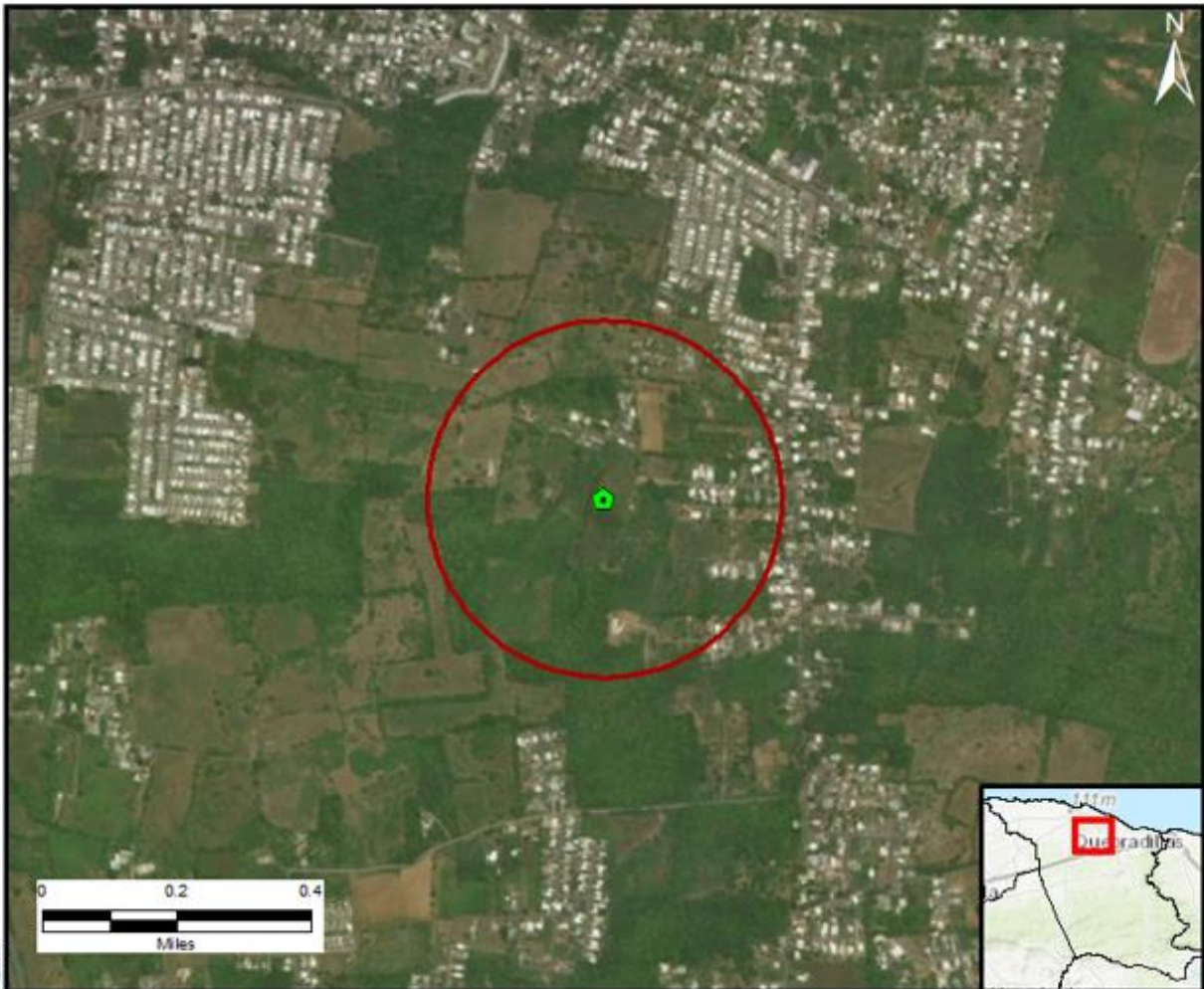


Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela

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



Source: National Park Service

Author: TG

Date: 10/17/2023

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

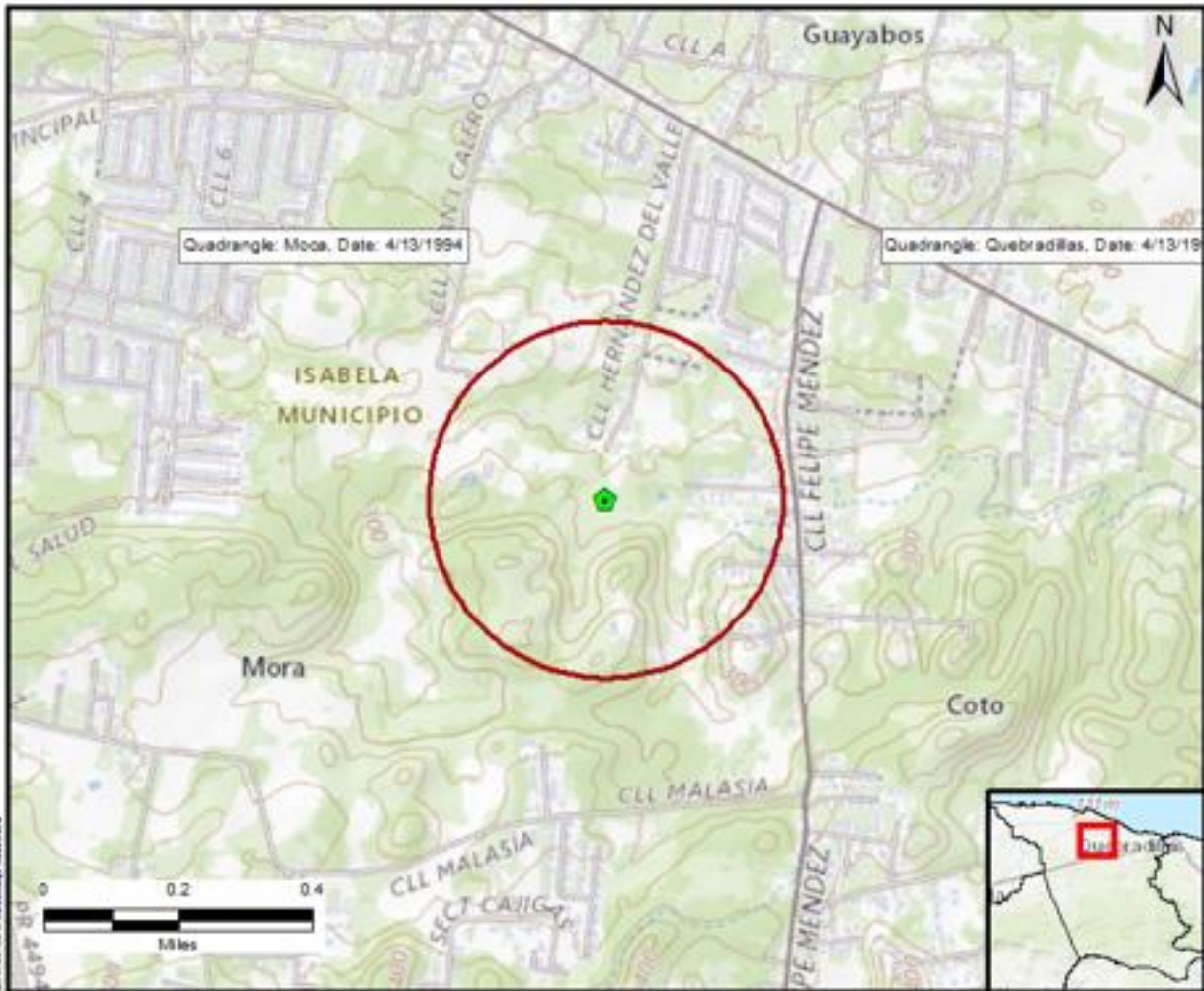


Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela

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

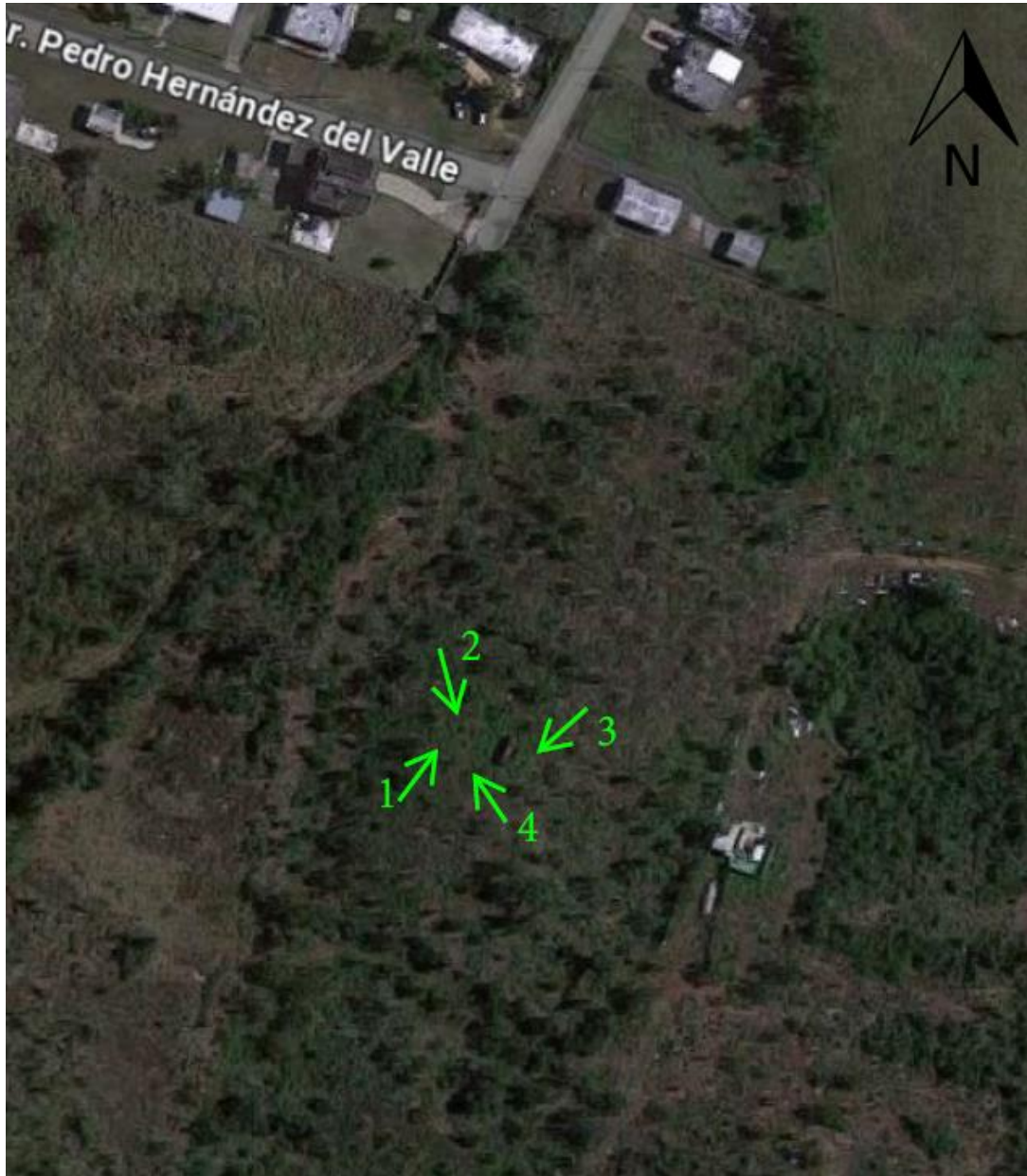


Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela

Photograph Key



Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela



Photo #: 1

Description (include direction): Scope of work: Construction of a water well, view to the northeast.

Date: 12/29/2023



Photo #: 2

Description (include direction): Scope of work: Construction of a water well, view to the southeast.

Date: 12/29/2023

Subrecipient: AGRO EMPRESAS TAVAREZ INC

Case ID: PR-RGRW-01056

City: Isabela



Photo #: 3

Description (include direction): Scope of work: Construction of a water well, view to the southwest.

Date: 12/29/2023



Photo #: 4

Description (include direction): Scope of work: Construction of a water well, view to the northwest.

Date: 12/29/2023



October 20, 2022

**Arch. Carlos A. Rubio Cancela**

Executive Director

State Historic Preservation Officer

Cuartel de Ballajá Bldg.

San Juan, Puerto Rico

**Re: Authorization to Submit Documents**

Dear Arch. Rubio Cancela:

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

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

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

Cordially,

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

Juan C. Pérez Bofill, P.E. M.Eng

Director of Disaster Recovery

CDBG DR-MIT