



U.S. Department of Housing and Urban  
Development  
451 Seventh Street, SW  
Washington, DC 20410  
[www.hud.gov](http://www.hud.gov)  
[espanol.hud.gov](http://espanol.hud.gov)

## Environmental Review for Activity/Project that is Categorically Excluded Subject to Section 58.5 Pursuant to 24 CFR 58.35(a)

### Project Information

**Project Name:** PR-RGRW-03840-W

**HEROS Number:** 900000010459148

**Start Date:** 03/17/2025

**State / Local Identifier:**

**Project Location:** , Maricao, PR 00606

### **Additional Location Information:**

Location centroid: Latitude 18.169008, longitude -66.895697 at the address given above. Cadastral: 263-000-009-54-901

### **Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:**

This project (PR-RGRW-03840-W) entails the award of a grant to Innova Crops LLC, an agricultural business, at Carretera 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606. Tax ID Number: 263-000-009-54-901. Coordinates (latitude 18.169008, longitude -66.895697). The proposed project includes the purchase and installation of a new "Farm in the City" vertical hydroponic greenhouse. One location is evaluated for the new greenhouse in the east area of the property. The proposed greenhouse is approximately 320 square feet (40 ft by 8 ft) with a height of approximately 9.5 ft. The applicant plans to construct a base for the container, the same size as the container, with their own funds. Footers will be made of concrete blocks that are 8 ft by 2 ft and 24 inches thick. There will be a total of three blocks placed approximately every 13 ft holding the container above ground; the blocks will be built 3 to 6 inches (in) deep in the ground and will be surrounded by boards spliced together to contain the concrete. The container will be anchored using a metal plate that will be welded to the bottom of the vertical hydroponic greenhouse. The base will not be included in the IUGF (Intended Use of Grant Funds). The applicant will also use their own funding to build wooden steps to be able to enter the greenhouse. Some minor grading may be needed to allow for a level surface to place the steps and the base. Water to irrigate the greenhouse will be provided from an existing aboveground connection, located approximately 30 ft northwest from the Greenhouse. The water pipes are connected to the aqueduct managed by the Autoridad de Acueductos y Alcantarillados (AAA); the applicant will obtain any necessary permits required for the new utility connections. All new irrigation piping and connections to the greenhouse will be aboveground surface lines. Electricity for the greenhouse will be provided from the existing structure northwest of the site location. An existing pole on the roof of the existing structure will be used to connect electricity aerially to the new greenhouse. This is the same structure used to connect the water which is approximately 30 ft away. The power is provided by LUMA, GENERA and in case of a blackout, the applicant will use generators that they own; the applicant will obtain any necessary permits required for

new utility connections. In the future, the applicant hopes to install a solar system to the roof of the greenhouse. The project will have some ground disturbance due to the installation of the base footers below ground but no vegetation or tree clearing is required for construction. No grading is needed for the base, but the steps may need some minor leveling using a shovel. The applicant owns the property and currently uses it for agricultural use; therefore, no acquisition or conversion is required. The project Innova Crops LLC PR-RGRW-03840-W has been evaluated in accordance with FR-6492-N-01. The activities identified CE: #7 - 7.7 CFR 799.32(e) (2) (iii): Construction of a new farm storage facility. HUD Level of Review: CEST. Potential application to HUD activities: Construction of a new farm storage facility with ground disturbance have been classified as CEST under the waiver.

**Level of Environment Review Determination:**

Categorically Excluded per 24 CFR 58.35(a), and subject to laws and authorities at §58.5:  
58.34(a)(12)  
58.35(a)(3)(iii)

**Funding Information**

Grant Number	HUD Program	Program Name	
B-17-DM-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-18-DE-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-18-DP-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-19-DP-78-0002	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00

**Estimated Total HUD Funded Amount:** \$100,000.00

**Estimated Total Project Cost [24 CFR 58.2 (a) (5)]:** \$100,000.00

**Mitigation Measures and Conditions [CFR 1505.2(c)]:**

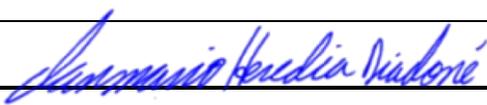
Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure or Condition	Comments on Completed Measures	Complete
Endangered Species Act	The USFWS NLAA concurrence is conditioned to the following: (1) if a Boa is encountered, the Conservation Measures will be in accordance with the USFWS Puerto Rican Boa Conservation Measures 2024, (2) if a Puerto Rican Parrot is	N/A	

	<p>encountered on the site, the USFWS Caribbean Office will be notified immediately, (3) if a Puerto Rican Broad-winged Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately, (4) if a Puerto Rican Harlequin Butterfly is encountered in the site, the Conservation Measures will be in accordance with the USFWS Puerto Rican Harlequin Butterfly Conservation Measures and (5) if a Puerto Rican Sharp-shinned Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately.</p> <p>Obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.</p>		
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**Determination:**

<input type="checkbox"/>	<p>This categorically excluded activity/project converts to <b>EXEMPT</b> per Section 58.34(a)(12), because it does not require any mitigation for compliance with any listed statutes or authorities, nor requires any formal permit or license; <b>Funds may be committed and drawn down after certification of this part</b> for this (now) EXEMPT project; OR</p>
<input checked="" type="checkbox"/>	<p>This categorically excluded activity/project cannot convert to Exempt status because one or more statutes or authorities listed at Section 58.5 requires formal consultation or mitigation. Complete consultation/mitigation protocol requirements, <b>publish NOI/RROF and obtain "Authority to Use Grant Funds"</b> (HUD 7015.16) per Section 58.70 and 58.71 before committing or drawing down any funds; OR</p>
<input type="checkbox"/>	<p>This project is not categorically excluded OR, if originally categorically excluded, is now subject to a full Environmental Assessment according to Part 58 Subpart E due to extraordinary circumstances (Section 58.35(c)).</p>

Preparer Signature:  Date: MArch.17.2025

Name / Title/ Organization: Ianmario Heredia / / Department of Housing - Puerto Rico

Responsible Entity Agency Official Signature:  Date: 3/18/2025

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

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

**Environmental Review for Activity/Project that is  
Categorically Excluded Subject to Section 58.5  
Pursuant to 24 CFR 58.35(a)**

**Project Information**

**Project Name:** PR-RGRW-03840-W

**HEROS Number:** 900000010459148

**Start Date:** 03/17/2025

**Responsible Entity (RE):** Department of Housing - Puerto Rico, P.O. Box 21365 San  
Juan PR, 00928

**State / Local Identifier:**

**RE Preparer:** Ianmario Heredia

**Certifying Office  
r:**

**Grant Recipient (if different than Responsible Ent  
ity):**

**Point of Contact:**

**Point of Contact:** Justin Neely

**Consultant (if applicable):** HORNE LLP

40 CFR 1506.5(b)(4): The lead agency or, where appropriate, a cooperating agency shall prepare a disclosure statement for the contractor's execution specifying that the contractor has no financial or other interest in the outcome of the action. Such statement need not include privileged or confidential trade secrets or other confidential business information.

- ✓ By checking this box, I attest that as a preparer, I have no financial or other interest in the outcome of the undertaking assessed in this environmental review.

**Project Location:** , Maricao, PR 00606

**Additional Location Information:**

Location centroid: Latitude 18.169008, longitude -66.895697 at the address given above. Cadastral: 263-000-009-54-901

**Direct Comments to:** environmentcdbg@vivienda.pr.gov

**Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:**

This project (PR-RGRW-03840-W) entails the award of a grant to Innova Crops LLC, an agricultural business, at Carretera 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606. Tax ID Number: 263-000-009-54-901. Coordinates (latitude 18.169008, longitude -66.895697). The proposed project includes the purchase and installation of a new "Farm in the City" vertical hydroponic greenhouse. One location is evaluated for the new greenhouse in the east area of the property. The proposed greenhouse is approximately 320 square feet (40 ft by 8 ft) with a height of approximately 9.5 ft. The applicant plans to construct a base for the container, the same size as the container, with their own funds. Footers will be made of concrete blocks that are 8 ft by 2 ft and 24 inches thick. There will be a total of three blocks placed approximately every 13 ft holding the container above ground; the blocks will be built 3 to 6 inches (in) deep in the ground and will be surrounded by boards spliced together to contain the concrete. The container will be anchored using a metal plate that will be welded to the bottom of the vertical hydroponic greenhouse. The base will not be included in the IUGF (Intended Use of Grant Funds). The applicant will also use their own funding to build wooden steps to be able to enter the greenhouse. Some minor grading may be needed to allow for a level surface to place the steps and the base. Water to irrigate the greenhouse will be provided from an existing aboveground connection, located approximately 30 ft northwest from the Greenhouse. The water pipes are connected to the aqueduct managed by the Autoridad de Acueductos y Alcantarillados (AAA); the applicant will obtain any necessary permits required for the new utility connections. All new irrigation piping and connections to the greenhouse will be aboveground surface lines. Electricity for the greenhouse will be provided from the existing structure northwest of the site location. An existing pole on the roof of the existing structure will be used to connect electricity aerially to the new greenhouse. This is the same structure used to connect the water which is approximately 30 ft away. The power is provided by LUMA, GENERA and in case of a blackout, the applicant will use generators that they own; the applicant will obtain any necessary permits required for new utility connections. In the future, the applicant hopes to install a solar system to the roof of the greenhouse. The project will have some ground disturbance due to the installation of the base footers below ground but no vegetation or tree clearing is required for construction. No grading is needed for the base, but the steps may need some minor leveling using a shovel. The applicant owns the property and currently uses it for agricultural use; therefore, no acquisition or conversion is

required. The project Innova Crops LLC PR-RGRW-03840-W has been evaluated in accordance with FR-6492-N-01. The activities identified CE: #7 - 7. 7 CFR 799.32(e) (2) (iii): Construction of a new farm storage facility. HUD Level of Review: CEST. Potential application to HUD activities: Construction of a new farm storage facility with ground disturbance have been classified as CEST under the waiver.

**Maps, photographs, and other documentation of project location and description:**

[PR-RGRW-03840-W Site Map.pdf](#)

[PR-RGRW-03840-W IUGF.pdf](#)

[PRDOH Regrow Puerto Rico Program - 5836 Waiver \(002\).pdf](#)

[Farm Service Agency Adopted Categorical Exclusions Identified in FR-6492-N-01.pdf](#)

[PR-RGRW-03840-W EFOR.pdf](#)

**Level of Environmental Review Determination:**

**Categorically Excluded per 24 CFR 58.35(a), and subject to laws and authorities at 58.5:**

58.35(a)(3)(iii)

**Determination:**

	This categorically excluded activity/project converts to <b>EXEMPT</b> per Section 58.34(a)(12), because it does not require any mitigation for compliance with any listed statutes or authorities, nor requires any formal permit or license; <b>Funds may be committed and drawn down after certification of this part</b> for this (now) EXEMPT project; OR
✓	This categorically excluded activity/project cannot convert to Exempt status because one or more statutes or authorities listed at Section 58.5 requires formal consultation or mitigation. Complete consultation/mitigation protocol requirements, <b>publish NOI/RROF and obtain "Authority to Use Grant Funds"</b> (HUD 7015.16) per Section 58.70 and 58.71 before committing or drawing down any funds; OR
	This project is not categorically excluded OR, if originally categorically excluded, is now subject to a full Environmental Assessment according to Part 58 Subpart E due to extraordinary circumstances (Section 58.35(c)).

**Approval Documents:**

[03840-SIG-PAGE\(1\).pdf](#)

[03840-SIG-PAGE.pdf](#)

**7015.15 certified by Certifying Officer on:**

**7015.16 certified by Authorizing Officer on:**

**Funding Information**

<b>Grant / Project Identification Number</b>	<b>HUD Program</b>	<b>Program Name</b>	<b>Funding Amount</b>
B-17-DM-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-18-DE-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-18-DP-72-0001	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00
B-19-DP-78-0002	Community Planning and Development (CPD)	Community Development Block Grants (Disaster Recovery Assistance)	\$0.00

**Estimated Total HUD Funded, Assisted or Insured Amount:** \$100,000.00

**Estimated Total Project Cost:** \$100,000.00

**Compliance with 24 CFR §50.4, §58.5 and §58.6 Laws and Authorities**

<b>Compliance Factors:</b> Statutes, Executive Orders, and Regulations listed at 24 CFR §50.4, §58.5, and §58.6	Are formal compliance steps or mitigation required?	Compliance determination (See Appendix A for source determinations)
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 &amp; § 58.6</b>		
<b>Airport Hazards</b> Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The nearest civil primary or commercial service airport, Eugenio Maria De Hostos is located 91,090 ft (17 miles [mi]) from the project site. The nearest military airport, Luis Munoz Marin International Airport, is located 320,434 ft (61 mi) from the project site.

		The project is in compliance with Airport Hazards requirements.
<b>Coastal Barrier Resources Act</b> Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project is not located in a CBRS Unit. It is 78,294 feet from a protected area. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act.
<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]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Flood Map Number 72000C1045H, effective on 4/19/2005: The structure or insurable property is not located in a FEMA-designated Special Flood Hazard Area. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 &amp; § 58.5</b>		
<b>Air Quality</b> Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on the project description, this project includes no activities that would require further evaluation under the Clean Air Act. The project is in compliance with the Clean Air Act.
<b>Coastal Zone Management Act</b> Coastal Zone Management Act, sections 307(c) & (d)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project is not located in or does not affect a Coastal Zone as defined in the state Coastal Management Plan. The project is located 60,426 feet from the coastal zone. The project is in compliance with the Coastal Zone Management Act.
<b>Contamination and Toxic Substances</b> 24 CFR 50.3(i) & 58.5(i)(2)]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Site contamination was evaluated as follows: None of the above. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. A review of science-based radon data offered a lack of data for the project site and radon testing was determined to be infeasible or impracticable. The project is in

		compliance with contamination and toxic substances requirements.
<b>Endangered Species Act</b> Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This project May Affect, but is Not Likely to Adversely Affect, listed species, and informal consultation was conducted. With mitigation, identified in the mitigation section of this review, the project will be in compliance with the Endangered Species Act.
<b>Explosive and Flammable Hazards</b> Above-Ground Tanks)[24 CFR Part 51 Subpart C	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on the project description the project includes no activities that would require further evaluation under this section. The project is in compliance with explosive and flammable hazard requirements.
<b>Farmlands Protection</b> Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project does not include any activities that could potentially convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Protection Policy Act.
<b>Floodplain Management</b> Executive Order 11988, particularly section 2(a); 24 CFR Part 55	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Flood Map Number 72000C1045H, effective on 4/19/2005: This project does not occur in the FFRMS floodplain. The project is in compliance with Executive Orders 11988 and 13690. PFIRMs in Puerto Rico were only developed for certain sections of the municipalities of Carolina, Canovanas, Loiza, San Juan and Trujillo Alto. The proposed project is located in the municipality of Maricao; therefore, PFIRM information was not available for the area and therefore not considered in the review.
<b>Historic Preservation</b> National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on Section 106 consultation there are No Historic Properties Affected because there are no historic properties present. The project is in compliance with Section 106.
<b>Noise Abatement and Control</b> Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on the project description, this project includes no activities that would require further evaluation under HUD's noise regulation. The project is in compliance with HUD's Noise regulation.

<b>Sole Source Aquifers</b> Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The project is not located on a sole source aquifer area. According to EPA, there are no sole source aquifers in Puerto Rico. The project is in compliance with Sole Source Aquifer requirements.
<b>Wetlands Protection</b> Executive Order 11990, particularly sections 2 and 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on the project description this project includes no activities that would require further evaluation under this section. The project is in compliance with Executive Order 11990. This project does not involve new construction, so a visual wetlands survey was not conducted.
<b>Wild and Scenic Rivers Act</b> Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project is not within proximity of a NWSRS river. The project is located 386,131 feet from the nearest Wild and Scenic River. The project is in compliance with the Wild and Scenic Rivers Act.
<b>HUD HOUSING ENVIRONMENTAL STANDARDS</b>		
<b>ENVIRONMENTAL JUSTICE</b>		
<b>Environmental Justice</b> Executive Order 12898	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. On January 21, 2025, President Donald Trump issued the Executive Order 14173 titled "Ending Illegal Discrimination and Restoring Merit-Based Opportunity", which revoked Executive Order 12898 and eliminated federal mandates requiring agencies to assess environmental justice impacts. Consequently, there is no longer a federal requirement to address environmental justice concerns in the environmental compliance review process.

**Mitigation Measures and Conditions [40 CFR 1505.2(c)]:**

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be

incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure or Condition	Comments on Completed Measures	Mitigation Plan	Complete
Endangered Species Act	<p>The USFWS NLAA concurrence is conditioned to the following: (1) if a Boa is encountered, the Conservation Measures will be in accordance with the USFWS Puerto Rican Boa Conservation Measures 2024, (2) if a Puerto Rican Parrot is encountered on the site, the USFWS Caribbean Office will be notified immediately, (3) if a Puerto Rican Broad-winged Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately, (4) if a Puerto Rican Harlequin Butterfly is encountered in the site, the Conservation Measures will be in accordance with the USFWS Puerto Rican Harlequin Butterfly Conservation Measures and (5) if a Puerto Rican Sharp-shinned Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately.</p> <p>Obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.</p>	N/A		

**Project Mitigation Plan**

Should new ground disturbance occur the Karst zone must be evaluated and when necessary DNER must be consulted prior to construction activities. The USFWS NLAA concurrence is conditioned to the following: (1) if a Boa is encountered, the Conservation Measures will be in accordance with the USFWS Puerto Rican Boa Conservation Measures 2024, (2) if a Puerto Rican Parrot is encountered on the site, the USFWS Caribbean Office will be notified immediately, (3) if a Puerto Rican Broad-winged Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately, (4) if a Puerto Rican Harlequin Butterfly is encountered in the site, the Conservation Measures will be in accordance with the USFWS Puerto Rican Harlequin Butterfly Conservation Measures and (5) if a Puerto Rican Sharp-shinned Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately. Obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.

**Supporting documentation on completed measures**

## APPENDIX A: Related Federal Laws and Authorities

### Airport Hazards

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D

1. To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?

✓ No

Based on the response, the review is in compliance with this section. Document and upload the map showing that the site is not within the applicable distances to a military or civilian airport below

Yes

### Screen Summary

#### Compliance Determination

The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The nearest civil primary or commercial service airport, Eugenio Maria De Hostos is located 91,090 ft (17 miles [mi]) from the project site. The nearest military airport, Luis Munoz Marin International Airport, is located 320,434 ft (61 mi) from the project site. The project is in compliance with Airport Hazards requirements.

#### Supporting documentation

[PR-RGRW-03840-W Airports.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

## Coastal Barrier Resources

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	

**1. Is the project located in a CBRS Unit?**

No

Document and upload map and documentation below.

Yes

### Screen Summary

#### **Compliance Determination**

This project is not located in a CBRS Unit. It is 78,294 feet from a protected area. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act.

#### **Supporting documentation**

[PR-RGRW-03840-W CBRS.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

No

## Flood Insurance

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).

**1. Does this project involve financial assistance for construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property?**

No. This project does not require flood insurance or is excepted from flood insurance.

✓ Yes

**2. Upload a FEMA/FIRM map showing the site here:**

[PR-RGRW-03840-W FIRM.pdf](#)

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

**Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?**

✓ No

Based on the response, the review is in compliance with this section.

Yes

**4. While flood insurance is not mandatory for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). Will flood insurance be required as a mitigation measure or condition?**

Yes

✓ No

**Screen Summary**

**Compliance Determination**

Flood Map Number 72000C1045H, effective on 4/19/2005: The structure or insurable property is not located in a FEMA-designated Special Flood Hazard Area. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.

**Supporting documentation**

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Air Quality

General requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93

**1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

Yes

✓ No

Based on the response, the review is in compliance with this section.

### Screen Summary

#### **Compliance Determination**

Based on the project description, this project includes no activities that would require further evaluation under the Clean Air Act. The project is in compliance with the Clean Air Act.

#### **Supporting documentation**

#### **Are formal compliance steps or mitigation required?**

Yes

✓ No

## Coastal Zone Management Act

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930

**1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?**

Yes

No

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

### Screen Summary

#### **Compliance Determination**

This project is not located in or does not affect a Coastal Zone as defined in the state Coastal Management Plan. The project is located 60,426 feet from the coastal zone. The project is in compliance with the Coastal Zone Management Act.

#### **Supporting documentation**

[PR-RGRW-03840-W CZM.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

No

## Contamination and Toxic Substances

General Requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
<b>Reference</b>		
<a href="https://www.onecpd.info/environmental-review/site-contamination">https://www.onecpd.info/environmental-review/site-contamination</a>		

**1. How was site contamination evaluated?\* Select all that apply.**

ASTM Phase I ESA

ASTM Phase II ESA

Remediation or clean-up plan

ASTM Vapor Encroachment Screening.

None of the above

\* HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site.

For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

**2. Were any on-site or nearby toxic, hazardous, or radioactive substances\* (excluding radon) found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

Provide a map or other documentation of absence or presence of contamination\*\* and explain evaluation of site contamination in the Screen Summary at the bottom of this screen.

No

Explain:

There are no toxic sites within 3,000 feet of the applicant location. The environmental field observation did not note any items of concern. See the attached environmental field observation report. A google earth review of the area shows no visible hazards. The past land use for the last 10-15 year is Rustic Specially Protected Agricultural Land.

Yes

\* This question covers the presence of radioactive substances excluding radon. Radon is addressed in the Radon Exempt Question.

\*\* Utilize EPA's Enviromapper, NEPAssist, or state/tribal databases to identify nearby dumps, junk yards, landfills, hazardous waste sites, and industrial sites, including EPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. Additional supporting documentation may include other inspections and reports.

**3. Evaluate the building(s) for radon. Do all buildings meet any of the exemptions\* from having to consider radon in the contamination analysis listed in CPD Notice [CPD-23-103](#)?**

Yes

Explain:

✓ No

\* Notes:

- Buildings with no enclosed areas having ground contact.
- Buildings containing crawlspaces, utility tunnels, or parking garages would not be exempt, however buildings built on piers would be exempt, provided that there is open air between the lowest floor of the building and the ground.
- Buildings that are not residential and will not be occupied for more than 4 hours per day.
- Buildings with existing radon mitigation systems - document radon levels are below 4 pCi/L with test results dated within two years of submitting the application for HUD assistance and document the system includes an ongoing maintenance plan that includes periodic testing to ensure the system continues to meet the current EPA recommended levels. If the project does not require an application, document test results dated within two years of the date the environmental review is certified. Refer to program office guidance to ensure compliance with program requirements.
- Buildings tested within five years of the submission of application for HUD assistance: test results document indoor radon levels are below current the EPA's recommended action

levels of 4.0 pCi/L. For buildings with test data older than five years, any new environmental review must include a consideration of radon using one of the methods in Section A below.

**4. Is the proposed project new construction or substantial rehabilitation where testing will be conducted but cannot yet occur because building construction has not been completed?**

Yes

Compliance with this section is conditioned on post-construction testing being conducted, followed by mitigation, if needed. Radon test results, along with any needed mitigation plan, must be uploaded to the mitigation section within this screen.

No

**5. Was radon testing or a scientific data review conducted that provided a radon concentration level in pCi/L?**

Yes

No

If no testing was conducted and a review of science-based data offered a lack of science-based data for the project site, then document and upload the steps taken to look for documented test results and science-based data as well as the basis for the conclusion that testing would be infeasible or impracticable.

Explain:

Radon testing is not feasible or practicable for this case, please see the attached Radon Memo.

File Upload:

[Radon Attachments.pdf](#)  
[PR-RGRW-03840-W Radon Memo.docx](#)

Based on the response, the review is in compliance with this section. Continue to the Screen Summary at the bottom of this screen.

Non-radon contamination was found in a previous question.

**Screen Summary****Compliance Determination**

Site contamination was evaluated as follows: None of the above. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. A review of science-based radon data offered a lack of data for the project site and radon testing was determined to be infeasible or impracticable. The project is in compliance with contamination and toxic substances requirements.

**Supporting documentation**

[PR-RGRW-03840-W Toxics.pdf](#)

[PR-RGRW-03840-W EFOR\(1\).pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

**Endangered Species**

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service (“FWS” and “NMFS” or “the Services”).	The Endangered Species Act of 1973 (16 U.S.C. 1531 <i>et seq.</i> ); particularly section 7 (16 USC 1536).	50 CFR Part 402

**1. Does the project involve any activities that have the potential to affect species or habitats?**

No, the project will have No Effect due to the nature of the activities involved in the project.

No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office

- ✓ Yes, the activities involved in the project have the potential to affect species and/or habitats.

**2. Are federally listed species or designated critical habitats present in the action area?**

No, the project will have No Effect due to the absence of federally listed species and designated critical habitat

- ✓ Yes, there are federally listed species or designated critical habitats present in the action area.

**3. What effects, if any, will your project have on federally listed species or designated critical habitat?**

No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat. in the action area.

- ✓ May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

**4. Informal Consultation is required**

Section 7 of ESA (16 USC. 1536) mandates consultation to resolve potential impacts to endangered and threatened species and critical habitats. If a HUD-assisted project may affect any federally listed endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

**Did the Service(s) concur with the finding that the project is Not Likely to Adversely Affect?**

- ✓ Yes, the Service(s) concurred with the finding.

Based on the response, the review is in compliance with this section. Document and upload the following below:

- (1) A biological evaluation or equivalent document
- (2) Concurrence(s) from FWS and/or NMFS
- (3) Any other documentation of informal consultation

Exception: If finding was made based on procedures provided by a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office, provide whatever documentation is mandated by that agreement.

No, the Service(s) did not concur with the finding.

6. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation. This information will be automatically included in the Mitigation summary for the environmental review. If negative effects cannot be mitigated, cancel the project using the button at the bottom of this screen.

✓ Mitigation as follows will be implemented:

The USFWS NLAA concurrence is conditioned to the following: (1) if a Boa is encountered, the Conservation Measures will be in accordance with the USFWS Puerto Rican Boa Conservation Measures 2024, (2) if a Puerto Rican Parrot is encountered on the site, the USFWS Caribbean Office will be notified immediately, (3) if a Puerto Rican Broad-winged Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately, (4) if a Puerto Rican Harlequin Butterfly is encountered in the site, the Conservation Measures will be in accordance with the USFWS Puerto Rican Harlequin Butterfly Conservation Measures and (5) if a Puerto Rican Sharp-shinned Hawk is encountered on the site, the USFWS Caribbean Office will be notified immediately. Obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed, or critical habitat determined that may be affected by the identified action.

No mitigation is necessary.

### **Screen Summary**

#### **Compliance Determination**

This project May Affect, but is Not Likely to Adversely Affect, listed species, and informal consultation was conducted. With mitigation, identified in the mitigation section of this review, the project will be in compliance with the Endangered Species Act.

#### **Supporting documentation**

[PR-RGRW-03840-W USFWS Consutation Package.pdf](#)

[PR-RGRW-03840-W USFWS Conservation Measures.pdf](#)

[PR-RGRW-03840-W USFWS Concurrence Letter.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Explosive and Flammable Hazards

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C

**1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

No

Yes

**2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

No

Based on the response, the review is in compliance with this section.

Yes

### Screen Summary

#### **Compliance Determination**

Based on the project description the project includes no activities that would require further evaluation under this section. The project is in compliance with explosive and flammable hazard requirements.

#### **Supporting documentation**

**Are formal compliance steps or mitigation required?**

Yes

No

## Farmlands Protection

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	<a href="#">7 CFR Part 658</a>

1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?

Yes

No

If your project includes new construction, acquisition of undeveloped land or conversion, explain how you determined that agricultural land would not be converted:

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

### Screen Summary

#### Compliance Determination

This project does not include any activities that could potentially convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Protection Policy Act.

#### Supporting documentation

[PR-RGRW-03840-W Farmland.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

## Floodplain Management

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988 * Executive Order 13690 * 42 USC 4001-4128 * 42 USC 5154a * only applies to screen 2047 and not 2046	24 CFR 55

**1. Does this project meet an exemption at 24 CFR 55.12 from compliance with HUD's floodplain management regulations in Part 55?**

Yes

(a) HUD-assisted activities described in 24 CFR 58.34 and 58.35(b).

(b) HUD-assisted activities described in 24 CFR 50.19, except as otherwise indicated in § 50.19.

(c) The approval of financial assistance for restoring and preserving the natural and beneficial functions and values of floodplains and wetlands, including through acquisition of such floodplain and wetland property, where a permanent covenant or comparable restriction is place on the property's continued use for flood control, wetland projection, open space, or park land, but only if:

(1) The property is cleared of all existing buildings and walled structures; and

(2) The property is cleared of related improvements except those which:

(i) Are directly related to flood control, wetland protection, open space, or park land (including playgrounds and recreation areas);

(ii) Do not modify existing wetland areas or involve fill, paving, or other ground disturbance beyond minimal trails or paths; and

(iii) Are designed to be compatible with the beneficial floodplain or wetland function of the property.

(d) An action involving a repossession, receivership, foreclosure, or similar acquisition of property to protect or enforce HUD's financial interests under previously approved loans, grants, mortgage insurance, or other HUD assistance.

(e) Policy-level actions described at 24 CFR 50.16 that do not involve site-based decisions.

(f) A minor amendment to a previously approved action with no additional adverse impact on or from a floodplain or wetland.

(g) HUD's or the responsible entity's approval of a project site, an incidental portion of which is situated in the FFRMS floodplain (not including the floodway, LiMWA, or coastal high hazard area) but only if: (1) The proposed project site does not include any existing or proposed buildings or improvements that modify or occupy the FFRMS floodplain except de minimis improvements such as recreation areas and trails; and (2) the proposed project will not result in any new construction in or modifications of a wetland .

(h) Issuance or use of Housing Vouchers, or other forms of rental subsidy where HUD, the awarding community, or the public housing agency that administers the contract awards rental subsidies that are not project-based (i.e., do not involve site-specific subsidies).

(i) Special projects directed to the removal of material and architectural barriers that restrict the mobility of and accessibility to elderly and persons with disabilities.

Describe:

No

**2. Does the project include a Critical Action? Examples of Critical Actions include projects involving hospitals, fire and police stations, nursing homes, hazardous chemical storage, storage of valuable records, and utility plants.**

Yes

Describe:

No

**3. Determine the extent of the FFRMS floodplain and provide mapping documentation in support of that determination**

The extent of the FFRMS floodplain can be determined using a Climate Informed Science Approach (CISA), 0.2 percent flood approach (0.2 PFA), or freeboard value approach (FVA). For projects in areas without available CISA data or without FEMA Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs) or Advisory Base Flood Elevations (ABFEs), use the best available information<sup>1</sup> to determine flood elevation. Include documentation and an explanation of why this is the best available information<sup>2</sup> for the site. Note that newly constructed and substantially improved<sup>3</sup> structures must be elevated to the FFRMS floodplain regardless of the approach chosen to determine the floodplain.

Select one of the following three options:

CISA for non-critical actions. If using a local tool, data, or resources, ensure that the FFRMS elevation is higher than would have been determined using the 0.2 PFA or the FVA.

- ✓ 0.2-PFA. Where FEMA has defined the 0.2-percent-annual-chance floodplain, the FFRMS floodplain is the area that FEMA has designated as within the 0.2-percent-annual-chance floodplain.

FVA. If neither CISA nor 0.2-PFA is available, for non-critical actions, the FFRMS floodplain is the area that results from adding two feet to the base flood elevation as established by the effective FIRM or FIS or — if available — a FEMA-provided preliminary or pending FIRM or FIS or advisory base flood elevations, whether regulatory or informational in nature. However, an interim or preliminary FEMA map cannot be used if it is lower than the current FIRM or FIS.

<sup>1</sup> Sources which merit investigation include the files and studies of other federal agencies, such as the U. S. Army Corps of Engineers, the Tennessee Valley Authority, the Soil Conservation Service and the U. S. Geological Survey. These agencies have prepared flood hazard studies for several thousand localities and, through their technical assistance programs, hydrologic studies, soil surveys, and other investigations have collected or developed other floodplain information for numerous sites and areas. States and communities are also sources of information on past flood 'experiences within their boundaries and are particularly knowledgeable about areas subject to high-risk flood hazards such as alluvial fans, high velocity flows, mudflows and mudslides, ice jams, subsidence and liquefaction.

<sup>2</sup> If you are using best available information, select the FVA option below and provide supporting documentation in the screen summary. Contact your [local environmental officer](#) with additional compliance questions.

<sup>3</sup> Substantial improvement means any repair or improvement of a structure which costs at least 50 percent of the market value of the structure before repair or improvement or results in an increase of more than 20 percent of the number of dwelling units. The full definition can be found at [24 CFR 55.2\(b\)\(12\)](#).

5. Does your project occur in the FFRMS floodplain?

Yes

No

**Screen Summary**

**Compliance Determination**

Flood Map Number 72000C1045H, effective on 4/19/2005: This project does not occur in the FFRMS floodplain. The project is in compliance with Executive Orders 11988 and 13690. PFIRMs in Puerto Rico were only developed for certain sections of the municipalities of Carolina, Canovanas, Loiza, San Juan and Trujillo Alto. The proposed project is located in the municipality of Maricao; therefore, PFIRM information was not available for the area and therefore not considered in the review.

**Supporting documentation**

[PR-RGRW-03840-W ABFE.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

**Historic Preservation**

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 “Protection of Historic Properties” <a href="https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf">https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf</a>

**Threshold**

**Is Section 106 review required for your project?**

No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA ). (See the PA Database to find applicable PAs.)  
 No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

- ✓ Yes, because the project includes activities with potential to cause effects (direct or indirect).

**Step 1 – Initiate Consultation**

**Select all consulting parties below (check all that apply):**

- ✓ State Historic Preservation Offer (SHPO) Completed

Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native Hawaiian Organizations (NHOs)

Other Consulting Parties

**Describe the process of selecting consulting parties and initiating consultation here:**

Only SHPO was consulted as No Historic Properties Affected was determined and no Tribal Lands were identified

Document and upload all correspondence, notices and notes (including comments and objections received below).

**Was the Section 106 Lender Delegation Memo used for Section 106 consultation?**

- Yes
- No

**Step 2 – Identify and Evaluate Historic Properties**

1. Define the Area of Potential Effect (APE), either by entering the address(es) or uploading a map depicting the APE below:

In the chart below, list historic properties identified and evaluated in the APE. Every historic property that may be affected by the project should be included in the chart.

Upload the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination below.

Address / Location / District	National Register Status	SHPO Concurrence	Sensitive Information
-------------------------------	--------------------------	------------------	-----------------------

**Additional Notes:**

No Historic Properties present within the APE

2. Was a survey of historic buildings and/or archeological sites done as part of the project?

- Yes
- ✓ No

**Step 3 –Assess Effects of the Project on Historic Properties**

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as

per guidance on direct and indirect effects.

**Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.**

No Historic Properties Affected

Based on the response, the review is in compliance with this section. Document and upload concurrence(s) or objection(s) below.

**Document reason for finding:**

No historic properties present.

Historic properties present, but project will have no effect upon them.

No Adverse Effect

Adverse Effect

**Screen Summary**

**Compliance Determination**

Based on Section 106 consultation there are No Historic Properties Affected because there are no historic properties present. The project is in compliance with Section 106.

**Supporting documentation**

[PR-RGRW-03840-W SHPO Package.pdf](#)

[PR-RGRW-03840-W Historic.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Noise Abatement and Control

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972  General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B

**1. What activities does your project involve? Check all that apply:**

New construction for residential use

Rehabilitation of an existing residential property

A research demonstration project which does not result in new construction or reconstruction

An interstate land sales registration

Any timely emergency assistance under disaster assistance provision or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster

None of the above

### **Screen Summary**

#### **Compliance Determination**

Based on the project description, this project includes no activities that would require further evaluation under HUD's noise regulation. The project is in compliance with HUD's Noise regulation.

#### **Supporting documentation**

#### **Are formal compliance steps or mitigation required?**

Yes

No



### Sole Source Aquifers

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149

1. Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

Yes

No

2. Is the project located on a sole source aquifer (SSA)?

A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

< No

Based on the response, the review is in compliance with this section. Document and upload documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area, below.

Yes

3. Does your region have a memorandum of understanding (MOU) or other working agreement with Environmental Protection Agency (EPA) for HUD projects impacting a sole source aquifer?

Yes

No

**Screen Summary****Compliance Determination**

The project is not located on a sole source aquifer area. According to EPA, there are no sole source aquifers in Puerto Rico. The project is in compliance with Sole Source Aquifer requirements.

**Supporting documentation**

[PR-RGRW-03840-W Sole Source Aquifers.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Wetlands Protection

General requirements	Legislation	Regulation
Executive Order 11990 discourages direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed. Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.

**1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance? The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order**

No

Based on the response, the review is in compliance with this section.

Yes

### Screen Summary

#### **Compliance Determination**

Based on the project description this project includes no activities that would require further evaluation under this section. The project is in compliance with Executive Order 11990. This project does not involve new construction, so a visual wetlands survey was not conducted.

#### **Supporting documentation**

[PR-RGRW-03840-W Wetlands.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Wild and Scenic Rivers Act

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297

### 1. Is your project within proximity of a NWSRS river?

No

Yes, the project is in proximity of a Designated Wild and Scenic River or Study Wild and Scenic River.

Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

### Screen Summary

#### **Compliance Determination**

This project is not within proximity of a NWSRS river. The project is located 386,131 feet from the nearest Wild and Scenic River. The project is in compliance with the Wild and Scenic Rivers Act.

#### **Supporting documentation**

[PR-RGRW-03840-W Wild and Scenic.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

No

**Environmental Justice**

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	

**HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.**

**1. Were any adverse environmental impacts identified in any other compliance review portion of this project’s total environmental review?**

Yes

No

Based on the response, the review is in compliance with this section.

**Screen Summary**

**Compliance Determination**

No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. On January 21, 2025, President Donald Trump issued the Executive Order 14173 titled "Ending Illegal Discrimination and Restoring Merit-Based Opportunity", which revoked Executive Order 12898 and eliminated federal mandates requiring agencies to assess environmental justice impacts. Consequently, there is no longer a federal requirement to address environmental justice concerns in the environmental compliance review process.

**Supporting documentation**

**Are formal compliance steps or mitigation required?**

Yes

No





DEPARTMENT OF

# HOUSING

GOVERNMENT OF PUERTO RICO



## Memorandum to File

**Date:** 3/17/2025

**From:** Justin Neely  
Environmental Manager  
CDBG-DR Program  
Regrow Puerto Rico Program  
Puerto Rico Department of Housing

**Application Number:** PR-RGRW-03840-W

**Project:** Innova Crops LLC

### **Re: Justification for the Infeasibility and Impracticability of Radon Testing**

After reviewing Application Number PR-RGRW-03840-W under the Regrow Puerto Rico Program, administered by the Puerto Rico Department of Housing (**PRDOH**), to complete the property's contamination analysis in accordance with 24 C.F.R. § 50.3(i) and 24 C.F.R. § 58.5(i), we have determined that testing the property's radon levels is infeasible and impracticable.

Per the U.S. Department of Housing and Urban Development's (**HUD**) CPD Notice 23-103, the recommended best practices and alternative options for radon testing are infeasible and impracticable in this case due to the following reasons:

- As required by the CPD Notice 23-103, the scientific data reviewed in lieu of testing must consist of a minimum of ten documented test results over the previous ten years. If there are less than ten documented results over this

period, it is understood that there is a lack of scientific data. The latest report for radon testing in Puerto Rico was prepared in 1995 by the U.S. Department of the Interior in Cooperation with the U.S. Environmental Protection Agency. No other completed studies and reports on radon testing are available in Puerto Rico.

- There is no available science-based or state-generated information for Puerto Rico for the last ten years that can be used to determine whether the project site is in a high-risk area. The Department of Health and Human Services, Centers for Disease Control and Prevention (**CDC**), National Environmental Public Health Tracking, and Radon Testing map do not include Puerto Rico data.
- There are only two (2) licensed professionals in Puerto Rico who can conduct radon testing using the American National Standards Institute/American Association of Radon Scientists and Technologists (**ANSI/AARST**) testing standards, which makes it difficult, time-consuming, and highly expensive to coordinate and secure a site visit for the contamination evaluation.
- Do-it-yourself (**DIY**) radon test kits are known to be unreliable in assuring and controlling the quality of the test results; they are not readily available in Puerto Rico, and the cost and time required for purchasing and sending them for analysis are unreasonable when weighed against the results' reliability and the need for prompt results.
- Local authorities in Puerto Rico do not have the specialized radon monitoring equipment or trained staff needed to conduct the radon testing analysis and ensure proper quality control and quality assurance practices are adhered to. We also do not have a radiation laboratory certified for radon testing.

As part of the evaluation for this determination, PRDOH sent information requests to six (6) local agencies at the state and federal levels. We received responses from the following agencies:

- United States Geological Survey;
- Centers for Disease Control and Prevention;
- Puerto Rico Department of Health; and
- United States Environmental Protection Agency.

The agencies mentioned above confirmed the lack of scientific data on Radon testing for Puerto Rico and the technical difficulties that we face to comply with HUD's Radon testing requirement. For the above-mentioned reasons, Radon testing is infeasible and impracticable for this property, and no further consideration of Radon is needed for the environmental review.



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

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

February 14, 2024

**Lauren Bair Poche**

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

SHPO: CF-02-03-24-05 PUERTO RICO DISASTER RECOVERY, CDBG-DR RE-GROW PR URBAN-RURAL AGRICULTURAL RE-GROW PROGRAM, PR-RGRW-03840, INNOVA CROPS, LLC., CARR. 426 KM 1.1, BO. INDIERA BAJA, MARICAO, PUERTO RICO

Dear Ms. Poche,

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

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

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

Sincerely,

Carlos A. Rubio-Cancela  
State Historic Preservation Officer  
CARC/GMO/LGC



February 5, 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-03840 – Innova Crops LLC – Carr. 426 Km 1.1, Bo. Indiera Baja, Maricao, 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 Innova Crops LLC located at Carr. 426 Km 1.1 Bo. Indiera Baja, in the municipality of Maricao. The undertaking for this project includes the purchase and installation of a new “Farm in the City” vertical hydroponic greenhouse. The proposed greenhouse is approximately 320 square feet (ft) (40 ft by 8 ft) with a height of approximately 9.5 ft. Footers will be made of concrete blocks that are 8 ft by 2 ft and 24 inches thick. There will be a total of three (3) blocks placed approximately every 13 feet holding the container above ground; the blocks will be installed approximately 3 to 6 inches deep into the ground and will be surrounded by boards spliced together to contain the concrete. The applicant will also use their own funding to build wooden steps to be able to enter the greenhouse. Some minor grading may be needed to allow for a level surface to place the steps, but no grading is required for the base. All new irrigation piping and connections to the greenhouse will

be aboveground surface lines. Electricity for the greenhouse will be provided from an existing structure aerially to the new greenhouse.

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,

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

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

Architectural Historian, EHP Senior Manager  
LBP/JLE

Attachments

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b>		
<b>REgROW PUERTO RICO PROGRAM</b>		
<b>Section 106 NHPA Effect Determination</b>		
<b>Applicant:</b> Innova Crops LLC		
<b>Case ID:</b> PR-RGRW-03840	<b>City:</b> Maricao	

<b>Project Location:</b> Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	
<b>Project Coordinates:</b> (as provided by applicant during field visit) Vertical Hydroponic Greenhouse: 18.169206, -66.896007	
<b>TPID (Número de Catastro):</b> 263-000-009-54-901	
<b>Type of Undertaking:</b> <input type="checkbox"/> Substantial Repair/Improvements <input checked="" type="checkbox"/> New Construction	
<b>Construction Date (AH est.):</b> Landowner's house: ca. 1985 Garage/above-ground cisterns/Cooler/Greenhouses on the project site: ca. 1980	<b>Property Size (acres): 20.6 acres total</b> Vertical Hydroponic Greenhouse: 0.007346 acres (620 sq. ft)

<b>SOI-Qualified Architect/Architectural Historian:</b> Erin Edwards, MPS
<b>Date Reviewed:</b> December 2, 2023
<b>SOI-Qualified Archaeologist:</b> Heath Anderson, Ph.D.
<b>Date Reviewed:</b> November 9, 2023

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

### Project Description (Undertaking)

The proposed project includes the purchase and installation of a new "Farm in the City" vertical hydroponic greenhouse. One location is evaluated for the new greenhouse in the east area of the property. The proposed greenhouse is approximately 320 square feet (ft) (40 ft by 8 ft) with a height of approximately 9.5 ft. The applicant plans to construct a base for the container, the same size as the container, with their own funds. Footers will be made of concrete blocks that are 8 ft by 2 ft and 24 inches thick. There will be a total of three (3) blocks placed approximately every 13 feet holding the container above ground; the blocks will be installed approximately 3 to 6 inches deep into the ground and will be surrounded by boards spliced together to contain the concrete. The container will be anchored using a metal plate that will be welded to the bottom of the vertical hydroponic greenhouse. The base will not be included in the IUGF (Intended Use of Grant Funds). The applicant will also use their own funding to build wooden steps to be able to enter the greenhouse. Some minor grading may be needed to allow for a level surface to place the steps, but no grading is required for the base.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant:</b> Innova Crops LLC	
<b>Case ID:</b> PR-RGRW-03840	<b>City:</b> Maricao

Water to irrigate the greenhouse will be provided from an existing aboveground connection, located approximately 30 ft northwest from the Greenhouse. The water pipes are connected to the aqueduct managed by the Autoridad de Acueductos y Alcantarillados (AAA). All new irrigation piping and connections to the greenhouse will be aboveground surface lines.

Electricity for the greenhouse will be provided from the existing structure northwest of the site location. An existing pole on the roof of the existing structure will be used to connect electricity aerially to the new greenhouse. This is the same structure used to connect the water which is approximately 30 ft away. The power is provided by LUMA, GENERA and in case of a blackout, the applicant will use generators that they own. In the future, the applicant plans to install a solar system to the greenhouse.

The project will have some ground disturbance due to the installation of the base footers below ground yet no vegetation or tree clearing is required for construction. No grading is needed for the base, but the steps may need some minor leveling using a hand shovel. The applicant owns the property and currently uses it for agricultural use; therefore, no acquisition or conversion is required.

**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 vertical greenhouse concrete block base 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 archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61) who searched the records at the SHPO and the Instituto de Cultura Puertorriqueña which shows that there are no reported archaeological materials or significant cultural properties within a half-mile (mi) radius of the project location. The closest archaeological site is MI0100023, which is located 0.66 miles (1.06 km) south of the project area. No archaeological evaluations and no studies

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REgROW PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant:</b> Innova Crops LLC	
<b>Case ID:</b> PR-RGRW-03840	<b>City:</b> Maricao

of cultural resources have been conducted within the 0.5 mi review radius with no cultural resources found. The proposed project is located in a rural, mountainous area in the west portion of the island at an elevation of 450 ft (137 meters [m]) above mean sea level. Per the USGS/NRCS Web Soil Survey, the project area crosses three mapped soil series: CoF2 (Consumo clay, 40 to 60 percent slopes); LuF2 (Los Guineos clay, 20 to 60 percent slopes, eroded); and MrF2 (Maricao clay, 20 to 60 percent slopes). The project area APE is in the central-north portion of Municipio Maricao. The general project area is located in an area of highland topography of pronounced, complex topographic relief and thick tropical forest. The closest freshwater source is an unnamed, perennial tributary to the Río Bucarabones located 0.21 mi (0.34 kilometers [km]) northeast of the project area. The west coast is approximately 14.2 mi (22.8 km) from the project area.

### 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. Surveys in the 0.50-mi review area include Código SHPO 10-12-14-02, which was performed in 2014 for the repavement of streets using CDBG funds. Four houses were surveyed for this project: 0.20-mi, 0.33-mi, and 0.57-mi to the southeast of the project site and one house 0.40-mi to the west of the project site. A finding of No Historic Properties/Negative was returned. The second survey that is within the 0.50-mi review area is Código SHPO 10-05-93-0, performed in 1993 for the improvement of the area's aqueducts with a Phase1A-1B survey. The site is approximately halfway between the project site and Hacienda Llanada (0.66-mi to the north) therefore the approximate location is 0.33 miles to the north of the project site. A negative finding was returned.

The project area is in a rural area of Maricao, in Indiera Baja Barrio. The area is mountainous with dense tropical vegetation. Historic aerials from 1972 show one building on the property that is no longer extant, and a neighbor to the south that has one building that is extant (<https://www.historicaerials.com/viewer>). Aerials from Earth Explorer for 1977 did not show enough detail to identify individual buildings (<https://earthexplorer.usgs.gov>). As there were no buildings on the project site in 1972 except for one building that is no longer extant, and as the landowner's father's house was built ca. 1985 per the applicant as materials

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>REGrow PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	 GOVERNMENT OF PUERTO RICO DEPARTMENT OF HOUSING
<b>Applicant:</b> Innova Crops LLC	
<b>Case ID:</b> PR-RGRW-03840	<b>City:</b> Maricao

used/design, the coffee farm can be placed at ca. 1980. The 20.6-acre project site sits at the top of a mountain and will not be visible to any buildings nearby.

### Determination

The following historic properties have been identified within the APE:

- Direct Effect:
  - None
- Indirect Effect:
  - None

Based on the results of our historic property identification efforts, the Program has determined that project actions will not affect 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. There are no reported archaeological materials or significant cultural properties within a half-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 of case PR-RGRW-03840 is located. The closest freshwater body is an unnamed tributary to the Río Bucarabones located 0.21 mi (0.34 kilometers [km]) northeast of the project area. The size of the proposed project activities are very small (0.007346 acres (620 sq. ft) and construction of public roads/residential structures/agricultural infrastructure has impacted the surrounding terrain. Additionally, the project site is on the crest of a mountain, and other properties will not see the project site due to elevation, vegetation, and the other buildings that are on site. No historic properties will be affected by the proposed project activities.

<b>PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM</b> <b>RE-grow PUERTO RICO PROGRAM</b> <b>Section 106 NHPA Effect Determination</b>	
<b>Applicant:</b> Innova Crops LLC	
<b>Case ID:</b> PR-RGRW-03840	<b>City:</b> Maricao

**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:

Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

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



REGROW PROGRAM

#### Project Location Area of Potential Effects (APE) Map

Applicant ID: PR-RGRW-03840



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ APE (Buffer (15-meters))

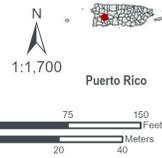
Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901

Parcel Center:  
66.895697°W 18.169008°N

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023

Layout: APE  
Aprx: 72428\_ReGrowTier2Maps

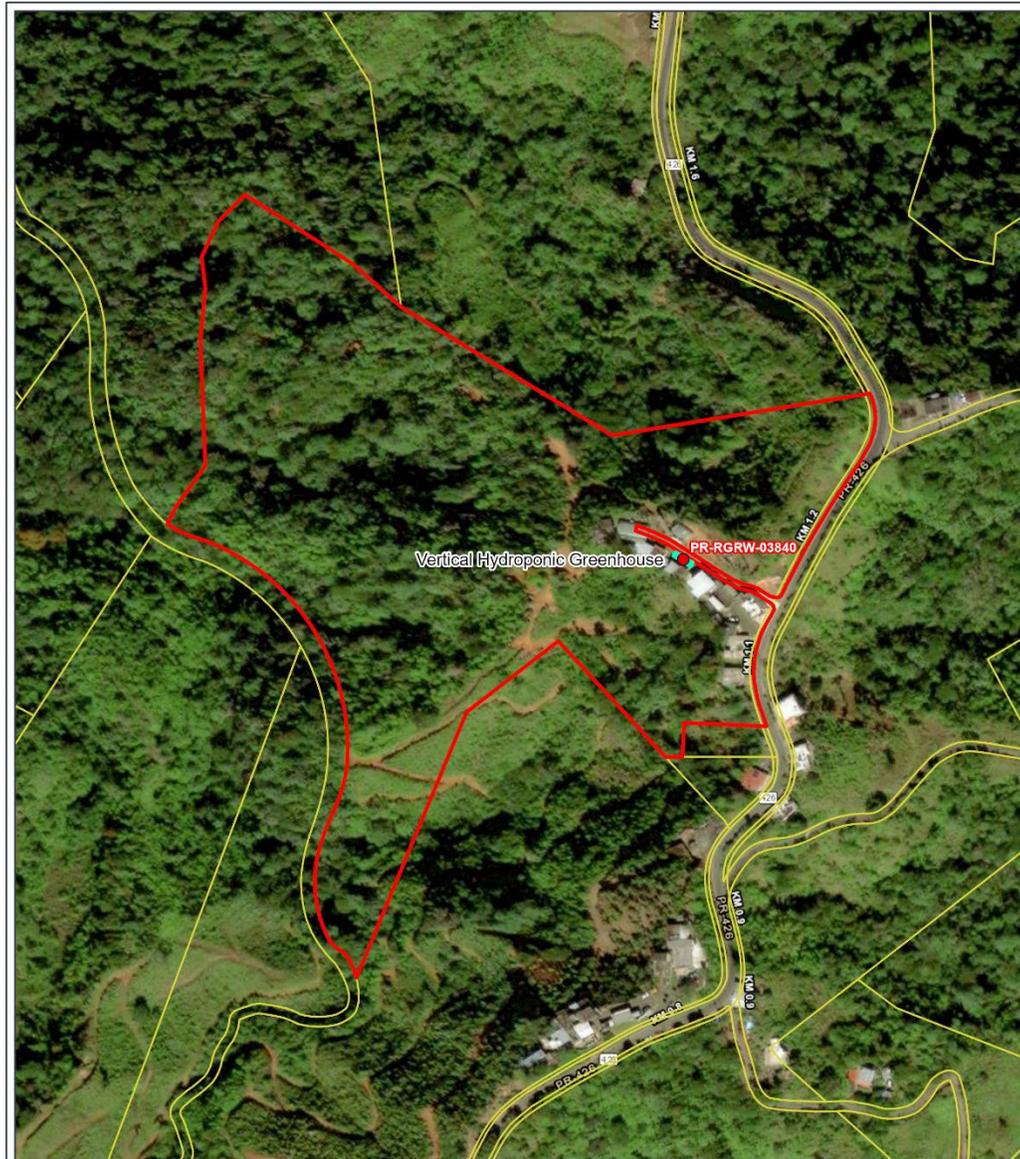


Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

### Project (Parcel) Location - Aerial Map



REGROW PROGRAM

**Figure A-2:  
Site Vicinity**

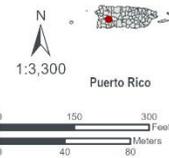
Applicant ID: PR-RGRW-03840



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606  
Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.896629°W 18.168857°N

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Site Vicinity  
Aprx: 72428\_ReGrowTier2Maps

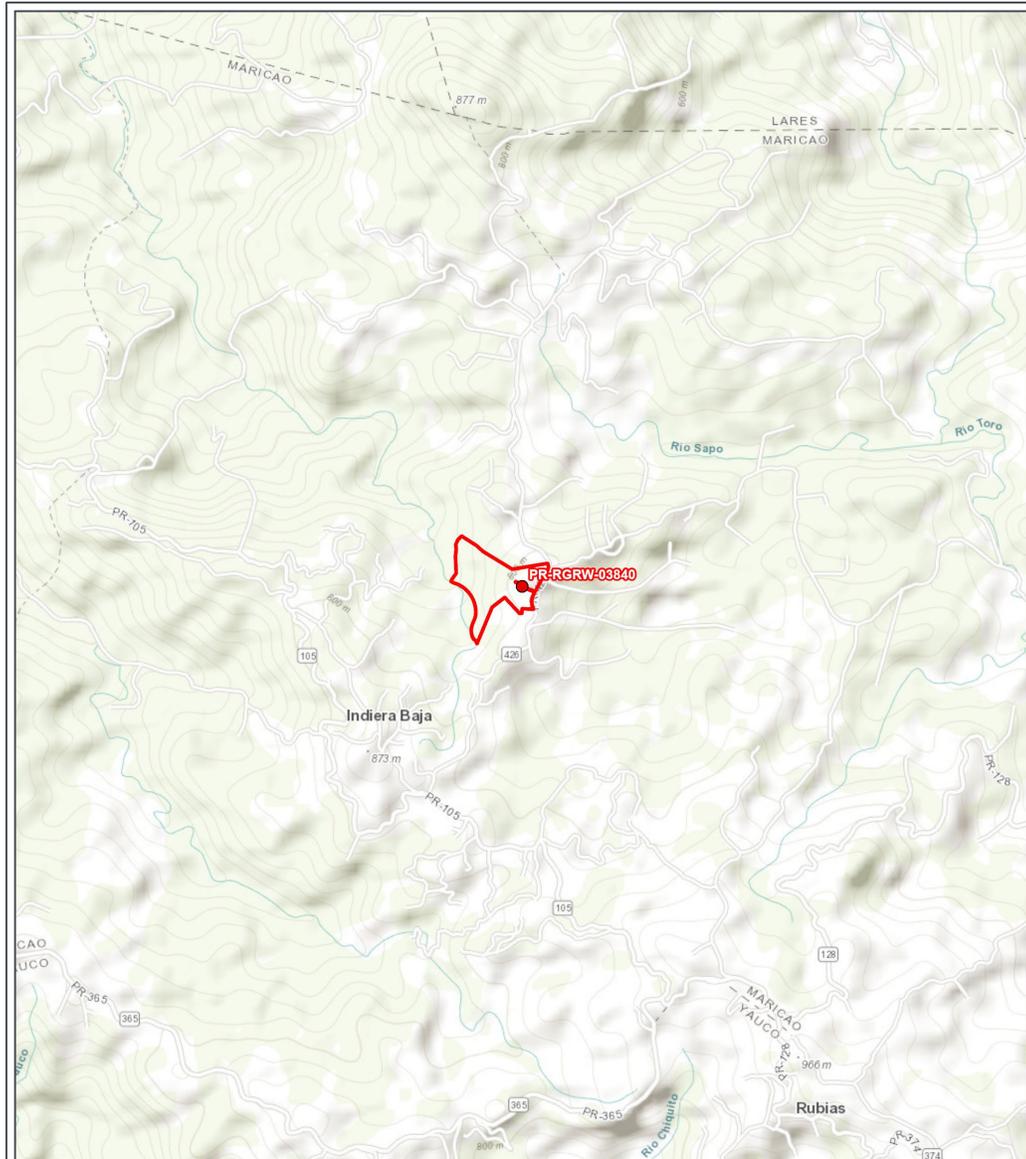


Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

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



REGROW PROGRAM

**Figure A-1:  
Site Location**

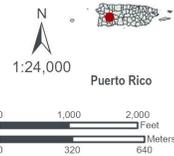
Applicant ID: PR-RGRW-03840



- Site
- ▭ Site Parcel

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606  
Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Site Location  
Aprx: 72428\_ReGrowTier2Maps

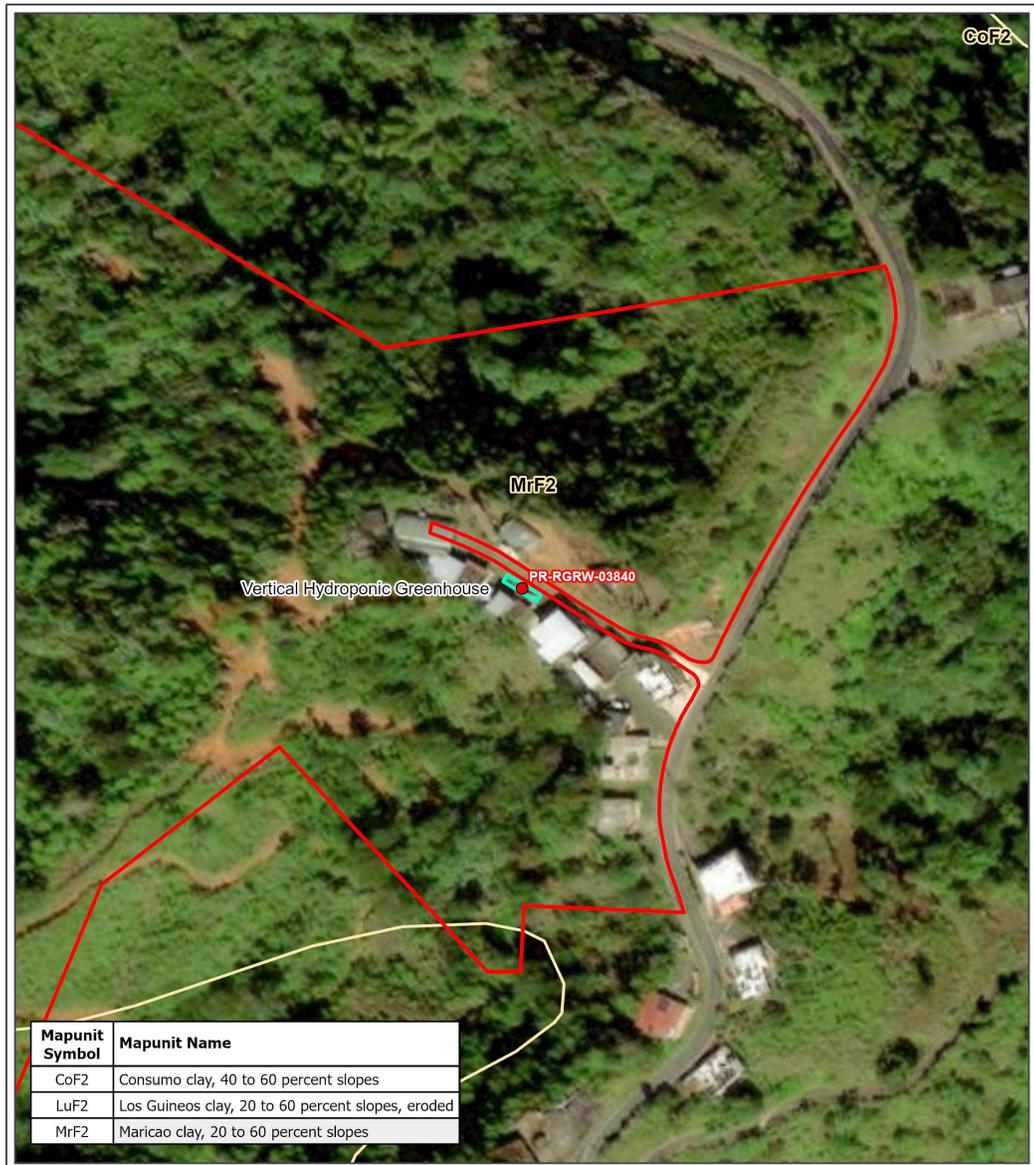


Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

### Project (Parcel) Location – Soils Map



Mapunit Symbol	Mapunit Name
CoF2	Consumo clay, 40 to 60 percent slopes
LuF2	Los Guineos clay, 20 to 60 percent slopes, eroded
MrF2	Maricao clay, 20 to 60 percent slopes

REGROW PROGRAM

USDA Soils Map

Applicant ID: PR-RGRW-03840



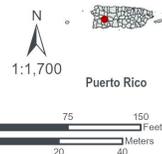
- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ Soil Mapunit

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901

Parcel Center:  
66.895697°W 18.169008°N

Data Source: <https://websoilsurvey.nrcs.usda.gov/app/>  
Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Soils  
Aprx: 72428\_ReGrowTier2Maps

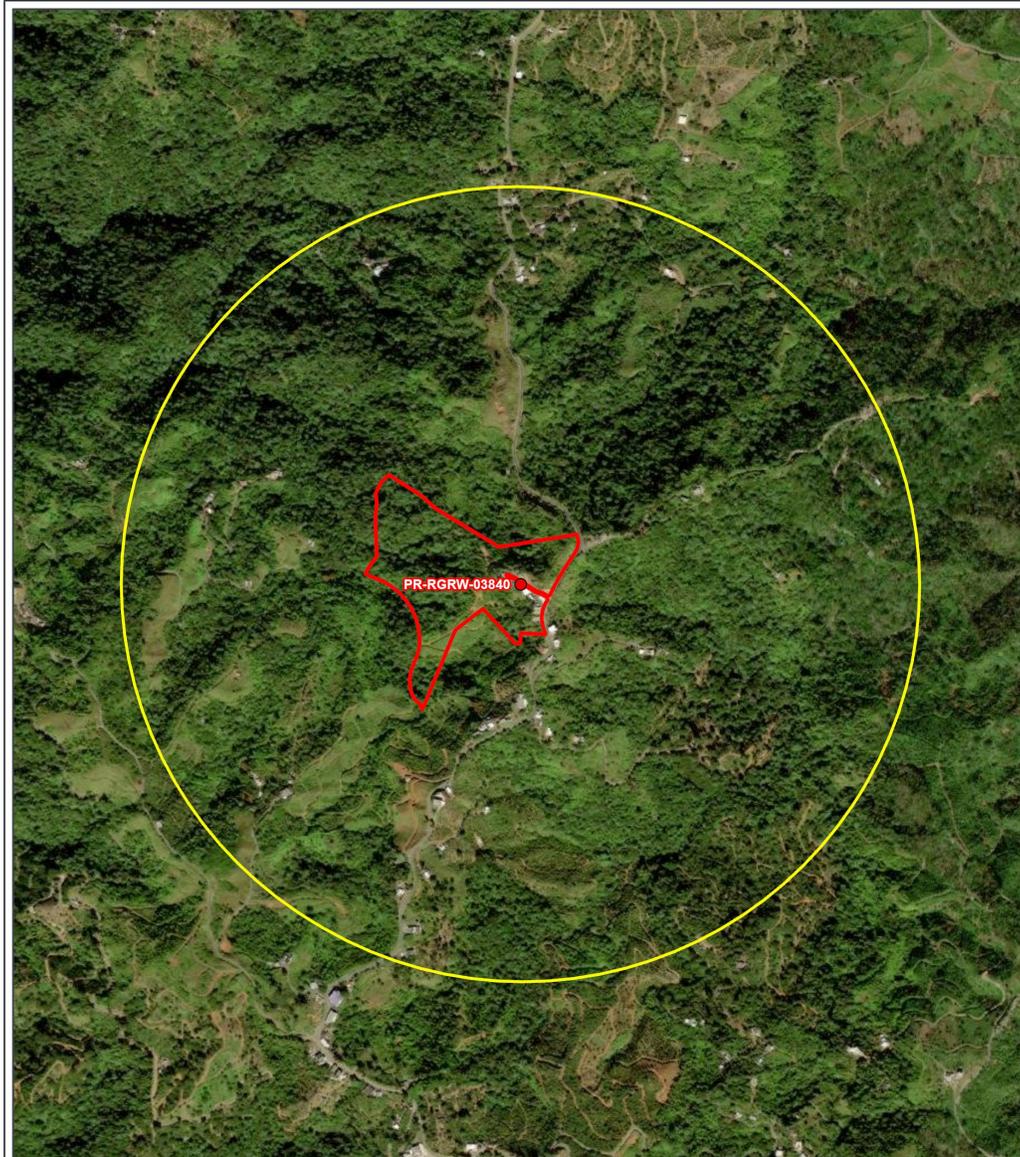


Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

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



REGROW PROGRAM

#### Previous Investigation Map

Applicant ID: PR-RGRW-03840



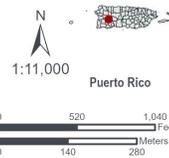
- Site
- Site Parcel
- Project Footprint (Option)
- Buffer (0.5-mile)
- Previously Recorded Survey
- MIPR Arqueologia
- Traditional Urban Centers

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901 Parcel Center:  
66.895697°W 18.169008°N

Data Source: State Historic  
Preservation Office and Puerto Rico  
Institute of Culture

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Previous Investigation  
Aprx: 72428\_ReGrowTier2Maps



Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

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



REGROW PROGRAM

**Figure B 11-1:  
Previously Recorded  
Cultural Resources  
Map**

Applicant ID: PR-RGRW-03840

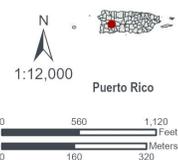


- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>● Site</li> <li>■ Site Parcel</li> <li>■ Buffer (0.5-mile)</li> <li>▲ Archaeological Site</li> <li>■ Historical Place</li> <li>★ Historic Area Point</li> <li>◆ JP Historical Sites</li> <li>● National Register of Historic Places</li> </ul> | <ul style="list-style-type: none"> <li>● National Historic Landmark</li> <li>■ National Register of Historic Places</li> <li>■ Historic Community</li> <li>■ Historic District</li> <li>■ Arroyo Historic Zone</li> <li>■ Caguas Historic Zone</li> <li>■ Coamo Historic Zone</li> <li>■ Guayama Historic Zone</li> </ul> | <ul style="list-style-type: none"> <li>■ Manati Historic Zone</li> <li>■ Miramar Historic Zone</li> <li>■ Ponce Historic Zone</li> <li>■ San German Historic Zone</li> <li>■ San Juan Historic Zone</li> <li>■ Vega Baja Historic Zone</li> <li>■ Traditional Urban Centers</li> </ul> |
|---|---|--|

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606  
Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: State Historic  
Preservation Office and Puerto Rico  
Institute of Culture

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 01/18/2023  
Layout: Cultural Resources  
Apr: 72420\_ReGrowTier2Maps



Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

### Photograph Key



**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<b>Photo #:</b> 01	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> West	
<b>Description:</b> Overview of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. Multiple structures built around the 1980s for cultivating mainly coffee: 1 <sup>st</sup> structure to the left is a garage or warehouse, 2 <sup>nd</sup> structure is a 2000-gallon water tank, 3 <sup>rd</sup> structure is a cooler and a place to process the crops, 4 <sup>th</sup> structure is a greenhouse managed by the applicant.	



<b>Photo #:</b> 02	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> North	
<b>Description:</b> The overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows two (2) greenhouses managed by the applicant, and in the middle, there are multiple freight containers or similar, one of them a 1500-gallon cistern.	



**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<p><b>Photo#:</b> 03</p>	<p><b>Date:</b> 09/15/2023</p>	
<p><b>Photo Direction:</b> East</p>		
<p><b>Description:</b> This overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a partial view of the area the applicant is cultivating, the gravel/dirt/grass access road, and a partial view of a structure used by the landowner to cultivate coffee.</p>		
<p><b>Photo #:</b> 04</p>	<p><b>Date:</b> 09/15/2023</p>	
<p><b>Photo Direction:</b> South</p>		
<p><b>Description:</b> This overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a partial view of a structure used by the landowner to cultivate coffee with a cut-open cistern (empty), a 55-gallon drum (empty), and a garage/warehouse.</p>		

**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<b>Photo #:</b> 05	<b>Date:</b> 09/15/2023	
<b>Photo Direction:</b> South		
<b>Description:</b> Overview from the north corner of the site location for a vertical hydroponic-greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a structure used by the landowner to cultivate coffee with a cut-open cistern (empty), a 55-gallon drum (empty) on a pick-up truck, and a garage/warehouse.		

<b>Photo #:</b> 06	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> West		
<b>Description:</b> Overview from the east corner of the site location for a vertical hydroponic-greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a garage/warehouse, a 2000-gallon above-ground water tank, and a cooler.		

**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<b>Photo #:</b> 07	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> North		
<b>Description:</b> Overview from the south corner of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows multiple freight containers or similar, one of them a 1500-gallon water tank, a greenhouse managed by the applicant, and the area's vegetation and landform.		

<b>Photo #:</b> 08	<b>Date:</b> 09/15/2023	
<b>Photo Direction:</b> Northwest		
<b>Description:</b> Area where the applicant plans to connect the electricity provided by LUMA/ GENERA from the cooler's roof electric pole using an above-ground cable to the vertical hydroponic – greenhouse; it also shows a partial view of the garage, warehouse, the 2000-gallon water tank, and the cooler with the greenhouse at the very end of the picture.		

**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<b>Photo #:</b> 09	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> North		
<p><b>Description:</b> The property has two main water tanks, in the picture it is shows a 1500-gallon above-ground water tank and it also overlooks a hydroponic table being built, a freight container, the greenhouses the applicant is managing, and the area's vegetation and landform.</p>		

<b>Photo #:</b> 10	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> Southwest		
<p><b>Description:</b> The property has two main water tanks, in the picture shows a 2000-gallon above-ground water tank and it also overlooks some equipment, partial views of the garage/warehouse (left) and cooler (right) with the area's vegetation and landform.</p>		

**Applicant:** Innova Crops LLC

**Case ID:** PR-RGRW-03840

**City:** Maricao

<b>Photo #:</b> 11	<b>Date:</b> 09/15/ 2023
<b>Photo Direction:</b> Northwest	
<b>Description:</b> This structure is inside the property but belongs to the landowner, the project will be located behind this structure built ca. 1985.	





October 20, 2022

**Arch. Carlos A. Rubio Cancela**

Executive Director

State Historic Preservation Officer

Cuartel de Ballajá Bldg.

San Juan, Puerto Rico

**Re: Authorization to Submit Documents**

Dear Arch. Rubio Cancela:

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

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

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

Cordially,

Juan C. Pérez Bofill, P.E. M.Eng

Director of Disaster Recovery

CDBG DR-MIT



## United States Department of the Interior

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



In Reply Refer to:  
FWS/R4/CESFO/72093-Gen

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

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

Re: CDBG-DR PR-RGRW-03840 Innova Corps,  
LLC., Maricao, Puerto Rico

Dear Mr. Pérez-Bofill

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

The Puerto Rico Department of Housing (PRDOH) is proposing the construction of a new Farm in the City greenhouse (40 Feet (Ft) x 8 Ft) to be located on a 20.6-acres property located at PR-426, Km. 1.1, Indiera Baja (18°10'08.5"N 66°53'44.5"W) in the municipality of Maricao. According to PRDOH, construction of the greenhouse will not require vegetation removal or tree clearing. However, some ground disturbance will be required to install footers for the base.

Using the U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) system, the PRDOH has determined that the proposed project site is located within the range of Puerto Rican boa (*Chilabothrus inornatus*), Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*), Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*), Puerto Rican parrot (*Amazona vittata*) and Puerto Rican harlequin butterfly (*Atlantea tulita*).

PRDOH used the Caribbean Determination Key (DKey) in the IPaC application to evaluate the potential impacts of the proposed project on federally listed species (Project code: 2024-00128560). Based on the answers provided, a consistency letter was obtained for the Puerto Rican broad-winged hawk and Puerto Rican sharp-shinned hawk, which determined that the proposed actions for this project may affect, but is not likely to adversely affect (NLAA) these species. As for the Puerto Rican boa a may affect, but is likely to adversely affect (MLAA) determination was obtained.

Based on the nature of the project, scope of work, information available, and analysis of the existing habitat which consists of cleared land with existing structures and forested areas are adjacent to the project area, PRDOH has determined that the proposed project may affect, but is not likely to adversely affect (NLAA) the Puerto Rican boa instead of the MLAA obtained by using the DKey. As for the Puerto Rican parrot and Puerto Rican harlequin butterfly, PRDOH has also determined that the proposed actions will NLAA these species. Conservation measures for all species will be implemented.

We have reviewed the information provided and our files, and concur with PRDOH's determination that the proposed project may affect, but is not likely to adversely affect the Puerto Rican parrot, Puerto Rican harlequin butterfly and Puerto Rican boa with the implementation of the conservation measures. Also, the Service acknowledges and concur with the NLAA consistency letter obtained for the Puerto Rican broad-winged hawk and Puerto Rican sharp-shinned hawk.

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

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

Sincerely,

**LOURDES  
MENA**

Digitally signed by  
LOURDES MENA  
Date: 2025.01.13  
21:51:50 -04'00'

Lourdes Mena  
Field Supervisor

dr

cc:  
SWCA  
HUD



February 7, 2025

**TO: José M. Olmo Terrasa, Esq.**

Deputy Director for Economic Recovery Grant Management  
Re-Grow PR Urban Rural Agriculture Program

**RE: Endangered Species Concurrence - Conservation Measures Implementation  
Innova Crops LLC. (PR-RGRW-03840)**

Dear Mr. Olmo:

This memorandum is to notify the CDBG-DR Re-Grow PR Urban-Rural Agriculture Program (Re-Grow Program) that on October 11, 2024, for the case **PR-RGRW-03840**, the CDBG-DR/MIT Permits and Environmental Compliance Division submitted an informal consultation under Section 7 (a)(2) of the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and in accordance with the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 et seq.) for the proposed project of the construction of a "new farm in the city" greenhouse, for Innova Crops LLC, an agricultural business, located at PR-156 Km 56.5, La Serrania Ward, Jardín Botánico de Caguas Sector, Caguas, PR 00725.

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

Name of Species	Status
Puerto Rican Boa	Endangered
Puerto Rican Parrot	Endangered
Puerto Rican Sharp-shinned Hawk	Endangered
Puerto Rican Broad-winged Hawk	Endangered
Puerto Rican Harlequin	Threatened
Critical Habitat	
There were no Critical Habitats noted within the project area.	

The United States Fish and Wildlife Service (USFWS) Caribbean Ecological Services Field Office reviewed the information provided and their files, and on January 13, 2025 concurred with the determination that the proposed project actions will have **May Affect, but is Not Likely to Adversely Affect (NLAA)** the Puerto Rican Boa, Puerto Rican Broad-winged Hawk, Puerto Rican Parrot, Puerto Rican Sharp-shinned Hawk and Puerto Rican Harlequin.

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

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

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

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

USFWS Caribbean Ecological Services Field Office key contact information:

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

Sincerely,

Permits and Environmental Compliance Division  
Disaster Recovery Office

# Caribbean ES Puerto Rican Boa

## *Puerto Rican Boa*

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





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

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

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

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



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

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

#### Conservation Measures:

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

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

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

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



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

1. The contractor must inform all personnel about the potential presence of the Puerto Rican harlequin butterfly or its occupied host plant "prickly bush" (*Oplonia spinosa*) in the project areas. A pre-work meeting should inform all project personnel about the need to avoid harming this butterfly and its occupied host plant. Educational material (e.g., posters, flyers or signs with photos or illustrations of all the life stages of the Puerto Rican harlequin butterfly (i.e., eggs, caterpillar, chrysalids and adult, and its host plant) should be prepared and available to all personnel for reference.
2. Before starting any project activity, including removal of vegetation and earth movement, the contractor must clearly delineate the boundaries of the working area in the field to avoid unnecessary habitat impacts. Once the project areas are clearly marked, and before any work activity, including site preparation, personnel with knowledge and ability to identify the Puerto Rican harlequin butterfly (all life stages) and the "prickly bush" must survey the areas where the work will be performed for the presence of the species and its host plant. It is important to note that the Puerto Rican harlequin butterfly can be observed year-round in all its life stages; thus, oviposition (egg-laying) may occur at any time during the year.
3. If the "prickly bush" is present on the project site, try to avoid cutting it off, even if no eggs, caterpillars, or chrysalids are present.
4. If there is no prickly bush within the project area, and the butterfly is observed flying within the project area, do not harass, harm, pursue, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, the species.
5. Adult butterflies are often observed flying near the host plant as part of their mating behavior and laying eggs. Project-related activities must stop if the prickly bush is found in the project area and the Puerto Rican harlequin butterfly is observed flying in that same area. A temporary 50-meter (164 feet) buffer zone of no activity or human disturbance should be established and clearly marked around that prickly bush until the butterfly moves out on its own.
6. Once the Puerto Rican harlequin butterfly has moved away, within a period of 24 to 36 hours, a search of the prickly bush that has been buffered should be conducted to determine the presence of any eggs, caterpillars, or chrysalids of the butterfly on the plant. The contractor or the Applicant should send a report of the observation and its findings to [caribbean\\_es@fws.gov](mailto:caribbean_es@fws.gov) after the 36-hour search is concluded.
7. If, after the initial search or after the 24 to 36-hour search, any life stage of the Puerto Rican harlequin butterfly is found in the prickly bush, take the following actions:
  - Clearly mark the host plant with flagging tape.
  - Establish a 10-meter (32-foot) buffer zone around the bush to protect it.

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

# Guaraguao de bosque

*Buteo platypterus brunnescens*



Distribución ■

## Información biológica

### Reproducción

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

### Hábitat

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

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

## Descripción

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

AMENAZADA

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

### Distribución

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

### Amenazas

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

### Medidas de conservación

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

### Referencias

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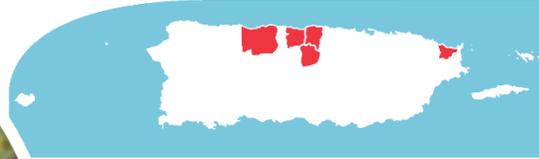
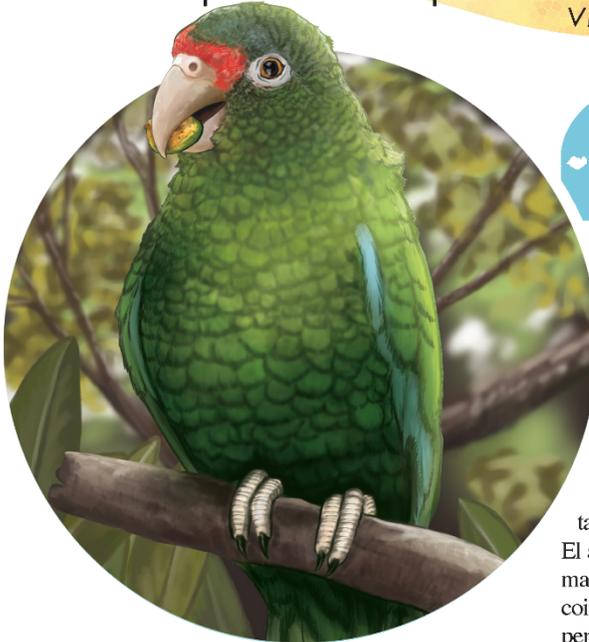
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AMENAZADA

# Cotorra puertorriqueña

*Amazona vittata vittata*



Distribución ■

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

## Descripción

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

## Información biológica

### Reproducción

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

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

### Dieta

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

### Distribución

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

EN PELIGRO

## Amenazas

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

## Medidas de conservación

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

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

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

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

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

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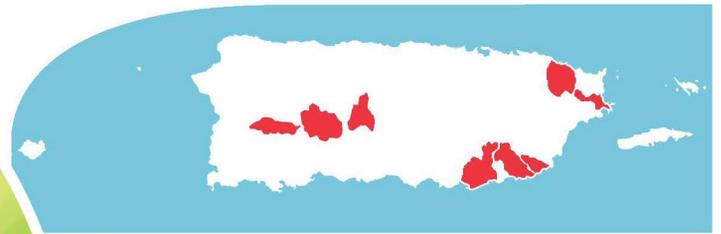
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EN PELIGRO

# Falco de sierra *striatus* <sup>16</sup>



Distribución ■

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

## Descripción

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

## Información biológica

### **Reproducción**

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

### **Habitat**

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

### **Dieta**

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

### **Distribución**

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

## Amenazas

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

Entre las amenazas que se han identificado para esta especie se encuentran: practicas de manejo y cultivo de madera en los bosques, construccion de veredas y carreteras en los bosques, construccion de facilidades recreativas, aumento en el uso de los bosques para fines recreativos y la posibilidad de cacerfa furtiva. Se ha identificado el parasitismo por la mosca parasftica del genero *Philornis* como un factor de mortandad para pichones del falcon de sierra en Maricao. El falcon de sierra tambien es susceptible a disturbios naturales tales como las tormentas tropicales fuertes y los huracanes ya que le modifican su habitat. Sin embargo, el problema principal del falcon de sierra es su baja densidad y lo limitado de su distribucion. Esto hace a esta subespecie extremadamente vulnerable a la perdida de un individuo.

## **Medidas de conservaci6n**

El falcon de sierra fue incluido en la lista federal de especies en peligro de extincion en 1994 y el plan de recuperacion se escribio en 1997. La medida principal que se debe tomar para la conservacion del falcon de sierra es la proteccion de los individuos restantes y de su habitaculo. Debido a que se encuentra en areas publicas, es imprescindible la implementacion de planes de manejo adecuados para asegurar la supervivencia de esta subespecie en los bosques.

La Ley Federal de Especies en Peligro de Extincion de 1973, segun enmendada, prohfbе matar, dafiar, molestar, atrapar, comprar o vender una especie, asf como partes o productos derivados de ellas.

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## **Informaci6n adicional**

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October 7, 2024

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

**Re: Federally Listed Threatened and Endangered Species Evaluation for the Puerto Rico Department of Housing ReGrow PR-RGRW-03840 Project/ SWCA Project No. 72428**

Dear Ms. Mena:

SWCA Environmental Consultants (SWCA), on behalf of the Puerto Rico Department of Housing, is requesting informal consultation under Section 7(a)(2) of the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 *et seq.*), and in accordance with the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) for the proposed ReGrow PR-RGRW-03840 Project (project). The Project is located on 20.6-acres at Carretera 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606 (18.16901876, -66.89570321).

The proposed Project involves the construction of a new Farm in the City greenhouse. Construction of the greenhouse will not require vegetation removal or tree clearing. Some ground disturbance will be required to install footers for the base.

Using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, we have determined that the proposed project lies within the range of the following federally listed species:

Species	Listing Status
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	Endangered
Puerto Rican Parrot ( <i>Amazona vittata</i> )	Endangered
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	Endangered
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	Threatened

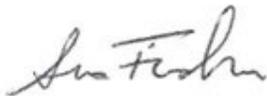
No designated or proposed critical habitat for any listed species was identified within the project area. Based on the nature of the project, scope of work, information available, and a careful analysis of the existing habitat, we have made the following effects determinations:

Species	Effect Determination	Conservation Measures to be Implemented
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Not likely to adversely affect (NLAA)Affect	Puerto Rican Boa General Project Design Guidelines
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	Not likely to adversely affect (NLAA)	Puerto Rican Broad-winged Hawk General Project Design Guidelines
Puerto Rican Parrot ( <i>Amazona vittata</i> )	Not likely to adversely affect (NLAA)	Puerto Rican Parrot Hawk General Project Design Guidelines
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	Not likely to adversely affect (NLAA)	Puerto Rican Sharp-shinned Hawk General Project Design Guidelines
Puerto Rican Harlequin Butterfly ( <i>Atlantea tulita</i> )	Not likely to adversely affect (NLAA)	Puerto Rican Harlequin Butterfly General Project Design Guidelines

In accordance with the 2024 Puerto Rican Boa General Project Design Guidelines, if a Puerto Rican Boa (PR Boa) is found in the project action site, work shall cease until the individual moves off on its own. If the PR 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 PR Boa.

In order to complete the informal consultation process, we are requesting your concurrence for the NLAA determinations included in this letter. Attached to this letter, we are including the documents used to reach our effect determinations for the listed species. If you have any questions or require any additional information, please contact me at (346) 388-1157 or [susan.fischer@swca.com](mailto:susan.fischer@swca.com).

Sincerely,



Susan Fischer  
Wildlife Ecologist  
SWCA Environmental Consultants

Attachments: Threatened and Endangered Species Technical Memorandum

## TECHNICAL MEMORANDUM

**To:** Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boquerón, Puerto Rico 00622

**From:** Susan Fischer, Project Biologist on behalf of the Puerto Rico Department of Housing

**Date:** September 28, 2024

**Re:** **Threatened and Endangered Species Evaluation for the Puerto Rico Department of Housing ReGrow PR-RGRW-03840 Project/ SWCA Project No. 72428**

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### Project Description

Innova Crops LLC, the applicant, is proposing to construct a new Farm in the City greenhouse on a 20.6-acre property in the Municipio of Maricao, Puerto Rico (project) (Appendix A, Figure 1). The project is located at Carretera 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606, in a rural area. The estimated dimensions of the greenhouse will be approximately 40 feet by 8 feet (320 square feet) (Appendix A, Figure 2).

### Existing conditions

The existing habitat conditions at the proposed greenhouse location consist of previously cleared land with existing structures. Forested areas are adjacent to the project area. A stream intersects the parcel at the south and east tip, approximately 1,000 feet away from the project site at its closest point (Appendix A, Figure 3). Construction of the greenhouse will not require vegetation clearing or tree removal. Representative photographs of the proposed locations are provided in Appendix B.

### Federally Protected Species

SWCA obtained a federal threatened and endangered species list from the USFWS (2024) Information for Planning and Consultation (“IPaC”) website for a 100-foot buffer around the greenhouse location (review area) (Appendix C). The IPaC automatically generates a list of species and other resources of concern, such as critical habitat, that are known or expected to be in the specified area and could potentially be directly or indirectly affected. According to the IPaC query for the project, five federally listed endangered species has the potential to occur in the review area; the Puerto Rican broad-winged hawk (*Buteo platypterus brunnescens*), Puerto Rican Parrot (*Amazona vittata*), the Puerto Rican sharp-shinned hawk (*Accipiter striatus venator*), the Puerto Rican boa (*Chilabothrus inornatus*), and the Puerto Rican harlequin butterfly (*Atlantea tulita*). SWCA also evaluated the review area for potential habitat for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) as they are protected by the Bald and Golden Eagle Protection Act of 1940 (“BGEPA”).

The bald and golden eagle’s range do not extend into Puerto Rico (Cornell Lab of Ornithology 2024); therefore, these species were eliminated from further analysis for this project. Table 1 identifies the species carried forward for further evaluation and summarizes each species’ habitat requirements, potential for occurrence in the project area, and determination of effects.

**Table 1. Federally Listed Species Range and/or Habitat Requirements**

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effects/Impacts
<b>Birds</b>				
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	FE	The Puerto Rican broad-winged hawk occurs in elfin woodland, sierra palm, caitimitillo-granadillo, and tabonuco forest types of the Río Abajo Commonwealth Forest, Carite Commonwealth Forest, and El Yunque National Forest as well as within hardwood plantations, shade coffee plantations, and mature secondary forests (USFWS 2019).	<i>Unlikely to occur.</i> Although there are forested areas located on the periphery of the review area, there are no forested areas present within the project area.	<i>May affect.</i> See discussion below.
Puerto Rican Parrot ( <i>Amazona vittata</i> )	FE	The Puerto Rican parrot is a frugivorous cavity nester. It depends on mature forests with large cavity forming trees. (USFWS 2009). It is currently confined to the Maricao Forest, El Yunque National Forest, and the Río Abajo Forest (USDA Forest Service 2024).	<i>Unlikely to occur.</i> Although there are forested areas located on the periphery of the review area, there are no forested areas present within the project area.	<i>May affect.</i> See discussion below.
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	FE	The Puerto Rican sharp-shinned hawk occurs primarily in high elevation mature closed canopy forests (USFWS 2019a).	<i>Unlikely to occur.</i> Although there are forested areas located on the periphery of the project area, there are no forested areas present within the project area itself.	<i>May affect.</i> See discussion below.
<b>Reptiles</b>				
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	FE	Considered to be a habitat generalist, the Puerto Rican boa tolerates a wide variety of terrestrial and arboreal habitats, including rocky areas, haystack hill, trees and branches, rotting stumps, caves, plantations, various types of forested areas such as karst and mangrove forests, forested urban and rural areas, and along streams and road edges (USFWS 2011).	<i>May occur.</i> The project area is located adjacent to the forested areas.	<i>May affect.</i> See discussion below.
<b>Insects</b>				
Puerto Rican Harlequin Butterfly	FT	This species inhabits areas with moderately dense to dense canopy cover and dense vegetation and a source of water within a	<i>Unlikely to occur.</i> There are no prickly bush plants	<i>May affect.</i> See discussion below.

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effects/Impacts
( <i>Atlantea tulita</i> )		kilometer. Eggs and larvae are found only on the prickly bush ( <i>Oplonia spinosa</i> ), while adult butterflies feed on the nectar of several tree species and drink water (USFWS 2019b).	or forested areas within the project area.	

\*Status Definitions:  
FE = Federally listed endangered

Based on a site visit and habitat evaluations, the Puerto Rican broad-winged hawk, Puerto Rican parrot, Puerto Rican sharp-shinned hawk, and Puerto Rican harlequin butterfly are considered unlikely to occur within the project area due to lack of suitable habitat. Due to the generalist nature of the Puerto Rican boa and forested habitat surrounding the project areas, the Puerto Rican boa may occur within the project area. The Caribbean Determination Key (DKey) was completed for the project, which generated a *may affect* determination for the Puerto Rican boa and a *may affect, not likely to adversely affect* determination for the Puerto Rican broad-winged hawk and Puerto Rican sharp-shinned hawk (Appendix D).

The project area is adjacent to forested areas; therefore, the applicant will employ conservation measures for all five species, as outlined in Appendix E, including but not limited to issuing a stop work if a Puerto Rican boa were to occur within the project area, and contacting the Puerto Rico Department of Natural and Environmental Resources for safe capture and relocation of the individual if such action is required. As such, it is anticipated that the project *may affect, but is not likely to adversely affect* the Puerto Rican broad-winged hawk, Puerto Rican parrot, Puerto Rican sharp-shinned hawk, Puerto Rican boa, and the Puerto Rican harlequin butterfly.

#### Critical Habitat and National Wildlife Refuges

Potential effects to habitat(s) within the project area critical to endangered species must be analyzed along with the endangered species themselves, while any activity proposed on National Wildlife Refuge lands must undergo a compatibility determination conducted by the Refuge. No designated critical habitats are present within 100-feet of any of the proposed project location options (Appendix A, Figure 4) (USFWS 2023b).

## LITERATURE CITED

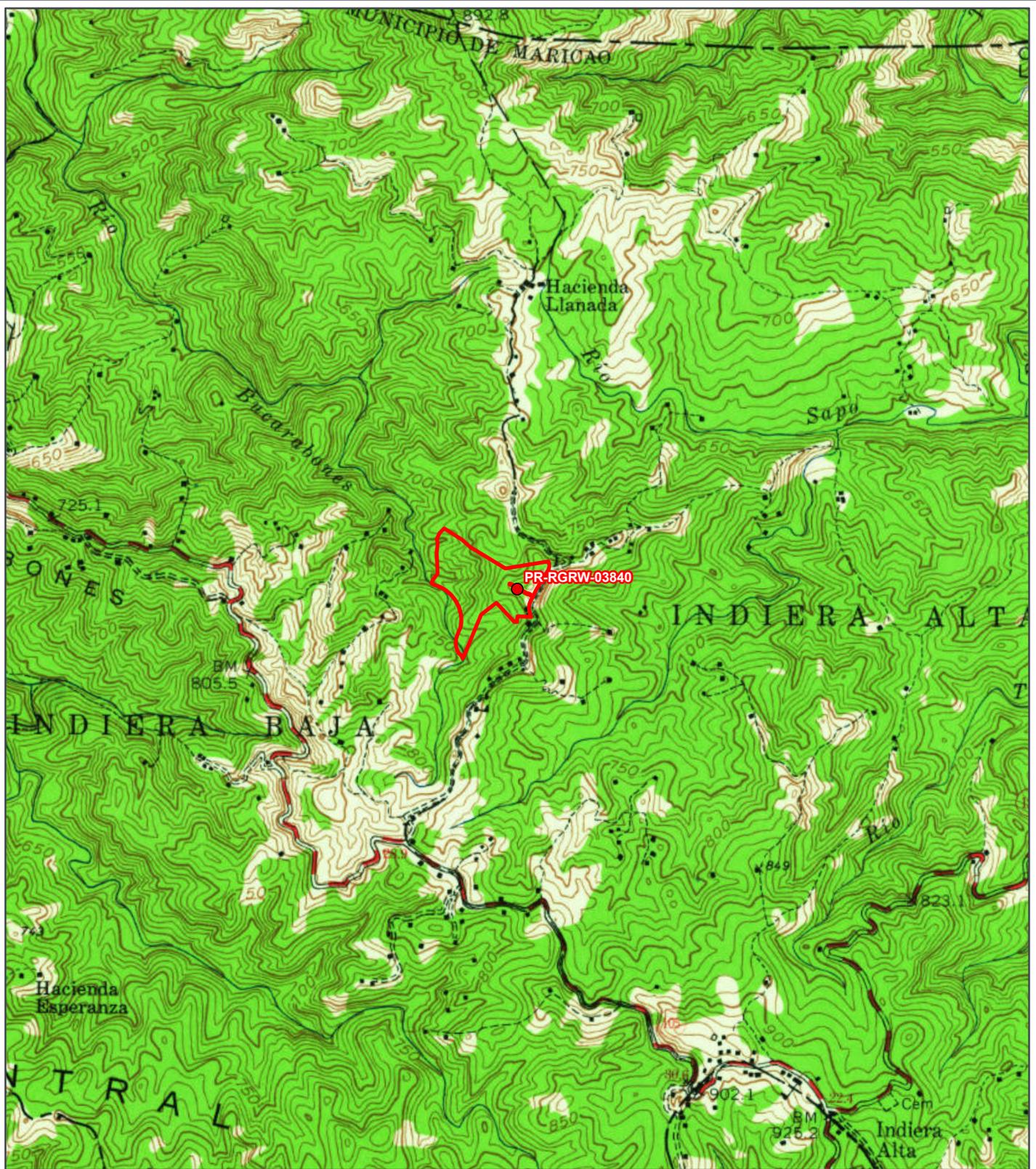
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- U.S. Department of Agriculture (USDA) Forest Service. 2024. the Iguaca, Puerto Rican Parrot. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5338966.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5338966.pdf). Accessed August 2024.
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- . 2019a. *Recovery Plan for Puerto Rican Broad-Winged Hawk (Buteo platypterus brunnescens) and Sharp-Shinned Hawk (Accipiter striatus venator) Amendment*. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, Georgia.
- . 2019b. *Species Status Assessment Report for the Puerto Rican Harlequin Butterfly (Atlantea tulita) Version 1.5*. U.S. Fish and Wildlife Service, Southeast Region. Atlanta, Georgia.
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- . 2024. Information for Planning and Consultation System (IPaC). Available at: <http://ecos.fws.gov/ipac/>. Accessed August 2024.

## **APPENDIX A**

### **Maps**

**Figure 1**

**USGS Topographic Map**



REGROW PROGRAM  
**USGS Topographic Map**  
 Applicant ID: PR-RGRW-03840



- Site
- Site Parcel

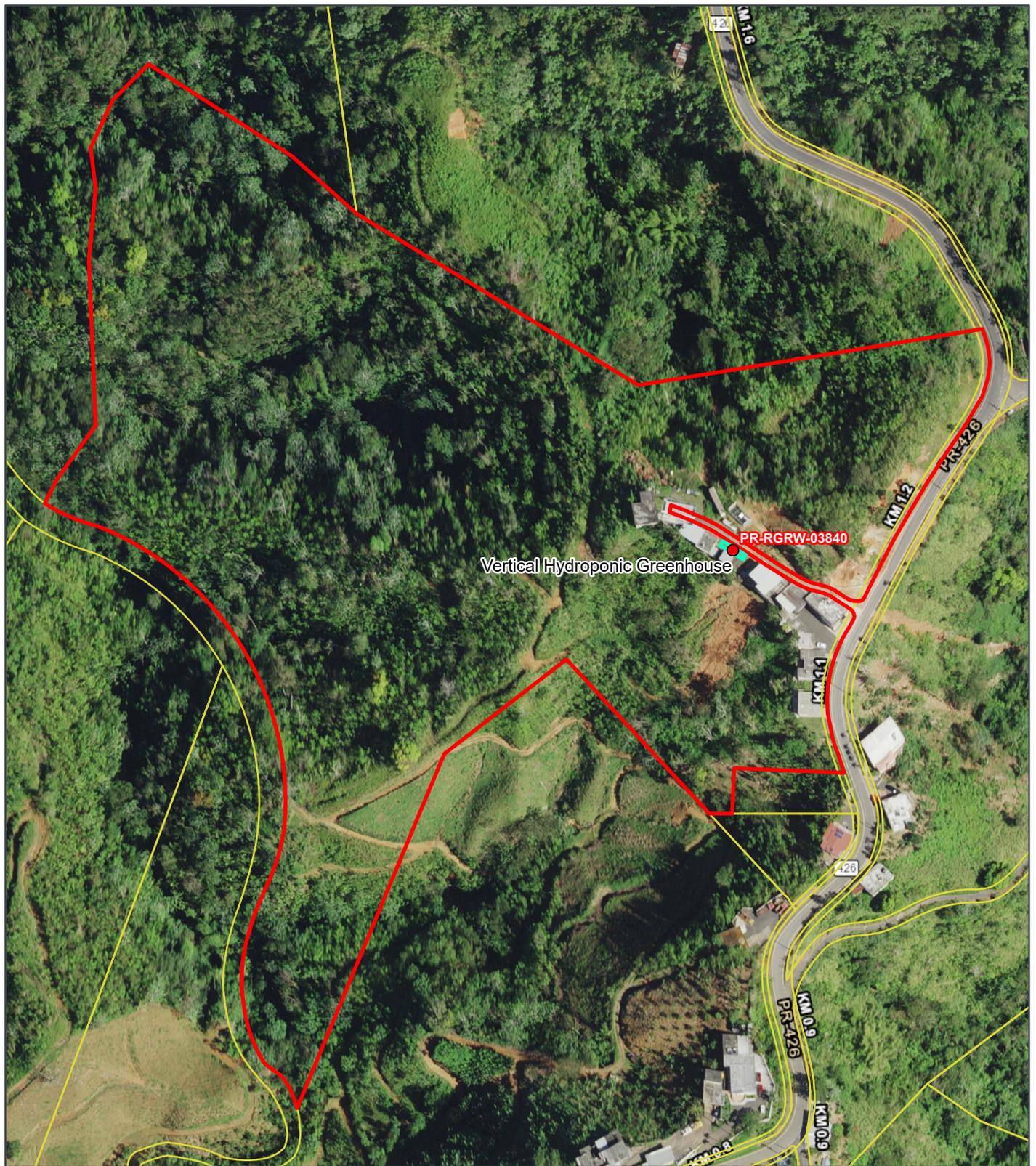
Carr. 426 Km 1.1 Bo. Indiera Baja  
 Maricao, Puerto Rico 00606  
 Parcel ID: 263-000-009-54-901  
 Center of Map:  
 66.895697°W 18.169008°N



Base Map: ESRI ArcGIS Online,  
 accessed August 2024  
 Updated: 8/9/2024  
 Layout: USGS Topographic Map  
 Aprx: 72428\_ReGrowTier2Maps



**Figure 2**  
**Site Vicinity Map**



REGROW PROGRAM

**Site Vicinity**

Applicant ID: PR-RGRW-03840



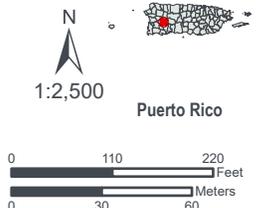
- Site
- Site Parcel
- Project Footprint (Option)

Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

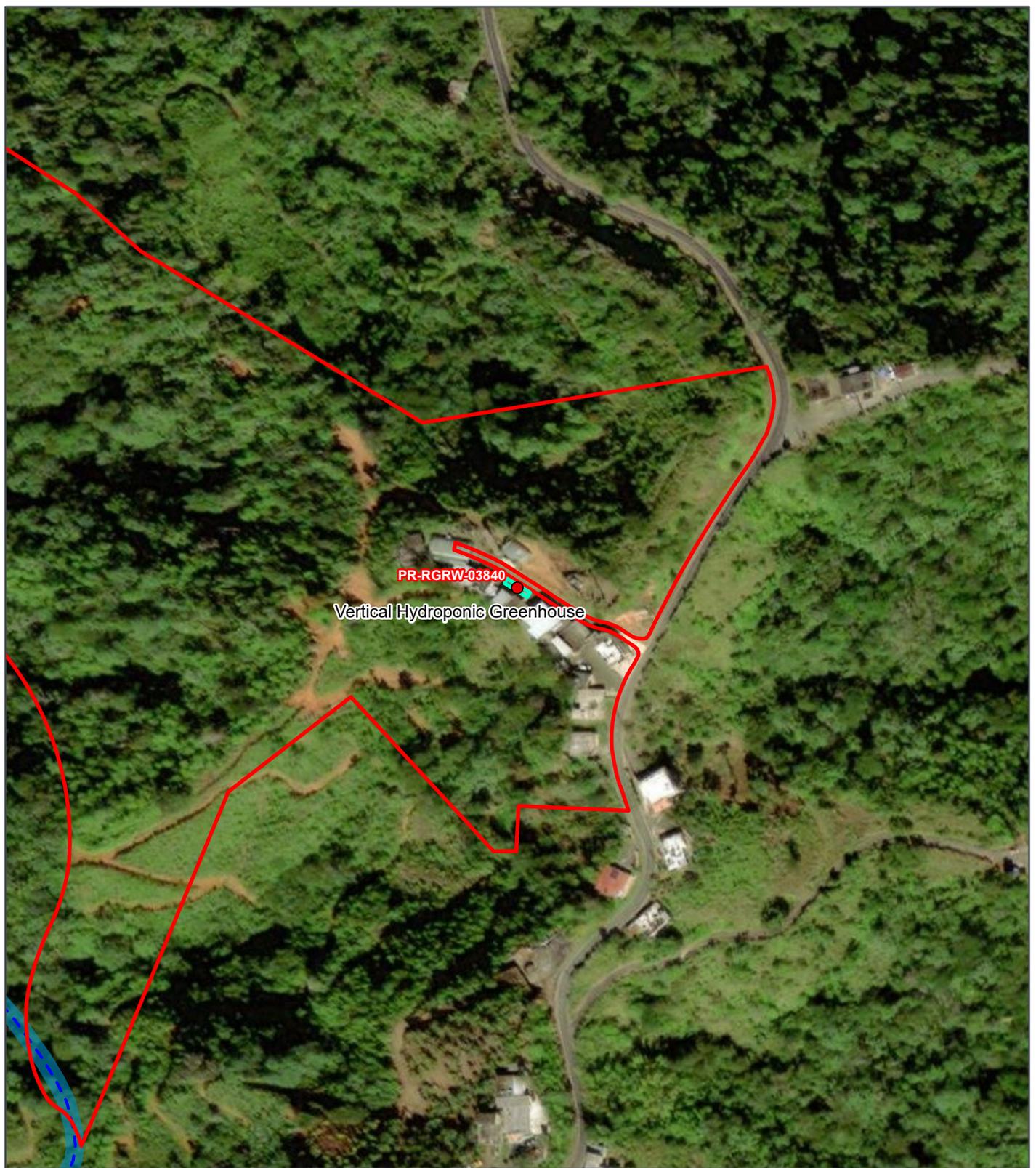
Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.896629°W 18.168857°N

Base Map: USA NAIIP Imagery  
Imagery Year: 2022  
Updated: 5/8/2024

Layout: Site Vicinity  
Aprx: 72428\_ReGrowTier2Maps



**Figure 3**  
**Wetlands Map**



REGROW PROGRAM

### Wetlands Protection Map

Applicant ID: PR-RGRW-03840



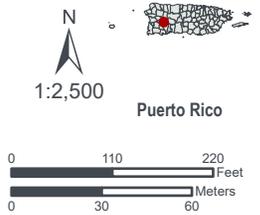
- Site
- Site Parcel
- Project Footprint (Option)
- - - NHD Stream
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

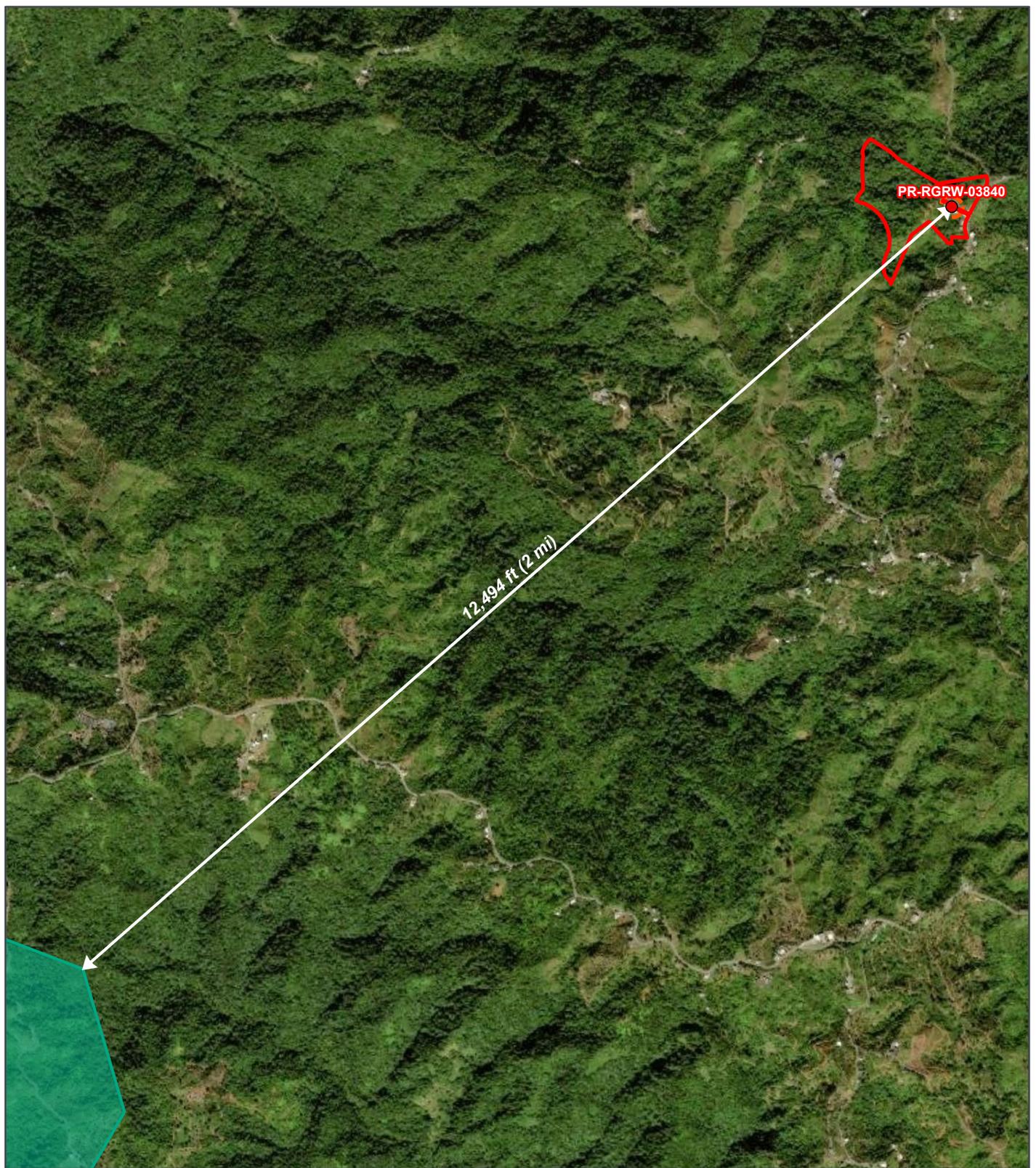
Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: <https://apps.nationalmap.gov/downloader/#/>  
<https://www.fws.gov/program/national-wetlands-inventory/data-download>  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Wetlands Protection



**Figure 4**  
**Critical Habitat Map**



REGROW PROGRAM

**Critical Habitat Map**

Applicant ID: PR-RGRW-03840



- Site
- Site Parcel
- Buffer (100-ft)
- Critical Habitat - Final
- National Wildlife Refuges

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.909191°W 18.157626°N

Data Source: [https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS\\_Critical\\_Habitat/](https://services.arcgis.com/QVENGdaPbd4LUkLV/arcgis/rest/services/USFWS_Critical_Habitat/)  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Critical Habitat  
Aprx: 72428\_ReGrowTier2Maps



1:18,000



## **APPENDIX B**

### **Photographic Log**

Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 01	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> West	
<b>Description:</b> This is an overview of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows multiple structures built around the 1980s for cultivating mainly coffee: 1 <sup>st</sup> structure to the left is a garage or warehouse, 2 <sup>nd</sup> structure is a 2000-gallon water tank, 3 <sup>rd</sup> structure is a cooler and a place to process the crops, 4 <sup>th</sup> structure is a greenhouse managed by the applicant.	



<b>Photo #:</b> 02	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> North	
<b>Description:</b> The overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows two (2) greenhouses managed by the applicant, and in the middle, there are multiple freight containers or similar, one of them a 1500-gallon cistern.	



Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 03	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> East	
<b>Description:</b> This overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a partial view of the area the applicant is cultivating, the gravel/dirt/grass access road, and a partial view of a structure used by the landowner to cultivate coffee.	



<b>Photo #:</b> 04	<b>Date:</b> 09/15/2023
<b>Photo Direction:</b> South	
<b>Description:</b> This overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a partial view of a structure used by the landowner to cultivate coffee with a cut-open cistern (empty), a 55-gallon drum (empty), and a garage/warehouse.	



Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 05	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> West		
<b>Description:</b> This overview was from the center of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a garage/warehouse, a 2000-gallon above-ground water tank, and a cooler.		

<b>Photo #:</b> 06	<b>Date:</b> 09/15/2023	
<b>Photo Direction:</b> South		
<b>Description:</b> Overview from the north corner of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a structure used by the landowner to cultivate coffee with a cut-open cistern (empty), a 55-gallon drum (empty) on a pick-up truck, and a garage/warehouse.		

Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 07	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> West		
<b>Description:</b> Overview from the east corner of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a garage/warehouse, a 2000-gallon above-ground water tank, and a cooler.		

<b>Photo #:</b> 08	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> North		
<b>Description:</b> Overview from the south corner of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows multiple freight containers or similar, one of them a 1500-gallon water tank, a greenhouse managed by the applicant, and the area's vegetation and landform.		

Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 09	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> East		
<b>Description:</b> This overview was from the west corner of the site location for a vertical hydroponic - greenhouse 40x8x9.5ft over three (3) concrete blocks 8x2ft, 24 inches thick. The picture shows a partial view of the area the applicant is cultivating, the gravel/dirt/grass access road, a partial view of a structure used by the landowner to cultivate coffee, and the area's vegetation.		

<b>Photo #:</b> 10	<b>Date:</b> 09/15/2023	
<b>Photo Direction:</b> Northwest		
<b>Description:</b> This picture overlooks the area where the applicant plans to connect the electricity provided by LUMA/ GENERA from the cooler's roof electric pole using an above-ground cable to the vertical hydroponic – greenhouse; it also shows a partial view of the garage, warehouse, the 2000-gallon water tank, and the cooler with the greenhouse at the very end of the picture. Eventually, the applicant wants to install a solar system on the greenhouse roof using personal funds; if the electricity service fails, he will use a generator.		

Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 11	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> The applicant plans to use the potable water provided by the AAA (PRASA in English) from the sink outside the cooler with an above-ground hose or water pipe as shown in the picture.		

<b>Photo #:</b> 12	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> North		
<b>Description:</b> The property has two main water tanks, in the picture it is shows a 1500-gallon above-ground water tank and it also overlooks a hydroponic table being built, a freight container, the greenhouses the applicant is managing, and the area's vegetation and landform.		

Project #: PR-RGRW-03840	Photographer: Delise Torres-Ortiz
Location Address: Carr. 426 Km 1.1 Bo. Indiera Baja, Maricao, PR 00606	Coordinates: 18.169206, -66.896007

<b>Photo #:</b> 13	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> Southwest		
<b>Description:</b> The property has two main water tanks, in the picture shows a 2000-gallon above-ground water tank and it also overlooks some equipment, partial views of the garage/warehouse (left) and cooler (right) with the area's vegetation and landform.		

<b>Photo #:</b> 14	<b>Date:</b> 09/15/ 2023	
<b>Photo Direction:</b> Northwest		
<b>Description:</b> This structure is inside the property but belongs to the landowner, the project will be located behind this structure built around the 1980s.		

## **APPENDIX C**

### **USFWS Information for Planning and Consultation**



## United States Department of the Interior



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

In Reply Refer To:

08/09/2024 18:09:43 UTC

Project Code: 2024-0128560

Project Name: PR-RGRW-03840 RFA-053

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

This species list is provided by:

Caribbean Ecological Services Field Office

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

Post Office Box 491

Boqueron, PR 00622-0491

(786) 244-0081

Attachment(s):

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

## OFFICIAL SPECIES LIST

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

This species list is provided by:

**Caribbean Ecological Services Field Office**

Post Office Box 491

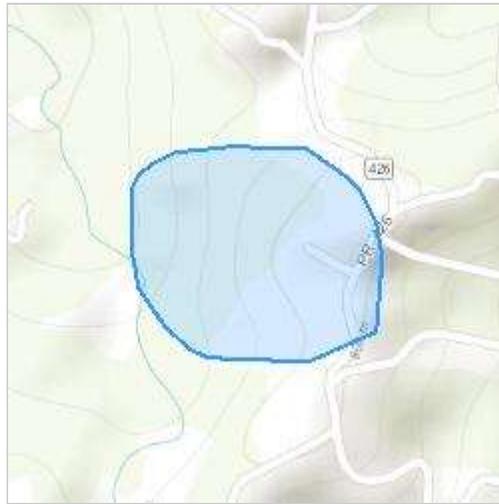
Boqueron, PR 00622-0491

(939) 320-3135

## PROJECT SUMMARY

Project Code: 2024-0128560  
Project Name: PR-RGRW-03840 RFA-053  
Project Type: Disaster-related Grants  
Project Description: Installation of a vertical hydroponic greenhouse  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.169278900000002,-66.89655838421214,14z>



Counties: Maricao County, Puerto Rico

## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

**BIRDS**

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

**REPTILES**

NAME	STATUS
Puerto Rican Boa <i>Chilabothrus inornatus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6628">https://ecos.fws.gov/ecp/species/6628</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/MKF2NYGIRJCTFD6PULC6OMD5NE/documents/generated/7159.pdf">https://ipac.ecosphere.fws.gov/project/MKF2NYGIRJCTFD6PULC6OMD5NE/documents/generated/7159.pdf</a>	Endangered

**INSECTS**

NAME	STATUS
Puerto Rican Harlequin Butterfly <i>Atlantea tulita</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9005">https://ecos.fws.gov/ecp/species/9005</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/MKF2NYGIRJCTFD6PULC6OMD5NE/documents/generated/7168.pdf">https://ipac.ecosphere.fws.gov/project/MKF2NYGIRJCTFD6PULC6OMD5NE/documents/generated/7168.pdf</a>	Threatened

**CRITICAL HABITATS**

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

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

## USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

## BALD & GOLDEN EAGLES

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

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

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

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

## MIGRATORY BIRDS

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

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

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

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

## WETLANDS

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

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

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

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

## **IPAC USER CONTACT INFORMATION**

Agency: SWCA

Name: Rachel Howsmon

Address: 13 Palafox Pl

City: Pensacola

State: FL

Zip: 32502

Email: rachel.howsmon@swca.com

Phone: 8504948710

**APPENDIX D**

**USFWS Consistency Letter**



## United States Department of the Interior



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

In Reply Refer To:

08/09/2024 18:17:42 UTC

Project code: 2024-0128560

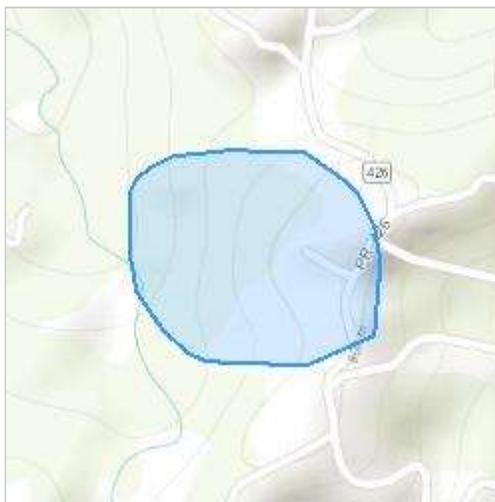
Project Name: PR-RGRW-03840 RFA-053

Subject: Consistency letter for the project named 'PR-RGRW-03840 RFA-053' for specified threatened and endangered species, that may occur in your proposed project location, pursuant to the IPaC determination key titled Caribbean Determination Key (DKey).

Dear Applicant:

Thank you for using the assisted evaluation keys in IPaC. This letter is provided pursuant to the Service's authority under the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531et seq.). On August 09, 2024, Rachel Howsmon used the Caribbean DKey; dated April 03, 2024, in the U.S. Fish and Wildlife Service's online [IPaC application](#) to evaluate potential impacts to federally listed species, from a project named 'PR-RGRW-03840 RFA-053'. The project is located in Maricao County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.169278900000002,-66.89655838421214,14z>



The following description was provided for the project 'PR-RGRW-03840 RFA-053':

### Installation of a vertical hydroponic greenhouse

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

<b>Species</b>	<b>Listing Status</b>	<b>Determination</b>
Puerto Rican Boa ( <i>Chilabothrus inornatus</i> )	Endangered	May affect
Puerto Rican Broad-winged Hawk ( <i>Buteo platypterus brunnescens</i> )	Endangered	NLAA
Puerto Rican Sharp-shinned Hawk ( <i>Accipiter striatus venator</i> )	Endangered	NLAA

**Consultation with the Service is not complete.** Further consultation with the Caribbean Ecological Services office is required for those species with a determination of "may affect" listed above. Please contact the Caribbean Ecological Services office to discuss methods to avoid or minimize potential adverse effects to those species.

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

**Action Description**

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

**1. Name**

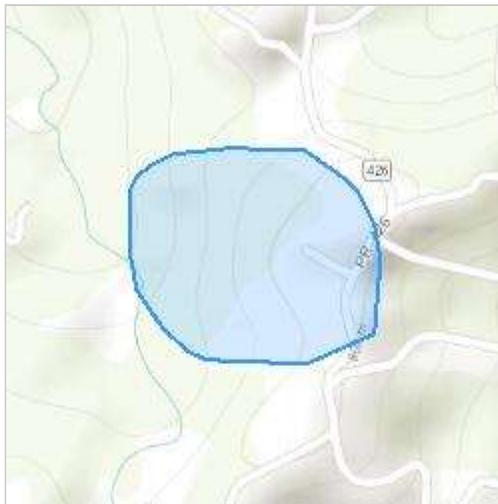
PR-RGRW-03840 RFA-053

**2. Description**

The following description was provided for the project 'PR-RGRW-03840 RFA-053':

Installation of a vertical hydroponic greenhouse

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.169278900000002,-66.89655838421214,14z>



## QUALIFICATION INTERVIEW

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

*No*

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

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

*No*

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

*No*

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

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

*No*

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

*No*

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

*No*

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

*No*

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

*No*

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

*No*

10. Is the proposed project adjacent or within a forested area?

**Note:** Examples of immediately adjacent to forested areas are rock walls and haystack hills (“mogotes”), wet montane forest, lowland wet forest, remnant coastal, mangrove forest, damp and dry limestone karst forests, pastureland with patches of exotic trees.

*Yes*

11. Is the project area more than 1 acre?

*No*

12. Is the proposed project an existing facility or the expansion of an existing facility within the footprint of the already developed area?

*No*

13. Is the proposed project a new facility which would require earth moving, vegetation clearing, or debris removal using heavy machinery, the use of staging areas, construction of temporary access roads?

*No*

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

**Automatically answered**

*Yes*

15. Will the proposed project be conducted during the Puerto Rican sharp-shinned hawk or Puerto Rican Broad-winged hawk breeding season between December and July?

*No*

16. If nests are detected within the project area, will the proposed project avoid any disturbance until fledging leaves the nest permanently?

*Yes*

17. Outside of the breeding season, in the event of a Sharp-shinned hawk nest encounter, would a buffer zone be implemented?

**Note:** The species or nests might be found out of the breeding season. A buffer zone is an area around the detected nests where no actions or activities can take place. The buffer zone should be clearly marked or delineated in the field and in the project plans.

*Yes*

18. Will the Fish and Wildlife Service and the Department of Natural Resources be notified immediately if a nest is detected?

*Yes*

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

**Automatically answered**

*Yes*

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

**Automatically answered**

*Yes*

## **IPAC USER CONTACT INFORMATION**

Agency: SWCA

Name: Rachel Howsmon

Address: 13 Palafox Pl

City: Pensacola

State: FL

Zip: 32502

Email: rachel.howsmon@swca.com

Phone: 8504948710

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Department of Housing and Urban Development

## **APPENDIX E**

### **Project Design Guidelines**

# *General Project Design Guidelines (2 Species)*

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# Species Document Availability

## Species with general design guidelines

Puerto Rican Boa *Chilabothrus inornatus*

Puerto Rican Harlequin Butterfly *Atlantea tulita*

## Species without general design guidelines available

Puerto Rican Broad-winged Hawk *Buteo platypterus brunnescens*

Puerto Rican Parrot *Amazona vittata*

Puerto Rican Sharp-shinned Hawk *Accipiter striatus venator*

# General Project Design Guidelines - Puerto Rican Sharp-shinned Hawk and 4 more species

Published by Caribbean Ecological Services Field Office for the following species included in your project

Puerto Rican Sharp-shinned Hawk *Accipiter striatus venator*

Puerto Rican Parrot *Amazona vittata*

Puerto Rican Harlequin Butterfly *Atlantea tulita*

Puerto Rican Boa *Chilabothrus inornatus*

Puerto Rican Broad-winged Hawk *Buteo platypterus brunnescens*



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

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

Section 7 (a)(1) of the Endangered Species Act (ESA) mandates Federal agencies to aid in the conservation of federally listed species. Section 7 (a)(2) requires the Federal agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of federally listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect listed species, such as approval of private activities through the issuance of Federal funding, permits, licenses, or any other actions. Any person that injures, captures, or kills a Puerto Rican harlequin butterfly, or destroy its eggs or any other of its life stage (caterpillars, chrysalis) is subject to penalties under the ESA. Thus, Federal Actions agencies must initiate consultation with the Service under Section 7 of the ESA for any action that could affect the Puerto Rican harlequin butterfly. To initiate a consultation under the Section 7 of the ESA, the Federal Action agency must submit a project package to the Service with the established minimum requirements (see below). The conservation measures included below should be incorporated into the project plans to minimize possible impacts to the Puerto Rican harlequin butterfly. Download the [project evaluations fact sheet](#) to learn more about the requirements or visit our [project evaluations webpage](#).



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

February 2024

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

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

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

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

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

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

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

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

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

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

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

# General Project Design Guidelines - Puerto Rican Sharp-shinned Hawk and 4 more species

Published by Caribbean Ecological Services Field Office for the following species included in your project

Puerto Rican Sharp-shinned Hawk *Accipiter striatus venator*

Puerto Rican Parrot *Amazona vittata*

Puerto Rican Harlequin Butterfly *Atlantea tulita*

Puerto Rican Boa *Chilabothrus inornatus*

Puerto Rican Broad-winged Hawk *Buteo platypterus brunnescens*

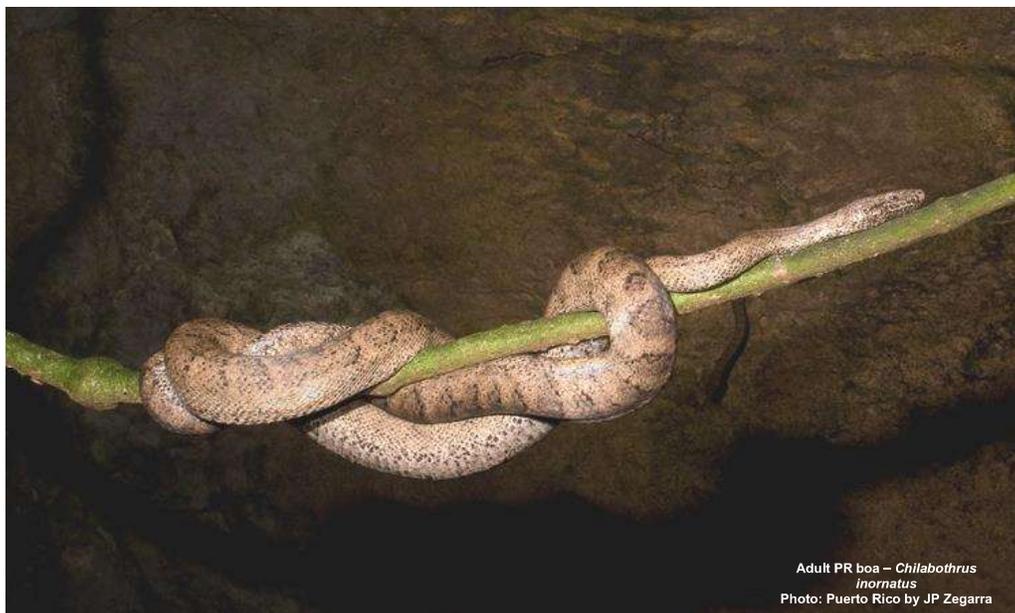


## U.S. FISH AND WILDLIFE SERVICE CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

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

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

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



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

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

#### Conservation Measures:

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

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

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

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

## Conservation Measures for the Broad-winged hawk (*Buteo platypterus brunnescens*)

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 broad-winged hawk 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 Puerto Rican broad-winged hawk is a small hawk with dark chocolate-brown upperparts, heavily streaked rufous breast, and a broadly banded black and white tail. Adult male and female are similar in appearance, but the female is slightly larger. This species occurs in elfin woodland, sierra palm, caimitillo-granadillo, and tabonuco forest types of the Río Abajo Commonwealth Forest, Carite Commonwealth Forest, and El Yunque National Forest as well as within hardwood plantations, shade coffee plantations, and mature secondary forests. The Puerto Rican broad-winged hawk population is estimated at about 125 individuals island-wide.



The broad-winged hawk was federally listed in 1994. The broad-wing prefers to hunt from a perch under the forest canopy for a better view of potential prey in a forest clearing, trail or river below. Each hunting pair requires a range of 40 hectares (98 acres). The Broad-wing builds a nest of sticks in February and March, laying 2 to 4 white/brown-spotted eggs. The female incubates the eggs for almost a month while the male searches for food. The young fledge around April or May about 1 month after hatching and can fly about 6 weeks after hatching. The parents feed the young for a few weeks after they leave the nest. The voice is a high-pitched whistle.

The hawk is an uncommon and local resident in the El Yunque National Forest, the Río Abajo State Forest, and the Toro Negro State Forest.

The US Fish and Wildlife Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the hawk 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 here.

1. For any project activity that involves construction or tree-disturbing activities, all construction workers will be required to participate in environmental awareness training. The training will educate workers on: (a) special-status species that may occur in the work area, (b) procedures

to follow in the event a species is observed, and (c) other environmental BMPs and emergency spill response protocols.

2. All non-emergency work activities will be confined to daylight hours (i.e., sunrise to sunset), unless necessary for assessing or protecting biological resources.
3. Whenever possible, impacts to native nesting birds will be avoided by not conducting Project activities that involve clearing of vegetation, generation of mechanical noise, or tree disturbance during the typical breeding season for this hawk (February and March), if the hawk is determined to be present.
4. If Project activities must be conducted during the nesting bird season, the Contractor will conduct surveys for nesting birds within a 1,000-ft radius of the construction area. If nests are detected, the Contractor will notify the USFWS and establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active nests will be a minimum of 250 feet, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until young have fledged or the nests become inactive.
5. If a broad-winged hawk is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #s: ((787) 724-5700, (787) 230-5550, (787) 771-1124).
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.

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

### Conservation Measures for the Puerto Rican Amazon (Parrot) (*Amazona vittata*)

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 Rican Parrot 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 Puerto Rican amazon (*Amazona vittata*), also known as the Puerto Rican parrot (Puerto Rican Spanish: cotorra puertorriqueña) or iguaca, is the only extant parrot endemic to the archipelago of Puerto Rico and belongs to the Neotropical genus *Amazona*. Measuring 28–30 cm (11.0–11.8 in), the bird is a predominantly green parrot with a red forehead and white rings around the eyes.



The parrot was federally listed as endangered in 1967. The parrot reaches sexual maturity at between three and four years of age. It reproduces once a year (between the months of February to June) and is a cavity nester. Once the female lays eggs, she will remain in the nest and continuously incubate them until hatching (about 24 to 28 days). The chicks are fed by both parents and will fledge 60 to 65 days after hatching. This parrot's diet is varied and consists of flowers, fruits, leaves, bark and nectar obtained from the forest canopy.

The species is the only remaining native parrot to Puerto Rico and has been listed as critically endangered by the World Conservation Union since 1994. Once widespread and abundant, the population declined drastically in the 19th and early 20th centuries with the removal of most of its native habitat; the species has completely vanished from Vieques and Mona Island. Conservation efforts commenced in 1968 to save the bird from extinction. The habitat of the parrot is generally identified as

the Palo Colorado, Palma de Sierra, and Tabonuco forests types of the upper zones of the Luquillo Mountains within the El Yunque National Forest.

The US Fish and Wildlife Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the hawk 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 here.

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

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

## Conservation Measures for the sharp-shinned hawk (*Accipiter striatus venator*)

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 sharp-shinned hawk 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 Puerto Rican sharp-shinned hawk is a small hawk measuring approximately 28 to 33 centimeters (11 to 13 inches). The dark slate gray upper parts and heavily barred rufous underparts of the adults are distinctive. Immatures are brown above and heavily streaked below. It has short, squared tail, often appearing notched when folded, and small head and neck. In flight, the short, rounded wings and long, narrow tail is characteristic. Adult males and females are similar in appearance, but the female is larger. The SSHA in Puerto Rico exhibits insular population traits, including small clutches, low productivity, and extended breeding periods. Historic information described this species as rare, uncommon, and occurring in restricted habitats in small numbers.



The sharp-shinned hawk was federally listed as endangered in 1994. The results of comprehensive population surveys suggest a decline of the island-wide population from 150 individuals in 1992 to about 100 individuals in 2016. In addition, a significant decline of this species have been reported in the Toro Negro Commonwealth Forest (TNCF) and Maricao Commonwealth Forest (MCF), which were previously considered the center of distribution of this species in Puerto Rico. Studies estimated the population of MCF as just 8 individuals and the population in TNCF as 26 individuals indicating a population decline of 53% and 86% in TNCF and MCF, respectively.

The US Fish and Wildlife Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the hawk 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 here.

1. For any project activity that involves construction or tree-disturbing activities, all construction workers will be required to participate in environmental awareness training. The training will educate workers on: (a) special-status species that may occur in the work area, (b) procedures to follow in the event a species is observed, and (c) other environmental BMPs and emergency spill response protocols.
2. All non-emergency work activities will be confined to daylight hours (i.e., sunrise to sunset), unless necessary for assessing or protecting biological resources.
3. Whenever possible, impacts to native nesting birds will be avoided by not conducting Project activities that involve clearing of vegetation, generation of mechanical noise, or tree disturbance during the typical breeding season for this hawk (March and April), if the hawk is determined to be present.
4. If Project activities must be conducted during the nesting bird season, the Contractor will conduct surveys for nesting birds within a 1,000-ft radius of the construction area. If nests are detected, the Contractor will notify the USFWS and establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active nests will be a minimum of 250 feet, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until young have fledged or the nests become inactive.
5. If a sharp-shinned hawk is found within any of the working or construction areas, activities should stop at that area and information recorded. Designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for additional directions (PRDNER phone #: ((787) 724-5700, (787) 230-5550, (787) 771-1124).
6. Designated critical habitat within the vicinity of project activities will be identified. All Proposed Project actions will be designed to avoid direct and indirect adverse modifications to these areas. Minimization measures, such as establishing and maintaining buffers around areas of designated critical habitat will be implemented in the event that avoidance is not feasible.
7. If critical habitat may be adversely modified by the implementation of Proposed Project actions, the area to be modified will be evaluated by a qualified biologist to determine the potential magnitude of the project effects (e.g., description of primary constituent elements present and quantification of those affected) at a level of detail necessary to satisfy applicable

environmental compliance and permitting requirements. This information shall be submitted to the PRDNER as shown in Number 5 above.

8. Projects must comply with all state laws and regulations. Please contact PRDNER for further guidance.

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
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Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)  
Office phone (786) 244-0081 or mobile (305) 304-1386

**Radon**  
**Attachments**



August 20, 2024

Mrs. Carmen R. Guerrero Pérez
Director
Caribbean Environmental Protection Division
City View Plaza II – Suite 7000
#48 Rd. 165 km 1.2
Guaynabo, PR 00968-8069

Via email: guerrero.carmen@epa.gov

RE: Request for information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

This Notice emphasizes the importance of radon testing and mitigation in ensuring safe living environments, particularly in HUD-assisted properties. PRDOH, as the grantee of the Community Development Block Grant for Disaster Recovery and Mitigation (CDBG-DR/MIT), is responsible for ensuring compliance with environmental requirements under CDBG-DR/MIT programs. To fulfill our obligations under this Notice, we must compile comprehensive and up-to-date information on radon levels, testing practices, and any mitigation efforts within the islands of Puerto Rico.

Specifically, we are seeking for possible availability of the following information:

Radon testing data – Results from radon testing conducted within your agency's purview, including details on location, testing methods, and recorded radon levels.

Reports and assessments – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.

Policies and guidelines – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

Historical data – If available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

[Handwritten signature]

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc: Mr. Oleg Povelko, Povelko.Oleg@epa.gov
Mr. Matthew Lantta, lantta.matthew@epa.gov



August 20, 2024

Dr. Silvina Cancelos
Professor
College of Engineering
University of Puerto Rico – Mayagüez Campus
259 Norte Blvd. Alfonso Valdés Cobián
Mayagüez, Puerto Rico

Via email: silvina.cancelos@upr.edu

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Sincerely,

[Handwritten signature]

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc: Dr. Carlos Marín, carlos.marin3@upr.edu



August 20, 2024

Dr. Jessica Izarry  
Director  
Office of Island Affairs  
U.S. Centers for Disease Control and Prevention  
1324 CII Canada, San Juan, 00920  
Guaynabo, PR 00968-8069

Via email: [OIA@cdc.gov](mailto:OIA@cdc.gov)

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Sincerely,

William O. Rodríguez Rodríguez, Esq.  
Secretary



August 20, 2024

Mrs. Anais Rodríguez  
Secretary  
Puerto Rico Department of Natural Resources  
Carretera 8838, km. 6.3, Sector El Cinco,  
Río Piedras San Juan, PR 00926

Via email: [anais.rodriguez@dma.pr.gov](mailto:anais.rodriguez@dma.pr.gov)

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William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. Luis Márquez, [secretariogaire@dma.pr.gov](mailto:secretariogaire@dma.pr.gov)  
Eng. Amarilys Rosario, [aire@dma.pr.gov](mailto:aire@dma.pr.gov)  
Mrs. Elid Ortegá, [ortega@dma.pr.gov](mailto:ortega@dma.pr.gov)



August 20, 2024

Dr. Carlos R. Mellado López  
Secretary  
Puerto Rico Department of Health  
PO Box 70184  
San Juan, PR 00936-8184

Via email: [drCarlos.mellado@salud.pr.gov](mailto:drCarlos.mellado@salud.pr.gov)

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Sincerely,

William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. Raúl Hernández Dabla, [rahernandez2@salud.pr.gov](mailto:rahernandez2@salud.pr.gov)



August 20, 2024

Mrs. Holly Weyers  
Regional Director, Southeast – Puerto Rico  
US Geological Survey  
3916 Sunset Ridge Road  
Raleigh, NC 27607

Via email: [hsweyers@usgs.gov](mailto:hsweyers@usgs.gov)

**RE: Request for Information regarding available data on radon testing and levels within Puerto Rico**

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Sincerely,

William O. Rodríguez Rodríguez, Esq.  
Secretary

Cc: Mr. R. Randall Schumann, [rschumann@usgs.gov](mailto:rschumann@usgs.gov)

**From:** Charp, Paul (CDC/NCEH/DEHSP) <pac4@cdc.gov>  
**Sent:** Tuesday, September 3, 2024 6:36 AM  
**To:** Miranda, Sandra (CDC/PHIC/DPS); Irizarry, Jessica (CDC/PHIC/DPS); Rzeszotarski, Peter (CDC/NCEH/DEHSP); Vinson, D. Aaron (CDC/NCEH/DEHSP)  
**Cc:** Kostak, Liana (CDC/PHIC/DPS); Vazquez, Germaine (CDC/NCEH/DEHSP)  
**Subject:** RE: REHi: Puerto Rico Request for Information- Randon testing and levels

Good morning, Sandra and others,

In response to the request from Mr. William Rodriguez of the Department of Housing, Government of Puerto Rico, I have reviewed all the available data within the CDC National Environmental Public Health Tracking Network system for data related to radon in Puerto Rico. In addition to the tracking data available on the internet, I also reached out to Mr. Aaron Vinson of the NCEH Tracking Branch.

I was not able to find any data in the CDC systems and this was confirmed by Mr. Vinson. We also reached out the US Environmental Protection Agency who indicated they had no radon data in their systems. Please relay this information to Mr. Rodriguez in your response to his requests

If you have any additional questions, please contact me.

Thank you and best regards,

Paul A. Charp, Ph.D., Fellow, HPS  
Senior Health Physicist  
Emerging Environmental Hazards and Health Effects Branch (EEHHEB)  
Division of Environmental Health Science and Practice (DEHSP)  
National Center for Environmental Health (NCEH)  
Centers for Disease Control and Prevention (CDC)  
pcharp@cdc.gov  
770-488-0723 office  
404.388.0614 Cell



**From:** Schumann, R. Randall <rschumann@usgs.gov>  
**Sent:** Wednesday, August 21, 2024 4:39 PM  
**To:** Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Weyers, Holly S <hsweyers@usgs.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>  
**Subject:** RE: Request for Information- Radon testing and levels

Dear Ms. Medina Smaine,

In the early 1990s the U.S. Geological Survey (USGS) conducted geologic assessments of radon potential for all 50 states and the territories of Guam and Puerto Rico, in collaboration with the U.S. EPA. I conducted the geologic radon potential assessment for Puerto Rico. The PDF file of the report is too large to attach to this message but it can be obtained at <https://pubs.usgs.gov/of/1993/0292k/report.pdf>. The USGS did not conduct indoor radon testing and we did not conduct field studies associated with this assessment; it was based on existing data. Mr. David Saldana of the Puerto Rico Department of Health kindly provided us with data for 610 homes that were tested for indoor radon by his agency between 1993 and 1995, which are summarized in the report. I am not aware of any other radon-related geologic studies conducted in the Commonwealth of Puerto Rico by the U.S. Geological Survey.

Best regards,

R. Randall Schumann  
Scientist Emeritus  
U.S. Geological Survey  
Geosciences and Environmental Change Science Center  
Denver, Colorado, USA  
[rschumann@usgs.gov](mailto:rschumann@usgs.gov)  
<https://www.usgs.gov/staff-profiles/r-randall-schumann>

-----

**From:** Raul Hernandez Doble <rhernandez2@salud.pr.gov>  
**Sent:** Wednesday, August 21, 2024 2:13:31 PM  
**To:** Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Dr. Carlos Mellado <drcarlos.mellado@salud.pr.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Mayra Toro Tirado <mtoro@salud.pr.gov>  
**Subject:** RE: [EXTERNAL]Request for Information- Radon testing and levels

Good afternoon. Ms. Medina

I regret to inform that we do not have any recent information on radon testing, since we do not have a certified radiation laboratory certified for radon testing. There are companies that sell test kits available online that can be done and mailed to a testing laboratory. There are also lists of radon contractors and these companies that process radon testing cartridges with instructions, on the Environmental Protection Agency Indoor air Quality web page. The last radon study in Puerto Rico done by the PR Department of Health was done on the year 1993.

Raul Hernandez Doble  
Director, Seccion Salud Radiologica  
Division de Salud Ambiental  
Secretaria Auxiliar para la Vigilancia y la Proteccion de la Salud Publica  
[rhernandez2@salud.gov.pr](mailto:rhernandez2@salud.gov.pr)  
Phone: (787)765-2929 ext. 3210

---

**From:** Reyes, Brenda <Reyes.Brenda@epa.gov>  
**Sent:** Wednesday, September 18, 2024 11:48 AM  
**To:** Cesar O Rodriguez Santos <cesarrodriguez@drna.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Silvana Cancelos Mancini <silvana.cancelos@upr.edu>; Melanie Medina Smaine <mmedina@vivienda.pr.gov>  
**Cc:** Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Povetko, Oleg (he/him/his) <Povetko.Oleg@epa.gov>  
**Subject:** RE: Request for Information- Randon testing and levels

Saludos.

La EPA esta trabajando una respuesta a su petición. Se sometió borrador a la directora y el subdirector para su aprobación y firma.

Brenda Reyes Tomassini  
Public Affairs  
U.S. EPA  
Region 2  
Caribbean Environmental Protection Division  
(787) 977-5869/(787) 977-5865  
Mobile: 202-834-1290

---

**From:** Silvana Cancelos Mancini <[silvana.cancelos@upr.edu](mailto:silvana.cancelos@upr.edu)>  
**Sent:** Friday, September 6, 2024 15:04  
**To:** Melanie Medina Smaine <[mmedina@vivienda.pr.gov](mailto:mmedina@vivienda.pr.gov)>  
**Cc:** Elaine Dume Mejia <[Edume@vivienda.pr.gov](mailto:Edume@vivienda.pr.gov)>; Luz S Colon Ortiz <[Lcolon@vivienda.pr.gov](mailto:Lcolon@vivienda.pr.gov)>; Aldo A. Rivera-Vazquez <[aarivera@vivienda.pr.gov](mailto:aarivera@vivienda.pr.gov)>; Maritza Rosa Olivares <[maritzarosaolivares@drna.pr.gov](mailto:maritzarosaolivares@drna.pr.gov)>; Reyes, Brenda <[Reyes.Brenda@epa.gov](mailto:Reyes.Brenda@epa.gov)>; Povetko, Oleg <[Povetko.Oleg@epa.gov](mailto:Povetko.Oleg@epa.gov)>  
**Subject:** Re: Request for Information- Randon testing and levels

Estimada Melanie Medina  
Quería dejarte saber que recibimos su correo el 21 de agosto al igual que el de Maritza Rosa el pasado 4 de septiembre. Ya las personas involucradas de EPA, junto conmigo y el Dr. Marín estamos al tanto del asunto y estamos trabajando para poder enviarles la información.

Atentamente

Silvana Cancelos  
Professor  
Associate Director  
Mechanical Engineering Department  
University of Puerto Rico - Mayaguez  
Call BOX 9000 Mayaguez PR 00680  
Tel: 787-832-4040 ext 5956  
email: [silvana.cancelos@upr.edu](mailto:silvana.cancelos@upr.edu)



Bubble Dynamics Lab  
University of Puerto Rico - Mayaguez



EPA REGION 2  
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION

September 23, 2024

**VIA EMAIL**

William O. Rodriguez Rodriguez, Esq.  
Secretary  
Puerto Rico Department of Housing  
Barbosa Ave. 606 Building Juan C. Cordero  
San Juan, PR 00917  
Email: W.Rodriguez@vivienda.pr.gov

**RE: EPA Response to August 20, 2024 request for information of data on radon testing and levels in Puerto Rico**

Dear Honorable Secretary Rodriguez Rodriguez:

This communication is in response to your letter of August 20, 2024 addressed to the Puerto Rico Department of Natural and Environmental Resources (DNER) and referred to the U.S. Environmental Protection Agency (EPA) regarding available data on radon testing and levels within Puerto Rico.

EPA's National Radon Action Plan 2021–2025 sets a goal for the nation to find, fix and prevent high indoor radon levels in 8 million buildings by 2025 and prevent 3,500 lung cancer deaths per year. Under this Plan, leaders from across multiple sectors are working together to plan, guide, and sustain nationwide action to prevent exposure to radon.

Due to the lack of data in Puerto Rico, EPA undertook an investigation in collaboration with the University of Puerto Rico-Mayaguez (UPRM) Campus, Departments of Civil Engineering and Surveying and Mechanical Engineering, to find out if radon presented a problem in Puerto Rico. Up until 2021, the only data we had for Puerto Rico was a 1993-1995 mail-in radon screening study referred to by the U.S. Geological Survey report (USGS, 1995) in which the USGS concluded that several areas of Puerto Rico have the geologic potential to generate indoor radon levels exceeding the EPA Action Level of 4 pCi/L (picocuries per liter), perhaps locally reaching very high levels above 50 pCi/L, if a house construction and

ventilation allow for soil-gas radon to enter and concentrate within the structure.<sup>1</sup> According to the USGS report, most of these areas are located in the northwest part of the island. Please note that the actual 1993-1995 study documentation is not available to the EPA.

Typical radon testing technology used in mainland United States (charcoal canisters or electric-powered devices) are impractical in Puerto Rico because of high humidity and power outages. The recovery and rebuilding of communities following the aftermath of 2017 Hurricanes Irma and Maria presented an opportunity to develop radon prevention and mitigation strategies in 2019. Initially, EPA sampled indoor radon air in over 170 single-family residences in the municipalities of San Sebastian, Lares, Ciales, Arecibo, Morovis, Camuy, and Hatillo and later expanded the project to other municipalities such as Rincon, Aguada, Aguadilla, Isabela, Quebradillas, Barceloneta and Vega Baja. The quality assurance protocols were anchored in American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) standards of practice (ANSI/AARS, 2019). The sampling was designed in two stages: scoping and confirmatory sampling. The scoping sampling was conducted using Corentium Home (CH) electronic monitors and E-Perm systems. Locations measuring above the EPA Action Level of 4 pCi/L with CH were measured at the second stage of the sampling using RAD7 and Corentium Pro Continuous Radon Monitors (CRMs). Nationally certified radon sampling professionals led by one such professional from the UPRM conducted confirmatory sampling in the second stage. Also, during the study, the nationally certified radon mitigation professionals inspected several homes with elevated indoor radon levels.

Mapping radon in Puerto Rico proved to be a complicated endeavor given the COVID-19 pandemic in 2020. EPA and UPRM continue to work on the project, however, results have not been finalized, and no scientific report has been published yet. Unfortunately, EPA cannot share preliminary data at this time because it contains privileged information. Nevertheless, preliminary data from the study does show homes with levels over 4 pCi/L (EPA Action Level) that might need mitigation to protect the health of their inhabitants.

Although many states have developed laws and regulations governing radon disclosure, certification, and mitigation, Puerto Rico lacks legislation or mandatory radon testing provisions for new construction, remodeling, selling or buying homes. Given this loophole and aiming to answer your request, the EPA can provide information on Best Management Practices for sampling indoor radon in Puerto Rico.

<sup>1</sup> Reference: USGS. Geologic Radon Potential of Guam and Puerto Rico, Report 93-292-K. Washington, DC: USGS. Retrieved 9/11/2024, from <https://pubs.usgs.gov/of/1993/0292k/report.pdf>.

CITY VIEW PLAZA II BUILDING, 7<sup>TH</sup> FLOOR  
ROUTE 185 GUAYNABO, PR 00988

2

If you have any questions or need any additional information, please contact me at 787-977-5865 or [guerrero.carmen@epa.gov](mailto:guerrero.carmen@epa.gov) or have your staff contact Reyes, Brenda at [reyes.brenda@epa.gov](mailto:reyes.brenda@epa.gov) or (787) 977-5869.

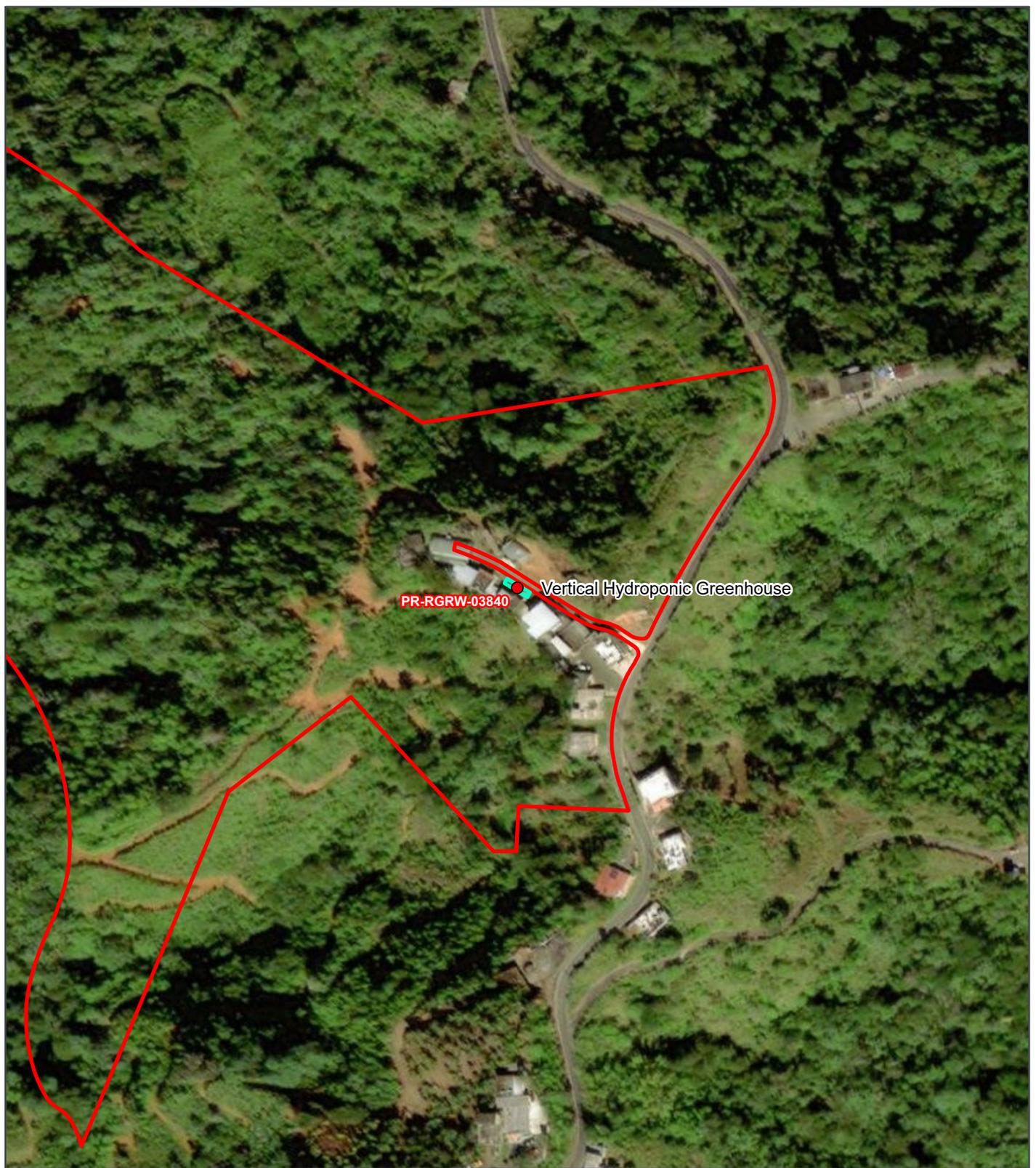
Sincerely,

**CARMEN  
GUERRERO  
PEREZ**

Carmen R. Guerrero Pérez  
Director

Digitally signed by  
CARMEN GUERRERO PEREZ  
Date: 2024.09.23 09:41:39  
-0400

cc: Roberto Mendez, Esq (Acting Secretary, PR Department of Natural and Env. Resources)  
Melany Medina: [mmedina@vivienda.pr.gov](mailto:mmedina@vivienda.pr.gov)  
Elaine Dume Mejia: [Edume@vivienda.pr.gov](mailto:Edume@vivienda.pr.gov)  
Luz S Colon Ortiz: [Lcolon@vivienda.pr.gov](mailto:Lcolon@vivienda.pr.gov)  
Aldo A. Rivera-Vazquez: [aarivera@vivienda.pr.gov](mailto:aarivera@vivienda.pr.gov)  
Cesar O. Rodriguez: [cesarrodriquez@drna.pr.gov](mailto:cesarrodriquez@drna.pr.gov)  
Marita Rosa Olivares: [maritzarosaolivares@drna.pr.gov](mailto:maritzarosaolivares@drna.pr.gov)



REGROW PROGRAM

**Figure B 10-1:  
Advisory Base Flood  
Elevation For 100-Year  
Floodplain Map**

Applicant ID: PR-RGRW-03840



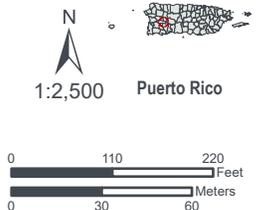
- Site
- Site Parcel
- Project Footprint (Option)
- Advisory Base Flood Elevation (ABFE)
- 0.2% Annual Chance Flood
- 1% Annual Chance Flood
- Zone A
- Zone A-Floodway
- Zone AE
- Coastal A Zone and Floodway
- Zone AE-Floodway
- Zone AO
- Zone VE
- Zone X (500-year floodplain)
- Zone/BFE Boundary

Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: [https://gis.fema.gov/arcgis/rest/services/DR/PuertoRico\\_ABFE\\_1PCT/MapServer](https://gis.fema.gov/arcgis/rest/services/DR/PuertoRico_ABFE_1PCT/MapServer)

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: ABFE 1Pct  
Aprx: 72428\_ReGrowTier2Maps





REGROW PROGRAM

**Figure B 1-1:  
Airport Hazards Map**

Applicant ID: PR-RGRW-03840



- Site
- Airport Runway
- Accident Potential Zones (APZ)
- Runway Protection Zones (RPZ)
- 2,500-FT Civil Airport Buffer
- 15,000-FT Military Airport Buffer

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.578988°W 18.30424°N

Data Source: <https://geodata.bts.gov/>  
Base Map: ESRI ArcGIS Online,  
accessed September 2023

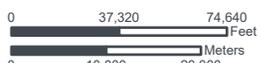
Updated: 9/18/2023  
Layout: Airport Hazards  
Aprx: 72428\_ReGrowTier2Maps



1:794,000



Puerto Rico





REGROW PROGRAM

**Figure B 2-1: Coastal Barrier Resources Map**

Applicant ID: PR-RGRW-03840

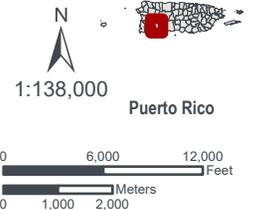


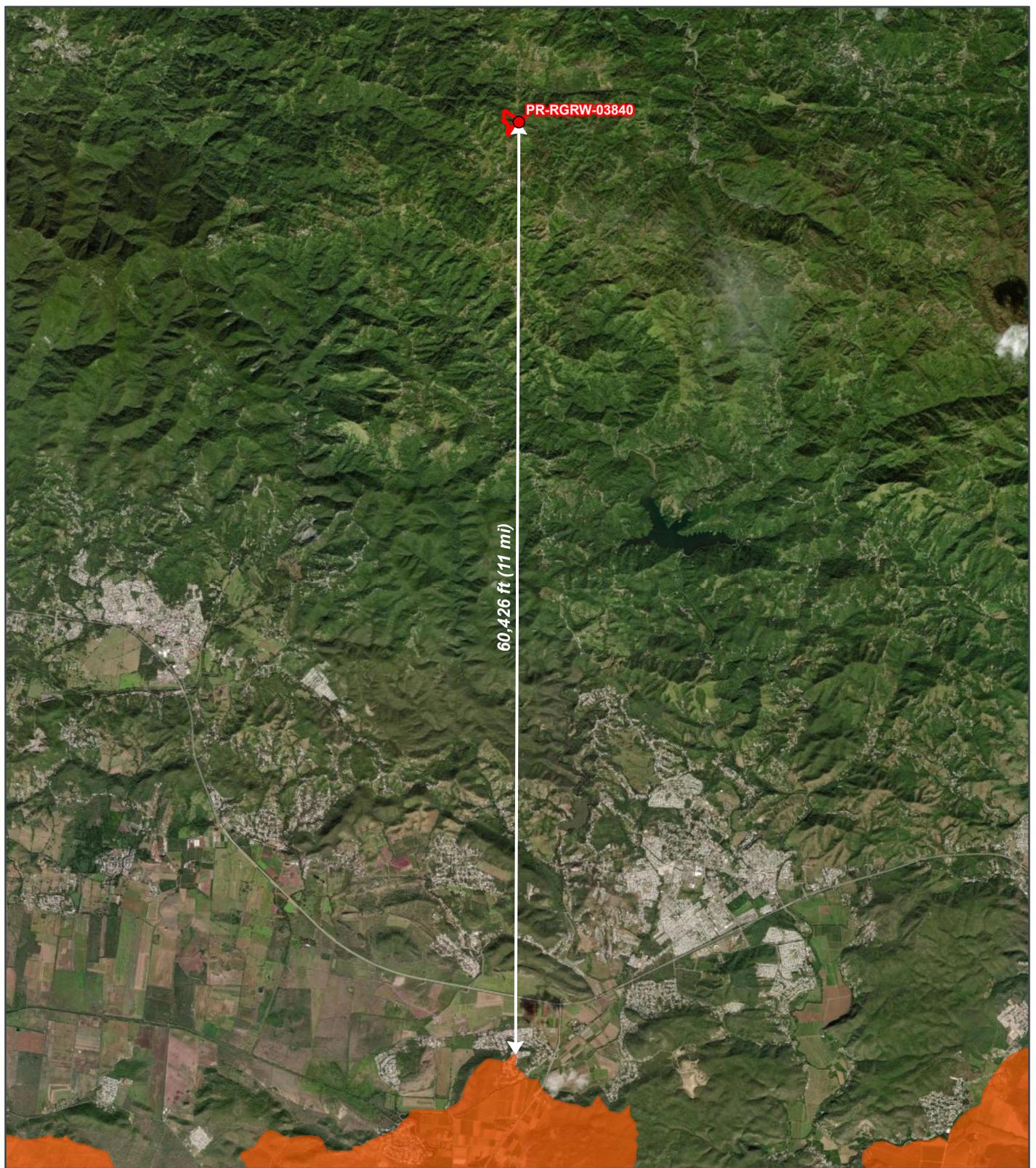
- Site
- Otherwise Protected Area
- System Unit

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.876887°W 18.062714°N

Data Source: <https://cbrsgis.wim.usgs.gov/arcgis/rest/services/CoastalBarrierResourcesSystem/MapServer>  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Coastal Barrier Resources System





REGROW PROGRAM

**Figure B 5-1: Coastal Zone Management Map**

Applicant ID: PR-RGRW-03840

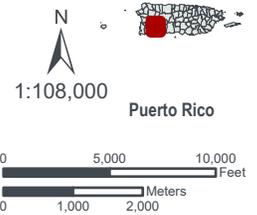


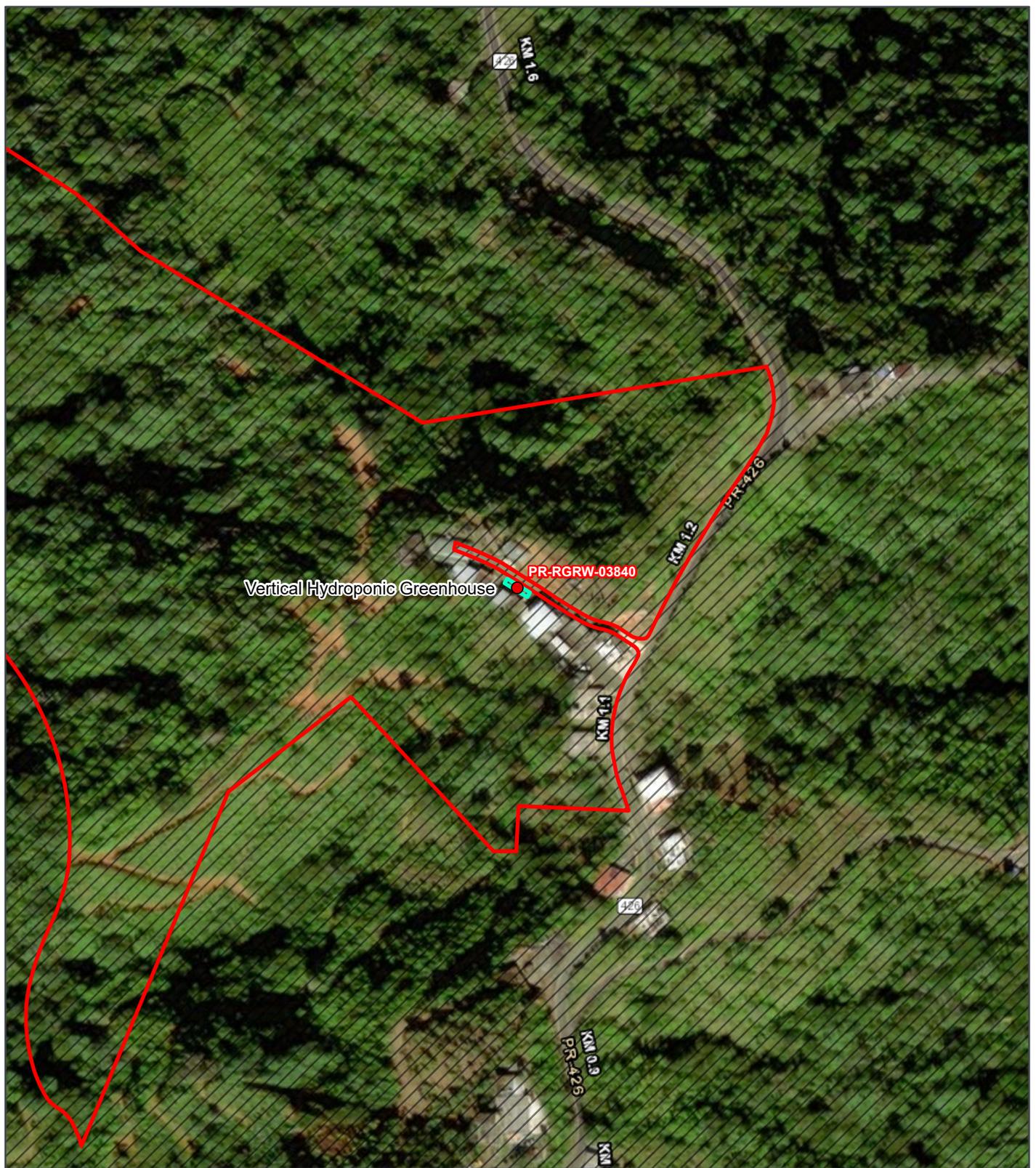
- Site
- Coastal Management Zone

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895781°W 18.085805°N

Data Source: <https://coast.noaa.gov/arcgis/rest/services/Hosted/CoastalZoneManagementAct/BaseMap>: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Coastal Zone Management  
Aprx: 72428\_ReGrowTier2Maps





REGROW PROGRAM

**Figure B 9-1:  
Prime Farmland Map**

Applicant ID: PR-RGRW-03840



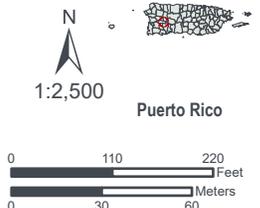
- Site
- Site Parcel
- Project Footprint (Option)
- All areas are prime farmland
- Farmland of statewide importance
- Farmland of statewide importance, if irrigated
- Prime farmland if drained

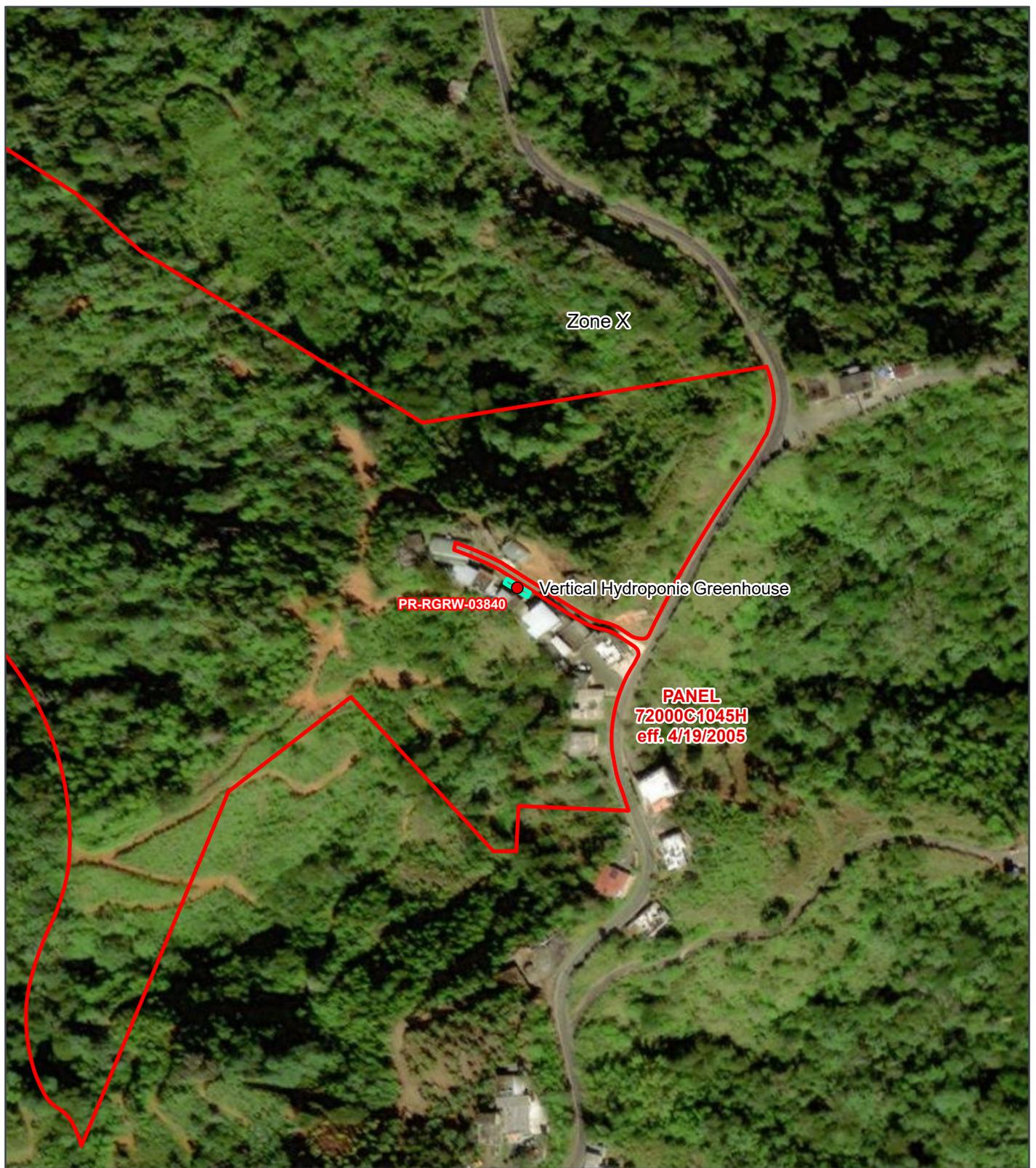
- Prime farmland if irrigated
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Not prime farmland
- Not Public Information

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: <https://websoilsurvey.nrcs.usda.gov/app/>  
Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Prime Farmland  
Aprx: 72428\_ReGrowTier2Maps





REGROW PROGRAM

**Figure B 3-1: Flood Insurance Rate Map (FIRM)**

Applicant ID: PR-RGRW-03840

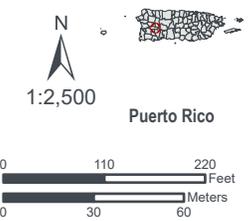


- Site
- Site Parcel
- Project Footprint (Option)
- Base Flood Elevations
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone VE
- Floodway
- Zone X - Shaded (500-year floodplain)
- Zone X - Unshaded
- Area Not Included
- Open Water

Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center: 66.895697°W 18.169008°N

Data Source: <https://hazards.fema.gov/gis/nfhl/rest/services/public/NFHL/MapServer>  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Effective Floodplain  
Aprx: 72428\_ReGrowTier2Maps



Applicant: Innova Crops LLC

Case ID: PR-RGRW-03840

City: Maricao

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



REGROW PROGRAM

#### Project Location Area of Potential Effects (APE) Map

Applicant ID: PR-RGRW-03840



- Site
- ▭ Site Parcel
- ▭ Project Footprint (Option)
- ▭ APE (Buffer (15-meters))

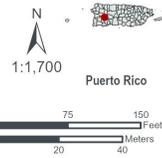
Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

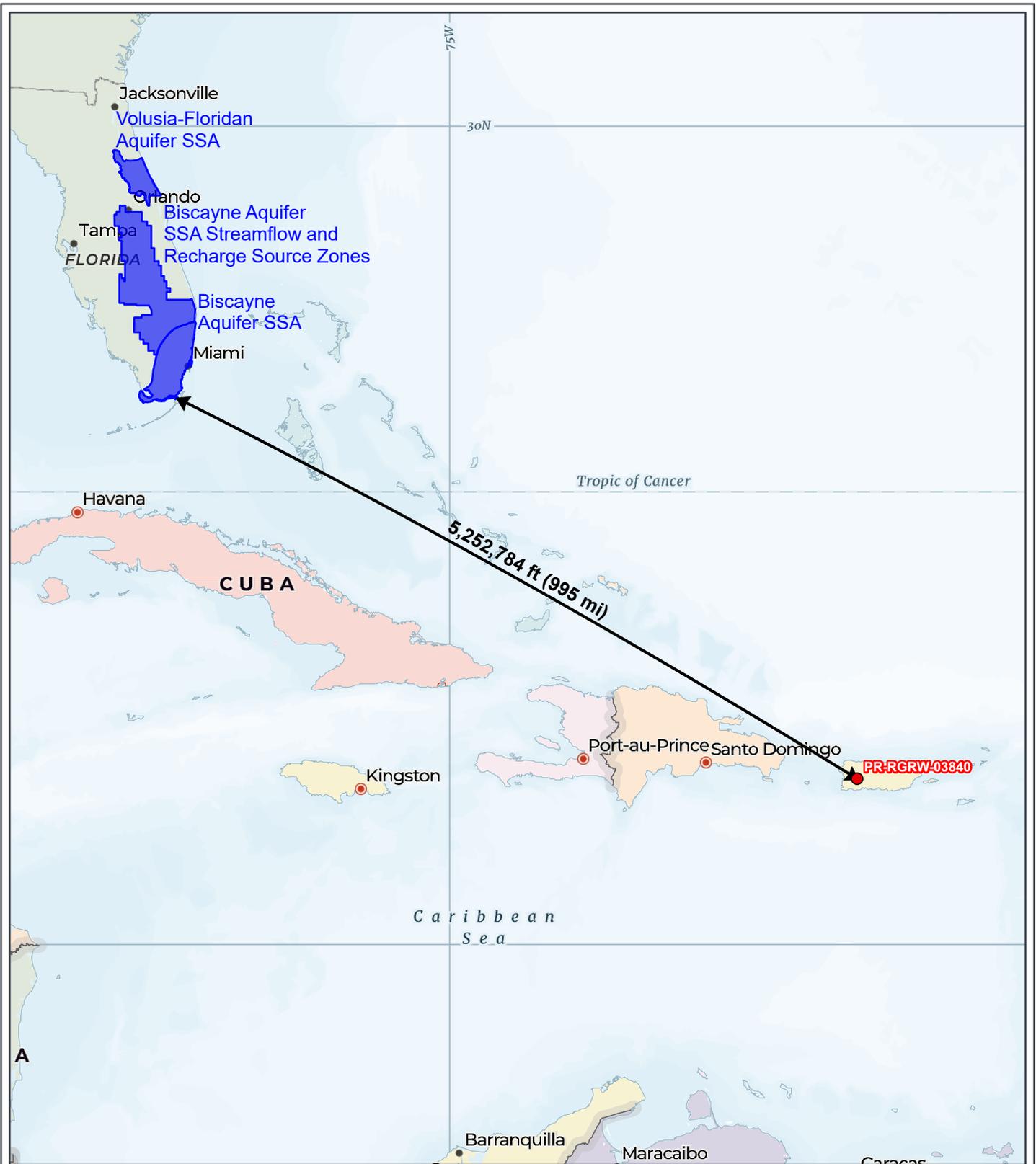
Parcel ID: 263-000-009-54-901

Parcel Center:  
66.895697°W 18.169008°N

Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023

Layout: APE  
Aprx: 72428\_ReGrowTier2Maps





REGROW PROGRAM

**Figure 15-1: Sole Source Aquifers Map**

Applicant ID: PR-RGRW-03840

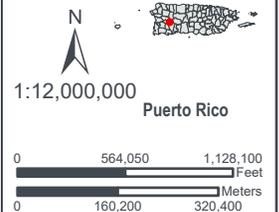


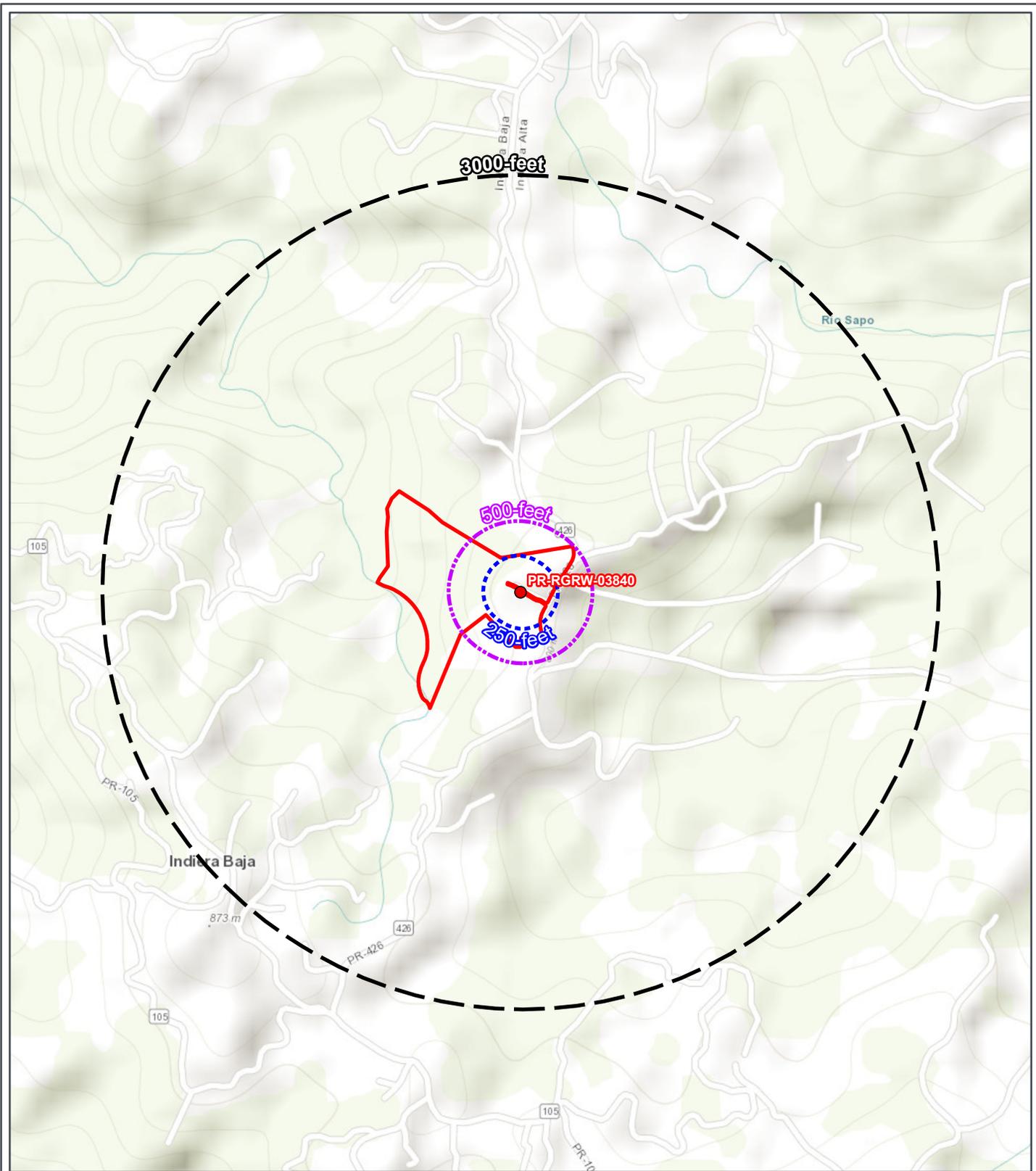
- Site
- Sole Source Aquifers

**\*There are no Sole Source Aquifers in Puerto Rico.**

Carr. 426 Km 1.1 Bo. Indiera Baja  
 Maricao, Puerto Rico 00606  
 Parcel ID: 263-000-009-54-901  
 Parcel Center:  
 73.643528°W 21.722446°N

Data Source: <https://services.arcgis.com/cJ9YHowT8TU7DUyn/arcgis/rest/services/SoleSourceAquifers/FeatureServer>  
 Base Map: ESRI ArcGIS Online, accessed February 2024  
 Updated: 2/23/2024  
 Layout: Sole Source Aquifers  
 Aprx: 72428\_ReGrowTier2Maps





REGROW PROGRAM

**Figure B 6-1:  
Contamination and  
Toxic Substances Map**

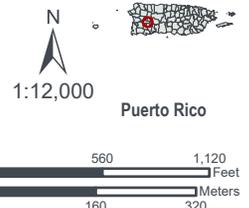
Applicant ID: PR-RGRW-03840

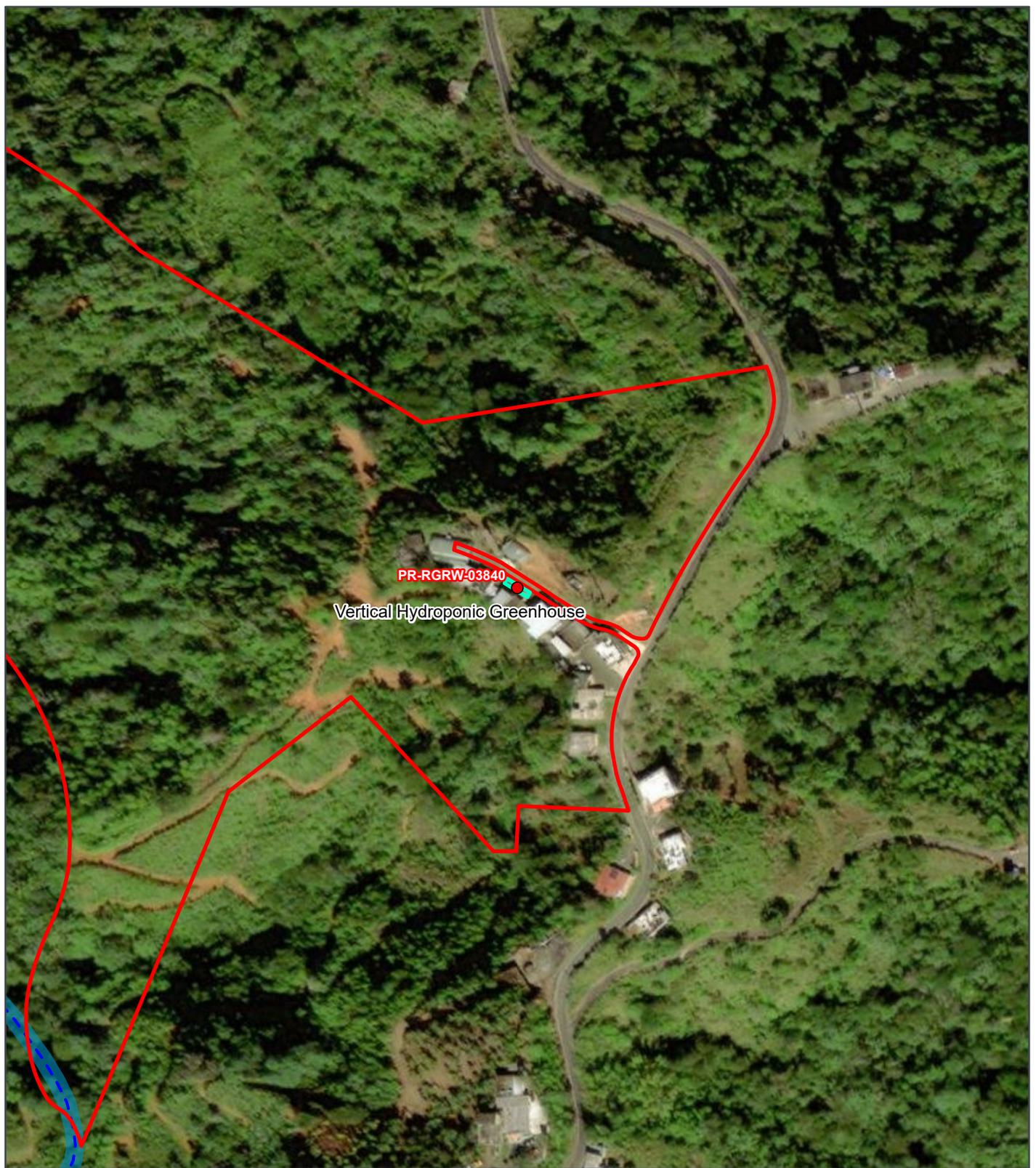


- Site
- Site Parcel
- Project Footprint (Option)
- Buffer (250-feet)
- Buffer (500-feet)
- Buffer (3000-feet)
- Water dischargers
- Toxic Substances Control Act
- Toxic releases
- Superfund
- Hazardous waste
- Brownfields
- Air pollution

Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606  
Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: <https://geopub.epa.gov/arcgis/rest/services/EMEF/MapServer>  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/27/2023  
Layout: Contamination and Toxic Substances





REGROW PROGRAM

**Figure B 12-1:  
Wetlands Protection  
Map**

Applicant ID: PR-RGRW-03840



- Site
- Site Parcel
- Project Footprint (Option)
- - - NHD Stream
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

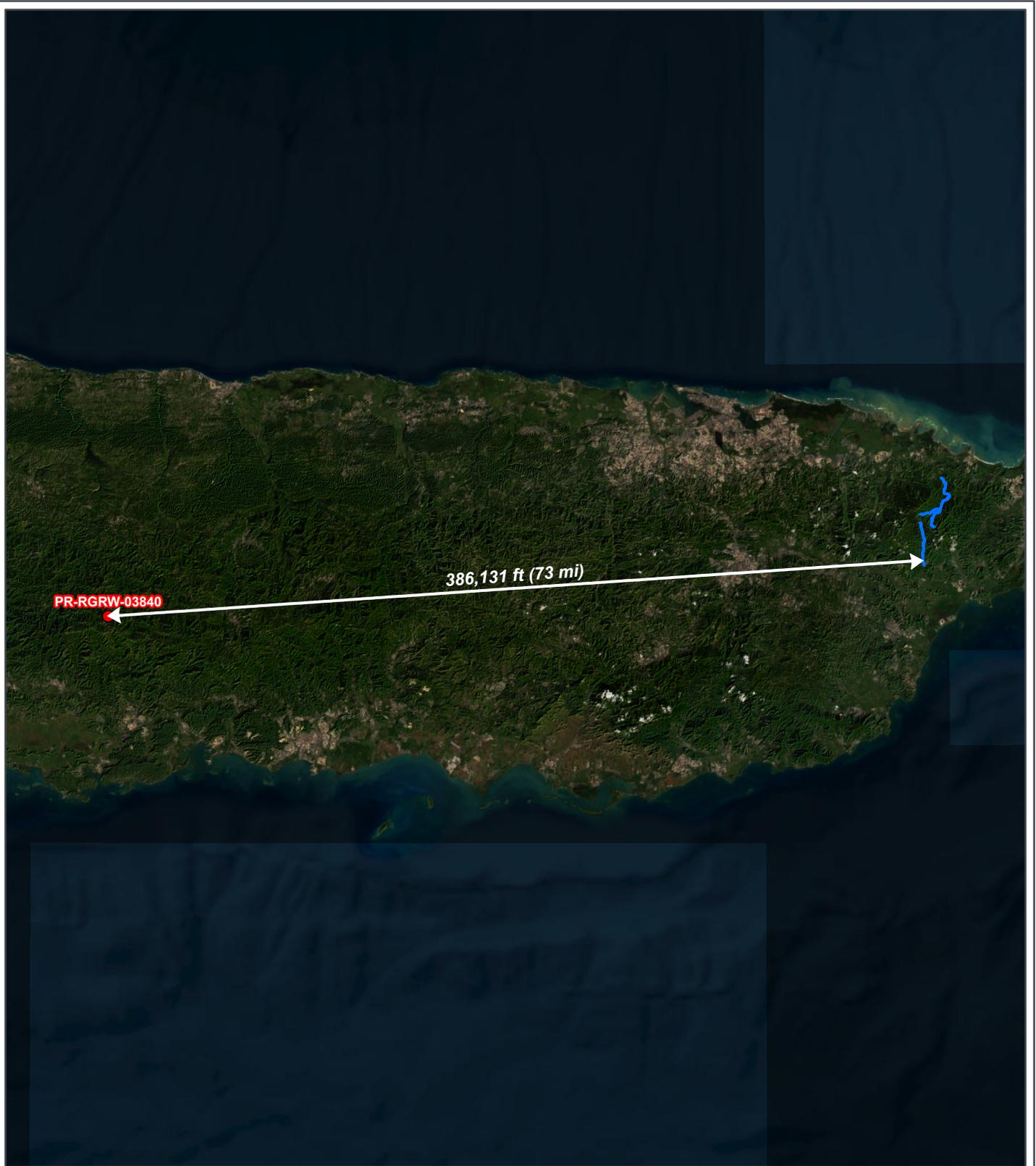
Carr. 426 Km 1.1 Bo. Indiera Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.895697°W 18.169008°N

Data Source: <https://apps.nationalmap.gov/downloader/#/>  
<https://www.fws.gov/program/national-wetlands-inventory/data-download>  
Base Map: ESRI ArcGIS Online,  
accessed September 2023  
Updated: 9/18/2023  
Layout: Wetlands Protection

N

1:2,500  
Puerto Rico



REGROW PROGRAM

**Figure B 13-1:  
National Wild and  
Scenic River Map**

Applicant ID: PR-RGRW-03840



- Site
- National Wild and Scenic River

Carr. 426 Km 1.1 Bo. Indiera  
Baja  
Maricao, Puerto Rico 00606

Parcel ID: 263-000-009-54-901  
Parcel Center:  
66.340797°W 18.205994°N

Data Source: [https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW\\_WildScenicRiverSegments\\_01/MapServer](https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW_WildScenicRiverSegments_01/MapServer)  
Base Map: ESRI ArcGIS Online, accessed September 2023  
Updated: 9/18/2023  
Layout: Wild and Scenic Rivers

1:785,000

Puerto Rico

0 30,000 60,000 Feet  
0 10,000 20,000 Meters