

# ENVIRONMENTAL APPENDIX

## APPENDIX B

# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
RIO GRANDE DE MANATI FLOOD RISK MANAGEMENT STUDY  
CIALES, PUERTO RICO**

**DRAFT**

**U.S. Army Corps of Engineers  
Pittsburgh District**

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## PHASE I ESA GLOSSARY AND REFERENCES

ACBM	Asbestos-Containing Building Materials
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AUL	Activity and Use Limitation
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CORRACTS	RCRA Corrective Action
CSO	Combined Sewer Overflow
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
HDPE	High-density polyethylene
HMIRS	Hazardous Material Information Reporting System
IC/EC	Institutional Control/Engineering Control
LUST	Leaking Underground Storage Tank
mg/l	milligram per liter
MGP	Manufactured Gas Plant
NAVD88	North American Vertical Datum, 1988
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NIH	National Institutes of Health
NPL	National Priority List
NTCHS	National Technical Committee for Hydric Soils
RCRA	Resource Conservation and Recovery Act
RCRA-LQG	RCRA Large Quantity Generator
RCRA-SQG	RCRA Small Quantity Generator
RCRA-TSDF	RCRA Treatment, Storage and Disposal
REC	Recognized Environmental Condition
RR	Railroad
SQG	Small Quantity Generator
SVOC	Semi-Volatile Organic Compound
SWF/LF	Solid Waste Facilities/Landfills
TRIS	Toxic Chemical Release Inventory System
TSD	Treatment, Storage and Disposal
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

## 1.0 INTRODUCTION

### 1.1 Purpose

The Municipality of Ciales, Puerto Rico has a long history of flooding during severe storm and hurricane events. Extensive socioeconomic and environmental impacts sustained during Hurricane Maria in 2017 led Puerto Rico to request U.S. Army Corps of Engineers (USACE) assistance to study and provide recommendations for reducing flood risk along the Rio Grande de Manati. An Integrated Feasibility Report and Environmental Assessment (IFREA) was prepared by USACE to evaluate flood risk management alternatives.

In support of the IFREA, the purpose of this Phase I Environmental Site Assessment (ESA) is to evaluate and identify, pursuant to the process described herein, whether or not hazardous substances or petroleum products may be present at the project site (i.e. Study Area) and to conclude whether or not recognized environmental conditions (RECs) exist. Results of this Phase I ESA will be used to help inform of potential RECs within the Study Area. The identification of the location and extent of any RECs or other environmental concerns during this early screening process will aid in development of flood risk management measures and selection of the preferred alternative.

This Phase I ESA was conducted in accordance with American Society for Testing and Materials International Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process ASTM International E1527-13 (ASTM E1527-13) and is not intended to identify *de minimis* conditions that do not present a significant risk of harm to public health or the environment and would generally not be subject to enforcement action if brought to the attention of appropriate government agencies. The term “recognized environmental condition” is defined by ASTM E1527-13 as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment; under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.”

### 1.2 Scope of Work

This Phase I ESA was conducted in accordance with U.S. Environmental Protection Agency (EPA) 40 CFR 312 Standards and Practices for all Appropriate Inquiries under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The following tasks were performed to meet objectives of the Phase I ESA in accordance with practices established by ASTM E1527-13:

- Review of existing environmental documentation including Federal and state environmental records provided by Environmental Data Resources (EDR), Inc. and the US EPA
- Review of historical aerial photographs, historical topographic maps and tax maps
- Site reconnaissance including observed uses of parcels associated with the Study Area and adjacent properties

The scope of work for this report does not include a chain of title, deed search or environmental lien/activity use limitation data search for properties located within the Study Area, as this information was not readily available for Puerto Rico. During the site visit, interviews with individual land owners were not conducted.

### **1.3 Standards**

This Phase I ESA was provided in accordance with U.S. Environmental Protection Agency (EPA) 40 CFR 312 Standards and Practices for all Appropriate Inquiries under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and in accordance with practices established by ASTM E1527-13. This practice defines “good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of CERCLA and petroleum products”.

## **2.0 SITE DESCRIPTION**

### **2.1 Location**

This Phase I ESA was conducted within the Study Area shown in Figure 1. The Study Area is located within the Municipality of Ciales and encompasses several communities, including the City of Ciales, Residencial Dos Rios, Dos Rios, and Alturas De Ciales. The approximate center of the Study Area is located at 18°20'58" N and 66°28'18" W and the limit of the Study Area is defined as the 350-acre flood-prone area within the 500-year floodplain, extending approximately 12,500 linear feet along the Rio Grande de Manati River from the PR-145 Bridge (east of Ciales) downstream to the PR-6685 Bridge (north of Alturas de Ciales).

Access to and from the Study Area is provided by PR-149, which is situated on the hillside above the right descending bank of the Rio Grande de Manati River. The City of Ciales, Residencial Dos Rios, Dos Rios, and Alturas De Ciales are accessed by PR-145, PR-146, and PR-6685 along the left descending bank of the Rio Grande de Manati River.

### **2.2 Site Vicinity and Characteristics**

The Municipality of Ciales is located on the northern slopes of the Central Mountain Range, approximately 25 miles southwest of San Juan, and has a population of approximately 19,000. The Rio Grande de Manati River flows northwest through the Study Area and includes approximately 350 acres of sandy and gravelly shoreline with heavily vegetated areas extending further from the river. Several smaller tributaries flow into Rio Grande de Manati River, including Rio Cialtios Creek near the center of the Study Area, Quebrada Los Quinones near the north end of the Study Area and an unnamed stream located just upstream of the discharge point of Rio Cialtios Creek (see Section 2.3.4).

Residential homes, businesses, and industry are located within the Study Area, particularly along the left descending bank of the Rio Grande de Manati River, within Alturas de Ciales, Dos Rios, Residencial Dos Rios, and Ciales. The Study Area includes public and private land characterized by commercial and industrial development consisting of vacant industrial land, warehouses, and commercial businesses. The Study Area also includes the Ciales Wastewater Treatment Plant, which is situated on the right descending bank of the Rio Grande de Manati River, downstream of the confluence with Rio Cialtios Creek.

The surrounding area east and west of the Study Area is primarily heavily vegetated, undeveloped land. The City of Hato Viejo is located north of the Study Area and the cities of San Jose and Reparto Cabilla are situated to the south.

Photographs of the Study Area and surrounding land are shown in Photographs 1 through 12 in Appendix A, and were taken during the site reconnaissance in March 2019 to provide information on current use and characteristics of the area. The location and direction of each photograph is shown on the map included in Appendix A.

## **2.3 Regional Geology, Soils, Topography, Surface Water and Hydrogeology**

### **2.3.1 Regional Geology and Soils**

Geology of the Study Area is primarily of Cretaceous to middle Tertiary age (upper and middle Oligocene and lower Miocene) and Quaternary period (Figure 2). Cretaceous and Tertiary age rocks include stratified limestone and marly limestone containing lenses of calcareous sand and gravel and terrigenous clastics (USGS, 1965). The northern end of the Study Area includes Quaternary period (Holocene-Pleistocene) landslide deposits and unconsolidated alluvium. The alluvium is comprised of unconsolidated silt, sand, gravel, cobbles and boulders along the stream and stream valley and angular rock debris and rock-slide debris on and at the base of steep slopes and are the most recent geological deposits in the Ciales region (USGS, 1965). The San Sebastian Formation (middle-upper Oligocene) is also identified in the northern part of the Study Area and includes clay, sand, gravel and sandy limestone, shaley clay, sandstone, and conglomerate. The southern end of the Study Area includes the intrusive mass (Morovis and Ciales stocks) of plutonic granodiorite and unconsolidated alluvium. A small portion of the southern end of the Study Area includes the Los Negros Formation composed of basaltic hyaloclastite-breccia with basaltic lava, volcanic sandstone, and siltstone (USGS, 1998).

Soils at the site are classified as riverwash, clay loams, gravelly silt loams, gravelly clay loams, silty clay loams and gravel as identified by U.S. Department of Agriculture (USDA) (Figure 3 and Appendix E).

### **2.3.2 Topography**

The center of the site is located at approximately 18°20'58" latitude north and 66°28'18" longitude west. Based on Google Earth USGS topographic maps, the Study Area has a peak slope of approximately 50 feet above sea level along the outer limit of the Study Area and gently slopes downgradient to the river. A relatively steep slope along right descending bank is located just east of the study site near the north end (Photo 2 in Appendix A). All elevations are referenced to North American Datum 1927 (NAD27). Topographic maps are provided in Appendix D.

### **2.3.3 Hydrogeology**

Approximately 1,350 square miles of Puerto Rico is underlain by hydrogeologic units that are classified as intergranular or fissured (USGS, 2014). These units form the principal aquifer system throughout Puerto Rico and outlying islands. The most extensive and developed aquifer is the

North Coast Limestone aquifer system, extending approximately 770 square miles and groundwater development is greatest in a 310 square mile area near Rio Grande de Manati, with an estimated 370,000 cubic yards per day withdrawal.

Based upon a review of geologic and groundwater information provided by EDR and topographic maps, regional shallow groundwater flow in the vicinity of the Study Area likely flows toward the Rio Grande de Manti River and its tributaries. Actual groundwater flow in the vicinity of the Study Area may be locally influenced by seasonal rainfall, surface topography, underground structures, nearby wells, soil and bedrock geology and other factors beyond the scope of this study.

#### 2.3.4 Surface Water and Flooding

The Study Area is located within the Rio Grande de Manati watershed which has a drainage area of 55.2 square miles (USGS, 2014). Surface water at the site includes the Rio Grande de Manati River which flows northwest through the Study Area. The river has several tributaries flowing into it, including Rio Cialtios Creek which flows northeast and eventually discharges near the center of the Study Area; Quebrada Los Quinones which flows westward near the north end of the Study Area; Quebrada Ventada which flows northwest near the south end of the Study Area and an unnamed tributary which flows northeast just east of Rio Cialtios Creek (Figure 4).

The Study Area is defined as the flood-prone area near the Rio Grande de Manati located within the 500-year floodplain. According to USGS, the Rio Grande de Manati has reached flood stage 35 times in the past 50 years, the most recent as a result of Hurricane Maria in 2017 (Figure 5).

### 3.0 SITE RECONNAISSANCE

#### 3.1 Introduction

A site reconnaissance was conducted by Doug Rowles and Elliott Porter, USACE Pittsburgh District, on 25 and 26 March 2019. The objective of the site visit was to obtain information that could assist in identifying RECs within the Study Area, assess whether there were obvious impacts to the environment from current or historic site operations and to observe property adjacent to the Study Area, as appropriate. The following sections include information obtained from the site reconnaissance.

#### 3.2 Methodology

Visual inspection conducted as part of the site reconnaissance included a vehicular reconnaissance using public roads in and around the Study Area. The Rio Grande de Manati River was accessed on foot at various locations along its length. Land uses and types of operations to the north, south, east and west of the site were also observed. Photographs of the Study Area and a map showing photograph locations are included in Appendix A.

#### 3.3 Site Observations

The site reconnaissance was conducted to visually identify suspected or known RECs and/or *de minimis* conditions. Based on USACE observations, no suspected or known RECs were identified within the Study Area during the site visit; however, one *de minimis* environmental condition was observed. As shown in Photograph 7 in Appendix A, a gasoline station was observed at the intersection of PR-146 and PR-6685 adjacent to Rio Cialitos Creek. The gasoline station was not in operation at the time of the site visit and the gasoline pumps had been removed. It appears that the underground storage tanks (USTs) remain in-place based on the presence of UST fill-ports located on the surface of the parking area. The fill-ports appeared to be relatively new and in good condition. No evidence of a release of petroleum from the facility was observed during the site visit, nor was the gasoline station identified in the EDR report. The likely presence of USTs within the Study Area is identified as a *de minimis* condition as excavation in or near this gasoline station site is not planned as part of any anticipated flood risk management alternatives. However, if any future actions at the site will require excavation in this area, the presence of these USTs should be considered and appropriate measures should be taken to identify what, if any contamination exists at this site. It was also noted that based on the age of buildings/structures within the Study Area, asbestos and/or lead-based paint may be present.

#### 3.4 Adjoining Properties

The majority of properties adjacent to the Study Area are heavily vegetated areas with some residences and businesses. No known or suspected RECs or *de minimis* conditions were identified on adjacent properties during the site visit. It was noted that based on the age of some buildings/structures, asbestos and/or lead-based paint could be present.

## 4.0 RECORDS REVIEW

### 4.1 Introduction

As part of the Phase I ESA, Environmental Data Resources, Inc. (EDR) was retained to provide environmental and historic records of the Study Area and surrounding area in compliance with EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) and practices established in ASTM E1527-13. A national provider of environmental information, EDR queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn fire insurance maps and city directories. The following records were provided by EDR on 5 March 2019:

- Federal environmental records
- State and tribal environmental records
- EDR proprietary records (data compiled by EDR researchers)
- Aerial photographs
- Historical topographic maps

Chain of title and environmental lien/activity use limitation records were not available from EDR. Mr. Michael Gandolfo of EDR stated that this information is not readily available for Puerto Rico and recommended as confirmation to contact AFX Research, LLC (AFX), a provider of due diligence reports. Mr. David Mitchell of AFX also confirmed that these records are not readily available.

Records provided by EDR were reviewed by USACE for evidence of current and previous contamination at the site based on historic uses and physical setting of the Study Area and surrounding area. Based on this review, potential environmental conditions within the Study Area were evaluated.

In addition to EDR records, USACE reviewed tax map information and USEPA's Enviromapper website for toxic and hazardous material releases and water discharges to identify potential environmental concerns within the Study Area. Results of the records review are provided in the sections below.

## 4.2 Environmental Records Provided by EDR

### 4.2.1 Federal and State Environmental Record Sources

A review of available Federal and state environmental records provided by EDR indicate several listed sites within or near the Study Area. A copy of the database report is provided in Appendix B and a summary of the regulatory database report is provided in Table 1 below and Figure 6.

**Table 1. Summary of EDR Environmental Records within the Study Area and Nearby Properties**

Sites Identified and Address	Direction/ Distance from Study Area	Record Identified/ Source	Comments
Thermo King de Puerto Rico  Road 6685 KM 11.2 Ciales, PR 00638	Within Study Area	FINDS ECHO	Thermo King de Puerto Rico operated as a subsidiary of Ingersoll-Rand as an air conditioning and heating equipment, commercial and industrial refrigeration equipment and motor vehicle parts manufacturer (Photo 3 in Appendix A). The site reconnaissance confirmed that this facility is no longer in operation. Chemicals processed at the facility included 1,1,1-Trichloroethane, Chlorodifluoromethane, Copper, Dichloromethane, Diisocyanates, Ethylene glycol, Methylenebis, Monochloropentafluoroethane, Sulfuric Acid, Toluene and Xylene. No violations of RCRA statutes according to EPA Enforcement and Compliance History Online (ECHO) were identified. EPA records indicate that a total of 5 lbs of 1,1,1-Trichloroethane, Xylene and Monochloropentafluoroethane were discharged to surface water in 1995 and 1996. Water quality at the time of discharge may have been temporarily affected. However, according to the National Institutes of Health ( <a href="https://pubchem.ncbi.nlm.nih.gov/">https://pubchem.ncbi.nlm.nih.gov/</a> ), once released to surface water, 1,1,1-Trichloroethane, Xylene and Monochloropentafluoroethane are expected to undergo volatilization to the atmosphere and are not expected to adsorb to sediment. Given the relatively small amount of discharge into water, 23+ years since the release occurred, and unlikely impact to sediment, it is unlikely that the Study Area is affected by this past discharge. In addition, excavation in or near this location is not planned as part of any anticipated flood risk management alternatives.
Puerto Rico Aqueduct and Sewer Authority (PRASA) Ciales Wastewater Treatment Plant (WWTP) PR-149 KM 12.1 Ciales, PR 00638 & Ciales STP State Rd, 144 KM 12.1 Ciales, PR 00638	Within Study Area	ICIS ECHO FINDS RMP	NPDES permit violations were noted between April 2016 and March 2019. Exceedances included Chlorine, Phosphorus and Total Suspended Solids (TSS). Water quality within the Study Area may have been temporarily impacted by these violations. According to the Centers for Disease Control Agency for Toxic Substances and Disease Registry ( <a href="https://www.atsdr.cdc.gov/">https://www.atsdr.cdc.gov/</a> ), accidental chlorine release into water is expected to volatilize rapidly and in the context of releases/spills to the environment, "chlorine is too reactive to be identified in soil or sediment". Phosphorus is in fertilizer and wastewater, and loadings from these sources into rivers within the Study Area occur from wastewater treatment discharges and runoff from agricultural areas adjacent to and within the Study Area. Discharge of excessive amounts of phosphorus can lead to degraded water quality (i.e. algal bloom). Established NPDES permit limits generally consider chlorine, phosphorus and TSS within the context of water quality of the receiving water body, and does not inform of a known hazardous material or petroleum spill or release that would directly impact soil or sediment quality. As a result, these NPDES permit violations are not considered RECs.
Thermo King Caribbean, Inc.	SSW 1/8-1/4 mile	SEMS- ARCHIVE	According to EDR, "SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. Archived sites have been removed

Sites Identified and Address	Direction/Distance from Study Area	Record Identified/Source	Comments
PR Rd 149 Ciales, PR 00638			and archived from the inventory of SEMS sites and archived status indicates that, to the best of EPA’s knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL).” This site was first reported in 1981 and archived in 1989 with an NFRAP status (No Further Remedial Action Planned). Similarly, according to USEPA’s Superfund website, the site is not proposed to, currently on, or deleted from the NPL nor is it being addressed under the Superfund Alternative Approach (SAA). <a href="https://www.epa.gov/superfund/search-superfund-sites-where-you-live">https://www.epa.gov/superfund/search-superfund-sites-where-you-live</a> . Based on the distance of this facility from the outer limit of the Study Area, the time elapsed (30 years), and the EPA status of the site as NFRAP, it is unlikely that the Study Area has been affected by this facility.
Empresas Codel, Inc.  Vega Baja County, PR	W 1/8-1/4 mile	US MINES	According to the U.S. Department of Labor, this is a sand and gravel surface mine (non-coal mine) and is currently active. Given the distance from the outer limits of the Study Area, and no known releases or hazardous material violations, it is unlikely that this facility has affected the Study Area.

The two listings identified in Table 1 within the Study Area are not considered RECs and none of the other listings are considered offsite RECs that would affect the Study Area.

#### 4.2.2 Orphan Sites

Orphan sites are those sites for which environmental information was found, but the sites have inadequate or incorrect addresses so that the location of the sites in relation to the Study Area cannot be properly determined. These sites are identified in the federal/state records provided by EDR (Appendix B). A review of orphan sites for which known petroleum or hazardous material releases occurred and/or violations were reported include the following sites believed to be outside of the Study Area:

- A leaking underground storage tank (LUST) incident was reported from a Shell service station believed to be located north of the Study Area in Manati. Review of current maps indicate that the address provided does not include a service station. The status of the site according to state records is “active” and the leak was discovered during tank removal in 2001. The address provided is located more than 2 miles north of the Study Area where the groundwater flow regime is likely northward toward the ocean, and therefore is unlikely to have affected the Study Area.
- Locations of other LUSTs identified as orphan sites in the report are not discernable.
- According to EDR records, Manati Open Burning Dump is located over 5 miles southwest of Study Area. The information provided indicates that this site is in noncompliance, but additional details were not provided. Given the distance from the Study Area, it is unlikely that this facility has affected the Study Area.
- Better Roads Asphalt Corporation in Manati was located in the EPA ECHO system as approximately 2 miles north of the Study Area in Manati on Bo Rio Arriba Saliente. The

facility had enforcement actions regarding the Clean Air Act. Given the distance from the Study Area and no impact to soil or groundwater noted, it is unlikely that this facility has negatively impacted the Study Area.

- One orphan site, identified at the address Carr #2 KM 48.1 in Manati had a documented mineral oil release of 100 gallons from a non-PCB transformer in 2012 at Barrio Cotto Norte, American University of Puerto Rico. According to EDR records, the release impacted soil and a private company was hired to remediate the spill. The address provided is over 2 miles north of the Study Area where the groundwater flow regime is likely northward toward the ocean. As a result, it is unlikely that this site has negatively impacted the Study Area.

Based on the limited information provided in the report for these orphan sites (and assumption that the address information is reliable), none of the orphan listings above are considered offsite RECs that would potentially affect the Study Area.

#### **4.3 USEPA Records Review**

A review was conducted of USEPA EnviroMapper website for petroleum and hazardous material releases in the vicinity of the Study Area (Figure 7). Results of the search indicate the sites listed in Table 2 below and shown in Figure 7 are located within the Study Area and within approximately one mile of the Study Area.

**Table 2. Summary of USEPA Records of Sites within the Study Area and Nearby Properties**

Sites Identified and Address	Direction/ Distance from Study Area	Comments
Thermo King de Puerto Rico  Road 6685 KM 11.2 Ciales, PR 00638	Within Study Area	This site was also identified in the EDR report as summarized in Section 4.2.1 and Table 1 above.
Ciales Wastewater Treatment Plant (WWTP)  PR-149 KM 12.1 Ciales, PR 00638	Within Study Area	This site was also identified in the EDR report as summarized in Section 4.2.1 and Table 1 above.
Escuela Juan Corretjer  PR-146 KM Bo Cordillera, Ciales	W 0.2 mile	This site was listed in the EPA Superfund Enterprise Management System for mercury cleanup in 2013 and is not on the National Priority List (NPL). According to EPA, “the The Escuela Superior Juan A. Corretjer Mercury site consists of a High School located in Ciales, Puerto Rico, contaminated with elemental (metallic) mercury by children who brought mercury to the school to show their classmates. The contamination was mostly limited to the hallways, stairways and one drinking water fountain. Removal action for elemental mercury was completed on January 3, 2013 with oversight by EPA. The soil sampling results were received on January 4, 2013 and the post-removal air monitoring of impacted areas showed all readings to be below action levels; the school was cleared for reoccupation on January 4, 2013.” <a href="https://response.epa.gov/site/site_profile.aspx?site_id=8361">https://response.epa.gov/site/site_profile.aspx?site_id=8361</a> . Based on the information provided by EPA and distance from the outer limit of the Study Area, this site is not likely to have impacted the Study Area.
Esso Standard Oil Company gasoline station  57 Palmer Street Rt 149, Ciales	W 0.3 mile	This site was listed in the RCRA Information System, however no hazardous material or petroleum releases were noted. As a result, it is unlikely that this site has impacted the Study Area.
Puerto Rico Public Housing Administration  Fernando Sierra, Guillermina Davila Street, Ciales	SW 0.4 mile	This site was listed in the RCRA Information System, however no hazardous material or petroleum releases were noted. As a result, it is unlikely that this site has impacted the Study Area.
Ciales Urbano System  PR-146 KM 27.2, Ciales	W 0.4 mile	This site is a water treatment facility that had noncompliance NPDES permit /Clean Water Act (CWA) violations for two quarters in 2017 including discharge in excess of daily maximum effluent limits for arsenic, cadmium, total residual chlorine, lead, mercury and phosphorus. The facility’s receiving water is Sonadora Creek which discharges into Rio Cialtios Creek. The site does not discharge directly into Rio Grande de Manati and is 0.4 mile from the outer limit of the Study Area; it is unlikely that these NPDES permit violations have impacted sediment/soil in the Study Area.
Precision Microblenders, Inc.  24 Betances Street, Ciales	W 0.5 mile	This site is an animal food preparation facility. The facility is near Rio Cialtios Creek. The site was listed in the Toxic Release Inventory System (TRI) in 1990, 1991, 1992, 1993, 1994 and 1996 due to offsite transfer/disposal of selenium and chromium. No releases to water or land were documented at this facility. As a result, it is unlikely that the Study Area has been impacted by this facility.

The two listings identified in Table 2 within the Study Area are not considered RECs and none of the other listings identified in EPA records are considered offsite RECs that would affect the Study Area.

#### **4.4 Tax Maps**

Tax map information was reviewed within and adjacent to the Study Area to determine ownership of land and any additional industries/commercial businesses that could potentially impact the Study Area.

(<https://landgrid.com/us/pr/ciales/hato-viejo#b=none&t=property&p=/us/pr/ciales/hato-viejo/853906>). Available tax records did not provide any additional existing industries or commercial businesses within or adjacent to the Study Area.

#### **4.5 Aerial Photograph Review**

A series of historic aerial photographs obtained online and provided by EDR were reviewed to determine prior land usage within and near the Study Area. The photographs range from 1977 to 2019 and are provided in Appendix C. The following is a summary of historical aerial photographs:

- 1977: Aerial photographs indicate that the area has become developed with businesses, industries and residential areas along the shoreline of the river and beyond, particularly along the left descending bank. Due to photograph resolution, it is difficult to discern the type of business/industries that are present within the Study Area
- 1993: Increased business, industrial and residential development along the shoreline of the river is apparent, including increased development along the right descending bank. A surface mine area is evident at the north end of the Study Area on the right descending bank. This is likely the sand and gravel mine identified in EDR environmental database records.
- 1995: The Study Area appears to be similar to the 1993 photograph.
- 2004: The Study Area appears to be similar to the previous aerial photograph. However, the surface mine area appears to be minimized compared to previous years.
- 2006: The Study Area appears to be similar to the previous aerial photograph.
- 2009: The Study Area appears to be similar to the previous aerial photograph.
- 2019: The Study Area appears to be similar to the previous aerial photograph.

#### **4.6 Historical Topographic Map Review**

Historical topographic maps were provided by EDR, Inc. and were reviewed for the project site for years 1947, 1957, 1982 and 2013 (Appendix D). The following is a summary of the historical topographic maps:

- 1947: The topographic map shows buildings and schools dispersed within the Study Area. A wide river wash area is also shown on the map along the river. More dense development is noted in the town of Ciales near the south end of the Study Area, including schools and other buildings which may be businesses or industries. Present day Routes 146 and 149 and 6685 are shown on this map in the same configuration (Route 149 appears to be Route 11 on this map). Unimproved roadways and trails appear to extend from the major roadways toward the river. Manati Bridge is also shown on this map crossing the river near the north end of the Study Area.
- 1957: The map appears similar to 1947, with more development (buildings) noted along roadways.
- 1982: Compared to 1957, more development (buildings) are noted along Routes 6685 and 146 and within Ciales along the left descending bank. Routes 149 and 145 have been extended via bridges over Rio Grande de Manati River in Ciales. More development is also noted south of Ciales. Some light development is noted along the right descending bank.
- 2013: Buildings are not shown on the map due to change in topographic map format. Major roadways generally appear similar to 1982 map.

## 5.0 LIMITATIONS, DATA GAPS AND USER RELIANCE

Limitations identified during this Phase I ESA study included the following:

- Estimation of exact Study Area boundary during the site reconnaissance was difficult to discern in some portions of the Study Area.
- Dense vegetation and size of the Study Area inhibited visual observations of some portions of Study Area. The majority of the site reconnaissance was conducted by vehicular access and private property was observed only from public roads.
- Chain of title records, environmental lien/activity use limitation and Sanborn map data were not available for Puerto Rico.
- Limited and/or potentially incorrect geographic information regarding orphan sites was identified in EDR's environmental record database search.
- Interviews with individual land owners within the Study Area were considered not easily obtainable and are not included as part of this Phase I ESA.

The ASTM E1527-13 Standard defines a Data Gap as "...a lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional (EP) to gather such information." Data gaps may result from incompleteness in any of the Phase I ESA activities required by this practice (e.g., site reconnaissance, interviews, etc.). A data gap by itself is not inherently significant; a data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap. Significant data gaps are those that affect the ability of the EP to identify RECs and identify the sources of information that were consulted to address the data gaps. No significant data gaps were identified during the performance of this Phase I ESA.

Previous and current potential sources of hazardous substances/petroleum releases within the Study Area and adjacent properties were researched for this Phase I ESA. The Phase I ESA is limited to a visual site inspection of the Study Area and a review of environmental records, historic aerial photographs, historic topographic maps, and tax maps. Each review component provides details that inform the condition of the Study Area. This report was prepared in accordance with accepted standards of practice for preparation of Phase I ESA investigations (ASTM E1527-13), using USACE's best professional judgment. The findings of this report are not scientific certainties. USACE makes no claims as to the presence or absence of surface or subsurface contamination at the project area. No other warranties, either expressed or implied,

are made herein. The contents of this document cannot be used or relied upon by any party other than the USACE, without the express written consent of USACE.

## 6.0 FINDINGS

This Phase I ESA was completed in conformance with ASTM E1527-13. The Phase I ESA did not identify any RECs associated with the Study Area, or offsite RECs that could potentially impact the Study Area.

No indication of any noxious odors, or lagoons/ponds containing hazardous substances or petroleum products, containers of hazardous substances, or stressed vegetation was noted during the site reconnaissance within or adjacent to the Study Area. However, due to the age of buildings and structures within the Study Area and surrounding area, asbestos and lead-based paint may be present in building materials. In addition, a former gasoline station adjacent to Rio Cialtios Creek within the Study Area was identified during the site visit. However, there was no evidence of petroleum releases from USTs at this site, nor was the gasoline station identified in the EDR report. The likely presence of USTs with no known or suspected leaks is considered a *de minimis* condition. Excavation in or near this gasoline station site is not planned as part of any anticipated flood risk management alternatives. However, if any future actions at the site will require excavation in this area, the presence of these USTs should be considered and appropriate measures should be taken to identify what, if any contamination exists at this site.

Review of environmental records provided by EDR and EPA indicate that there are no known current releases of petroleum/hazardous material within the Study Area that would potentially affect soil or sediment, nor are there any known properties undergoing remediation due to contamination within the Study Area. Based on review of records provided, any environmental conditions noted at adjacent and/or nearby properties are unlikely to have affected the Study Area.

## 7.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

*Gabriella Sykora*

---

Gabriella Sykora, P.E.  
Physical Scientist

---

Douglas Rowles  
Biologist

## REFERENCES

- Centers for Disease Control Agency for Toxic Substances and Disease Registry, Chlorine. 2019. <https://www.atsdr.cdc.gov/toxprofiles/tp172-c6.pdf>
- National Institutes of Health. National Center for Biotechnology Information Chemical Database. 2019. <https://pubchem.ncbi.nlm.nih.gov/>
- U.S. Environmental Protection Agency (EPA). EnviroMapper Online Resource. 2019. <https://www.epa.gov/emefdata/em4ef.home>
- U.S. Geological Survey (USGS) Bulletin 1184. Berryhill, H.L., Geology of the Ciales Quadrangle, Puerto Rico. 1965. <https://pubs.usgs.gov/bul/1184/report.pdf>
- USGS Geologic Map of Puerto Rico with Correlation Chart and Map Unit Descriptions. Geology, Geochemistry, Geophysics, Mineral Occurrences and Mineral Resource Assessment for the Commonwealth of Puerto Rico. USGS Report 98-38. Bawiec, Walter J., and Krushensky, R.D. 1998. <https://pubs.usgs.gov/of/1998/of98-038/pdf/manuscript.pdf>
- USGS Scientific Investigations Map 3296. Gomez-Gomez, F., Rodriguez-Martinez, J., Santiago, M., Hydrogeology of Puerto Rico and the Outlying Islands of Vieques, Culebra and Mona. 2014. <https://pubs.usgs.gov/sim/3296/pdf/sim3296.pdf>

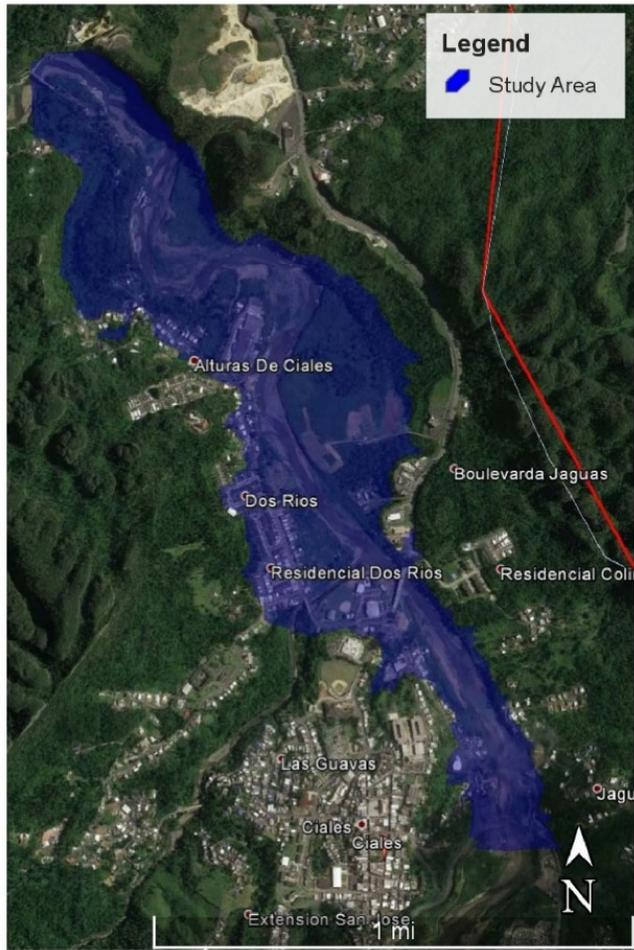
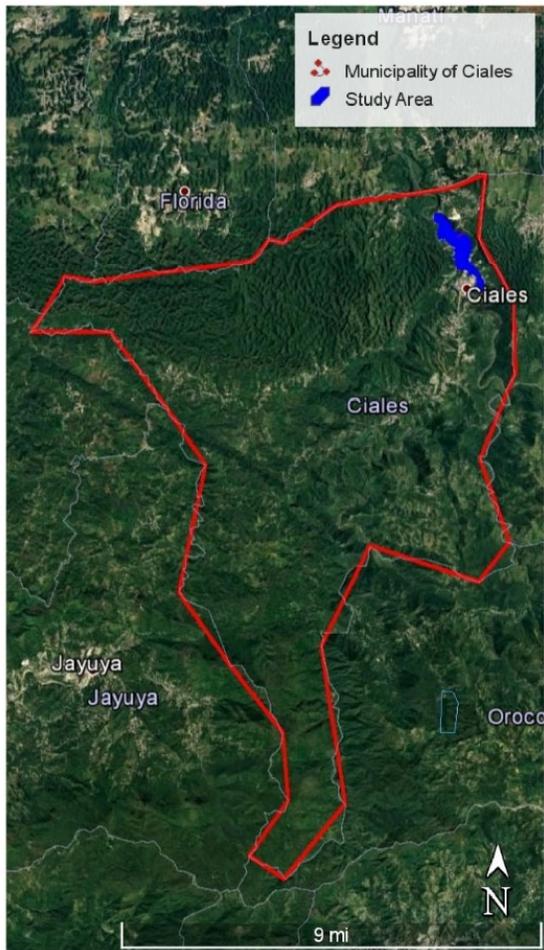
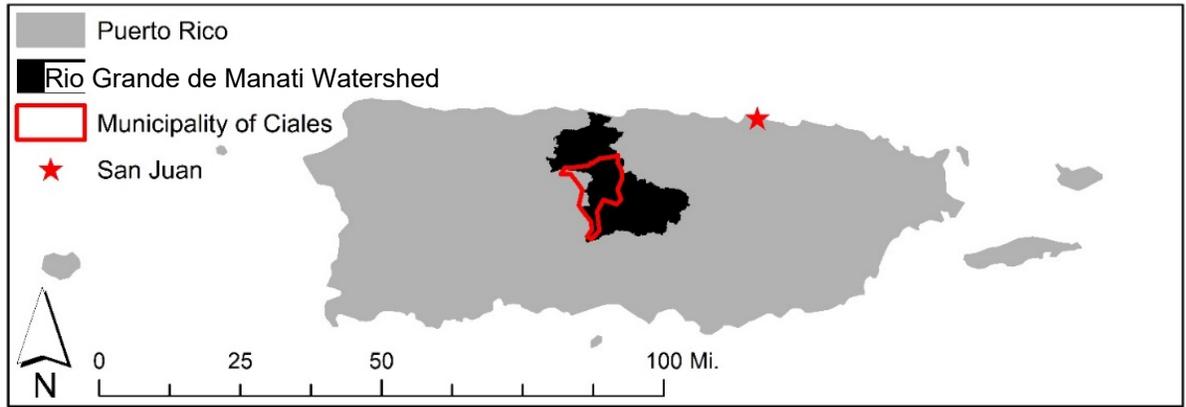
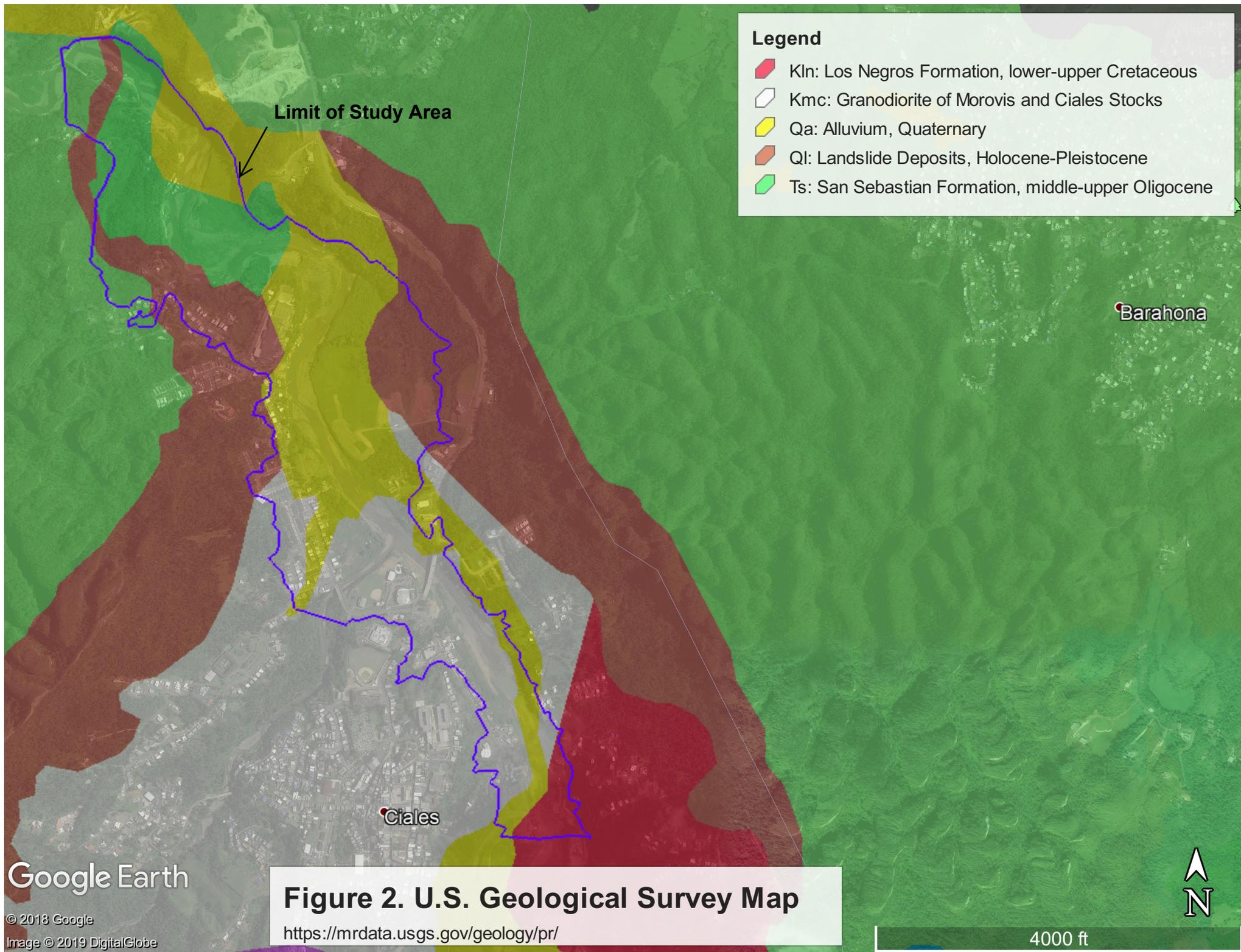
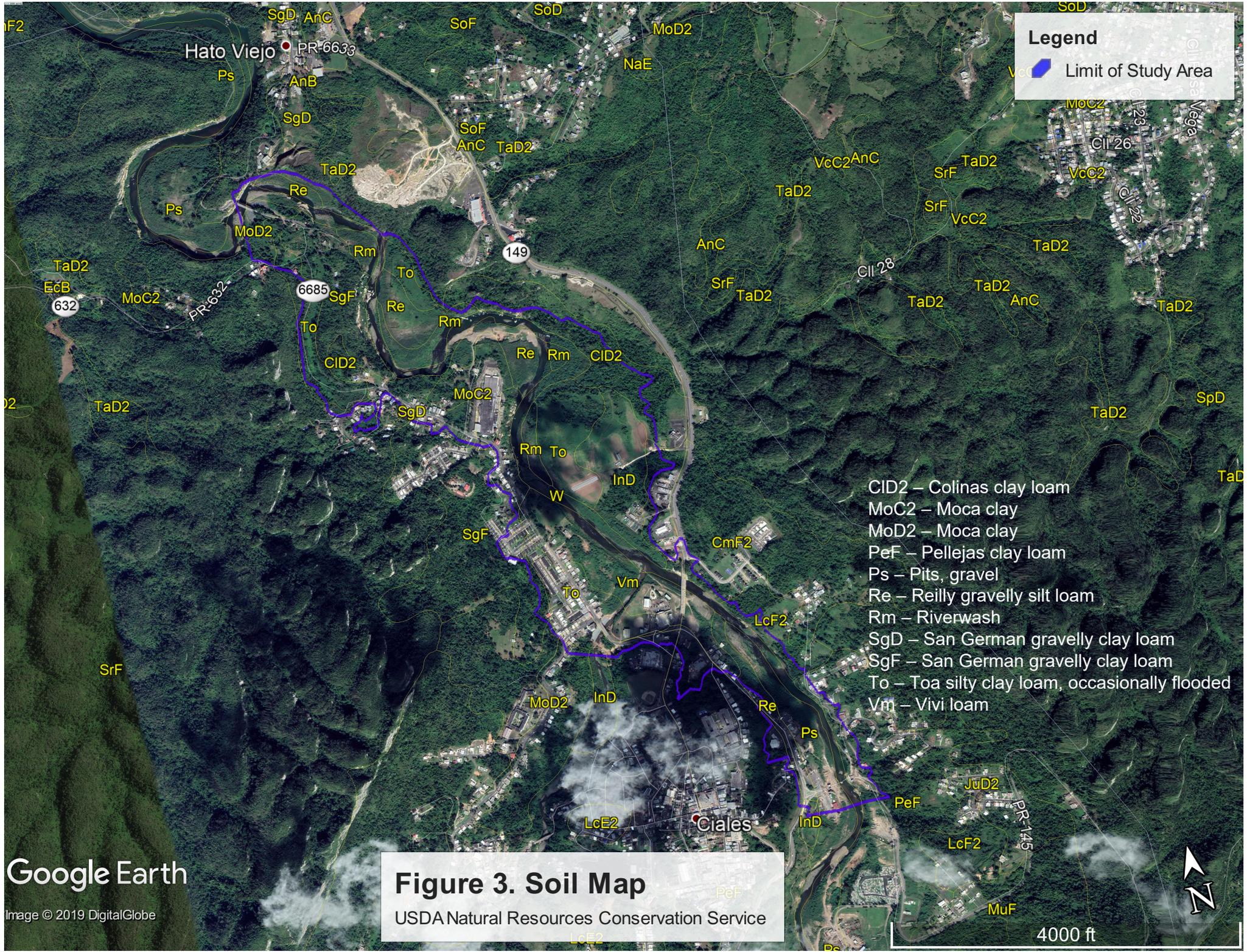


Figure 1. Location of the Municipality of Ciales, Rio Grande de Manati Watershed and Study Area. Flow of Rio Grande de Manati is Northwest.





Google Earth

Image © 2019 DigitalGlobe

**Figure 3. Soil Map**

USDA Natural Resources Conservation Service

4000 ft



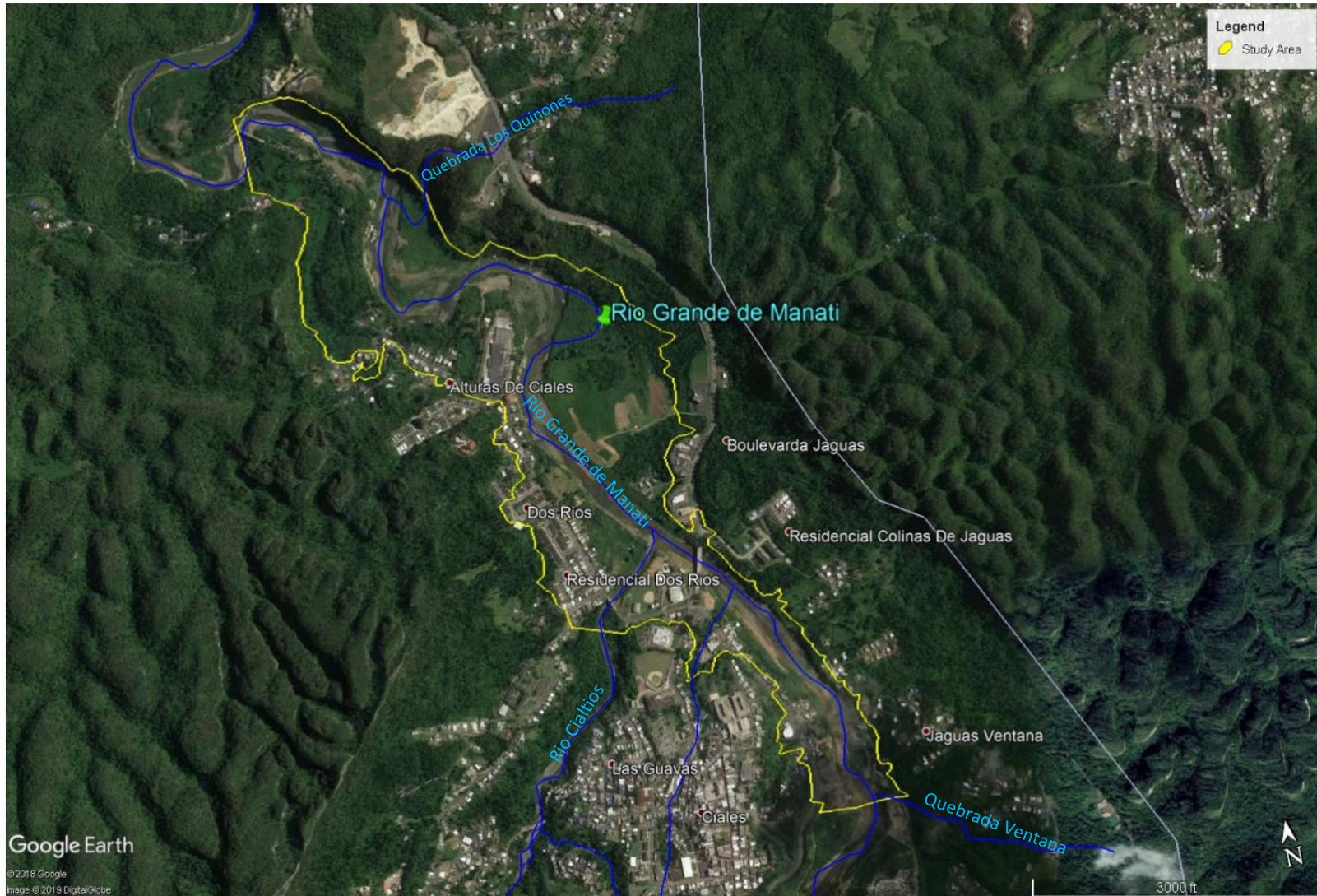


Figure 4. Surface Water

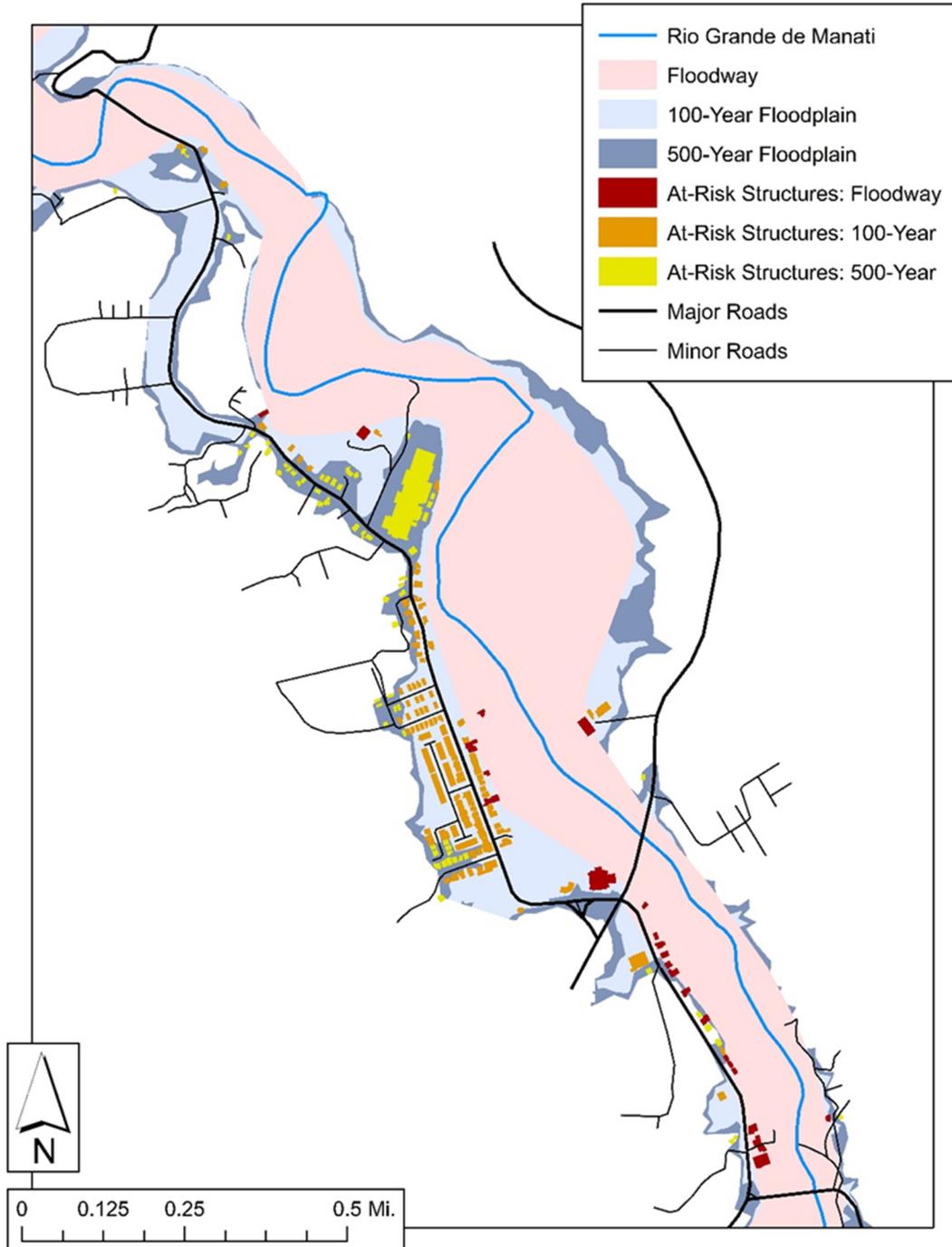
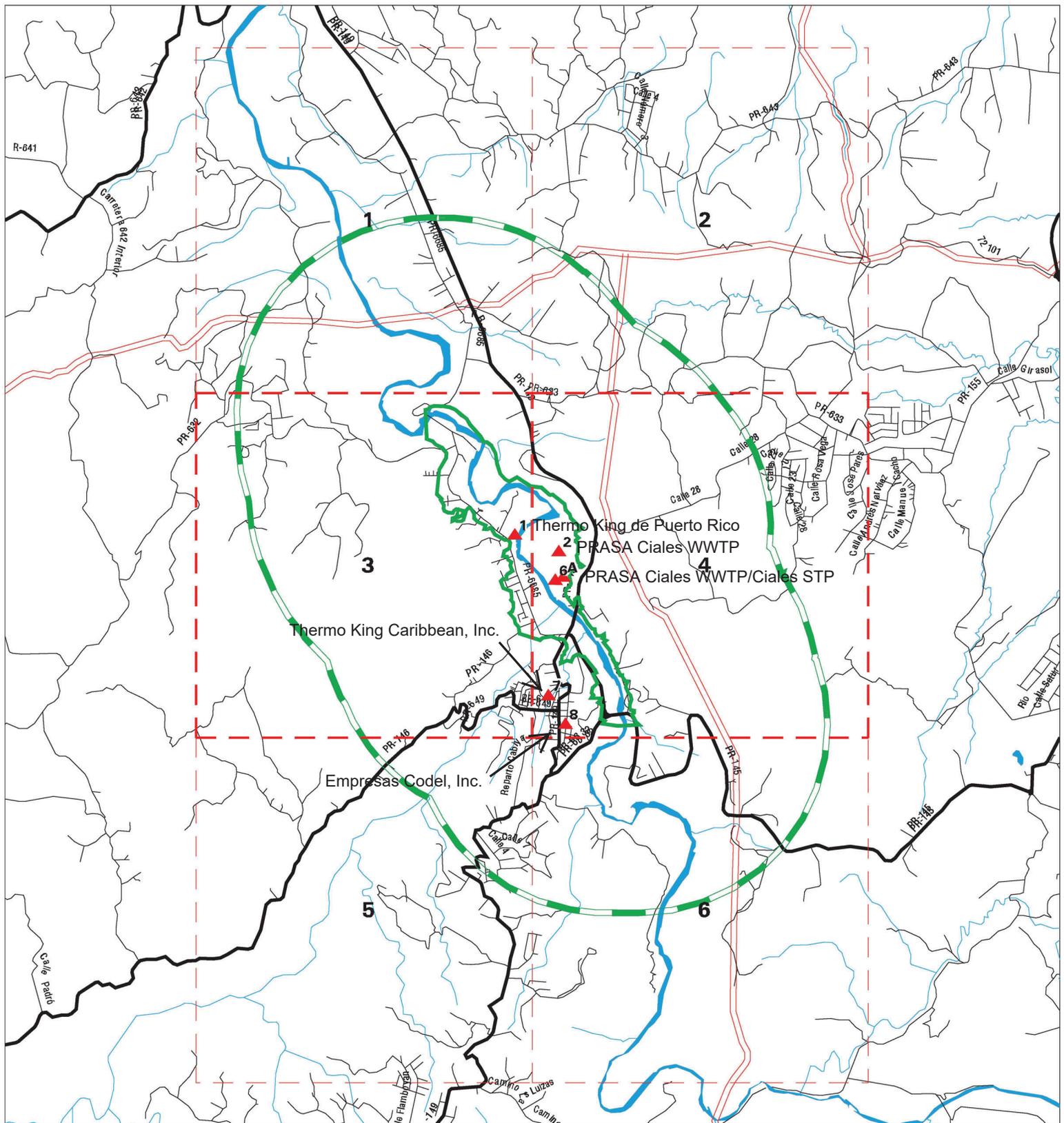


Figure 5. Floodway and 100- and 500-year Floodplains



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



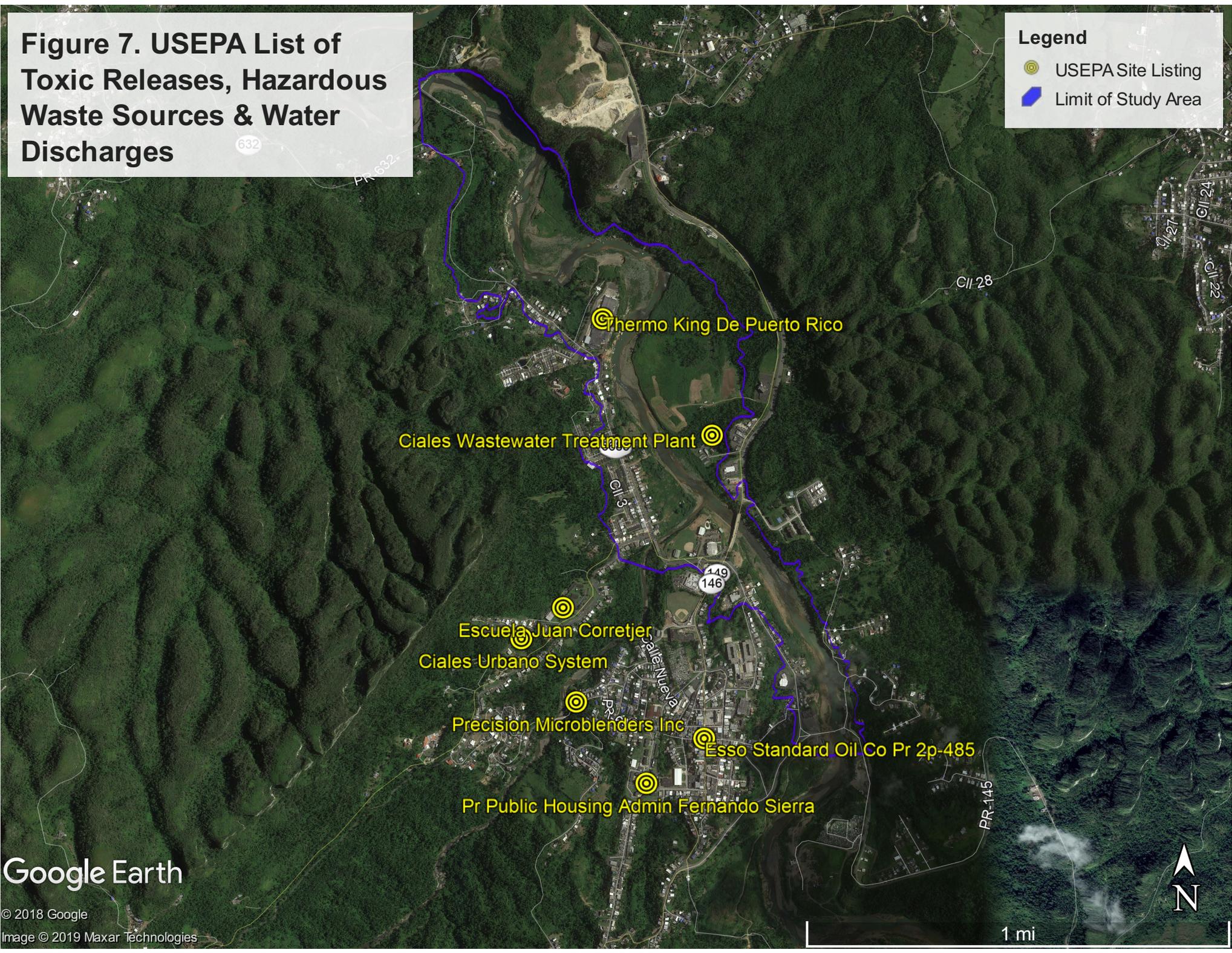
**Figure 6. EDR Corridor Report Target Sites**

<p>SITE NAME: Rio Grande de Manati Puerto Rico          ADDRESS: Rio Grande de Manati Puerto Rico          CITY/STATE: Ciales PR          ZIP: 00638</p>	<p>CLIENT: U.S. Army Corps of Engineers          CONTACT: Gabriella Sykora          INQUIRY #: 5579627.8s          DATE: 03/05/19 11:45 AM</p>
--	--

**Figure 7. USEPA List of Toxic Releases, Hazardous Waste Sources & Water Discharges**

**Legend**

- USEPA Site Listing
- Limit of Study Area



Google Earth

© 2018 Google  
Image © 2019 Maxar Technologies

**APPENDIX A**  
**SITE PHOTOGRAPHS**

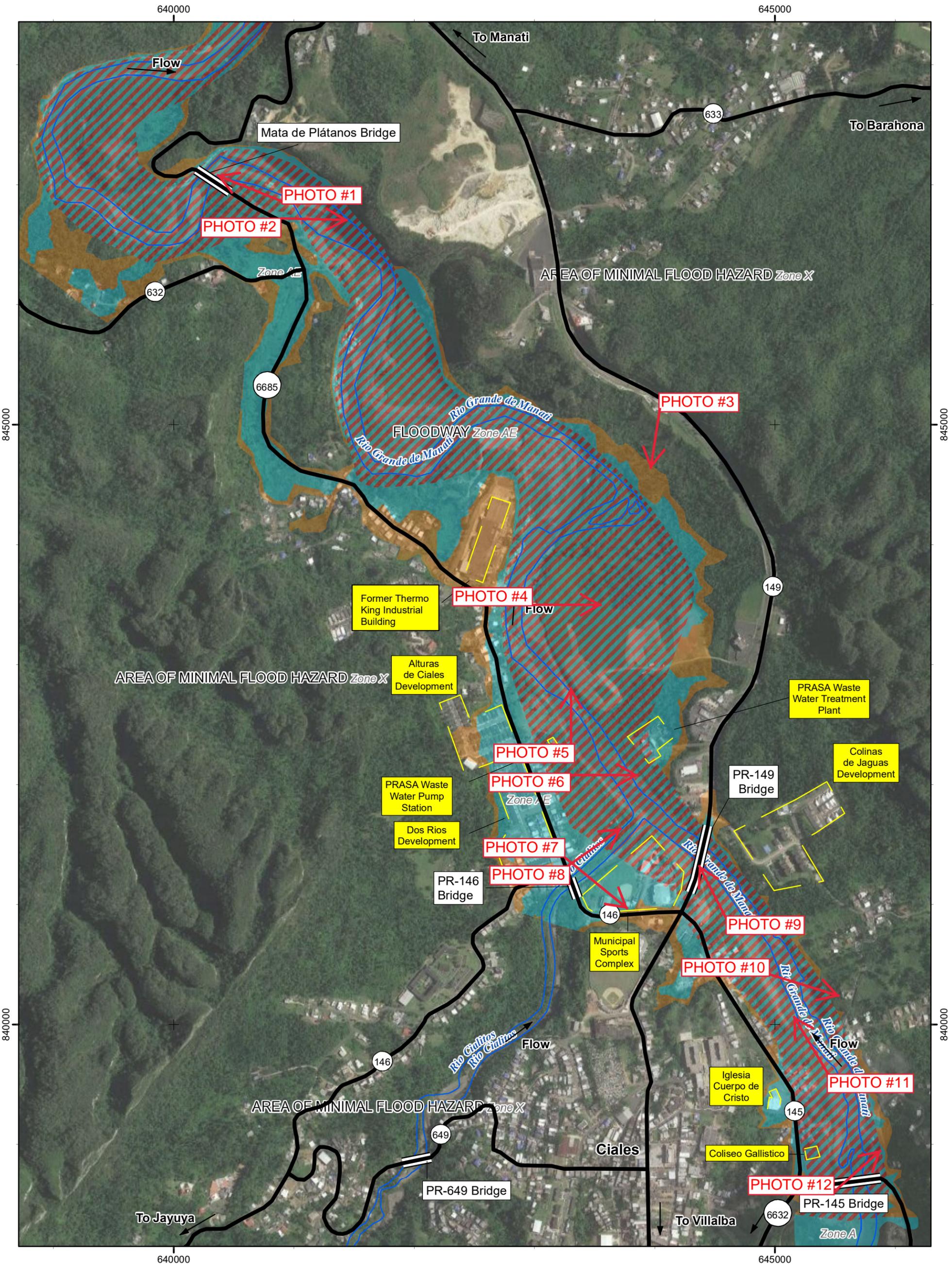
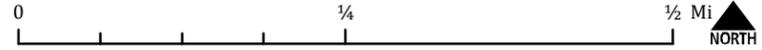


# Río Grande de Manatí en Ciales, PR

Coordinate System: NAD 1983 StatePlane Puerto Rico Virgin Islands FIPS 5200 Feet  
Projection: Lambert Conformal Conic

US Army Corps  
of Engineers  
Pittsburgh District

## FEMA - Zonas de Peligro de Inundación



### Legend

State Road

### Flood Hazard Zones

#### Zone Type

- Peligro de Inundación con Probabilidad Anual de 1%
- Peligro de Inundación con Probabilidad Anual de 0.2%
- Canal de Inundación Reglamentario

PHOTO #1 → Photo Number, Location, and Direction

Data Sources: USACE  
Imagery copyright © Google  
Map Date: March 2019

USACE Pittsburgh Geospatial, 412-395-7553





Photo 1. General view of terrain at the northern end of the Study Area, including the Mata de Platanos Bridge along PR-6685, which spans the Rio Grande de Manati River. Photo view northwest.



Photo 2. General view along the Rio Grande de Manati River. Exposed cliff face is on the right descending side of the river. Photo view east.



Photo 3. General view of the project area from the scenic overlook located along PR-149. The former Thermo King de Puerto Rico industrial building is located adjacent to the Rio Grande de Manati River at right of center. Photo view southwest.



Photo 4. General view of a grassland agricultural field along the right descending bank of the Rio Grande de Manati River. Photo view east.



Photo 5. General view along the left descending bank of the Rio Grande de Manati River. Photo view north.



Photo 6. General view along the left descending bank of the Rio Grande de Manati River. Photo view east.



Photo 7. View of a vacant gasoline station at the intersection of PR-146 and PR-6685. Photo view southeast.



Photo 8. General view of Rio Cialitos Creek. The gasoline station property in Photo 7 above is visible at left of center. Photo view northeast from PR-146 Bridge.



Photo 9. General view of the PR-149 Bridge spanning the Rio Grande de Manati River. Photo view northwest.



Photo 10. General view along the left descending bank of the Rio Grande de Manati River. Photo view southeast.



Photo 11. General view along the left descending bank of the Rio Grande de Manati River. Photo view northwest.



Photo 12. General view of the PR-145 Bridge construction site at the southern end of the Study Area. Construction debris is visible in the foreground. The newly-constructed bridge abutment is visible along right side of photograph. Photo view northeast.

**APPENDIX B  
EDR CORRIDOR REPORT**

**Rio Grande de Manati Puerto Rico**

Rio Grande de Manati Puerto Rico

Ciales, PR 00638

Inquiry Number: 5579627.8s

March 05, 2019

## EDR Area / Corridor Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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Map Findings Summary .....	3
Focus Maps .....	6
Map Findings .....	18
Orphan Summary .....	OR-1
Government Records Searched/Data Currency Tracking .....	GR-1

***Thank you for your business.***  
 Please contact EDR at 1-800-352-0050  
 with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### SUBJECT PROPERTY INFORMATION

#### ADDRESS

RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

### TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

### ADDITIONAL ENVIRONMENTAL RECORDS

#### ***Other Ascertainable Records***

RMP: Risk Management Plans

A review of the RMP list, as provided by EDR, and dated 10/26/2018 has revealed that there is 1 RMP site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
CIALES WASTEWATER TR	CARR. 149, KM 12.1	6 / 4	23

ICIS: Integrated Compliance Information System

A review of the ICIS list, as provided by EDR, and dated 11/18/2016 has revealed that there are 3 ICIS sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
PRASA CIALES WWTP FRS ID:: 110000557424	STATE ROAD 149, KM 1	2 / 4	17
<b><i>CIALES WASTEWATER TR</i></b> FRS ID:: 110000557424	<b><i>PR-149 KM 12.1</i></b>	<b><i>A4 / 4</i></b>	<b><i>18</i></b>
CIALES STP FRS ID:: 110000557424	STATE RD 144 KM 12.1	A5 / 4	21

## EXECUTIVE SUMMARY

FINDS: Facility Index System/Facility Registry System

A review of the FINDS list, as provided by EDR, and dated 11/15/2018 has revealed that there are 2 FINDS sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<b><i>THERMO KING DE PUERT</i></b> Registry ID:: 110008476611	<b><i>ROAD 6685 KM 11.2</i></b>	<b><i>1 / 3</i></b>	<b><i>17</i></b>
<b><i>CIALES WASTEWATER TR</i></b> Registry ID:: 110000557424	<b><i>PR-149 KM 12.1</i></b>	<b><i>A4 / 4</i></b>	<b><i>18</i></b>

ECHO: Enforcement & Compliance History Information

A review of the ECHO list, as provided by EDR, and dated 09/02/2018 has revealed that there are 2 ECHO sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<b><i>THERMO KING DE PUERT</i></b> Registry ID: 110008476611	<b><i>ROAD 6685 KM 11.2</i></b>	<b><i>1 / 3</i></b>	<b><i>17</i></b>
<b><i>CIALES WASTEWATER TR</i></b> Registry ID: 110000557424	<b><i>PR-149 KM 12.1</i></b>	<b><i>A3 / 4</i></b>	<b><i>18</i></b>

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 12/13/2018 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<b><i>THERMO KING CARIBBEA</i></b> Site ID: 0202476 EPA Id: PRD091049262	<b><i>PR RD 149</i></b>	<b><i>SSW 1/8 - 1/4 (0.177 mi.)</i></b>	<b><i>7 / 4</i></b>	<b><i>28</i></b>

# EXECUTIVE SUMMARY

## ADDITIONAL ENVIRONMENTAL RECORDS

### ***Other Ascertainable Records***

US MINES: Mines Master Index File

A review of the US MINES list, as provided by EDR, has revealed that there is 1 US MINES site within approximately 0.25 miles of the requested target property.

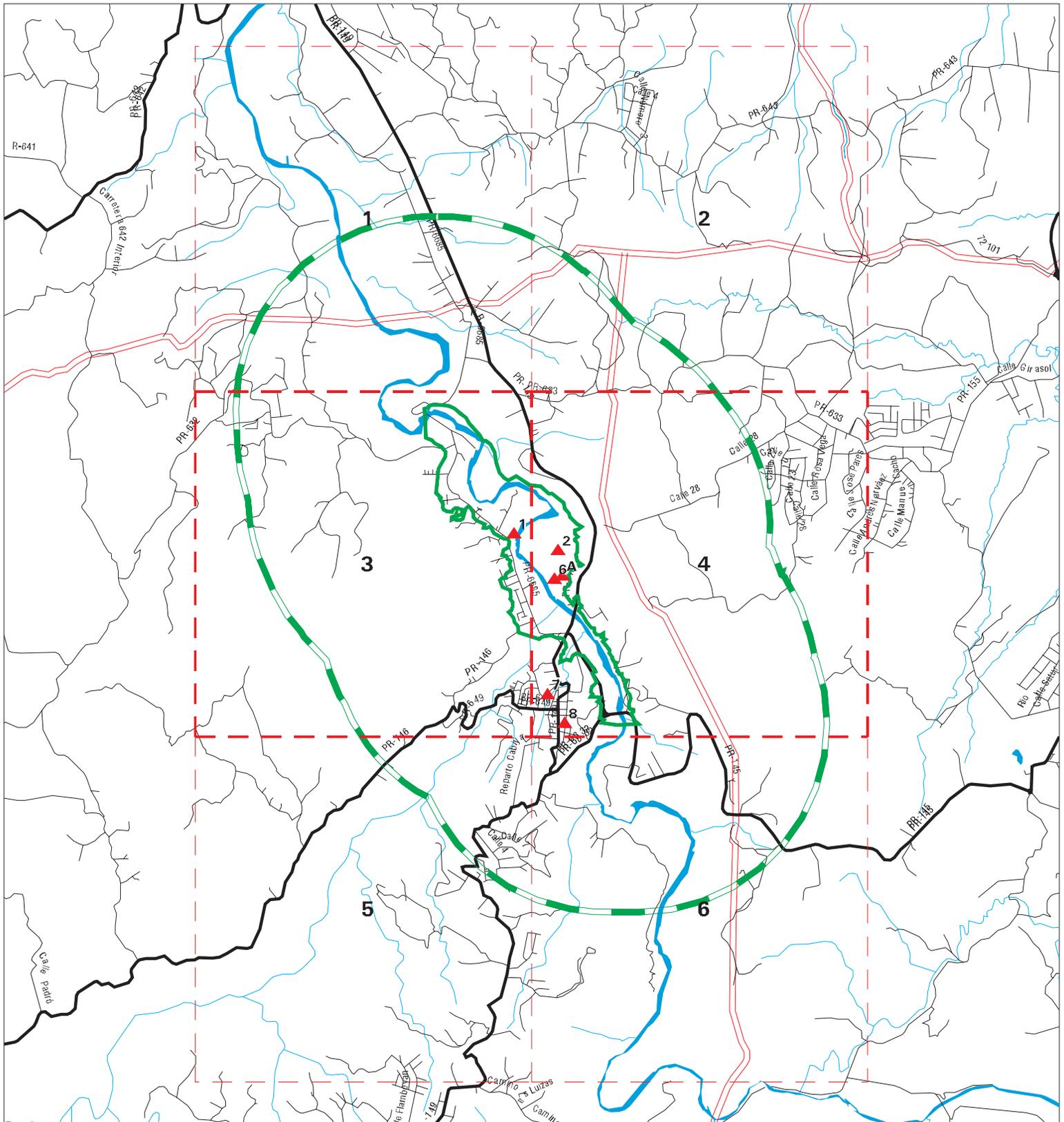
<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
EMPRESAS CODEL INC Database: US MINES, Date of Government Version: 08/01/2018 Mine ID:: 5400253		W 1/8 - 1/4 (0.185 mi.)	8 / 4	30

MAPPED SITES SUMMARY
----------------------

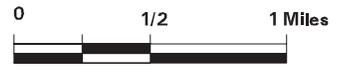
Target Property:  
 RIO GRANDE DE MANATI PUERTO RICO  
 CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 3	THERMO KING DE PUERT	ROAD 6685 KM 11.2	FINDS, ECHO	TP
2 / 4	PRASA CIALES WWTP	STATE ROAD 149, KM 1	ICIS	TP
A3 / 4	CIALES WASTEWATER TR	PR-149 KM 12.1	ECHO	TP
A4 / 4	CIALES WASTEWATER TR	PR-149 KM 12.1	ICIS, FINDS	TP
A5 / 4	CIALES STP	STATE RD 144 KM 12.1	ICIS	TP
6 / 4	CIALES WASTEWATER TR	CARR. 149, KM 12.1	RMP	TP
7 / 4	THERMO KING CARIBBEA	PR RD 149	SEMS-ARCHIVE	933 0.177 SSW
8 / 4	EMPRESAS CODEL INC		US MINES	978 0.185 West

# Key Map - 5579627.8s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
**CITY/STATE:** Ciales PR  
**ZIP:** 00638

**CLIENT:** U.S. Army Corps of Engineers  
**CONTACT:** Gabriella Sykora  
**INQUIRY #:** 5579627.8s  
**DATE:** 03/05/19 11:45 AM

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><u>STANDARD ENVIRONMENTAL RECORDS</u></b>								
<b><i>Federal NPL site list</i></b>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<b><i>Federal Delisted NPL site list</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Federal CERCLIS list</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Federal CERCLIS NFRAP site list</i></b>								
SEMS-ARCHIVE	0.500		0	1	0	NR	NR	1
<b><i>Federal RCRA CORRACTS facilities list</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA generators list</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>State- and tribal - equivalent CERCLIS</i></b>								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
<b><i>State and tribal leaking storage tank lists</i></b>								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
<b><i>State and tribal registered storage tank lists</i></b>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<b><i>State and tribal voluntary cleanup sites</i></b>								
INDIAN VCP	0.500		0	0	0	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>ADDITIONAL ENVIRONMENTAL RECORDS</b>								
<b>Local Brownfield lists</b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b>Local Lists of Landfill / Solid Waste Disposal Sites</b>								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<b>Local Lists of Hazardous waste / Contaminated Sites</b>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
<b>Local Land Records</b>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<b>Records of Emergency Release Reports</b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP	1	NR	NR	NR	NR	NR	1
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP	3	NR	NR	NR	NR	NR	3
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	1	NR	NR	NR	1
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	2	NR	NR	NR	NR	NR	2
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP	2	NR	NR	NR	NR	NR	2
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
<b><u>EDR HIGH RISK HISTORICAL RECORDS</u></b>								
<b><i>EDR Exclusive Records</i></b>								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<b><u>EDR RECOVERED GOVERNMENT ARCHIVES</u></b>								
<b><i>Exclusive Recovered Govt. Archives</i></b>								
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		8	0	2	0	0	0	10

**NOTES:**

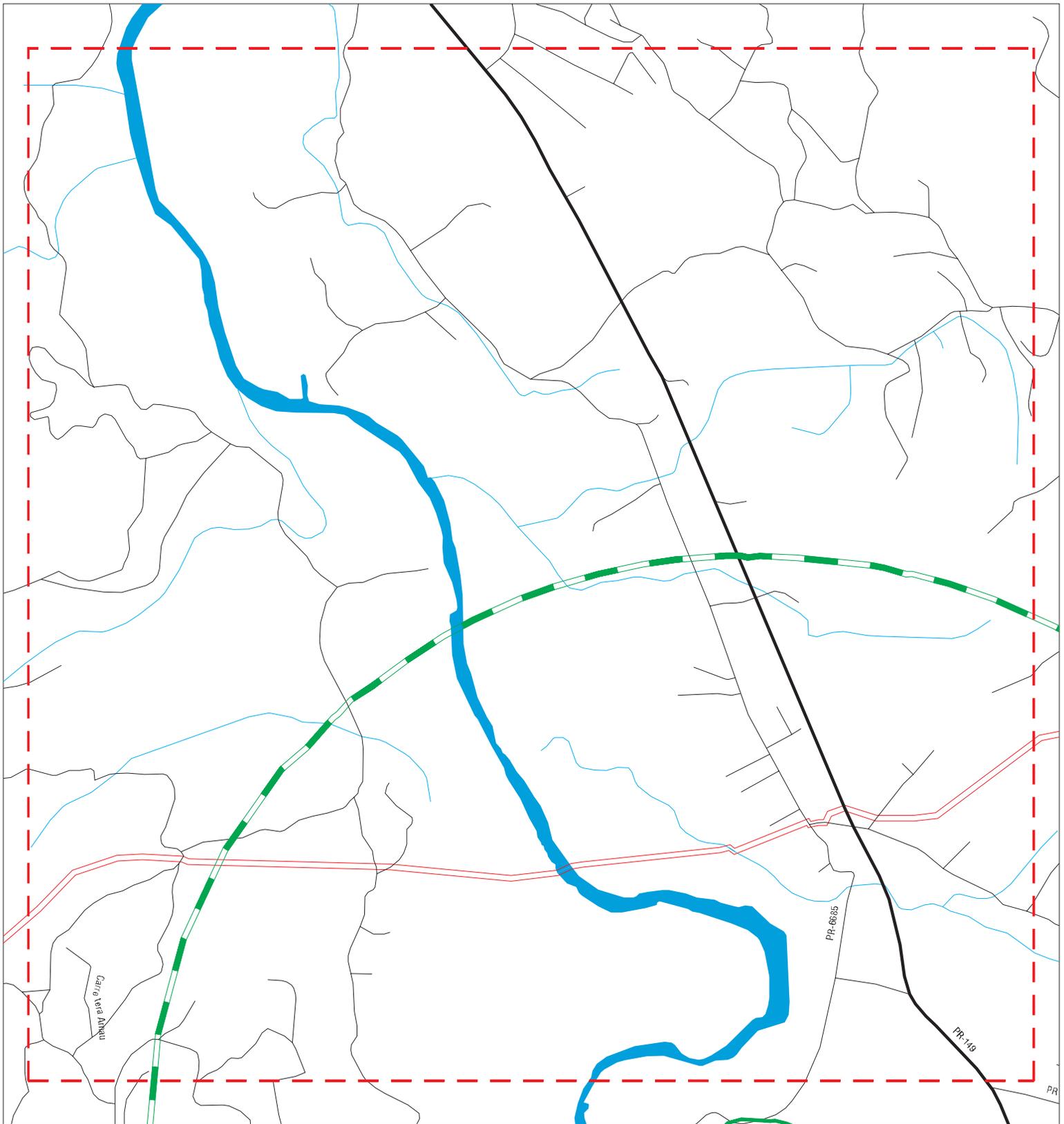
TP = Target Property

NR = Not Requested at this Search Distance

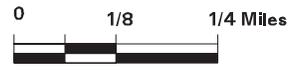
Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

# Focus Map - 1 - 5579627.8s



- ▲ Sites
- - - Focus Map - Sites
- - - Target Property
- National Priority List Sites
- - - Search Buffer
- Dept. Defense Sites
- - - Focus Map - No Sites
- Indian Reservations BIA



**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
**CITY/STATE:** Ciales PR  
**ZIP:** 00638

**CLIENT:** U.S. Army Corps of Engineers  
**CONTACT:** Gabriella Sykora  
**INQUIRY #:** 5579627.8s  
**DATE:** 03/05/19

MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:  
RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND

# Focus Map - 2 - 5579627.8s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
**CITY/STATE:** Ciales PR  
**ZIP:** 00638

**CLIENT:** U.S. Army Corps of Engineers  
**CONTACT:** Gabriella Sykora  
**INQUIRY #:** 5579627.8s  
**DATE:** 03/05/19

MAPPED SITES SUMMARY - FOCUS MAP 2

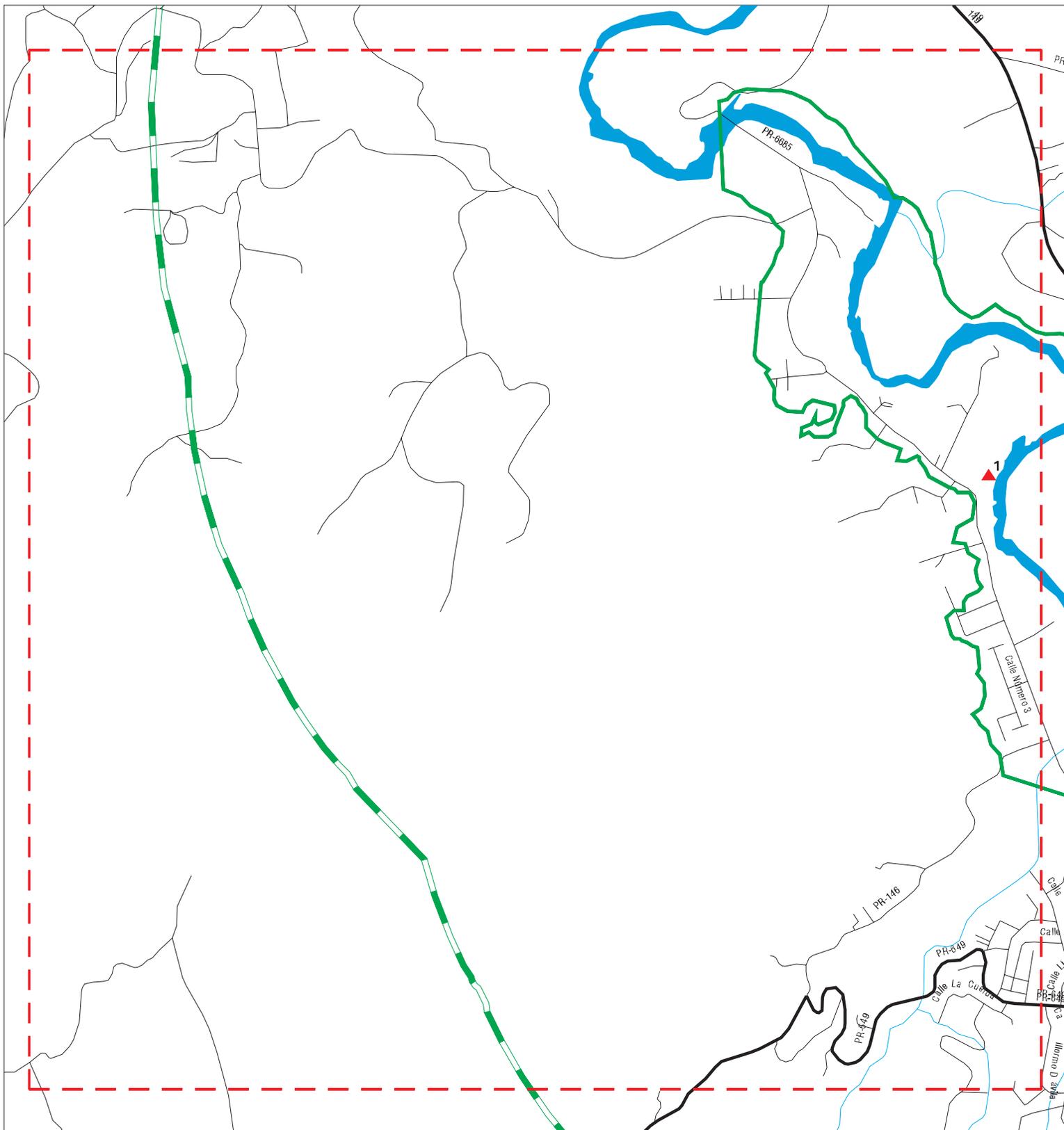
Target Property:  
RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND

# Focus Map - 3 - 5579627.8s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
**CITY/STATE:** Ciales PR  
**ZIP:** 00638

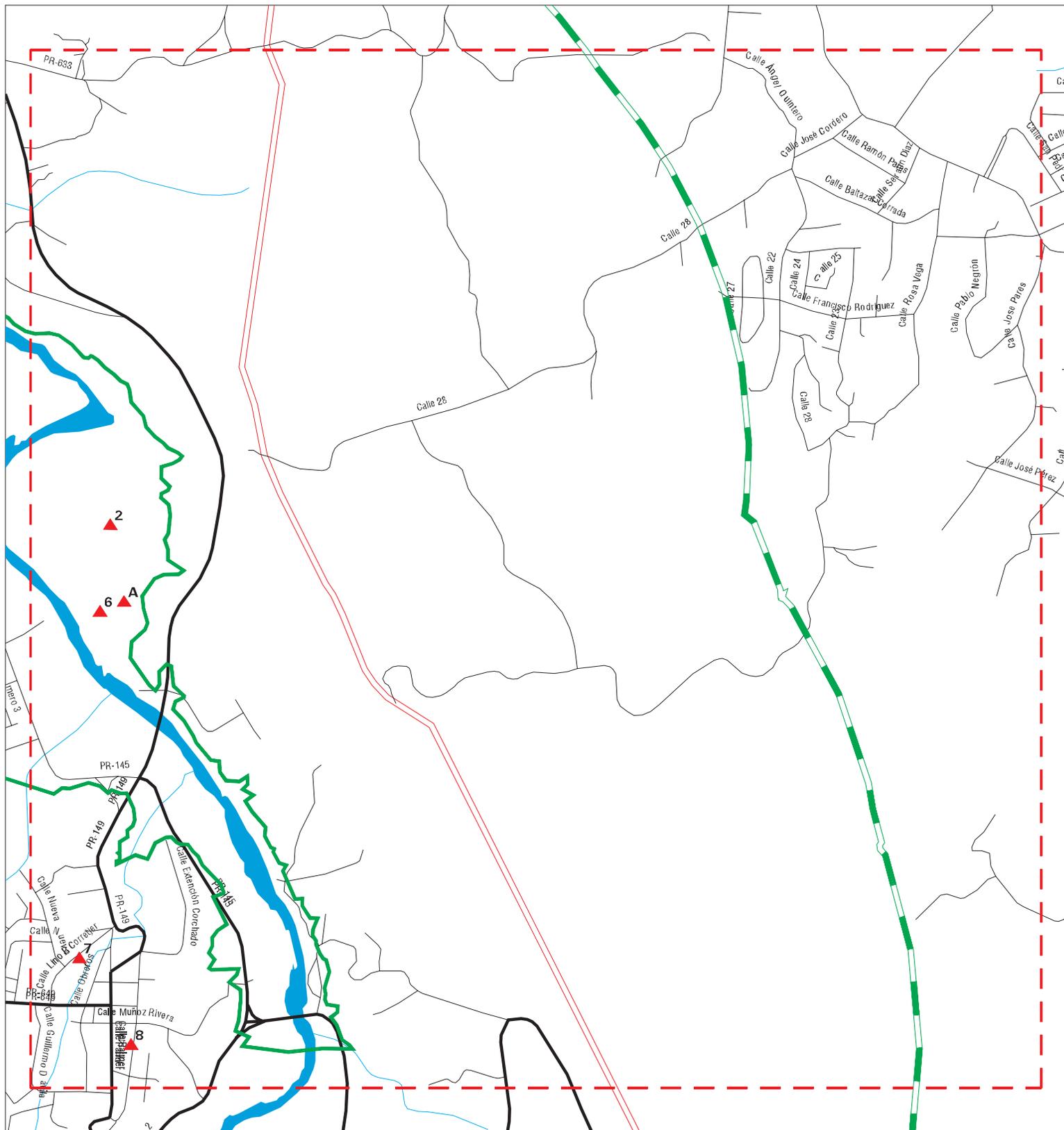
**CLIENT:** U.S. Army Corps of Engineers  
**CONTACT:** Gabriella Sykora  
**INQUIRY #:** 5579627.8s  
**DATE:** 03/05/19

MAPPED SITES SUMMARY - FOCUS MAP 3

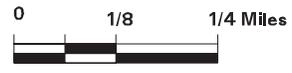
Target Property:  
RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 3	THERMO KING DE PUERT	ROAD 6685 KM 11.2	FINDS, ECHO	TP

# Focus Map - 4 - 5579627.8s



- ▲ Sites
- Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



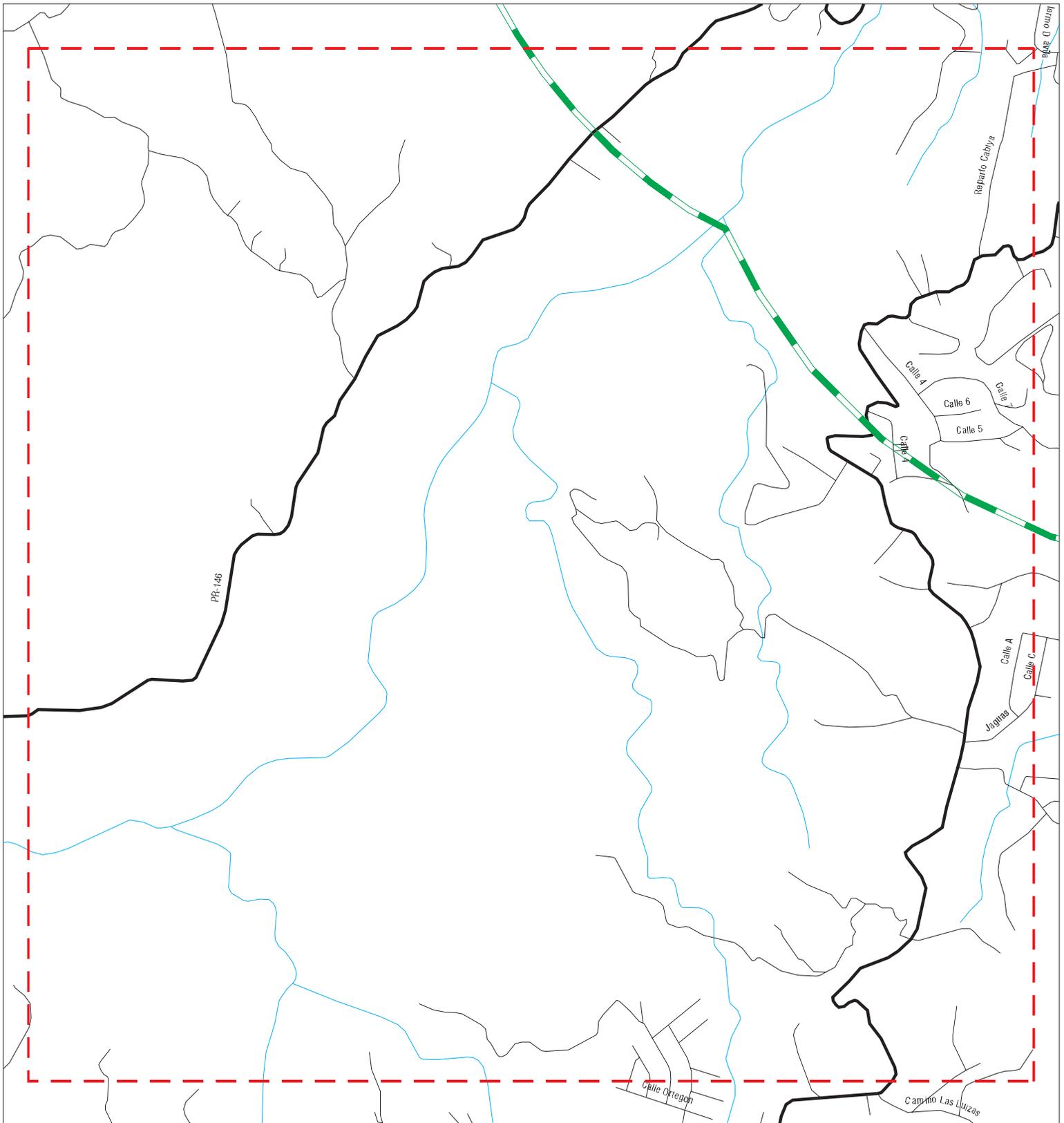
<p>SITE NAME: Rio Grande de Manati Puerto Rico          ADDRESS: Rio Grande de Manati Puerto Rico          CITY/STATE: Ciales PR          ZIP: 00638</p>	<p>CLIENT: U.S. Army Corps of Engineers          CONTACT: Gabriella Sykora          INQUIRY #: 5579627.8s          DATE: 03/05/19</p>
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MAPPED SITES SUMMARY - FOCUS MAP 4

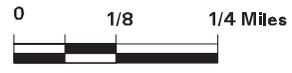
Target Property:  
 RIO GRANDE DE MANATI PUERTO RICO  
 CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
2 / 4	PRASA CIALES WWTP	STATE ROAD 149, KM 1	ICIS	TP
A3 / 4	CIALES WASTEWATER TR	PR-149 KM 12.1	ECHO	TP
A4 / 4	CIALES WASTEWATER TR	PR-149 KM 12.1	ICIS, FINDS	TP
A5 / 4	CIALES STP	STATE RD 144 KM 12.1	ICIS	TP
6 / 4	CIALES WASTEWATER TR	CARR. 149, KM 12.1	RMP	TP
7 / 4	THERMO KING CARIBBEA	PR RD 149	SEMS-ARCHIVE	933 0.177 SSW
8 / 4	EMPRESAS CODEL INC		US MINES	978 0.185 West

# Focus Map - 5 - 5579627.8s



- ▲ Sites
- Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- / / Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: Rio Grande de Manati Puerto Rico  
 ADDRESS: Rio Grande de Manati Puerto Rico  
 CITY/STATE: Ciales PR  
 ZIP: 00638

CLIENT: U.S. Army Corps of Engineers  
 CONTACT: Gabriella Sykora  
 INQUIRY #: 5579627.8s  
 DATE: 03/05/19

MAPPED SITES SUMMARY - FOCUS MAP 5

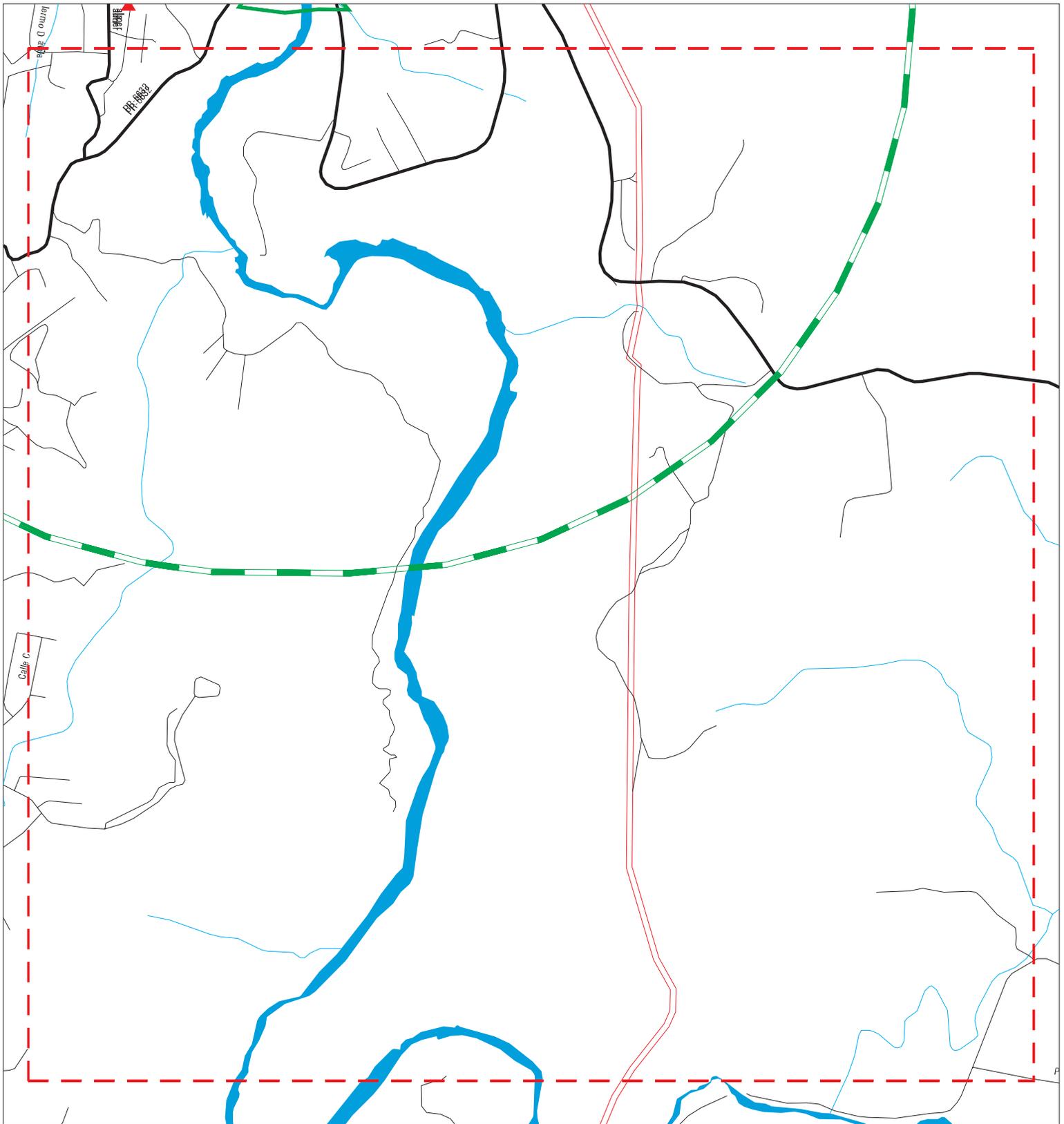
Target Property:  
RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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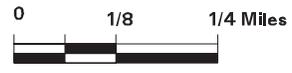
---

NO MAPPED SITES FOUND

# Focus Map - 6 - 5579627.8s



- ▲ Sites
- ↗ Target Property
- ↘ Search Buffer
- ↗ Focus Map - No Sites
- ↘ Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
**CITY/STATE:** Ciales PR  
**ZIP:** 00638

**CLIENT:** U.S. Army Corps of Engineers  
**CONTACT:** Gabriella Sykora  
**INQUIRY #:** 5579627.8s  
**DATE:** 03/05/19

MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:  
RIO GRANDE DE MANATI PUERTO RICO  
CIALES, PR 00638

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND





Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1016766371**

Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Facility Address: PR-149 KM 12.1  
CIALES, PR 00638  
Enforcement Action Type: CAA 113D1 Action For Penalty  
Facility County: CIALES  
Program System Acronym: RMP  
Enforcement Action Forum Desc: Administrative - Formal  
EA Type Code: 113D1  
Facility SIC Code: Not reported  
Federal Facility ID: Not reported  
Latitude in Decimal Degrees: 18.346639  
Longitude in Decimal Degrees: -66.468244  
Permit Type Desc: Not reported  
Program System Acronym: 100000121441  
Facility NAICS Code: Not reported  
Tribal Land Code: Not reported

Enforcement Action ID: 02-2007-1023  
FRS ID: 110000557424  
Action Name: Puerto Rico Aqueduct and Sewer Authority  
Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Facility Address: PR-149 KM 12.1  
CIALES, PR 00638  
Enforcement Action Type: CAA 113A Admin Compliance Order (Non-Penalty)  
Facility County: CIALES  
Program System Acronym: RMP  
Enforcement Action Forum Desc: Administrative - Formal  
EA Type Code: 113A  
Facility SIC Code: Not reported  
Federal Facility ID: Not reported  
Latitude in Decimal Degrees: 18.346639  
Longitude in Decimal Degrees: -66.468244  
Permit Type Desc: Not reported  
Program System Acronym: 100000121441  
Facility NAICS Code: Not reported  
Tribal Land Code: Not reported

Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Address: PR-149 KM 12.1  
Tribal Indicator: N  
Fed Facility: Not reported  
NAIC Code: Not reported  
SIC Code: Not reported

Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Address: PR-149 KM 12.1  
Tribal Indicator: N  
Fed Facility: Not reported  
NAIC Code: Not reported  
SIC Code: Not reported

Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Address: PR-149 KM 12.1  
Tribal Indicator: N  
Fed Facility: Not reported  
NAIC Code: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1016766371**

SIC Code: Not reported

Facility Name: CIALES WASTEWATER TREATMENT PLANT  
Address: PR-149 KM 12.1  
Tribal Indicator: N  
Fed Facility: Not reported  
NAIC Code: Not reported  
SIC Code: Not reported

**FINDS:**

Registry ID: 110000557424

**Environmental Interest/Information System**

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

US EPA Risk Management Plan (RMP) database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES STP (Continued)**

**1018285499**

Federal Facility ID: Not reported  
Latitude in Decimal Degrees: 18.346617  
Longitude in Decimal Degrees: -66.468227  
Permit Type Desc: Not reported  
Program System Acronym: 44511  
Facility NAICS Code: Not reported  
Tribal Land Code: Not reported

Enforcement Action ID: 02-1999-3076  
FRS ID: 110000557424  
Action Name: PRASA - CIALES WTP  
Facility Name: CIALES STP  
Facility Address: STATE RD 144 KM 12.1  
CIALES, PR 00638

Enforcement Action Type: CWA 309A AO For Compliance  
Facility County: CIALES  
Program System Acronym: ICIS  
Enforcement Action Forum Desc: Administrative - Formal  
EA Type Code: 309A  
Facility SIC Code: 4952  
Federal Facility ID: Not reported  
Latitude in Decimal Degrees: 18.346617  
Longitude in Decimal Degrees: -66.468227  
Permit Type Desc: Not reported  
Program System Acronym: 44511  
Facility NAICS Code: Not reported  
Tribal Land Code: Not reported

Enforcement Action ID: 02-1997-0285  
FRS ID: 110000557424  
Action Name: PRASA - CIALES STP  
Facility Name: CIALES STP  
Facility Address: STATE RD 144 KM 12.1  
CIALES, PR 00638  
Enforcement Action Type: CWA 309A AO For Compliance  
Facility County: CIALES  
Program System Acronym: ICIS  
Enforcement Action Forum Desc: Administrative - Formal  
EA Type Code: 309A  
Facility SIC Code: 4952  
Federal Facility ID: Not reported  
Latitude in Decimal Degrees: 18.346617  
Longitude in Decimal Degrees: -66.468227  
Permit Type Desc: Not reported  
Program System Acronym: 44511  
Facility NAICS Code: Not reported  
Tribal Land Code: Not reported

Enforcement Action ID: 02-1997-0214  
FRS ID: 110000557424  
Action Name: PRASA - CIALES  
Facility Name: CIALES STP  
Facility Address: STATE RD 144 KM 12.1  
CIALES, PR 00638  
Enforcement Action Type: CWA 309A AO For Compliance  
Facility County: CIALES  
Program System Acronym: ICIS

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CIALES STP (Continued)**

**1018285499**

Enforcement Action Forum Desc: Administrative - Formal  
 EA Type Code: 309A  
 Facility SIC Code: 4952  
 Federal Facility ID: Not reported  
 Latitude in Decimal Degrees: 18.346617  
 Longitude in Decimal Degrees: -66.468227  
 Permit Type Desc: Not reported  
 Program System Acronym: 44511  
 Facility NAICS Code: Not reported  
 Tribal Land Code: Not reported

**6**  
**Target**  
**Property**

**CIALES WASTEWATER TREATMENT PLANT**  
**CARR. 149, KM 12.1**  
**CIALES, PR 00638**

**RMP 1011819181**  
**N/A**

**Actual:**  
**128 ft.**  
**Focus Map:**  
**4**

RMP:

Facility ID: 29488  
 LEPC city: Arecibo  
 Facility decimal latitude: 18.346389  
 Facility decimal longitude: -66.468889  
 Is facility in county box: T  
 LatLong method: G6  
 LatLong description: ST  
 Home page web address: Not reported  
 Facility telephone: 7872817878  
 Facility email: Not reported  
 Facility DUNS #: 0  
 Parent's name: Puerto Rico Aqueduct and Sewer Authority  
 Partner's name: Not reported  
 Parent's DUNS #: 0  
 Partner's DUNS #: 0  
 Operator's name: Compañía de Aguas de Puerto Rico  
 Operator's telephone: 7877451220  
 Operator's address: PO Box 235  
 Operators City,St,Zip: Caguas, PR 00726  
 RMP implementation contact: Fernando Pina  
 RMP contact title: Director of Operations  
 Emergency contact: Centro de Informacion de Emergencia  
 Emergency contact title: Shift Supervisor  
 Emergency contact telephone: 7877562717  
 24 hour emergency telephone: 7877562706  
 Emergency contact ext/pin #: Not reported  
 Number of full time employees: 2  
 EPA ID: PRD000689406  
 Facility ID provided by CEPO: 100000121441  
 Is facility covered by OSHA PSM: T  
 Is facility covered by EPCRA 302: T  
 Is fac. covered by CAA Title V 112(2): F  
 Clean air op. permit/State ID: Not reported  
 Last safety insp. dat: Not reported  
 Inspected by: unknown  
 Is it OSHA approved with star/merit ranking: False  
 Will RMP involve predictive filing: False  
 Submission type: First Time  
 RMP description: Not reported  
 Facility has no accident hist. recs: True  
 Foreign owner's address: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1011819181**

Foreign owner's zip: Not reported  
Foreign owner's country: Not reported  
Claim # of employees as CBI: False  
Date RMP accepted by EPA: 2004-01-30 00:00:00  
Date of error Report: Not reported  
Date RMP received: 1999-06-22 00:00:00  
Does RMP contain graphics files: False  
Does RMP contain attachments: False  
Was certification letter received: True  
RMP submission method: RMP\*Submit  
Does RMP contain CBI substantiation: False  
Does RMP contain electronic waiver: False  
Date RMP postmarked: 1999-06-21 00:00:00  
Is RMP complete: True  
Date of de-registration: 2007-10-24 00:00:00  
Date de-registration is effective: 2007-10-22 00:00:00  
Anniversary date: 2004-06-21 00:00:00  
Does RMP contain CBI data: False  
Does RMP contain unsanitized CBI version: False  
RMP version #: 2.0  
FRS latitude: 18.34639  
FRS longitude: -66.468890000000002  
FRS Description: STORAGE TANK  
FRS Method: GPS CODE (PSEUDO RANGE) STANDARD POSITION (SA ON)

**RMP:**

Process ID: 42718  
NA & Industry Classification Sys.code(s): 22132  
NAICS code description: Sewage Treatment Facilities  
Optional facility description: Chlorine injection/stor.  
Program level: 3  
Record contains CBI data: False

**RMP:**

Chemical name: Public OCA Chemical  
Process chemical qty in 100s lbs: 0  
Process flammable chemical name: Not reported

**RMP:**

Percent weight of chemical: 100  
Physical state: c  
Analytical basic: EPA's OCA Guidance Reference Tables or Equations  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Release duration in minutes: Not reported  
Release rate in pounds per second: Not reported  
Wind speed in meters/second: 3  
Stability class: D  
Topography: a  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Active mitigation: Not reported

**RMP:**

Percent weight of chemical: 100

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1011819181**

Physical state: c  
Analytical basic: EPA's OCA Guidance Reference Tables or Equations  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Release duration in minutes: 10  
Release rate in pounds per second: Not reported  
Wind speed in meters/second: 1.5  
Stability class: F  
Topography: a  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported

**RMP:**

Endpoint used: Not reported  
LFL value: Not reported  
Analytical basic: Not reported  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Active mitigation: Not reported

**RMP:**

Analytical basic: Not reported  
Quantity released in pounds: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Safety review date: Not reported  
Most recent PHA date: Not reported  
Process Hazard Analysis: Not reported  
Expected PHA changes completion date: Not reported  
Major Hazard: Not reported  
Process Control: Not reported  
Mitigation Systems: Not reported  
Monitoring/Detection: Not reported  
Changes since the last process hazard analysis: Not reported  
Most recent review of op. procedures: Not reported  
Most recent training progs review/update: Not reported  
Training: Not reported  
Competency testing: Not reported  
Most recent maintenance review date: Not reported  
Most recent equipment inspection date: Not reported  
Equipment tested: Not reported  
Most recent changes by mgmt: Not reported  
Date of most recent review/update: Not reported  
Date of pre-start review: Not reported  
Most recent compliance audit date: Not reported  
Expected date of audit completion: Not reported  
Most recent incident investigation: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1011819181**

Expected date of investigation changes: Not reported  
Date of participation plan review: Not reported  
Date of hot work permit review: Not reported  
Date of contractor safety review: Not reported  
Date of contractor safety eval. review: Not reported  
Record has CBI data: Not reported  
Safety review date: Not reported  
Federal Regulation: Not reported  
Federal regulation comment: Not reported  
Major Hazard: Not reported  
Process Control: Not reported  
Mitigation Systems: Not reported  
Monitoring/Detection: Not reported  
Changes since the last process hazard analysis: Not reported  
Most recent hazard review/update: Not reported  
Most recent review of op. procedures: Not reported  
Most recent training progs review/update: Not reported  
Expected completion of review changes: Not reported  
Training: Not reported  
Competency testing: Not reported  
Most recent maintenance review date: Not reported  
Most recent equipment inspection date: Not reported  
Equipment tested: Not reported  
Most recent compliance audit date: Not reported  
Expected date of audit completion: Not reported  
Most recent incident investigation: Not reported  
Expected date of investigation changes: Not reported  
Record has CBI data: Not reported  
Date of most recent changes: Not reported  
Chemical name: Chlorine  
Process chemical qty in 100s lbs: 10000  
Process flammable chemical name: Not reported

**RMP:**

Percent weight of chemical: Not reported  
Physical state: Not reported  
Analytical basic: Not reported  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Release duration in minutes: Not reported  
Release rate in pounds per second: Not reported  
Wind speed in meters/second: Not reported  
Stability class: Not reported  
Topography: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Active mitigation: Not reported

**RMP:**

Percent weight of chemical: Not reported  
Physical state: Not reported  
Analytical basic: Not reported  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Release duration in minutes: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1011819181**

Release rate in pounds per second: Not reported  
Wind speed in meters/second: Not reported  
Stability class: Not reported  
Topography: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported

**RMP:**

Endpoint used: Not reported  
LFL value: Not reported  
Analytical basic: Not reported  
Scenario: Not reported  
Quantity released in pounds: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Active mitigation: Not reported

**RMP:**

Analytical basic: Not reported  
Quantity released in pounds: Not reported  
Distance to endpoint in miles: Not reported  
Residential population: Not reported  
Public receptors: Not reported  
Environmental receptors: Not reported  
Passive mitigation: Not reported  
Safety review date: Not reported  
Most recent PHA date: Not reported  
Process Hazard Analysis: Not reported  
Expected PHA changes completion date: Not reported  
Major Hazard: Not reported  
Process Control: Not reported  
Mitigation Systems: Not reported  
Monitoring/Detection: Not reported  
Changes since the last process hazard analysis: Not reported  
Most recent review of op. procedures: Not reported  
Most recent training progs review/update: Not reported  
Training: Not reported  
Competency testing: Not reported  
Most recent maintenance review date: Not reported  
Most recent equipment inspection date: Not reported  
Equipment tested: Not reported  
Most recent changes by mgmt: Not reported  
Date of most recent review/update: Not reported  
Date of pre-start review: Not reported  
Most recent compliance audit date: Not reported  
Expected date of audit completion: Not reported  
Most recent incident investigation: Not reported  
Expected date of investigation changes: Not reported  
Date of participation plan review: Not reported  
Date of hot work permit review: Not reported  
Date of contractor safety review: Not reported  
Date of contractor safety eval. review: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CIALES WASTEWATER TREATMENT PLANT (Continued)**

**1011819181**

Record has CBI data:	Not reported
Safety review date:	Not reported
Federal Regulation:	Not reported
Federal regulation comment:	Not reported
Major Hazard:	Not reported
Process Control:	Not reported
Mitigation Systems:	Not reported
Monitoring/Detection:	Not reported
Changes since the last process hazard analysis:	Not reported
Most recent hazard review/update:	Not reported
Most recent review of op. procedures:	Not reported
Most recent training progs review/update:	Not reported
Expected completion of review changes:	Not reported
Training:	Not reported
Competency testing:	Not reported
Most recent maintenance review date:	Not reported
Most recent equipment inspection date:	Not reported
Equipment tested:	Not reported
Most recent compliance audit date:	Not reported
Expected date of audit completion:	Not reported
Most recent incident investigation:	Not reported
Expected date of investigation changes:	Not reported
Record has CBI data:	Not reported
Date of most recent changes:	Not reported
<b>RMP:</b>	
ER plan:	Not reported
ER plan most recent review date:	1999-06-16 00:00:00
ER plan most recent employee training date:	1999-09-30 00:00:00
Local agency coordinating ER plan:	Civil Defense - Zone VI Orocovis
Telephone of the coordinating local agency:	7878677000
Federal regulation:	False
OSHA 1910 120:	True
SPCC:	False
RCRA:	False
OPA 90:	False
EPCRA:	False
Other Regulations:	Not reported

**7**  
**SSW**  
**1/8-1/4**  
**0.177 mi.**  
**933 ft.**

**THERMO KING CARIBBEAN INC**  
**PR RD 149**  
**CIALES, PR 00638**

**SEMS-ARCHIVE 1015736328**  
**PRD091049262**

**Actual:**  
**259 ft.**  
**Focus Map:**  
**4**

SEMS Archive:	
Site ID:	0202476
EPA ID:	PRD091049262
Cong District:	Not reported
FIPS Code:	72039
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information
Latitude:	18.3375
Longitude:	-66.469444

SEMS Archive Detail:  
 Region: 02  
 Site ID: 0202476

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THERMO KING CARIBBEAN INC (Continued)**

**1015736328**

EPA ID: PRD091049262  
Site Name: THERMO KING CARIBBEAN INC  
NPL: N  
FF: N  
OU: 00  
Action Code: VS  
Action Name: ARCH SITE  
SEQ: 1  
Start Date: Not reported  
Finish Date: 1989-09-27 04:00:00  
Qual: Not reported  
Current Action Lead: EPA Perf In-Hse

Region: 02  
Site ID: 0202476  
EPA ID: PRD091049262  
Site Name: THERMO KING CARIBBEAN INC  
NPL: N  
FF: N  
OU: 00  
Action Code: PA  
Action Name: PA  
SEQ: 2  
Start Date: 1987-09-01 04:00:00  
Finish Date: 1987-09-21 04:00:00  
Qual: L  
Current Action Lead: EPA Perf

Region: 02  
Site ID: 0202476  
EPA ID: PRD091049262  
Site Name: THERMO KING CARIBBEAN INC  
NPL: N  
FF: N  
OU: 00  
Action Code: SI  
Action Name: SI  
SEQ: 1  
Start Date: 1989-06-30 04:00:00  
Finish Date: 1989-09-27 04:00:00  
Qual: N  
Current Action Lead: EPA Perf

Region: 02  
Site ID: 0202476  
EPA ID: PRD091049262  
Site Name: THERMO KING CARIBBEAN INC  
NPL: N  
FF: N  
OU: 00  
Action Code: DS  
Action Name: DISCVRY  
SEQ: 1  
Start Date: 1981-05-01 04:00:00  
Finish Date: 1981-05-01 04:00:00  
Qual: Not reported  
Current Action Lead: EPA Ovrsght

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THERMO KING CARIBBEAN INC (Continued)**

**1015736328**

Region: 02  
Site ID: 0202476  
EPA ID: PRD091049262  
Site Name: THERMO KING CARIBBEAN INC  
NPL: N  
FF: N  
OU: 00  
Action Code: PA  
Action Name: PA  
SEQ: 1  
Start Date: 1986-12-30 05:00:00  
Finish Date: 1987-01-07 05:00:00  
Qual: L  
Current Action Lead: St Perf

**8**

**EMPRESAS CODEL INC**

**US MINES 1011260079**

**West**

**1/8-1/4  
0.185 mi.  
978 ft.**

**VEGA BAJA (County), PR**

**N/A**

**Actual:  
310 ft.**

**Focus Map:  
4**

US MINES:  
Mine ID: 5400253  
SIC code(s): 144200 000000 000000 000000 000000 000000  
Entity name: GRAVERO CARRO  
Company: EMPRESAS CODEL INC  
Status: 1  
Status date: 20111221  
Operation Class: non-Coal Mining  
Number of shops: 0  
Number of plants: 0  
Latitude: 18 20 07  
Longitude: 066 28 05

Violations Details:

Violation Number: 9331918  
Date Issued: 5/9/2018  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 6/6/2018  
Citation/Order: Citation  
Sig and Sub Designation: Y  
Proposed Penalty: 286.00  
Paid Penalty: 286.00  
Assessment Status code: Proposed  
Assess. Case Status code: Closed  
Assessment Amount: 286.00  
Year: 2018

Violation Number: 8903067  
Date Issued: 4/11/2017  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 4/12/2017

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EMPRESAS CODEL INC (Continued)**

**1011260079**

Citation/Order: Citation  
Sig and Sub Designation: Y  
Proposed Penalty: 280.00  
Paid Penalty: 280.00  
Assessment Status code: Proposed  
Assess. Case Status code: Closed  
Assessment Amount: 280.00  
Year: 2017

Violation Number: 8903066  
Date Issued: 4/11/2017  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 4/27/2017  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 116.00  
Paid Penalty: 116.00  
Assessment Status code: Proposed  
Assess. Case Status code: Closed  
Assessment Amount: 116.00  
Year: 2017

Violation Number: 8820043  
Date Issued: 12/02/2015  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(b)  
Date Abated: Not reported  
Citation/Order: Order  
Sig and Sub Designation: Not reported  
Proposed Penalty: Not reported  
Paid Penalty: Not reported  
Assessment Status code: Not reported  
Assess. Case Status code: Not reported  
Assessment Amount: Not reported  
Year: 2015

Violation Number: 8903029  
Date Issued: 11/17/2016  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 12/06/2016  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 114.00  
Paid Penalty: 0.00  
Assessment Status code: Received  
Assess. Case Status code: Proposed  
Assessment Amount: 114.00  
Year: 2016

Violation Number: 8820037  
Date Issued: 10/22/2015  
Mine Status: Active

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EMPRESAS CODEL INC (Continued)**

**1011260079**

Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 11/09/2015  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 100.00  
Paid Penalty: 100.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 100.00  
Year: 2015

Violation Number: 8820036  
Date Issued: 10/22/2015  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: Not reported  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: Not reported  
Paid Penalty: Not reported  
Assessment Status code: Not reported  
Assess. Case Status code: Not reported  
Assessment Amount: Not reported  
Year: 2015

Violation Number: 8903828  
Date Issued: 07/13/2016  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 07/26/2016  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 114.00  
Paid Penalty: 114.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 114.00  
Year: 2016

Violation Number: 7798918  
Date Issued: 07/01/2002  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(b)  
Date Abated: 07/01/2002  
Citation/Order: Order  
Sig and Sub Designation: Not reported  
Proposed Penalty: Not reported  
Paid Penalty: Not reported  
Assessment Status code: Not reported  
Assess. Case Status code: Not reported  
Assessment Amount: Not reported  
Year: 2002

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EMPRESAS CODEL INC (Continued)**

**1011260079**

Violation Number: 7798907  
Date Issued: 06/20/2002  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: Not reported  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 297.00  
Paid Penalty: 297.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 297.00  
Year: 2002

Violation Number: 8643548  
Date Issued: 06/08/2012  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 07/03/2012  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 162  
Paid Penalty: 162  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 162  
Year: 2012

Violation Number: 8727379  
Date Issued: 04/04/2013  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 04/04/2013  
Citation/Order: Citation  
Sig and Sub Designation: Y  
Proposed Penalty: 117  
Paid Penalty: 117  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 117  
Year: 2013

Violation Number: 8813931  
Date Issued: 03/28/2014  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 03/28/2014  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 100.00  
Paid Penalty: 100.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EMPRESAS CODEL INC (Continued)**

**1011260079**

Assessment Amount: 100.00  
Year: 2014

Violation Number: 8819770  
Date Issued: 02/20/2015  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 02/20/2015  
Citation/Order: Citation  
Sig and Sub Designation: Y  
Proposed Penalty: 108.00  
Paid Penalty: 108.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 108.00  
Year: 2015

Violation Number: 8819769  
Date Issued: 02/20/2015  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 02/20/2015  
Citation/Order: Citation  
Sig and Sub Designation: Y  
Proposed Penalty: 243.00  
Paid Penalty: 243.00  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 243.00  
Year: 2015

Violation Number: 8719202  
Date Issued: 02/14/2012  
Mine Status: Active  
Status Date: 12/21/2011  
Action Type: 104(a)  
Date Abated: 02/14/2012  
Citation/Order: Citation  
Sig and Sub Designation: N  
Proposed Penalty: 100  
Paid Penalty: 100  
Assessment Status code: Closed  
Assess. Case Status code: Proposed  
Assessment Amount: 100  
Year: 2012

## ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CIALES	S103553840	GILBERTO COLON FIERRO	CARR 149 KM 8.7 CAMPAMENTO		LUST
CIALES	S104904810	GULF #405	CARR. 149 KM. 15.5		LUST
CIALES	1007445500	CIALES OPEN BURNING DUMP	STATE ROAD PR KM 1 HM 1		ODI
CIALES	1016680970	PLANTA CARBON CALIZO	PR-149 KM 9.2	00638	FINDS, ECHO
CIALES	1016689454	#525 - ANDRES RIOS	PR-149 KM 9.4	00638	FINDS, ECHO
CIALES	1016689710	TAINO ICE PLANT	PR-146 KM 24.8 CORDILLERA	00638	FINDS
CIALES	1016459413	PRASA FRONTON	PR-146 KM 15.8 INT	00638	FINDS, ECHO
CIALES	1016460997	PRASA LAS DELICIAS	PR-149 KM 30.0 INT	00638	FINDS, ECHO
CIALES	1016418470	GASOLINERA L & F	PR-149, KM 17.6, BO. JAGUAS	00638	FINDS
CIALES	1016418512	GARAGE LA FAMILIA	PR-146, KM 16.3, BO. FRONTON CENTRO	00638	FINDS
CIALES	1017073527	CIALES URBANO - CIALES RIVER	PR-146 KM 27.2	00638	FINDS
CIALES	1017073538	CIALES URBANO - CORDILLERAS CR.	PR-146 KM 27.2	00638	FINDS
CIALES	1017073548	CIALES URBANO - RIO ARRIBA 4	PR-146 KM 27.2	00638	FINDS
CIALES	1016692395	ESCUELA JUAN CORRETER	PR-146 KM 2 BO CORDILLERA	00638	FINDS, ECHO
MANATI	1006817734	ESSO STANDARD OIL CO PR 3P-149	RR 2 KM 42.1	00674	RCRA-CESQG
MANATI	2012009467		CARR# 2 KM 48.1	00674	ERNS
MANATI	S106917663	SHELL S/S # 003190	CARR. 670 KM. 1.5 URB. O'NEILL		LUST
MANATI	U003430618	ORTIZ SERVICE STATION INC.	RD. #2, KM.50.1	00674	UST
MANATI	U003429990	ATENAS SHELL S/S # 03018	RD 2 KM 48.1 BARRIO COTO NORTE COTTO NORTE WARD	00674	UST
MANATI	U003430000	SHELL S/S #003190	RD. 670 KM. 1 HM. 5 URB ONEILL URB.O'NEILL	00674	UST
MANATI	U003431195	DEPARTAMENTO DE OBRAS PUBLICA	RD. #685 KM,0.1	00674	UST
MANATI	U003431444	WILLIAM DIAZ S/S 985	RD 149 KM 7.0 BO. RIO ARRIBA SALIENTE	00674	UST
MANATI	1007445521	MANATI MUNICIPAL OPEN BURNING DUMP	STATE ROAD PR 149 KM 4 HM 2 SABANA SECA WARD		ODI
MANATI	1004779290	ESSO STANDARD OIL CO PR CO 155	RD 149 KM 6.2 BO RIO ARRIBA	00674	RCRA NonGen / NLR
MANATI	1001128294	SHELL CO PR LTD SS 3190 URB ONEILL	RD PR 670 KM 1.5 URB ONEILL	00674	RCRA NonGen / NLR
MANATI	1001120699	URBANIZACION ONEILL SS 3190	CARR PR 670 KM 1.5	00674	RCRA NonGen / NLR
MANATI	1017783432	BETTERROADS ASPHALT CORP GRAVERO MANATI	PR 6685 MK 6.0 BO RIO ARRIBA SALIENTE	00674	ICIS, US AIRS, ECHO
MANATI	1011587935	MANATI, MUNICIPAL OF DEPT OBRAS PUBLICAS	GOBIERNO MUNICIPAL DE MANATI (685 KM 0.1)	00674	ICIS
MANATI	1016137205	BETTERROADS ASPHALT CORP GRAVERO MANATI	BO RIO ARRIBA SALIENTE	00674	FINDS
MANATI	1016051466	MANATI, MUNICIPAL OF DEPT OBRAS PUBLICAS	GOBIERNO MUNICIPAL DE MANATI (685 KM 0.1)	00674	FINDS, ECHO
MANATI	1023540140	BETTERROADS CORPORATION - MANAT?	PR-6685 KM. 6.0	00674	FINDS
MANATI	1010030415	ANGEL L. SILVA MARRERO	STATE ROAD KM 682 KM 1.2, MONTEBELLO	00674	FINDS, ECHO
MOROVIS	U003432021	ASDA RIO GRANDE	CARR.3INT. CARR. 958 KM. 1.0 BARRIO MALPICA	00687	UST
MOROVIS	1007445524	MOROVIS OPEN BURNING DUMP	STATE ROAD PR-633 BARAHONA WARD		ODI
MOROVIS	1006811285	RALON MFG	CARR 634 KM 1.3	00687	RCRA NonGen / NLR

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/12/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: N/A
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/15/2019
	Data Release Frequency: Quarterly

## NPL Site Boundaries

### Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 3  
Telephone 215-814-5418

EPA Region 4  
Telephone 404-562-8033

EPA Region 5  
Telephone 312-886-6686

EPA Region 10  
Telephone 206-553-8665

EPA Region 6  
Telephone: 214-655-6659

EPA Region 7  
Telephone: 913-551-7247

EPA Region 8  
Telephone: 303-312-6774

EPA Region 9  
Telephone: 415-947-4246

## Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/12/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: N/A
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/15/2019
	Data Release Frequency: Quarterly

## NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/12/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: N/A
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/15/2019
	Data Release Frequency: Quarterly

## FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/04/2019
Number of Days to Update: 92	Next Scheduled EDR Contact: 04/15/2019
	Data Release Frequency: Varies

## SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/12/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/29/2019
	Data Release Frequency: Quarterly

## SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 12/13/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/29/2019
	Data Release Frequency: Quarterly

## CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018	Source: EPA
Date Data Arrived at EDR: 03/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (212) 637-3660
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

## RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (212) 637-3660
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

## RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (212) 637-3660
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

## RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (212) 637-3660
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

## LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 10/17/2018	Source: Department of the Navy
Date Data Arrived at EDR: 10/25/2018	Telephone: 843-820-7326
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 02/07/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 05/27/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 02/04/2019
Number of Days to Update: 17	Next Scheduled EDR Contact: 06/10/2019
	Data Release Frequency: Varies

## US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 02/04/2019
Number of Days to Update: 17	Next Scheduled EDR Contact: 06/10/2019
	Data Release Frequency: Varies

## ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 09/25/2018	Telephone: 202-267-2180
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 02/08/2019
Number of Days to Update: 45	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

## **STANDARD ENVIRONMENTAL RECORDS**

### ***State- and tribal - equivalent CERCLIS***

PR SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A	Source: Environmental Quality Board
Date Data Arrived at EDR: N/A	Telephone: 787-767-8181
Date Made Active in Reports: N/A	Last EDR Contact: 08/22/2005
Number of Days to Update: N/A	Next Scheduled EDR Contact: 11/21/2005
	Data Release Frequency: N/A

### ***State and tribal leaking storage tank lists***

PR LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/27/2018	Source: Environmental Quality Board
Date Data Arrived at EDR: 11/08/2018	Telephone: 787-767-8056
Date Made Active in Reports: 01/03/2019	Last EDR Contact: 01/25/2019
Number of Days to Update: 56	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 01/25/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017	Source: FEMA
Date Data Arrived at EDR: 05/30/2017	Telephone: 202-646-5797
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 01/08/2019
Number of Days to Update: 136	Next Scheduled EDR Contact: 04/22/2019
	Data Release Frequency: Varies

### **State and tribal registered storage tank lists**

## PR UST: Underground Storage Tank Facilities

Underground storage tank site locations.

Date of Government Version: 01/01/2008	Source: Environmental Quality Board
Date Data Arrived at EDR: 03/26/2008	Telephone: 787-767-8056
Date Made Active in Reports: 04/23/2008	Last EDR Contact: 01/25/2019
Number of Days to Update: 28	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Semi-Annually

## INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R1: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

## INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

## US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/17/2018  
Date Data Arrived at EDR: 12/18/2018  
Date Made Active in Reports: 01/11/2019  
Number of Days to Update: 24

Source: Environmental Protection Agency  
Telephone: 202-566-2777  
Last EDR Contact: 12/18/2018  
Next Scheduled EDR Contact: 04/01/2019  
Data Release Frequency: Semi-Annually

## INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998  
Date Data Arrived at EDR: 12/03/2007  
Date Made Active in Reports: 01/24/2008  
Number of Days to Update: 52

Source: Environmental Protection Agency  
Telephone: 703-308-8245  
Last EDR Contact: 01/29/2019  
Next Scheduled EDR Contact: 05/13/2019  
Data Release Frequency: Varies

## DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009  
Date Data Arrived at EDR: 05/07/2009  
Date Made Active in Reports: 09/21/2009  
Number of Days to Update: 137

Source: EPA, Region 9  
Telephone: 415-947-4219  
Last EDR Contact: 01/17/2019  
Next Scheduled EDR Contact: 05/06/2019  
Data Release Frequency: No Update Planned

## ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985  
Date Data Arrived at EDR: 08/09/2004  
Date Made Active in Reports: 09/17/2004  
Number of Days to Update: 39

Source: Environmental Protection Agency  
Telephone: 800-424-9346  
Last EDR Contact: 06/09/2004  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014  
Date Data Arrived at EDR: 08/06/2014  
Date Made Active in Reports: 01/29/2015  
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service  
Telephone: 301-443-1452  
Last EDR Contact: 02/01/2019  
Next Scheduled EDR Contact: 05/13/2019  
Data Release Frequency: Varies

## US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018  
Date Data Arrived at EDR: 09/21/2018  
Date Made Active in Reports: 11/09/2018  
Number of Days to Update: 49

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 02/21/2019  
Next Scheduled EDR Contact: 06/10/2019  
Data Release Frequency: No Update Planned

## US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/21/2018  
Date Data Arrived at EDR: 09/21/2018  
Date Made Active in Reports: 11/09/2018  
Number of Days to Update: 49

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 02/21/2019  
Next Scheduled EDR Contact: 06/10/2019  
Data Release Frequency: Quarterly

## LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/12/2018  
Date Data Arrived at EDR: 12/28/2018  
Date Made Active in Reports: 01/11/2019  
Number of Days to Update: 14

Source: Environmental Protection Agency  
Telephone: 202-564-6023  
Last EDR Contact: 02/15/2019  
Next Scheduled EDR Contact: 05/06/2019  
Data Release Frequency: Semi-Annually

## HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018  
Date Data Arrived at EDR: 03/27/2018  
Date Made Active in Reports: 06/08/2018  
Number of Days to Update: 73

Source: U.S. Department of Transportation  
Telephone: 202-366-4555  
Last EDR Contact: 02/08/2019  
Next Scheduled EDR Contact: 04/08/2019  
Data Release Frequency: Quarterly

## RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018  
Date Data Arrived at EDR: 03/28/2018  
Date Made Active in Reports: 06/22/2018  
Number of Days to Update: 86

Source: Environmental Protection Agency  
Telephone: (212) 637-3660  
Last EDR Contact: 12/03/2018  
Next Scheduled EDR Contact: 04/08/2019  
Data Release Frequency: Quarterly

## FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015  
Date Data Arrived at EDR: 07/08/2015  
Date Made Active in Reports: 10/13/2015  
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Last EDR Contact: 02/22/2019  
Next Scheduled EDR Contact: 06/03/2019  
Data Release Frequency: Varies

## DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 11/10/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 62

Source: USGS  
Telephone: 888-275-8747  
Last EDR Contact: 01/11/2019  
Next Scheduled EDR Contact: 04/22/2019  
Data Release Frequency: Semi-Annually

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/11/2019
Number of Days to Update: 339	Next Scheduled EDR Contact: 04/22/2019
	Data Release Frequency: N/A

### SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2017	Telephone: 615-532-8599
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 02/15/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/27/2019
	Data Release Frequency: Varies

### US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/25/2018	Telephone: 202-566-1917
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 02/04/2019
Number of Days to Update: 45	Next Scheduled EDR Contact: 04/08/2019
	Data Release Frequency: Quarterly

### EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 02/08/2019
Number of Days to Update: 88	Next Scheduled EDR Contact: 05/20/2019
	Data Release Frequency: Quarterly

### 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 02/08/2019
Number of Days to Update: 73	Next Scheduled EDR Contact: 05/20/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016	Source: EPA
Date Data Arrived at EDR: 06/21/2017	Telephone: 202-260-5521
Date Made Active in Reports: 01/05/2018	Last EDR Contact: 12/21/2018
Number of Days to Update: 198	Next Scheduled EDR Contact: 04/01/2019
	Data Release Frequency: Every 4 Years

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016	Source: EPA
Date Data Arrived at EDR: 01/10/2018	Telephone: 202-566-0250
Date Made Active in Reports: 01/12/2018	Last EDR Contact: 02/20/2019
Number of Days to Update: 2	Next Scheduled EDR Contact: 06/03/2019
	Data Release Frequency: Annually

## SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 12/10/2010	Telephone: 202-564-4203
Date Made Active in Reports: 02/25/2011	Last EDR Contact: 01/25/2019
Number of Days to Update: 77	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Annually

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/12/2018	Source: EPA
Date Data Arrived at EDR: 12/28/2018	Telephone: 703-416-0223
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 02/15/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Annually

## RMP: Risk Management Plans

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/26/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2018	Telephone: 202-564-8600
Date Made Active in Reports: 01/11/2019	Last EDR Contact: 01/22/2019
Number of Days to Update: 66	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

## RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

## PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: 202-564-6023
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 02/15/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/20/2019
	Data Release Frequency: Quarterly

## PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/14/2018	Source: EPA
Date Data Arrived at EDR: 10/11/2018	Telephone: 202-566-0500
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 01/11/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 04/22/2019
	Data Release Frequency: Annually

## ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 01/07/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/22/2019
	Data Release Frequency: Quarterly

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

### FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: Quarterly

### MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/08/2016	Telephone: 301-415-7169
Date Made Active in Reports: 10/21/2016	Last EDR Contact: 01/22/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Quarterly

### COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 12/05/2018
Number of Days to Update: 76	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

### COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 12/03/2018
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

### PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/30/2017	Telephone: 202-566-0517
Date Made Active in Reports: 12/15/2017	Last EDR Contact: 01/25/2019
Number of Days to Update: 15	Next Scheduled EDR Contact: 05/06/2019
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/03/2018	Telephone: 202-343-9775
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 01/03/2019
Number of Days to Update: 37	Next Scheduled EDR Contact: 04/15/2019
	Data Release Frequency: Quarterly

## HIST FTTS: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

## HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

## DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/01/2018	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 10/30/2018	Telephone: 202-366-4595
Date Made Active in Reports: 01/18/2019	Last EDR Contact: 01/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 05/11/2019
	Data Release Frequency: Quarterly

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2018	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 10/12/2018	Telephone: Varies
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 01/07/2019
Number of Days to Update: 56	Next Scheduled EDR Contact: 04/22/2019
	Data Release Frequency: Varies

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2015  
Date Data Arrived at EDR: 02/22/2017  
Date Made Active in Reports: 09/28/2017  
Number of Days to Update: 218

Source: EPA/NTIS  
Telephone: 800-424-9346  
Last EDR Contact: 02/13/2019  
Next Scheduled EDR Contact: 06/03/2019  
Data Release Frequency: Biennially

## INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014  
Date Data Arrived at EDR: 07/14/2015  
Date Made Active in Reports: 01/10/2017  
Number of Days to Update: 546

Source: USGS  
Telephone: 202-208-3710  
Last EDR Contact: 01/07/2019  
Next Scheduled EDR Contact: 04/22/2019  
Data Release Frequency: Semi-Annually

## FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017  
Date Data Arrived at EDR: 09/11/2018  
Date Made Active in Reports: 09/14/2018  
Number of Days to Update: 3

Source: Department of Energy  
Telephone: 202-586-3559  
Last EDR Contact: 01/31/2019  
Next Scheduled EDR Contact: 05/20/2019  
Data Release Frequency: Varies

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017  
Date Data Arrived at EDR: 10/11/2017  
Date Made Active in Reports: 11/03/2017  
Number of Days to Update: 23

Source: Department of Energy  
Telephone: 505-845-0011  
Last EDR Contact: 02/22/2019  
Next Scheduled EDR Contact: 06/03/2019  
Data Release Frequency: Varies

## LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/12/2018  
Date Data Arrived at EDR: 12/28/2018  
Date Made Active in Reports: 01/11/2019  
Number of Days to Update: 14

Source: Environmental Protection Agency  
Telephone: 703-603-8787  
Last EDR Contact: 02/15/2019  
Next Scheduled EDR Contact: 04/15/2019  
Data Release Frequency: Varies

## LEAD SMELTER 2: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/12/2018  
Date Data Arrived at EDR: 12/28/2018  
Date Made Active in Reports: 01/11/2019  
Number of Days to Update: 14

Source: Environmental Protection Agency  
Telephone: 703-603-8787  
Last EDR Contact: 02/15/2019  
Next Scheduled EDR Contact: 04/15/2019  
Data Release Frequency: Varies

## US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009  
Date Data Arrived at EDR: 11/10/2009  
Date Made Active in Reports: 12/08/2009  
Number of Days to Update: 28

Source: N/A  
Telephone: N/A  
Last EDR Contact: 11/12/1996  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## US AIRS MINOR: Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009	Source: N/A
Date Data Arrived at EDR: 11/10/2009	Telephone: N/A
Date Made Active in Reports: 12/08/2009	Last EDR Contact: 11/12/1996
Number of Days to Update: 28	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Annually

## US MINES: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 03/01/2019
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/10/2019
	Data Release Frequency: Varies

## US MINES 2: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 03/01/2019
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/10/2019
	Data Release Frequency: Varies

## US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 03/01/2019
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/10/2019
	Data Release Frequency: Varies

## ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018	Source: Department of Interior
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-208-2609
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 12/19/2018
Number of Days to Update: 3	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/15/2018  
Date Data Arrived at EDR: 12/05/2018  
Date Made Active in Reports: 01/11/2019  
Number of Days to Update: 37

Source: EPA  
Telephone: (212) 637-3000  
Last EDR Contact: 01/31/2019  
Next Scheduled EDR Contact: 03/18/2019  
Data Release Frequency: Quarterly

## DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018  
Date Data Arrived at EDR: 07/26/2018  
Date Made Active in Reports: 10/05/2018  
Number of Days to Update: 71

Source: Environmental Protection Agency  
Telephone: 202-564-0527  
Last EDR Contact: 03/01/2019  
Next Scheduled EDR Contact: 06/10/2019  
Data Release Frequency: Varies

## ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018  
Date Data Arrived at EDR: 09/05/2018  
Date Made Active in Reports: 09/14/2018  
Number of Days to Update: 9

Source: Environmental Protection Agency  
Telephone: 202-564-2280  
Last EDR Contact: 01/07/2019  
Next Scheduled EDR Contact: 03/18/2019  
Data Release Frequency: Quarterly

## UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017  
Date Data Arrived at EDR: 06/19/2018  
Date Made Active in Reports: 09/14/2018  
Number of Days to Update: 87

Source: Department of Defense  
Telephone: 703-704-1564  
Last EDR Contact: 01/14/2019  
Next Scheduled EDR Contact: 04/29/2019  
Data Release Frequency: Varies

## FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2018  
Date Data Arrived at EDR: 08/22/2018  
Date Made Active in Reports: 10/05/2018  
Number of Days to Update: 44

Source: EPA  
Telephone: 800-385-6164  
Last EDR Contact: 02/21/2019  
Next Scheduled EDR Contact: 06/03/2019  
Data Release Frequency: Quarterly

## EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

## EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

## EDR RECOVERED GOVERNMENT ARCHIVES

### ***Exclusive Recovered Govt. Archives***

#### PR RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Environmental Quality Board in Puerto Rico.

Date of Government Version: N/A	Source: Environmental Quality Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/04/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 187	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

### Electric Power Transmission Line Data

Source: PennWell Corporation

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## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

### AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

### Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

### Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

### Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

### **STREET AND ADDRESS INFORMATION**

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**APPENDIX C**  
**HISTORICAL AERIAL PHOTOGRAPHS**



## **Rio Grande de Manati Puerto Rico**

Rio Grande de Manati Puerto Rico

Ciales, PR 00638

Inquiry Number: 5579627.6

March 06, 2019

# The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

**Date EDR Searched Historical Sources:**

Aerial Photography March 06, 2019

**Target Property:**

Rio Grande de Manati Puerto Rico

Ciales, PR 00638

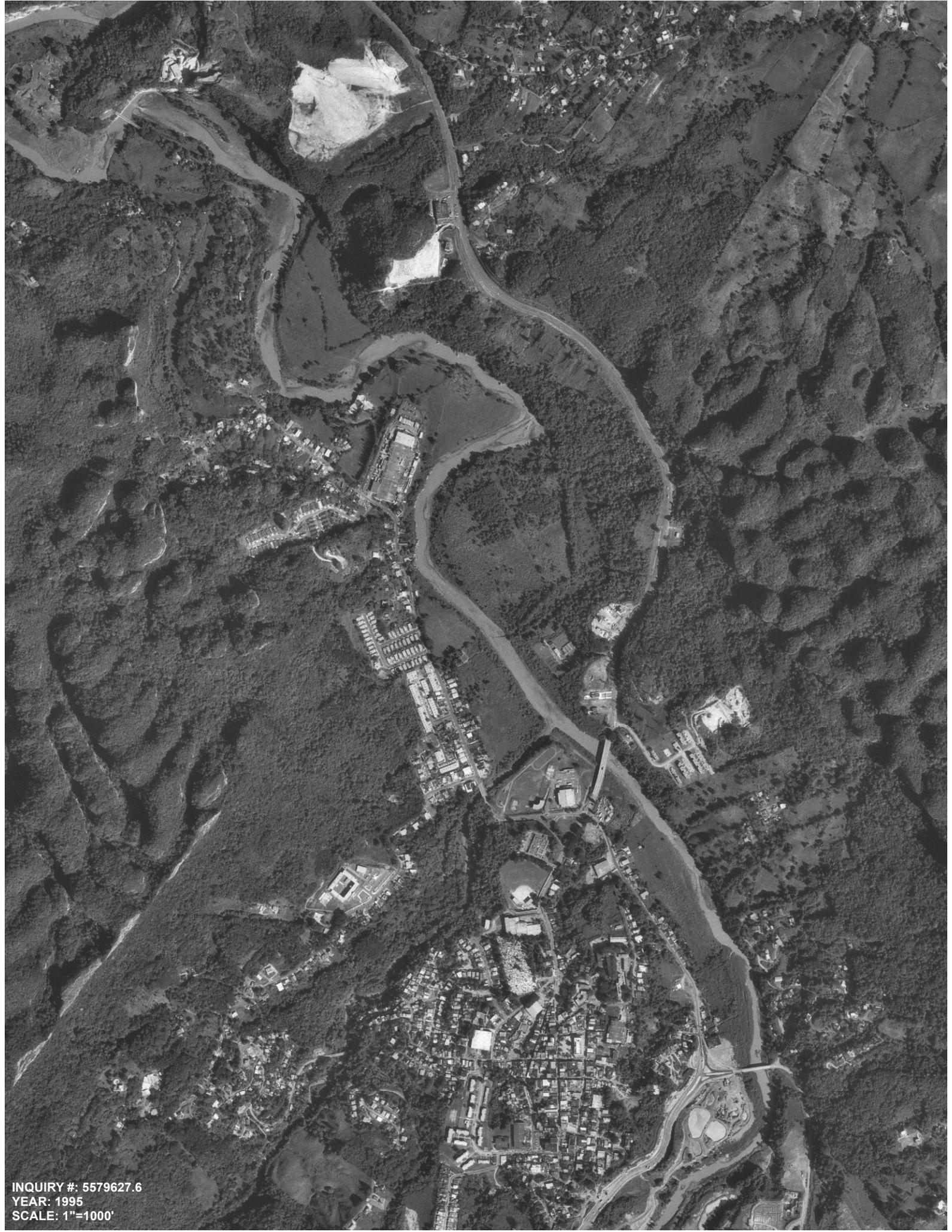
<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1977	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1977	USGS
1993	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1993	USGS
1995	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1995	USGS
2004	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2004	USGS
2006	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2006	USGS
2009	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2009	USGS



INQUIRY #: 5579627.6  
YEAR: 1977  
SCALE: 1"=1000'



INQUIRY #: 5579627.6  
YEAR: 1993  
SCALE: 1"=1000'



INQUIRY #: 5579627.6  
YEAR: 1995  
SCALE: 1"=1000'



INQUIRY #: 5579627.6  
YEAR: 2004  
SCALE: 1"=1000'



INQUIRY #: 5579627.6  
YEAR: 2006  
SCALE: 1"=1000'



INQUIRY #: 5579627.6  
YEAR: 2009  
SCALE: 1"=1000'

**APPENDIX D**  
**HISTORICAL TOPOGRAPHIC MAPS**

Rio Grande de Manati Puerto Rico

Rio Grande de Manati Puerto Rico

Ciales, PR 00638

Inquiry Number: 5579627.5

March 05, 2019

# EDR Historical Topo Map Report

with QuadMatch™



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# EDR Historical Topo Map Report

03/05/19

**Site Name:**

Rio Grande de Manati Puerto F  
Rio Grande de Manati Puerto F  
Ciales, PR 00638  
EDR Inquiry # 5579627.5

**Client Name:**

U.S. Army Corps of Engineers  
1000 Liberty Avenue  
Pittsburgh, PA 15222  
Contact: Gabriella Sykora



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by U.S. Army Corps of Engineers were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

**Search Results:****Coordinates:**

<b>P.O.#</b>	NA	<b>Latitude:</b>	18.346647 18° 20' 48" North
<b>Project:</b>	Rio Grande de Manati	<b>Longitude:</b>	-66.470781 -66° 28' 15" West
		<b>UTM Zone:</b>	Zone 19 North
		<b>UTM X Meters:</b>	767291.80
		<b>UTM Y Meters:</b>	2030395.74
		<b>Elevation:</b>	108.30' above sea level

**Maps Provided:**

2013  
1982  
1957  
1947

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## **Topo Sheet Key**

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### **2013 Source Sheets**



Ciales  
2013  
7.5-minute, 20000

### **1982 Source Sheets**



Ciales  
1982  
7.5-minute, 20000  
Aerial Photo Revised 1977

### **1957 Source Sheets**

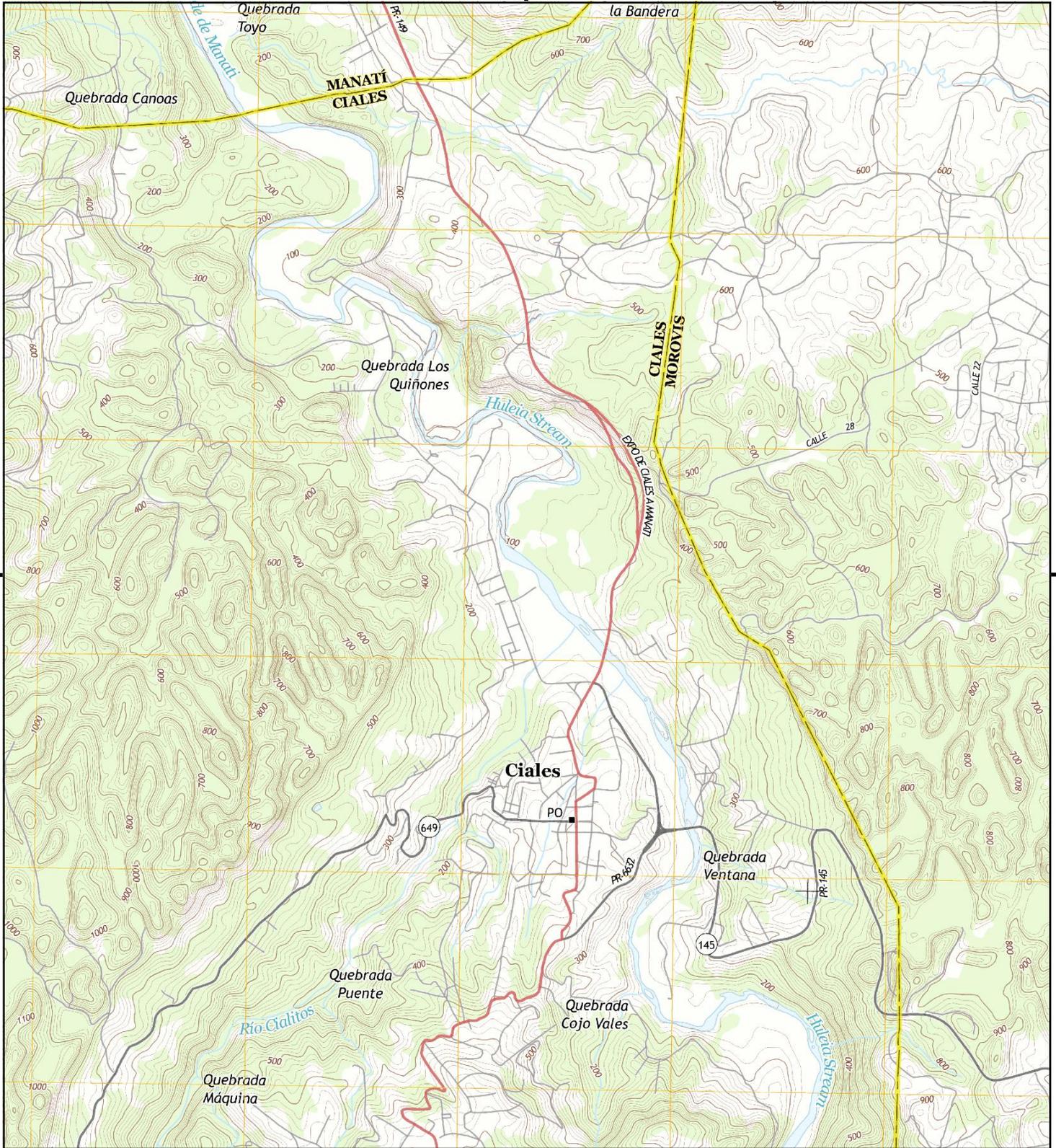


Ciales  
1957  
7.5-minute, 20000  
Aerial Photo Revised 1941

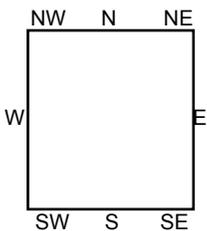
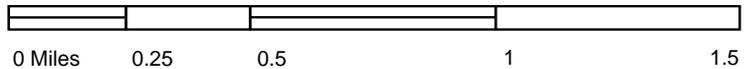
### **1947 Source Sheets**



Ciales NO  
1947  
7.5-minute, 10000



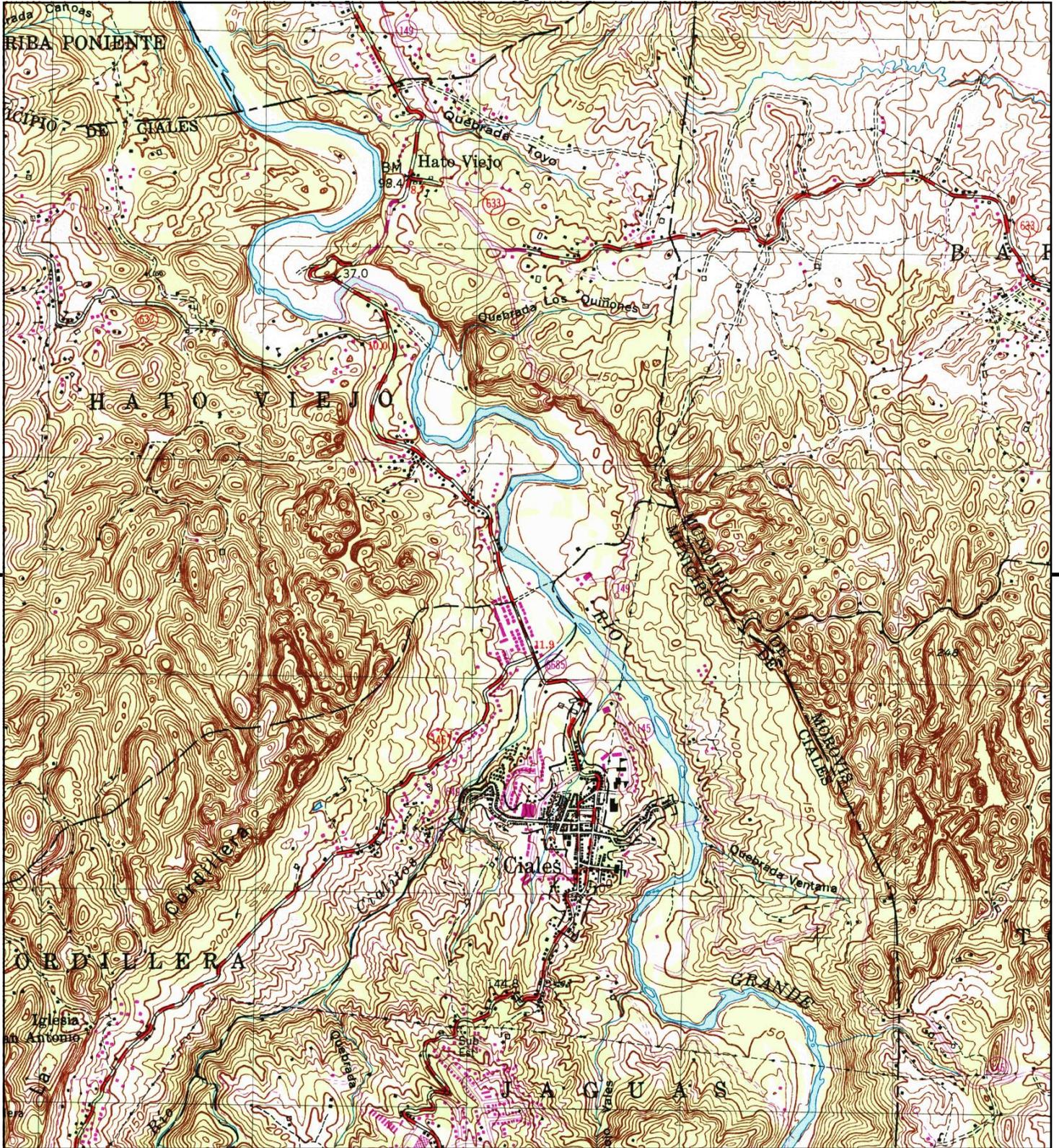
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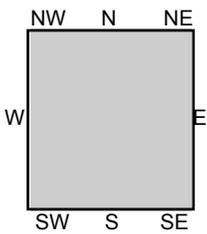
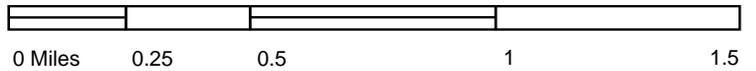
TP, Ciales, 2013, 7.5-minute

**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
 Ciales, PR 00638  
**CLIENT:** U.S. Army Corps of Engineers





This report includes information from the following map sheet(s).



TP, Ciales, 1982, 7.5-minute

SITE NAME: Rio Grande de Manati Puerto Rico  
 ADDRESS: Rio Grande de Manati Puerto Rico  
 Ciales, PR 00638  
 CLIENT: U.S. Army Corps of Engineers

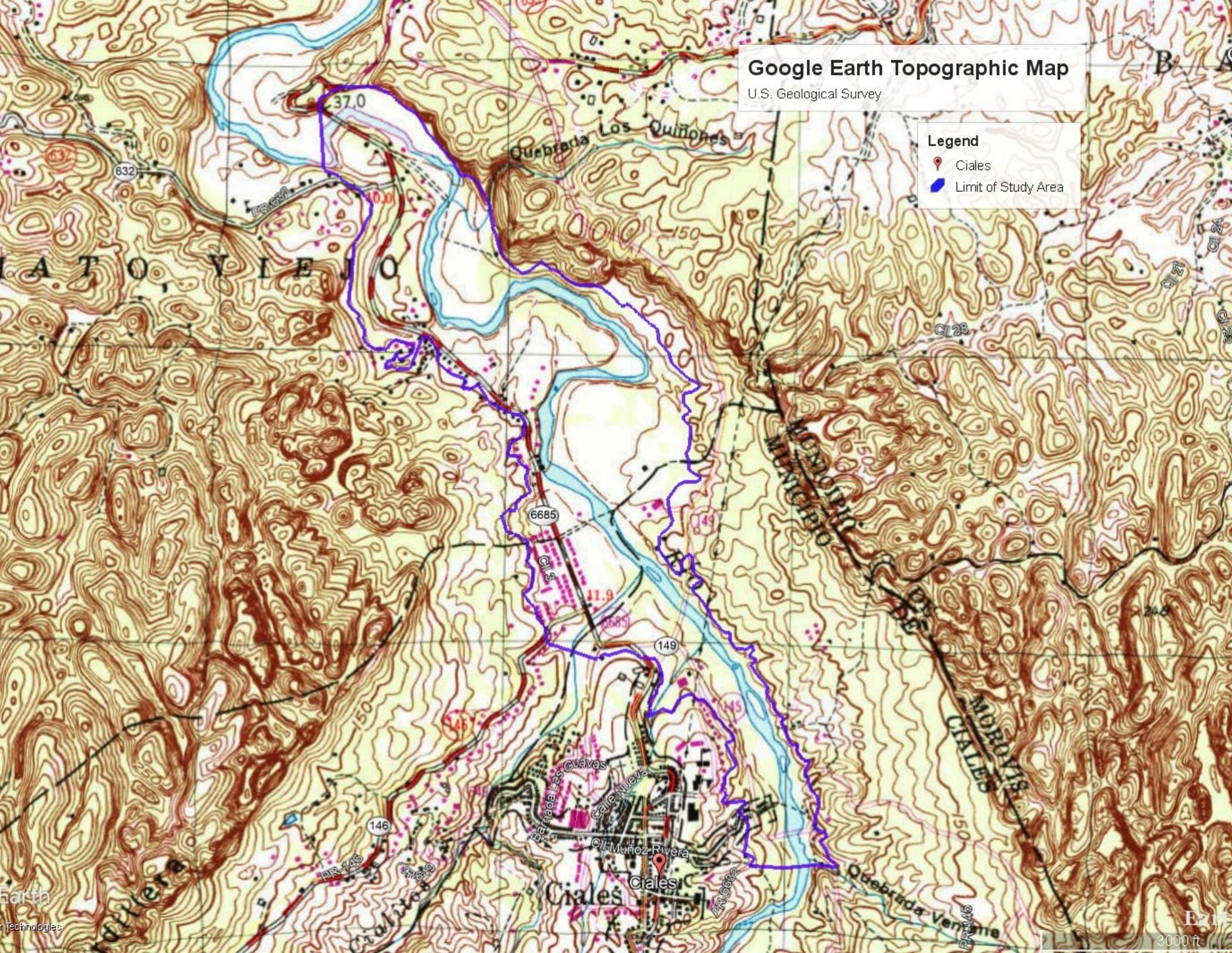


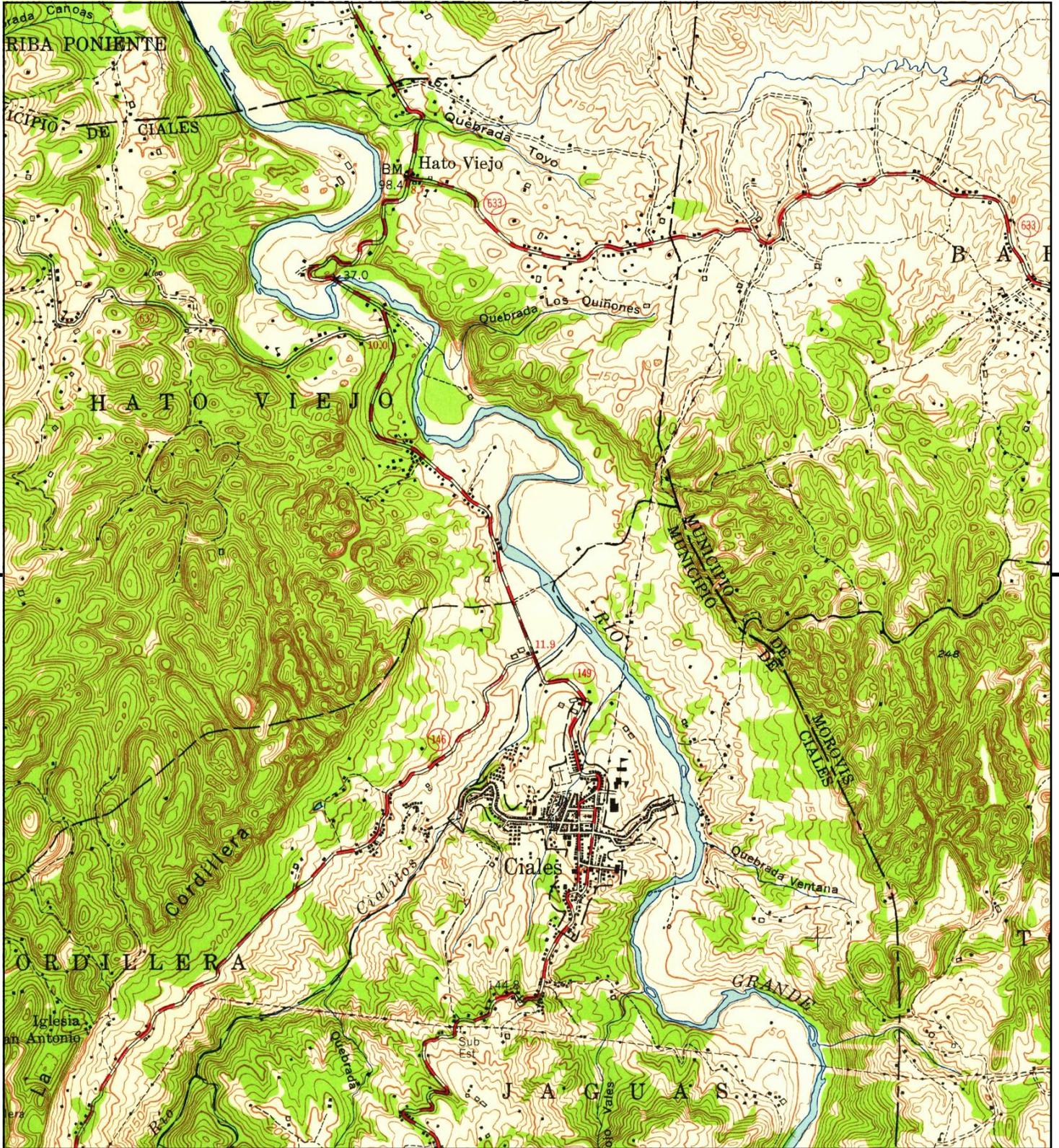
# Google Earth Topographic Map

U.S. Geological Survey

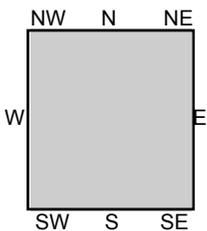
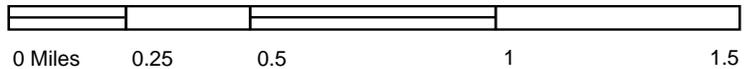
## Legend

-  Ciales
-  Limit of Study Area





This report includes information from the following map sheet(s).



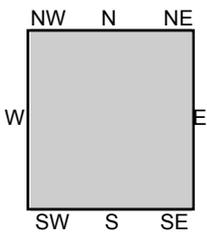
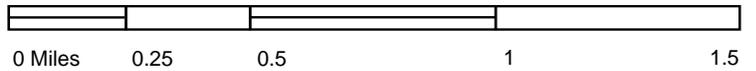
TP, Ciales, 1957, 7.5-minute

**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
 Ciales, PR 00638  
**CLIENT:** U.S. Army Corps of Engineers





This report includes information from the following map sheet(s).



TP, Ciales NO, 1947, 7.5-minute

**SITE NAME:** Rio Grande de Manati Puerto Rico  
**ADDRESS:** Rio Grande de Manati Puerto Rico  
Ciales, PR 00638  
**CLIENT:** U.S. Army Corps of Engineers

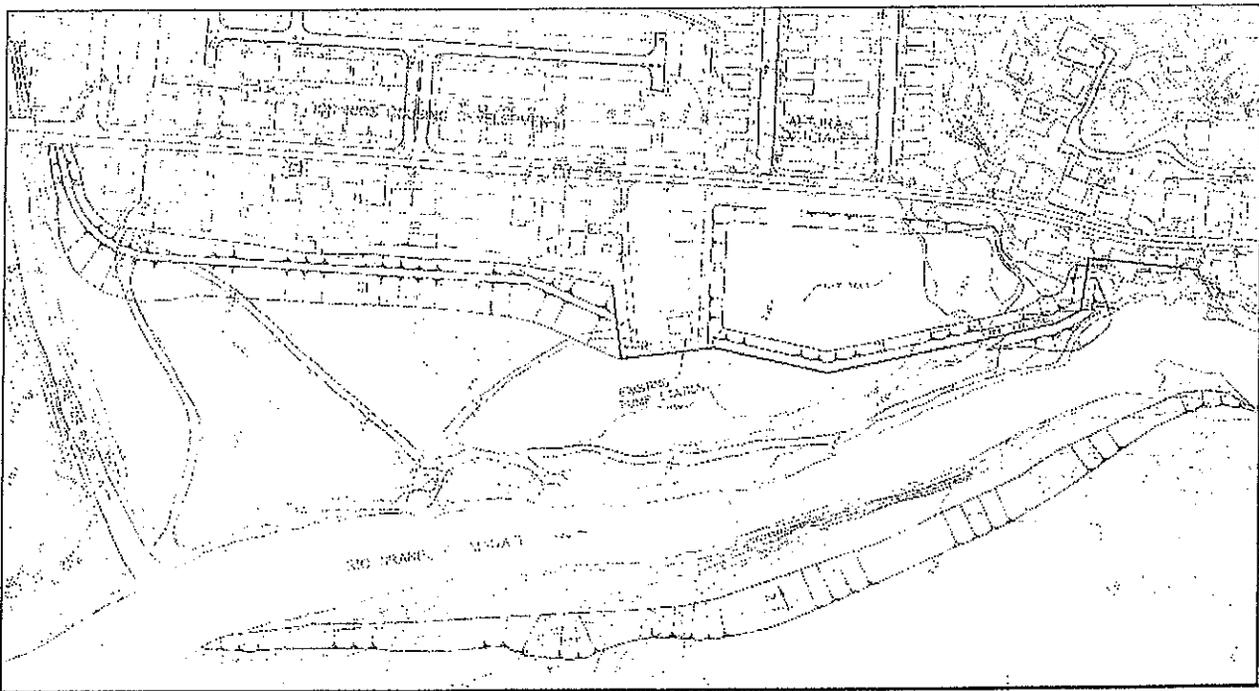


# FLORA AND FAUNA INVENTORY

# ESTUDIO DE FLORA Y FAUNA



## DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES



### PROYECTO DE PROTECCIÓN DE INUNDACIONES PARA EL SECTOR DOS RÍOS EN EL MUNICIPIO DE CIALES, PUERTO RICO

# ESTUDIO DE FLORA Y FAUNA

Para el Proyecto de Construcción de Facilidades de Control de Inundaciones del Rio Grande de Manati Para la Proteccion del Sector Dos Rios En el Municipio de Ciales, Puerto Rico

Preparado para:  
Quiñonez, Diez y Silva y Asociados, CSP  
Ingenieros Consultores

Preparado por : Rolando Santos  
Jaime Padilla  
Iván R. Ruiz

Julio 2004

## TABLA DE CONTENIDO

INTRODUCCION	1
LOCALIZACION Y DESCRIPCION DEL AREA	1
METODOLOGIA	2
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## INTRODUCCION

El Departamento de Recursos Naturales y Ambientales proponen la creación de un canalización del rio Grande de Manati en el sector Dos Rios que se extiende desde hasta el puente de la carr. PR-149 existente, localizada en el municipio de Ciales. Este tramo tiene un largo de aproximadamente 600 metros de largo y unos 220 metros en parte mas ancha. Esta alternativa se nombra como 1. Nuestro objetivo es presentarles una evaluación de la composición de la ecología (flora y fauna) en el predio objeto de nuestro estudio.

### LOCALIZACIÓN Y DESCRIPCION GENERAL DEL AREA DE ESTUDIO

La localización de la alternativa esta ubicada en el norte de la carretera PR- 149. Colinda al sur con Dos Rios Housing Development; al oeste con la urbanización Alturas de Ciales y al este con parte de la planicie inundable del Rio Grande de Manati.

Esta alternativa se localiza en su mayoría en áreas perturbadas anteriormente por uso agricola y por el uso de las tierras para pastoreo. Tambien cabe señalar que por otro lado, la gran parte de esta área la alternativa se encuentra dentro de areas de bosques secundarios compuestos en su mayoría por especies exoticas e invasoras dentro del área sujeta esta evaluación.

## METODOLOGIA

Durante los días 8,9,10 y 11 de julio de 2004, se visitó el área objeto de estudio para que obtuvieramos una idea de la composición ecológica (flora y fauna, vertebrados) de las áreas propuestas para la realización de la construcción de esta obra de mitigación. La identificación de las especies de composición bótánica y composición zoológica se realizó mediante un recorrido de las áreas e identificando todas las familias y especies en los diferentes hábitats existentes .

En general, para la fauna solamente se cubrieron los vertebrados: aves, reptiles y anfibios. El horario de esta evaluación fue de 6:00 am. hasta las 7:00 pm.. Se concentraron los esfuerzos durante las primeras horas del día en la identificación de aves, así como en el ocaso. Las especies de aves se identificaron tanto ocularmente, como por su canto, aunque se registraran fuera de los límites de las alternativas propuestas.

LISTADO DE FLORA

Nombre científico	Nombre común	Familia	Habitat	Hábito
<i>Sesbania sericea</i>	Papagayo	Leguminosae	4,5	Ar
<i>Penisetum purpureum</i>	Yerba elefante	Gramineae	4	H
<i>Euphorbia heterophylla</i>	Lechecillo	Euphorbiaceae	4,5	H
<i>Momordica charantia</i>	Manzanilla de monte	Compositae	3,5	H
<i>Casearia sylvestris</i>	Cafeílo	Flacourtiaceae	1,5	Ar
<i>Randia aculeata</i>	Tintillo	Rubiaceae	1,3	A
<i>Roystonea borinquena</i>	Palma real	Palmaceae	1,5	A
<i>Bromelia pinguin</i>	Maya	Bromeliaceae	1,5	H
<i>Terminalia catappa</i>	Almendro	Combretaceae	1,5	A
<i>Musa ssp.</i>	Platano /Guineo	Musaceae	5	A
<i>Mikania cordifolia</i>	Guaco	Compositae	1,5	B
<i>Psidium guayava</i>	Guayaba	Myrtaceae	3,5	Ar
<i>Cupania americana</i>	Guara	Sapindaceae	1	A
<i>Tragia rolubilis</i>	Pringamosa	Euphorbiaceae	1	B
<i>Zanthoxylum martinicense</i>	Espino rubial	Rutaceae	1	A
<i>Commelina diffusa</i>	Cohitre azul	Commelinaceae	1,3,4,5	H
<i>Ipomoea indica</i>	Bejuco de puerco	Convolvulaceae	3,4,5	B
<i>Tabebuia heterophylla</i>	Roble nativo	Bignoniaceae	1,5	A
<i>Cecropia peltata</i>	Yagrumo hembra	Moraceae	1,5	A
<i>Didymopanax morototoni</i>	Yagrumo macho	Araliaceae	1	A
<i>Ficus bejamina</i>	Laurel bejamina	Lauraceae	1,5	A
<i>Clusia rosea</i>	Cupey	Guttiferae	1,5	A
<i>Citharexylum fruticosum</i>	Péndula	Verbenacea	1,5	A
<i>Arthocarpus altilis</i>	Pana	Moraceae	1,5	A
<i>Eugenia jambos</i>	Pomarrosa	Myrtaceae	1	A
<i>Eulophidium maculatum</i>	xx-----xx	Orchidaceae	1	H
<i>Comocladia dodnaea</i>	Chicharrón	Anacardiaceae	1	Ar

LISTADO DE FLORA

Nombre científico	Nombre común	Familia	Habitat	Hábito
<i>Sorghum bralipense</i>	Yerba Johnson	Gramineae	4,5	H
<i>Centrosema pubescens</i>	Flor de pito	Leguminosae	3,4,5	B
<i>Albizia procera</i>	Albicia	Leguminosae	3,4,5	A
<i>Tricholaena repens</i>	Yerba rosada	Gramineae	3,4,5	H
<i>Babusa vulgaris</i>	Bambua	Gramineae	4	H
<i>Spathodea campanulata</i>	Tulipan Africano	Bignoniaceae	1,3,5	A
<i>Echinochloa colona</i>	Arrocillo	Gramineae	3,4,5	H
<i>Eleusine indica</i>	Pata de gallina	Gramineae	3,4,5	H
<i>Panicum maximun</i>	Yerba de guinea	Gramineae	3,4,5	H
<i>Axonopus compressus</i>	Yerba colorada	Gramineae	3,4	H
<i>Cynodon dactylon</i>	Yerba bermuda	Gramineae	3,4,5	H
<i>Mimosa pudica</i>	Moriviví	Leguminosae	3,4,5	H
<i>Petiveria alliacea</i>	Anamú	Phytolaccaceae	3,5	H
<i>Ricinus communis</i>	Higuereta	Euphorbiaeae	4,5	A
<i>Saccharum officinarum</i>	Caña de azúcar	Gramineae	4	H
<i>Delonix regia</i>	Flamboyan	Leguminosae	1,2,4,5	A
<i>Brachiaria purpurascens</i>	Malojillo	Gramineae	4	H
<i>Eriochloa polystachya</i>	Malojilla	Gramineae	4	H
<i>Thunbergia fragans</i>	Susana blanca	Acanthaceae	3,5	B
<i>Menemina quinquefolia</i>	Batatilla blanca	Convolvulaceae	5	B
<i>Thunberga alata</i>	Susana	Acanthaceae	3,5	B
<i>Pithecellobium dulce</i>	Guamá americano	Leguminoceae	1,3,5	A
<i>Inga laurina</i>	Guamá	Leguminoceae	3,5	A
<i>Pithecellobium ungis-cati</i>	Escambron	Leguminoceae	3,4,5	Ar

LISTADO DE FLORA

Nombre científico	Nombre común	Familia	Habitat	Hábito
<i>Leucaena leucocephala</i>	Zarcilla	Leguminosae	1,3,4,5	A
<i>Colibrina reclinata</i>	Mabí	Rhamnaceae	1	Ar
<i>Bucidas buceras</i>	Ucar	Combretaceae	1,5	A
<i>Burcera simaruba</i>	Almacigo	Burseraceae	1,5	Ar
<i>Heyerotrichum cymosum</i>	Camasey peludo	Melastomataceae	1	A
<i>Miconia prasina</i>	Camasey	Melastomataceae	1	A
<i>Tetrazygia elaeagnoides</i>	Verdiseco	Melastomataceae	1	A
<i>Cucumis anguria</i>	Pepinillo silvestre	Cucurbitaceae	5	B
<i>Cissus sicyoides</i>	Bejuco de caro	Vitaceae	1,5	B
<i>Melicoccus bijigatus</i>	Quenepo	Sapindaceae	3,4,5	H
<i>Ficus citrifolia</i>	Jagúey blanco	Moraceae	1	A
<i>Cocos nucifera</i>	Palmade coco	Palmaceae	1,4,5	A
<i>Mangifera indica</i>	Mango	Anacardiaceae	1	A
<i>Scleria pterota</i>	Cortadora blanca	Cyperaceae	1	H
<i>Calopogonium coeryleum</i>		Leguminosae	4	B
<i>Clitoria falcata</i>	Ahoga gallina	Leguminosae	3,5	B
<i>Abrus precatoria</i>	Peronias	Leguminosae	1,5	B
<i>Strelitzia reginae</i>	Ave del paraiso	Strelitziaceae	5	H
<i>Psilatum nudum</i>	xx-----xx	Psilotaceae	1	E
<i>Tetrapteris citrifolia</i>	Bejuco paralejo	Malpighiaceae	1,5	B

LISTADO DE FLORA

Nombre científico	Nombre común	Familia	Habitat	Hábito
<i>Gliricidia sepium</i>	Mataratón	Leguminosae	1,5	A
<i>Arthrostylidium sarmentosum</i>	Bambú trepador	Gramineae	1	B
<i>Bidens alba</i>	Romerillo	Compositae	3,4,5	H
<i>Jatropha zossypifolia</i>	Tua-Tua	Euphorbiaceae	3,4,5	H
<i>Ipomoea tiliacea</i>	Bejuco blanco	Convolvulaceae	4,5	B
<i>Coccoloba diversifolia</i>	Uvilla	Polygonaceae	1	A
<i>Comocladia glabra</i>	Carrasco	Anacardiaceae	1	Ar
<i>Sporobolus indicus</i>	Cerrillo	Gramineae	3,4,5	H
<i>Kyllinga pumila</i>		Cyperaceae	3,4,5	H
<i>Fimbristyllis cymosa</i>		Cyperaceae	3,4,5	H
<i>Psilatum nudum</i>		Psilotaceae	1	E
<i>Setaria geniculata</i>	Cepillo de fregar botella	Gramineae	3,5	H
<i>Muntingia calabura</i>	Capulín	Gramineae	5	A
<i>Piper aduncum</i>	Higuillo	Piperaceae	4,5	A
<i>Guazuma ulmifolia</i>	Guácima	Sterculaceae	1,3,5	A
<i>Paullina pinnata</i>	Bejuco de paloma	Sapindaceae	1,4,5	B

### LISTADO DE FLORA

Nombre científico	Nombre común	Familia	Habítat	Hábito
<i>Andira inermis</i>	Moca	Leguminosae	1,3,5	A
<i>Cynanchum ephedroides</i>		Asclepiadaceae	1	B
<i>Serjania polyphylla</i>	Bejuco de corrales	Sapindaceae	1,5	B
<i>Casearia aculeata</i>	Rabo de ratón	Flacourtiaceae	1,5	Ar
<i>Callophyllum calaba</i>	María	Guttiferae	1,5	A
<i>Eulophidium maculatum</i>		Orchidaceae	1	H

\* Este listado representa la totalidad de las familias y especies que puedan encontrarse en el área propuesta.

### Leyenda

#### Hábitos:

- A- Arbol
- B- Bejuco
- Ar- Arbusto
- H- Herbacea
- E- Epífita

#### Habitat:

1. Bosque secundario
2. Bosque de galería a lo largo de la quebrada
3. Habitat bajo pastoreo de ganado
4. Llano aluvial
5. Áreas perturbadas por desarrollos

TABLA VII

LISTADO DE AVES

Nombre científico	Nombre común
<i>Coccyzus minor</i>	Pájaro bobo menor
<i>Zenaida aurita</i>	Tórtola
<i>Zenaida asiática</i>	Paloma aliblanca
<i>Coereba flaveola</i>	Reinita común
<i>Quiscalus Níger</i>	Chango
<i>Tiaris bicolor</i>	Gorrión Negro
<i>Mimus polyglottus</i>	Ruiseñor
<i>Tyrnnus dominicensis</i>	Pitirre
<i>Todus mexicanus</i>	San Pedrito
<i>Anthracothrox viridis</i>	Zumbador verde
<i>Columbina passerin</i>	Rolita
<i>Melanerpes portoricensis</i>	Carpintero *
<i>Egretta alba</i>	Garza Real
<i>Spindalis zena</i>	Reina mora

\* Endemico

TABLA VIII

LISTADO DE REPTILES

Nombre científico	Nombre común
<i>Anolis cristatellus</i>	Lagartijo común
<i>Anolis puchellus</i>	Lagartijo jardinero
<i>Anolis stratulus</i>	Lagartijo manchado
<i>Ameiba exusul</i>	Ciguana
<i>Sphaerodactylus macrolepis</i>	Salamanquita común

TABLA IX

LISTADO DE ANFIBIOS

Nombre científico	Nombre común
<i>Eleuterodactylus antillensis</i>	Coquí
<i>Eleuterodactylus coqui</i>	Coquí
<i>Leptodactylus albilabris</i>	Rana de pantano
<i>Bufo marinus</i>	Sapo común

## RECOMENDACIONES :

En ninguna de lugar del area prouesta para la construcción se encontro especies en peligro de extinción o raras. Esto fue tambien verificado el 9 de Julio del 2004 con el Registro de Localizaciones de elementos del Banco de Datos de la División de Parimonio Natural del Departamento de Recursos Naturales y Ambientales y en la Lista Federal de especies en Peligro de Extinción .

Debemos señalar que esto no representa la posibilidad que puedan encontrarse especies como la *Epicrates inornatus* (Boa) por que es recomendable la realización de estudios para determinar su presencia.

## REFERENCES

- 1- Rivero, Juan A., 1978, The amphibians and Reptiles of Puerto Rico, University of Puerto Rico Editorial.
- 2- Schwartz, Albert, Henderson Robert W., 1991, Amphibians and Reptiles of Natural History, University of Florida Press.
- 3- Stenjneger, Leonhard, 1904, The Herpetology of Puerto Rico.
- 4- Tolson, Peter J., Henderson, Robert W., 1993, The Natural History of West Indian Boas, R & A Publishing Limited.
- 5- Little, Elbert., Frank H. Wadsworth. 1964. "Common Trees of Puerto Rico and Adjacent Islands ". Second Volume. USDA, Forest Services Agricultural Hand books.

# MIGRATORY BIRD CONSERVATION MEASURES

## NATIONWIDE STANDARD CONSERVATION MEASURES

Listed below are effective measures that should be employed at all project development sites nationwide with the goal of reducing impacts to birds and their habitats. These measures are grouped into three categories: General, Habitat Protection, and Stressor Management. These measures may be updated through time. We recommend checking the Conservation Measures website regularly for the most up-to-date list.

### 1. General Measures

- a. Educate all employees, contractors, and/or site visitors of relevant rules and regulations that protect wildlife. See the Service webpage on [Regulations and Policies](#) for more information on regulations that protect migratory birds.
- b. Prior to removal of an inactive nest, ensure that the nest is not protected under the Endangered Species Act (ESA) or the Bald and Golden Eagle Protection Act (BGEPA). Nests protected under ESA or BGEPA cannot be removed without a valid permit.
  - i. See the [Service Nest Destruction Policy](#)
- c. Do not collect birds (live or dead) or their parts (e.g., feathers) or nests without a valid permit. Please visit the [Service permits page](#) for more information on permits and permit applications.
- d. Provide enclosed solid waste receptacles at all project areas. Non-hazardous solid waste (trash) would be collected and deposited in the on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor. For more information about solid waste and how to properly dispose of it, see the [EPA Non-Hazardous Waste](#) website.
- e. Report any incidental take of a migratory bird, to the [local Service Office of Law Enforcement](#).
- f. Consult and follow applicable [Service industry guidance](#).

### 2. Habitat Protection

- a. Minimize project creep by clearly delineating and maintaining project boundaries (including staging areas).
- b. Consult all local, State, and Federal regulations for the development of an appropriate buffer distance between development site and any wetland or waterway. For more information on wetland protection regulations see the Clean Water Act sections [401](#) and [404](#).
- c. Maximize use of disturbed land for all project activities (i.e., siting, lay-down areas, and construction).
- d. Implement standard soil erosion and dust control measures. For example:
  - i. Establish vegetation cover to stabilize soil
  - ii. Use erosion blankets to prevent soil loss
  - iii. Water bare soil to prevent wind erosion and dust issues

### 3. Stressor Management

#### **Stressor: Vegetation Removal**

Conservation Goal: Avoid direct take of adults, chicks, or eggs.

**Conservation Measure 1:** Schedule all vegetation removal, trimming, and grading of vegetated areas outside of the peak bird breeding season to the maximum extent practicable. Use available resources, such as internet-based tools (e.g., the FWS's Information, Planning and Conservation system and Avian Knowledge Network) to identify peak breeding months for local bird species; or, contact local Service Migratory Bird Program Office for breeding bird information.

**Conservation Measure 2:** When project activities cannot occur outside the bird nesting season, conduct surveys prior to scheduled activity to determine if active nests are present within the area of impact and buffer any nesting locations found during surveys.

- 1) Generally, the surveys should be conducted no more than five days prior to scheduled activity.
- 2) Timing and dimensions of the area to be surveyed vary and will depend on the nature of the project, location, and expected level of vegetation disturbance.
- 3) If active nests or breeding behavior (e.g., courtship, nest building, territorial defense, etc.) are detected during these surveys, no vegetation removal activities should be conducted until nestlings have fledged or the nest fails or breeding behaviors are no longer observed. If the activity must occur, establish a buffer zone around the nest and no activities will occur within that zone until nestlings have fledged and left the nest area. The dimension of the buffer zone will depend on the proposed activity, habitat type, and species present and should be coordinated with the local or regional Service office.
- 4) When establishing a buffer zone, construct a barrier (e.g., plastic fencing) to protect the area. If the fence is knocked down or destroyed, work will suspend wholly, or in part, until the fence is satisfactorily repaired.
- 5) When establishing a buffer zone, a qualified biologist will be present onsite to serve as a biological monitor during vegetation clearing and grading activities to ensure no take of migratory birds occurs. Prior to vegetation clearing, the monitor will ensure that the limits of construction have been properly staked and are readily identifiable. Any associated project activities that are inconsistent with the applicable conservation measures, and activities that may result in the take of migratory birds will be immediately halted and reported to the appropriate Service office within 24 hours.
- 6) If establishing a buffer zone is not feasible, contact the Service for guidance to minimize impacts to migratory birds associated with the proposed project or removal of an active nest. Active nests may only be removed if you receive a permit from your local Migratory Bird Permit Office. A permit may authorize active nest removal by a qualified biologist with bird handling experience or by a permitted bird rehabilitator.

**Conservation Measure 3:** Prepare a vegetation maintenance plan that outlines vegetation maintenance activities and schedules so that direct bird impacts do not occur.

**Stressor: Invasive Species Introduction**

**Conservation Goal:** Prevent the introduction of invasive plants.

**Conservation Measure 1:** Prepare a weed abatement plan that outlines the areas where weed abatement is required and the schedule and method of activities to ensure bird impacts are avoided.

**Conservation Measure 2:** For temporary and permanent habitat restoration/enhancement, use only native and local (when possible) seed and plant stock.

**Conservation Measure 3:** Consider creating vehicle wash stations prior to entering sensitive habitat areas to prevent accidental introduction of non-native plants.

**Conservation Measure 4:** Remove invasive/exotic species that pose an attractive nuisance to migratory birds.

**Stressor: Artificial Lighting**

**Conservation Goal:** Prevent increase in lighting of native habitats during the bird breeding season.

**Conservation Measure 1:** To the maximum extent practicable, limit construction activities to the time between dawn and dusk to avoid the illumination of adjacent habitat areas.

**Conservation Measure 2:** If construction activity time restrictions are not possible, use down shielding or directional lighting to avoid light trespass into bird habitat (i.e., use a 'Cobra' style light rather than an omnidirectional light system to direct light down to the roadbed). To the maximum extent practicable, while allowing for public safety, low intensity energy saving lighting (e.g. low pressure sodium lamps) will be used.

**Conservation Measure 3:** Minimize illumination of lighting on associated construction or operation structures by using motion sensors or heat sensors.

**Conservation Measure 5:** Bright white light, such as metal halide, halogen, fluorescent, mercury vapor and incandescent lamps should *not* be used.

**Stressor: Human Disturbance**

**Conservation Goal:** Minimize prolonged human presence near nesting birds during construction and maintenance actions.

**Conservation Measure 1:** Restrict unauthorized access to natural areas adjacent to the project site by erecting a barrier and/or avoidance buffers (e.g., gate, fence, wall) to minimize foot traffic and off-road vehicle uses.

### **Stressor: Collision**

**Conservation Goal:** Minimize collision risk with project infrastructure and vehicles.

**Conservation Measure 1:** Minimize collision risk with project infrastructure (e.g., temporary and permanent) by increasing visibility through appropriate marking and design features (e.g., lighting, wire marking, etc.).

**Conservation Measure 2:** On bridge crossing areas with adjacent riparian, beach, estuary, or other bird habitat, use fencing or metal bridge poles (Sebastian Poles) that extend to the height of the tallest vehicles that will use the structure.

**Conservation Measure 3:** Install wildlife friendly culverts so rodents and small mammals can travel under any new roadways instead of over them. This may help reduce raptor deaths associated with being struck while tracking prey or scavenging road kill on the roadway.

**Conservation Measure 4:** Remove road-kill carcasses regularly to prevent scavenging and bird congregations along roadways.

**Conservation Measure 5:** Avoid planting “desirable” fruited or preferred nesting vegetation in medians or Rights of Way.

**Conservation Measure 6:** Eliminate use of steady burning lights on tall structures (e.g., >200 ft).

### **Stressor: Entrapment**

**Conservation Goal:** Prevent birds from becoming trapped in project structures or perching and nesting in project areas that may endanger them.

**Conservation Measure 1:** Minimize entrapment and entanglement hazards through project design measures that may include:

1. Installing anti-perching devices on facilities/equipment where birds may commonly nest or perch
2. Covering or enclosing all potential nesting surfaces on the structure with mesh netting, chicken wire fencing, or other suitable exclusion material prior to the nesting season to prevent birds from establishing new nests. The netting, fencing, or other material must have no opening or mesh size greater than 19 mm and must be maintained until the structure is removed.
3. Cap pipes and cover/seal all small dark spaces where birds may enter and become trapped.

**Conservation Measure 2:** Use the appropriate deterrents to prevent birds from nesting on structures where they cause conflicts, may endanger themselves, or create a human health and safety hazard.

1. During the time that the birds are trying to build or occupy their nests (generally , between April and August, depending on the geographic location), potential nesting

- surfaces should be monitored at least once every three days for any nesting activity, especially where bird use of structures is likely to cause take. It is permissible to remove non-active nests (without birds or eggs), partially completed nests, or new nests as they are built (prior to occupation). If birds have started to build any nests, the nests shall be removed before they are completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
2. If an active nest becomes established (i.e., there are eggs or young in the nest), all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied. Construction activities that may displace birds after they have laid their eggs and before the young have fledged should not be permitted. If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, all netting shall be removed and properly disposed of.

**Stressor: Noise**

**Conservation Goal:** Prevent the increase in noise above ambient levels during the nesting bird breeding season.

**Conservation Measure 1:** Minimize an increase in noise above ambient levels during project construction by installing temporary structural barriers such as sand bags

**Conservation Measure 2:** Avoid permanent additions to ambient noise levels from the proposed project by using baffle boxes or sound walls.

**Stressor: Chemical Contamination**

**Conservation Goal:** Prevent the introduction of chemicals contaminants into the environment.

**Conservation Measure 1:** Avoid chemical contamination of the project area by implementing a Hazardous Materials Plan. For more information on hazardous waste and how to properly manage hazardous waste, see the [EPA Hazardous Waste](#) website.

**Conservation Measure 2:** Avoid soil contamination by using drip pans underneath equipment and containment zones at construction sites and when refueling vehicles or equipment.

**Conservation Measure 3:** Avoid contaminating natural aquatic and wetland systems with runoff by limiting all equipment maintenance, staging laydown, and dispensing of fuel, oil, etc., to designated upland areas.

**Conservation Measure 4:** Any use of pesticides or rodenticides shall comply with the applicable [Federal and State laws](#).

1. Choose [non-chemical](#) alternatives when appropriate
2. Pesticides shall be used only in accordance with their registered uses and in accordance with the manufacturer's instructions to limit access to non-target species.

3. For general measures to reducing wildlife exposure to pesticides, see EPA's [Pesticides: Environmental Effects](#) website.

**Stressor: Fire**

**Conservation Goal:** Minimize fire potential from project-related activities.

**Conservation Measure 1:** Reduce fire hazards from vehicles and human activities (e.g., use spark arrestors on power equipment, avoid driving vehicles off road).

**Conservation Measure 2:** Consider fire potential when developing vegetation management plans by planting temporary impact areas with a palette of low-growing, sparse, fire resistant native species that meet with the approval of the County Fire Department and local FWS Office.

STUDY SCOPING LETTER AND AGENCY COMMENT  
LETTERS



DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

REPLY TO  
ATTENTION OF

Environmental and Cultural Resources Section

December 17, 2018

Edwin E. Muñiz  
U.S. Fish and Wildlife Service  
Caribbean Ecological Services Field Office  
P.O. Box 491  
Boqueron, PR 00622

Dear Mr. Muñiz,

The US Army Corps of Engineers' Pittsburgh District (Corps) is in the process of developing and analyzing alternatives for a feasibility study for a flood risk management project located within the Municipality of Ciales, Puerto Rico. This project, entitled the *Rio Grande de Manati, PR (Ciales) Feasibility Study*, is authorized under Supplemental Appropriations in the Bipartisan Budget Act of 2018 (Public Law 115-123). The sponsor for this project is the Puerto Rico Department of Natural and Environmental Resources, a government agency whose mission includes protecting, conserving, and managing the natural and environmental resources of Puerto Rico.

The objectives of the project are to reduce flood risk within the affected communities, decrease the risk to structures, industry, and public infrastructure in areas with existing and worsening stream bank erosion, and to reduce life and safety risk associated with the loss of access to population centers during storm and flooding events along the Rio Grande de Manati within the Municipality of Ciales. The study area begins upstream of Dos Rios at the PR-145 bridge and extends approximately 12,500 linear feet in a northerly direction along the Rio Grande de Manati to the PR-6685 bridge. Management measures that are currently being considered include structural measures such as channel improvement (widening, deepening, straightening), flood walls, levees, rip rap, gabion baskets/mattresses, concrete/stone revetments, channel relocation, and transportation-related recommendations; non-structural measures such as flood-proofing, home acquisition and relocation, and emergency planning; and environmental measures such as wetland retention, riparian restoration, channel diversions, and plantings.

Pursuant to compliance with the National Environmental Policy Act and associated environmental laws and regulations, [including the Endangered Species Act, Fish and Wildlife Coordination Act, Clean Water Act, National Historic Preservation Act] the Corps will be preparing an Environmental Assessment (EA) to analyze the potential effects of the alternatives. At this time we request your feedback on the scope of issues to be addressed in the EA, any resources or habitats of concern in the project

area, information on ongoing projects in the area, and any feedback you may have on the alternatives to be considered.

Please provide your input within 30 days of receipt of this letter or we will assume your agency has no comments regarding this project. If you have any questions on this matter, please feel free to contact Erin Stuart, at 412-395-7517, or by e-mail at [Erin.Stuart@usace.army.mil](mailto:Erin.Stuart@usace.army.mil).

Sincerely,

A handwritten signature in black ink, appearing to read "Marc A. Glowczewski". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Marc A. Glowczewski  
Chief, Planning and  
Environmental Branch





**GOBIERNO DE PUERTO RICO**

**Oficina Estatal de Conservación Histórica  
State Historic Preservation Office**

January 22, 2019

**Marc A. Glowczewski**

Chief, Planning and Environmental Branch  
Pittsburgh District Corps of Engineers  
William S. Moorhead Federal Building  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

**SHPO 12-27-18-01 RÍO GRANDE DE MANATÍ, PR (CIALES) FEASIBILITY  
STUDY, CIALES, PUERTO RICO**

Dear Mr. Glowczewski,

We acknowledge receipt of your request for information regarding historic properties that may be affected by the proposed flood risk management project. Although there are multiple archaeological sites located in the area, a systematic survey has not been carried out. As such, the total number of sites, their historic significance or their boundaries is unknown. In addition, Bridge No. 321, a property listed in the National Register of Historic places, is at the northern end of the study area.

We hope this information is of use to you. After the area of potential effects for this project has been determined, the U.S. Army Corps of Engineers should carry out appropriate identification efforts for historic properties, in consultation with our Office.

If you have questions regarding this matter, please contact our Office at (787) 721-3737 or email, [ediaz@prshpo.pr.gov](mailto:ediaz@prshpo.pr.gov).

**Sincerely,**

**Carlos A. Rubio-Cancela**  
State Historic Preservation Officer

CARC/GMO/MB

Cuartel de Ballajá (Tercer Piso),  
Calle Norzagaray, Esquina Beneficencia, Viejo San Juan, P.R. 00901

PO Box 9023935, San Juan, P.R. 00902-3935  
Tel: 787-721-3737 Fax: 787-721-3773  
[www.oech.pr.gov](http://www.oech.pr.gov)



**OFICINA ESTATAL DE  
CONSERVACIÓN HISTÓRICA**  
OFICINA DEL GOBERNADOR  
**STATE HISTORIC  
PRESERVATION OFFICE**  
OFFICE OF THE GOVERNOR



# GOVERNMENT OF PUERTO RICO

Department of Economic Development and Commerce  
Permits Management Office

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January 23, 2019

VIA EMAIL

[Erin.Stuart@usace.army.mil](mailto:Erin.Stuart@usace.army.mil)

Mr. Marc A. Glowczewski  
Chief, Planning and Environmental Branch  
Environmental and Cultural Resources Section  
Department of the Army

Ref: **National Environmental Policy Act**  
**Proyecto Río Grande de Manatí**

Dear Mr. Glowczewski:

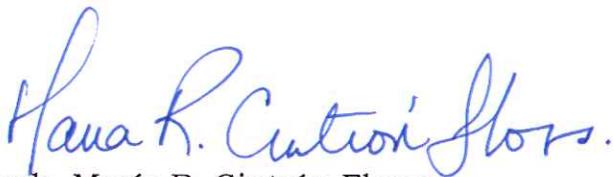
We acknowledge receipt of your request for information related to the project "Río Grande de Manatí (Ciales) Feasibility Study", and the environmental compliance requirements applicable under the regulations of the Government of Puerto Rico. As stated in Rule 114 (L) of the Regulation for the Environmental Assessment Process, Regulation No. 8858 of November 23, 2016, "those proponent agencies that have complied with section 102 (2) (C) of the National Environmental Policy Act ("NEPA", by its acronym in English) and have distributed the environmental document to federal government agencies, will not have to prepare a new environmental document to obtain an environmental compliance determination by the Permits Management Office (OGPe ,by its acronym in Spanish), provided that this document complies with the criteria and requirements of this Regulation. Therefore, the environmental document should be distributed to state government agencies with competence on the proposed action."<sup>1</sup>

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<sup>1</sup> Unofficial translation

In summary, if an environmental document has been prepared under NEPA, for the evaluation of the proposed alternative, this document should be distributed through the Single Business Portal (SBP) under the "Recommendation of Environmental Evaluation" mechanism. Therefore, government agencies with jurisdiction over the proposed action will issue their recommendations, within the limits established in the Regulation. Once the comment process is completed by the proponent of the action, they must submit the corresponding environmental document through the SBP and OGPe will proceed to issue the corresponding determination of environmental compliance.

We hope that our comments have properly answered any questions about the process of environmental compliance. In case of having additional questions or comments about this matter, or if any further explanation is required, do not hesitate to contact the subscriber.



Arch. María R. Cintrón Flores  
Assistant Secretary  
Department of Economic Development and Commerce  
Permits Management Office



# GOVERNMENT OF PUERTO RICO

## Puerto Rico Planning Board

January 30, 2019

### **Mr. Marc A. Glowczewski**

Chief  
Planning and Environmental Branch  
Department of the ARMY  
William S. Moorhead Federal Building  
1000 Liberty Ave.  
Pittsburgh, PA 15222-4186

Via email: erin.stuart@usace.army.mil

#### **NOTICE ABOUT FEASIBILITY STUDY FOR FLOOD RISK MANAGEMENT MUNICIPALITY OF CIALES**

Dear Mr. Glowczewski:

This is to acknowledge receipt of your communication about the feasibility study for a flood risk management project located within the Municipality of Ciales. We appreciate the opportunity provided to present comments.

Per your communication, the objectives of the project are to reduce flood risk within the affected communities, decrease the risk to structures, industry, and public infrastructure in areas with existing and worsening stream bank erosion, and to reduce life and safety risk associated with the loss of access to population centers during storm and flooding events along the Rio Grande de Manatí within the Municipality of Ciales.

We are familiarized with the area since in the past we conducted various site visits attending two (2) complaints of illegal construction in the floodway. During Hurricane María, the area was severely affected by flooding including the collapse of the bridge at road PR-145.

We recognize that structural alternatives (levees, retaining walls, etc.) are measures that are considered because they adequately or cost-effectively remediate or mitigate a risk condition. Nevertheless, there are developments (housing) within the floodway or high hazard areas along segments of the river that will be studied, where non-structural measures such as acquisition and relocation can be considered instead of considering high maintenance options. For this alternative to be successful, a coordinated outreach effort with the municipality and the active participation of potentially affected citizens is required in order to have a positive result.

Also, it is known that flood patterns and hydraulic, among other aspects of the area are affected by hydromodification projects. This may have long term impact in land use



decisions, flood insurance among others. That said, we would like to keep notified of the final alternatives selected for this project and also be provided with the Hydrologic-Hydraulic studies once they are developed for this reach, in case FIRM maps have to be amended after the construction of the selected alternatives.

The Puerto Rico Planning Board as State Floodplain Manager and State Coordinator of the National Flood Insurance Program (NFIP), appreciates the opportunity to comment in this type of projects. We would like to keep receiving such communications in order to improve state participation and collaboration between decision making stakeholders and be aware of potential projects that might have impact on land use and flood plain matters.

***Cordially,***



María del C. Gordillo Pérez  
Chairwoman

# AGENCY CORRESPONDENCE



DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

REPLY TO  
ATTENTION OF

Environmental and Cultural Resources Section

5 June 2019

Edwin E. Muñiz  
Field Supervisor  
Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boqueron, PR 00622

Dear Mr. Muñiz,

The U.S. Army Corps of Engineers, Pittsburgh District (Corps), respectfully requests technical assistance in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended) for the Rio Grande de Manati Flood Risk Management Study, in Ciales, Puerto Rico.

The purpose of the proposed project is to reduce flood risk along the Rio Grande de Manati River within the municipality of Ciales. Assistance from the Corps was requested to study, provide recommendations, and build the recommended plan to reduce flood risk as a result of extensive socioeconomic impacts sustained during Hurricane Maria in 2017. Recommended actions would be constructed/implemented in approximately 2022. The non-federal sponsor for the study is the Puerto Rico Department of Natural and Environmental Resources.

The Corps is currently assessing various alternatives in this study and has developed four conceptual alternatives, in addition to a no-action alternative. Descriptions of these alternatives are enclosed for your review.

The Corps respectfully requests that the USFWS provide a planning aid letter with comments and technical assistance for the proposed alternatives. If you have any questions, or need additional information, please contact Erin Stuart, at 412-395-7517, or by e-mail at [Erin.Stuart@usace.army.mil](mailto:Erin.Stuart@usace.army.mil). Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc A. Glowczewski".

Marc A. Glowczewski  
Chief, Planning and Environmental Branch

Enclosure

## Project Location

The Municipality of Ciales is located on the northern slopes of the Central Mountain Range, approximately 25 miles southwest of San Juan (Figure 1). Approximate coordinates in the center of the study area are 18.345784°N and -66.469817°W. The Rio Grande de Manati flows through the study area (Figure 2).

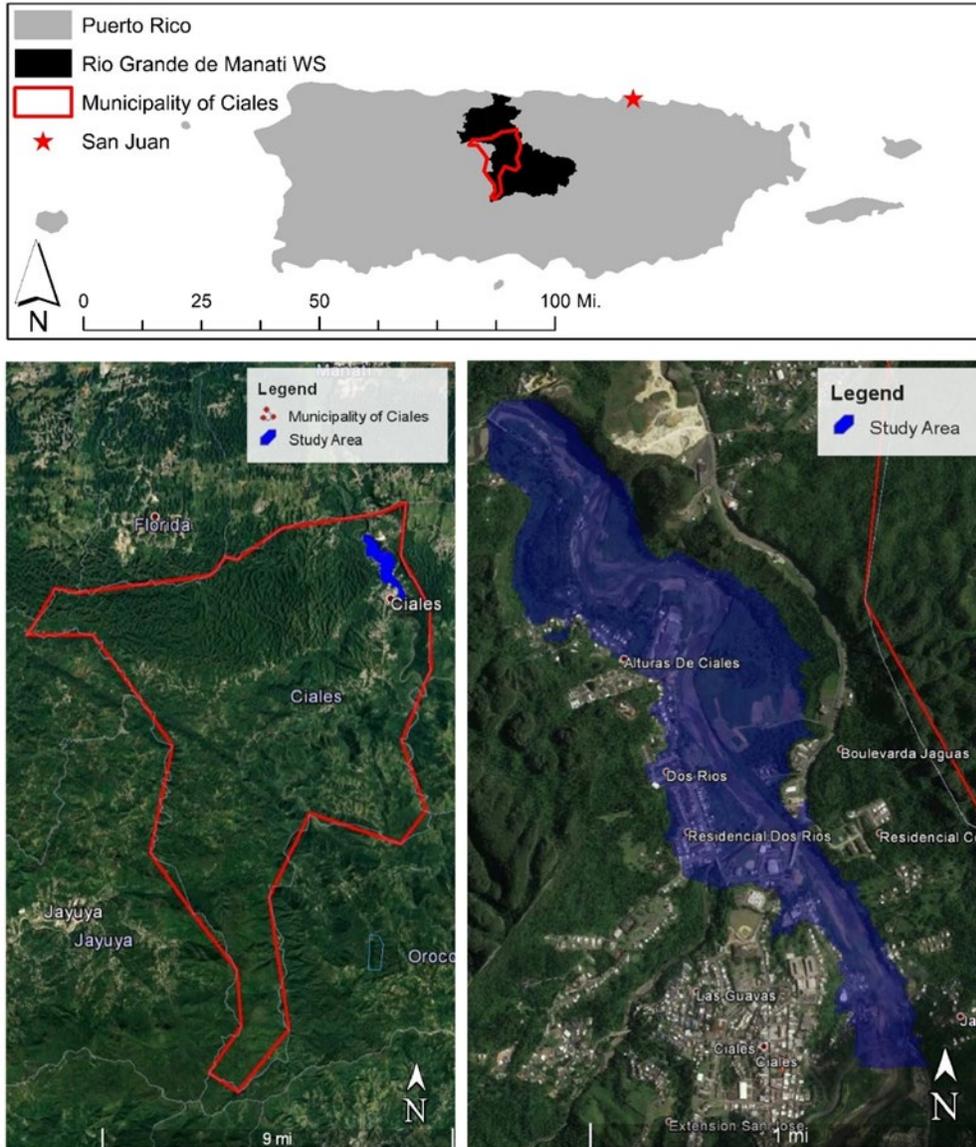


Figure 1. Location of the Rio Grande de Manati watershed, Municipality of Ciales, and study area within Puerto Rico. The Rio Grande de Manati flows northwest through the study area.



Figure 2. Rio Grande de Manati location within the study area.

### Conceptual Alternatives

Alternative 1. No Action: Under the no action alternative, no federal action would be taken by the Corps to reduce flood risk.

Alternative 2. Channelization: Channelization involves constructing approximately 9,000 linear feet of concrete-lined channel within existing riverbank limits (Figure 3). The trapezoidal channel would be approximately 280 feet wide and 15 feet deep, requiring excavation (i.e., widening and deepening) within the existing riverbed. Channelization would reduce flood risk by increasing capacity and expediting water movement through the study area, as well as prevent additional stream bank erosion.

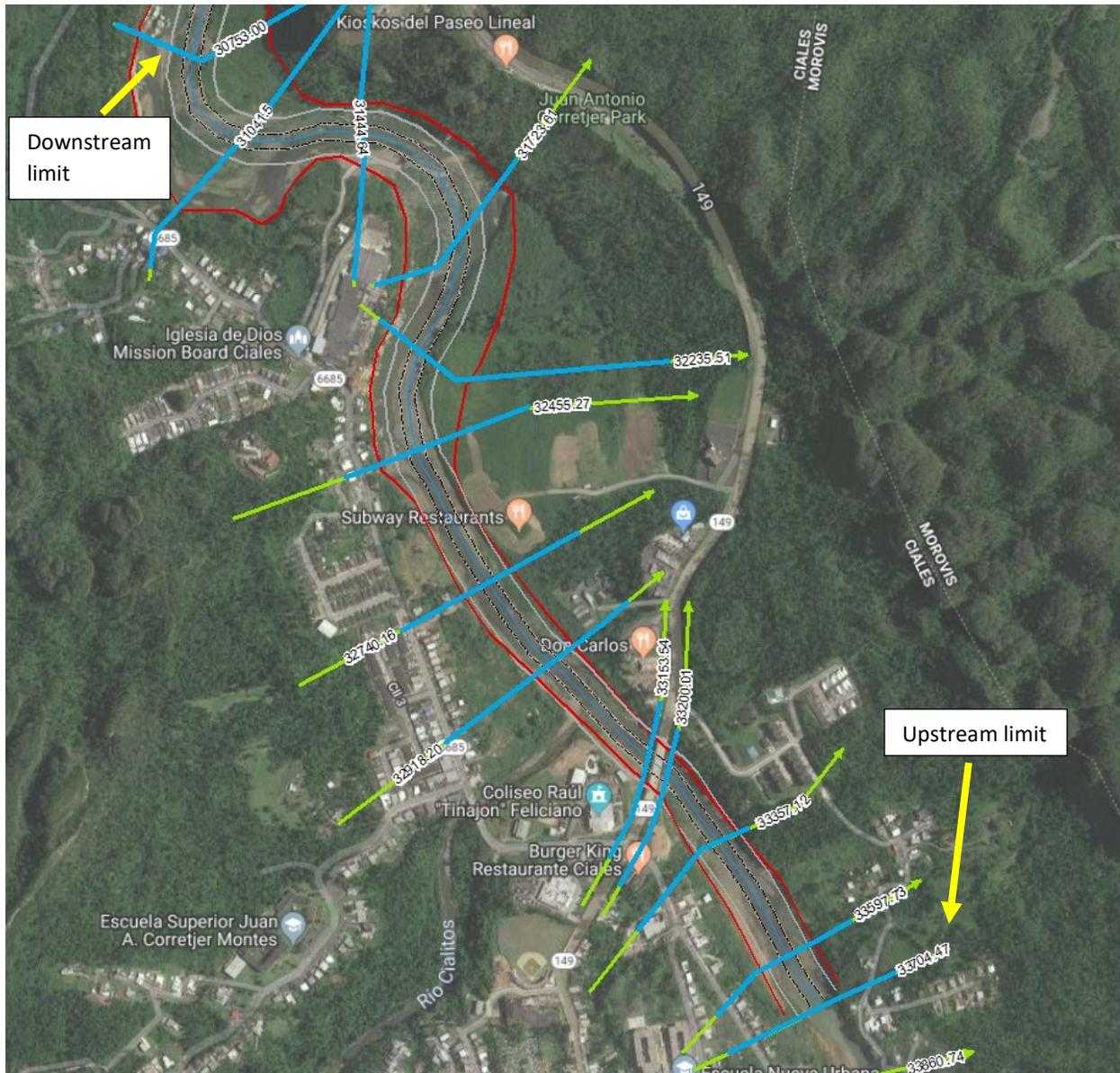


Figure 3. Extent of channelization associated with Alternative 2 (gray and black lines). Blue and green lines represent cross sections. Channelization would occur between cross sections 33704.47 and 30753.00.

**Alternative 3. Levee/Floodwall & Stream Bank Protection:** This alternative incorporates the original, locally developed 2008 Flood Protection Works project design, which included a combined levee/floodwall system, a drainage system and retention pond, as well as channel improvements to reduce flood risk within the community of Dos Rios. Alternative 3 also incorporates a 1,200-foot floodwall around the wastewater treatment plant and approximately 4,000 linear feet of riprap stream bank protection that would require excavation to key the riprap into the channel (Figure 4).



Figure 4. Management measures associated with Alternative 3, including bridge scour protection, bank erosion protection, floodwall/levee system, and channel improvement (widening).

**Alternative 4. Channel Improvement & Realignment:** This alternative includes construction of approximately 10,000 feet of new, meandering low flow channel and widening of the channel within the existing floodplain to improve hydraulic conductivity and increase capacity. Channel improvements (i.e., widening and deepening) at the PR-149 Bridge would be designed to reduce water backup upstream of the bridge. Alternative 4 also incorporates a 1,200-foot floodwall around the wastewater treatment plant and approximately 4,000 linear feet of riprap stream bank protection that would require excavation to key the riprap into the channel (Figure 5).

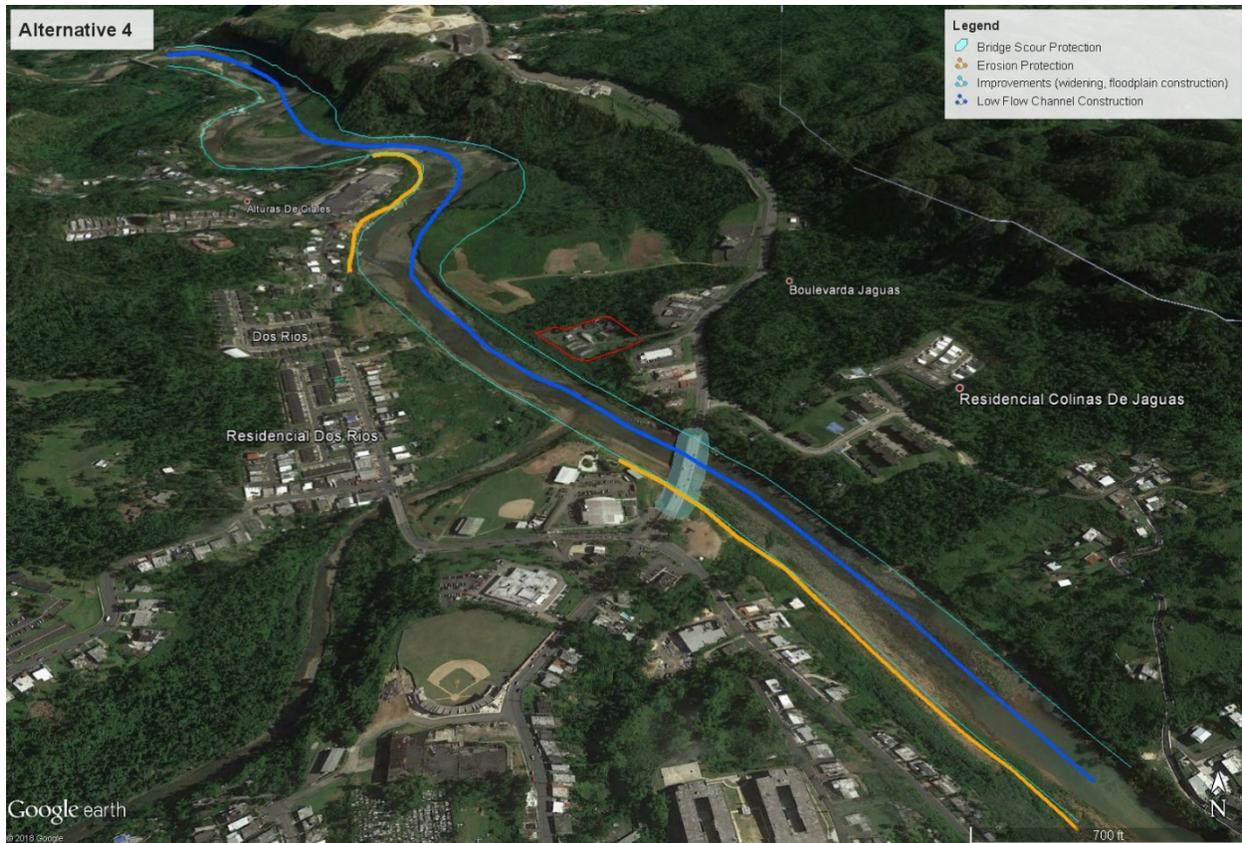


Figure 5. Management measures associated with Alternative 4, including low flow channel construction, stream improvements (i.e., widening, floodplain construction), a flood wall around the water treatment plant, stream bank protection, and bridge scour protection.

Alternative 5. Non-structural Relocations & Stream Bank Protection: Private structures within the 25-year floodplain would be acquired and demolished. Residents would be relocated outside of the floodplain. A 1200-foot floodwall would be constructed around the wastewater treatment plant. Alternative 5 also includes approximately 4,000 linear feet of riprap stream bank protection that would require excavation to key the riprap into the channel (Figure 6).



Figure 6. Management measures associated with Alternative 5, including structure relocation, bridge scour protection, bank erosion protection, and a floodwall/levee system.



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Caribbean Ecological Services  
Field Office  
P.O. Box 491  
Boqueron, PR 00622

In Reply Refer To:  
FWS/R4/CESFO/FC-043

**JUN 24 2019**

Mr. Marc A. Glowczewski  
Chief, Planning and Environmental Branch  
Pittsburgh District Corps of Engineers  
William S. Moorhead Federal Bldg.  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

RE: Ciales Flood Control Study, Rio Grande  
de Manatí, Ciales, Puerto Rico

Dear Mr. Glowczewski:

This is in reply to your June 5, 2019 letter, requesting our review and technical assistance of the proposed alternatives for flood risk reduction of the Rio Grande de Manatí and the Municipality of Ciales. Our comments are provided as technical in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended).

The US Army Corps of Engineers (Corps) has been asked to reduce the flood risk along the Rio Grande de Manatí within the Municipality of Ciales. The non-federal sponsor for the study is the Puerto Rico Department of Natural and Environmental Resources (PRDNER), and construction and implementation is estimated to take place by 2022.

Service biologist Felix Lopez and Corps staff conducted a site visit of the area on March 26, 2019. During the site visit, both structural and non-structural alternatives were discussed. The Rio Grande de Manatí is one of the few major rivers along the north coast of Puerto Rico that remains undammed and unimpeded. Other major river systems like the Rio Grande de Arecibo, La Plata and Rio Loíza all have major high head dams. As a result, Rio Grande de Manatí still has a full complement of native stream fauna (Kwak 2007, 2013). Native stream fauna in Puerto Rico for the most part is amphidromous with eggs hatching in the estuary and larvae spending some time near shore, with the juveniles and sub adults migrating back upstream to their preferred habitats. The Service's main concern with the proposed project is centered on maintaining appropriate riverine habitat for native stream fauna, as well as maintaining connectivity to support migratory requirements of these species.

The Municipality of Ciales lies within the Puerto Rico northern karst region, which is suitable habitat for the listed Puerto Rican boa (*Chilabothrus* (formerly *Epicrates) inornatus*). The Service developed guidelines for boa conservation at construction sites (enclosed). These conservation measures should be implemented for all alternatives with the exception of the No Action alternative (Alternative 1). We believe that the implementation of these conservation measures would result on a not likely to adversely affect determination for the Puerto Rican boa.

Based on the information provided, we also have the following comments and recommendations:

#### **Alternative 2 Channelization:**

This alternative involves the construction of a concrete lined channel 280 feet wide, 15 feet deep and about 9,000 feet long. This would require excavation of the riverbed. This alternative would eliminate all riverine habitat for stream fauna along this reach. It could possibly impede some species from migrating further upstream. In addition, this type of structure could lead to downstream bank erosion and downward erosion of the riverbed as the volume and velocity of channeled water transitions into the natural channel.

#### **Alternative 3 Levee/Floodwall and Stream Bank Protection**

This alternative leaves the natural riverbed intact and concentrates efforts on protecting selected residential areas and about 4,000 feet of riprap stream bank. It also entails the widening of a point bar to move the river away from residential areas. The existing wastewater treatment plant will be protected by a floodwall.

#### **Alternative 4 Channel improvements and Realignment**

This alternative is similar to Alternative 3 but includes the construction of a natural low flow channel 10,000 feet long and widening the existing channel. A point bar north of the town will be bypassed to improve hydraulics. Channel improvements at the PR 149 bridge will help eliminate this bottleneck and minimize water backing up on the bridge.

#### **Alternative 5 Non-Structural Relocations and Stream Bank Protection**

This alternative would entail the acquisition and demolition of private and commercial structures within the 25-year floodplain. Residents would be relocated outside the floodplain. Riprap stream bank protection and treatment plant protection remain the same as alternatives 3 and 4.

Based on the information provided, Alternative 1 has the most effects on riverine habitats, and Alternative 5 has the least impacts. Alternative 3 does not alter the river bed while Alternative 4 involves constructing a "natural" channel although there is not enough detail in the project description to visualize exactly how this would work. Alternatives 3-5 have a riprap component; however, the source of the material for the riprap is not identified. Ciales is surrounded by karst geology and this area hosts numerous listed plant and animal species. If there were a need for an offsite rock quarry to provide the riprap stone, site assessment would be

required to identify possible presence of listed species, and additional section 7 consultation requirements.

In addition, please refer to the guidance titled "*Post-Disaster Guidance for Repair, Replacement, and Clean-up Projects in Streams and Waterways of Puerto Rico from Hurricane María*" that was developed by the USFWS and provided to the Federal Emergency Management Agency (FEMA) for regulatory review by permitting agencies, protect damaged structures, reduce future damages, and prevent or minimize damage to natural resources. This guidance applies to post-disaster repair, replacement, and clean-up projects related to storm damage incurred by Hurricane María in aquatic habitats (creeks, rivers, and tidally-influenced waters). The guidance is available at: <https://www.fws.gov/southeast/pdf/guidelines/post-disaster-guidance-for-projects-in-streams-and-waterways-of-puerto-rico.pdf>.

Thank you for the opportunity to provide assistance in this planning process. This does not constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA.

If you have any questions please contact Felix Lopez of my staff at 787-851-7297, extension 210 or via email at [felix\\_lopez@fws.gov](mailto:felix_lopez@fws.gov).

Sincerely yours,



Edwin E. Muñiz  
Field Supervisor

Enclosure (1)

cc:

DNRA, San Juan

COE, San Juan

EPA, San Juan

#### References

Kwak, T.J., Cooney, P.B. and Brown, C.H., 2007. Fishery population and habitat assessment in Puerto Rico streams: phase 1 final report. Federal Aid in Sport Fish Restoration Project F-50 Final Report. Marine Resources Division, Puerto Rico Department of Natural and Environmental Resources, San Juan.

Kwak, T. J., W. E. Smith, E. N. Buttermore, P. B. Cooney, and W. G. Cope. 2013. Fishery population and habitat assessment in Puerto Rico streams: phase 2 final report. Federal Aid in Sport Fish Restoration Project F-50 Final Report, Submitted to Marine Resources Division, Puerto Rico Department of Natural and Environmental Resources, San Juan.

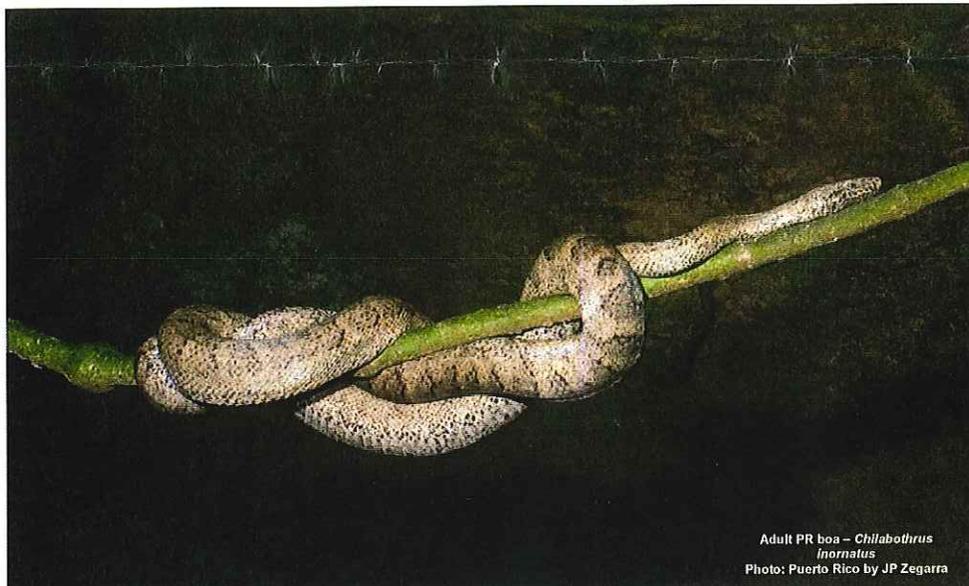


**U.S. FISH AND WILDLIFE SERVICE  
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE  
MARCH 2019**

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

Section 7 (a)(1) of the Endangered Species Act (ESA) charges federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of federal lands as well as federal actions that may affect listed species, such as federal approval of private activities through the issuance of federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa, destroy eggs is subject to penalties under federal law. 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 effects to the species. Download the [project evaluations fact sheet](#) to learn more about the requirements or visit our [project evaluations webpage](#).

The endangered Puerto Rican (PR) boa (*Chilabothrus inornatus*, formerly *Epicrates inornatus*) is an endemic species and it is the largest snake that inhabits Puerto Rico. The PR boa is a non-venomous snake that does not pose any life threatening danger to humans, but be aware that some individuals may try to bite if disturbed or during capture or handling. The PR boa 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 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 virgin forest to areas that exhibit various degrees of human disturbance like roadsides or houses, especially if near their habitat. The PR boa is considered mostly nocturnal, remaining less active concealed or basking in the sun during the day.

The U.S. Fish and Wildlife Service (Service) has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the species 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.

#### 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 this species as well as penalties for harassing or harming boas. An educational poster or sign with photo or illustration 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 area 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 use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or experienced personnel should survey the areas to be cleared to verify the presence of any PR boa within the work area. This should be done daily for the duration of the entire project.
4. The PR boa is considered more active at night. Thus, in order to maximize PR boa detection, the species can be searched for the night(s) prior to any vegetation clearing starts according to the construction plan and if snakes are found, they can be relocated accordingly (see #7).
5. Once the area has been searched for PR boas, vegetation should first be cleared by hand to the maximum extent possible. Vegetation should first be cut about one meter above the ground, prior to the use of heavy machinery for land clearing. Once land is cleared by hand, this will allow boas present on site to potentially move away on their own to adjacent available habitat. If there is no suitable habitat adjacent to the project site, any PR boas found need to be relocated accordingly (see #7).
6. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the

animal (dead or alive), relocation site GPS coordinates, the time and date of the relocation, and comments on how the PR was detected and its behavior.

7. If a PR boa is found within any of the working or construction areas, activities should stop at the area where the PR boa is found and information recorded (see #6). Boas should be safely captured and relocated at least 1 km within suitable habitat (forested) and away from construction areas. Potential boa relocation sites should be pre-determined before the project starts and sites shared with the Service for review. Relocation of boas should be done by trained and designated personnel, and shall not harm or injure the captured boa. Activities at other work sites, where no boas have been found after surveying the area, may continue.
8. If immediate relocation is not an option, project related activities at this area should stop until the boa moves out of harm's way on its own or call the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation (phone #'s: 787-724-5700, 787-230-5550, 787-771-1124). The potential use of the PRDNER staff for these purposes should be coordinated with them at least 30 days before the project starts. If a PR boa is captured by the PRDNER, record the name of the PRDNER staff and information on where the PR boa will be taken.
9. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (in 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, boas need to be safely captured and relocated accordingly (see #7).
10. PR boas may also enter or occur within 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 in areas farthest 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 an undisturbed area.
11. If the event a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #6). If the PR boa was killed as part of the project actions, please include information on what conservation measures had been implemented and recommendations on what will be done to avoid further killing more individuals. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.
12. Projects must comply with all state laws. Please contact the PRDNER for further guidance.

If you have any questions regarding the comments above, please contact the USFWS Monday to Friday 8am-430pm:

- Marelisa Rivera, Deputy Field Supervisor
  - Email: [marelisa\\_rivera@fws.gov](mailto:marelisa_rivera@fws.gov)
  - Office phone 787-851-7297 ext. 206 or mobile 787-510-5219
- José Cruz-Burgos, Endangered Species Coordinator
  - Email: [jose\\_cruz-burgos@fws.gov](mailto:jose_cruz-burgos@fws.gov)
  - Office phone 787-851-7297 ext. 218 or mobile 787-510-5206



DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

September 23, 2019

Environmental and Cultural Resources Section

Edwin E. Muñiz  
Field Supervisor  
Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boqueron, PR 00622

Dear Mr. Muñiz,

Thank you for your Planning Aid Letter dated 24 June 2019 (FWS/R4/CESFO/FC-043) providing technical assistance and comments for the proposed alternatives for the Rio Grande de Manati Flood Risk Management Study in Ciales, Puerto Rico.

The U.S. Army Corps of Engineers, Pittsburgh District (Corps), has identified the recommended plan and respectfully requests your comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*).

The recommended plan consists of the construction of several structural measures to reduce flood risk, including: a 1,200-foot concrete and steel I-wall around the wastewater treatment plant perimeter with a maximum height of approximately 8-feet; two separate areas of riprap bank protection built to the 25-year flood elevation or top of bank, each approximately 2,000 feet in length; and a third location of riprap for scour protection around the bridge piers and abutments of the PR-149 bridge. Bridge scour protection will be placed surrounding each pier to an approximate depth of 6-feet. Riprap will be obtained from a commercial facility. The recommended plan also consists of non-structural measures, including: the acquisition, demolition, and relocation of 60 private homes and businesses located within the 25-year floodplain. Maps depicting the types of work, general project footprints, and their locations within the study area are enclosed.

Based on discussions with Felix Lopez of your office, coordination responsibilities under the Fish and Wildlife Coordination Act can be completed by using the National Environmental Policy Act (NEPA) review and the Endangered Species Act consultation process. The Corps will provide the draft Rio Grande de Manati Flood Risk Management Study Integrated Feasibility Report and Environmental Assessment (IFR/EA) to your office at the time that it is released for public comment. A draft

Memorandum for the Record to document this informal understanding is enclosed for your review.

Consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) will also be initiated with your office at the time that the draft IFR/EA report is released for public comment.

We appreciate your review and technical assistance on the project. If you have any questions, or need additional information, please contact Erin Stuart, at 412-395-7517, or by e-mail at *Erin.Stuart@usace.army.mil*. Thank you for your assistance.

Sincerely,

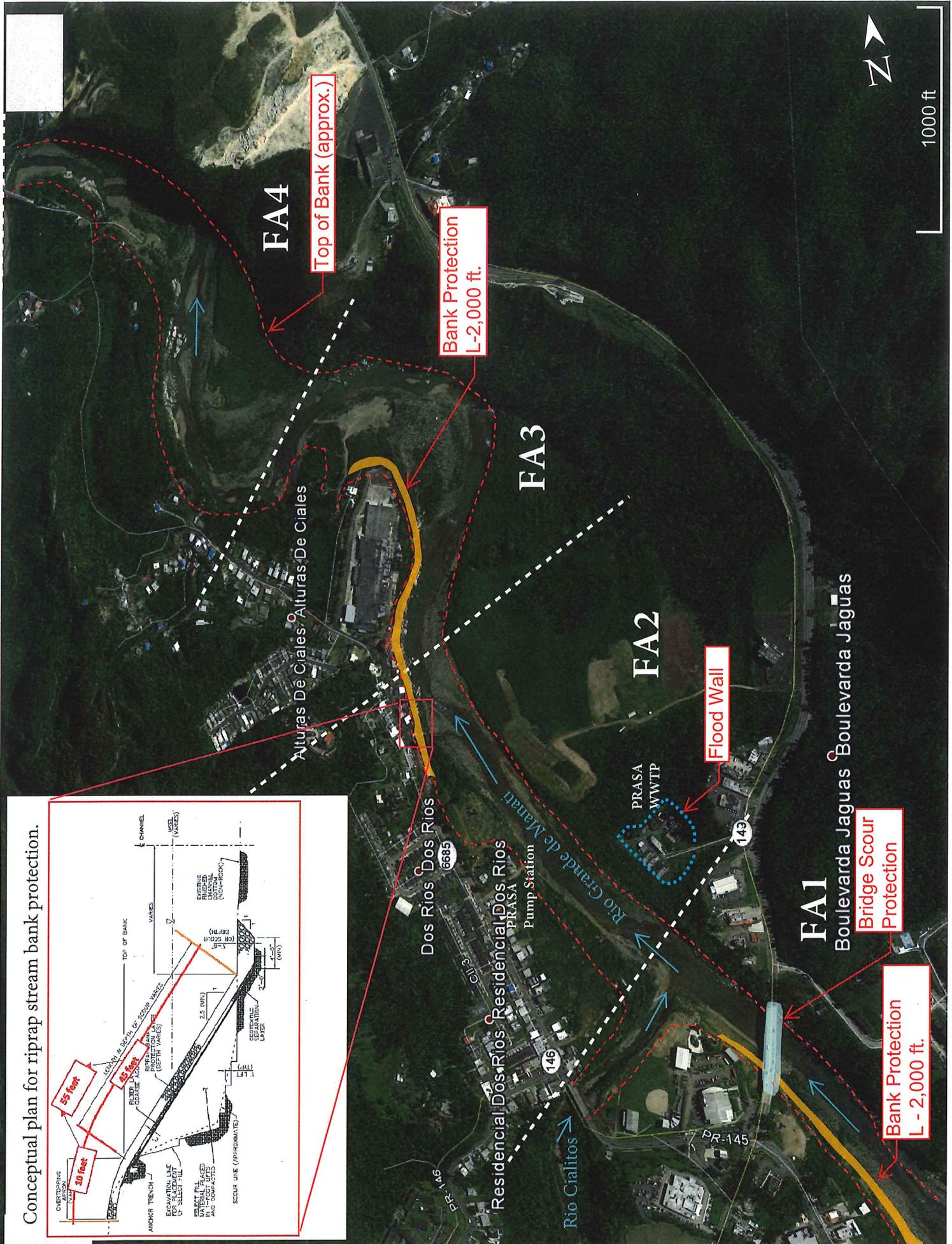
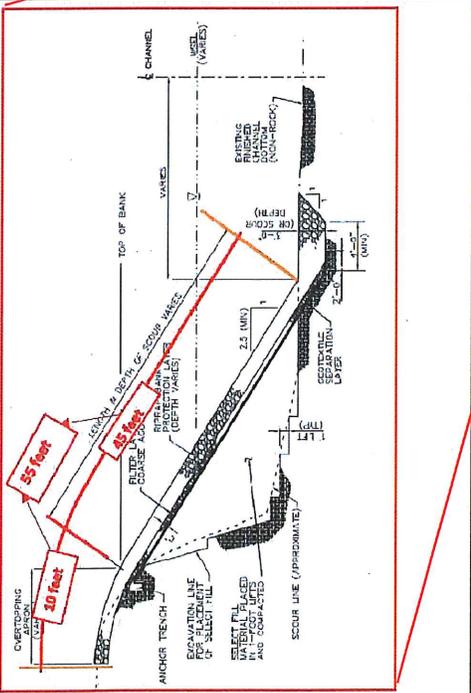
A handwritten signature in black ink, appearing to read "Marc A. Glowczewski". The signature is fluid and cursive, with a long horizontal stroke at the end.

Marc A. Glowczewski  
Chief, Planning and Environmental

Enclosure



Conceptual plan for riprap stream bank protection.



1000 ft





DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

CELRP-PM-EV

MEMORANDUM FOR RECORD

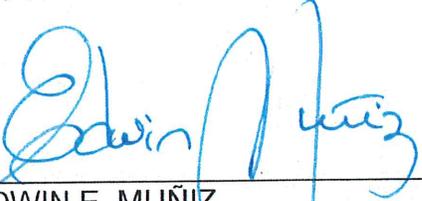
SUBJECT: Coordination Act Report for the Rio Grande de Manati Flood Risk Management Study, Ciales, Puerto Rico

1. **PURPOSE:** To document an informal understanding between the U.S. Army Corps of Engineers, Pittsburgh District (Corps), and the U.S. Fish and Wildlife Service (USFWS) Caribbean Ecological Services Field Office.
2. **BACKGROUND:** The Corps is in the process of analyzing alternatives for a feasibility study for a flood risk management project located within the Municipality of Ciales, Puerto Rico. This project, entitled the Rio Grande de Manati, PR (Ciales) Feasibility Study, is authorized under Supplemental Appropriations in the Bipartisan Budget Act of 2018 (Public Law 115-123). The sponsor for this project is the Puerto Rico Department of Natural and Environmental Resources.
3. **RECOMMENDED PLAN:** The Recommended Plan consists of the construction of several structural measures to reduce flood risk, including: a 1,200-foot concrete and steel I-wall in a perimeter configuration around the wastewater treatment plant with a maximum height of approximately 8-feet; approximately 4,000 linear feet of riprap bank protection built to the 25-year flood elevation or top of bank located in two separate locations, each with approximately 2,000 linear feet of bank protection; and the placement of riprap around the bridge piers and abutments of the PR-149 bridge as scour protection. Bridge scour protection will surround each pier to a depth of approximately 6-feet. The Recommended Plan also consists of non-structural measures, including: the acquisition, demolition, and relocation of 60 private homes and businesses located within the 25-year floodplain.
4. **COORDINATION:** The Fish and Wildlife Coordination Act (FWCA; 16 U.S.C. 661 *et seq.*, March 10, 1934, as amended 1946, 1958, 1978, and 1995) requires Federal agencies to consult with USFWS regarding project related effects to fish and wildlife resources and proposed measures to avoid, minimize, and/or mitigate unavoidable effects. Additional Coordination authorities exist through the review process of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321-4347, January 1, 1970, as amended 1975 and 1982) and the consultations required under the Endangered Species Act of 1973 (ESA; 7 U.S.C. 136, 16 U.S.C. 1531 *et seq.* December 28, 1973).

The USFWS provided a Planning Aid Letter (PAL) (FWS/R4/CESFO/FC-043) dated 24 June 2019 providing technical comments regarding the proposed alternatives. The PAL identified the non-structural relocations and stream bank protection alternative as having the least amount of effects on riverine habitats. This alternative is the Recommended Plan described above. The PAL also identified concerns regarding the source of riprap stone. Riprap will be obtained from an existing commercial quarry to avoid impacts to listed plant and animal species inhabiting the surrounding karst geology. The PAL identified that the study area contains suitable habitat for the endangered Puerto Rican boa (*Chilabothrus inornatus*). Conservation measures developed by the USFWS to minimize adverse effects to the boa were enclosed in the PAL. The Corps will include these conservation measures in the project plans and specifications and will require implementation of these measures during project construction activities.

USFWS continues to coordinate and consult with the Corps through NEPA and the ESA in which impacts to fish and wildlife resources are adequately addressed via these two authorities. Funds may be sent to USFWS during the Preconstruction Engineering and Design (PED) phase to provide support during design refinements. USFWS will include comments relevant to FWCA in the USFWS response to the Corps' ESA coordination letter.

5. AGREEMENT: The undersigned, the Corps and USFWS, agree to utilize the Rio Grande de Manati, PR (Ciales) Feasibility Study project NEPA review and ESA consultation processes to complete coordination responsibilities under the FWCA. This agreement will avoid duplicate analysis and documentation as authorized under 40 CFR section 1500.4 (k), 1502.25, 1506.4, and is consistent with Presidential Executive Order for Improving Regulation and Regulatory Review, released January 18, 2011.

  
\_\_\_\_\_  
EDWIN E. MUÑIZ  
Field Supervisor  
Caribbean Ecological Services Field Office

Oct 4, 2019

\_\_\_\_\_  
(Date)

  
\_\_\_\_\_  
MARC A. GLOWCZEWSKI  
Chief  
Planning and Environmental Branch

Oct 9, 2019

\_\_\_\_\_  
(Date)



**GOBIERNO DE PUERTO RICO**

**Oficina Estatal de Conservación Histórica  
State Historic Preservation Office**

October 17, 2019

**Angela E. Dunn**

Chief, Environmental Branch  
Jacksonville District Corps of Engineers  
701 San Marco Boulevard  
Jacksonville, FL 32207-8915

**SHPO 12-27-18-01 RÍO GRANDE DE MANATÍ, PR (CIALES) FEASIBILITY  
STUDY, CIALES, PUERTO RICO**

Dear Ms. Dunn,

We acknowledge receipt of the tentatively identified area of potential effects (APE) for this undertaking. Based on the currently available project information, we believe this APE to be appropriate. However, as the scope of the undertaking is preliminary, changes to the undertaking may require modifying the APE in the future.

We also concur with your decision to comply with your Section 106 responsibilities through the execution of a Programmatic Agreement in accordance with 36 CFR 800.14. We look forward to working with you in developing this agreement.

If you have questions regarding this matter, please contact our Office at (787) 721-3737 or email, [ediaz@prshpo.pr.gov](mailto:ediaz@prshpo.pr.gov).

**Sincerely,**

**Carlos A. Rubio-Cancella**  
State Historic Preservation Officer

CARC/GMO/MB



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207-8915

Planning and Policy Division  
Environmental Branch

29 October 2019

Mr. Carlos Rubio-Cancela  
State Historic Preservation Officer  
Office of the Governor  
P.O. Box 9023935  
San Juan, Puerto Rico 00902-3935

Re: The Río Grande de Manatí Flood Risk Management Study (Ciales), Puerto Rico  
(SHPO 12-27-18-01)

Dear Mr. Rubio-Cancela:

The U.S. Army Corps of Engineers, Pittsburgh District (Corps), is preparing an integrated Environmental Assessment and Feasibility Study for the Río Grande de Manatí Flood Risk Management Project, Ciales, Puerto Rico (Project). The Project is authorized under Section 204 of the River and Harbor and Flood Control Acts of 1970 (PL 91-611), and funded through the Supplemental Appropriations of the Bipartisan Budget Act of 2018 (Public Law 115-123). The Project is being developed to provide protection from flooding and erosion north of the town of Ciales, in the Cordillera, Hato Viejo, and Jaguas barrios in the municipio of Ciales, at the confluence of the Río Grande de Manatí and Río Cialitos. USGS data indicate the Río Grande de Manatí has reached flood stage 35 times in the last 50 years, including serious impacts related to Hurricane Maria in 2017. The Project recommends Federal action to reduce flood risk along the Río Grande de Manatí.

The Tentatively Selected Plan (TSP) in the Feasibility Study has been identified as a combination of measures including the installation of floodwalls around a water treatment facility, hardening river embankment with erosion control revetment, relocation of threatened residents and structures, and bridge scour protection. The preliminary area of potential effects (APE) for the TSP includes all laydown areas, construction zones, and the area where the visual changes to the landscape will be evident; however, the APE is subject to change based on future project design after Congressional approval and funding of the Project (Figure 1). The Puerto Rico State Historic Preservation Officer (SHPO) concurred with this tentative APE by letter dated October 23, 2019. As the SHPO noted in a previous letter dated January 22, 2019, there have not been systematic surveys of the entire APE and there is potential to find significant cultural resources

In order to complete these identification efforts, your office has agreed by letter dated October 23, 2019 to execute a Programmatic Agreement (Agreement). This Agreement will detail how the Corps will comply with our responsibilities under Section 106 of the National Historic Preservation Act. A draft Agreement has been enclosed with this letter for your comment. Comments from your office would be appreciated as soon as possible. If there are any questions, please contact Mr. Christopher Altes at 904-232-1694 or by e-mail christopher.f.altes@usace.army.mil.

Sincerely,



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Angela E. Dunn  
Chief, Environmental Branch

Enclosure

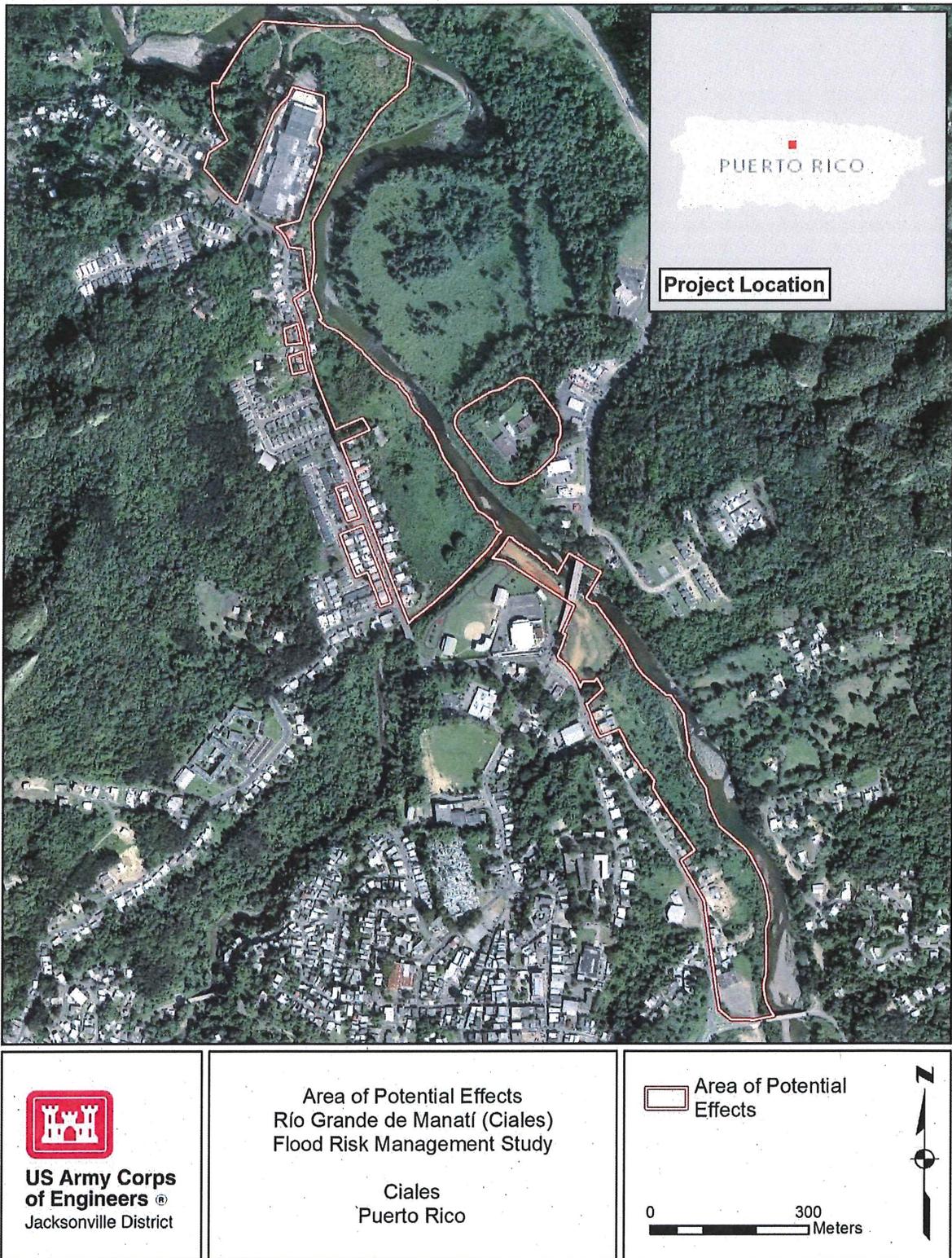


Figure 1. APE for the Tentatively Selected Plan



**GOBIERNO DE PUERTO RICO**  
**Oficina Estatal de Conservación Histórica**  
**State Historic Preservation Office**

December 2, 2019

**Angela E. Dunn**

Chief, Environmental Branch  
Jacksonville District Corps of Engineers  
701 San Marco Boulevard  
Jacksonville, FL 32207-8915

**SHPO 12-27-18-01 RÍO GRANDE DE MANATÍ FLOOD RISK MANAGEMENT  
STUDY, CIALES, PUERTO RICO**

Dear Ms. Dunn,

We have reviewed the draft Programmatic Agreement prepared for the above referenced project. We suggest the following changes.

The ninth WHEREAS should clarify that “the Corps [has notified] the Advisory Council.”

Stipulation III.B.3 **Determination of Adverse Effects** should state that the Corps “shall notify the SHPO [and the ACHP] of the determination.”

As for Stipulation III.C. **Historic Properties Treatment Plan**, the introductory paragraph and paragraph 4 should, in addition to SHPO, include Corps consultation with any other consulting party participating in the process.

If you have questions regarding the recommended changes, please do not hesitate to contact our Office at (787) 721-3737 or email, [ediaz@prshpo.pr.gov](mailto:ediaz@prshpo.pr.gov).

**Sincerely,**

**Carlos A. Rubio-Cancela**  
State Historic Preservation Officer

CARC/GMO/MB

**From:** [Solimar Resto Feliciano](#)  
**To:** [Altes, Christopher F CIV USARMY CESAJ \(USA\)](#)  
**Subject:** [Non-DoD Source] SHPO: 12-27-18-01 RIO GRANDE DE MANATI, FEASIBILITY STUDY, CIALES, PUERTO RICO  
**Date:** Thursday, December 5, 2019 1:44:23 PM  
**Attachments:** [SHPO-12-27-18-01000.pdf](#)

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**GOBIERNO DE PUERTO RICO**  
**Oficina Estatal de Conservación Histórica**

Greetings!

Enclosed please find copy of letter issued by our office for the subject project.

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

**Solimar Resto Feliciano**

Asistente Administrativa  
Sub-delegada Compradora  
P.O. Box 9023935  
San Juan, P.R. 00902-3935  
T. (787) 721-3737  
F. (787) 721-3773





DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207-8915

Planning and Policy Division  
Environmental Branch

Mr. Carlos Rubio-Cancela  
State Historic Preservation Officer  
Office of the Governor  
P.O. Box 9023935  
San Juan, Puerto Rico 00902-3935

Re: Río Grande de Manatí Flood Risk Management Project, Guayanilla, Puerto Rico (SHPO  
No.: 12-27-18-01)

Dear Mr. Rubio-Cancela:

The U.S. Army Corps of Engineers, Pittsburgh District (Corps) is currently studying the feasibility and environmental effects of alternatives proposed to manage flooding risks associated with Río Grande de Manatí in Ciales, Puerto Rico. Heavy rainfall, the confluence of Río Grande de Manatí and Río Cialitos, and infrastructure located in the floodplain creates life safety and economic consequences in Ciales. The river reached flood stage 35 times in 50 years within the study area. The current study is evaluating an array alternatives that include a combination of levees, floodwalls, channel improvements, property buyouts, and bridge scour protection to reduce the risk of damages associated with flooding.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 USC 306108), and its implementing regulations (36 CFR Part 800), the Corps has determined that the Río Grande de Manatí Flood Risk Management Project in Ciales (Project) constitutes an undertaking as defined in 36 CFR 800.16(y). The Corps previously initiated consultation with your office on this Project by letter dated December 17, 2018. The feasibility study for the Project is ongoing, but a tentatively selected plan has been identified as depicted in Figure 1. As part of the continuation of consultation for the Project, the Corps has tentatively identified the area of potential effects (APE) for the undertaking to encompass all areas of proposed ground disturbance, including access, staging, and construction areas (Figure 1). The APE may be subject to further refinement as the study progresses.

The Corps currently proposes to develop a programmatic agreement with your office to comply with Section 106 of the NHPA for the feasibility study. The feasibility study was authorized under Section 204 of the River and Harbor and Flood Control Acts of 1970 (PL 91-611) and funded through Supplemental Appropriations in the Bipartisan Budget Act of 2018 (Public Law 115-123), reducing funding and schedule for completing of planning studies. Due to these timing and budgetary constraints, the Corps cannot conduct the necessary surveys to identify and evaluate cultural resources and determine effects of the Project prior to completing the appropriate National Environmental Policy Act (NEPA) documentation.

Therefore; pursuant to 54 U.S.C. 306108 and § 800.4(b)(2), the Corps is deferring final identification and evaluation of historic properties until after the Project is congressionally authorized, funding is appropriated, and prior to construction by executing a programmatic agreement with the SHPO and the ACHP, if inclined to participate. The programmatic agreement will outline the efforts and schedule for identifying historic properties, assessing the effects of proposed measures on historic properties, and avoiding, minimizing, and/or mitigating the effects of the measures on historic properties.

Pursuant to 36 CFR 800.4(1) the Corps kindly requests your comments on the proposed APE within 30 days from receipt of this letter. Pursuant to 36 CFR 800.14, the Corps is also seeking your concurrence for the Corps to comply with Section 106 of the NHPA for the Project by executing a Programmatic Agreement. A draft Programmatic Agreement will be developed by the Corps in consultation with your office upon receipt of any comments regarding the APE. If there are any questions, please contact Mr. Christopher Altes by telephone at 904-232-1694 or e-mail at Christopher.F.Altes@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Angela E. Dunn". The signature is fluid and cursive, with the first name being the most prominent.

Angela E. Dunn  
Chief, Environmental Branch

Enclosure

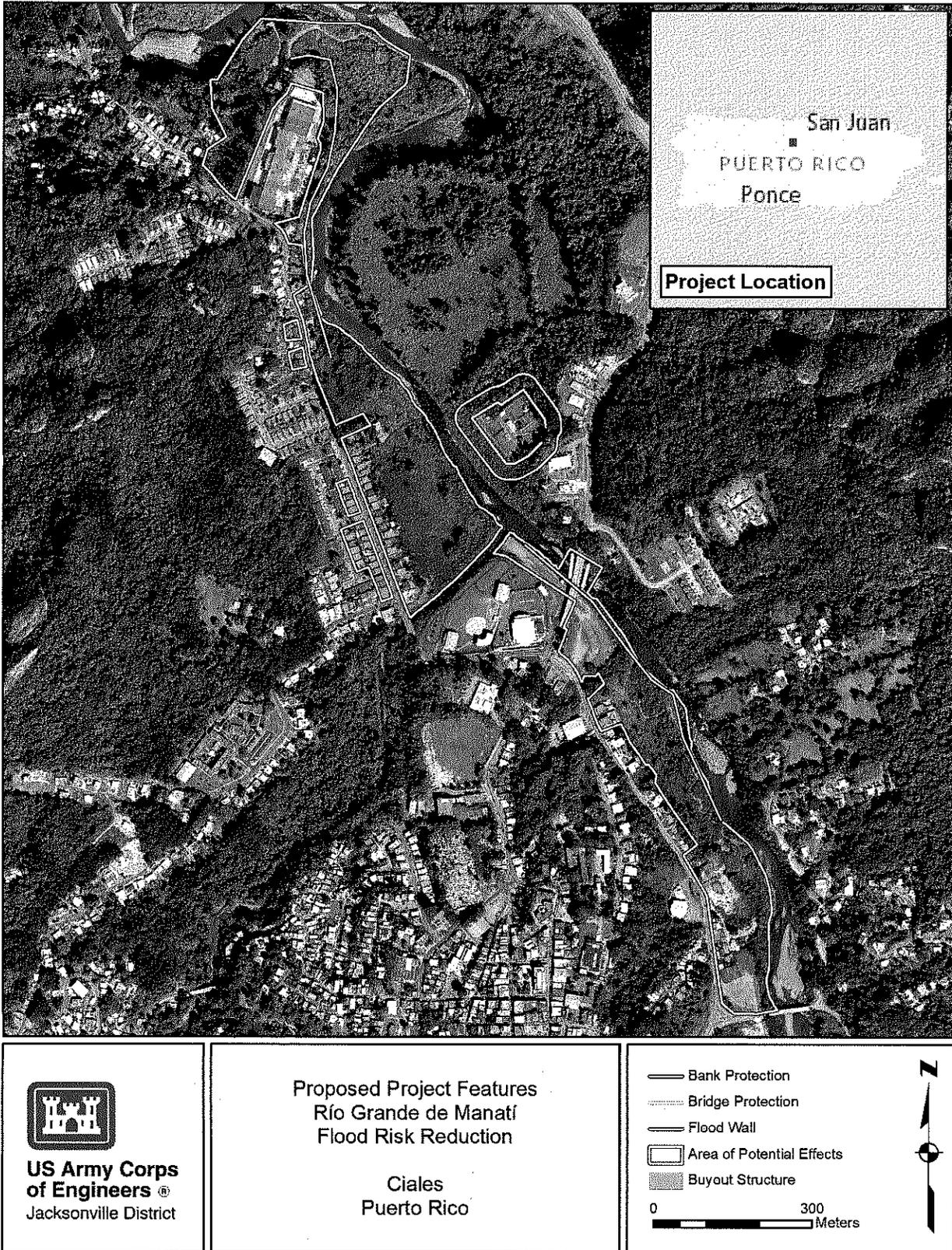


Figure 1. Features from the Tentatively Selected Plan and the proposed APE for the Río Grande de Manatí Flood Risk Management Project.



DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

REPLY TO  
ATTENTION OF

February 24, 2020

Environmental and Cultural Resources Section

Edwin E. Muñiz  
Field Supervisor  
Caribbean Ecological Services Field Office  
U.S. Fish and Wildlife Service  
P.O. Box 491  
Boqueron, PR 00622

Dear Mr. Muñiz,

Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Army Corps of Engineers, Pittsburgh District (Corps), respectfully requests informal consultation with the U.S. Fish and Wildlife Service (USFWS) for the Rio Grande de Manati Flood Risk Management Study in Ciales, Puerto Rico.

The purpose of the project is to reduce flood risk along the Rio Grande de Manati River and within the Municipality of Ciales. The Recommended Plan consists of the construction of approximately 2,400 feet of riprap bank protection built to the 25-year flood elevation or top of bank located in two separate locations. Approximately 400 feet of riprap will be placed upstream of the PR-149 bridge and approximately 2,000 feet of riprap will be placed downstream of the bridge. Riprap will also be placed around the bridge piers and abutments of the PR-149 bridge as scour protection. The Recommended Plan also includes the acquisition, demolition, and relocation of 58 private homes and businesses located within the 25-year floodplain.

The municipality of Ciales contains suitable habitat for the endangered Puerto Rican boa (*Chilabothrus* (formerly *Epicrates*) *inornatus*). Unavoidable impacts will occur along the streambanks of the Rio Grande de Manati River, within the river at the PR-149 bridge, and in surrounding floodplain and upland areas. To avoid and minimize impacts to the boa, the conservation measures for boas at construction sites, provided by your office in your letter dated 24 June 2019, will be implemented for the project.

The Corps has determined that the proposed project, with the impact minimization measures, may affect, but is not likely to adversely affect (MANLAA) the Puerto Rican boa.

Included with this letter is additional information for your review, as discussed between Erin Stuart and Felix Lopez of your office, describing the project background, project location, proposed action, potential effects to boas, and efforts to eliminate/avoid impacts.

As agreed to in the signed memorandum for record between the Corps and the USFWS (enclosed), the project NEPA review and ESA consultation processes will be used to complete coordination under the Fish and Wildlife Coordination Act. A copy of the draft integrated study report containing the Environmental Assessment is available for review on the Corps' website: <https://www.lrp.usace.army.mil/Missions/Rio-Grande-Manati-Ciales-PR-Feasibility-Study/>

The Corps respectfully requests that the USFWS provide a letter of concurrence to the Corps' MANLAA effect determination within 30 days of the receipt of this letter. If you have any questions, or need additional information, please contact Erin Stuart, at 412-395-7517, or by e-mail at [Erin.Stuart@usace.army.mil](mailto:Erin.Stuart@usace.army.mil). Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc A. Glowczewski". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Marc A. Glowczewski  
Chief, Planning and Environmental Branch

Enclosure

## **Rio Grande de Manati in Ciales, Puerto Rico Flood Risk Management Study**

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To comply with Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Army Corps of Engineers, Pittsburgh District (Corps), respectfully requests a letter of concurrence within 30 days of the receipt of this letter from the U.S. Fish and Wildlife Service (USFWS) on the Rio Grande de Manati, Ciales Puerto Rico Study. The Corps has determined that the proposed project may affect, but is not likely to adversely affect the Puerto Rican boa (*Chilabothrus inornatus*).

The Corps obtained a list of threatened and endangered species that may occur in the project area and/or may be affected by the proposed project using the Information for Planning and Consultation (IPAC) online system (04EC1000-2019-SLI-0266).

The Corps is providing the following information for your review:

- Project Description
- Project Location
- Recommended Plan
- Listed Species Under USFWS Jurisdiction
- Potential Effects to Listed Species and Efforts to Eliminate/Avoid Impacts; and
- Corps' Effect Determination

### **Project Description**

The Corps is in the process of analyzing alternatives for a feasibility study for a flood risk management project located within the Municipality of Ciales, Puerto Rico. This project, entitled the Rio Grande de Manati, PR (Ciales) Feasibility Study, is authorized under Supplemental Appropriations in the Bipartisan Budget Act of 2018 (Public Law 115-123). The sponsor for this project is the Puerto Rico Department of Natural and Environmental Resources, a government agency whose mission includes protecting, conserving, and managing the natural and environmental resources of Puerto Rico.

The purpose of the project is to reduce flood risk along the Rio Grande de Manati and within the affected communities of the City of Ciales, Residencial Dos Rios, Dos Rios, and Alturas De Ciales in the municipality of Ciales, Puerto Rico. United States Geological Survey data indicate the Rio Grande de Manati has reached flood stage 35 times in the past 50 years. During storm and flooding events, floodwaters inundate local roadways cutting off access to residents and posing increased risks to life and safety. Existing streambank erosion along the Rio Grande de Manati worsens during flood and storm events and flood damage to structures, industry and public infrastructure has occurred. Extensive socioeconomic impacts sustained during Hurricane Maria in 2017

led Puerto Rico to request Corps assistance to study and provide recommendations to reduce flood risk along the Rio Grande de Manati.

### Project Location

The Municipality of Ciales is located on the northern slopes of the Central Mountain Range, approximately 25 miles southwest of San Juan (Figure 1). Approximate coordinates in the center of the study area are 18.345784°N and -66.469817°W. The Rio Grande de Manati flows through the study area (Figure 2).

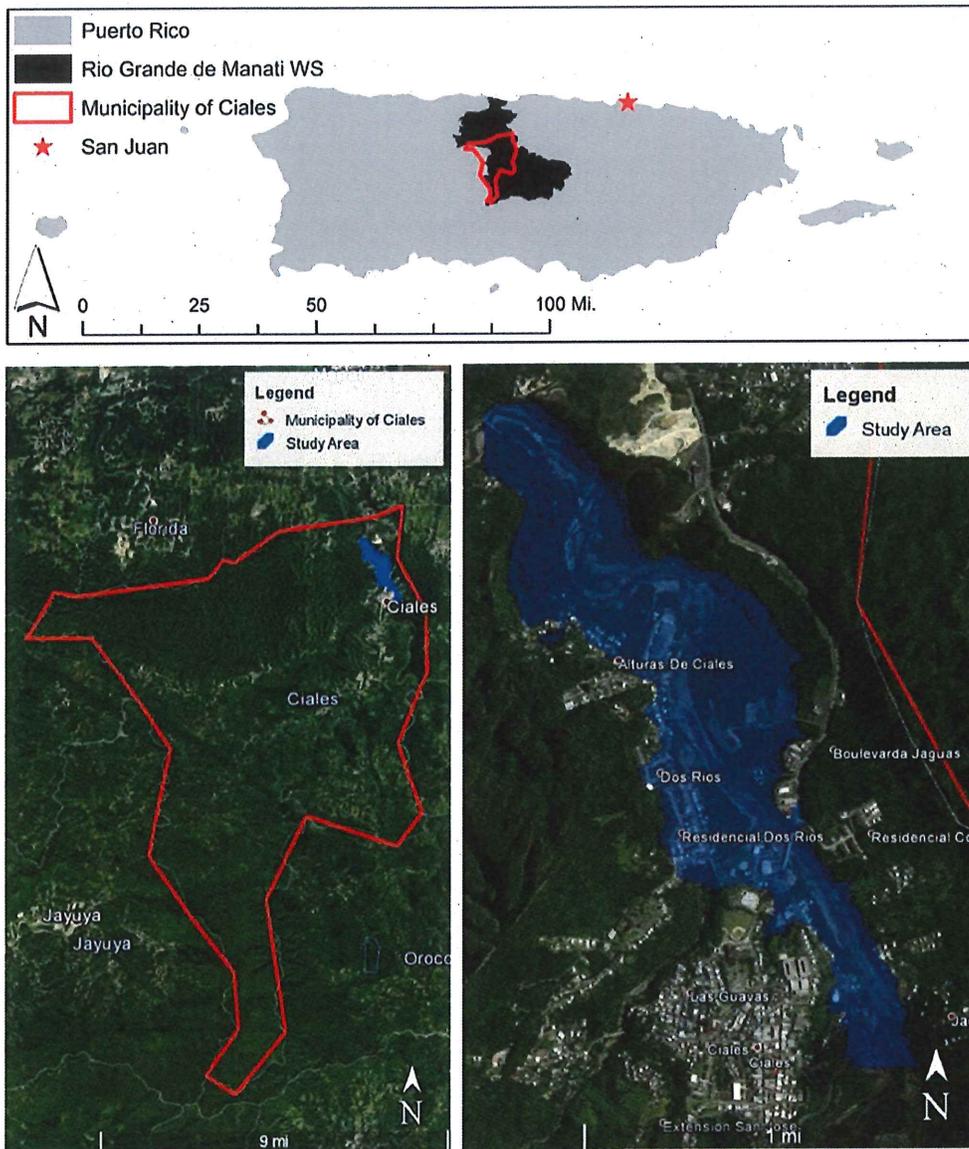


Figure 1. Location of the Rio Grande de Manati watershed, Municipality of Ciales, and study area within Puerto Rico. The Rio Grande de Manati flows northwest through the study area.



Figure 2. Rio Grande de Manati location within the study area.

### Recommended Plan

The Recommended Plan consists of the following construction: approximately 2,400 feet of riprap bank protection built to the 25-year flood elevation or top of bank located in two separate locations, approximately 400 feet of bank protection upstream of the PR-149 bridge and approximately 2,000 feet of bank protection downstream of the bridge; and the placement of riprap around the bridge piers and abutments of the PR-149 bridge as scour protection. Bridge scour protection will extend one pier-width (5 feet) upstream, seven pier-widths (35 feet) downstream, and 2 pier-widths (11 feet) on the sides of each pier with a depth of 6-feet. The Recommended Plan also includes the acquisition, demolition, and relocation of 58 private homes and businesses located within the 25-year floodplain (Figure 3).

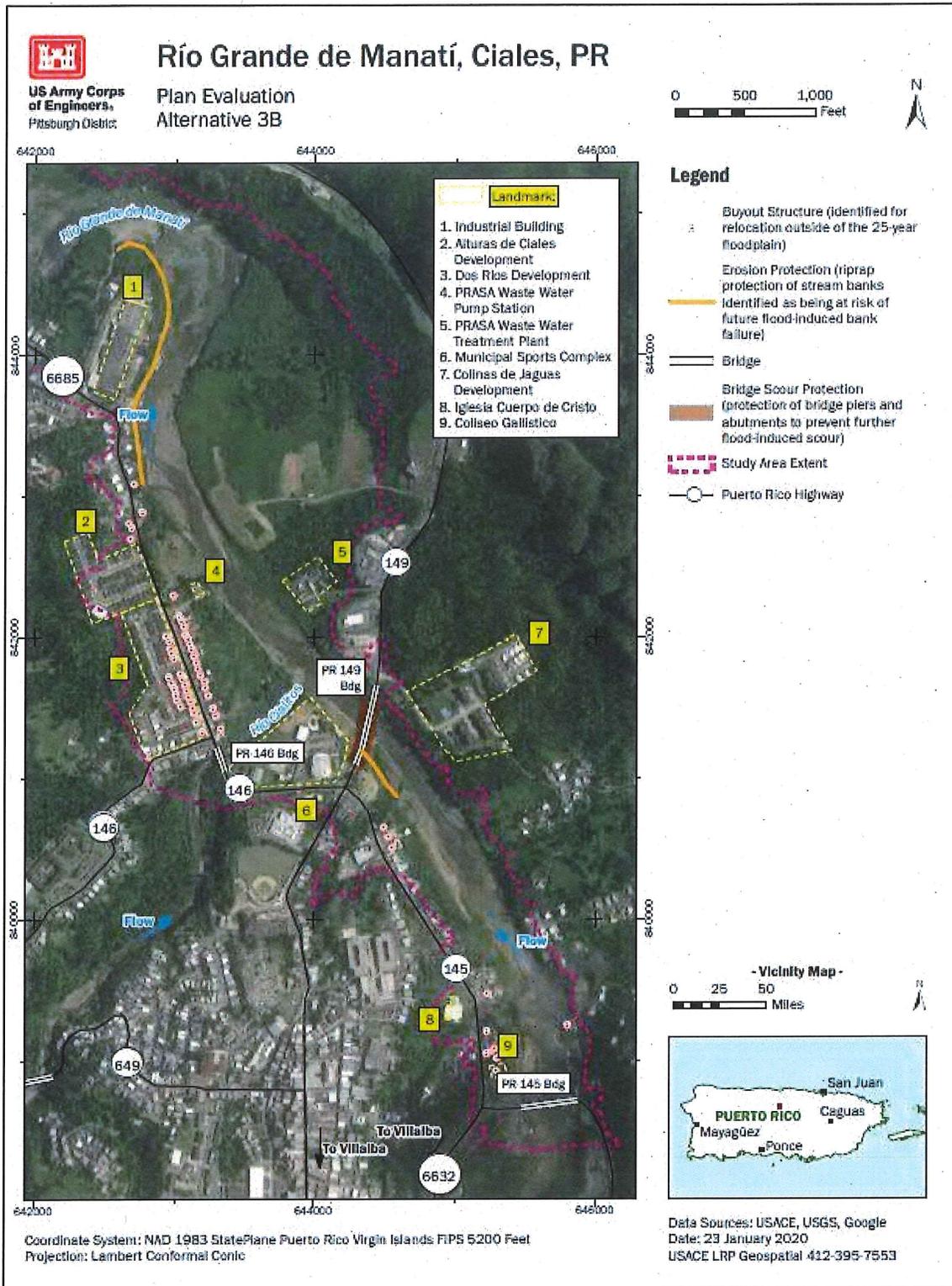


Figure 3. Plan showing proposed bank stabilization, bridge scour protection, and structures proposed for buyouts.

## Listed Species under USFWS Jurisdiction

Listed species which may occur in the vicinity of the proposed work and are under the jurisdiction of the USFWS include the endangered Puerto Rican boa (*Chilabothrus inornatus*). The Corps has determined the project may affect, but is not likely to adversely affect the boa. There is no critical habitat defined for this species in the project area.

### Corps' Analysis and Effect Determination on Listed Species under USFWS Jurisdiction:

#### Puerto Rican boa (*Chilabothrus inornatus*)

The Puerto Rican boa was listed as endangered in 1970 (35 FR 13519). The boa belongs to the family Boidae, and order Squamata. It is endemic to Puerto Rico and is the largest snake inhabiting the island reaching a length of up to seven feet. Its color and pattern markings are highly variable. Adult coloring can range from tan to dark brown, gray or black, while juveniles may be reddish brown in color with many markings. It is found in a variety of habitats at elevations between sea level and approximately 1300 feet, ranging from virgin forest to areas with high levels of human disturbance, and it can tolerate wet or dry forest habitats. It is most frequently found in northern Puerto Rico's karst areas. It is non-venomous and generally prefers to avoid humans, only biting if provoked. The boa is more active at night and may be found during the day hiding (including in machinery) or basking in the sun. Boas consume a variety of birds, small mammals and lizards.

Habitat loss and modification is the largest threat to the species. Karst formations are present near Ciales; however no impacts to these areas are proposed with this project. It is not expected that the proposed project will alter habitat currently occupied by the boa. The greatest potential for impact to the boa will likely occur during construction activities. To avoid and/or minimize impacts to the boa, general project design guidelines containing conservation measures and recommendations developed by the USFWS will be included in the plans and specifications and the contractor will be required to abide by them. The conservation measures to be implemented are as follows:

### CONSERVATION MEASURES FOR THE PUERTO RICAN BOA – USFWS

#### General Information:

The Endangered Puerto Rican boa (*Chilabothrus inornatus*) is an endemic species and it is the largest snake that inhabits the Puerto Rico Island Shelf. The color and pattern of

the Puerto Rican boa is highly variable. The species color can range from tan to dark brown with irregular diffuse marking on the dorsum but some individuals lack marking and are uniformly dark. Juveniles have reddish brown ground color with numerous pronounced markings. The Puerto Rican boa can be found in the habitat range from the sea level to about 400 m of elevation. The boa tolerates a wide variety of habitat types ranging from wet montane to subtropical dry forest and can be found from virgin forest to areas that exhibit various degrees of human disturbance like roadside or out buildings. Boas are more active at night, remaining less active concealed or basking in the sun during the day. The U.S. Fish and Wildlife Service (Federal Register October 13, 1970) listed the Puerto Rican boa (*Chilabothrus inornatus*) as endangered in 1970 and it is protected by the Endangered Species Act of 1973, as amended. Any person that injures, captures, or kills a Puerto Rican boa is subject to penalties under federal law of up to \$100,000, one year in prison or a combination of both.

#### Recommendations:

The U.S. Fish and Wildlife Service (hereafter the Service) has developed recommendations to avoid or minimize impacts on the boa during a project development in an area where the boa may occur. The recommendations are the following:

- A. Prior to any earth movements or vegetation clearing, the boundaries of the project area, the buffer areas and areas to be protected should be clearly marked in the project plan and in the field.
- B. A pre-construction meeting should be conducted to inform supervisors and employees about the conservation of protected species, as well as penalties for harassing or harming such species.
- C. Prior to any use of machinery on areas where the boa may occur, the vegetation should be cleared by hand to provide time to the boa, if present, to be detected or move away from the area. All personnel involved in site clearing must be informed of the potential presence of the snake, and the importance of protecting the snakes.
- D. Before activities commence each workday during the vegetation clearing phase, the experienced personal in identifying and searching for boas should survey the areas to be cleared that day, to ensure that no boas are present or affected within the work area. If boas are found within the working area, activities should stop at the area where the boas are found until the boas move out of the area on their own. Activities at other work sites, where no boas have been found after surveying the area, may continue. If relocation of the species is necessary, any relocated boas should be transferred by authorized personnel of the Department of Natural and Environmental Resources (DNER) to appropriate habitat close

to the project site. Any findings should be reported to the Service and to the DNER Ranger office so they can further assist you in developing sound conservation measures and specific recommendations to avoid, minimize and/or compensate for any impacts to this species.

E. Strict measures should be established to minimize boa casualties by motor vehicles or other equipment. Before operating or moving equipment and vehicles in staging areas near potential boa habitats (within 25 meters of potential boa habitat), these should be thoroughly inspected to ensure that no boas are lodged in the standing equipment or vehicles. If boas are found within vehicles or equipment, authorized personnel of DNER must be notified immediately for proper handling and relocation. Any relocated boas should be transferred to appropriate habitat close to the project site.



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Caribbean Ecological Services  
Field Office  
P.O. Box 491  
Boqueron, PR 00622

**FEB 28 2020**

In Reply Refer To:  
FWS/R4/CESFO/FC-043

Mr. Marc A. Glowczewski  
Chief, Planning and Environmental Branch  
Pittsburgh District Corps of Engineers  
William S. Moorhead Federal Bldg.  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

Re: Rio Grande de Manatí at Ciales Flood  
Control Study

Dear Mr. Glowczewski:

This is in reply to your February 24, 2020 email, requesting our review of the proposed alternatives for flood risk reduction of the Rio Grande de Manatí and the Municipality of Ciales. Our comments are provided as technical in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq. as amended).

The US Army Corps of Engineers (Corps) has been asked to reduce the flood risk along the Rio Grande de Manatí within the Municipality of Ciales. The Recommended Plan consists of the construction of approximately 2,400 feet of riprap bank protection built to the 25-year flood elevation or top of bank located in two separate locations. Approximately 400 feet of riprap will be placed upstream of the PR-149 bridge and approximately 2,000 feet of riprap will be placed downstream of the bridge. Riprap will also be placed around the bridge piers and abutments of the PR-149 bridge as scour protection. The Recommended Plan also includes the acquisition, demolition, and relocation of 58 private homes and businesses located within the 25-year floodplain.

The proposed alternative will have about 2,400 feet of rip-rap for scour protection. However the source of the stone for this rip-rap is not identified. Ciales is surrounded by karst geology and this habitat hosts numerous listed plant and animal species. If there were a need for a new rock quarry to provide the riprap stone, then additional consultation and site assessment would be required for the quarry site. If an existing quarry will be used, but that existing quarry needs to expand its footprint to accommodate the request, then the expansion area would have to be assessed for possible endangered species presence.

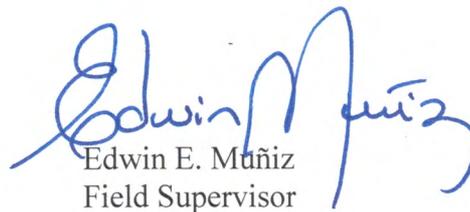
The project site harbors suitable habitat for the endangered Puerto Rican (PR) boa (*Chilabothrus* (formerly *Epicrates) inomatus*). Unavoidable impacts may occur along the streambanks of the Rio Grande de Manatí River, within the river at the PR-149 bridge, and in surrounding floodplain and upland areas.

To avoid and minimize impacts to the boa, the conservation measures for boas at construction sites, provided by the Service in our Planning Aid letter dated 24 June 2019, will be implemented for the project. The Corps has determined that the proposed project may affect, but is not likely to adversely affect the PR boa.

Based on the information provided, we concur with your determination that the proposed alternative may affect, but is not likely to adversely affect the PR boa. This concludes consultation under Section 7 of the Endangered Species Act. However, reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law when the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence. Or the authorized actions may affect newly listed species or designated critical habitat.

If you have any questions please contact Felix Lopez of my staff at 787-851-7297, extension 210 or via email at [felix\\_lopez@fws.gov](mailto:felix_lopez@fws.gov).

Sincerely yours,



Edwin E. Muñiz  
Field Supervisor

cc:

DNER, San Juan

COE, San Juan

EPA, San Juan

## PUBLIC COMMENTS AND RESPONSES

Summary of public comments received during public notice period for the Rio Grande de Manati feasibility study.

Commenter	Comment <i>(All translated from Spanish)</i>	Response
Ricardo M. Rodriguez	<p>Para La Naturaleza completed a scientific study under the Scientific Citizen Program. The themes of the investigations were: archaeology, invertebrates in the river, bats, birds, native trees and a cost study associated to the hydrology of the Rio Grande de Manati. The information is available at <a href="http://www.ciudadanocientifico.org">www.ciudadanocientifico.org</a> or I can email it to you. Mid and long range studies indicate that reforestation with native trees in the highest part of the shoreline will minimize significantly the velocity, quantity of water and mud (sedimentation) during heavy rain events. Create alliances for reforestation.</p>	<p>Noted. Thank you for your comment.</p>
Anonymous	<p>In the cost benefit analysis: Who is paying for that? Who are the beneficiaries? Are the numbers (\$) visible to the public?</p>	<p>Thank you for your comment. The project costs would be cost shared between the Federal Government (65%) and the PR Department of Natural and Environmental Resources as the local sponsor (35%). The benefits reflect projected decreases in flood damages to homes and businesses included in the acquisition and relocation program. A summary of the costs and benefits, as well as the details on the economic analyses will be included in the final report and, thus, will be publically available.</p>
Margarita Bermudez Ortega	<p>I support the Alternative 3 relocation project.</p>	<p>Thank you for your comment.</p>

<p>Ray A. Huertas Padilla</p>	<p>Which natural alternatives are available? You are not considering that an archaeological site has been identified in the river, it is known as the [redacted]. Is of importance that a phase I and II be completed to identify potential impacts. Contact ICP and SHPO. We must consider the climatic change on nearby archaeological sites. A decision should not be made before taking in consideration the changes that may occur to the area.</p>	<p>Thank you for your comment. The Corps and SHPO have developed a Programmatic Agreement for compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended); this agreement document outlines the steps the Corps will take in the Preconstruction, Engineering, and Design phase to identify historic properties, assess any adverse effects to historic properties, and take steps to avoid, minimize, and mitigate any adverse effects to historic properties. The Corps considers the effects of the project alternatives and the recommended plan on climate change.</p> <p>Note: The Corps does not publish sensitive cultural resources information. The name of the archaeological site was redacted.</p>
<p>Jobel Villafañe</p>	<p>What is the duration on this structure? I am referring to the normal condition of the river and extreme flooding. Have you consider reestablishing area where the structures are as they used to be endemic forests? I hope you are considering climatic and environmental parameters at long range!</p>	<p>Thank you for your comment. The Corps reviewed a number of alternatives that are detailed in the feasibility study report. As part of the analysis, short and long term environmental impacts of the alternatives and the recommended plan are considered, along with the effects of the alternatives and recommended plan on climate change.</p>
<p>Nestor Miranda</p>	<p>If this proposal is supposed to be approved in October what is delaying the relocations and how will properties be appraised before and after a hurricane?</p>	<p>Thank you for your comment. Once this feasibility study is complete, a report will be sent to the United States Congress to determine if and when the recommended plan will be funded for implementation. There is no guarantee as to if or when the recommended plan will be funded by Congress for implementation. If the project is funded, the timeline for completion of the acquisitions and relocations is at least 36 months. That timeline incorporates time to identify and close on replacement housing for 57 properties, as well as the time to move all 57 occupants to their new housing.</p>
<p>Anonymous</p>	<p>We need information more often, example every 6 months. As individuals emotionally we are not doing well. It's been a year and this is the same, we don't see a difference. We need something for sure now.</p>	<p>Thank you for your comment. The Corps will provide periodic updates to the local sponsor and community.</p>

<p>Noriliz Rivera Gonzales</p>	<p>You are channeling the river, how long does it take? I support your decision.</p>	<p>Thank you for your comment. The recommended plan will consist of structure buyouts only. The bank stabilization will no longer be part of the recommended plan.</p>
<p>Ana M. Santiago</p>	<p>You are mentioning erosion, but there is a lot of extraction of sand in the river. This exacerbates the flooding. Are you doing something about this? How will the relocations of private residences happen? Will the residents have to invest?</p>	<p>Thank you for your comments. The Corps does not control activities, such as the sand extraction, occurring within the study area.</p> <p>The relocation program is set up in such a way that the resident does not have to invest. A relocation counselor would work with all residents and business owners to identify comparable replacement housing or commercial property that meet their individual needs and desires. All replacement housing must be decent, safe, and sanitary and functionally equivalent to the residents' present dwelling. Replacement housing can be located within or outside of the community from which the resident is being relocated. All residents would have the freedom of choice in the selection of a replacement home or commercial property. Residents would be given fair market value for their property and may qualify for supplemental payments to offset differences in cost between the acquired and identified comparable replacement properties, as well as any increase in mortgage interest. Residents occupying rental properties would be relocated to a comparable rental property. Any price difference in rent between the acquired and comparable rental properties would be multiplied by 42 and given to the renter as one lump sum payment. Relocation benefits include reimbursement of moving costs and expenses.</p>