

nr667

# National Register of Historic Places Registration Form

## 1. Name of Property

Historic name Vivero de Peces de Maricao  
Other names/site number Fish Hatchery, Criadero de Peces, Criadero Insular de Peces  
Name of related multiple property listing New Deal Era Constructions in the Forest Reserves of Puerto Rico 1933-1942 (AMENDMENT)  
(Enter "N/A" if property is not part of a multiple property listing)

## 2. Location

Street & Number SR-401, Km 1.7, Maricao Afuera Ward  
City or town Maricao State Puerto Rico County Maricao  
Not for publication  Vicinity

## 3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  nomination  request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property  meets  does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:  national  statewide  local

Applicable National Register Criteria:  A  B  C  D

*Cariangeli Leon Moraza*  
Cariangeli Leon Moraza, Esq., SHPO

12/30/2016

Signature of certifying official/Title:

Date

Puerto Rico State Historic Preservation Office

State or Federal agency/bureau or Tribal Government

In my opinion, the property  meets  does not meet the National Register criteria.

Signature of Commenting Official

Date

Title

State of Federal agency/bureau or Tribal Government

## 4. National Park Service Certification

I, hereby, certify that this property is:

- entered in the National Register.
- determined eligible for the National Register.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain):

*Joe Salts*  
Signature of Keeper

2-21-2017  
Date of Action

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**5. Classification**

**Ownership of Property** (Check as many boxes as apply)

- Private
- Public-local
- Public-state
- Public-federal

**Category of Property** (Check only **one** box)

- Building(s)
- District
- Site
- Structure
- Object

**Number of Resources within Property** (Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1	5	Buildings
0	0	Sites
16	5	Structures
1	0	Objects
18	10	Total

Number of contributing resources previously listed in the National Register N/A

**6. Function or Use**

**Historic Functions** (Enter categories from instructions.)

Agriculture/ fishing facility  
 Education/research facility  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Current Functions** (Enter categories from instructions.)

Agriculture/ fishing facility  
 Education/research facility  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**7. Description**

**Architectural Classification** (Enter categories from instructions.)

No Style  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Materials** (enter categories from instructions.)

Principal exterior materials of the property: Stone and Concrete

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## Description

**Summary Paragraph** (Briefly describe the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

The *Vivero de Peces de Maricao* is a 3.32 acre fish hatchery district located at kilometer 1.7 of PR-410 in the Maricao Afuera Ward. The property lies approximately 1.2 kilometers to the southwest of the Maricao urban area. The fish hatchery, part of the Maricao State Forest, was established on three segments of land along the meander of the Maricao River enclosed by heavily forested Hills. The *Vivero de Peces de Maricao* includes the approximately 4.0 acres of the original insular fish hatchery developed by Civilian Conservation Corps from 1937-1942 for the Insular Forest Service. The district is made up of six buildings (administration, laboratories, storage and rest rooms), twenty-two structures (spawning ponds, holding tanks, grow-out ponds, parking) and one object (marker). The resources were built using stone and concrete as construction materials. After its opening on January 1938, the *Vivero de Peces de Maricao* has been in continued use as a fish hatchery. In 1940, The Government of Puerto Rico added 2.75 acres to the fish hatchery. By 1942, the fish hatchery was expanded and the construction of four large grow-out ponds for breeding fish and sixteen smaller ponds for breeding of crustacean was completed. At a later date, another grow-out pond was added in the northern segment, west of the original ponds. In 1998/2000, constructions were undertaken in the fish hatchery to repair damages caused by the Hurricane Georges and increase fish production. In this period three original grow-ponds were redesigned and two new grow-out ponds, restroom building, storage building, gabions, and one concrete bridge were built. At a later date, a visitor parking was built on a lot across the Maricao River. This visitors parking is not included within the district's boundaries. Today the property is administered by the Puerto Rico Department of Natural and Environmental Resources. This district retains integrity of location, setting, workmanship, materials, feeling and association.

**Narrative Description** (Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable.)

The *Vivero de Peces de Maricao* (Fish Hatchery of Maricao) is an insular fish hatchery, at an elevation of 457.2 meters (1,500 feet) above sea level, located along the Maricao River basin approximately 1.2 kilometers southwest of the town of Maricao. The *Vivero de Peces de Maricao* is made up of three segments north and south of the Maricao River and a dam located up stream (to the West). The insular fish hatchery is reached by travelling southwest from the town on State Road PR-410 until reaching a gate on kilometer 1.7. This gate gives access to the fish Hatchery's Visitors Parking that is located in a low and flat area north of the Maricao River.

On the southwest corner of the Visitors Parking, a small concrete bridge crosses the Maricao River reaching the main southern area of the *Vivero de Peces de Maricao*. The main area is located in narrow a strip of land south of the Maricao River and north of hills. This area has twenty-two of the twenty-eight resources of this district: five buildings (Restroom, Administration building, Quarantine Lab, Temperature & Photoperiod Lab and Nursery), sixteen structures (stairway, water channels, old storm water aqueduct, one ornamental pond, three oval spawning ponds, one raceway tanks, three nursery tanks or gazebos, three holding tanks, one large oval grow-out pond and two bridges), and one object

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(marker). The fish hatchery has a system of sluices and channels that move water by gravity to all ponds and tanks, not having to depend on an external piped water supply. It takes in water from a dam (built in the 1998-2000 expansion) located upstream at the Maricao River which passes through the property.

The entrance of the main area is identified by a pedestal with two shield shaped entrance signs to the south of the eastern bridge that reads: *Departamento Servicio Forestal, PR, Entrada Bosque Insular de Maricao* (Department of Insular Forest Entrance to Insular Forest of Maricao). A service road splits in two – one segment to the east leading to the small public restrooms building and a grow-out pond, and another leading to a second bridge upriver to the west.

In the eastern segment, an ornamental block fence that runs south from the chain link fence in the north serves as a border for the grow-out pond (CC1), see figure 1. The fence opens in two places: in the center to provide access to the pond’s western pier and in south to the restroom building.

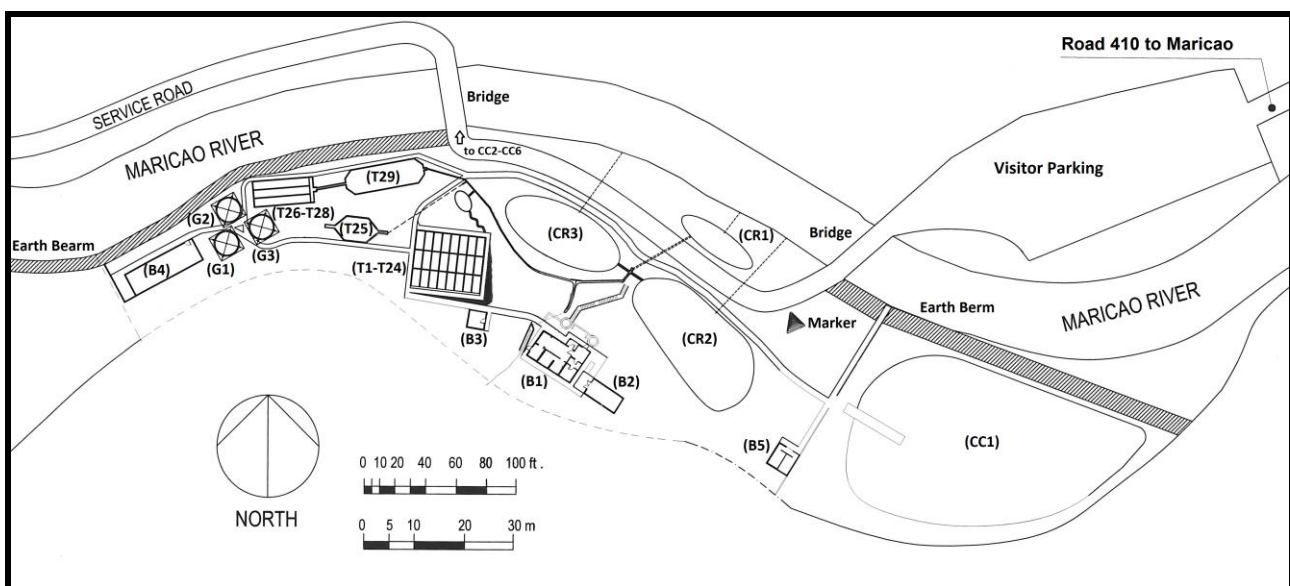


Figure 1. Drawing showing the southern segment of the Maricao Fish Hatchery. Prepared by Jorge Ortiz Colom in July 2015 for Cafiesencia. Modified by PRSHPO in 2016.

The restroom building is a front gabled one story concrete edifice with separate bathroom facilities for men and women. The grow-out pond is oval shaped and is the largest structure in the southern area. This pond has two small piers (east and west) and is delimited to the north by a chain link fence and enclosed in the south by a concrete fence built at the base of a Hill.

A concrete sidewalk, starting in front of the restroom building, progresses westward the central and western segments of the main area. In the central segment, the sidewalk and service road run parallel crossing north of various structures (spawning ponds CR2 & CR3, water channel, storm water drainage and a concrete stairway) and south of the spawning pond (CR1).

As the service road progresses westward, the ground slopes slightly when passing the second largest spawning pond (CR3) close to the western bridge’s landing. Visually, this landing and the northern section seems to be at the same height as the raceway tank (T1-T24). A grass covered artificial earthen

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mound was built along the northern area beyond this bridge landing, running parallel to the river bed, to protect two holding tanks (T29 and T26-28) and the gazebos (G1-G3) against flood waters. Near the gazebos, a one story, rectangular concrete building is used as the hatchery's nursery. This bridge leads to the northern section of the fish hatchery.

Moving eastward, on the sidewalk from the nursery building is the holding tank (T25) and raceway tank (T1-T24) found in a slightly elevated area. Prior to reaching the raceway tank the sidewalk forks: one route turning east toward the laboratories and the administration building; the other one turning north connecting with the original sidewalk.

Ascending on this sidewalk, to the south and east of the raceway tank, is a small square concrete building used as Temperature and Photoperiod Lab (B3). The sidewalk further slopes until reaching a level area where the Administration Building (B1) and the Quarantine Lab (B2) are located. This area is the highest point of the fish hatchery.

The Administration building was built of reinforced concrete walls with perforated openings for doors and windows. Wherever beams were used, they were of the haunched type<sup>1</sup> (Spanish *vigas acarteladas*) demonstrating a very conservative view of the structural possibilities and freedom of concrete construction. This building has a flat concrete roof with parapets. A roof extends east covering the open space between the Administration and the Quarantine Lab. This lab is one story, concrete, flat roof building with a rectangular plan.

A concrete stairway was built after the 1970s in level area facing the Administration building's northern façade. This stairway descends until reaching a small grassy open area between two spawning ponds (CR2 and CR3). Close to the stairway, on its western side, is an original (1938) storm drainage system, today partially covered by the roots of a tree and vegetation, which are still in use. Behind both buildings a concrete drain runs towards a channel which collects storm waters.

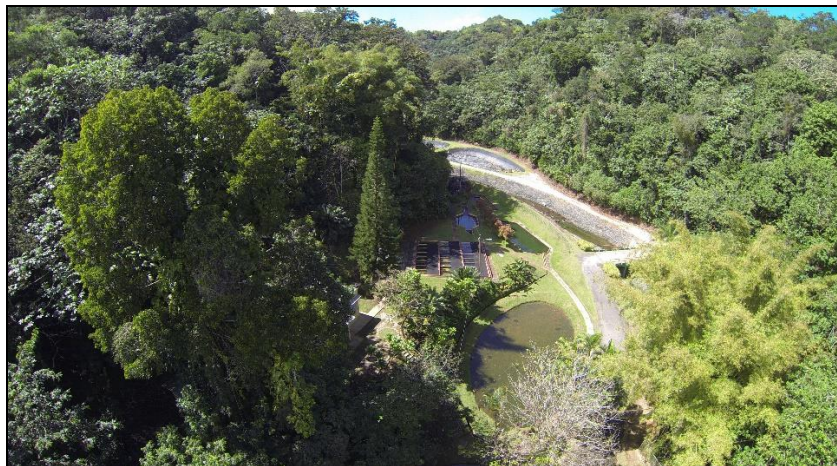


Figure 2. Aerial view that shows the road, spawning, holding tanks, concrete bridge and one of the grow-out pond.

<sup>1</sup> It means that the beam widens in an angle shortly before reaching the supports. The triangular widening is usually called the "haunch". This detail was widely used in early concrete work in Europe and America.

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### Ponds, tanks and water channels

The fish ponds have geometric shapes: rectangles, chamfered rectangles (lozenges) and ovals. Only the larger pond (CC1) in the southern area shows some kind of organic form as the 30.5-meter-long (100-foot-long) oval tends to be somewhat irregular, in part defined by the contour of the hill to the south. The organization of the ponds and tanks is basically determined by the functional needs of the facility: breeding takes place in the smaller tanks upstream and finally fingerlings are placed in the three larger, excavated-in-the-earth ponds downstream. Sluices and ditches are arranged for the effective use of water collected by the upstream dam and this water descends by gravity and usually on the surface. This way, the fundamental role of fresh water in the hatchery operations is emphasized.

At strategic points where the ditches join, metal gates are manipulated to selectively move water to specific ponds and tanks. Over this network of water channels, there is superimposed another of mostly concrete sidewalks that communicate between ponds, tanks and buildings. Steps and ramps are used liberally considering the inclines of the terrain. The main building – caretaker’s lodgings and office – has a commanding view of the whole installation.

In terms of earth movement, the hatchery was graded to form the level surfaces in which the fishponds were established, and provide adequate level changes to facilitate the movement of water that was dammed upstream in the Maricao River. Grass was liberally used to landscape the spaces between the ponds and buildings in the Hatchery.

### Landscaping

The landscaping treatment in the fish hatchery is conceived as a “soft” landscape that, although fully designed, changes angles with the vistas to the river, trying hard to look more like a timeless, organically evolved-one of the continuing type.<sup>2</sup> Local and exotic vegetation is used quite liberally for esthetic effect. Some details like the zigzag sluice and another stepped one go past the hatchery’s only ornamental pond. They were contrived for a “romantic” image and as an attempt to break up the rigidity of the utilitarian, “functionally” designed concrete tanks. The “primeval”, surrounding forest and the strategic location of the entry to the hatchery at a point where the river bends and the mountains close in, gives a sense of enclosure and detachment to the Hatchery, which is expressed as a secluded, Shangri-La type enclave, where nature is hegemonic.

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<sup>2</sup> This analysis is based on the categories originally developed by various landscape experts and cultural geographers such as Carl O. Sauer, and the terms used here derive from those adopted by the United Nations’ Educational, Scientific and Cultural Organization (UNESCO) in their classification of World Heritage Landscapes, in turn also adopted by the NPS in their Cultural Landscape Preservation documentation.



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Figure 3. Vivero de Peces Maricao district boundaries that include northern and southern segments.

The hatchery's other five large oval shaped grow-out ponds and the equipment building are located on a strip of land on the north of the Maricao River. Access to this area is by way of a concrete second bridge. Two service roads serve to encompass the grow-out ponds and join where equipment storage building is located. Between these grow-out ponds, there are service roads that are used for maintenance of these structures. The equipment building is a large one story, rectangular concrete construction used for equipment and supplies.

## CONTRIBUTING RESOURCES

### Entrance Bridge (Contributing)

This small concrete vehicular beam one spans bridge crosses the Maricao River and serves as the main access to the fish hatchery. The Civilian Conservation Corps completed its construction by 1938.



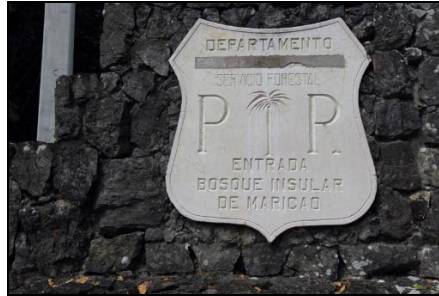
Pictures 1 and 2. View of the Visitors Parking, as seen from the Hatchery and photo of the old bridge taken from the Maricao river basin.

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Entrance Insular Forest of Maricao – Pedestal [Marker] (Contributing)

A historic object located close to the entrance bridge. This 1938 stepped pedestal with stone facing has two stone shield plaques identifying the entrance to the facility. These signs are mounted two sides of the pedestal, facing northeast towards the bridge entrance and west toward the service roadway.



Pictures 3, 4 and 5. View of the pedestal at the entrance to the facility, close up of its plaque and photo that shows the pedestal location in relation to the hatchery's service roadway.

Charca de Reproducción # 1 [CR1] (Contributing)

An oval shaped, shallow, dirt floor, spawning pool built by the Civilian Conservation Corps in 1937-1938. This pool is located north of the fish hatchery's service road. Bluegills are bred in this spawning pool.



Picture 6. View of spawning pool CR1. This is the smallest pools in the hatchery.



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Charca de Reproducción #2 [CR2] (Contributing)

An oval shaped, shallow, dirt floor, spawning pool built by the Civilian Conservation Corps in 1937-1938. This pool, located south of the service road, is the largest of the three spawning pools built for the fish hatchery. Tilapias are bred in this pond.



Picture 7. Spawning Pool CR2 with restroom building in background (to the right).

Water Channels (Contributing)

This system of channels that connects the ponds and tanks in the southern segment of the district is part of the original system designed for the fish hatchery in 1937-1938. Later in 1998/2000 it was affected by the intervention. However, it seems that the concrete water ways and sluice system connecting the spawning pools and holding tanks (CR1, CR3, T1-24, T29, T25, T26-28, G1, G2 and G3) conforms to original design and retains integrity.



Pictures 8, 9, and 10. Showing the waterways and their sluiceways in ponds.

Charca de Reproducción # 3 [CR3] (Contributing)

This structure, known as *Charca de Reproducción 3*, was one of two original spawning ponds built in 1937-1938 by the Civilian Conservation Corps. This spawning pond has dirt floor, which is better suited than concrete surface, for egg laying by the fish. Bass are bred in this pond.

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Pictures 11 and 12. View of the pool (CR3) is undergoing its weekly maintenance. First photo looking approximately west. Second photo looking approximately east.

Tanque # 1-24 [T1-24] (Contributing)

Tank 1 through Tank 24, also known as fish battery, built by 1937-1938 by the Civilian Conservation Corps. It is made up of 24 pools in which water is fed through gravity.



Pictures 13 and 14. General view of the old fish battery (T1-T24) and a close up of one of the pools.

Tanque #29 [T29] (Contributing)

This chamfered rectangle shaped holding tank was constructed in 1937-1938 by the CCC.



Picture 15 and 16. First photo shows part of water channel holding tank (T29) in the foreground. Second photo is taken from sidewalk to the left of the holding tank looking west, while in the background T26-T28 and Gazebo 2.



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Tanque #26 - 28 [T26 – T28] (Contributing)

This retention tank is rectangular shaped and is divided into three long pools. This tank currently is used for the “tilapia” production. Built in 1937-38 by the CCC.



Picture 17. View of the retention tank’s (T26-T28) three pools. Photo taken from the Gazebo area looking east.

Gazebo 1 [G1], Gazebo 2 [G2] and Gazebo 3 [G3] (Contributing)

The Gazebo was previously used as a 1938 circular tank, with diameter of 6.096 meters, which used to have a rotating mechanism that provide exercise for the small fishes. Today the circular tank has been modified to house seven large blue colored plastic drums. They are presently experimentation tanks used by the nursery.



Pictures 18 and 19. First photo is taken from retention tanks (T26-T28) looking southwest.  
The second photo shows Gazebo 2 (G2) looking east.

Tanque #25 [T25](Contributing)

This “guitar” shaped concrete holding tank, measuring 18.288 meters long by 6.096 meters wide, is used today as a retention tank for large fishes. This structure was built by the CCC in 1937-1938. The structure suffered minor damage when a tree fell on its western end (see Picture 21).

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Pictures 20 and 21. First photo of the holding tank (T25) looking east, while second photo shows the damaged area.

Hatchery Office [B1] (Contributing)

The Hatchery Office, known also as Administrator building, serves as the fish hatchery's administrators and staff residential facility. The original building, one story concrete flat roof, dates from the 1937-1938. Although changes have been made to the building, like closing windows on its main facade, the property retains the original volume and floor plan.



Pictures 22 and 23. The first photo is of the Hatchery Office in the elevated area south of a spawning pond (CR3) and the second view shows the building main facade taken from the stairway looking southwest.

Charca de Crianza #2 [CC2] (Contributing)

A grow-out pond, measuring approximately 1,406 square meters (15,134 square feet), is located to the east of CC3 and west of three-span concrete bridge. This grow-out pond is located in the northern sector of the fish hatchery. The structure was originally built in 1940-1941 by the Civilian Conservation Corps as part of the expansion of the fish hatchery. It was modified by the Government of Puerto Rico in 1998/2000 intervention.



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Pictures 24 and 25. First photo of grow-out pond #2 (CC2) looking southeast with Nursery, Gazebo area and concrete bridge in the back ground. In the second photo shows the pond in foreground, looking northeast.

*Charca de Crianza #3 [CC3] (Contributing)*

A grow-out pond, measuring approximately 1,509 square meters (16,238 square feet), located in the northern sector of the fish hatchery. This structure was originally built in 1940-1941 by the Civilian Conservation Corps as part of the expansion of the fish hatchery. The structure was modified by the Government of Puerto Rico in 1998/2000 intervention.



Picture 26. View of the grow-out pond #3 (CC3) looking southwest.

*Charca de Crianza #4 [CC4] (Contributing)*

This is the largest grow-out pond in the hatchery. This pond, measuring approximately 2,400 square meters (25,829 square feet), is located between CC3 (east) and CC5 (west) in the northern sector of the fish hatchery. This structure was originally built in 1940-1941 by the Civilian Conservation Corps as part of the expansion of the fish hatchery. The structure was modified by the Government of Puerto Rico in 1998/2000 intervention.

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Picture 27, 28 and 29. Views of the grow-out pond #4 (CC4) emptied for routine maintenance. The photos were taken from the interior service road, close up of its fish kettle and from the exterior service road (close to the river bed).

Charca de Crianza #5 [CC5] (Contributing)

A grow-out pond, measuring approximately 1,449 square meters (15,594 square feet), located between CC4 (east) and CC6 (west) in the northern sector of the fish hatchery. This structure was originally built in 1940-1941 by the Civilian Conservation Corps as part of the expansion of the fish hatchery. The structure was modified by the Government of Puerto Rico in 1998/2000 intervention. However, although its shape might have been altered, it continues to serve in its historic function.



Picture 30. View of the grow-out pond #5 looking northwest. In the background are grow-out pond #6 and the Equipment building.

**NON- CONTRIBUTING RESOURCES**

Charca de Crianza #1 [CC1] (Non-Contributing)

A large, about eight feet deep, grow-out pond, that measures 925 square meters (9,959 square feet), located at the east end of the southern area of the fish hatchery. This grow-out pond was built by the Department of Natural and Environmental Resources at an unknown date prior to 1996. The structure surface is covered in an impermeable membrane and is controlled from its fish kettle. Currently bluegills are bred in this grow-out pond.

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Pictures 31 and 32. Grow-out pond CC1. First picture looking west, while second picture looking east.  
Restroom building in the background to the left of the CC1 (Picture 31).

Restrooms [B5] (Non-Contributing)

A one floor concrete rectangular plan with a small two room public bathroom built in the 1970s to accommodate influx of visitors to the fish hatchery.

Staircase (Non-Contributing)

A concrete staircase built to provide access to the administration area from the spawning pool (hatching office) area. This stairway, made up of 30 steps, was probably built as part of a recent construction.



Pictures 33. Concrete stairway and spawning pool CR3 with Administration building in the foreground a top of the hill.

Ornamental Pond (Non-Contributing)

The small ornamental pond located close to the sidewalk junction, leading to the runway tanks, is an oval shaped structure that serves exclusively as a decorative function. There is no known date of its construction.



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Picture 34. Ornamental pond just above the sidewalk. The holding tank T1-T24 can be seen in the background.

Nursery Building [B4] (Non-Contributing)

This nursery is a concrete, front gabled rectangular plan one story building. This building is where the fish eggs, on spawning mats from the spawning ponds, are kept until the larvae hatch. It has a system of fishbowls that run the length of the building. The nursery is also used as a research laboratory. The hatchery's original wooden edifice was replaced at an unknown date by the current concrete building.



Pictures 35 and 36. Exterior and interior view of the Nursery Building.

Temperature and Photoperiod Lab [B3] (Non-Contributing)

The small one story building, close to the old raceway tanks and the administration building, is used in part for the scientific research conducted in the fish hatchery. The building was built at an unknown date. In the 1960s a one story wooden building was located in this area.



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Pictures 37 and 38. View of the Temperature and Photoperiod Lab located on an incline close to the Hatchery Office. The first view, looking east shows the T1-T24 pond to the left, the lab and the Hatchery Office to the right. The second photo shows the laboratory looking northwest.

Quarantine Lab [B2] (Non-Contributing)

The Quarantine Lab is a one story, rectangular plan concrete building built at an unknown date. The facilities are joined to the administration building by a wooden roof. The building is used for diseased fish, to prevent the spread of contagion among the fish population. There are fish tanks (from 6-8) that run with their own water filtration system.



Picture 39. View of the Quarantine Lab looking southeast.

Bridge over the Maricao River – upriver (Non-Contributing)

The three span concrete bridge was built as part of the 1998/2000 improvements to the hatchery. This structure was designed, with the capacity to withstand one hundred year flooding, by Engineer Casiano Ancalloe, for the Department of Natural and Environmental Resources. The original 1941 bridge was destroyed in the 1998 flooding.

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Picture 40. Three span concrete bridge over the Maricao River.

Charca de Crianza #6 [CC6] (Non-Contributing)

A grow-out pond, measuring approximately 1,382 square meters (14,877 square feet), located between CC5 (east) and the Equipment Building (west) in the northern sector of the fish hatchery. This structure was built at an unknown date.



Picture 41 and 42. View of the grow-out pond #6 looking southeast (#41) and looking northwest (#42). In the first picture has a close up view of the impermeable membrane used to cover the bottom and sides of the pond. In the background of second picture is the Equipment Storage Building.

Equipment Storage Building [#14] (Non-Contributing)

The one story rectangular concrete building was built by the Department of Natural and Environmental Resources as the improvements to the fish hatchery in the 1998/2000 intervention. Currently there is an intervention underway for reuse.

Integrity of the property

The original resources in the southern part of the district have, with the exception of the gazebo and nursery, retained a high level of integrity of location, design, setting, materials, workmanship, feeling and association. In the northern area, modifications have been made to the original four grow-out ponds. However, these ponds have continued its historic function as part of the fish hatchery.

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**8. Statement of Significance**

**Applicable National Register Criteria**

(Mark "X" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield information important in prehistory or history.

**Criteria Considerations**

(Mark "X" in all the boxes that apply.)

Property is:

- A** Owned by a religious institution or used for religious purposes.
- B** Removed from its original location.
- C** A birthplace or a grave.
- D** A cemetery.  
A reconstructed building, object, or structure.
- E** structure.
- F** A commemorative property.
- G** Less than 50 years of age or achieved significance within the past 50 years.

**Areas of Significance**

(Enter categories from instructions.)

Entertainment/Recreation

**Period of Significance**

1938-1966

**Significant Dates**

1938, 1942

**Significant Person**

(Complete if Criterion B is marked above.)

N/A

**Cultural Affiliation**

**Architect/Builder**

Civilian Conservation Corps

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**Statement of Significance Summary Paragraph** (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

El Vivero de Peces de Maricao (Maricao Fish Hatchery), has statewide significance under Criterion A in the area of entertainment/ recreation. This district is significant because it represents the introduction of recreation fishing or sport fishing in Puerto Rico. As the first freshwater fish breeding facility, built by the Civilian Conservation Corps in Puerto Rico, it provided in the first eight years a place to raise and nurture rainbow trout, primarily from fry to yearling, brought as eggs from the United States prior to their insertion to Puerto Rico's rivers, lakes and reservoirs. The facility, which opened in 1938 and expanded in 1942, has been in continued use as an insular fish hatchery for seventy-eight years. The period of significance ends in 1966, using the National Register cut-off 50 year date.

**Narrative Statement of Significance** (Provide at least **one** paragraph for each area of significance.)

The Insular irrigations and electrification projects in the early decades of the 20<sup>th</sup> century in the north and south of Puerto Rico decreased the population of fresh water fish. Also, the newly created reservoir offered the opportunity to bring establish new fish species to the Island. As a result, Dr. Samuel F. Hildebrand, ichthyologist of the Fishing Bureau of the Department of Commerce, visited Puerto Rico in early 1934 for two months,<sup>3</sup> to determine the possibilities for the pisciculture<sup>4</sup> development in lakes, rivers and reservoirs in Puerto Rico. In his preliminary study, Dr. Hildebrand indicated there was sufficient presence of crustaceans, aquatic plants, small fishes and mollusks in the Island's lakes and rivers to sustain the introduction of fresh water fish species (blue-gill sunfish, bull-head catfish and rainbow trout) and that the water temperature did not increase beyond 85° F. As result of this study<sup>5</sup>, live fish and rainbow trout eggs were imported to the island in 1934. Since the eggs could not be planted directly on the lakes or rivers, William R. Barbour<sup>6</sup>, Supervisor of the Luquillo National Forest, as an emergency measure, built facilities (an incubator, two circular pools and a propagation pool) in the Río La Mina area to help the fish propagation program. In these facilities the eggs were hatched and the hatchlings (also known as fry) were kept in tanks until they grew to three to six inches long when they were released into the rivers of the National Forest. In 1935, the Puerto Rico Department of Agriculture and Commerce reported of the planned construction of a fish hatchery for trout and warm water fishes in the vicinity to the town of Maricao<sup>7</sup>. This fish hatchery would allow the hatching and production of fresh and warm water fish for rivers, lakes and reservoirs in the western and central areas of the Island<sup>8</sup>.

<sup>3</sup> Dr. Hildebrand visited Puerto Rico from January 28 to March 18, 1934. Copei, Vol. 1935, No. 2 (July 16, 1935), 49.

<sup>4</sup> Pisciculture – the breeding, rearing, and transplantation of fish by artificial means. www.dictionary.com

<sup>5</sup> A result of this study was the creation of the Ornithology and Pisciculture Division within the PR Department of Agriculture and Commerce.

<sup>6</sup> A part of an agreement between the Insular and Federal Government in 1918 the head of the Supervisor of the Luquillo National Forest was also chief of the Insular Forest Service.

<sup>7</sup> Informe anual del Departamento de Agricultura y Comercio, Ejercicio 1934-35 (San Juan: Negociado de Materiales, Imprenta y Transporte, 1935), 57, 214.

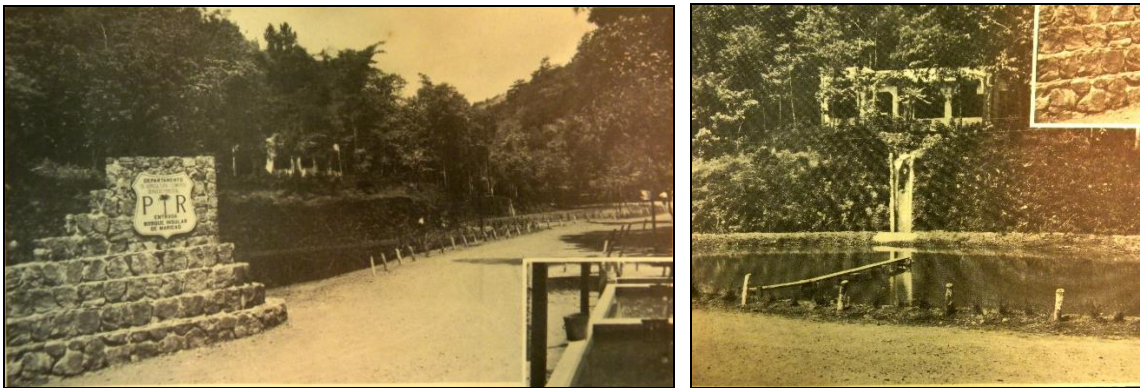
<sup>8</sup> The Maricao Fish Hatchery, in its first year of service, was provided with a shipment of Luquillo National Forest fish hatchery's largest and best developed rainbow trout hatchlings, while Federal Experimental Station at Mayagüez provided 500 bluegill sunfish and 500 bullhead catfish. Informe anual del Comisionado de Agricultura y Comercio, Ejercicio 1936-37 (San Juan: Negociado de Materiales, Imprenta y Transporte, 1938), 177, 178.



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The construction of the *Vivero de Peces de Maricao* started in 1937, in a 1.9 acre property two kilometers to the southwest of the town of Maricao. The fish hatchery was built by the Civilian Conservation Corps, as part of their program to introduce recreational activities in the Island's forest reserves. The property at that time consisted of an incubation hut, three circular concrete ponds, a pool for spawning, and two pools for nurturing warm water fish, a tank repository and a watchman residence. The hatchery was designed to nurture both warm and cold water fishes. One of the conditions for selection of the site was that annually the water's temperature remained between 64° and 70° F<sup>9</sup>, which was ideal for trout nurturing. A roadway was built from the town of Maricao to provide access to the hatchery. The hatchery was completed in early January 1938. It was the first modern construction of its type south of the United States of America<sup>10</sup>. On January 12, 1938, the first shipment from US Bureau of Fisheries in Washington, D.C. arrived at the hatchery. This shipment consisted of: 250,000 rainbow trout eggs (*Salmo irideus*), a shipment of live bluegill sunfish (*Lepomis incisor*) and catfish (*Ameiurus*). Out of this egg shipment, 206,167 or 82.6% were successfully hatched<sup>11</sup>.



Figures 4 and 5. Views of the entrance to the fish hatchery at Maricao and Spawning Pond (CR3). Album de Oro (1938).

<sup>9</sup> Rafael Sacarello, "El Departamento de Agricultura esta Poblando de Peces las Aguas Dulces de Puerto Rico", Revista de Agricultura de Puerto Rico, Marzo de 1939 (San Juan: Negociado de Materiales, Imprenta y Transporte, 1939), 32.

<sup>10</sup> This was the opinion of Luis C. Bonnet, Chief of the Division of Ornithology and Pisciculture, PR Department of Agriculture and Commerce. Informe Anual del Comisionado de Agricultura y Comercio, Ejercicio 1937-38, (San Juan: Negociado de Materiales, Imprenta y Transporte, 1939), 58.

<sup>11</sup> Informe Anual del Comisionado de Agricultura y Comercio, Ejercicio 1937-38, (San Juan: Negociado de Materiales, Imprenta y Transporte, 1939), 58.

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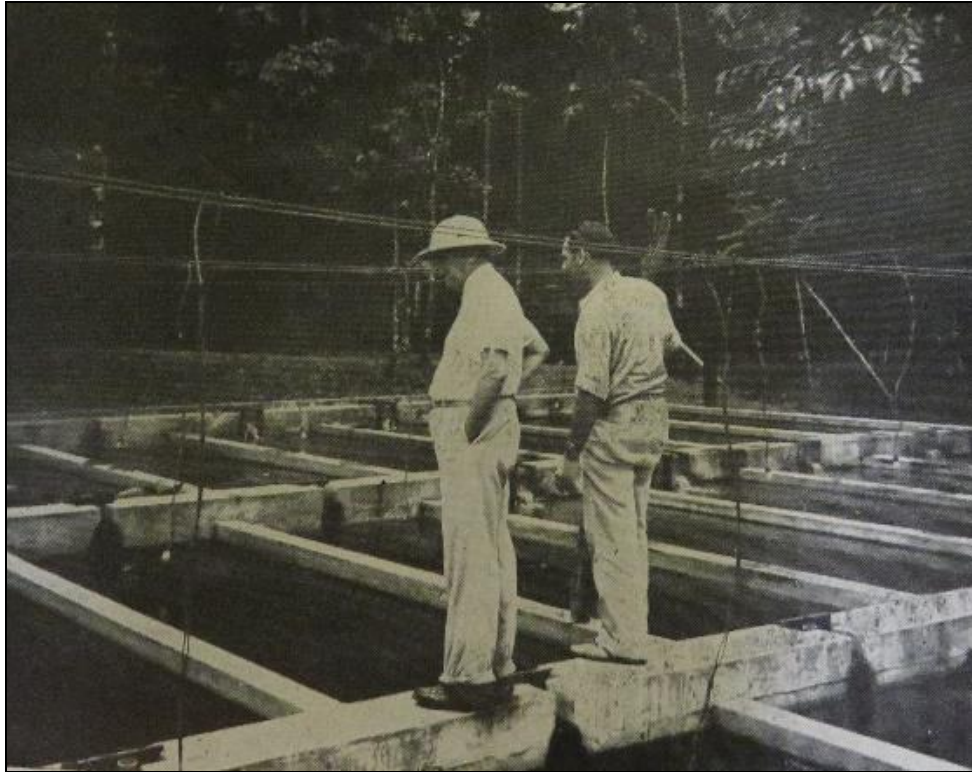
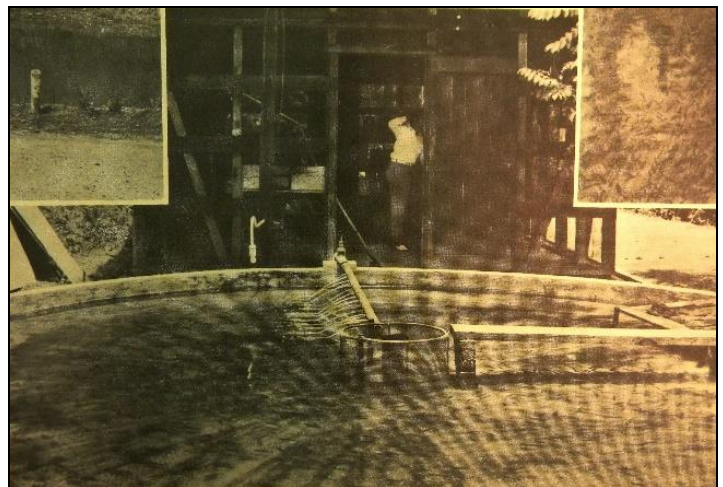
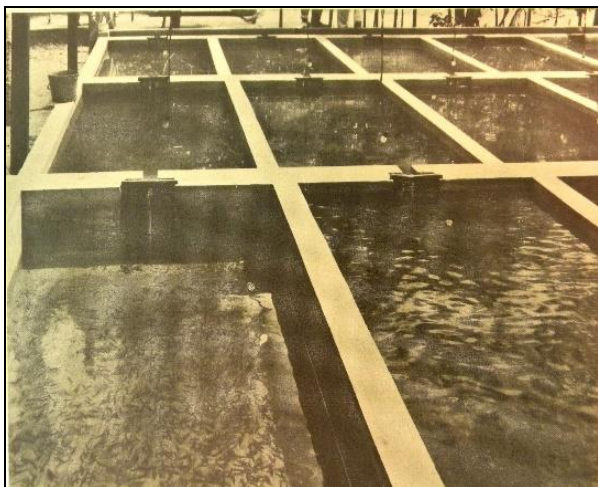


Figure 6. Blanton Winship, Governor of Puerto Rico, accompanied by E. W. Fentress person in charge of the fish hatchery. Revista de Agricultura y Comercio de Puerto Rico. Marzo 1939



Figures 7 and 8. View of fish battery and in second photo the nursery building and round ponds. Album de Oro (1938).



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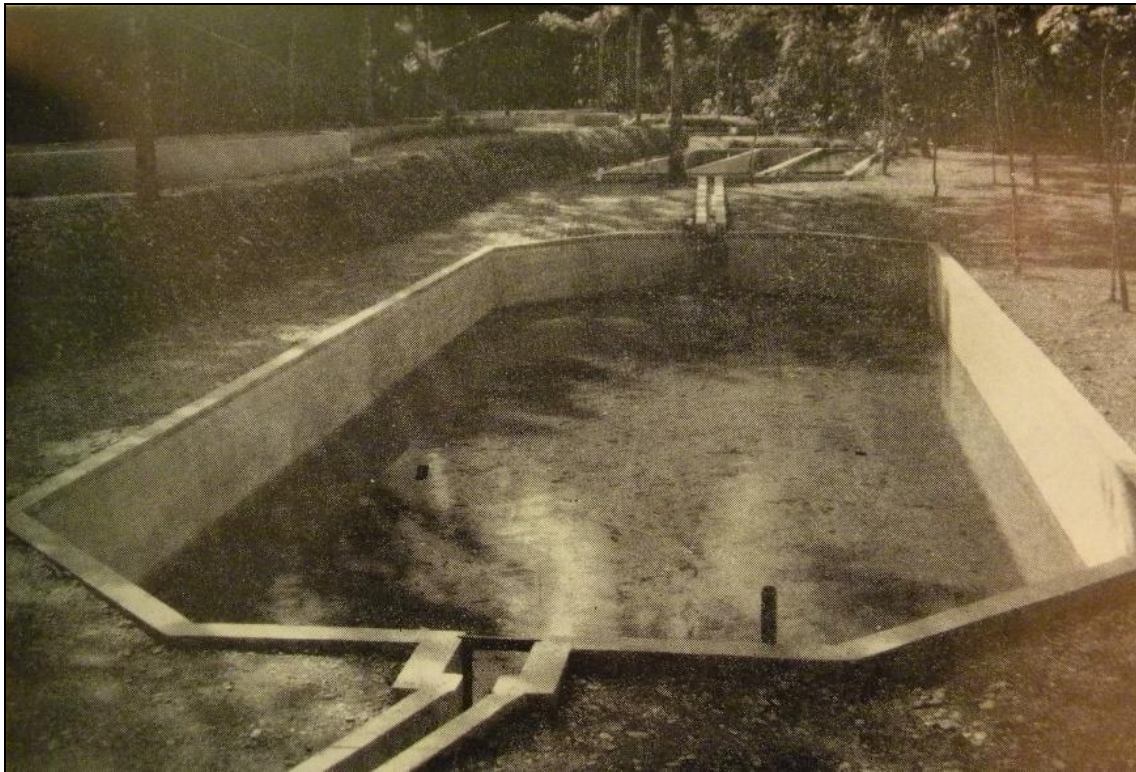


Figure 9. View of the holding tank built in 1938. Informe anual del Comisionado de Agricultura y Comercio, Ejercicio 1937-38.



Figure 10. View of the holding tank and in the background the retention tank and circular tank. Revista de Agricultura y Comercio de Puerto Rico. Marzo 1939



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With the outbreak of war in Europe (September 1, 1939), there was the need of intensifying the production of warm and cold water fishes in the Island to prevent locally foodstuff shortages.

At no time has there been such intensive interest in commercial fisheries and the decision to spend money to get the business started is closely related to the development of war in Europe. During the World War there were times when stocks of staple foods were all but exhausted in Puerto Rico. Ships that had been regularly supplying the island, were transferred to carry war cargos and schedules were frequently disrupted. Virtually all of the Puerto Rico's food reaches the island in the United States ships and is derived from mainland United States. Any diversion of foreign shipping, however, places a heavier demand upon American bottoms and the higher rates paid for wartime cargoes places available shipping at premium<sup>12</sup>.

In the 1939-1940 fiscal year, the Puerto Rican Legislature approved \$3,000 to expand, repair and buy equipment for the fish hatchery. The funds were for the construction of five nurturing ponds for warm water fishes, twenty small nurturing ponds for daphnia, a garage and a dam. By June 1940, the *Vivero de Peces of Maricao* held approximately 150,000 fishes of three species (rainbow trout, bluegill sunfish and catfish). During this fiscal year the hatchery released 63,775 rainbow trout and 26,157 bluegill sunfish to Puerto Rico's lakes and rivers<sup>13</sup>. The following year, the amount of fishes released decreased to 3,419 rainbow trout, 41,631 bluegill sunfish and 1,997 catfish. The Insular Legislature approved \$5,000 to start the program for the construction of other pools in rural farms for fish nurturing on the Island. These pools would in turn be supplied by the fish hatchery<sup>14</sup>.

In the first months of 1942, the Department of Agriculture and Commerce of Puerto Rico reported the acquisition of a 2.75 acre plot near the hatchery and the completion of four nurturing ponds for warm water fishes, seventeen ponds for nurturing daphnia, a dam and a bridge. General repairs on the other ponds was also carried out. With this expansion of the facilities it was expected that the annual production would be duplicated<sup>15</sup>.

However, the fish hatchery's location astride a river could also have drawbacks since it could be susceptible to loss of production due to flooding. The first flooding occurred during fiscal year 1945-46 when the Insular Forest Service reported the loss of 98% of its catfish (commonly known as *barbudas*) and 80% of the bluegill (commonly known as *chopa*) by flooding. In order to deal with this situation, arrangements were made with US Fish and Wildlife to obtain more specimens and the propagation and

<sup>12</sup> "Danger of War Time Shortage Intensifies Commercial Fisheries Research. Fresh Water Fish are now Available in Island Rivers", *Revista de Agricultura, Industria y Comercio de Puerto Rico*, Junio 1940, 317.

<sup>13</sup> Informe anual del Comisionado de Agricultura y Comercio al Honorable Gobernador de Puerto Rico Año Fiscal 1939-40. (San Juan: Negociado de Materiales, Imprenta y Transporte, 1940), 125

<sup>14</sup> Informe anual del Comisionado de Agricultura y Comercio al Honorable Gobernador de Puerto Rico Año Fiscal 1940-41 (San Juan: Negociado de Materiales, Imprenta y Transporte, 1941), 123.

<sup>15</sup> Informe anual del Comisionado de Agricultura y Comercio al Honorable Gobernador de Puerto Rico Año Fiscal 1941-42. (San Juan: Negociado de Materiales, Imprenta y Transporte, 1943), 135.

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distribution of fishes was reorganized. It was at this time that a new species, bass (commonly known as *lobina*), was introduced to establish a natural balance between the catfish and bluegill population<sup>16</sup>.

In 1946, as the failure to successfully establish a lasting trout population, the focus of the fish production changed to warm water fish. This in turn “initiated the development of recreation facilities in Puerto Rico’s reservoirs”.

In a report to the Puerto Rico Commissioner of Agriculture and Commerce, Hildebrand (1934) recommended the importation and introduction of rainbow trout and brown trout for stocking in the coolwater streams. These actions provided the impetus for the construction of the Maricao Fish Hatchery, which began producing fingerlings for release in 1938. Trout production was the primarily objective of the hatchery until 1942, when it became apparent that introduced fingerling trout failed to establish sustainable population because natural reproduction was not occurring. During the short-lived coldwater phase of fish propagation, the hatchery also produced some warmwater species, such as bluegill and brown bullhead, which were introduced primarily in new and existing reservoirs. Channel catfish *Ictalurus punctatus* were also imported from the United States and released into Cidra, Dos Bocas and Loiza reservoirs....Bluegill and catfishes (most likely channel catfish) were the only species produced and released for 3 years following the cessation of propagation, but in 1946, the emphasis of the hatchery shifted in earnest to producing warmwater species<sup>17</sup>.

The next fiscal year (1947-48), the Insular Forest service carried out the second expansion of the facilities at the fish hatchery. A battery of eleven pools for fry nurturing was built. Five of the ponds are fourteen feet long, four feet wide and nine inches in depth. The remaining ponds, although of the same type, are smaller in size. Earth is used as surface for these ponds. Observations made at the hatchery had indicated that newly hatched (fry) mortality rate was lower in earthen structures rather than concrete structures.

<sup>16</sup> Informe anual del Comisionado de Agricultura y Comercio, para el año fiscal 1945-46. (San Juan: Administración General de Servicios, División de Imprenta, 1947), 21.

<sup>17</sup> J. Wesley Neal, Richard L. Noble, María de Lourdes Olmeda and Craig G. Lilyestrom. Management of Tropical Freshwater Fisheries with Stocking: The Past, Present and Future of Propagated Fishes in Puerto Rico. American Fisheries Society Symposium 44:197-206, 2004.

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Figure 11. View of the Maricao Fish Hatchery's four grow-out ponds built in 1947. *Cuadrángulo Maricao, Serie de 3 ¾ minutos* (USGS Maricao Quadrangle Map, 3 ¾ minutes series), 1947.



Figure 12. View of Vivero de Peces Maricao, 1953 by Antonio Antiles, Colección de Fotos del Periódico El Mundo. <http://bibliotecadigital.uprrp.edu>



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In 1996, the Marine Division of the Department of Natural and Environmental Resources prepared a project to improve, with minimal impact of the existing structures, the conditions of the Maricao Fish Hatchery<sup>18</sup>. However, the work on the facilities was interrupted by the strong winds and torrential rain of Hurricane Georges, which crossed the Island between September 21 and 22, 1998. The fish hatchery's facilities and production suffered,

The hatchery was heavily damaged by flooding and high winds associated with Hurricane Georges in 1998, after which it underwent a major reconstruction, renovation and upgrade. This renovation increased production capacity and eliminated the threat of flooding, and limited dry-season water supply, which constrained fingerling production in the previous facility<sup>19</sup>.

### *Research / Conservation*

Maricao's fish hatchery was devised as a facility originally conceived for the possible acclimation of game fish from southern North American rivers. Local river fish species were judged too insufficient for populating rivers and reservoirs and it was believed that some types of trout, bass, catfish and other similar species could be successfully transplanted into the Highland lakes of a tropical island. The hatchery, thus, was to serve as a monitoring installation for this acclimation process. Through the years it was found that some species – specifically the bass and the catfish – could prosper and adjustments in the mix of available fish were made. As new reservoirs were built in several mountains for different purposes, the installation kept on growing and other fish species like the tilapias were experimented with. Some types of native fishes have also been bred here.

The internal organization of the ponds and tanks of the hatchery was made in order to improve the quality of fish breeding and to undergo research on species behavior in climatic and geographical conditions that were not previously tested for many of the imported species.

The main purpose of the hatchery was to stock up lakes and rivers for recreational fishing that could be part of the overall experience of consumption of the forest as a foil for the regimentation of urban life. However, those in charge of the project understood that the availability of freshwater fish, easier to catch than marine species, could improve nutrition in the countryside. Many artificial lakes and rivers not linked with the forest conservation areas benefited from the fish grown in this hatchery, and in many places installations have been built for the enjoyment of citizens living close to these bodies of water.

The stocking up of fish brought from this hatchery had a modest effect on dietary patterns of inland families, since fishing, more so with line and cord, was an unfamiliar activity for most country and mountain peasants. Edible protein could be Harvested from the rivers, but mostly made up of manually-gathered native crustaceans like *camarones de río* (shrimps), *guábaras* (prawns) or *buruquenas* (river crabs). Most had some access to locally grown meat or poultry and most dishes were made with this kind of ingredients – or with imported, salted meats and (marine) fishes that were generally available on

<sup>18</sup> SHPO Maricao 12-23-96-02. The project, by C-A Engineering, included a set of drawings prepared by Casiano Ancalle, which showed the location and shape of the structures of the fish hatchery.

<sup>19</sup> Ibid.

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country stores. Nevertheless, the possibility of lake and river fishing opened up another available option for the common man's diet in Puerto Rico.

Recreational fishing facilitated by the existence of hatchery-grown fish has been a substantial activity, mostly in accessible artificial lakes. The advent in the last quarter-century of tilapias (many of which have been grown in the newer, larger ponds in Maricao) has had a more evident effect in the availability of fish in the Puerto Rican diet, as this species lends well to dense aqua cultural processes. However, the final impact of the original introduced species - like bass and catfish - on Puerto Rican dietary Habits needs further study.

The Maricao fish hatchery is the first freshwater fish breeding facility built in Puerto Rico with a purpose of stocking rivers and reservoirs with species appropriate for recreational and subsistence fishing. It was the first scientific research facility for any kind of aquatic species in the island. Therefore, it is related with a moment in history in which the expansion of available knowledge about plant and animal behavior could be systematized in specific practices, at least as interpreted by American agricultural authorities. This signified a leap in the "scientific management" of undomesticated nature, which until then, even with the availability of well-trained naturalists, was largely managed empirically and traditionally. The design and layout of the hatchery, even if sensitive to its dense and complex natural location, is dictated in the final analysis by the rationality of science and the "best practices" known at the time for fish breeding. This is the main justification for the application of Criterion A.

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## 9. Major Bibliographic References

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**Bibliography** (Insert bibliography here – cite the books, articles and other sources used in preparing this form.)

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**Previous documentation on file (NPS):**

- preliminary determination of individual listing (36 CFR 67 has been requested)
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey #

**Primary location of additional data:**

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University

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       recorded by Historic American Engineering Record #  
       recorded by Historic American Landscape Survey #

       Other (Name of repository)  
\_\_\_\_\_

Historic Resources Survey Number (if assigned): \_\_\_\_\_

**10. Geographical Data**

Acreage of property 3.32 acres USGS Quadrangle Maricao

(Use either the UTM system or latitude/longitude coordinates. Delete the other.)

**Latitude/Longitude Coordinates**

Datum if other than WGS84: \_\_\_\_\_

- |    |          |       |           |       |
|----|----------|-------|-----------|-------|
| 1. | Latitude | _____ | Longitude | _____ |
| 2. | Latitude | _____ | Longitude | _____ |
| 3. | Latitude | _____ | Longitude | _____ |
| 4. | Latitude | _____ | Longitude | _____ |

**OR**

**UTM References**

Datum (indicated on USGS map): \_\_\_\_\_

       NAD 1927 or   X   NAD 1983

- |    |      |           |         |               |          |                |
|----|------|-----------|---------|---------------|----------|----------------|
| 1. | Zone | <u>19</u> | Easting | <u>712900</u> | Northing | <u>2010020</u> |
| 2. | Zone | _____     | Easting | _____         | Northing | _____          |
| 3. | Zone | _____     | Easting | _____         | Northing | _____          |
| 4. | Zone | _____     | Easting | _____         | Northing | _____          |

**Verbal Boundary Description** (Describe the boundaries of the property.)

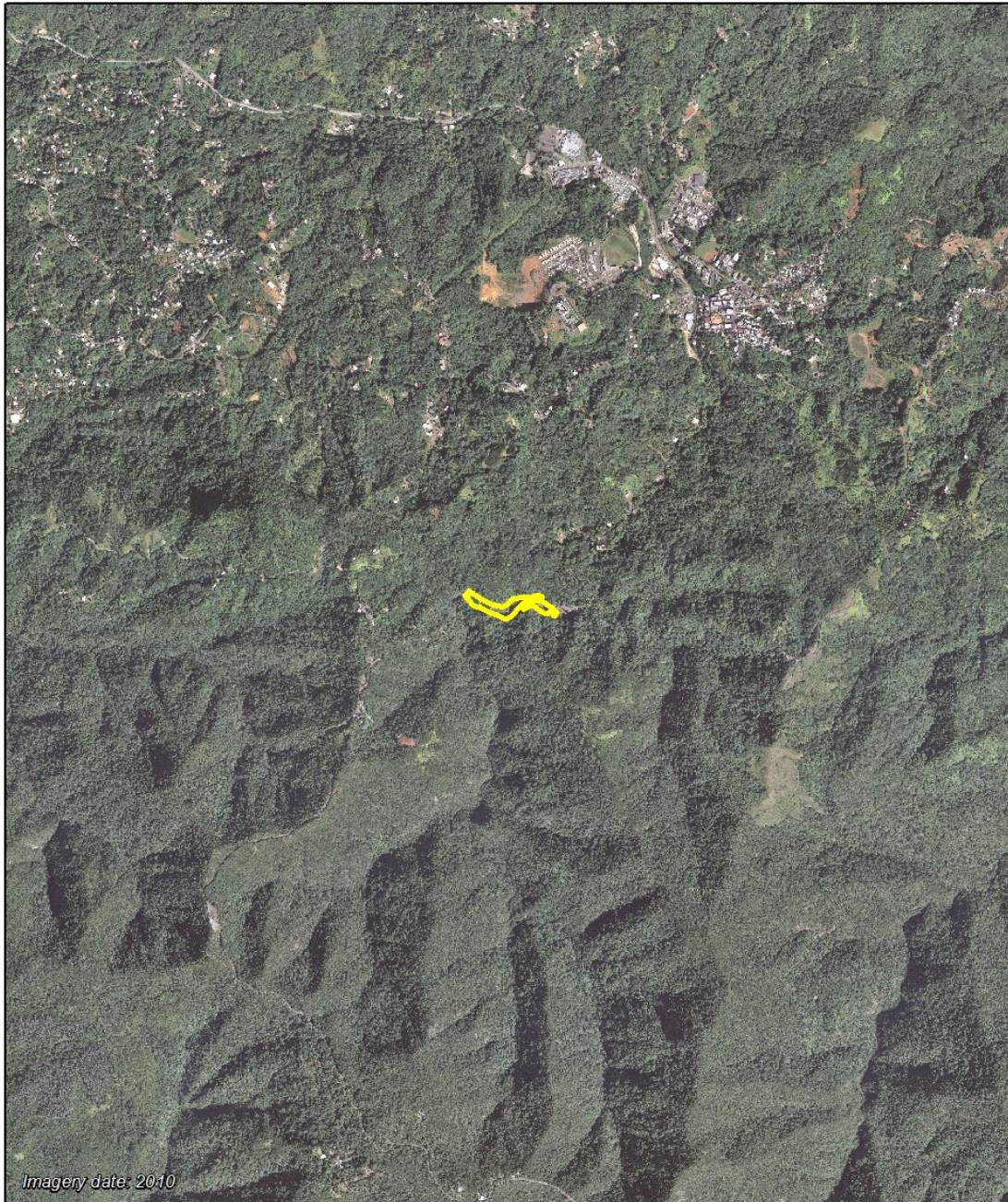
See maps.

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Imagery date: 2010



**Vivero de Peces de Maricao**

Maricao, Puerto Rico

19Q 712858 2010173 UTM

1:20,000 N

0 500 1,000 Feet

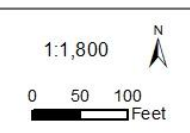


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19Q 712858 2010173 UTM



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**Boundary Justification** (Explain why the boundaries were selected.)

The property’s boundaries encompass the area linked with the Maricao Fish Hatchery’s development from 1938-1942. This area includes structures (bridges, spawning pool, holding tanks, retention tanks and water channels), buildings and objects (pedestal) associated with the fresh water fish production for the rivers, lakes and reservoir in Puerto Rico.

**11. Form Prepared By**

name/title Manuel Valdés Pizzini, PhD, Anthropologist, Jorge Ortiz Colom, Architect, Carlos Carrero Morales, PhD, José Daniel Cuevas, Lisette Fas Quiñones/ Revised and edited José E. Marull del Río, PRSHPO  
 organization Cafi Cultura Puertorriqueña Inc. (Cafiesencia) date December 27, 2016  
 street & number 22 San Isidro Street telephone (787) 309-6017  
 city or town Sabana Grande state Puerto Rico zip code 00637  
 email lisettefas@gmail.com

**Additional Documentation**

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to map.
- **Additional items:** (Check with the SHPO for any additional items.)

**Photographs**

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn’t need to be labeled on every photograph.

**Photo Log**

Name of Property Vivero de Peces de Maricao

City or Vicinity <u>Maricao</u>	County <u>Maricao</u>	State <u>Puerto Rico</u>
Lisette Fas Quiñones (#6, #11, #13,#14,#17), Jorge Ortiz Colom (#2, #3, #23), José E. Marull del Río (#1, #4, #5, #7-#10, #12, #15, #16, #18-#22, #24-#42)		Lisette Fas Quiñones (2014 & 2015), Jorge Ortiz Colom (2015) and José E. Marull del Río (2016)
Photographer	Date Photographed	

Description of Photograph(s) and number, include description of view indicating direction of camera.

1. View of the roadway over the old bridge over the Maricao River as seen from the southern segment of the Fish Hatchery. Looking approximately north.

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2. View of the Hatchery's old bridge as seen from the riverbed. A chain link fence (to the right) is part of the Fish Hatchery. Looking approximately northwest.
3. View of the Pedestal at the entrance of the Fish Hatchery. Corner view that shows the two stone shield plaques. Looking approximately southeast.
4. Close up view of one of the stone shield plaques. Looking approximately south.
5. View of the pedestal and service road taken from the roadway that leads to grow-out pond #1 (CC1). Looking approximately northwest.
6. View of spawning pool #1 taken from the service roadway. Looking approximately northwest.
7. View of spawning pool #2 taken from the sidewalk. Looking approximately southeast.
8. View of the water channels where they connect with the spawning pond #3. Base of the stairway leading to the Administration building can be seen on the upper right side of the picture. Looking approximately south.
9. Detail of the outflow gate of T29 pond. Looking approximately west.
10. Sluice detail showing water flow between tanks. Looking approximately east.
11. General View of empty original left side spawning pool #3, looking approximately northwest.
12. General View of empty spawning pool #2, looking approximately southeast.
13. Overall view of the original cement battery with 24 pools. Looking approximately north.
14. Close up of one of the pools of the original cement battery. Looking approximately southeast.
15. View of original basin 1 & 2. Looking approximately west.
16. View of the T29 in foreground, in the background T26-T28 and gazebos (G2 and G3). Looking approximately west.
17. View of retention tank (T26-T28) showing its three pools. Looking approximately east.
18. Partial view of retention tanks in foreground and in back ground Gazebo #2, #3 and #1. Looking approximately southwest.
19. View of Gazebo #2, looking approximately east.
20. View of Holding Tank T25, looking approximately east.
21. Close up of the damaged area in holding tank T25. Looking approximately north.
22. General view of the Administration building as seen from the sidewalk to the north of spawning pool #3. Looking approximately south.
23. View of the Hatchery Office's main façade. Looking approximately southwest.
24. View of grow-out pond #2. In the background the Nursery building, gazebo area and concrete bridge. Looking approximately southeast.
25. Close up of grow-out pond #2, looking approximately east.
26. General view of grow-out pond #3 (to the right) that shows part of pond #2 (to the left), looking southwest.
27. View of grow-out pond #4 empty of water during routine maintenance. Looking approximately west.
28. Close up of the kettle of grow-out pond #4. Looking approximately east.
29. Partial view of grow-out pond #4. Photo taken from the exterior service road (closer to the river bed). Looking approximately northwest.
30. General view of grow-out pond #5, looking approximately northwest.
31. View of grow-out pond #1, looking approximately northwest.
32. Ground level view of the kettle of grow-out pond #1. Looking approximately east.
33. General view of concrete stairway. Partial view of spawning pond (to the right). Looking approximately south.
34. View of the Ornamental pond. Looking approximately southeast.
35. General view of the Nursery building as seen from the northern segment of the fish hatchery. Can appreciate the flood control work completed after the 1998 flooding. Looking approximately southwest.
36. Interior view of the tanks used in the Nursery building. Looking approximately west.
37. General view of the raceway tanks (T1-T24) and the Temperature and Photoperiod Lab. In the background (to the right) behind the lab is the Hatchery Office. Looking approximately east.
38. Close up view of the Temperature and Photoperiod Lab. Looking approximately northwest.
39. View of Quarantine Lab, looking southeast.
40. View of three span concrete bridge over the Maricao River that serves as access to the holding tanks #2-#6 and equipment building in the northern segment of the district. Looking southeast.



Vivero de Peces de Maricao

Maricao, Puerto Rico

**Name of Property**

**County and State**

- 41. Close up view of grow-out pond #6. The impermeable membrane used on the pond. Looking approximately southeast.
- 42. General View of grow-out pond #6 and Equipment building. Looking northwest.

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.