

2015

# Caño Martín Peña Urban Water Location Work Plan



Caño Martín Peña,

San Juan, Puerto Rico

Ingrid M. Vila Biaggi

Urban Water Ambassador

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## **I. Background**

The Urban Water’s Federal Partnership is a U.S. Environmental Protection Agency lead effort that seeks to “revitalize urban waters and the communities that surround them, transforming overlooked assets into treasured centerpieces and drivers of urban revival”<sup>1</sup>. To accomplish this, the partnership leverages

- Align Federal government programs and investment in these communities;
- Expand partnerships;
- Build local capacity;
- Find innovative ways to communicate the environmental and economic potential of safe and clean urban waters.

Fourteen federal agencies have embraced the program, acting as partners. The Caño Martín Peña was selected in 2013 as one of nineteen sites nationwide to participate in this program. In Puerto Rico the Partnership comes to life through the collaboration of the San Juan Bay Estuary Program and the Corporación del Proyecto Enlace del Caño Martín Peña (Enlace).

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<sup>1</sup> Urban Waters Federal Partnership: Vision, Mission and Principles

## **II. Partnerships**

Following is the list of federal agency, local agency, local government and non-governmental organizations and private sector that have thus far been identified as key partners in this process for the Caño Martín Peña.

### Federal Agency Partnership

- Department of Agriculture
  - U.S. Forest Service
  - National Resource Conservation Service
- Department of Commerce
  - Economic Development Administration
- Department of Defense – Army Corps of Engineers
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security
  - Federal Emergency Management Agency
- Department of Housing and Urban Development
- Environmental Protection Agency
- Small Business Administration
- White House Task Force

### Puerto Rico Agency Partnership

- Puerto Rico Aqueduct and Sewer Authority
- Puerto Rico Electric and Power Authority
- Puerto Rico Department of Natural and Environmental Resources
- Puerto Rico Department of Housing
- Puerto Rico Highway and Transportation Authority
- Office of the Commissioner of Municipal Affairs
- Government Development Bank
- Governor's Authorized Representative

### Local Government Partnership

- Municipality of San Juan

Non-government organizations/ Private sector

- G-8
- Corporación del Proyecto Enlace del Caño Martín Peña
- Fideicomiso de la Tierra
- San Juan Bay Estuary Program
- University of Puerto Rico
- Sacred Heart University
- University of Ponce
- Fundación Banco Popular
- McConell Valdés

### III. Overview of Caño Martín Peña

The Caño Martín Peña is a 3.75 mile long tidal channel located within the San Juan Bay National Estuary in Puerto Rico: the only tropical estuary within the National Estuary Program. During the early 20th century, substandard dwellings were built in the mangrove wetlands bordering the channel, which used refuse and debris as fill material. The channel is clogged with debris, sediment and organic waste. Over 3,000 structures still discharge raw sewage into the remains of the channel. The lack of adequate sewer and storm water systems has led to flooding, exposing 27,000 residents to polluted waters and sediments.

The Martín Peña Channel Urban Waters Federal Partnership seeks to make significant contributions to the health and welfare of the eight communities that surround the Martín Peña Channel in San Juan, Puerto Rico. In an effort to improve water quality, restore the watershed's ecosystem, and address public safety issues, the Federal Partnership is currently engaged in several initiatives with their local partner, Enlace. This includes an ecosystem restoration project, which involves a major dredging plan to restore water flow in the channel.

Partners have conducted health studies that assess the effects of repeated exposure to contaminated waters and sediments on the public health of the residents, and the public health benefits of dredging Martin Peña. The objective is to transform the environmental and health challenges faced into an invaluable economic, environmental and recreational asset for the communities and Puerto Rico.



*For the purpose of this Work Plan: Year 1 refers to July 2015-June 2016 and Year 2 refers to July 2016-June 2017.*

## **IV. Priority Initiatives**

### **Initiative 1: USACE Caño Martín Peña Ecosystem Restoration Project (ERP)**

“The Caño Martín Peña ERP will restore tidal connectivity between the San José Lagoon and the San Juan Bay by removing over 800,000 cubic yards of sediments, debris and trash; reducing water residence time; improving water quality; improving essential fish habitat conditions and mobility of fish throughout the San Juan Bay Estuary, and boosting biodiversity”<sup>2</sup>

Federal leads: US Army Corps of Engineers (USACE), US Environmental Protection Agency (USEPA), White House Task Force

Partners/stakeholders: Enlace, G-8 Communities, San Juan Bay Estuary Program (SJBEP), Department of Natural and Environmental Resources (DNER), Puerto Rico Federal Affairs Administration (PRFAA), Resident Commissioner’s office, Fundación Banco Popular

#### **Year 1 Work plan activities:**

a. Feasibility Study Approval

Enlace is working with the USACE, USEPA and DNER on finalizing and getting approval of the Feasibility Study by December 2015.

b. Appropriations for Pre-Construction and Engineering

Once the feasibility study is approved the next phase requires appropriating funds in Fiscal Year 2016 that will allow continuing with Pre-Construction and Design (PED). The estimated cost for the PED is \$10.38 million (65% federal/35%local cost share) to be spent in 18 months. Both the federal and non-federal cost-share must be secured by December 2015. The White House Task force can collaborate in ensuring this activity is included in the Presidents FY 2017 budget. The Puerto Rico Affairs Administration, the Resident Commissioner’s office and Fundación Banco Popular are working on Congressional awareness and strategy for appropriations in FY 2016 budget.

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<sup>2</sup> USACE. Final Independent External Peer Review Report Draft Feasibility Report and Environmental Impact Statement for the Caño Martín Peña Ecosystem Restoration Project. San Juan, Puerto Rico. 12 Dec. 2013. 18 Jul 2014.

c. Contract and initiate Pre-construction Engineering and Design

With PED funding secured both Enlace and the USACE must move quickly towards procuring and contracting services for PED in order to initiate work by the end of Year 1.

Expected outputs Year 1:

- Approved Feasibility Study.
- PED appropriation (federal and local).
- PED contracting.

**Year 2 Work Plan Activities**

a. Pre-construction Engineering and Design

Enlace and USACE are to continue with PED development during Year 2. By the end of Year 2 PED should be completed or close to completion.

**Initiative 2: Reframing a broader vision for the project**

A broader vision that presents the opportunities that dredging the Caño Martín Peña could bring to the entire region is to be developed. The visioning plan must take into consideration community priorities and values and be able to integrate aspects such as the economic development value of connecting the Luis Muñoz Marín International Airport and the San Juan Bay via a water system, its potential for eco-tourism and the possibility of developing trails and green spaces that can be enjoyed by the wider regional community, among others.

Federal leads: Economic Development Agency (EDA) (through Municipality of San Juan), National Park Service (NPS), US Forest Service (USFS)

Partners/Stakeholders: G-8 communities, Enlace, San Juan Bay Estuary, Municipality of San Juan, New York Federal Reserve

**Year 1 Work plan activities:**

a. Economic Benefit Assessment

An economic benefit assessment of dredging and revitalization of the Caño Martín Peña is essential to continue gaining support from sectors. The study must validate and build upon the socio-economic benefits of the project which will improve

quality of life conditions for residents and stimulate economic activity and competitiveness of the Metropolitan Area. The New York Federal Reserve had indicated possibility of collaborating in an engagement like this one. Otherwise, must identify another entity or funding opportunity to contract the assessment.

b. Visioning and Economic Strategy Plan Phase I

Developing a visioning and economic strategy plan is essential for the medium/long term sustainable revitalization programming for the Caño Martín Peña. In this first year we will work with the Municipality of San Juan to identify possible collaborative efforts that could lead to funding for this planning effort. The EDA could be a good fit, but engagement must initiate at the Municipal level. We will also explore possibilities for planning assistance through the NPS's Rivers, Trails and Conservation Assistance Program. The USFS through its various programs could also be engaged to assist in this effort. It would be essential to engage both the EDA and the NPS to work with the community and stakeholders towards and integrated sustainable vision planning.

Expected outputs Year 1:

- Identifying a lead agency or funding and initiate the economic benefit assessment.
- Identifying entities that could help lead the Visioning and Economic Strategy Plan and presenting proposals, as needed.

**Year 2** Work plan activities

a. Vision and Economic Strategy Planning Phase II

Develop the visioning and economic strategy plan with the participation of communities and stakeholders. By the end of Year 2 the Plan should be completed or close to completion.

b. Audiovisuals

Audiovisuals should be developed that can show initial renderings of what the Caño Martín Peña can look like after dredging. Materials are intended for educational purposes, to raise awareness and to engage additional support for continued development and revitalization of the zone. The DNER and the Tourism Company have also formed an alliance that could contribute in this engagement. SJBE has

guided scripts for the Caño Martín Peña that could be updated. Need to approach foundations for funding.

### **Initiative 3: Infrastructure projects**

Infrastructure projects include the relocation of current infrastructure that will allow for dredging works. These include the development of water, wastewater and stormwater systems in communities that lack these basic services or have deficient service, the walkway to be developed along the Caño to protect and integrate the Caño and communities.

The following projects have already been completed:

- ✓ the Barbosa Avenue bridge relocation (PRHTA-2007)
- ✓ San Jose trunk sewer (PRASA-2014)
- ✓ 115kV power line relocation (PREPA-2015)
- ✓ Vacuum sewer system Barrio Obrero Marina (PRHTA-2008; pending correction of deficiencies)

Federal leads: Department of Housing and Urban Development (HUD), Federal Emergency Management Agency (FEMA), USEPA

Partners/Stakeholders: Enlace, G-8 communities, Puerto Rico Aqueduct and Sewer Authority (PRASA), Municipality of San Juan (MSJ)

#### **Year 1 Work Plan Activities:**

a. Israel Bitumul North

-ENLACE: Walkway is in the design phase, but lacks funding for housing relocations and construction (\$6m)

-PRASA: Potable and wastewater system is 100% designed and ready for procurement. Funding is available. (\$4.3m)

-MSJ: Stormwater system is in the design phase. Funding is available through SRF. A meeting is to be coordinated between the MSJ, OCAM and CLCC to define opportunities for adjustment in design to address climate change issues.

The critical path here is the identification of funds for the relocations that have to occur prior to the commencement of any of the other projects. Options with HUD

or FEMA need to be further explored. Potential project for National Disaster Resiliency Competition (HUD) or for FEMA funding.

b. Relocation of Rexach Siphon

-PRASA: siphon relocation is designed and funded (\$13.3m)

-ENLACE: in charge of housing relocations. Pending identification of \$1m in funding.

The critical path here is the identification of funds for housing relocations. This project is scheduled for procurement for July 2015.

c. Relocation of Borinquen potable water line

-PRASA – fully designed and in procurement process. Construction is to begin October 2015. (\$8.5m)

d. Israel Bitumul South

-PRASA- potable water and wastewater systems fully designed and funded (\$7.7m). PRASA proposes dividing project in phases to start with the more organized portion of the community.

Pending final coordination between Enlace and PRASA to proceed with procurement.

e. Buena Vista Santurce Stormwater

Enlace received an Urban Water Small Grant for the conceptual design of the storm water system. The conceptual design should be completed by January 2016.

Expected outputs Year 1:

- Israel Bitumul North - Identification of \$6m for housing relocations and finish design of walkway. Begin relocations.
- Relocation Rexach Siphon – Identification of \$1m for housing relocation and start construction
- Relocation of Borinquen potable water line – start construction
- Israel Bitumul South – Start construction of infrastructure in more organized portion of community.
- Complete conceptual design for Buena Vista Santurce Stormwater system.

## **Year 2** Work plan activities

- a. Caño Norte Walkway and Buena Vista Santurce and San Ciprián infrastructure  
-PRASA/Enlace/MSJ – Currently in planning stage. Need to identify funding sources.
- b. Las Monjas and Buena Vista Hato Rey infrastructure  
-PRASA/Enlace/MSJ – Currently in planning stage. Procurement scheduled for first semester of Year 2. Need to identify funding sources.
- c. Israel Bitumul North  
-PRASA/Enlace/MSJ - Initiate procurement and construction.
- d. Relocation of Rexach Siphon  
-PRASA/Enlace - Construction should finish in Year 2.
- e. Relocation of Borinquen potable water line  
-PRASA- Construction should finish in Year 2.
- f. Israel Bitumul South  
-PRASA- construction for Phase I(organized portion should finish). Begin procurement and construction of Phase II.

## **Initiative 4: Housing**

Includes the relocation of residents, acquisition of property, construction of new housing and rehabilitation of existing housing. In the past 10 years, 500 families have already been relocated.

Federal leads: HUD, FEMA

Local partners/stakeholders: Enlace, G-8 communities, PR Housing Department, Office of the Commissioner of Municipal Affairs (OCAM), MSJ, Governor’s Authorized Representative (GAR)

## **Year 1** Work plan activities:

- a. Comprehensive housing acquisition, relocation, construction action program

Need to develop a comprehensive housing action program for the Caño Martín Peña that allows planned funding for housing acquisition, relocation, construction in order for infrastructure and dredging related projects to move forward swiftly. Programs under HUD such as Choice Neighborhoods, Promised Zones, One-CPD or the National Resource Network need to be explored for this purpose. NDRC should be evaluated as a source of funding for this. Evaluate constituting a Caño Housing Sub-Committee with the participation of HUD, FEMA, PR Housing Department, OCAM, MSJ, GAR, Enlace and the Fideicomiso de la Tierra.

b. Short term funding for housing relocation

As detailed under Initiative 3, several infrastructure projects are awaiting housing relocation funding in order to proceed. Need to identify \$1m for Rexach siphon project and \$6m for Israel/Bitumul North project.

c. Short term revitalization project

The Caño Martín Peña communities have been fighting for the revitalization of their communities for decades. It is important to identify a short term project that that can serve as a sign of progress towards the revitalization goal. Housing relocations present an opportunity for creating an open space area that the community can start enjoying in the next 12-18 months. Need to work with USEPA, PR Housing Department, MSJ and the San Juan Bay Estuary Program to identify opportunities and funding. Then proceed to delineate a schedule for implementation.

Expected outcomes Year 1:

- Constitute the Caño Housing Sub-Committee with the participation of HUD, FEMA, Housing Department, OCAM, MSJ, GAR, Enlace.
- Develop action program to address housing needs and issues.
- MSJ and Enlace are to evaluate and present proposals to benefit from HUD programs.
- Fund short term housing relocation needs for PRASA projects to proceed (Rexach Siphon project and Israel Bitumul North)
- Define short term open space project and start work.

**Year 2 Work Plan activities:**

- a. Full implementation of Comprehensive housing acquisition, relocation, construction action program
- b. Complete short term revitalization project.

**Initiative 5: Sustainable socio-economic development**

Although improving physical and environmental conditions in the Caño is the main focus, the improvement of socio-economic conditions needs to also be addressed as a high priority. Enlace and the G-8 communities have developed various activities and initiatives, but additional support is needed.

Federal leads: Small Business Administration (SBA), US Department of Justice (USDOJ), US Department of Energy (USDOE), US Department of Agriculture (USDA), USFS, Department of Human and Health Services (HHS), Department of Education

Local partners/stakeholders: Enlace, G-8 communities, Puerto Rico Electric and Power Authority, UPR Mayaguez, DNER

**Year 1 Work plan activities**

- a. Support and development of small-businesses  
From eco-tourism, to urban farming, to recycling, to basic community services, the Caño Martín Peña communities have great potential for the development of a small-business ecosystem. However, community members need additional support to expand their business capacity with job training, finance assistance, etc. The Small Business Administration can offer support through a Strategic Alliance Memorandum with Enlace to offer direct assistance to residents and communities.
- b. Urban farming  
The Caño residents have developed urban farming initiatives in empty lots in Caño communities. Funding, technical and business support could help further develop this initiative into a profitable endeavor for residents. A first step is exploring assistance through the USDA (National Resource Conservation Service), HUD or USEPA.

An opportunity could be through the “Local Foods, Local Places” program which provides direct technical support to selected communities. Under this EPA lead program a team of experts helps community members develop action plans that use local foods to support healthy families and communities and to drive downtown and neighborhood revitalization. The assistance process features a community workshop that brings people together to develop shared goals and steps to achieve them. Special consideration is given to communities in federally designated Promise Zones or USDA StrikeForce counties. The deadline for application is Sept. 15, 2015. \$800,000 are available nationwide in this round of “Local Foods, Local Places”.

c. Energy projects

As explained earlier the Caño Martín Peña communities are adversely affected by flooding during rain and severe weather events. Aside from flooding, basic services such as power service are frequently affected as well. Embracing new resiliency models, it is essential to explore more sustainable ways to deliver power service to these communities and implement effective conservation strategies. The possibility of developing in the Caño communities a microgrid and/or a renewable energy project, coupled with conservation methods, should be explored with the USDOE, UPR Mayaguez and PREPA.

d. Climate change adaptation

The Caño Martín Peña is a zone vulnerable to climate change conditions. Better understanding of the effects of climate change in the zone is essential to develop resilient infrastructure and adaptation mechanisms that will enable communities to plan and address future impacts. A first step is exploring with USFS (San Juan Ultra, Caribbean Landscape Conservation Cooperative) and the local Climate Change Council (DNER, USFS, others) the possibility of collaboration and identification of funding. Initial collaboration for storm surge modelling between OCAM, EPA model data and CLCC, is already occurring. The Caribbean Climate Change Conference (Nov.17-18, 2015) in Puerto Rico is a good opportunity to showcase and gain support for climate change adaptation in Caño Martín Peña communities.

e. Social development

Enlace has helped develop community initiatives with youth groups, after-school programs, literacy programs and sports initiatives for residents. Funding constraints limit the capacity to expand needed social services to these communities. Need to work with USDOJ to identify possible funding options for women and youth, with HHS to expand and improve health services, with the Department of Education for after-school and literacy programs.

Expected outcomes Year 1:

- Formalize Strategic Alliance Memorandum with SBA and Enlace
- Through the Alliance establish objectives in terms of job creation, new business establishment or growth.
- Identify and request support for urban farming initiatives.
- Explore and develop concept for sustainable energy project with DOE and UPR Mayaguez
- Explore with USFS and Climate Change Council possible collaborative efforts, formalize engagement and begin developing a work plan.
- Identify social development funding opportunities within USDOJ, HHS, DE and present proposals.

**Year 2** Work plan activities:

Since this Initiative is in its first stages of awareness and planning at the federal level, it is difficult to identify activities for Year2 at this point. In 6-12 months the plan should be updated to include activities for Year 2 once collaborations and projects have been defined.

**Initiative 6: Expand support**

The Caño Martín Peña project is an important program that requires ample support from different sectors of society in order to achieve progress at the desired pace. Additional resources are needed in order to leverage and take full advantage of federal opportunities available.

Federal lead: USEPA

Local partners/stakeholders: Enlace, McConnell Valdés, SJBEP

**Year 1** Work plan activities:

a. Private sector support

Awareness at the private sector level coupled with a strategy for fund raising is essential to ensure sustainable progress. We will be working with McConnell Valdés Law Firm and Enlace to delineate a strategy to approach and gain support from the hotel sector. We will also seek support from the airport long-term operators, Aerostar, who will benefit from the dredging and improved conditions in the Caño Martín Peña.

b. National Estuaries Program Annual Meeting

The 2015 National Estuaries Program Annual Meeting will be celebrated in San Juan, PR, on December 2-4<sup>th</sup>. It is important to work with the SJBEP in order to showcase the Caño Martín Peña in this event and raise awareness and support among participants. Visits to the Caño should be coordinated as well as presentations.

c. Develop scholarly investigation/work.

Identify opportunities for scholarly investigation/work regarding environmental conditions, community development, water quality. Develop social-ecological research to promote what the city of the future should look like. The Caño Martín Peña is well poised as an ideal site to conduct this type of research with the leadership of USFS and USEPA.

d. Regional federal support

In order to gain additional support we need to continue to raise awareness at the regional federal level. All partnering federal agencies should reach out to the regional and central administrative offices to brief them on the needs and opportunities in the Caño Martín Peña. Visits by federal agency Secretaries and Regional Administrators are encouraged.

e. Proposal writer

A basic but essential element of the Caño Martín Peña workplan is to be able to recruit a proposal writer that will help identify and capture federal and foundations opportunities to fund the various initiatives. The River Network has offered capacity building and one-on-one support to the person who is recruited. The Urban Water program could be a possible source of funding.

Expected results Year 1:

- Finalizing private sector strategy. Obtaining commitment from various hotels and airport operator.
- Integrate the Caño Martín Peña to the agenda of the National Estuaries Program Annual meeting.
- Begin integrating social-ecological research initiatives towards developing a the city of the future roadmap.
- Increased awareness at the regional/central federal level
- Recruiting a proposal writer and pairing the person with River Network resources to maximize opportunities for funding.

**Year 2** Work plan activities:

- a. Expand private sector support  
Explore expanding private sector strategy to banking industry, retail industry, etc.

## **V. Additional initiatives to be evaluated during Year 1**

These are initiatives that have been identified and should be further explored to determine viability.

- a. Artistic interventions/collaborations in the Caño to raise awareness on water quality.

*This work plan should be revised and updated on an annual or semi-annual basis.*

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