

Annual Report 2023 San Juan Bay Estuary Partnership



ESTUARIO

Message from Executive Director



Dear Friend of the Estuario,

With great pride, I present you the Estuario's Annual Report for fiscal years 2023 and a financial summary of fiscal year 2022.

Climate change, coupled with the contamination of our waters, directly impacts the health of the San Juan Bay Estuary. Our urban waters are constantly threatened by land use decisions, lack of proper water infrastructure, and the impact of recurrent extreme weather events. As a result, many rivers, creeks, and natural springs that flow into the San Juan Bay Estuary system are contaminated, due to raw sewage discharges, spills of combustible substances, chemical residues, and improperly disposed trash. According to the Puerto Rico Aqueduct and Sewer Authority, 60% of the overflows of the sanitary water sewer are caused by the incorrect disposal of used oil and grease into the sink drainage. Although Estuario has made progress in restoring the quality of the estuarine waters, concerted efforts across multiple sectors must continue to be made effective. Restoring and protecting our estuary requires citizens, communities, and government agencies' collaboration. The progress we have obtained is thanks to the continued support we have secured from these sectors.

The year 2022 ended with a solid direction to ensure operational and fiscal sustainability from a 5-year strategic plan developed in collaboration with our Board of Directors, Management Conference, and advisory committees. The Strategic Plan also provides guidance to review and establish Estuario's Comprehensive Conservation Management Plan. The revised Plan will consider the challenges we confront due to climate change, contamination of our waters, and Puerto Rico's unique standing as a tropical estuary and island territory. It will identify the actions and strategies necessary to restore the natural waters of the Estuario.

As we move forward, these efforts must continue to be expanded. This includes significant investments in critical infrastructure projects, an integrated monitoring network, and technology to provide the data required to guide science-based decisions while at the same time pursuing place-based restoration and conservation in overburdened and vulnerable regions within the San Juan metropolitan area. With today's historic funding levels being made available from resources such as the Bipartisan Infrastructure Law (BIL), we are presented with opportunities to fund transformational projects that provide lasting solutions to our estuary's environmental challenges. For the next five years, Estuario will invest the support from BIL funding in restoring Juan Mendez Creek, a heavily impacted body of water draining into the San Jose lagoon. The restoration of the Juan Mendez Creek is critical to sustain current investments related to the dredging of the Martin Peña channel.

Looking forward to 2024, the Estuario will continue to serve as a trusted ally to citizens, the local government, and our other partners, offering a scientifically sound platform and guide to track the state of our waters through smart investment of our infrastructure and resilience-based restoration projects.

Cordially,

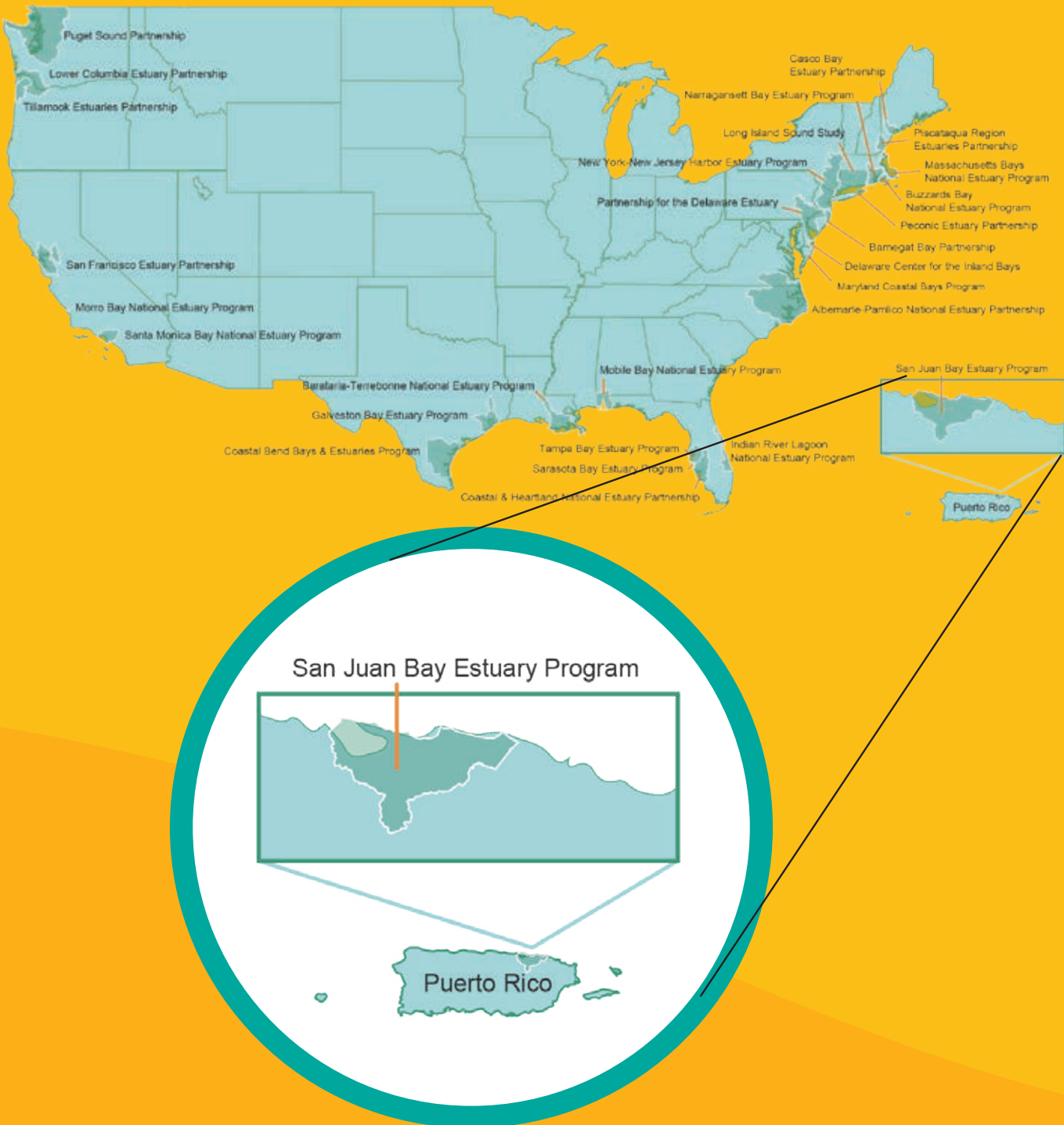
Brenda Torres Barreto

Executive Director, San Juan Bay Estuary Partnership



National Estuary Program

Established by Congress and authorized by section 320 of the Clean Water Act in 1987, the U.S. Environmental Protection Agency (EPA) National Estuary Program (NEP) protects and conserves estuary ecosystems by restoring the water quality and ecological integrity of estuaries of national significance. The NEP is a place-based watershed management program that takes a collective and organized decision-making approach to ensure that tangible environmental results are effectively achieved. There are 28 estuaries and each has a Management Conference (MC) that consists of diverse stakeholders and is responsible for development and implementation of a Comprehensive Conservation Management Plan, which represents the collective goals and identifies actions to tackle water quality, habitat and, living resources issues.



About the Estuario

The San Juan Bay Estuary Partnership, also known as Estuario, is an NEP that works as a partnership to protect, restore, and conserve the natural waters of the San Juan Bay Estuary. Estuario's mission is to restore and conserve the water quality in the Estuario de la Bahía de San Juan Estuary as a sustainable hub of social and economic development.

In 1992, the Governor of Puerto Rico officially designated the San Juan Bay Estuary as an estuary of national importance. The following year, the Management Conference, a partnership between the federal, state and local governments was created. Through an arduous process of scientific and civic research and analysis, the Management Conference developed the Comprehensive Conservation Management Plan (CCMP), the most ambitious environmental restoration plan of Puerto Rico. This plan was approved by the EPA in 2000 and updated in 2016. The CCMP is a guiding document that represents the interest and commitment that exists among the SJB E stakeholders to improve the quality of the estuary's resources now and into the future. It provides the strategies and corrective actions and implementation schedules to support restoration of our estuary in the following 5 priority areas: Water Quality and Sediment, Aquatic Debris, Green Infrastructure, Habitat, Fish, and Wildlife, and Public Education and Involvement. The Estuario coordinates the implementation of the CCMP with the Management Conference, which consists of a Policy Committee, Scientific and Technical Advisory Committee (STAC), and Citizen Advisory Committee (CAC). Estuario is the leading organization

Estuario is the only tropical and non-continental estuary among the 28 other estuaries in the National Estuary Program

connecting local, state, federal, and community partners with the common goal to restore the water quality of the San Juan Bay Estuary. Our success can be largely attributed to our multisectoral and community-led approach that is at the core of our work. In collaboration with our partners, we support regular monitoring to better understand the conditions of the estuary's waters and guide science-based management and restoration decisions.

Covering 83 square miles of land and 14 square miles of water, our estuary system spans across 8 municipalities and is home to approximately 970,000 people. In addition to the enormous ecological value of the estuary, this ecosystem is fundamental to economic development and food security in Puerto Rico. It has provided the resources needed to support highly valued economic, recreation and tourism activities within the region.

Our Mission

Restore and conserve the water quality in the Estuario de la Bahía de San Juan ecosystem as a sustainable hub of social and economic development.

Our Vision

The San Juan Bay Estuary Partnership is a trusted regional science-based organization, supported by engaged stakeholders that serves as a catalyst and facilitator to restore and maintain clean water to support thriving tropical ecosystems, healthy communities and a vibrant economy in the San Juan Bay estuary and its urbanized watershed.



The San Juan Bay Estuary System and its Watershed



LEYENDA

- DELIMITACIÓN DE LA CUENCA
- CUERPOS DE AGUA (RÍOS, QUEBRADAS, CANALES Y LAGUNAS)



Our
Board of Directors.
Management Conference.
Staff.
EPA.

BOARD OF DIRECTORS

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Carl-Axel P. Soderberg
Vice-President

Carlos Fernández Lugo
Secretary

Rafael Vélez
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Friedel Stubbe

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SAN JUAN BAY ESTUARY PARTNERSHIP
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Jorge San Miguel
President San Juan Bay Estuary Program
Management Conference

María de Lourdes Jiménez
President, Corporation for the Conservation of
the SJBE

Anais Rodríguez
Secretary, Department of Natural and
Environmental Resources

Julio Lassús Ruiz
President, Puerto Rico Planning Board

Dr. Ariel Lugo
President, Scientific and Technical Committee
(STAC)

Doriel I. Pagán Crespo
Executive President Puerto Rico Aqueduct and
Sewer Authority

Carmen R. Guerrero Pérez
Director, USEPA Caribbean Environmental
Protection Division

Marisol Jiménez
President, Citizens Advisory Committee (CAC)

Ramón D. Lloveras
Representative of the Banking and Finance Sector

SAN JUAN BAY ESTUARY
PARTNERSHIP STAFF

Brenda Torres Barreto
Executive Director

Cristina Cabrera
Senior Program Manager

Jorge Bauzá-Ortega
Scientific Director

Cristina I. Ramírez Colón
Aquatic Debris Manager

María Gabriela Huertas Díaz
Stakeholder and Engagement Manager

Ivangs M. Rivera Aponte
Citizen Science and Education Manager

Cathy Ortiz Gómez
Operations Officer

Maricela Perryman
Grants and Compliance Manager

Delia Jiménez
State Revolving Funds Project Officer

Sofía Burgos Caraballo
Bipartisan Infrastructure Law Project Officer

U.S. EPA

Evelyn Huertas
Project Officer, Caribbean Division

Noemí Mercado
HQ Coordinator
Partnerships Programs Branch



Con el Estuario Convivimos

In June 2023, the Estuario launched an educational campaign on the importance of conserving the water bodies interconnected to the San Juan Bay Estuary. The campaign's centers youth voices who critically evaluate their surrounding environment. The campaign's slogan, "Con el Estuario Convivimos" encourages a sense of ownership towards protecting and conserving our ecosystem, particularly among partners and stakeholders that are considered decisionmakers in water conservation issues. Through billboards, television and radio commercials, and social media, grey infrastructure such as highways and roads is presented as an integrated and cohesive part of natural blue-green infrastructure in an urban setting, serving as a call to action towards a common goal of restoring and conserving the San Juan Bay Estuary's natural waters. The Estuario will be revamping a previous design of an Estuario license plate that will be adopted by the US Puerto Rico Department of Transportation. The new design will be related to this campaign and its call to action.

Special Thanks

Federico "Friedel" Stubbe

For your contribution to the successful launch of our campaign, "Con el Estuario Convivimos" .

Estuario was able to welcome the press in the morning with coffee, water and delicious hors d'oeuvres.

Our invitees were greeted with paella, croquettes, wine, and refreshments in the afternoon and early evening.



Sobre el ESTUARIO
jugamos

Year in Review

The 15th annual Puerto Rico Water Quality Day was held in April 2023 with the participation of over 1,400 volunteers monitoring in over 200 stations across the island. Our flagship event continues to raise public awareness about the importance of keeping our waters in optimal conditions and has trained thousands of volunteers over the years who have carried out simple water quality tests in natural waters across the island.



Other civic science initiatives include our Citizen Science Certification program, where citizens can be certified in different themes regarding water quality monitoring, habitat assessment and microplastics monitoring. The Coastal Resilience module is the newest addition to the certification and presents topics focused on tropical coastal ecosystems in order to study the services they provide and their roles in socio-ecological resilience. Through the training of citizen scientists in Coastal Resilience, we carry out restoration efforts throughout Puerto Rico. The Coastal Resilience module as a whole seeks to develop capacity in the region to implement green infrastructure projects, restore the capacity of ecosystems to provide their services and strengthen the resilience of our Estuary watershed communities. Through the Coastal Resilience workshops, our volunteers have planted a total of 10,635 mangroves and other species of plants. This year, Estuario incorporated the opportunity for high school age youth to become certified and have collaborated with schools to provide workshops. By involving youth in the project, we are investing in Puerto Rico's future and creating a local workforce capable of implementing initiatives and promoting the development of the blue green economy in Puerto Rico. Investing in these actions helps us maximize the impact through recovery while creating a replicable model for the rest of the island.

The Scientific and Technical Committee (STAC) of the Corporation for the Conservation of the San Juan Bay Estuary hosted its first Estuario Summit on November 15-17, 2022. The Summit brought together experts on estuaries and its ecosystems from both the United States and Puerto Rico in order to begin developing a conceptual model of the social-ecological-technological system of the San Juan Bay Estuary as a guide to create conservation, research, water quality monitoring and education programs. As part of the Summit, experts were invited to collaborate in developing a manuscript titled *San Juan Bay Estuary: Research History and Opportunities* which will be translated in Spanish and published in collaboration with the USEPA. Lastly, the Summit helped to initiate the creation of the Regional Collaborative Water Quality Monitoring Network, bringing together potential stakeholders to align environmental monitoring efforts across the region.



Key Achievements and Results



Completed
12
Habitat
Restoration
Projects

8.3
of Acres
Restored

234
Volunteers
for Habitat
Restoration

1,990
Trees Planted

756
of Pounds of
Aquatic Waste
Eliminated from
the SJBE

1,457
Participants Monitoring
at 217 sites across
Puerto Rico for the
14th annual P.R.
Water Quality
Monitoring Day

65
High School
Student Volunteers
Participated in Citizen
Scientist Certification
Workshops for
Coastal Resilience

220
Adults Certified as
Citizen Scientists in
Coastal Resilience
Module



Focus for 2024



This upcoming year, Estuario will continue to identify illicit discharges in collaboration with responsible entities and jurisdictions to correct and invest in smart infrastructure. Estuario trusts our partners will continue to support the implementation of our CCMP.

Furthermore, 2024 will kick off with the revision of our Comprehensive Conservation Management Plan, in order to have a revised CCMP by 2026. This year’s focus will be on implementing the CCMP Roadmap which is being developed based on the input from the 5-year strategic plan. Other key studies that will be critical input for the revised CCMP are in the process of being completed, such as Puerto Rico’s first-ever Watershed-based Multijurisdictional Hazard Mitigation Plan. As part of the development of this plan, an Economic Analysis will be conducted and specific mitigation strategies will be validated by our scientific community, government agencies, and other key partners. Meanwhile, a Green Infrastructure Master Plan for Stormwater Management focusing on identifying nature-based solutions to support infrastructure needs as well as vulnerabilities identified throughout the development of the Watershed-based Multijurisdictional Hazard Mitigation Plan will be finalized and presented for validation by the end of the fiscal year. The plan will primarily focus on improving stormwater infrastructure to tackle the risks of massive defoliation after hurricanes and an aging gray infrastructure system.

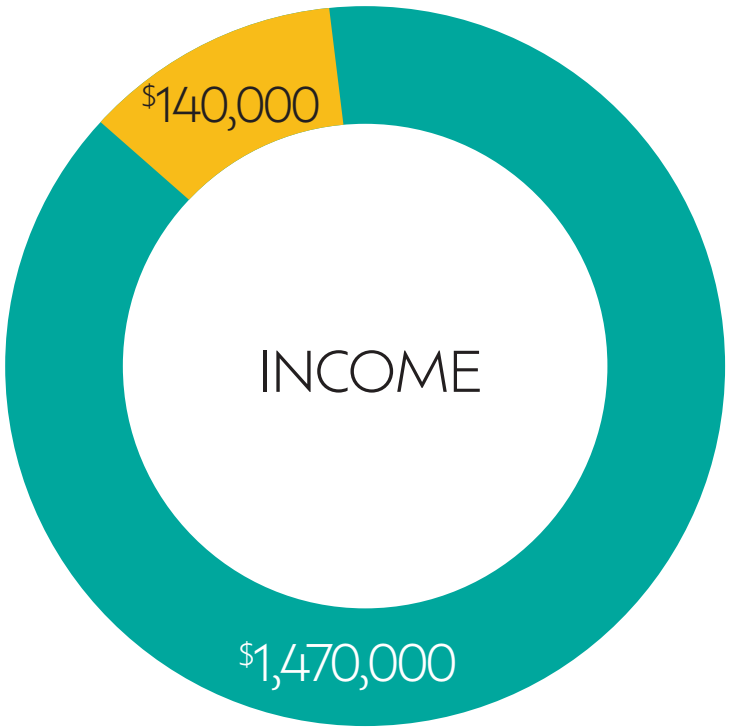
Estuario is spearheading the creation of a Regional Collaborative Water Quality Monitoring Network with various partners to collect and share water quality data more frequently and efficiently, ensure quality assurance, and enable quick turnaround on interpretation and reporting for corrective measurements. The Estuario is currently the only entity in our region to take a regional approach to gathering, organizing, and communicating environmental data, while leading green infrastructure and reforestation projects and addressing resiliency comprehensively.

Estuario will continue its restoration efforts via the Citizen Scientist Certification Program, recruiting 150 high school youth and adults to volunteer and become certified in coastal resilience. This module develops capacity in the region to implement green infrastructure projects, restores the capacity of ecosystems to provide their services, and strengthens the resilience of our Estuary watershed communities. In addition, Estuario will continue education and engagement efforts at the Condado Lagoon nature reserve, while also working with Amigos de la Laguna to co-manage the Lagoon along with Puerto Rico Department of Natural Resources, and the San Juan Municipality.

Finally, the Estuario will continue to center environmental justice in our work, particularly through the Juan Méndez Creek restoration project with Bipartisan Infrastructure Law funding. Juan Méndez Creek is located in the municipality of San Juan and is a critical area affected by illicit discharges due to a deficient water infrastructure from lack of maintenance. The project will design and implement high-impact blue/green infrastructure interventions, achieving medium-term restoration of water communities affected by this body of water, many of which are environmental justice communities.

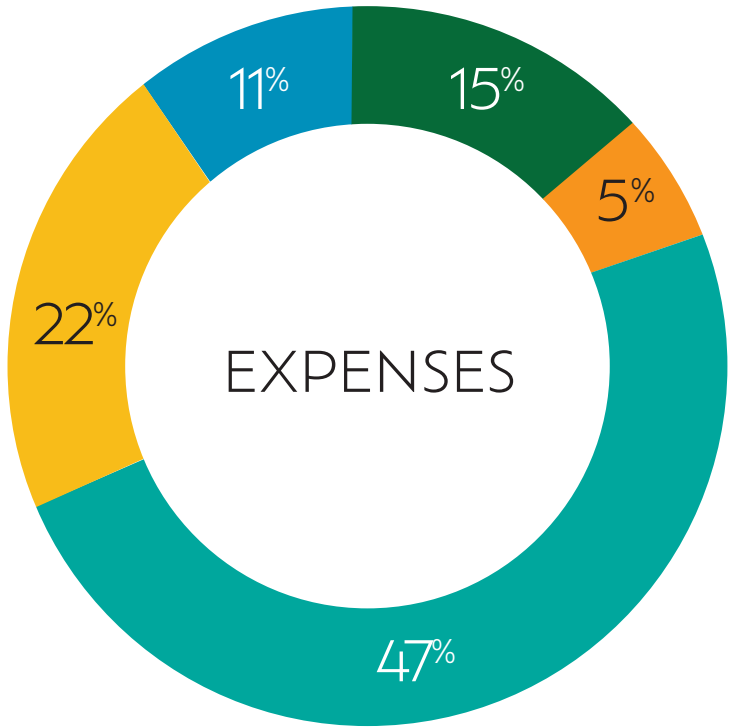


Funding at a Glance



Federal Funds Non-Federal Funds

Portion of income from federal and non-federal sources. Non-federal sources include, private grants and donations.



Protection and Restoration Water Quality
Program Management Education and Outreach
In-kind matching from Puerto Rico Aqueduct and Sewer Authority

Portion of funds spent in each general program area for the 2022 fiscal year.

Thank You

The Estuario would like to thank the **Puerto Rico Aqueduct and Sewer Authority** for providing the in-kind matching for grants under the Clean Water Act Section 320, for their support correcting illicit discharges, and during the Annual Water Quality Day.



Thank You for your support!



ESTUARIO

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