

RESEARCH PROJECTS ON GOVERNORS ISLAND

The Opportunity

With over 130 acres of open space including a new park designed to adapt to a changing climate, Governors Island offers an unparalleled platform for new research in the areas of environmental studies, urban studies and more. Scholars and students will have the opportunity to explore the Island's expansive terrain, study its complex operational systems and examine ways it could become even more sustainable as they develop innovative research projects and generate important new knowledge about our shared environment.

About Governors Island

Governors Island is a 172-acre island in New York Harbor, nestled between Lower Manhattan and the Brooklyn waterfront. For almost two centuries, the Governors Island was closed to the public, operating as a military base for the U.S. Army and later, the Coast Guard. In 2003, the federal government sold 150 acres of Governors Island back to the people of New York. Eight minutes from the energy and excitement of the rest of the City, today the Island is a popular seasonal destination. A resilient, new, award-winning park is complemented by dozens of unique historic buildings, educational facilities, a rich arts and culture program and a 22-acre National Monument managed by the National Park Service. Unlike anywhere else in New York, Governors Island offers peaceful settings with sweeping views of the Harbor, skyline and Statue of Liberty.

About the Trust for Governors Island

The Trust for Governors Island is the nonprofit corporation created by the City of New York that is responsible for the redevelopment and operation of 150 acres of Governors Island. The Trust's mission is to transform Governors Island into a vibrant resource for New York City, making this island in New York Harbor a destination with extraordinary public open space, as well as educational, not-for-profit and commercial facilities.

POTENTIAL RESEARCH AREAS & TOPICS

Island Operations

Waste Systems

- Improvements in tracking waste disposal
 - How is the Island connected to larger NYC waste system?
 - Creative solutions to become zero waste
- Composting process efficiency in coordination with Earth Matter

- Innovative solutions to inspire increased public participation in recycling and composting

Energy

- Renewable energy opportunities on Governors Island to reduce or eliminate dependence on the grid
 - Comparison of current and future build-outs
- Innovative solutions for improving energy efficiency of landmarked historic buildings

Transportation

- Environmental analysis of transportation options for on-Island transport
 - Opportunities for current and future build-outs, e.g., ways to improve cycling, future use of electric vehicles, etc.

Public Health

- Evaluation of recreation opportunities available on the Island and associated health benefits to visitors
- Exploration of how park/landscape design informs health decisions through analysis of visitor health data (e.g., miles walked, stairs climbed, etc.)
- Comparing environmental health factors to other areas within the city
 - Pollution, humidity, heat index, noise pollution, etc.

Ecology

Trees, Plants, and Soils

- Tree Inventory of species, size, health etc.
 - Run full diagnostics to capture the benefit of trees for the Island, such as carbon capture, building energy impacts, human health impacts, etc.
 - Public facing educational opportunities for visitors to learn about and interact with tree species on the Island
- Evaluation of success of various tree species in Hammock Grove
 - Impact of climate change on historically native species, growth rate of different species in harsh island micro-climates
 - Opportunity to inform other parks and open spaces on types of trees that are successful in harsh climate conditions
 - Implementation and evaluation of sustainable forest management techniques
- Tree succession planning for historic trees declining in health
- Evaluation of soil health and how soil composition has changed over time with the addition of compost, lawn care, etc.

Birds, Pollinators, and Wildlife

- Biological survey of all living species contained within the Island (Bioblitz)
 - Evaluating ecosystem services provided by Island biodiversity, such as reduced run-off, soil formation, nutrient storage, resiliency, pollution capture and breakdown, etc.
- Impact of pollinator species on Island horticulture and agriculture
- Bird population changes over time in coordination with NYC Audubon

Invasive Species, Pests, and Disease

- Exploration of invasive plant species on Governors Island, including origin and mode of transport
- Impact of park construction and changes in climate on invasive plant species
- Integrated Pest Management strategies for an Island environment
- Tree disease identification, impact, and treatment research

Resilience

Climate Change

- Evaluation of climate impacts on the Island
 - Could be through the lens of visitor experience, impact on flora and fauna, considerations for future development, transportation solutions, renewable energy opportunities, etc.
- Opportunities for carbon capture technologies and processes

Water

- Flood resilience and mitigation strategies of the new park
- Examination of the Island's water table and its impact on successful horticulture
- Study of water quality (including contaminants, microplastics, etc.) in waters surrounding Governors Island
 - Impact of Island activities on surrounding Harbor water quality
- Exploration of rainwater capture systems to reduce water usage for irrigation

Agriculture

- Opportunities for a closed-loop agricultural system on the Island
 - Integration between urban farming, Island's food program, and composting center

ON-ISLAND ORGANIZATIONS & RESOURCES



GrowNYC's Teaching Garden is a 21,000-square-foot urban farm on Governors Island that aims to engage, excite and educate its visitors in all aspects of urban farming. It features over 20 vegetable beds, a half-acre farm, a two-story aquaponics system, a large solar oven and outdoor kitchen, a greenhouse, fruit trees, several rainwater harvesting systems, a rain garden and more. During the week, GrowNYC hosts NYC students and summer camps, giving kids the opportunity to plant, water, harvest and cook the garden's wide array of vegetables, herbs and fruits. On weekends, GrowNYC opens the garden to the public and provides free tours, garden and nutrition related workshops, as well as self-guided activities.

grownyc.org



Earth Matter NY is a nonprofit organization that seeks to reduce the organic waste misdirected into the garbage stream by encouraging community participation and leadership in composting. At Earth Matter's Compost Learning Center and Soil Start Farm on Governors Island, visitors and volunteers explore how to make compost using a wide variety of methods and apply compost as a soil amendment to grow and care for plants. The Center processes over 60,000 pounds of food scraps from the Island and NYC communities every month, and is home to over 60 animals, including goats and chickens, who are an important part of the composting process.

earthmatter.org



The Billion Oyster Project is a nonprofit organization dedicated to restoring oyster reefs to New York Harbor through public education initiatives that foster awareness, affinity and understanding of our shared environment. BOP's vision is a future in which New York Harbor is the center of a rich, diverse and abundant estuary surrounded by communities that are engaged in its ongoing preservation, with endless opportunities for work, education and recreation. In their oyster reef staging area on Governors Island, BOP transforms oyster shells collected from restaurants across NYC into reefs that will support future oyster populations in New York Harbor.

billionoysterproject.org



AgTech X builds entrepreneurial communities to activate sustainable food and agriculture innovation with New York's only co-working lab focused solely on sustainable food and agriculture challenges. The Future Farm Exhibit by AgTech X & Tower Farms on Governors Island, housed in a retrofitted shipping container, is a public demonstration of indoor farming's benefits and potential as well as its limitations. By locating the exhibit next to other sustainable agriculture projects, the demonstration works to inspire honest dialogue about how indoor farming and agriculture technologies could fit into a more sustainable future.

agtech-x.com



Swale began in 2016 as a public floating food forest built atop a 5,000-square-foot barge in New York City that welcomed the public to harvest herbs, fruits and vegetables for free. After visiting communities across the city, Swale is working with Services for the Underserved to build a food forest, perennial pollinator gardens, soil remediation sites, agricultural projects and a swale and berm system on Governors Island.

Complementing this outdoor demonstration site, Swale also runs indoor programs on edible landscaping and continues to promote Public Food through advocacy and educational programming, stressing the importance of re-addressing food as a commons.

swaleny.org



Island Bee Project's mission is to educate the public on the importance of honeybees in our ecosystem and to spread awareness about the global decline of honeybees and other pollinators. The organization aims to inspire people of all ages to become honeybee advocates and gain a deeper understanding of the inner workings of honeybee colonies through demonstrations, hive inspections and unique workshops in partnership with local artists and artisans. With these and other educational programs on Governors Island, Island Bee Project is working to build community and a more sustainable and healthy future for generations to come.

islandbeeproject.nyc