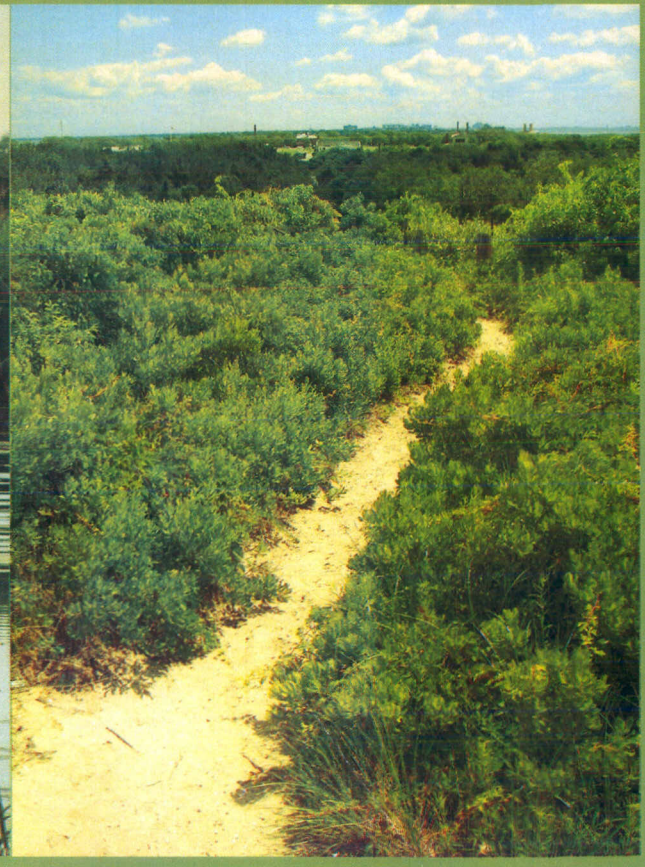
Jamaica Bay Institute

Fiscal Year 2007 Congressional Report







Jamaica Bay Institute Report to Congress – FY2007

RLC Name	Parks Served	Initial/main Funding Source
Jamaica Bay Institute First Year Funded- FY 2002	**Gateway National Recreation Area, NY** Potential for other National Parks of New York Harbor	Natural Resource Challenge $225,000

Mission Statement

"To promote and improve the ecological health and social relevance of Jamaica Bay through research, education, and informed decision-making".

ADMINISTRATION



Headquarters Building 69

The Jamaica Bay Institute (JBI) was initially funded in fiscal year 2002 by the Natural Resource Challenge and is hosted by the Jamaica Bay Unit of Gateway National Recreation Area (NRA) in New York City. JBI is staffed by a Director/Research Coordinator (GS-12, permanent), Biological Technician (GS-5, 2 year term) and an Education Coordinator (GS-11, 4 year term) hired in January 2007. In addition, Jamaica Bay Unit staff contributes to the JBI program by providing general maintenance, administrative and technological support.

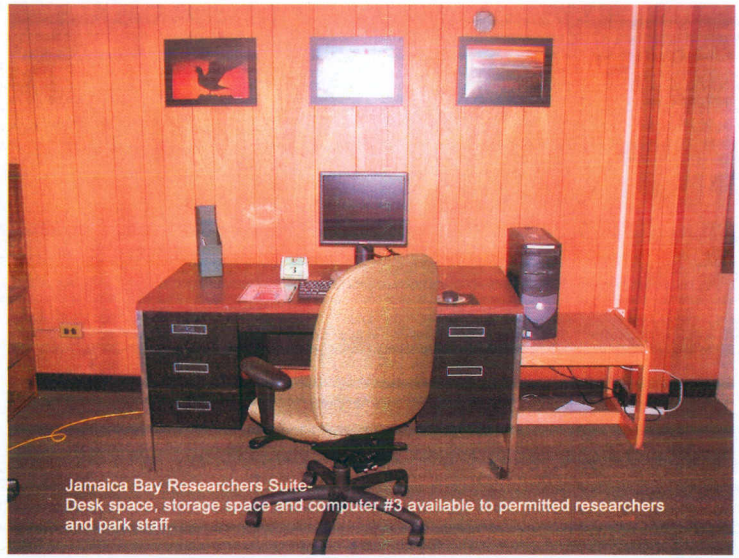
Facilities and other Logistical Support

The Jamaica Bay Institute is housed in the JBU headquarters, building 69 at Floyd Bennett Field in Brooklyn. Over 4,000 square feet of space accommodates JBI staff offices, as well as the following assets:

The Researchers Suite, which offers three computers with Internet access, printer, telephones, shelf, drawer and desk space as well as ample room to spread out if needed. The Suite experiences steady traffic throughout the year. Researchers usually end their work days here compiling field data, checking gear and communicating with distant colleagues.

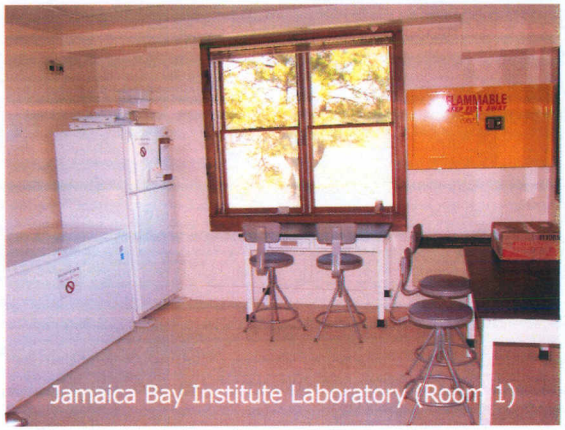


Jamaica Bay Institute Researchers Suite-
File space and computers #1 and #2 available to permitted researchers and park staff.

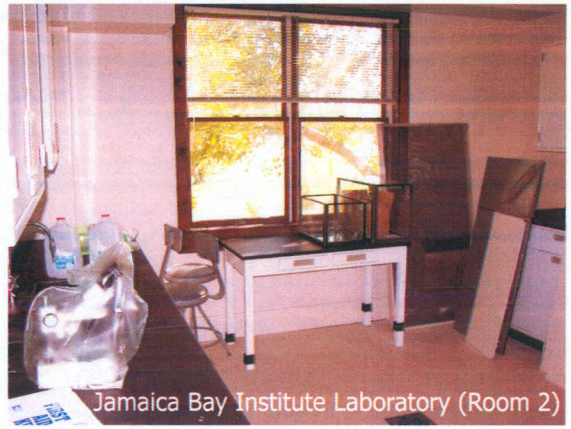


Jamaica Bay Researchers Suite-
Desk space, storage space and computer #3 available to permitted researchers and park staff.

Down the hall lies the **Jamaica Bay Institute Laboratory**. Wet and dry adjoining laboratories are equipped with various materials that make it possible to carry out research there or to prepare specimen or samples for transportation to specialized labs. A large chest freezer, specimen refrigerator, large and small aquariums, vent hood and fire cabinet occupy both rooms and there is no shortage of storage or counter space.



Jamaica Bay Institute Laboratory (Room 1)



Jamaica Bay Institute Laboratory (Room 2)



Jamaica Bay Institute Laboratory (Room 2)

Off the lab lies the **break room**, a spacious area divided into a lunch and storage area. One half of the room contains lockers, desks and heavy duty shelving for both personal and equipment storage while the other half of the room contains a small refrigerator, microwave, toaster oven, pantry area and dining table. This year, the breakroom was updated and furnished with a seating area which allows researchers to observe laboratory activities or hold informal conferences while lunching. For more formal meetings and presentations, the Jamaica Bay Institute offers researchers a sizable **conference room** as well as a smaller room for more intimate meetings.

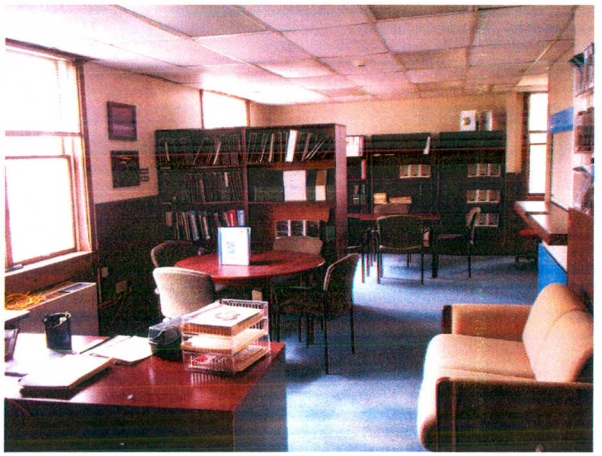
The JBI Breakroom and Storage Area

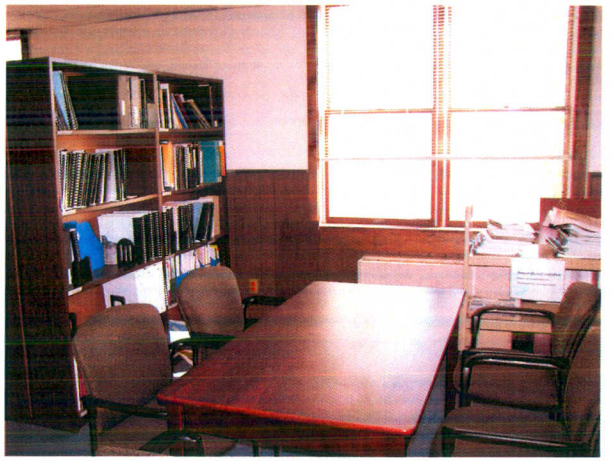


JBI Conference Rooms



Upon completion of a research project, final materials are submitted and catalogued in the **Jamaica Bay Resources Library** to be utilized by students, researchers, park staff and interested public. The Jamaica Bay Resource Library houses over 4,000 publications pertaining to the natural and cultural resources of Jamaica Bay. A computerized catalog makes searching quick and convenient. During peek research times, the library is occupied and utilized primarily by students and researchers while in the slower off-season, our own park staff visit the library to develop educational programs, public presentations, reports, PMIS entries, MOU's and more. Most of the collection can be searched via the NPS Online Library Catalog or browsed by subject from the Institute website. The operation is overseen by the Institute staff, but is run by the support of volunteers. To date, eight volunteers have worked in the library, dedicating over 1000 hours.





To aid in research facilitation, the Jamaica Bay Institute offers **Lodging**, a three bedroom, two bathroom house within five minutes walking distance from JBI offices exclusively available to visiting scientists conducting research in the park. Additional park housing at Fort Tilden and Staten Island is made available to accommodate scientists for short-term research visits.





This **JBI Research Vessel** is docked at the Gateway Marina near JBI headquarters. The Research Vessel is a 21 foot Maritime skiff with a 90 horsepower Suzuki four stroke outboard. During the summer months, an MOCC certified boat operator is hired by the JBI to escort researchers to various field sites around the bay. Service is offered to researchers with a valid Gateway NRA scientific permit, on a first come first serve basis.





Jamaica Bay Institute Research Vessel



Accomplishments through the RLC to *facilitate use of parks for scientific research and any evidence of success:*

The JBI has facilitated the use of the Jamaica Bay Unit for scientific research in various ways as follows:



JBI Research Vessel provides support to cormorant research in the bay



Permitted researcher, Russell Burke, an d grad student research data in the JB Resource Library

Use of Facilities:

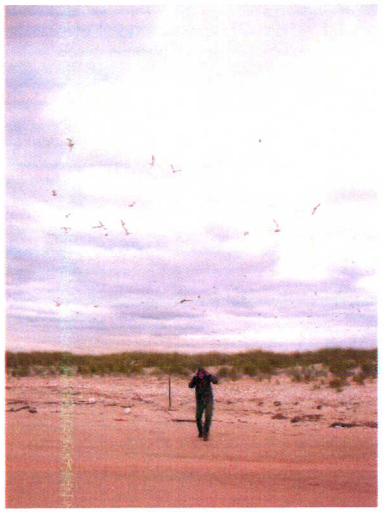
- Use of JBI facilities provided a valuable service such as offering the **Research Vessel** to assist in permitted research in the bay. The boat was used approximately 70 days during FY07 for a variety of projects including the high profile Elders Point Marsh Restoration project in cooperation with the Army Corps of Engineers, New York City Audubon, National Parks of New York Harbor Education Center, and the City University of New York, Queens College.
- JBI provided **housing** for 3 researchers (maximum capacity at current location) for the summer season totaling 242 nights/bed. These researchers performed West Nile mosquito and avian monitoring as well as bird banding in conjunction with the NYC Audubon. Data from both projects contribute to long term monitoring plans.
- The **Jamaica Bay Resource Library** has accommodated over two-dozen visitors and numerous phone or email requests for information in the past year. The library has incorporated an electronic news search to capture current news stories and added over 150 new records to the libraries database which will be featured in a forthcoming educator's resource directory to be distributed by the city's Department of Environmental Protection.
- The Jamaica Bay Institute **Researchers Suite** provided computer access and meeting space for visiting researchers, volunteers as well as park staff and management being utilized over 140 times during FY07. The Elders Point Marsh Restoration Project staff frequented the computer suite to coordinate and enter field data.
- During FY07 the JBI **laboratory and breakroom** has been heavily relied upon by the Army Corps of Engineers/NPS Elders Point Marsh Project. The lab has been furnished with a fire proof cabinet for chemical storage. In addition, a drying oven has been purchased by the marsh restoration project for the lab to aid in drying samples and will remain when the project is completed.



BioBlitz participants observing avian species



Presenters at the Plight & Promise Conference answer questions following their presentations


JBI staff assists with the annual gull count which can be hazardous

Leveraging of Funds:

- Event sponsors contributed an additional $3,000.00 to the first-ever **Jamaica Bay BioBlitz**, co-organized by Queens College/CUNY and the Jamaica Bay Institute. Although the Bioblitz was primarily funded through a co-operative agreement the additional funds allowed the scope of work to be expanded and provided greater opportunities for volunteer recognition.
- The **Jamaica Bay: Plight and Promise** conference held in October 2007 successfully brought together researchers and educators to reinforce the fact sound education is based on sound science. An initiative that has grown out of this full-day of information sharing has been the development of a Citizen Science pilot program titled **Marine Invaders of Jamaica Bay** that will provide opportunities for area high school students to actively participate in aquatic invasive monitoring within the park.
- The Columbia University's Center for International Earth Science Information Network (CIESIN) contributed in-kind support throughout the year by continuing to expand and maintain the **Jamaica Bay Research and Management Information Network** webpage as part of an on-going effort to preserve and enhance the biodiversity existing in the region's urban centers.

Technical Expertise:

- Professional staff from the Jamaica Bay Institute once again provided **support in the field** for both the Elder's Point Marsh restoration project and Tern monitoring project. Staff assisted by training new field crew members and collecting data.



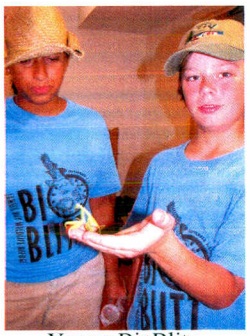
JBI staff assisting with the annual gull count and in the field with the high profile Elders Point Marsh Restoration project



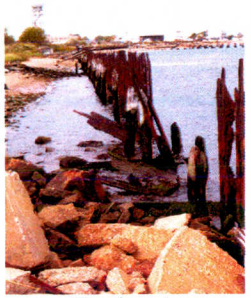
Harbor Herons Conference



Horseshoe Crabs spawning



Young BioBlitz participants



Erosion at Floyd Bennett Field

Accomplishments through the RLC to *provide research information or value-added products to park staff and managers*:

As part of an on-going effort to understand aspects of both ecology and health of a variety of wading birds as well as protect and restore coastal wetland habitat in an area that serves as the breeding sites of nine species of colonial wading birds, including herons, egrets and ibis, the Jamaica Bay Institute (JBI) at Gateway National Recreation Area (GNRA), along with Wildlife Trust, Harbor Herons Subcommittee of the NY-NJ Harbor Estuary Program, and the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service sponsored the **Harbor Herons, Cormorants, and More - Current Research and Future Planning** meeting in the fall of 2006. The 2-day gathering was convened in order to share and compare research results from the summer breeding season, discuss observable trends in the harbor heron population, identify obstacles impairing conservation efforts, and coordinate research within the tri-state area. The information shared at the conference has been made available on the Jamaica Bay Research and Management Information Network webpage.

Park policy has been altered as a direct outcome of research findings concerning dwindling numbers of horseshoe crabs in Gateway NRA. Data collected from permitted research was reported to park managers as a **Briefing Statement** which resulted in the park superintendent updating the compendium. The previous limit, set by New York State, allowed 5 horseshoe crabs per person per day to be taken. Horseshoe crab harvesting is no longer permitted in the Jamaica Bay Unit of Gateway NRA.

Data collected from the **Jamaica Bay BioBlitz** were entered into an all-taxa database owned by Gateway National Recreation Area and managed by the Jamaica Bay Institute. The primary product will be a comprehensive and updated checklist of species found in and around Jamaica Bay. As well, a summary of results and findings will be published on the project website and printed in pamphlet form. These materials will be incorporated into the body of knowledge used by park management and will be made available to members of the scientific community and the public through the Jamaica Bay Institute's Resource Library.

An **Executive Summary of the Floyd Bennett Field Erosion Assessment** has brought focus to the issue facing the Jamaica Bay Unit. The study was conducted during the summer of 2006 and information summarized and made available during FY2007. Packets containing the summary as well as a DVD copy of the presentation were circulated to park managers and other staff resulting in a renewed interest in the shoreline preservation of the Field and other park areas.

Through the **Jamaica Bay Plight and Promise Conference** a cross section of resource managers, interpretive staff, educators, and interns were presented with findings from some of the most current research work in Jamaica Bay in order to guide decision making and highlight the need to help restore the complex ecosystem. Conference attendees were given a number of materials including an educator's guide, a resource CD, and a copy of the conference proceedings. As well, the conference kicked off the Jamaica Bay Stewardship Series; a new series of educational events designed to foster an interest and understanding of the bay, and inspired the development of the new citizen science program, **Marine Invaders of Jamaica Bay,** that will begin collecting data this fall.



Accomplishments through the RLC in *communicating the relevance of park research* to people's daily lives and in making research results widely available to learners of all ages:

The newly created **Jamaica Bay Stewardship Series** aims to support the educational objectives of both the National Park Service and DEP's recently drafted Watershed Protection Plan by creating an informed citizenry while strengthening partnerships among existing groups. The mostly free series of lectures, excursions, and field service activities offers an opportunity for participants to progress towards becoming a recognized steward of Jamaica Bay by receiving a stewardship stamp for each event they attend. Specifically, the series is designed to promote a variety of exciting interdisciplinary programs in order to foster an interest in and understanding of Jamaica Bay by recognizing individual efforts to learn about issues affecting the ecological health of the bay.



BioBlitz participants race to count as many species as possible in 24 hrs.

Two specific objectives for the Jamaica Bay BioBlitz were to 1) increase public awareness of nature in Jamaica Bay and New York City and 2) excite children and public about science. Through this 24-hour event members of the public had the opportunity to participate in field explorations and learn about natural ecosystems through interpretive programs. Over 273 volunteers ranging in age from 2 to 81 and from diverse ethnic backgrounds were actively engaged in the intensive effort to build a checklist of species for the area which will be made available to the public through the Jamaica Bay Resource Library and the Jamaica Bay Research and Management Information Network webpage. In addition, the event served as an opportunity to expose high-school teachers involved in the new citizen science program, **Marine Invaders of Jamaica Bay**, allowing them to increase their content knowledge and contribute to protocol development.



Brown Bag Lunch presentation by Grassy Bay High School Seniors

The Institute continues to coordinate a **Brown Bag Lunch Series** in order to connect park staff and the public with visiting researchers, interns, partners, and park staff in an informal setting. Information presented at these lunches is frequently integrated into resource management planning, interpretive materials, and formal presentations.



Brown Bag Lunch presentation on Atlantic Sturgeon research

The **Brooklyn Children's Museum** produced a series of four short documentary films as part of a new exhibition entitled "Neighborhood Nature." The films feature the volunteer work of individuals who are helping with scientific research in area parks, reserves, and "green spaces." The films highlight the process of scientific data collecting and feature interviews with the volunteers (i.e. citizen scientists) and the scientist whose research they are supporting. The four short documentaries will be located in two kiosks in the final exhibition which is expected to be viewed by 250,000 – 300,000 (annual) visitors. The JBI Director was invited to speak on behalf of the value of research to the NPS and how it enriches the understanding of the visiting public. The interview focused on horseshoe crabs, which are a major highlight in the Jamaica Bay area, which attracts 100's of visitors to our interpretive walks and volunteers in data collection. The filmed interview will be featured as a segment of the exhibition kiosks.

Accomplishments through the RLC to *promote resource stewardship through partnerships*:



Dr. John Waldman, one of the project directors for the BioBlitz is also compiling the JBI Research Catalog



View down a walking area on Elders Point Marsh Restoration area



"Fresh Water Pond" in the Back Fort of Fort Tilden



Park managers review project submissions for the Envisioning Gateway Design Competition

Through a cooperative agreement initiated with the City University of New York in 2006 two major projects have been completed this year. Over a 24-hour period on the weekend of September 7-8 an all taxa **BioBlitz** took place in the Jamaica Bay Unit of Gateway National Recreation Area. Teams of scientists identified and catalogued over 665 species while also teaching the public about the wildlife that lives in the area. As well, research faculty from Queens College/CUNY served as project director for the development of a natural resource and social sciences **Research Opportunities Catalog** for the Jamaica Bay Unit of Gateway National Recreation Area. The catalog identifies opportunities to study species, habitats, processes, and ecological principles within an urban setting and assist park management in their efforts to better understand the park's natural resources and support resource protection actions.

The NPS, in cooperation with the Army Corps of Engineers has continued work on the high profile Elders Point Restoration Project. The JBI has played a crucial part providing lab, computer and meeting space as well as boat transportation to and from marsh locations. Throughout FY07, the JBI has partnered with the National Parks of New York Harbor to provide educational boat tours of the marsh areas involved in the project, as well as others, for local teachers.

As part of the on-going initiative by the New York City Department of Environmental Protection to produce a comprehensive Watershed Protection Plan for Jamaica Bay, the **Education and Outreach Committee**, has contributed by developing specific objectives to increase the public's understanding of the importance of Jamaica Bay and the impacts of individual actions on the health and sustainability of the bay. As a member of the committee staff from the Jamaica Bay Institute have assisted in identifying strategies or actions to address each objective. Currently, the multi-agency committee is developing a Jamaica Bay Educator's Resource Guide in order to support educational initiatives within the Jamaica Bay watershed.

In addition, the newly created **Jamaica Bay Stewardship Series** aims to support the educational objectives of both the National Park Service and NYC DEP's recently drafted Watershed Protection Plan by creating an informed citizenry while strengthening partnerships among existing groups. Initially the pilot phase of the Stewardship Series has focused primarily on NPS hosted programs, however we have already begun expanding the offerings included in the Series by inviting other organizations to join us as partners in the initiative.

The partnership of Van Alen Institute, National Parks Conservation Association, and Columbia University Graduate School of Architecture Planning and Preservation invited designers worldwide to play a vital role in Gateway National Recreation Area's future by generating innovative, visionary and compelling proposals that celebrate the unique potential of the park as both a significant regional resource and a national environmental treasure. Staff from the Jamaica Bay Institute supported the design process by providing background materials and information to design students at Columbia University, offering personal consultations, and hosting a review/critique session for park staff. Winning entries from the **Envisioning Gateway Design Competition** were presented to the National Park Service for potential inclusion in the next planning phase of Gateway's General Management Plan, which is scheduled for 2009.

The Jamaica Bay Institute and Columbia University's Center for International Earth Science Information Network (CIESIN) have continued to maintain and promote the **Jamaica Bay Research and Management Information Network** (JBRMIN) as the premier clearinghouse for research information pertaining to Jamaica Bay. Researchers, land managers, and interested citizens actively utilize the site to learn about the activities of numerous stakeholders. Last year the New York City Department of Environmental Protection (DEP) designated JBRMIN as the official site of the Jamaica Bay Watershed Management Plan and during 2007 the site served as the primary point of contact for the Jamaica Bay BioBlitz. The website's address is: http://nin.nbii.gov/jamaicabay/.

Oceans Initiative Conference Development

Responding to the US Ocean Action Plan, issued by the President in 2004, the National Park Service has launched a new initiative to provide an enhanced focus on ocean park marine resources. The National Park Service Ocean Park Stewardship Action Plan, announced in December 2006, commits to science-based management and conservation of marine resources, both natural and cultural, in the National Park System. Numerous federal, state and local agencies, and conservation-oriented organizations, share common mandates for protection of marine resources.

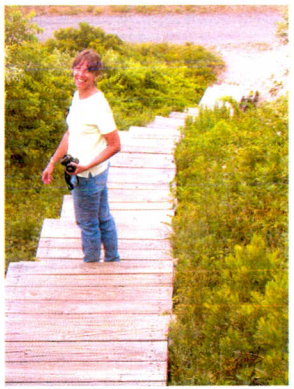
The Director of the JBI was selected as the Chair of the Workshop Development Team for the New York/ New Jersey Bight. The workshop will engage all relevant disciplines (natural and cultural resources, social sciences, protection/enforcement, education, and planning), key federal and state agencies, and non-government partners (maximum 100 participants) in regard to the ***Oceans Initiative*** concept and the ***Seamless Network of Parks*** vision. This workshop will facilitate efforts in identifying: a) common stewardship responsibilities; b) priority marine resource threats that confront each agency; c) common priority research, inventory and monitoring needs, d) environmentally sensitive resources under stewardship of each agency, with a focus on common priority resources; and, e) the capacity for sharing of resources (e.g., personnel, facilities, monies, and expertise), potential obstacles or concerns, (e.g., administrative, bureaucratic or political/societal barriers). Critical to the success of this workshop is the ability to highlight opportunities among specific parks, refuges, sanctuaries, reserves and/or state/local conservation areas that will embrace the seamless network concept.

The conference is scheduled for March 2008, and in partnership with Rutgers University "Jacques Cousteau National Estuarine Research Reserve" (member of the CESU), the JBI is well on its way in developing an informative and engaging workshop, which will set the stage for other similar workshops across all coastal regions of the U.S.



2. Impacts to Accomplishments:

Enhancements:



- After years of set backs in filling the Science Education Coordinator (GS-11, 4 year term), Nancy Khan was hired and began on January 8, 2007. Nancy is highly qualified and has been a great asset to the JBI. Her main duties include community outreach and education as well as a myriad of other valuable tasks. Her contributions have been immeasurable.
- The breakroom adjacent to the JBI Laboratory was updated and has been used by both researchers and staff alike.
- Educational photos/displays have been placed in the hallways of the JBI building and have elicited many questions and compliments from visitors as well as staff.
- The Jamaica Bay Unit has committed to move Researcher Housing to another house with an extra bedroom that bring the total availability of beds from 5 to 7.
- A variety of field equipment was purchased for the BioBlitz that will continue to benefit both permitted researchers as well as NPS Resource and Educational staff.
- An effort to revamp the JBI website has begun and should be completed during FY08.

Setbacks:

- $10,400 was pulled from JBI's budget for park operation shortfalls.
- The **facility** where the JBI is currently situated is not the most beneficial venue for our mission and functions. We currently reside in old officers quarters on Floyd Bennett Field. / co-located with Jamaica Bay Unit Headquarters. As the JBI program develops, we see the immeasurable value in "location, location, location". The Coast Guard Station, a building owned by Gateway, is currently being evaluated in the cost of rehab and the types of concessions it can potentially host. Staff of the JBI has routinely expressed the many indisputable reasons for our relocation to this building. The building is located next to the water and has docking capabilities for the JBI Research Vessel, it offers a great amount of space for offices, a commissary, dorm and lecture rooms, and possibly auditorium and display space. This location called Riis Landing is being considered as a ferry station for commuters and visitors to and from Queens and Manhattan, which would greatly advance the publics awareness of the Research Learning Center and the many collaborative projects underway in the Metropolitan community. The location and space is ideal for facility/program sharing partnerships with city and state agencies, as well as university collaboration, such as with The City University of New York (also a member of the CESU). Rehabilitation requires an investment of approximately $800,000. JBI sees the ability to obtain such funds in partnership with city agencies. However, the key obstacle is Gateway's interest in housing a Concession with an adequate enough income generated to sustain and maintain the property. We believe such a scenario can occur in time, however, some latitude and investment would be needed upfront, for the JBI to attract the quality partners we would want to co-habitate with.
- Having only partial involvement in the scientific **permitting process** limits the communication and potential collaborations the JBI could have with permit applicants. JBI has been very successful in connecting with researchers conducting work in the park, but such connections would be greatly facilitated and supported if JBI was identified as the permit processing entity for the Gateway NRA. Some advancement has been made, as we are now the primary evaluator and signatory of permits in the Jamaica Bay Unit.

3. Vignettes:



JBI Research Vessel Operator



Tidal creek at Elders Point Marsh



Carolina wren at the Wildlife Refuge

- **Facilitating use of parks for scientific inquiry**

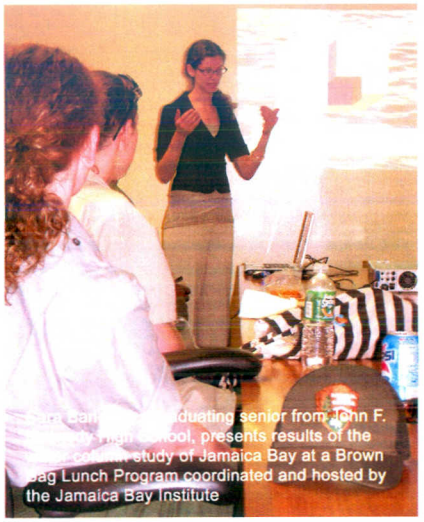
JBI Research Vessel – The JBI has greatly contributed to the progress of research and education in and throughout Jamaica Bay. The JBI Research Vessel is available for use by permitted researchers as well as partners and park staff from May until November (or as weather permits). During FY07, the Research Vessel was utilized approximately 70 days for a variety of projects including the high profile Elders Point Marsh Restoration project in cooperation with the Army Corps of Engineers, New York City Audubon, National Parks of New York Harbor Education Center, and the City University of New York, Queens College.

Research Catalogue - Through efforts by JBI and the North Atlantic Coast Cooperative Ecosystem Studies Unit, The City University of New York was recruited into the CESU. Our first task order under this master cooperative agreement was to develop a natural resource and social sciences research opportunities catalog for the Jamaica Bay Unit of Gateway National Recreation Area. Such a catalogue helps steer further scientific inquiry into this complex, stressed, but resilient urban ecosystem. This catalog serves three main objectives:

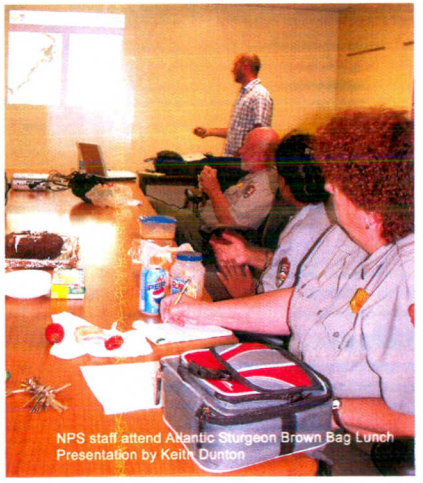
- To identify research needs that will directly assist park management in their efforts to better understand the park's natural resource and support resource protection actions.
- To identify opportunities to study species, habitats, processes, and ecological principles within an urban setting: and the connections the metropolitan community has to these.
- To identify thematic research topics that transcend Jamaica Bay and would have application in all urban estuaries both nationally and internationally.



Jamaica Bay Wildlife Refuge



graduating senior from John F. ...ool, presents results of the ...study of Jamaica Bay at a Brown Bag Lunch Program coordinated and hosted by the Jamaica Bay Institute



NPS staff attend Atlantic Sturgeon Brown Bag Lunch Presentation by Keith Dunton



- **Supporting science-informed decision making**

Brown Bag Lunch Series – These are informal presentations given by researchers, partners, and park staff to park employees and cooperators. The series encourages increased dialogue among staff of different Gateway units and divisions with investigators, inspires collaborations, and facilitates informed decision-making. The series is open to the public and attendees have included park superintendents, supervisory rangers, resource management staff, park interpreters, educators, administrative staff, academic partners, state or city agencies, research institutions, and volunteers. Programs delivered this year have included 1) a "Retrospective Analysis of Aquatic Conditions in Jamaica Bay" by Misses Ayushi Singh and Sara Barlowe, graduating seniors of John F. Kennedy High School who collaborated with Dr. Alan Rice from the American Museum of Natural History and New York City Department of Environmental Protection and 2) the "Oceanic Distribution, Abundance, and Habitat Concentration of Sub-adult Atlantic Sturgeon in the New York Bight" by Keith Dunton et. al. who found that the area may warrant protection as essential fish habitat.

Horseshoe Crab compendium change - Park policy has been altered as a direct outcome of research findings concerning dwindling numbers of horseshoe crabs in Gateway NRA. Data collected from permitted research was reported to park managers as **Briefing Statement** which resulted in the park superintendent updating the compendium. Horseshoe crab harvesting is no longer permitted in the Jamaica Bay Unit of Gateway NRA.

Communicating relevance and providing access to research knowledge

Jamaica Bay Plight and Promise Conference - This first joint conference for researchers and educators brought to light the impacts of natural events as well as anthropogenic activities on Jamaica Bay and the broader Hudson River/ New York Bay estuary. Made possible by collaboration between Gateway NRA's Jamaica Bay Institute, the National Parks of New York Harbor Education Center, Brooklyn College, and the College of Staten Island (CUNY) the conference provided access to up-to-date scholarship and research that is critical to designing educational programs and fostering stewardship of our natural and cultural resources. Fourteen field scientists from National Park Service, Hofstra University, St. John's University, McGill University, and the City University of New York, presented findings of their research work in Jamaica Bay to date and painted a cohesive picture portraying the plight of one of the most rich and diversified ecosystems on the East Coast.

By way of the recently launched **Jamaica Bay Stewardship Series**, the Jamaica Bay Institute is proud to recognize individuals for their increased understanding and knowledge of issues affecting the ecological health of the bay. The mostly free series of lectures, excursions, and field service activities offers an opportunity for participants to progress towards becoming a recognized steward of Jamaica Bay by receiving a stewardship stamp for each event they attend. On an annual basis the stamps can collectively be redeemed with the Institute for Certificate of Achievement and recognition award. To date, the pilot phase of the Stewardship Series has focused on NPS hosted programs and has received a positive response from program participants who will be receiving their Certificates at the end of the year. The series is promoted to a widespread and diverse audience with the goal of engaging people from all communities and backgrounds in the work and future of Jamaica Bay.

- **Promoting resource stewardship through partnerships**

Jamaica Bay BioBlitz - Over a 24 hour period in early September the first-ever Jamaica Bay BioBlitz succeeded in highlighting the natural resources of Jamaica Bay by bringing together over 270 community volunteers and scientific experts to create a snapshot of the biodiversity found in and around the bay. Throughout the event, field teams departed from the base-camp at the Jamaica Bay Wildlife Refuge to explore the less studied areas of the park such as Fort Tilden and Floyd Bennett Field in order to identify as many organisms as possible and expand the already extensive list of species known to exist in the park. Educational activities such as ranger-led walks, interactive displays, creative workshops, and research laboratory stations allowed participants to get an up-close look at some of the 665 species that were documented during the event. Organized as a partnership between the Jamaica Bay Institute (Gateway NRA) and Queens College (CUNY), the event provided an opportunity for the public to contribute to a scientific inventory while learning about the natural history of species found in the area.

- **Promoting resource stewardship through partnerships (Cont.')**

The Jamaica Bay Institute and Columbia University's Center for International Earth Science Information Network (CIESIN) have continued to maintain and promote the **Jamaica Bay Research and Management Information Network** (JBRMIN) as the premier clearinghouse for research information pertaining to Jamaica Bay. Researchers, land managers, and interested citizens actively utilize the site to learn about the activities of numerous stakeholders. Originally funded through collaboration between the Jamaica Bay Institute and the USGS National Biological Inventory Infrastructure the site has broadened its content and added features to increase its functionality. Specifically, the site served as the primary point of contact for the Jamaica Bay BioBlitz with CIESIN staff contributing to page layout, database design, and online registration management. As well, the site added a new feature highlighting educational activities for K-12 students.

4. Collaboration across the Challenge:

All three staff members from the Jamaica Bay Institute participated in **Annual Meeting of the NPS Research Learning Centers (RLC's)** that coincided with the biennial George Wright Society Conference in April 2007. The purpose of this meeting was to bring together staff from all 17 active Research Learning Centers in the National Park System for a Strategic Planning Workshop to discuss current status and future goals for the network. Discussion focused on the unique nature of RLCs and how they are individually and collectively helping to attain and communicate science and research for parks. After drafting a vision statement, identifying RLC operational models, and building a logic model three work groups were developed to carry forward ideas from the meeting and outline strategic actions. A second network-wide meeting is planned for January 2008 to complete the final draft of a 5 year strategic plan for the RLC network.

Staff of the Jamaica Bay Institute traveled to Shelburne Farms and Marsh-Billings-Rockefeller National Park in Vermont to meet with personnel from the Research Learning Center and Conservation Studies Institute each respectively housed at the sites previously mentioned. During the two-day **Site Visit**, staff toured facilities, exchanged programmatic ideas, and explored possible partnerships.

The Jamaica Bay Institute in cooperation with the North Atlantic Coast Cooperative Ecosystem Studies Unit has **recruited the City University of New York into the CESU**. We have established two task orders under the master cooperative agreement: 1. Develop a natural resource and social sciences research opportunities catalog for the Jamaica Bay Unit of Gateway National Recreation Area (jointly funded by North Atlantic Coast CESU and JBI); and, 2: Conduct a Jamaica Bay Bio Blitz Summer 2007 focusing on aquatic vegetation and invertebrates (funded solely by JBI). Both projects have been completed. The public engagement value and enhancement of research and other collaborative opportunities exceeded all expectations. Our collaborations were deemed a resounding success by all involved.



(left) Shelburne Farms Learning Center staff showing JBI staff plans for a new education center and dorm space



(left and right) JBI staff getting a tour of Shelburne Farms educational facilities



(right) JBI Director, Kim Tripp, and Marsh-Billings RLC Director, Delia Clark, exchange program ideas



5. GPRA:

Staffing and Facilities
Ia1A, IaIB, Ia2A, Ia2B, Ia04, Ia01A, Ib01, Ib2E, Ib3, IIa1, IIb1X, IVa, IVa0, IVb1, and IVb2A

Research Permitting and Support
Ia1A, IaIB, Ia2A, Ia2B, Ia04, Ia01A, Ib01, Ib2E, and Ib3.

Restoration Projects
Ia1a, Ia01A, Ib01, IIb1, IIb1X, IVa, IVa0, IVb1, IVb2A, and IVb2B.

Partnerships, Internships, and Volunteers
Ia1a, Ia01A, Ib01, Ib3, IIb1, IIb1, IIb1X, IVa, IVa0, IVb1, and IVb2A

Website and Information Dissemination
Ia1a, Ia01A, Ib01, Ib3, IIb1, IIb1X, IVa, IVa0, IVb1, and IVb2A

Science for the Public
IIa1, IIb1X, IIb1, IVb1, and Ia04.



Ron and Jean Bourque clean nest boxes as part of the Cornell Tree Swallow monitoring program that the JBI participates in annually and encourages as part of the citizen science effort.

6. Plans:

- Update and expand JBI facilities through partnerships and outside funding
- Increase partnership funding that is more program based
- Continue development of citizen science programs and collaboration with other park educational programs
- Update and expand Jamaica Bay Resource Library
- Revamp and update JBI website
- Further develop and expand the Jamaica Bay Student Fellowship Program:

  The JBI has developed a Cooperative Agreement with Eastern National entitled: The Jamaica Bay Student Fellowship Program. This program will encourage graduate students to focus their research questions on the Jamaica Bay Ecosystem. The partnership will also include sponsoring conferences which highlight research projects occurring in Jamaica Bay and the greater Hudson Raritan Estuary. Narrative materials will be produced from these conferences with possible opportunities to sell such publications at the Eastern National venues throughout Gateway and other National Parks of New York Harbor sites. We anticipate that this program will greatly enhance the interest of academia in conducting research in Jamaica Bay, as well as, increase public awareness of Jamaica Bay.

7a. RLC Housing Table – FY 2007

Type of Housing	$ / Night @ # Nights	Total Cost	Equivalent Private Lodging	$ / Night @ # Nights	Total Private Value	Savings to Researchers and Science Communicators
Shared	$10/242	$2,420	Holiday Inn	$157/night	$37,994	$37,994-$2,420
			Comfort Inn	$199/night	$48,158	
			Best Western	$285/night	$68,970	
			Courtyard JFK	$299/night	$72,358	$72,358-$2,420
Total		$2,420				**$35,574 to $69,938**

7b. Other savings to researchers:

OTHER SAVINGS TO RESEARCHERS:

Jamaica Bay Institute offers housing, offices, lab space, and most importantly: the various natural habitats of Jamaica Bay including salt marsh, grasslands, and barrier beach are all within walking or short driving distance of JBI facilities. This close proximity enables researchers to maximize the use of their time and project funds. Researchers also save by having computer and phone access, as well as, use of the JBI Research Vessel that is currently offered at no expense. JBI also purchased field equipment such as cameras, water quality test equipment and presentation materials that aid in data collection and presentations. The JBI housing also includes a fully equipped kitchen and laundry area saving researchers both time and money.

7c. Partnership Table – FY 2007

Name of Partner	Level (national, regional, state, local)	Focus (research, education, restoration of historic structures, etc.)	Type (Formal or Informal)
Wildlife Trust	International	Research	Informal- being formalized
NYC Audubon Society	Local	Research, Education	Informal
CIESIN, Columbia University	Regional	Education, Web Development	Formal
CERC, Columbia University	Local	Research	Informal
NYU, The Steinhardt School of Education	Local	Research and Education	Informal
The Lab School	Local	Education	Informal
The Rockaway Artist Alliance	Local	Education	Informal
NY SeaGrant	Regional	Research and Education	Formal
Wild Metro	Regional	Research	Informal
NYC DEP	City	Research/restoration	Formal
NYDEC	State	Research/restoration	Formal
USACOE	National	Research/restoration	Formal
CUNY/CESU	City	Research	Formal
Columbia U.	City	Research	Formal
St. Johns U.	City	Research	Formal
Wild Metro	International	Research/education	Informal
NJ Audubon	Regional	Research/education	Formal
NPNH Ed Center	City	Education	Formal
Brooklyn College	City	Research/ Education	Formal
SUNY Stonybrook	State	Research	Formal
NY/NJ Baykeeper	Regional	Education	Formal
NY/NJ Harbor Estuary Program	Regional	Research/Education	Informal
National Parks Conservation Association	National	Education	Informal
NYC Parks and Recreation	City	Research/ Education	Informal
Brooklyn Botanical Garden	City	Education	Informal
Bates College	Regional	Research/ Education	Informal
Queens Botanical Garden	Local	Research/Education	Informal
American Littoral Socitey	National	Education/Restoration	Informal
National Geographic	National	Research/Education	Informal
Brooklyn Children's Museum	Local	Research/Education	Informal
New York Aquarium	Local	Research/Education	Informal
GLOBE	International	Research/Education	Informal
Biology Teachers Association	State	Education	Informal
GAIA Institute	Local	Restoration/Education	Informal

7d. Value to Partners: quotes

Provide one or more quotes from partners on the benefits of your RLC. Include the source.



"Since 2004, the Jamaica Bay Institute offered me key support on bird-related research projects I have lead in Floyd Bennett Field and elsewhere in Jamaica Bay. From housing, research facilities, and boat transportation during the field season, to a prompt and straightforward research permit process, to organizing regional conferences and public events focused on the vital conservation issues within the Bay -- JBI made it possible for me to work efficiently and effectively in this densely populated urban estuary, and share my research and experiences with both academic and public audiences. Kim Tripp, Jessica Browning, and Nancy Khan should be proud of what they have built within the first few years of the Institute's existence, and I would expect only positive developments in the future."

Andrew Bernick, Ph. D. (CUNY-Graduate Center '07)
Ecologist, AKRF, Inc



""I have found the Jamaica Bay Institute to be an important emerging player in the local natural resources management world and a useful presence in aiding my own endeavors. Jamaica Bay is the most urbanized National Park land, as such, serves as a model for how nature can be preserved and showcased at the edge of a great city. Last year the Institute held an excellent conference on research in the Bay. This year I participated in a highly successful BioBlitz that gathered scientists, students, the lay public, and media for this common cause. The Institute also saved the day for me this summer when I was having trouble arranging to bring a New York Times reporter to cover my student's research on a nearby NPS-managed island. Kim Tripp made the Institute's vessel available, which resulted in a feature story. I applaud the recent NPS initiative of forming institute's such as these to better link the management and research worlds in NPS holdings and am pleased by the progress to date shown by the Jamaica Bay Institute."

John Waldman, Ph. D. (CUNY- Professor, Brooklyn College)
Biology Dept. - Ecology, Evolution and Behavior

7e. RLC Research Tables – FY 2007

RPRS at RLC parks and the level of RLC facilitation

	Permit #	Title/Description	Level of RLC Involvement
1	GATE-2007-SCI-0024	Asian Longhorned Beetle (Anoplophora glabripennis): Surveys of 11 Genera of Tress to Detect and Plan Eradication of this Alien Invasive Beetle	3
2	GATE-2007-SCI-0013	Water Quality in Jamaica Bay: a Hands on Learning Experience for NYC School Teachers	3
3	GATE-2007-SCI-0005	Educational Collecting: Benthic Invertebrate Study	3
4	GATE-2007-SCI-0009	New York City Audubon Harbor Herons Project: Nesting Surveys 2007-2011	3
5	GATE-2007-SCI-0019	Neighborhood Nature - Touch Tank at the Brooklyn Childrens Museum	3
6	GATE-2007-SCI-0004	Inventory of Odonata (Dragonflies and Damselflies) at Fire Island National Seashore, Gateway National Recreation Area and Sagamore Hill National Historic Site, N.Y.	3
7	GATE-2007-SCI-0025	Marine Invaders of Jamaica Bay, NY: Citizen Science by Students and Teachers	3
8	GATE-2006-SCI-0006	Elders Point Marsh Seed Planting. Overall Restoration of 50 to 150 acres of Marsh Islands within Jamaica Bay. Collection of Spartina seed from the Marsh Islands for Planting	3
9	GATE-2007-SCI-0021	Evaluation of the Effects of Chemical Contaminants on Marine Organisms in Gateway National Recreation Area	3
10	GATE-2005-SCI-0028	Jamaica Bay Marsh Islands Ecosystem Restoration Monitoring Program	3
11	GATE-2005-SCI-0026	Survey of Raccoons and other Mammals	3
12	GATE-2005-SCI-0027	Reproduction Ecology of Diamondback Terrapins	3
13	GATE-2005-SCI-0023	Diamondback Terrapin Movements, Population Size, and Habitat use in the Hudson River Estuary Including Gateway NRA	3
14	GATE-2005-SCI-0016	Diet Study of the Diamondback Terrapin	3
15	GATE-2006-SCI-0007	Long-Term Monitoring of Ospreys and Barn Owls	3
16	GATE-2007-SCI-0020	Foraging Ecology and Seasonal Movements of Mute Swans in the lower Hudson River and New York Harbor	3
17	GATE-2004-SCI-0019	Census of the Jamaica Bay Laughing Gull Nesting Colony	3
18	GATE-2004-SCI-0001	Wintering Northern Saw-whet Owls (Aegolius acadius) on the New York barrier beach	1

	Permit #	Title/Description	Level of RLC Involvement
19	GATE-2007-SCI-0011	The Birds of Floyd Bennett Field	3
20	GATE-2006-SCI-0005	The Double-Crested Cormorants of New York Harbor: Population Changes, Feeding Behavior, and Inter-specific Competition	3
21	GATE-2006-SCI-0014	Horseshoe Crab Spawning Activity Survey	3
22	GATE-2006-SCI-0004	Assessment of Potential Impacts to Biodiversity in the NY Harbor Heronries by Double-crested Cormorants	3
23	GATE-2007-SCI-0022	Floyd Bennett Field Mitigation Site: Soil samples for FBF northern shore	3
24	GATE-2005-SCI-0030	Breeding Bird Surveys for Gateway NRA	3
25	GATE-2005-SCI-0033	Accumulation and Toxicity of Metals (e.g., cadmium, mercury, zinc and silver) in Marine Organisms: Ongoing Laboratory studies.	1
26	GATE-2007-SCI-0002	Anthropogencic PAH distribution in the sediments found within Gateway NRA as Determined by Thermal Extraction GC/MS	2
27	GATE-2007-SCI-0010	Impact of Dissolved Oxygen and Ammonia on the Viability of Ichthyoplankton and Benthos Relative to Water Quality Attainment Areas in Jamaica Bay, NY	3
28	GATE-2007-SCI-0015	Ecology of Diamondback Terrapins: Predation and Recruitment: (Understanding the Factors Affecting the Reproduction and Survivorship)	3
29	GATE-2006-SCI-0010	Effects of Urbanization on the Belowground Structure and Soil Respiration Rates of Salt Marsh: Comparison of Smooth Cordgrass (Spartina alternaflora) in Disturbed and More Stable Strands within Jamaica Bay, NY.	1
30	GATE-2004-SCI-0025	Locating Potential Eelgrass Restoration Sites in Jamaica Bay, NY	2
31	GATE-2006-SCI-0016	Double Crested Cormorant (Phalacrocorax auritus) Colonies May Depress Litter Biodiversity in the New York Harbor	3
32	GATE-2007-SCI-0018	Jamaica Bay NY BioBlitz	3
33	GATE-2005-SCI-0020	Efficient Surveillance and Target Management of West Nile Virus	3
34	GATE-2003-SCI-0004	Studies of Juvenile Fishes, Marine Invertebrates, and Macroalgae.	1
35	GATE-2002-SCI-50-DNR	Monitoring and Restoration of Estuarine Systems in Jamaica Bay	3
36	GATE-2003-SCI-0001	Establishement of a Cooperative New Jersey Coastal Network Node at Gateway National Recreation Area	2
37	GATE-2003-SCI-0002	Juvenile Striped Bass Study	1
38	GATE-2005-SCI-0011	Predicting and Monitoring the Spread of Marine Invasive Species. Development of approaches and application to the European green crab (Carcinus maenas) and the Asian shore crab (Hemigraspus sanguineus)	3

	Permit #	Title/Description	Level of RLC Involvement
39	GATE-2002-SCI-15-DNR	Monitoring and Restoring Estuarine Systems in Jamaica Bay	3
40	GATE-2007-SCI-0012	Density and Distribution of the Asian Shore Crab (Hemigrapsus sanguineus) in Jamaica Bay, NY	3
41	GATE-2006-SCI-0015	Diet Study of the Diamondback Terrapins of JBUNY	3
42	GATE-2003-SCI-0011	Operating a MAPS (Mapping Avian Productivity and Survival) Bird-banding and Observation Station at Fort Tilden & Great Kills Park	3
43	GATE-2003-SCI-0002	Juvenile Striped Bass Study (Tag and Release Striped bass of Various Age Classes and Estimate Annual Survival Rates by Age for Ages 1,2 and older Striped Bass)	2
44	GATE-2006-SCI-0008	The Moths of Jamaica Bay	3
45	GATE-2006-SCI-0013	Microgeographic Variation of Sex Ratio in the Atlantic Silverside, Menidia menidia	3
46	GATE-2006-SCI-0019	Sea Level Rise in New York harbor area: A GIS Model for Identifying the Potential for Submerged Prehistoric Cultural Resources	2
47	GATE-2005-SCI-0009	Long- and Short-term Tradeoffs in Response to Burial of he Common Dune Grass, Ammopila Breviligulata	3
48	GATE-2004-SCI-0018	Deployment of 25 MHz High Frequency CODAR Seanode System	2
49	GATE-2006-SCI-0012	Pragmites australis Ecological Role in Watershed Wetlands, a Managers Nightmare?: Secondary Production of Finfishes	3
50	GATE-2005-SCI-0017	Survey of Invertebrates and Related Marsh Organisms in Jamaica Bay	3
51	GATE-2002-SCI-46-DNR	Field Trips and Collecting at Fort Tilden and Breezy Point for Educational Purposes by Kingsborough Community College	2
52	GATE-2006-SCI-0003	Seed Collection of Common Native Plants for the Purpose of Enhancing Ecological Restoration in the Greater NYC Region	1
53	GATE-2006-SCI-0018	Water Column Profiles in Grassy Bay (Jamaica Bay): Summer 2006	2
54	GATE-2004-SCI-0031	Salt Marshes, Subtidal Systems and Water Inlets in the JBU, NPS	3
55	GATE-2001-SCI-26-DNR	Field Trips and Collecting at Fort Tilden and Breezy Point for Educational Purposes by Kingsborough Community College	2
56	GATE-2001-SCI-27-DNR	Field Trips and Collecting for Exhibits and Other Educational Purposes by the New York Aquarium	2

b) Other non-permitted research	
Title/description	**Level of RLC involvement**
Avian monitoring of the grassland areas of Floyd Bennett Field.	3
SEANet and avian mortality study	3

7f. Please sum the number of permits/projects in each category from table 8e above.

RLC involvement level	*Total permits and other non-permitted research*
0	*0*
1	*6*
2	*10*
3	*42*
TOTAL Projects/Permits	*58*

7g. Literature citations:

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http://www.nero.noaa.gov/StateFedOff/grants/Anadromous/NA05NMF4051085.pdf

Walter, Steve. Jamaica Bay Moth Survey: 2006-2007 Update. New York: National Park Service, 2007.

7h. RLC Student Table – FY

Degree Being Sought	Number of students/VIP	Examples of Fields of Research	Example of Research Topics	Types of Products
Post-Masters				
Masters	6	Evolutionary biology, Fisheries Science, Aquatic Invasives	Avian Ecology; West Nile Research, Diamond-backed terrapin ecology, anthropogenic impacts on aquatic resources; Asian Shorecrab Invasion	Presentations, Interim reports, Public bulletins
Ph.D.	1	Avian Ecology, Evolutionary Biology	Avian banding/monitoring: Black Crowned Night Heron distribution	Presentations, Reports and technical expertise
Bachelors: capstone	1	Distribution Ecology	Domestic feline distribution and ecological impacts	Presentations, Reports
Bachelors	24	Distribution and Population Ecology	Population distribution of various taxa among the Jamaica Bay Unit of Gateway NRA	Species checklist, Reports
Internships	2	Avian Ecology	Bird Surveys of Floyd Bennett Field, Gateway NRA	Reports, Presentations
VIP	274	BioBlitz-all taxa inventory; Library science	Importance & documentation of local biodiversity; library science	Species checklist, Summary report, Public presentations

7i. RLC Center Communication Table – FY 2007

Type of Product or Event	Audience**	Title of Product/Event	Program Objective	Number of Scientists Involved or Contributing	Type of Recipients, Benefactors, or Participants	Number of Recipients, Benefactors, or Participants	Length of Event (hours)	Total Contact (# of participants x hours)
BioBlitz	PTMS	Jamaica Bay BioBlitz	Stimulate interest and educate the public as well as create a baseline species check list	30	Public, scientists, politicians, park staff, teachers and students of all ages	273 participants & 50,000* benefactors	24 hrs.	1,206,552
Conference	PTMS	Plight & Promise: A Sharing of Research Perspectives	Connect teaching community and scientific community	15	Students, teachers, scientists and park staff	50*	6 hrs.	300
Educational Series	PTMS	Stewardship Series	Increase awareness of issues affecting Jamaica Bay	6	General public	150*		150
Conference	PTMS	Harbor Herons	Relate research findings and future plans between agencies, the public and park staff		Agency representatives, park staff and interested public	40*	16 hrs.	640
Film	PTMS	Brooklyn Children's Museum	Develop an exhibit highlighting Neighborhood Nature	50	Children, Adults, general public, Teachers, Students	250,000 (per year)		250,000
Publication/ Catalogue	PTMS	Research Catalogue	Develop a catalogue of research needs in natural and social sciences	12	Students, Scientists, Teachers, Park Staff, Citizens	12 (benefactors, recipients 1,000)		1,012
Brown Bags Lunch Seminars	PTMS	Various Science Titles (3 talks in FY07)	Raise awareness of park science and resource issues	4	Park Staff, Local Community	50*	6 total	300
Briefing Statement	MS	Piping Plover	Inform park management and staff of current conditions	3	Park staff and management	20*		
Briefing Statement	MS	Horseshoe Crab	Inform park management and staff of current conditions	2	Park staff and management	20*		
Executive Summary	MS	Floyd Bennett Field Erosion Assessment Study	Educate and summarize study for park/program managers	2	Park Staff	20*		

***estimates noted w/ an ***

**** P=public, T=Teachers or students, M= Mgmt or Staff , S=scientists or professional**

7j. *OCEAN AND COASTAL RLCs ONLY (Including Great Lakes)*

	Descriptive Project Title	NPS Funding Amount	Partner Funding Amount	Region	RLS	Park	Project Contact	PMIS # (if applicable)
1	Floyd Bennett Field Mitigation Site: Soil Samples from FBF Northern Shore			Northeast Region	Jamaica Bay Institute	Gateway NRA	Elizabeth Nemeth	
2	Foraging Ecology and Seasonal Movements of Mute Swans in the Lower Hudson River and New York Harbor			Northeast Region	Jamaica Bay Institute	Gateway NRA	Susan Elbin	
3	Evaluation of the effects of Chmeical Contaminants on Marine Organisms in Gateway National Recreation Area			Northeast Region	Jamaica Bay Institute	Gateway NRA	Anne McElroy	
4	Water Quality in Jamaica Bay: a Hands on Learning Experience for NYC School Teachers			Northeast Region	Jamaica Bay Institute	Gateway NRA	Cheng Zhongqi	
5	Density and Distribution of the Asian Shore Crab (*Hemigrapsus sanguineus*) in Jamaica Bay, New York			Northeast Region	Jamaica Bay Institute	Gateway NRA	Danny Roman	
6	Impact of Dissolved Oxygen and Ammonia on the Viability of Ichthyoplankton and Benthos Relative to Water Quality Attainment Areas in Jamaica Bay, New York	$0.00	$1,000,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Thomas Gulbransen	
7	Educational Collecting: Benthic Invertebrate Study			Northeast Region	Jamaica Bay Institute	Gateway NRA	Dan Meharg	
8	Sea Level Rise in New York Harbor Area: A GIS Model for Identifying the Potential for Submerged Prehistoric Cultural Resources	$0.00	$16,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Curtis Larsen	
9	Double Crested Cormorant (*Phalacrocorax auritus*) Colonies May Depress Litter Biodiversity in the New York Harbor	$0.00	$0.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	James Danoff-Burg	

	Descriptive Project Title	NPS Funding Amount	Partner Funding Amount	Region	RLS	Park	Project Contact	PMIS # (if applicable)
10	Microgeographic Variation of Sex Ratio in the Atlantic Silverside (*Menidia menidia*)	$0.00	$300.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	David Conover	
11	Horseshoe Crab Spawing Acitivy Survey	$0.00	$5,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Matthew Sclafani	
12	The Double-Crested Cormorants of New York Harbor: Population Changes, Feeding Bahvior, and Inter-specific Competition	$0.00	$0.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	John Waldman	
13	Effects of Urbanization on the Belowground Structure and Soil Respiration Rates of Salt Marsh: Comparison of Smooth Cordgrass (*Spartina alternaflora*) in Disturbed and more Stable Strands within Jamaica Bay, New York			Northeast Region	Jamaica Bay Institute	Gateway NRA	Cathleen Wigand	
14	Elder Point Marsh Seed Planting: Restoration of over 50 to 150 acres of Marsh Islands within Jamaica Bay. Collection *Spartina* seed from the Marsh Islands for Planting			Northeast Region	Jamaica Bay Institute	Gateway NRA	Leonard Houston	
15	Assesment of Potential Impacts to Biodiversity in the NY Harbor Heronries by Double-Crested Cormorants	$0.00	$4,200.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Susan Elbin	
16	Accumulation and Tozicity of Metals (e.g., cadmium, mercury, zinc and silver) in Marine Organisms: Ongoing Laboratory Studies	$0.00	$3,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	William Wallace	
17	Jamaica Bay Marsh Islands Ecosystem Restoration Monitoring Program			Northeast Region	Jamaica Bay Institute	Gateway NRA	Patti Rafferty	

	Descriptive Project Title	NPS Funding Amount	Partner Funding Amount	Region	RLS	Park	Project Contact	PMIS # (if applicable)
18	Predicting and Monitoring the Spread of Marine Invasive Species. Development of approaches and application to the European Green Crab (*Carcinus maenas*) and the Asian Shore Crab (*Hemigrapsus sanguineus*)	$0.00	$50,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	David Delany	
19	Survey of Invertebrates and Related Marsh Organisims in Jamaica Bay			Northeast Region	Jamaica Bay Institute	Gateway NRA	David Franz	
20	Locating Potential Eelgrass Restoration Sites in Jamaica Bay, New York	$0.00	$5,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Yiyi Wong	
21	Deployment of 25 MHz High Frequency CODAR Seanode System	$0.00	$1,500,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Hugh Roarty	
22	Wintering Northern Saw-whet Owls (*Aegolius acadius*) on the New York Barrier Beach	$0.00	$3,338.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Gertrude Battaly	
23	Establishment of a Cooperative New Jersey Coastal Network Node at Gateway National Recreation Area			Northeast Region	Jamaica Bay Institute	Gateway NRA	Thomas Herrington	
24	Juvenile Striped Bass Study (Tag and release Striped Bass of various age classes and estimate annual survival rates by age for ages 1,2 and older Striped Bass)	$0.00	$75,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Julia M. Brischler	
25	Studies of Juvenile Fishes, Marine Invertebrates, and Macroalgae	$0.00	$0.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Thomas Noji	
26	Monitoring and Restoring Estuarine Systems in Jamaica Bay			Northeast Region	Jamaica Bay Institute	Gateway NRA	Martin Schreibman	

	Descriptive Project Title	NPS Funding Amount	Partner Funding Amount	Region	RLS	Park	Project Contact	PMIS # (if applicable)
27	*Phragmities australis* Ecological Role of in Watershed Wetlands, a Managers Nightmare?: Secondary Production of Finfishes	$0.00	$80,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Michael Weinstein	
28	Jamaica Bay BioBlitz	$30,000.00	$2,500.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Gillian Stewart	
29	Neighborhood Nature- Touch Tank at the Brooklyn Children's Museum			Northeast Region	Jamaica Bay Institute	Gateway NRA	Sara DeAngelis	
30	Ecology of Diamondback Terrapins: Predation and Recruitment: (Understanding the Factors Affecting the Reproduction and Survivorship)	$0.00	$5,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Russell Burke	
31	New York City Audubon Harbor Herons Project: Nesting Surveys 2007-2011			Northeast Region	Jamaica Bay Institute	Gateway NRA	Andy Bernick	
32	Inventory of Odonata (Dragonflies and Damselflies) at Fire Island National Seashore, Gateway National Recreation Area and Sagamore Hill National Historic Site, NY			Northeast Region	Jamaica Bay Institute	Gateway NRA	Annette Olivera	
33	Diet Study of Diamondback Terrapins of Jamaica Bay	$0.00	$3,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Russell Burke	
34	Seed Collection of Common Native Plants for the Purpose of Enhancing Ecological Restoration in the Greater NYC Region			Northeast Region	Jamaica Bay Institute	Gateway NRA	Timothy Chambers	
35	Long-term Monitoring of Ospreys and Barn Owls			Northeast Region	Jamaica Bay Institute	Gateway NRA	Christopher A. Nadareski	
36	Efficient Surveillance and Target Management of West Nile Virus	$106,715.00	$105,000.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Howard Ginsberg	

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37	Reproduction and Ecology of Diamondback Terrapins			Northeast Region	Jamaica Bay Institute	Gateway NRA	Russell Burke	
38	Diamondback Terrapin Movements, Population Size, and Habitat Use in the Hudson River Estuary including Gateway National Recreation Area			Northeast Region	Jamaica Bay Institute	Gateway NRA	Russell Burke	
39	Long- and Short-term Tradeoffs in Response to Burial of the Common Due Grass, *Ammopila breviligulata*	$0.00	$5,690.00	Northeast Region	Jamaica Bay Institute	Gateway NRA	Michael Peek	
40	Census of the Jamaica Bay Laughing Gull Colony			Northeast Region	Jamaica Bay Institute	Gateway NRA	Brian Washburn	







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