



The Vieques Sustainability Task Force **UPDATE**

May 4, 2012

This briefing highlights current efforts of various members of the Vieques Sustainable Task Force, a collaboration of federal, Commonwealth, and local government recommended in the March 2011 President's Task Force on Puerto Rico.



PROJECT OVERVIEW

Goals

The Vieques Sustainability Task Force has two overarching goals:

1. Advance the Superfund remediation and clean-up on Vieques in a safe, responsible, and protective manner.
2. Advance sustainable economic development and job creation projects on Vieques for the benefit of its residents.

Governor Luis Fortuño and EPA Regional Administrator Judith Enck speak to the media on April 6, 2011.



The Vieques Sustainability Task Force is working to coordinate, promote and accelerate sustainable redevelopment. The focus is on activities that supplement existing efforts and build off existing development planning processes. The enhanced communication among government and stakeholders provided by the Task Force is expected to lead to new initiatives, as well as faster and more implementation of existing initiatives. The Task Force has specific goals for itself and keeps a record of the initiatives it has contributed to. The Task Force is project and action-oriented.

Secretary of State Hon. Kenneth McClintock and Vieques Mayor, Hon. Evelyn Delermecamacho, at the Vieques Sustainability Task Force Informational Fair.

To achieve these goals, the Vieques Sustainability Task Force is assisting in coordination and collaboration around projects that include: innovative technology deployment for cleanup; clarity in local planning to guide Superfund cleanup priorities; establishment of energy efficiency and clean renewable energy projects on the island; green hospitality initiatives; green tourism; increased protection of the Mosquito Bay (a bioluminescent bay); establishment of waste reduction, recycling and clean composting programs; use of electric vehicles; improvements in mass transit; sustainable agricultural development and greater access to health care and environmental education.



The Vieques Sustainability Task Force does not replace the Navy's Restoration Advisory Board nor does it replace or supplant the cleanup decision-making framework of the Federal Facilities Agreement developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act.

The Vieques Sustainability Task Force met on April 6, 2011 in Vieques, on November 16, 2011 in San Juan and May 4, 2012 in the Eisenhower Executive Office Building in Washington, DC.

SUPERFUND

Issue: From the 1940s until 2003, the Navy administered lands on both the Western and Eastern ends of Vieques. On the Eastern side, the Navy operated the former Vieques Naval Training Range that covered approximately 14,573 acres where military exercises with munitions took place. This resulted in large quantities of unexploded ordnance being left on land and water. On the Western side, the Navy stored munitions in an area that covered approximately 8,200 acres. Live fire training on Vieques ceased in 2001. On April 30, 2001, 4,250 acres of the Navy's property in west Vieques were transferred to the municipality of Vieques, 3,050 to the U.S. Department of Interior with a use restriction of a National Wildlife Refuge, and 800 acres to the Puerto Rico Conservation Trust. In 2003, all Navy training on Vieques ceased, and all 14,573 acres of the former Vieques Naval Training Range (east Vieques) were transferred to the Department of Interior to be administered as a National Wildlife Refuge and a wilderness conservation area with no public access. Despite progress on the site, there have been several concerns raised about some aspects of the cleanup. The Navy's continued method of blowing up unexploded ordnance in place without the use of a containment chamber and its proposal for a controlled burn to remove vegetation have been opposed by some local residents. The Navy has not been able to successfully address this concern as there have been no other safe methods identified to date to conduct this work. To this point, cleanup efforts have focused on surface clearance of munitions on land. Future work is needed to address the unexploded ordnance in the waters around Vieques, including shallow waters near beaches. Despite warnings from the Navy and the U.S. Coast Guard, boaters regularly trespass into areas in which unexploded ordnance is present underwater. Since 2005, the Navy has documented over 1,700 trespassing incidents into waters around the former bombing range. Boat trespassers have been seen within a half-mile of a dangerous submunitions area, and children have been observed digging on contaminated beaches.

Objective #1: Expedite installation of the marine barrier to prevent trespassing.



Pedro Ruiz and Madeline Rivera, Navy, at the Informational Fair.

Background

Due to safety concerns from unexploded munitions, the Navy has attempted to prevent recreational boaters from anchoring and coming ashore in the Live Impact Area. Warning signs and notices to mariners have been issued, but the problem continues. Since the Navy does not own the land, it no longer has jurisdiction to enforce restrictions or pursue trespassers. Negotiations are ongoing with the U.S. Coast Guard, U.S. Fish and Wildlife Service, and the Puerto Rico Department of Natural and Environmental Resources to provide effective, long-term enforcement of the no-trespassing zones. In the interim, the Navy is working to install a floating marine barrier as a short term measure to prevent recreational boaters from anchoring and coming ashore across a portion of the Live Impact Area. Due to the presence of endangered species and sensitive habitats, a Biological Assessment and consultation with the U.S. National Marine Fisheries Service was required prior to construction, and these efforts are ongoing.

Recommendation

1. Expedite the Biological Assessment and U.S. National Marine Fisheries Service Consultation to allow installation of the marine barrier.
2. Determine a workable approach to long term enforcement of no trespassing and no anchor zones. Senior level support among the Navy, U.S. Coast Guard, U.S. Fish and Wildlife Service, Department of Natural and Environmental Resources, and other agencies would be helpful.

Timeline for Development of Deliverable

The Biological Assessment for the marine barrier was submitted to the U.S. National Marine Fisheries Service in November, 2011. Under the Endangered Species Act, Section 7 Consultation with U.S. National Marine Fisheries Service allows 135 days for U.S. National Marine Fisheries Service to issue a legal opinion, which is currently pending. Actual construction time is expected to be 3 to 6 weeks, occurring in late summer 2012.

Status

1. The underwater field work for the marine barrier Biological Assessment was completed in August, 2011. In order to expedite the approval process, the U.S. National Marine Fisheries Service was invited to participate in the dive, and tentative anchor points were identified in areas of minimal impact. In October 2011, the Navy met face-to-face with the U.S. National Marine Fisheries Service to discuss key issues related to the Biological Assessment Report, which was finalized based on feedback from the U.S. National Marine Fisheries Service. Formal Section 7 consultation with U.S. National Marine Fisheries Service has begun, and a Biological Opinion will come from U.S. National Marine Fisheries Service within 135 days (90 days for technical evaluation and 45 days to prepare the opinion). Since U.S. National Marine Fisheries Service participated in the field work and key issues have already been discussed, it is expected that the consultation process will be streamlined. The Navy has awarded a contract for barrier installation, and a site visit was held with the contractor January, 2012, to assess field conditions and prepare for construction. The construction work plan will be finalized based on the U.S. National Marine Fisheries Service biological opinion, after which construction will begin.
2. The Navy has begun working with the Puerto Rico Department of Natural and Environmental Resources to address long term enforcement of no trespassing and no anchor zones around the island. The Department of Natural and Environmental Resources has prepared a written proposal to provide enforcement, and Navy legal counsel is pursuing a mechanism to fund this effort as part of the cleanup actions.



Remotely Operated Vehicle for underwater munitions investigations.

Objective #2: Facilitate a strategy to address the 75 acre Sub-Munitions Area.

Background

The 75 acre Sub-Munitions Area within the Live Impact Area contains a high number of unexploded sub-munitions. Due to their extreme sensitivity and small size, sub-munitions are very dangerous and difficult to locate. Standard approaches for vegetation clearance and munitions removal cannot be implemented safely. The Vieques project team, composed of Navy, National Oceanic and Atmospheric Administration, Environmental Protection Agency, U.S. Fish and Wildlife Service, and the Puerto Rico Environmental Quality



Members of the Vieques Sustainability Task Force visit a school acquired by the Vieques Conservation and Historical Trust for use as an environmental center.

Board, determined that a controlled burn would be the only known safe and effective method of vegetation clearance, but a variance to Puerto Rico law is required for this type of controlled burn. From 2006 to 2009, the Navy and regulatory agencies jointly worked on a controlled burn plan, air monitoring plan, and air modeling report in support of the variance application. Clearance of the Sub-Munitions Area is on hold, pending a decision by the Environmental Protection Agency and the Environmental Quality Board on these documents. The community is divided in their opinions as to whether or not the controlled burn should proceed. The current mayor of Vieques has expressed opposition to the controlled burn. This level of uncertain community acceptance has hindered the agencies from reaching a final decision on this matter.

Recommendation

1. Engage senior leaders among federal, state, and local stakeholders to obtain a final decision on the variance and burn plan.
2. If the decision is made to approve the burn, the Federal Facility Agreement project team should proceed quickly to address this highest risk area.
3. If the decision is made to disapprove the burn, the Federal Facilities Agreement project team should reach agreement on the most appropriate means to isolate the site from future exposure.

Timeline for Development of Deliverable

To be determined.

Status

The decision on the burn plan has been on hold, pending the release and review of the updated Environmental Health Evaluation by the Agency for Toxic Substances and Disease Registry. The Agency for Toxic Substances and Disease Registry released their draft report on December 8, 2011 for 90-day public comment period. The Agency for Toxic Substances and Disease Registry is currently working on addressing public comments in order to finalize the report.

Objective #3: Provide for earlier involvement of the Restoration Advisory Board in the planning of work at the site, with special emphasis as it pertains to sensitive ecosystems.

Background

The Restoration Advisory Board is an integral part of the overall project team and a valuable resource to the team by providing not only the views of the Restoration Advisory Board but also insight into how various aspects of the project may impact the community at large. Early involvement in work planning provides the project team with this information at a point in the process where revisions can be made, in consultation with the project team as necessary, without significantly impacting overall project schedules. This early involvement is critical to ensure the community is fully involved in the remedy selection process as mandated by the Comprehensive Environmental Response, Compensation and Liability Act.

Recommendation

The Federal Facilities Agreement project team, in consultation with the Restoration Advisory Board, should develop a process to ensure the early involvement of the Restoration Advisory Board in planning of work on the site. While this includes all major aspects of site work, special emphasis should be placed on the Restoration Advisory Board's early involvement in work planning as it pertains to sensitive ecosystems. The Federal Facilities Agreement project team will take community concerns into account as they make response decisions.

Timeline for Development of Deliverable

Documentation of a draft process to ensure this early involvement can be completed by the end of June 2012. The Federal Facilities Agreement project team will review with the Restoration Advisory Board and community and issue when finalized.

Status

This objective has been met. The Navy has taken the following steps to ensure early involvement of the Restoration Advisory Board, especially in areas involving sensitive ecosystems:

- Tentative plans involving all aspects of the cleanup program are discussed at quarterly Restoration Advisory Board meetings, so the Restoration Advisory Board can give input at the conceptual stage.
- Site visits allow Restoration Advisory Board members to see areas of proposed work and observe sensitive habitats that may be present. The overall approach to the work is discussed on site among the Restoration Advisory Board, the Navy, and the regulatory agencies.
- Important reports such as Proposed Plans or Biological Assessments of sensitive habitat may be discussed face-to-face to ensure Restoration Advisory Board members understand the approach and have an opportunity to discuss.

Objective #4: Facilitate a strategy to address underwater unexploded ordnance.

Background

Vieques was formerly used for military training operations, so the waters surrounding part of the island contain munitions and explosives of concern in addition to other related munitions debris. Underwater munitions of concern could have originated from both the firing of munitions as well as from the transfer of munitions, both of which present a hazard to commercial and recreational divers, boaters, fishermen, etc. To address this material development of technologies for the detection, discrimination, and removal of the underwater munitions and explosives of concern is needed.

Recommendation

Summarize existing information regarding underwater munitions, technologies, and ecosystem concerns and identify potential data/information gaps. The Federal Facilities Agreement project team will identify actions and schedules to fill these gaps.

Timeline for Development of Deliverable

The Work Group is requesting that the Federal Facilities Agreement project team provide a draft schedule to accomplish the above identified tasks to the Vieques Sustainability Task Force by September 30, 2012.

Status

This objective has been met. The Federal Facilities Agreement project team has reviewed information regarding underwater munitions, technologies, and ecosystem concerns, and an overall schedule for the underwater work has been prepared. During a technical meeting in October, 2011, the Federal Facilities Agreement project team agreed to a strategic approach, and the Navy has set aside funding to begin these actions in 2012.

The tasks include:

- Biological Assessment of underwater areas (initiated).
- Comprehensive investigation using cameras, side-scan sonar, and underwater geophysics.
- Prioritize areas for focused study and remediation, based on public use/access, explosive risk, ecological concerns, and water depth and currents.
- Investigate areas around western Vieques (SWMU 4, former mooring points).
- Complete an underwater site from investigation to remedy, and apply lessons learned to the remaining sites.

ENERGY

***Issue:** The remote location of the Island has resulted in high energy costs that impede further economic development and place an extra burden on local residents' household budgets.*

Objective: Develop and deploy renewable energy technologies to meet its needs Vieques' small size, its commitment to eco-tourism, its geographic location, and its modest energy needs (current electricity demand is only 3-7 MW).

Vieques Sustainability Task Force Member Actions: The Puerto Rico Energy Affairs Administration, the Puerto Rico Energy and Power Authority, and the U.S. Department of Energy have several efforts underway.

The Commonwealth's Green Energy Fund was launched in 2011, through which individuals and businesses can apply for funds to develop renewable energy projects (wind and photovoltaic), at both a residential and commercial level.

The Green Energy Fund is divided in two tiers. For Tier 1, the grant cycle opens twice each fiscal year: from July 1 through December 31, and from January 1 through June 30. Incentives are available throughout these periods, unless funds are fully committed before the end of the period. Under this tier, recipients can receive a cash grant of up to 60%, and is for wind or solar PV projects in the 1kW to 100 kW system capacity range.

Tier 2 projects' grant cycle opens quarterly and incentives are available throughout these periods, unless funds are fully committed before the end of the period. Additionally, incentives for this tier are limited and awarded on a competitive basis. Projects that are more cost-effective are the stronger contenders. Under this tier, recipients can receive a cash grant of up to 50%, and is for wind or solar PV projects in the 101kW to 1 MW system capacity range.

Knowing that construction in Vieques is more expensive compared to the rest of the island, higher GET (green energy technologies) Reference Costs will be allowed for GEPs (green energy projects) to be developed in the Vieques-Culebra Economic Development Zone, as defined in Act No. 153 of August 10, 2002. This consideration applies to both tiers.



Rooftop solar panels.

UPDATE: As of March 30, 2012, one application was submitted to request local funding from the Green Energy Fund for Vieques. The application was granted, and is for a 250 kW solar photovoltaic project at the Antonio Rivera Rodríguez Airport.

Under the Energy Efficiency and Conservation Block Grant program, there are lighting retrofit and air conditioning retrofit projects at the Mayor's Office, the Municipal Elderly Home, and a government center that houses Vieques' sports and recreation department and the department of emergency management; it also serves as a refuge in case of emergency.

UPDATE: Considering the projects under this program as a single project, the amount allocated to Vieques was \$147,500, and the project is 44% completed. For Vieques, this program projects annual energy savings of 158,147 kWh, which is \$42,699.69, based on a rate of \$0.27 per kWh. As result of implementing this program in Vieques, there will be 202,523 CO₂ emissions less in the atmosphere, annually.

Under the Department of Energy funded Weatherization Assistance Program, 29 homes have been weatherized, out of a total 36 to be weatherized in Vieques.

UPDATE: This program's work in Vieques is 100% completed, with a total 59 weatherized homes. Originally, there were 36 homes to be weatherized in Vieques, but thanks to an additional \$17 million grant to this program, from the Department of Energy, an additional 23 homes could be weatherized.

With \$246,000 invested (an average investment of \$4,250 per household), the PR Energy Affair Administration has replaced 49 refrigerators, 18 a/c units, and 42 water heaters. Additionally, the crew performed safety and health measures in 58 homes, as well as replacing incandescent light bulbs with fluorescent ones. As result of these measures, the estimated annual energy savings is 67,260 kWh, which is \$18,160.20, based on a rate of \$0.27 per kWh. These measures also reduced CO₂ emissions by 38,350 kg.

Under the State Energy Program's Street Lighting Retrofit, the PR Energy Affair Administration along with the Puerto Rico Energy and Power Authority will substitute 380 light bulbs in public sites around the island.

UPDATE: LED street lighting were installed throughout the island in April 2012.

JOB CREATION

***Issue:** Many Viequenses live in abject poverty, with 73 percent of the residents living below the Federal poverty level. The median household income is \$5,900, and Vieques has an unemployment rate of 22 percent.*

Objective: Increase opportunities for employment, including creating resident-owned small businesses.

Vieques Sustainability Task Force Member Actions: The Puerto Rico Department of Economic Development and Commerce has secured a \$2 million fund within the Economic Development Bank to act as a guarantee to what is now called the Vieques and Culebra Tourism Development Microloans Program. Unlike most special loans programs banks offer, the proponent must attend training sessions, funded by Department of Economic Development and Commerce, where each individual learns how to create a business plan and what one must do to develop one's business successfully. After complying with the training classes, the proponent files his or her loan request with Banco Popular, which processes the loan documents with the Government's guarantee in mind.

Loans range from \$2-25k and are geared towards stimulating the creation or expansion of tourism-related businesses. The first training session occurred on December 8-9, last year and graduated 50 Culebrenses and Viequenses. To date, over 11 loans have been issued totaling over \$226,000. In June 2011, the Department of Economic Development and Commerce and the Small Business Administration held a seminar for Vieques and Culebra where 35 additional different business plans were completed.

HOSPITALITY

***Issue:** Hospitality businesses on the Island are both a major driver of the local economy and a major consumer of local resources.*

Objective: Increase the sustainability of local hospitality businesses while enhancing their eco-tourism appeal for potential visitors.

Vieques Sustainability Task Force Member Actions:

Overall, Puerto Rico established the first Green Lodging Certification program in the Caribbean in September 2011. In trainings provided across Puerto Rico in the summer of 2011, trainers addressed the following:

1. How to establish a Green Team;
2. How to start a recycling program and filling the quarterly report;
3. How to manage toxic waste;
4. Best management practices in a food scraps program;
5. Environmental Protection Agency's partnership programs;
6. Presentation of the Puerto Rico Green Lodging Certification Program and its Building Operations and Maintenance Guidelines.

On Vieques, the U.S. Environmental Protection Agency in partnership with the Commonwealth provided Green Hospitality assessments for eight of Vieques and Culebra hotels, bed and breakfasts, and inns. Also, the Environmental Protection Agency signed a Memorandum of Understanding with the Puerto Rico Tourism Company in 2010 to promote green hospitality in Puerto Rico. Consequently, the Puerto Rico Tourism Company certified the Hix Island House in Vieques as a green hotel. Based on the team's

The Hix Island House's, Casa Solaris, an off-grid guesthouse.



assessment, Hix Island House is an excellent model of energy efficiency for other hoteliers to follow in Puerto Rico. The interagency group observed that the hotel has been constructed to take advantage of the Caribbean trade winds. There is no mechanical air conditioning in the guest rooms and the facility does not have any windows. Instead, a roll-down shutter prevents the occasional rain from entering into the guest rooms. A system of 30 solar panels and batteries supports LED lighting on site, low energy appliances and ceiling fans are in the guest rooms. Mr. Hix, the owner and architect of Hix Island House stated that his utility bill for the month was in the area of \$500, with an annual electrical utility cost of \$6,000 or less.

The team observed comparably sized hotel facilities in Vieques spending in excess of \$50,000/yr on electricity. Additionally, solar hot water panels at the Hix Island House serve showers and basins. Rainwater stored in two cisterns (4,500 gallon capacity) is used for showers, sinks and toilets. The toilets are water efficient. The grey water from showers, sink use and water used in cleaning the floor surfaces is conveyed to guavas, bananas, papayas and lemons; which in turn are harvested and shared with the guests.

The Casa de Amistad guesthouse.



The Puerto Rico Tourism Company is currently evaluating another hotel in Vieques, the Casa de Amistad, which was also visited by the interagency team. The guest rooms at the Amistad, which is a parador (small inn), are equipped with mostly compact fluorescent bulbs (CFLs) but also include some incandescent bulbs for ambience lighting. In the bathrooms, most toilets are low-flow (1.6 gpf). Although the guest rooms do not have programmable thermostats, the staff check the rooms and adjust thermostats and close shades to minimize heating from incoming sunlight.

In addition to providing certification to the Hix Island House and working with the Casa de Amistad toward certification, the Puerto Rico Tourism Company has been coordinating with hoteliers in Vieques concerning sea turtles. Specifically, the Puerto Rico Tourism Company has made site visits to hotels along the Vieques coastline, such as the W, to discuss the habits of the turtles and their protection. The Department of Economic Development and Commerce, with a grant from Department of Labor is also training the W Hotel personnel in best practices for hospitality. These include the history of Vieques, culinary and cultural aspects of the Island, and providing quality service.

BIOBAY

Issue #1: Puerto Mosquito is one of the brightest bioluminescent bays the world has ever seen. It is the number one attraction on the island. However, it is threatened by sedimentation.

Objective #1: Protect and enhance the BioBay.



Tony Rios, Executive Director, Puerto Rico Solid Waste Management Authority and Daniel Galan-Kercado, Puerto Rico Secretary Natural Resources and Environment.

Vieques Sustainability Task Force Member Actions: Changes to the bay’s water quality, alter the habitat of the Pyrodinium bahamense, the microscopic organisms that produce the bioluminescence that makes Puerto Mosquito unique and that drives much of the Viequense tourism economy. The Vieques Conservation and Historical Trust and the Department of Natural Resources joined efforts to address this issue. A \$75,000 assistance grant from Environmental Protection Agency, and financial and technical assistance from U.S. Geological Survey, Environmental Quality Board, Greg Morris Engineering Corporation and Department of Natural and Environmental

Resources, have made it possible for the Vieques Conservation and Historical Trust to develop site-specific projects to reduce sediment loading in Puerto Mosquito and to reduce other anthropogenic threats to the with education and training for local residents and visitors.

First: Analyses was needed to incorporate low cost, sustainable, low maintenance Best Management Practices to the road responsible for the majority of the sediments running into the bay. These analyses demonstrated the need for the relocation of the most erodible stretch of road and to manage traffic in order to reduce impacts. Department of Natural and Environmental Resources has undertaken the design and funding of the relocation. State of the art, low-maintenance high-effectiveness erosion reduction techniques will be incorporated and the abandoned stretch of road will be reforested to control erosion.

Second: A year-long water quality/turbidity study has already been initiated. The Vieques Conservation and Historical Trust and U.S. Geological Survey installed the in situ data collection equipment in December. A trimester of data on turbidity, water temperature, salinity, conductivity, dissolved oxygen, and dissolved oxygen percent saturation has been collected at 15 minute intervals and is being analyzed by the U.S. Geological Survey. Weather data has been collected for this same period, which corresponds to the dry season in Vieques. Volunteers have participated as assistants in the data collection and equipment maintenance.

Third: The training component began with a pilot-project certification course for Mosquito Bay guides and interested residents. This course covered the ecology of the bay, customer service, Vieques Bioluminescent Bay Natural Reserve laws and regulations, astronomy, boating safety and CPR certification. As a work tool and quick reference aide, a field guide was produced for course participants. Additionally, the Vieques Conservation and Historical Trust facilitated bringing to Vieques the Coast Guard Auxiliary and Department of Natural and Environmental Resources navigation courses, which were open to the community. Approximately 60 persons attended. Several workshops

were conducted for Puerto Rican police and Municipal police members on the bioluminescent bay fragility and conservation, and on emergency response at the bay. Workshops for the hospitality industry and the next term's elected officials are scheduled for the future.

***Issue #2:** Puerto Mosquito is one of the brightest bioluminescent bays the world has ever seen. It is the number one attraction on the island. However, it is threatened by light pollution. And, no one agency within the Federal government has the authority/jurisdiction to provide funding for light shields for protection of the BioBay.*

Objective #2: Obtain funds to implement light shielding.



Lirio Marquez, Vieques Conservation and Historical Trust, addressing the crowd at the Informational Fair, and Mayor Delorme-Camacho in the background.

Vieques Sustainability Task Force Member Actions: Meetings between the Vieques Conservation and Historical Trust and the local Puerto Rico Environmental Protection Agency office resulted in an agreement to change old “Drop Down Cobra Heads” to “Full Cut Off Cobra Heads” and more modern luminaries to reduce the impact. Dozens of these lights have been replaced and the Environmental Protection Agency has made it clear that they will continue to honor that agreement and replace lights upon request. Site analysis in schools and other public buildings and site visits to the bay to determine the effectiveness of the new LED lights being installed by the Environmental Protection Agency have been performed. The Puerto Rico Secretary of State, Hon. Kenneth McKlintock and engineer Mitchell Wolfrom have been instrumental in the acquisition and installation of these lights. Utilizing historic photographic evidence, the Vieques Conservation and Historical Trust has been monitoring their effect from different areas of the bay compared to the lights that were installed before. Tour operators and other users of the bay were incorporated into the information-gathering effort regarding these changes.

TRANSPORTATION

***Issue:** Limited access to Vieques constrains its ability to enhance economic development. For instance, the Mosquito Pier in Vieques would need major renovations to be used as a major transportation base for cargo ferry operations to Roosevelt Roads. The passenger ferries in their current state remain a barrier to consistent, sufficient, transportation for both tourism and local needs.*

Objective: Improve transportation services and transportation experience for tourists, residents and businesses.

Vieques Sustainability Task Force Member Actions: Cape Air signed a cooperative marketing agreement with the Commonwealth whereby \$1 per inbound seat is dedicated to marketing tourism on Vieques.

The Vieques ferry terminal at Isabel Segunda was awarded a bid to reconstruct the terminal and construction will begin in the Fall of 2011 and construction is expected to last up to two (2) years. In addition, the Fajardo - Vieques - Culebra public ferry received a Ferry

Boat Discretionary Awards for new vessel construction of \$3 million under FY09 monies from the Federal Highway Administration. The dock at the Culebra ferry terminal will be ready in May 2012. Terminal development will follow after dock reconstruction is complete.

In August 2010, the Environmental Protection Agency awarded the Puerto Rico Metropolitan Maritime Transportation Authority \$517,220 in Diesel Emissions Reduction grant funding that will be used to repower (replace 4 diesel engines) in the marine vessel Cayo Norte, which is used as a passenger and cargo ferry traveling from the municipality of Fajardo to Vieques and Culebra. The total cost for this project will be over \$1 million, of which the remaining balance will be cost shared and leveraged by the Puerto Rico Metropolitan Maritime Transportation Authority. The annual emission reductions resulting from this project will include 45 tons of nitrogen oxides and 2.3 tons of particulate matter.

SUSTAINABLE AGRICULTURE

Issue: With a growing demand for organic, local, and sustainably raised and harvested agricultural products, there is the potential for local, small farmers to service local food purveyors and enhance the sustainable and eco-tourism qualities of the Island.

Objective: Adopt sustainable agricultural practices on the Island.

Benefits include enriching the soil and protecting air and water quality, while minimizing energy consumption and reducing the need to transport food across the globe. On the economic side, money spent on local agriculture stays in the local economy, producing an economic-multiplier effect.

Vieques Sustainability Task Force Member Actions: In September of 2011, U.S. Environmental Protection Agency brought together Commonwealth and U.S. Department of Agriculture technical assistance to share information on sustainable agriculture with over fifty (50) Island residents. At this summit, participants learned about funding and grant opportunities, how to obtain technical assistance and tools for improved sustainable agriculture in the region. Connections were made for future collaboration and the group engaged in a lively discussion of how to move forward. As follow up, the Environmental Protection Agency prepared a “Resources for Sustainable Agriculture” fact sheet for distribution on the island.

Additional community concerns around cost effective soil sampling and access to a market analysis of agriculture on the island, still need to be addressed. Below summarizes the current status of soil testing on the Island. Outside of the residential areas, the Navy has sampled and tested the soil to support Superfund efforts on both the eastern and western parts of the island. Soils are tested for a wide range of contaminants, including petroleum compounds, solvents, pesticides, explosive compounds, metals, and inorganics. In addition, soil background levels have been established for metals and inorganic compounds, including aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc. For example, in 2011, the soil in the Eastern Conservation Area was extensively sampled. Out of approximately 900 tests, there were 16 detections of explosive compounds, and one result was above the threshold value for direct expo-

Environmental Finance Center interns demonstrating composting techniques to Mayor Delorme-Camacho at the Informational Fair.



sure to soil. In addition, the concentrations of metals and inorganic compounds were comparable to background and did not appear to be affected by past Navy operations. A human health risk assessment indicated no unacceptable risk to wildlife refuge workers who would enter the control area. Potential risk from agricultural use was not evaluated because this area is not intended for such use as it is a designated wildlife refuge.

Mangoes.



The Natural Resources Conservation Service maps soils across the U.S. states and territories. The most recent soil survey data from Vieques was gathered in the 1970s and published in the 1980s. At that time, there was limited data gathering on naturally occurring background levels of various constituents. The Natural Resources Conservation Service soil sampling work is mostly focused on types and kinds of soils and their various productivities. The Natural Resources Conservation Service is neither an environmental regulatory entity nor a public health agency. However, in more recent years, the Natural Resources Conservation Service has been gathering some modest background data on some constituents as heavy metals as it updates its soil survey. Other than reporting what it finds, the Natural Resources Conservation Service has no regulatory or technical ability to determine if such levels, whatever they may be, are safe or unsafe for humans and various exposure pathways (i.e., direct ingestion, uptake in vegetables or animals, etc.).

LAND USE PLANNING

Issue: Lack of an effective, coordinated, and implementable land use plan for the Island limits sustainable economic development on the Island, particularly for those portions of the Superfund site property that will be cleaned up and transferred back to the municipality in 2014.

Objective: Create an up-to-date plan for both private land and federal lands likely to revert to the municipality within the next five years in order to provide a clear basis for sustainable development.

Vieques Sustainability Task Force Member Actions: The Department of Economic Development and Commerce of Puerto Rico is leading a revision and update the 2004 Master Plan this year. The Department of Economic Development and Commerce of Puerto Rico has expressed interested in having the Vieques Sustainability Task Force provide input on the revisions. The Department of Economic Development and Commerce of Puerto Rico aims to have the revised Master Plan ready by Fall 2011. The revision will include the filing of a revised land use plan with the Planning Board of Puerto Rico.

In addition, it may be possible to conduct a charette on Superfund site reuse for the Western part of the island. A charette is a public engagement process that brings all interested people together to a very hands-on workshop or series of workshops to do detailed brainstorming about the possibilities, issues, constraints, opportunities and desires of the government agencies and the public. Vieques Sustainability Task Force could sponsor the charette, not as a decision maker but as an advocate of networking and coordination between agencies and the citizens of Vieques. The Environmental Protection Agency through its Reuse Initiative has assisted communities at a number of sites to conduct charettes or other land use public participation processes for Superfund reuse/redevelopment.

SOLID WASTE

Issue: Due to the limited capacity of its two landfills, Vieques has a solid waste dilemma. The old Vieques landfill is an unlined, municipally-owned landfill located on the environmentally sensitive north coast. According to a report from the U.S. Fish and Wildlife Service, the old Vieques landfill is suffering from considerable erosion and waste wash out. The current Vieques landfill is a municipally-owned landfill that accepts 123 tons of waste per week. The active portion of the landfill is not equipped with a liner, leachate collection system, gas monitoring system, or stormwater collection system as required by federal law. This landfill is predicted to reach capacity in 2020.

Objective: Reduce the volume of the waste stream to the landfill through waste reduction, recycling and clean composting.

Vieques Sustainability Task Force Member Actions: The Environmental Protection Agency is working to complete a study for recycling on the Island. As part of this effort, Vieques Sustainability Task Force member the Syracuse University Environmental Finance Center has a grant with the Environmental Protection Agency to help promote sustainable materials management in Puerto Rico, including Vieques. The Syracuse University Environmental Finance Center facilitates the Puerto Rico Recycling Partnership. The Puerto Rico Recycling Partnership was created by the Environmental Protection Agency and the PR Solid Waste Management Authority to accelerate source reduction, reuse, composting and recycling in Puerto Rico. Vieques is one of the model communities being targeted by the Puerto Rico Recycling Partnership. Toward that end, the Syracuse University Environmental Finance Center has been on Vieques twice to better evaluate options, including holding extensive discussions with the Vieques municipal recycling coordinator and others. As a result, the Syracuse University Environmental Finance Center is working to assist the recycling coordinator address barriers to accelerating more sustainable solutions to the solid waste management challenge on the island (such as market development and transportation issues).



Vieques recycling truck.

The Syracuse University Environmental Finance Center also secured a grant from Vieques Sustainability Task Force partner U.S. Department of Agriculture Rural Development to focus extensively on better organic waste management through composting, with Vieques being one of the target communities. With both U.S. Department of Agriculture and Environmental Protection Agency funding, and Puerto Rico Recycling Partnership support, three Puerto Rican college interns are working during the spring of 2012 on Vieques. They are coordinating with the Vieques Conservation and Historical Trust, and working with three schools (one elementary as well as the intermediate and high school) as well as homeschoolers on the island to train teachers, support staff, and students about proper organics management and composting. The intent is to find additional funds for this intern program to extend the time period and the mandate for the interns (i.e., work on other issues like reuse and recycling programs). The interns have also connected with the director of Incubadora de Negocios Bieké to discuss possible businesses that can be created through composting and recycling programs. The Syracuse University Environmental Finance Center and the interns also supported the sus-

tainability fair held on April 15, and will continue to assist the Vieques Conservation and Historical Trust and municipality with ways to better manage solid waste. The Syracuse University Environmental Finance Center is also working with The W Resort to further address their solid waste management needs. The W has been exploring the possibility of a composting facility for its food and yard waste that may also be open to employees.

HEALTH CARE

Issue: Health care is a significant challenge for Viequenses. There is no state-of-the-art, full-service hospital on Vieques, and people have to travel off-island to obtain medical care such as chemotherapy, dialysis, and for complicated childbirth. Emergency situations can prove especially perilous because residents of Vieques rely on ferry service to transport them to and from the main Island.

Objective #1: Health and Human Services should work with the Commonwealth to conduct a needs assessment to identify the most effective and efficient way to ensure that the people of Vieques receive the care, including expertise in environmental medicine, that they need and develop options for best addressing those needs.

Vieques Sustainability Task Force Member Actions: Between April and November of 2011, the Health and Human Services Region 2 Vieques Workgroup met with the Puerto Rico Department of Health and other Commonwealth government officials, including the administrative leadership of the Susan Centeno Family Health Center, to discuss organization of health care services; health care service utilization; environmental health related services; emergency care; services availability on and off the island of Vieques; demographic data; and vital statistics. In addition, the Workgroup met with public health leaders, clinicians, and researchers from the University of Puerto Rico and its School of Public Health as well as the College of Physicians & Surgeons to obtain first-hand knowledge of findings associated with their research, including epidemiologic studies related to disease causation and its relationship to the environmental exposure to toxic substances.

In September 2011, Health and Human Services had the opportunity to visit the island of Vieques and we met with the Honorable Evelyn Delorme-Camacho, Mayor of Vieques; the administration and medical director of the Susana Centeno Family Health Center; a broad range of community-based private health care providers; and residents of Vieques while seeking care at the Susana Centeno Family Health Center — or functioning as advocates of the Servicios de Salud Integral de Vieques. While there, we viewed the Susana Centeno Family Health Center's physical plant, equipment, supplies and resources. The Workgroup experienced serious challenges of transportation via ferry to-and-from Vieques, sensed the frustration and isolation of a community in search resources to build a healthy and environmentally safe community, and were impressed by the people's resolve to address these problems.

The Health Care Needs Assessment and draft recommendations are based on the following information and data:

1. Census Bureau Demographic data
2. Puerto Rico Department of Health Morbidity and Mortality data

3. Puerto Rico Central Cancer Registry
4. Puerto Rico Department of Health Needs Assessments and utilization studies
5. Estudio Continuo de Salud Para los Municipios de Puerto Rico
6. Office of the Insurance Commissioner
7. Patient Advocate (Procurador de Pacientes)
8. Claims data from Government Health Insurance Administration (Spanish acronym ASES) and the MiSalud program
9. MCS Health Plan Utilization data compiled by Government Health Insurance Administration (ASES)
10. Non-emergency off-island specialty care data
11. Susan Centeno Family Health Center Emergency Room related diagnosis
12. Susan Centeno Family Health Center Off-Island emergency service related diagnosis
13. Medicaid eligibility service availability and access
14. Health services for veterans
15. College of Physicians and Surgeons, Environmental Health Committee
16. University of Puerto Rico, School of Public Health
17. Medical and environmental sciences researchers
18. Interviews with government officials, administration of the Susana Centeno Family Health Center, Vieques health care providers, and residents of Vieques.

The Workgroup set out to accomplish the following, in order to develop its recommendations and feasibility analysis:

- I. Identify current health care services available to residents of Vieques
- II. Identify current gaps in services
- III. Propose tangible options for health care service development that address known gaps

Objective #2: Health and Human Services to assist Vieques and the Puerto Rico Department of Health in exploring two programs that could improve health care in Vieques.

These two program recommendations are explained below and actions taken to date.

Objective# 2A: Health and Human Services and Puerto Rico should explore the feasibility of a section 330 health center application and if a viable option, for the Puerto Rico Department of Health to support this effort and work with the Vieques community to develop a strong application.

It also recommends that Health and Human Services explore funding for health centers under the Health Center Program established by section 330 of the Public Health Service Act, specifically opportunities made available by the Affordable Care Act.

Objective #2B: Health and Human Services should continue to work with the Puerto Rico Department of Health should explore Critical Access Hospital designation and determine if the Centro de Salud de Familia facility in Vieques meets the statutory requirements for Critical Access Hospital designation.

Vieques Sustainability Task Force Member Actions: Despite its commitment and efforts, the Susana Centeno Family Health Center provides limited ambulatory services and emergency care with limited staff and services. Furthermore, there is no specialty

care available on island for the majority of residents and transportation challenges limit resident access to it. The Susana Centeno Family Health Center staffing pattern and organization of services do not appear to foster comprehensive coordinated primary care for children, adolescents, adults, and persons with special needs. The goal is to build a comprehensive primary care model, with an emphasis on health maintenance, disease prevention, and care coordination utilizing care management, patient self-management care education, and support services.

While the Susana Centeno Family Health Center would have to undergo a comprehensive redesign in service delivery in order to build such a model, it would greatly benefit from the various options available to it under the Health and Human Services Health Resources and Services Administration Health Center Program, also known as Federally Qualified Health Centers.

The Workgroup's analysis includes the benefits and limitations of the following options:

1. Conversion to a Health Center Program Grantee;
2. Conversion to a Health Center Program Grantee Satellite;
3. Federally Qualified Health Center Look-Alike.

Under current law, the following prerequisites apply to Critical Access Hospitals:

- A Critical Access Hospital may only be converted from an existing Medicare certified hospital
- Or-
- From a Medicare certified hospital that ceased operations between 11/29/89 and 11/29/99
- Or-
- Be a health center (as defined by the state) that previously operated as a Medicare certified hospital before being downsized to a health clinic
- And-
- The facility must be located in a state or territory that participates in a Rural Hospital Flexibility Program

With regard to the statutory requirements:

- Vieques is one of Puerto Rico's 10 rural municipalities.
- The Susana Centeno Family Health Center has never been certified by the Medicare program as an acute care hospital, therefore it does not meet the conditions for conversion to a Critical Access Hospital.
- The Susana Centeno Family Health Center is licensed by the state as a hospital with 2 beds, however, it has never been certified by the Medicare program as an acute care hospital, a necessary requirement for conversion to a Critical Access Hospital.
- Puerto Rico has never applied to the Health Resource Services Administration to establish a Rural Hospital Flexibility Program.

