



## **Report – Sustainability Workshop**

January 30, 2008

Radisson Hotel MacArthur Airport, Holtsville, NY

### **I. Workshop Overview**

This document is a summary report of a workshop conducted by the National Park Service (NPS) as part of the Fire Island National Seashore (FIS) General Management Plan (GMP). This workshop, which took place on January 30, 2008, dealt with the subject of sustainability at Fire Island National Seashore. During the winter of 2007-2008 additional workshops were held to address other topics that were judged critical to the GMP. These other topics included transportation and visitor experience at the Seashore and the protection and management of marine resources.

More than twenty-five participants attended the one-day event. Participants included staff from Fire Island National Seashore and NPS sustainability experts and practitioners from the agency's Denver Service Center, Washington, DC headquarters, and Assateague National Seashore. The group also included representatives of local, county, and state agencies and organizations, as well as private practitioners from the Greater New York Area and beyond.

Proceedings began with a round of introductions, followed by an explanation of the meeting's purpose and format. Presenters explained that many of the ideas generated during the workshop would be evaluated and tested during the Alternatives development stage of the GMP. Planners encouraged the participants to be imaginative and future-oriented, rather than being overly concerned about the present-day obstacles to implementing these ideas. A variety of graphic materials were displayed on the conference room walls. These included: very large-format maps of Fire Island and the surroundings, image boards illustrating Fire Island's fundamental resources and values, and boards defining the concept of sustainability.

#### **Meeting Purpose** (from Agenda)

- Review the NPS principles of sustainability and enhance them to ensure that they relate well to Fire Island National Seashore.
- Develop actions and strategies that should be considered to make Fire Island and the William Floyd Estate function more sustainably in an ecological sense, while allowing for continued public enjoyment.

### **II. General Management Plan Overview**

GMP Project Manager, Ellen Carlson, provided an overview of the General Management Plan process. She explained that every National Park Service unit is required to have an updated GMP, that the current GMP for Fire Island National Seashore is thirty years old, and that many important developments have occurred in the intervening years, including the designation of the Otis Pike Fire Island High Dune Wilderness Area and the park assuming control of the William Floyd Estate. Ellen described the major steps undertaken to date, including initial scoping meetings, the development of foundation planning statements, and a summary newsletter. For reference, workshop organizers displayed the draft foundation statements, including the park purpose, park significance, and fundamental resources and values, on boards taped to the walls of the room. She also made clear that these foundation statements would guide the development of the next major phase of the GMP—generating a range of alternatives for the Seashore's management and development.



### III. Overview of Fire Island National Seashore

#### **PowerPoint Presentation: Setting the Stage for Building a Sustainable Future – FIIS Supt. Mike Reynolds**

Superintendent Mike Reynolds delivered a PowerPoint presentation. The presentation served as an introduction to Fire Island National Seashore, but it also contained a special focus on the opportunities to build a more sustainable future. The first half of the presentation briefly covered the establishment of the Seashore, its purpose, major resources, the typical experience for visitors, and the most important issues facing GMP planners. During the second half of the presentation Mike posed to the audience several questions related to the workshop's purpose. A question and answer session followed, in which some of Mike's points were discussed in more detail.

#### Key points of Superintendent's Presentation

- **Definition of Sustainability** – Sustainability is a concept that recognizes that human civilization is an integral part of the natural world and that nature must be preserved and perpetuated if the human community is to sustain itself indefinitely. Sustainable design is the philosophy that human development should exemplify the principles of conservation, and encourage the application of those principles in our daily lives. (“Let the place be your teacher.”)
- **Very Broad Topic** – Sustainability is a very broad subject encompassing topics including: transportation, interpretation, natural and cultural resource preservation, site and building design, the use of energy and water, waste management, as well as operations and maintenance.
- **Environmental Conditions of Fire Island/Issues** – As a barrier island, Fire Island is constantly on the move. Issues relating to sustainability that concern Fire Island include: periodic storms and floods (damage to facilities from storms or ice), climate change and sea level rise, the impact of septic systems (from island communities and NPS facilities) on water quality, continued development on the island, and the challenge of dealing with waste and transportation issues on an island.
- **Positive Qualities** – From a sustainability perspective, positive qualities and opportunities represented by Fire Island include: ferry travel and other opportunities for mass transit, the natural state of most of the island, the lack of roads on the island, and its compact, tightly clustered communities, opportunities for expanded interpretation, and outdated facilities that present opportunities to build in a more sustainable fashion.
- **Some ideas to consider** – Night Sky (how to work with community to preserve); Increasing ease of lateral movement; Website (how it can advance our efforts in sustainability); New options for camping or staying overnight; William Floyd Estate (how to properly utilize and manage); New location for HQ; how to address troubling development trends
- **Positive Steps** – Recently implemented practices include: recycled plastic lumber used on boardwalk; solar power buoys, solar power at new entrance station etc.

### IV. Grasping Sustainable Concepts

#### **PowerPoint Presentation: “Grasping Sustainable Concepts”– Noted Green Architect, Bill Bobenhausen**

Bill Bobenhausen is an architect, author, and professor who is widely regarded as an authority on the design and development of green buildings. He delivered a presentation titled “Grasping Sustainable Concepts” that addressed the topic of green building in some depth. The presentation introduced the broad concepts of sustainable design and provided an overview of the LEED green building rating system developed by the U.S. Green Building Council. Bill also



presented for inspiration two case studies of sustainable development from coastal environments analogous to Fire Island.

#### Key points of Bill Bobenhausen's Presentation

- **Particular to Place** – Sustainability must grow out of a particular place. A sustainable solution for one place/problem may not be appropriate for another place. It demands understanding for the local environmental conditions
- **Process is Important** – Sustainability implies a particular approach to a problem. It is this new way of viewing a project that is important, not the “gadgets” (not the technological measures). Oftentimes the approach just follows common sense.
- **Important Concepts** - Bill used ten different headings as a way of presenting major concepts of sustainability. These headings are: 1) Low Energy/High Performance; 2) Replenishable Sources; 3) Recycling: Eliminating Waste and Pollution; 4) Embodied Energy; 5) Long Life, Loose Fit; 6) Total Life Cycle Costing; 7) Embedded in Place; 8) Access and Urban Context; 9) Health and Happiness; and 10) Community and Connection
- **LEED U.S. Green Building Council Rating System** – Credits can be obtained for sustainable practices in different categories:
  - Sustainable Sites (development in the right place; brownfield redevelopment; restoration; permeable pavements; light pollution; alternative transportation);
  - Water Efficiency (water-wise landscaping; capturing and using stormwater; efficient fixtures);
  - Energy and Atmosphere (refrigeration practices; on-site renewable energy; green power);
  - Materials and Resources (recycling; keeping materials out of landfills; using materials from local or sustainably harvested sources);
  - Indoor Environmental Quality (no smoking; daylight and views; high efficiency air filters);
  - Innovation in Design (additional credits for educational or research value, community participation, stewardship etc.)
- **Case Studies** include:
  - Dewees Island, SC (sustainable planned development on barrier island; uses new technologies; prohibits gasoline vehicles and certain building materials)
  - Chesapeake Bay Foundation's Philip Merrill Environmental Center (LEED Platinum project that developed as result of a interdisciplinary charette)
- **Financial Costs** – During the Question and Answer session Bill and others discussed the costs of building green. Typically there may be additional up-front costs, but long-term savings may result due to efficient technologies etc.

## V. Sustainable Practices at Assateague National Seashore

### **PowerPoint Presentation – Rick Barrett, Facilities Manager, and Ish Ennis, Maintenance Mechanic Supervisor, Assateague National Seashore**

Using PowerPoint, Rick Barrett and Ish Ennis highlighted sustainable practices that have been implemented at Assateague National Seashore.

#### Key points of Rick's and Ish's Presentation

- **Driving Force for Sustainable Measures** – Like FIIS, Assateague is a dynamic environment. Ocean, shifting sand, and seasonal storms constantly transform the landscape. Natural forces have damaged many beach facilities over the years.
- **Mobile bathhouse units** – These consist of lightweight changing rooms, passive solar vault toilets, solar-powered shower, and removable decking. These units can be removed, stored,



and re-erected at appropriate time and place. They respond to the dynamic environment. Interpretive displays describe these to the public.

- **Other examples** of sustainable construction employed at Assateague include:
  - Fiberglass doors – stand up better against rusting and weathering in this corrosive salt air environment
  - Recycled Plastic Boardwalks – made of recycled material and require low maintenance
  - Roof Materials – 50-year shingles and stainless steel nails are long lasting materials that withstand harsh coastal environment
  - Roads and Parking – Employ native materials (clay and clamshell) that will withstand storms

## VI. Building a More Sustainable Fire Island

### Small Group Role-Playing Session

Participants broke into four small groups in order to brainstorm ideas and recommendations for making Fire Island a more sustainable place. Planners had assigned individuals to their respective teams in advance so that each group was assured a diversity of expertise. Each group was provided with maps and flip charts. In each group, a facilitator kept discussion moving forward and recorded the group's recommendations. Notes are included below.

#### Assignment for Each Small Group (from Agenda)

*Develop a series of ideas that will make Fire Island National Seashore (including the William Floyd Estate, the mainland facilities, and the surrounding area) a more sustainable place in the future. Please be sure to develop ideas for the following topic areas:*

- *Public Information, Interpretation, and Outreach*
- *Natural and Cultural Resource Preservation*
- *Site and Building Design*
- *Transportation*
- *Infrastructure (Energy, Water, Waste Water and Waste Management)*

### Group 1 Notes

#### Main Big Ideas

- No new NPS permanent facilities on the barrier island
- Develop barges for exhibits, restaurants, restrooms, education
- Contain and remove black water
- Harvest and reuse gray water
- When a catastrophic storm comes:
  - Use 20-year life cycle maintenance.
  - Remainder of island restores itself – then shifting sands don't matter as much
- William Floyd Estate – Maintain it carefully. Use state of the art utilities but ensure historic compatibility. Historic stabilization and or rehabilitation.
- Multi-agency Visitor Center on the mainland (Patchogue?) – USFWS, State of NY, DEC, TNC etc.
- Public shuttle/transportation system at railroad terminal. It should link to Fire Island and also to Wertheim NWR, William Floyd Estate
- Over time begin to remove park facilities on the island

#### Development

- Any permanent new construction should not be on the barrier island. Instead, place NPS development on the mainland.
- Permanent structures on mainland – Locate a V.C. in Patchogue



- Provide mobile structures on the barrier island. Reuse and store these in safe place year after year
- Communities – Coastal Erosion Hazardous Area (CEHA). Any structure in that zone cannot be rebuilt in that place
- Homes just inward of CEHA. Use stilts or other techniques to protect the homes so that they have good chance of surviving future storms. Can rebuild in this zone.
- Take a stand that public should not rebuild on barrier island if wiped out during natural disaster (may be difficult politically). Requires cooperation with towns, local governments for zoning.
- Combine Wertheim V.C with FIIS VC at Patchogue. This will be a bigger, joint facility. Include Chamber of Commerce. Existing Wertheim VC at refuge becomes secondary and small scale.
- Locate FIIS headquarters to downtown Patchogue to help revitalize village

#### Infrastructure/Waste

- Sewage – Living Machine with salt marshes as part of treatment.
- Separate gray and black water with goal of removing black water from Fire Island
- Educate people about that black water tank boat nearby – Enforce/ensure that it doesn't release black water into bay (this is better than putting it on a truck).
- Nowhere in the bay can dump black water. Work to regulate black water disposal on Long Island.
- Inspect that [unknown word? Pg. 2] shut valve – inspected by Coast Guard.
- Toilets not near water – Use composting toilets in areas of light use
- Land based toilets pumped out boat that also services boats
- Inland toilets – holding tanks with frequent pumping
- Continue black water sewage – remove from Island – do not dump in GSB
- Convert community to waste water treatment facility – brought off F.I. – could it be on barge?
- Communities should move from independent residential system to shared waste water system

#### Building Design/Post-Storm Vision/Food etc.

- Maintain existing facilities with sustainable materials. LEED certified with strong positive life cycle costs. "Not put 100 year roof". But remember, in 20-30 years is probable storm.
- If feasible, use the abandoned motel (Talisman?) for NPS housing. Remove outdated isolated housing.
- Floating facilities - use floating restaurant barge, science barge, restrooms, exhibits. Tie off with floating dock to it. It can be towed to safety out of storm's way.
- Floating docks that get pulled up and put right on shore. (Won't get wiped out by ice etc.)
- In advance of catastrophic storm, define purpose/mission of each area. What is development to be like? Will this area be rebuilt? If so, how will it be green? Other areas won't be rebuilt
- Foster and encourage restaurants on the mainland.
- At Fire Island, use barge for food/restaurants. (Remove Watch Hill bar?)
- Remove all bulkheading. Replace with sustainably constructed shoreline (natural materials).
- New facilities will be LEED certified.
- Reuse existing structures like bowling alley
- Strengthen links to LIRR and FIIS and downtown Patchogue
- Over time, begin to eliminate park facilities on the island

#### William Floyd Estate

- More vigorous outreach. Create a special website link. Institute more educational programs
- Relocate curatorial facility to higher ground
- Sustainable bathroom (composting?)
- Remove asphalt parking. Replace with pervious option.



- Historic restoration/rehabilitation of Old Mastic House. Institute state of the art (but historically compatible) utilities to keep it healthy and functioning
- Build stronger partnerships for help in administering WFE

#### Lighthouse

- Make it as sustainable as possible without diminishing historic character
- Upgrade energy efficiency without hurting historical character
- Use “power of the day” (Make it solar) Perhaps solar supplemental
- New Fresnel Lens building will be LEED certified bldg.

#### Water, Transportation, Land Use

- Remove all swimming pools, hot tubs (to limit use of water and chemicals)
- Do not allow residents to use fertilizer on lawns/gardens (or work to discourage)
- Water harvesting – encourage use
- Storm water management – planted roofs on buildings such as bowling alley or new V.C.
- Pervious pavement – Naturalize parking areas (including at Robert Moses)
- V.C. – on mainland with shuttle service on Long Island Expressway. Shuttle to any number of sites. Kind of like Disney World. Public subsidy- would help remove traffic – direct link to RR.
- Smith Point – move beach house off dune, move Flight 800 Memorial back

#### Outreach

- Get Stony Brook and others to do programs at F.I. – Focus attention on sustainable practices. Interpretation at every place where sustainable practices are employed
- Solar 1 and Solar 2 Exhibit (?)
- Our V.C. will be a storehouse for information on all things green, not just about Fire Island
- Sustainability will be a strong focus of website

#### **Group 2 Notes**

- Big Question: What is a “sustainable” barrier island? Nevertheless, we are moving past the sand issue for this discussion. Communities and NPS must work together as partners.

#### Public Information/Outreach

- NPS must be proactive in children’s education. Get youth to understand the message of sustainability since they are the future.
- Create Focus groups with children – specifically related to topics such as: climate change and barrier island dynamics
- Fire Island is a wonderful place for children – the bright moon, the mystery of the Sunken Forest, the lack of vehicles. Capitalize on this. Attract kids from Long Island and beyond.
- Website – Reconstruct so it is engaging to kids! – Establish a virtual visit. Encourage kids to learn about/struggle with climate change etc. Better yet, engage kids in developing the website. Make it up to them. Partner with schools in this effort.
- Work with teachers to make sustainability and environmental issues (climate change, ecology, stewardship, vegetation, green building) a part of school curriculum. Mesh with local and national standards.
- NPS should sponsor focus groups/conventions across county.
- Don’t forget the resident experience. Adult residents are hungry for interpretation/education. Tap into the historic Chautauqua concept. Sponsor lectures about sustainability
- Role for Fire Island Association – they (as residents) develop their role and vision for sustainability. Establish a Green Committee
- William Floyd Estate – Use subject of sustainability to tie it thematically with the rest of the park. The house is built to south so faced the winds. It is a bit like an island: self sufficient etc. Link history with the cutting-edge in this way. Same island metaphor for the island communities (they are islands)



- WFE – Establish better connections to other heritage sites within Long Island.
- Literature – the setting of WFE is tied to development of literature. There are 300 years of residency and use by Floyd family. This is sustainable in a way. Use these 300 years of history and use to illustrate the theme of sustainability.
- Create a model program in Seaview. We are well positioned to navigate political issues.
- “Sustainable Seaview” could emerge as model that would spread throughout the island.
- Living on an island is different than mainland. Sustainability has special appeal for islanders. We understand being self sufficient, the need to recycle etc.
- Encourage community participation/practice by establishing sustainability competitions.
- Develop a special organization that ties together communities with NPS: community managers: the people who really make place tick. Justin McCarthy, Mario (long timers)
- NPS Climate-Friendly Park Initiative already exists. FIIS has agreed to participate. Park has to: develop action plan for reducing greenhouse gas emissions and educate on sustainability – “Do Your Part for Climate” program is way to get residents and visitors engaged – people actually learn their impact (calculate greenhouse gases and reduce it). – These get donated to park, 4000 homes, marinas etc.

#### Natural and Cultural Resource Preservation

- Open space – inviting people to donate properties through Community Fund – could be model
- Viewsheds, night sky, soundscapes, vehicle absence, walkability – focus on these topics.
- Emphatic – Recognize that relationship between park and people must be sustainable. NPS must provide for management of resources in sustainable way while ensuring public health and comfort. Topics like mosquitoes, ticks, deer must be resolved. “The island will not sustain itself until it has holistic, cooperative stewardship.” Goal of management is to get everyone on board.
- Study new ideas for helping marshes keep pace with sea level rise
- Develop mosquito management plan. Continue partnership with county
- Lighthouse and other cultural resources – NPS must provide support for these entities (the place and the entity that runs them). Support in form of financial, personnel, and public information. Also, NPS must balance historic values with green components. Only incorporate new technologies in these places in a historically sensitive way.
- WFE – The Forge River is heavily polluted from duck farms. Compare historic conditions with today. Investigate opportunities for restoration.

#### Transportation

- NPS must get rid of 2-cycle engines in fleet. Work with auto manufacturers
- Shuttles from RR and other hubs – electric vehicles or hybrids that get you to the ferries that plug into energy generators
- Ferries – replace old ferries or convert them into 100% bio-fuels. NPS should also do with ranger vessels (Channel Island is an example) – petroleum free
- Increase ridership on ferries – decrease autos coming on island at Robert Moses and Smith Point.
- Create storage areas for utilities to discourage utility workers from going back and forth. Will reduce amount of driving
- Subsidized water taxis? Ferries? – communities would pay for some of operation. (They do not want to encourage new use of bikes: “if it can come by water...”)
- Electric water taxis

#### Utilities

- Partner with utilities and community to reduce water (Suffolk County Water Authority)
- Increase cost for driving on island. We want to discourage driving on the island.
- Bold idea – a “zero energy island” – can we harness tides to generate energy?



### Waste

- Garbage removal – First strategy is to do what we can to reduce the amount of waste. This should be a key component of our education. Work with the concessionaires to limit or eliminate bottles, cans etc. (All drinks will be draft or fountain)
- Institute aggressive recycling program on island. Create real incentives for what comes over to go back
- Set up a terminal (NPS?) in central location on NPS land for garbage removal. Consider a land swap? Sell the land and use it to make some money for the NPS (some debate)
- Reduce reliance on septic – Can we create constructed wetlands to filter waste?
- “Living Machine” – treat sewage through composting toilets (?) – some difficulties.
- Consider linking community sewage systems together and build constructed wetlands on the island.
- Incentives and Disincentives on Energy (to limit use; encourage use of solar etc.) Flexible rate structure or surcharge on energy (capacity is limited – 3 cables).

### Building and Site Design

- Reconsider NPS buildings. Of existing buildings, what can we do without? Restore sites that are wiped out by storms. (Not just NPS)
- Islip and Brookhaven – convince these entities and find creative ways to get on board.
- Implement new guidelines for building after storm events. Use them as an opportunity for building in a way that is LEED-based. Rebuild with renewable/recyclable materials etc.
- In GMP propose new zoning standards – get communities to buy in.

## **Group 3 Notes**

### Resource Preservation

- Acquire Bellport Beach property – remove structures
- Whenever possible, allow the barrier island to be a natural barrier island – allow for natural process. Natural action in the shallows is very important.
- Park Boundaries – may be important to have greater area of the bay within the park boundary from a resource protection and sustainability standpoint.
- Land swaps (for what purpose?)

### Public Information

- Use multiple means and opportunities to get sustainability message out (a la ASIS interpretive panels).
- Train stations / Ferry terminals – important opportunity for communication. Interpreters could
- Better use of local media.
- A guidebook for making communities more sustainable – pointing out financial benefits.
- Education opportunity – NPS and other “green” interests – “trade show” for green building and landscape products and techniques.
- Encourage communities to engage in community-wide efforts to become more sustainable (e.g. encouraging “shaded” areas, to other principles).
- Promote use of transit as car-free connections to beaches.

### Transportation - Water

- EPA – Regulations: Tier system – increasingly more stringent
- Tier 2 – 1 VOCS - New boats require 4-stroke engines
- Tier 3 – Goes into effect 2012: 4-stroke engines still required, but now recycling
- Tier 4 - Goes into effect 2025
- Applicable for motors and fuel for passenger boats – licensed commercial carriers.
- 4-stroke engines when fleet is re-powered.
- Use bio-diesel for some craft. For smaller engines (say water taxis), some boats should burn bio-diesel. (Valero, CA – 1st ferry service experimenting with bio-diesel) Bio-diesel has to be



certified as particle-free for use in new Tier 2 engines. Bio-diesel for marine use has different requirements than use of bio-diesel in land vehicles.

- Power/sail craft. Alcatraz ferry experimenting with power/sail craft. In new concession contract.
- As EPA Tier requirements approach – industry will catch up and will likely be looking to Europe (which has been looking at this for a while).
- 1st tactic – in the short term, re-power with engines that burn cleaner burning fuels.
- As vessels need to be re-powered, do the best you can do with available technology.
- Hulls/ Wake / Wash – very important for both FI and mainland shores in terms of impacts. As vessels are replaced, consider vessels that are configured to produce smaller wake. That will reduce impacts on shore.
- Currently no vessel program similar to LEED → needs to be developed for new vessels.
- Navy/ military doing work on configuring vessels – single hulled/double hulled etc. Navy is no longer painting their vessels (Finding different materials to paint with)
- Ferries – Need better accessibility, better PA systems, better public information/education → sustainability should be a central message of this information
- Small carriers – some innovations may be available to them sooner because of market influences. Diesel outboards will make a significant difference once it hits the broader market.
- Commercial trawlers – diesel powering electric motors.
- Upgrade park patrol fleet. New platforms, 4-strokes are heavier than 2-strokes, older boats can't handle the weight of new motors. Patrol fleet needs to be modernized to become more sustainable and meet park operational needs

#### Transportation – Mainland Connections and Land-based

- Enhance RR to ferry connections. Improve transit/shuttle links between RR & ferries at Bay Shore and Sayville and Patchogue. Bus links – use buses in links
- LIRR policy on pets/bikes discourages use. Work with them to modify. Could these policies be modified – say on-peak / off-peak?
- USCG regulations – relative to weight, mass, emergency access, discouraging bringing bikes on ferries. Can't there be a way around this?
- Commercial Fleet – upgrade as requirements come online (EPA) and technology becomes available.
- Electric airport “tram”; Rubber tired trolley train
- “Zip Car” – fleet of “island-friendly” vehicles that are available for rent on the Island Low impact paths – clamshells/aggregate
- Transit link from Babylon Train Station – will be asking State to extend bus service to FIIS West End Ranger Station – current proposal.
- Consider maintenance issues for vehicles – eco-friendly paints.
- Utilities/municipalities – should downsize their vehicles particularly for use during the season
- Commercial/contractor vehicles – they already use downsized vehicles during the non-driving season (summer season). For driving season, use full sized vehicles.

#### Other

- What happens with “subtractive developments” – when we lose houses/buildings to coastal erosion?
- Endorse the use of removable structures (pump out may be more of an issue at FIIS – may limit where they can be located)

### **Group 4 Notes**

#### Sustainable Infrastructure/Waste

- Waste Management – Reduce size of waste stream; purchase in bulk
- Proper disposal sites
- Process human waste on site (Living Machine)



- Flexible Sewer System – nothing released into water
- Incentives: free parking for picking up a bag of beach trash
- Create bio fuel from waste
- Incentives for zoning/use of bio fuels

#### Infrastructure/Energy Demand and Supply

- Create a baseline database of current use
- Reduce energy demand on the island
- Support small solar and wind generators – avoid fossil fuels. Explore alternative sources of energy:
- Alternative energy should be required for park; encouraged for others
- Adjust zoning regulations to provide incentives for small building – penalties for large buildings. Otherwise insert sustainability into zoning standards
- Reduce demands for driving /reduce energy budget
- Support energy- efficient boats: regulate horse power?

#### Water

- Collect rain water
- Solar/wind power pumping and distribution of rain water
- Eliminate dependence on water from aquifer
- Reduce waste water

### **Group Discussion – New Ideas and Comments**

After the small teams had finished reporting out to the larger group, all participants were invited to comment on, or add to, what they had heard. The main new points from this discussion are included below:

- **Uncertain Future/Post-Storm** – How do we prepare for an uncertain future? Two scenarios: a catastrophic storm will come, and no catastrophic storm will come in the near future. Let's continue to make progress on sustainable front in the meantime, but let's be mindful that a catastrophic storm is always a possibility. Let's have a blueprint ready in the event of such storm: a set of standards and goals for re-development after the storm. Are there to be settlements here or not? (some debate) If so, it should acknowledge the dynamic character of the place. Greensburg, KS (destroyed by tornado and now developing with sustainability at core of the vision) can be a model. GMP must address this "reset button" possibility.
- **Carrying Capacity** – Good idea for GMP to consider. There is a capacity that the island can sustain. At certain point, all involved must say "enough is enough." Establish capacities for different management zones (look at VERP, which strives for optimum visitor experience of resource). Keep in mind that if we develop in a sustainable way, our carrying capacity will rise.
- **Communities/Development** – If we evaluate the island communities according to sustainability requirements, they really score pretty high. However, the character of development truly needs to be addressed. They can be made even more sustainable. Keep the message positive.
- **Transportation** – Residents and others wanted to reiterate that boating was appropriate for Fire Island. Zip cars should not be allowed on the island.
- **Financial Cost of Sustainability** – The message must get out that building green is actually the cheapest way to go in the long run. People should not view as a constraint, but an opportunity. Marketplace is beginning to respond; will get cheaper over time.
- **Boating Industry** – Let's not get "down" on the boating industry. It has made great strides in last twenty years and it continues to evolve/get more green (design of engines, wake consciousness, materials used etc.)



- **CEHA** – Coastal Erosion Law. The concepts are right. It is just very young and is not enforced well.
- **Swimming Pools** – Town of Islip has recently rewritten ordinance on swimming pool—strengthening the requirements for having a pool.

## VII. The Most Important Ideas / Long-term Vision

The day ended with a group discussion of the most important/best ideas voiced during the workshop. Facilitators asked the questions, “If you could implement only one of the ideas generated today, which would it be?” and “What is your vision for Fire Island twenty years from now?” Notes from the responses are included below:

- Educational Leader – Fire Island becomes an educational force in bringing young people together (Long Island and the nation) to learn about climate change and responding to it
- Appropriate Zoning – The creation of a tailored zoning ordinance for each community which disallows enormous FAR relative to conditions.
- Sustainable Facilities – In 20 years I’d like to see a very different facility base on Fire Island – almost 180 degrees different from today.
- Cooperation among Agencies – All government agencies working together with F.I. to achieve sustainability. (lots of support for this)
- Petroleum-Free Island – NPS and residents of F.I. sign a voluntary resolution saying they’d move toward energy neutral, zero-waste island. Petroleum free island.
- Baseline Data – Better baseline data about existing use (of resources etc.)
- Implementation – Implementation of bold ideas set forth today
- Great South Bay/Expanded NPS Boundary – More attention paid to bayside environment. Consideration for expanding the boundary of FIIS.
- Affordable Renewable Energy – Hope to see alternative energy cheaper in future.
- Reducing Waste – We need to reduce the waste stream. This is the best idea for dealing with waste: find ways to reduce the amount! (lots of support) What you bring on to the island, you must bring off.
- Interagency VC in Patchogue – Public and NPS should build V.C. at Patchogue. Everything sustainable: Platinum LEED; connected to RR etc. A model for others nationwide.
- Sustainable Residency Options – Given projections for storm intensity and frequency in future, the recognition by all involved that we need to look at new residency options.
- Radical Changes in Lifestyle – We will be living in a post-fossil-fuel economy. The answer must be a radical change of lifestyle. We must scale back on many fronts.
- No Decrease in Quality of Life – I want my grandchildren to enjoy same benefits as my children. Facilities should be cutting edge but not so difficult. Should be “do-able.”
- Cutting-Edge – Ferries play a role in sustainability and transport you to a cutting-edge park.
- General Pulling-back From the Resource – Drastically increased recycling and re-use. Removing structures off the resource (away from the island).
- Post-Storm Blueprint – We should have a decision in place about character of redevelopment or not redeveloping
- Green Maintenance/Operations – Conservation of fossil fuels and use of green materials in park operations.

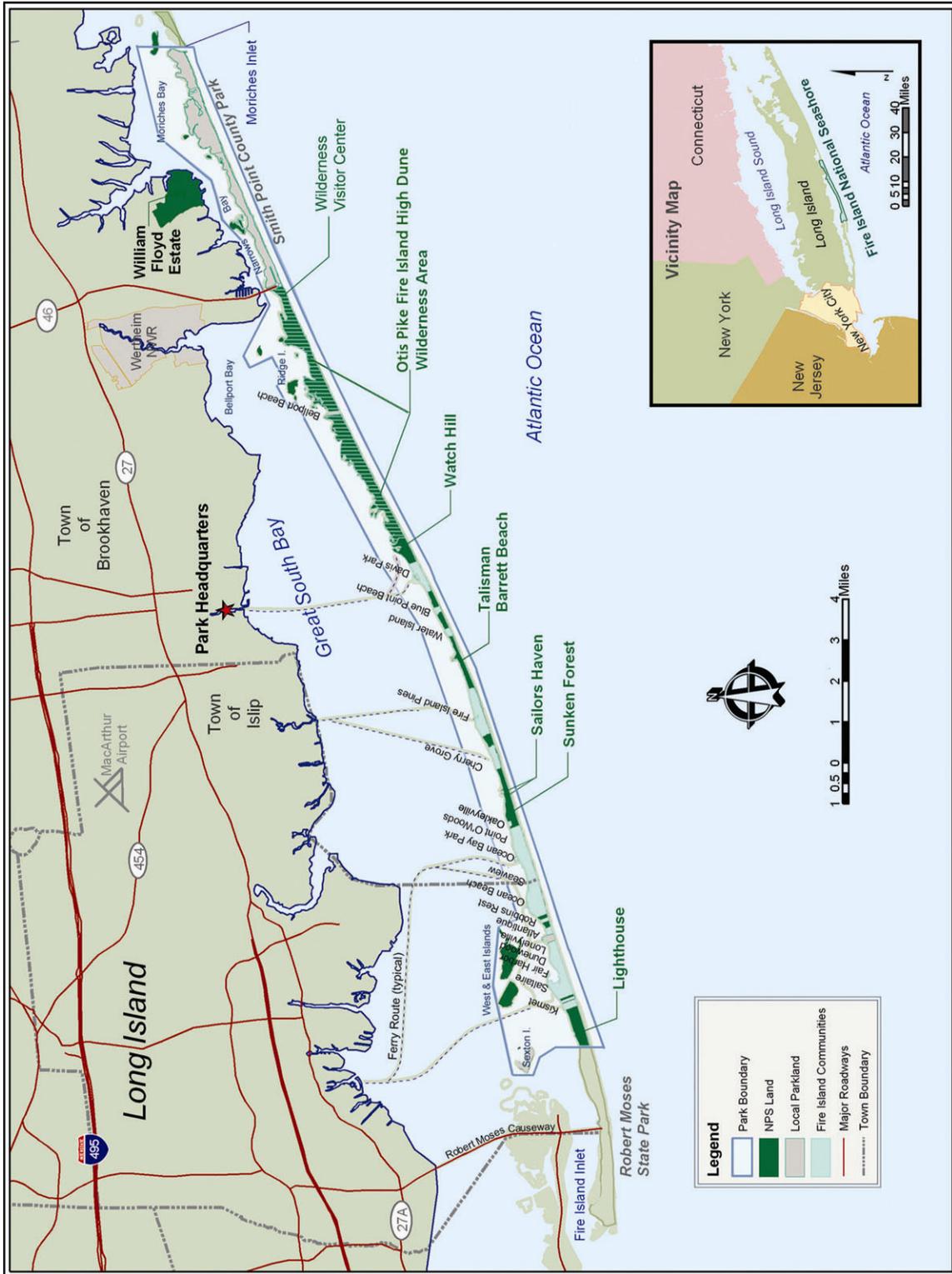


## Appendix I. List of Participants

<b>Rick Barrett</b> Facility Manager	Assateague Island NS
<b>Michael Bilecki</b> Chief, Resource Management	Fire Island NS
<b>Bill Bobenhausen, FAIA</b> President	Sustainable Design Collaborative
<b>Ellen Carlson</b> Project Manager	NPS NER
<b>Paul Cataldo, LEED AP</b> Architectural Designer	US Green Building Council -- LI Chapter/ Ashley McGraw Architects
<b>William Chaleff</b> Principal	Chaleff & Rogers Architects
<b>Ish Ennis</b> Maintenance Machanic Supervisor	Assateague Island NS
<b>Dennis Gartland</b> Deputy Superintendent	Robert Moses State Park
<b>Dave Genaway</b> Planning Director	Town of Islip
<b>Tom Gibney</b> Associate	Shapins Belt Collins
<b>Suzy Goldhirsch</b> President	Seaview Homeowners Association
<b>Dave Griese</b> Administrator	FI Light Preservation Society
<b>Joe Heinrich</b> Maintenance Foreman	Fire Island NS
<b>Dave Henson, DVM</b> Sustainability Advocate	RESC 7260 Friends of Fire Island NS
<b>Robin Lepore</b> Coastal Mgmt Specialist	NPS NER
<b>Jay Lippert</b> Chief Ranger	Fire Island NS
<b>Walt Martens</b> Carpenter	Fire Island NS
<b>Sean McGuinness</b> Deputy Superintendent	Fire Island NS
<b>Ann Moss</b> Principal	Shapins Belt Collins
<b>Charles Norris</b> Principal Architect	Norris & Norris Associates
<b>Shawn Norton</b> NPS Environmental Leadership Coordinator	National Park Service
<b>Derek Rogers</b> Staff	Smith Point County Park
<b>Michael Reynolds</b> Superintendent	Fire Island NS
<b>Lou Siegel</b> Science Coordinator	South Shore Estuary Program
<b>Ken Stein</b> Boat Operator/ Concessioner	Fire Island Concessions
<b>Ron Treants</b> Project Specialist/ Architect	NPS Denver Service Center
<b>Paula Valentine</b> Public Information Specialist	Fire Island NS



## Appendix II. Park Map



Map originally published in *Fire Island National Seashore Business Plan, FY 2004*, © 2005, NPS