



PRELIMINARY PROJECTS – WEST GILGO TO CAPTREE

COASTAL MANAGEMENT

A major focus of the six communities in this NYRCR planning area is preservation of the natural environment, both for the continued enjoyment of its outdoor recreation amenities by residents and visitors, and as the first line of defense for life and property on the barrier islands and Long Island at large. There is a strong desire to invest in robust and healthy dunes, broad beaches, and flourishing wetlands to minimize future damage to the barrier island communities, as well as safeguard the mainland communities that the barrier islands shield.

Strengthen Dunes



Project Category: *Infrastructure, Natural Resources*

Project Description: *The barrier island communities depend wholly on the strength of the dune system to protect the survival of their communities. Current standards and methodologies are proving to be insufficient, as indicated by large sections of the dunes failing simply from periods of strong winds. The NYRCR communities propose an immediate comprehensive review of current and alternative means and methods of dune replenishment and strengthening with a focus on long-term resiliency of the dune system. Once completed, the communities propose the implementation of the best methodology identified in the review. Though costs for such projects may be high, the benefit cost analysis will help to determine project feasibility.*

Community Benefits: *Research and construction jobs; economic stabilization of residences and mainland business interests; prevention of environmental damages; protection of environmentally sensitive areas; protects socially vulnerable populations.*



Beach Replenishment

Project Category: *Infrastructure / Natural Resources*



Project Description: *Going hand-in-hand with strengthening the dune system must be a strategy for replenishing the beaches on an ongoing basis. Wider beaches reduce storm damage because the energy contained in wave action and storm surge is dissipated by the break and slope of the sand. Wider beaches on the barrier islands would help to protect the dune system that in turn protects structures on the barrier islands, as well as those on mainland Long Island.*

Due to the direction of the surf and the geography of Fire Island and Jones Beach Island, Gilgo and West Gilgo beaches are relatively narrow. The mechanics of the littoral drift in these locations takes the sand away more than it replenishes the supply. The narrowness of the beaches exposes the residential communities on the other side of Ocean Parkway to increased effects of storm surge. Periodic failures of the dunes at these locations increase the communities' exposure and decrease mobility on Ocean Parkway adjacent to the failures. The communities propose to study the feasibility of various nonstructural and structural strategies to protect the barrier island's infrastructure and diminish the adverse effects of coastal hazards, while restoring and maintaining the ecosystem's natural protective features and processes. Where structural methods are advised, the Committee will seek to combine them with nonstructural measures to counteract unintended consequences of the proposed structural interventions. The Committee also proposes to seek funding to implement projects that advance the recommended actions of the feasibility study.

Community Benefits: *Construction jobs; economic stabilization of residences and mainland business interests; prevention of environmental damages; protection of environmentally sensitive areas; protects socially vulnerable populations.*



WATER SUPPLY



West Gilgo Elevation of Public Water Systems

Project Category: *Infrastructure*

Project Description: *West Gilgo operates and maintains its own standalone water system that supplies water for domestic and fire suppression uses to all residents. Although the floodwaters from Sandy inundated both of the two system pump houses, the water only reached about 6-12 inches, thus sparing the electrical components. Power to the community had been lost, but a standby propane-fueled generator kept the pumps in operation during and after the storm. However, given Sandy's modest rain, the community recognizes that flooding in a future event could be much higher, thus putting the electrical components at risk of inundation. The West Gilgo community proposes the use of approximately \$140,000 for its community water system to raise the tops of the well heads, elevate the standby generator and propane fuel tank, and acquire and install new pump house storage tanks and piping. All elevating activities would bring the equipment to four feet above ground level to mitigate against flooding of the well heads and electrical components in future storm events, and ensure continuity of water supply for domestic and fire suppression uses.*

Community Benefits: *Construction jobs; prevention of environmental damages; increase in neighborhood economic stabilization; provides access to essential health services during acute events; protects socially vulnerable populations.*

Estimated Project Cost: *\$140,490.*



Gilgo Four Additional Drafting Wells

Project Category: *Infrastructure*

Project Description: *Fire prevention and suppression are major themes for the West Gilgo to Captree NYRCR communities. Being so far from other Town of Babylon communities, it takes 18 minutes for the Babylon volunteer fire department to reach the outer beach communities, a period of time during which a small blaze can become a raging fire threatening one or more structures. The West Gilgo to Captree NYRCR communities typically address the risk of fire by drilling drafting wells and building fire jetties for use by the community's fire pump carts or the Babylon FD's pumper trucks. All six communities have expressed the need for a more reliable water supply for fire response and specific projects will be developed for the final plan.*

The Gilgo community has expressed that their current level of protection from fires is insufficient, particularly during or following an event when Babylon FD is occupied by other disaster response activities and/or when Gilgo is inaccessible due to road damages/blockages. The Gilgo community proposes to identify funding to develop four additional fire drafting wells located strategically in the community for ideal coverage of the residences.

Community Benefits: *Construction jobs; prevention of environmental damages; increase in neighborhood economic stabilization; provides access to essential social services during acute events; protects socially vulnerable populations.*

Oak Beach Water Systems

Project Category: *Infrastructure*

Project Description: *The Oak Beach community currently has three small public water supply systems – the “Dougherty”, “McCarren” and “McCrodden” – that serve less than 25 residential structures each. Each system lost power following Sandy, leaving the connected residences without the ability to draw water and without residential filtration capability. In addition, all three systems have been cited for violations of NYS drinking water standards. The Oak Beach community proposes to identify funding to combine and upgrade the three public water supply systems at Oak Beach with additional capacity. The project would resolve the drinking water standards violations and the increased capacity would provide service to additional lots. The system would service up to 94 homes located between the Oak Beach Community Center and Oak Beach Park. Preliminary engineering estimates place the cost of the project at \$2.1 million. The proposed system would be built to current codes and standards, including controls elevated above the 500-year flood elevation, above ground tanks, and a backup power supply.*

Community Benefits: *Construction jobs; prevention of environmental damages; increase in neighborhood economic stabilization; provides access to essential health services during acute events; protects socially vulnerable populations.*



Oak Island Beach Association Water System

Project Category: *Infrastructure*

Project Description: *: Oak Island Beach Association residents are connected to private wells either as an individual household or jointly with up to three other lease holders on one well. The smaller wells are unregulated by NYS, but testing indicates that many do not meet NYS drinking water standards. Furthermore, most of the private wells do not have a backup power source and residences on these wells lost the ability to draw or filter water during and after Sandy. The Oak Island Beach Association proposes to identify funding to connect all residents to a newly constructed public water system. The project would resolve the drinking water standards violations and the increased capacity would provide service the entire community. The proposed system would be built to current codes and standards, including controls elevated above the 500-year flood elevation, above ground tanks, and a backup power supply.*

Community Benefits: *Construction jobs; prevention of environmental damages; increase in neighborhood economic stabilization; provides access to essential health services during acute events; protects socially vulnerable populations.*

ADAPTATIONS FOR LOCAL FLOOD MITIGATION

Adapting Captree Road

Project Category: *Infrastructure*

Project Description: *Project Description: Captree Road is a single entry road that runs along the northern edge of the inhabitable area and serves all of the Captree Island residents. The low-lying road is immediately adjacent to the marshlands and the waters of the bay frequently rise high enough to spill over the roadway, restricting access and egress to residents. The Captree community may propose adaptive measures to strengthen the shoreline along the north side of Captree Road to mitigate flooding and minimize travel disruptions.*

Community Benefits: *Construction jobs; prevention of environmental damages; protection of environmentally sensitive areas; increase in neighborhood economic stabilization; provides access to essential social services during acute events; protects socially vulnerable populations.*





Oak Island Shoreline Stabilization

Project Category: *Infrastructure*



Project Description: *Oak Island's structures suffered tremendous damage due to their location in direct line of Sandy's strong winds and storm surge. Most structures on the island are elevated, but floodwaters rose to unprecedented levels. The Oak Island community may propose to strengthen, raise, or replace the shoreline stabilization structures (currently bulkheads) along the waterfront to new code requirements to reduce damages from storm impacts.*

Community Benefits: *Construction jobs; prevention of environmental damages; protection of environmentally sensitive areas; increase in neighborhood economic stabilization; protects socially vulnerable populations.*



Mitigation of Oak Beach Road Flooding

Project Category: *Infrastructure*

Project Description: *Oak Beach Road is a single entry road serving all of the community's residents that floods frequently, limiting access and egress and potentially blocking evacuation and/or emergency vehicle access during an emergency event. There exists a vegetated swale along the north side of the road that is meant to retain stormwater runoff; however, the swale has not been maintained regularly and does not function as it should. The Oak Beach community may propose to seek funding to re-establish and upgrade the capacity of the channel to handle current and projected stormwater management needs. The use of native plantings would serve the dual purpose of filtering the runoff as it percolates into the ground and recharges the water table. The re-establishment of the trench from Oak Beach Park to the Oak Beach Community Center is currently in the specifications for the Oak Beach Park project.*

Community Benefits: *Construction jobs; prevention of environmental damages; protection of environmentally sensitive areas; increase in neighborhood economic stabilization; provides access to essential health services during acute events; protects socially vulnerable populations.*





POWER SUPPLY

Mitigation of Power Outages

Project Category: *Infrastructure*

Project Description: *Like many victims of Sandy, the residents of the barrier islands faced extensive power outages. Many community members describe being without power, and therefore without water or heat, for more than 30 days. The West Gilgo to Captree NYRCR communities will investigate the best means of mitigating future power outages, be it hardening the existing power supply, determining needs for backup power supplies, seeking alternative renewable energy sources, or a combination of these. The communities will likely propose to seek funding to implement the best identified strategies to alleviate this critical issue.*

Community Benefits: *Construction jobs; increase in neighborhood economic stabilization; provides access to essential health and social services during acute events; protects socially vulnerable populations.*





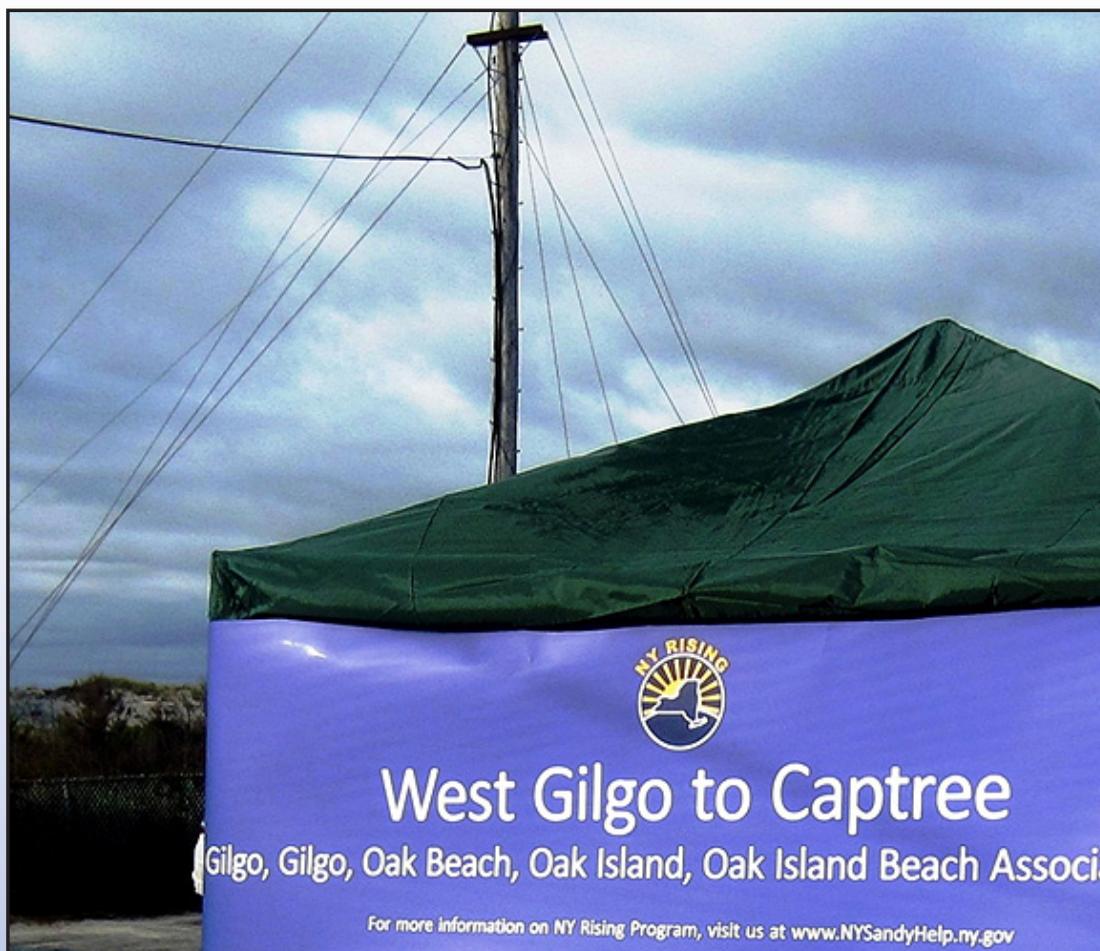
COMMUNICATIONS

Mitigation of Failures to Cellular Service

Project Category: *Infrastructure*

Project Description: *Communication is critical in the lead up and response to an emergency situation and cellular phones have become the most valuable tool to communicate with family and friends, request emergency services, and receive and pass along updates on evacuation, weather, road blocks, power outages, fuel supplies, and myriad other emergency management issues. Preventable problems arose related to cellular service provision during and after Sandy, including the submersion of electrical controls on microwave towers. The West Gilgo to Captree communities may propose to seek funding for projects that mitigate this and other issues to ensure continuity of cellular service. Such a project may be the elevation of electrical controls on all microwave towers and backup power source.*

Community Benefits: *Construction jobs; increase in neighborhood economic stabilization; provides access to essential social services during acute events; protects socially vulnerable populations.*





Expansion of Internet Coverage

Project Category: *Infrastructure*

Project Description: *The West Gilgo to Captree communities are not currently covered by a reliable internet service provider. Some residents use a satellite provider, while others use the wireless tower at Cedar/Overlook Beach. Not only is the lack of reliable access an everyday nuisance, particularly for year-round residents who live and potentially work from their residences, it becomes a public safety issue in times of impending emergency situations. Many residents were not sufficiently notified of Sandy’s magnitude, nor did they receive the reverse 911 mandatory evacuation notification. Access to information becomes a life and safety issue when living on a barrier island. The communities propose to seek funding to extend internet coverage to the full extents of each of the six communities in the NYRCR planning area.*

Community Benefits: *Construction jobs; increase in neighborhood economic stabilization; provides access to essential social services during acute events; protects socially vulnerable populations.*

PRESERVATION OF HISTORICAL AND CULTURAL ASSETS

Oak Beach Community Center - Elevation/Retrofit

Project Category: *Community Planning / Cultural Resources*

Project Description: *The Oak Beach Community Center is a historic structure in the heart of Oak Beach. Built in 1888 as a U.S. Life-Saving Station, the building, which is pending National Historic designation, has since served as the post office, chapel, yacht club, civic association, and now as the center of community gatherings. The center has been closed for repairs*



since Sandy due to wind and flood damages. The Oak Beach community may propose to elevate the building to above the 500-year flood height. Preliminary engineering plans estimate the budget to be around \$385,000. The project would include ADA accessibility to allow utilization by handicapped populations.

Community Benefits: *Construction jobs; prevention of environmental damages; increase in neighborhood economic stabilization; provides access to essential social services during acute events; protects socially vulnerable populations.*



Cedar Beach Marina Backup Power

Project Category: *Community Planning / Cultural Asset*

Project Description: *The Cedar Beach Marina Aqua Center is a Town of Babylon recreational facility that lost power during Sandy and subsequently lost its living ecology exhibits. The communities may propose to seek funding to install a permanent mounted propane-fueled generator for the facility. The estimated cost is \$40,000 and the benefits could extend beyond continuity of operations for the facility itself. Power supply was a major issue for every community and the center could serve as a drop-in center/warming center where residents could spend time, warm up, recharge cell phones, and exchange community news.*

Community Benefits: *Construction jobs; provides access to essential social services during acute events; protects socially vulnerable populations.*