

**6.3.3. Category C:
Potential New Sites Requiring
Additional Action to be
Established as a Beach**



6.3.3 Category C: Potential New Sites Requiring Additional Action to Become Feasible

HENRY HUDSON TOWN PARK

Town of Bethlehem

Albany County

River Mile 138.5

Ownership: Private

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: Several hundred feet of beach exist at this site were reviewed for suitability for a swimming program when water quality classification allows. This beach has a good slope and a narrow upland beach composed of small shale fragments. At a three-foot depth a few inches of mud and clay cover a rock-fragment beach surface. The upland beach material continues up to thirty feet in a wooded area.

Size of Feasible Facility and Other Potential Site Uses: A narrow beach is located on a bay, adjacent to the north end of Henry Hudson Town Park, seven miles south of the City of Albany. The Town of Bethlehem Park has developed facilities at its south end, providing a boat launch site, picnicking, fishing and other activities. Though the Park access road is located adjacent to the beach, no improvements have occurred in this section since the proposed beach development area located north of the NYSDEC boat launch ramp is private property. The size of a potential beach was not evaluated at this stage, since water quality classification currently precludes swimming at this site.



Water Quality Considerations: The New York State water quality classification of the Hudson River at Henry Hudson Park does not permit swimming at this time. Some observations indicate, however, that the water quality in this area has improved and may be suitable for reclassification, opening a greater span of the Hudson River in Southern Albany and Rensselaer Counties (currently Class C) for swimming and other activities. The analysis and review of the proper classification of this reach of the Hudson River may be useful as a part of the next phase of the Hudson River Swimming Feasibility Study.

The review of water quality constraints in this section of the River is a necessary first step in determining the suitability of this site for swimming. The current class C rating may be upgraded to Class B or A on the basis of existing water quality if sampling shows no constraints. An additional issue that requires evaluation is the discharge from a wastewater treatment plant that is located to the south of the Park, approximately one third of a mile from the potential beach. Even if the reclassification of this reach of the Hudson is deferred, securing the beach for future use would be a wise action if the owner is willing.

Tides, Currents, Waves and Wakes. A shallow bay location helps protect this site from north or south winds and currents. Wake from shipping along this narrow river reach will require similar lifeguard procedures as are exercised at Ulster Landing Park. Winds from the southeast and northeast will carry occasional choppy waves to the beach. The channel current at Henry Hudson Park is 2.2 fps, maximum tidal range is 4.5 feet.

SCHODACK ISLAND STATE PARK

Town of Schodack

Rensselaer County

River Mile 135

Ownership: New York State Office of Parks,
Recreation and Historic Preservation

***The following analysis is offered to guide potential development of a beach. No action will be taken by the State of New York to develop swimming at this site without further examination and review.**

Beach Conditions: The beach slope is good and the water clarity was excellent at the proposed beach site. A well compacted, fine-grained sand was found on the shore, placed there through the deposit of clean dredged material. The near-shore subsurface had a few inches of clay and mud over a firm sand and pebble base. Regular swimming use of the beach may quickly improve this subsurface condition. The upland beach is narrow, limited to the erosion line of wave action which is slowly eroding a two to three foot bluff composed of dredged material sands. Heavy scrub brush growth helps to retain this bluff.

The other beaches on Schodack Island located approximately one mile and four miles further south on the island, looked similar to the characteristics of the “planned” beach site. These two sites had a wider upland beaches, indicating that somewhat less work may be required to establish a swimming beach at these alternative sites than at the site shown in plans.

The beaches along Schodack Island were examined to determine if they constitute a good prospect for establishing beach swimming on the island, if water quality is found to be suitable for reclassification upgrades. The site determined to be most suitable for a beach by NY State Parks was checked from on-land and



boat-based inspections. The other beaches, located further south of the planned beach on the island were only observed from the River. All three sites face the open river to the west, with the same constraints associated with ship wakes, and the same advantage of afternoon sun. Access and utility improvements only are suggested to extend to the beach site shown in the NYS Office of Parks, Recreation and Historic Preservation's 1998 Master Plans for the Island (NYSOPRHP 1998). This supports the modification of the beach site shown in the Plan, so that it would also have choice upland beach characteristics.

Size of Feasible Facility and Other Potential Site Uses: Estimation of the size of a potential swimming facility has not been evaluated at this stage. Further evaluation of this site as a potential beach location would be required. A new State Park has been constructed at Schodack Island, located on the east side of the Hudson, just ten miles south of the Capital District's cities of Albany and Rensselaer. A bridge was constructed across the east shore railroad right-of-way to permit site access. Other park amenities include camping areas, a boat launch and picnic areas with benches. While a potential "beach" is indicated on the Park plans, a project for that site has not yet been designed or scheduled for development.

Facility Budget Estimate: Not evaluated at this stage, since water quality classification currently precludes swimming at this site.

Water Quality Considerations: As with Henry Hudson Park, the State water quality classification of the Hudson River adjoining all of Schodack Island does not permit swimming at this time (currently Class C). Some observations indicate however that the water quality in this area has improved and may be suitable for reclassification. A review of the classification of this reach of the Hudson River has been suggested, as noted above, for the next phase of the Hudson River Swimming Feasibility Study.

It would be prudent to determine if water quality constraints can be lifted for the beaches on Schodack Island, before major investments are made at the potential beach. A relatively inexpensive project may also be considered to be advanced at the same time as the water quality analysis, to re-shape the upland component of the potential beach. This would allow natural wave action to stabilize the site after the project, and confirm that this location is suitable to provide a swimming facility.

Tides, Currents, Waves and Wakes. The beach site shown in the Park Master Plan is somewhat protected from the north and south by a very slight shoreline indentation offering near shore protection from tidal currents and winds from the southwest and northwest. Wake from shipping along this narrow river reach at this location will require similar lifeguard procedures as are exercised at Ulster Landing Park. Winds from the southwest and northwest will carry occasional choppy waves to the beach. The channel current at Schodack Island State Park is 2.4 fps, maximum tidal range is 4.7 feet.

FOUR MILE POINT ROAD

Town of Coxsackie

Greene County

River Mile: 121.5

Ownership: Private

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: A small bay protects a short stretch of fine-grained sand beach approximately mid-way along the section of Four Mile Point Road that parallels the Hudson. The privately owned site is at a point where the road is closest to the River, providing only a narrow strip of upland property next to the beach. Parking for the site is at roadside. A little more wooded land exists at either end of this narrow property, which appears to be used on an impromptu basis for picnicking. The configuration of any public proposal would require research of the availability of these lands from a willing seller. Development of this site because of its size would probably be local and would require the approval of the town or the county. State support would probably be needed to make this happen.

The usable beach length at the Four Mile Point Road site is approximately 125 feet and the upland beach is only 30 feet, with another 30 feet to the road shoulder. The underwater slopes were excellent and the sand conditions are good for a small swimming beach. If this site is used for a swimming program, the narrow upland beach can be improved, and must be protected from parking vehicles and any new structures.

Roughly triangular properties at either side of the beach have fine stands of trees and brush that could be used to buffer most of the site from the road. These side properties could be effectively used for site support facilities. The views from the shoreline are excellent.



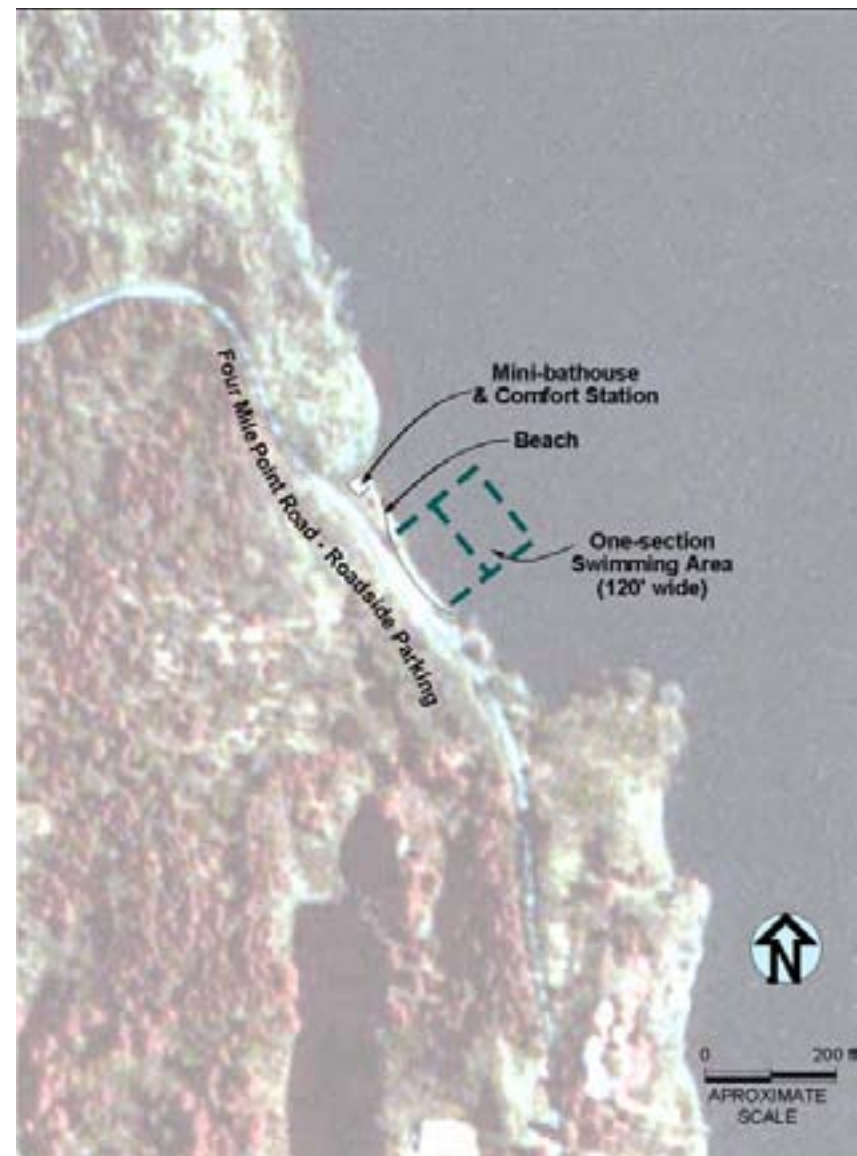
Parking will be a constraint at this site. Four Mile Point Road does not carry through traffic, or any appreciable volume of vehicles. Roadside parallel parking may be a solution for limited use, which is in keeping with the small beach. Other options may involve angle parking or other nearby properties if neighboring property owners are willing sellers. Improvements facilitating safe pedestrian flow are an important part of any parking design.

The need for a public swimming facility along Greene County's Hudson River shore has been documented. Public swimming facilities in the Catskills and in nearby counties are quite distant for the population that resides near the River. There are significant proportions of low-income families, with poor mobility in Greene County, who are unable to get to these distant facilities. One result of these limits is that local people do swim in the Hudson, often in unsafe areas. Consequently, finding the swimming beach "potential" along Four Mile Road, simply involved looking for the spot where people are already consistently using the beach. Four Mile Point Road is an understandable destination, since it is only a fifteen-minute bicycle ride from the nearby Villages of Athens and Coxsackie.

Size of Feasible Facility and Other Potential Site Uses: Considering the limited scale of the Four Mile Point Road property and its limited parking potential, a "minimum" scale facility would be the appropriate project for the site. The entire facility would serve roughly an instant* population of only 50, and a design day population of 150.

In addition to swimming the completed facility may provide for picnicking, fishing and the launching of car-top boats in the off-season. Fires that are made by picnickers would be kept to one or two prepared fire-rings or fireplaces. Access for ice fishing may also be explored, partly depending on the conditions that will be generated by the near shore tidal action.

***Note:** "The design of recreational facilities is guided by how many people can be accommodated. Beaches and pools can be represented by the number of people found at a site on the afternoon of the design day, often the 10th. highest weekend day. This number is called the "instant population" accommodated by the site. Other times of the day or less popular days are then easily accommodated, while a few really crowded afternoons may exceed this number and necessitate turning away people or pre-scheduling the use to accommodate the pool or beach limitations."



Facility Budget Estimate: The approximate cost for a bathhouse and utilities would be \$125,000, and operations would cost about \$25,000 per year. Improvements along the road to support this new activity may add to these costs. Land acquisition would add to the cost and unknown at this time.

Environmental Conditions: Four Mile Point is located within the Vosburgh Swamp and Middle Ground Flats Significant Coastal Fish and Wildlife Habitat area. Several potential swimming sites are located along Four Mile Point Road from the vicinity of Barker Mountain on the north to Four Mile Point, with the best potential site located on the north side of Four Mile Point and within the northern boundary of the significant habitat area. The primary habitat feature of the area is Vosburgh Swamp, which is an extensive intertidal wetlands area located on the south west side of Four Mile Point. The significant habitat area is characterized as having a highly diverse habitat of excellent quality that has experienced moderate disturbance. Recommended use of the area calls for the continued protection of the extensive shallows and flats in the immediate vicinity of Four Mile Point.

The bald eagle, listed as threatened by the U.S. Fish and Wildlife Service and the NYSDEC, along with the least bittern, smoother bur marigold, heartleaf plantain, and spongy arrowhead, also listed as threatened by the NYSDEC, are species that have been identified within the vicinity of the potential Four Mile Point Road beach site. Although impacts to these species are not anticipated as a result of beach construction, further individual site analysis would need to be conducted should plans for construction be advanced at this site.

Water Quality Considerations: The water quality observations nearest to this site are data collected by the Albany County Sewer District and the Glenmont STP. These sampling locations are approximately 21 miles upstream of the site. Total and fecal coliform data collected by the Albany County Sewer District between 1987 and 1996 show that total and fecal coliform criteria for NYSDEC and NYSDOH standards are not exceeded. Data collected by the Glenmont STP is of limited use since bacteriological data were not collected. Additional water quality investigations should be performed at the site to determine its suitability since no data is available near the site.

Tides, Currents, Waves and Wakes. This site is well protected by the configuration of the shoreline from all but the east. A little way out in deeper water, winds from the north or south can fetch choppy waves. Wakes from the ship channel can require similar caution by lifeguards, as is successfully exercised at Ulster Landing Park. The channel current at Four Mile Point Road is 2.7 fps, maximum tidal range is 4.3 feet.

MILLS-NORRIE STATE PARK

Town of Hyde Park

Dutchess County

River Mile 87

Ownership: New York State Office of
Parks, Recreation and Historic
Preservation

***The following analysis is offered to guide potential development of a beach. No action will be taken by the State of New York to develop swimming at this site without further examination and review.**



Beach Conditions: The survey of potential Hudson River swimming sites located several good options for developing a small facility at Mills-Norrie State Park to meet park related as well as local needs. The survey included two beach sites on the north side of the Park and a potential site for a small floating pool at the south end of the park. The best of these options for a beach and a location for a floating pool are discussed below.

A narrow, north-facing beach is located at the base of the Mills Mansion hill. A small intermittent stream empties approximately mid-beach, and helps to maintain the good quality sand that is found at this location. At the same time; however, the proximity of the stream to the beach warrants a close examination of the potential for non-point source pollution impacts especially during heavy runoff. With over 300 ft of beach, and a suitable gradient, especially for family groups, a small swimming area can readily be located at this beach. A bay protects this beach from currents found on the open river. A location on the beach near the stream outlet offers the best slope and sub-surface sand for a swimming beach. The water in the bay is not deep enough to permit a diving raft.

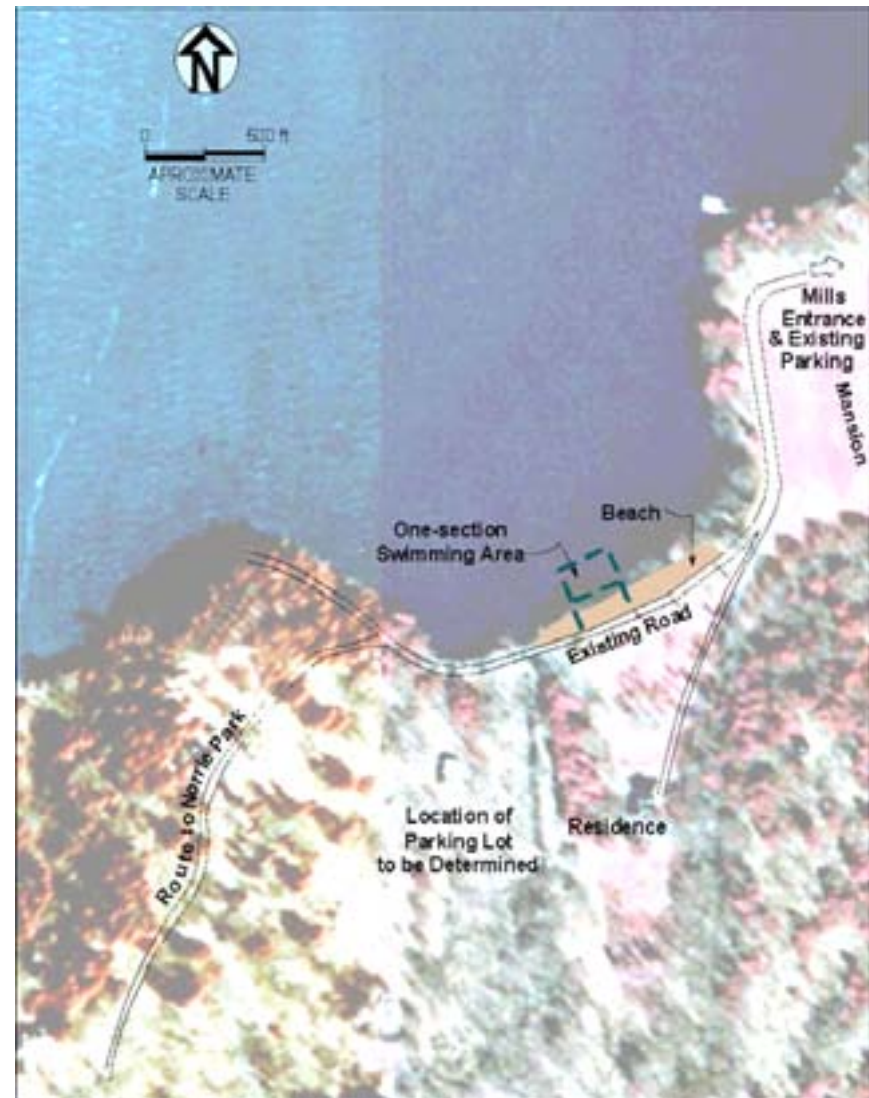
A careful selection for location of parking and a small bathhouse may reduce impacts to the Mills Mansion view-shed. This location could also serve as trailhead parking and bathroom facilities that are independent of activities associated with the Mansion. The extension of the utilities that serve a nearby Park residence may be adequate to serve the bathhouse.

Access options to this site are good. A gravel road, which branches off of the historic entrance to Mills Mansion and serves the former groundskeeper's house, parallels the shoreline behind (south of) the potential beach. Improving this road and locating a parking area to the south of the beach is the best short-term solution for providing access to this beach.

Another option for beach access (found to be most feasible) requires a more comprehensive approach that involves a large segment of the Park. The gravel road behind the beach heads uphill, then to the south to the unoccupied Hoyt Mansion. Several sections of old carriage roads interconnect to form a walking path (blue trail) that leads to the picnic area, campground and cabins. Improvement of these old roads could open up sections of the park that are now little used, and allow visitors access to the beach without negotiating the Mills Mansion entrance. The costs, impacts and opportunities associated with this access route should be considered, but are well beyond the scope of this study.

Size of Feasible Facility and Other Potential Site Uses: A small scale facility with a design-day population of approximately 300, including an instant* population of 100 swimmers, would adequately serve recreational needs at this site.

The most feasible beach is near the Mills section of the State Park. There are four bays with beaches, two in the Park and two north of the Park. The southern most bay and its north-facing beach were found to be most feasible for swimming. Ebbing currents and a small stream cleanse this beach. The next cove, with a west-facing beach had undesirable silt sediment not far off shore. Based on the survey of the area similar sedimentary conditions probably prevail at the two beaches north of the Park. The two feasible beaches in the Mills section of the State Park are



NOTE: The scale for this figure is 1 in = 500 ft. Beach size is comparable to other figures



within the historic core area of the Mills and Hoyt mansions and are in areas designated for passive recreation. Possible conflicts with historic preservation policies and other recreational uses would need to be evaluated.

Deep water along the picnic site at the Norrie section of the State Park will permit the mooring of vessels, given shoreline improvements. These improvements would have to be seasonal because of damaging ice scour. The location could readily accommodate a seasonal floating pool discussed in Section 6.

No suitable swimming beaches were located in the southern section (Norrie Section) of the Park; however, deep water in the vicinity of the existing picnic area (River Mile 85.5) would permit the mooring of a floating pool. The floating pool would be a seasonal deployment requiring winter removal due to potentially damaging ice conditions along the exposed shoreline. The use of the site for a floating pool would require the development of additional parking, up-grading the picnic pavilion and construction of a bathhouse. The existing shorefront trail would need to be protected and improved.

***Note:** "The design of recreational facilities is guided by how many people can be accommodated. Beaches and pools can be represented by the number of people found at a site on the afternoon of the design day, often the 10th. highest weekend day. This number is called the "instant population" accommodated by the site. Other times of the day or less popular days are then easily accommodated, while a few really crowded afternoons may exceed this number and necessitate turning away people or pre-scheduling the use to accommodate the pool or beach limitations."

Facility Budget Estimate: A small swimming area and bathhouse at this site would require approximately \$600,000 in construction costs and \$30,000 per year in operations costs. Floating pool costs are discussed in Section 6.

Environmental Conditions: The site extends several miles along the eastern shore of the Hudson River. The Park is located in the Vanderburgh Cove and Shallows Significant Coastal Fish and Wildlife Habitat area. The habitat area is characterized as a moderately disturbed area of moderately diverse good quality habitat. The principle feature of the significant habitat area is Vanderburgh Cove an extensive marsh area formed at the mouths of the Landsman Kill and Fallsburg Creek. The potential beach site is located approximately 6000 ft south of the Vanderburgh Cove area at the southern end of the significant habitat area. The

development of the site would not interfere with the designated use of the Park and since the site is not in the immediate vicinity of Vanderburgh Cove potential environmental impacts associated with increased boat traffic should not be a factor.

Two species listed by the NYSDEC; the shortnose sturgeon (endangered) and the pied-billed grebe (threatened) have been identified within the vicinity of the potential Mills-Norrie State Park beach site. Although impacts to these species are not anticipated as a result of beach construction, further individual site analysis would be conducted during Phase II should plans for construction be advanced at this site.

Water Quality Considerations: Two water quality sampling locations are located within 5 miles of this site. Monthly data collected by Ulster County at Kingston Point Beach show that the fecal coliform criteria for NYSDEC and NYSDOH standards were not exceeded. Data collected by the Port Ewen sewer district show total coliform samples collected did not exceed water quality standards and a bacteriologic pathogen, *E. coli* was not found in the samples. Additional water quality investigations should also be performed at the site to determine its suitability, due to the lack of data necessary to determine if geometric mean criteria are exceeded.

Tides, Currents, Waves and Wakes. The feasible beach location is well protected from the south and northeast by shoreline headlands. A wide river will however, allow choppy waves from the north and west. The picnic area site is open from the north or south to winds, and the deep channel and signs of shoreline erosion indicate scour by currents and winter ice flows. The channel current at Mills Norrie is 2.0 fps, maximum tidal range is 3.6 feet.

LITTLE STONY POINT

Town of Philipstown.

Putnam County

River Mile 55

Ownership: New York State Office of
Parks, Recreation and Historic
Preservation

***The following analysis is offered to guide potential development of a beach. No action will be taken by the State of New York to develop swimming at this site without further examination and review.**

Beach Conditions: The site includes scenic rock outcrops that were mined for traprock in the past. A relatively flat section of the peninsula faces north, and the shore on this side of the property accumulated a deposit of fine quality beach sand.

The beach at Little Stony Point shows excellent potential. Nearly a thousand feet of northwest facing beach provides a wide choice of sites for the selection of an ideal small 150-foot area for a swimming beach. The eastern half of this beach appears to have better slopes and more protection from wakes created by ships in the River channel. This site also avoids a sunken wreck that is located off shore, further to the west. The western end of the beach could continue to serve boaters, so it would be less likely that boat landings would conflict with swimmers if the designated beach space was located nearer to the open river.

There are several constraints that any programmed use of Little Stony Point must overcome. The raised elevation of the new bridge required ramps that are currently too steep for some vehicles or use by the handicapped. With tight spaces, the bridge ramp constraints should be addressed with imaginative solutions. Limited space both on the peninsula and next to Route 9D is probably a greater constraint. The scenic rock outcrops, a small section of wetlands and wooded areas on the small peninsula are too valuable natural features to be used for all but the most necessary of facilities needed to support a programmed use. A cooperative effort with NYSDOT may help solve potential parking problems. The selection of only a “small” swimming program should not exceed the capacity



of the peninsula and associated parking limits, though 40-50 more parking spaces would be needed to support a swimming facility. An important feature of substantial concern to patron safety is the railroad lines that run between Route 9D and the beach. Patrons parked at a distance from the overpass may choose to cross these high-speed rail lines by foot. This situation would need to be addressed immediately.

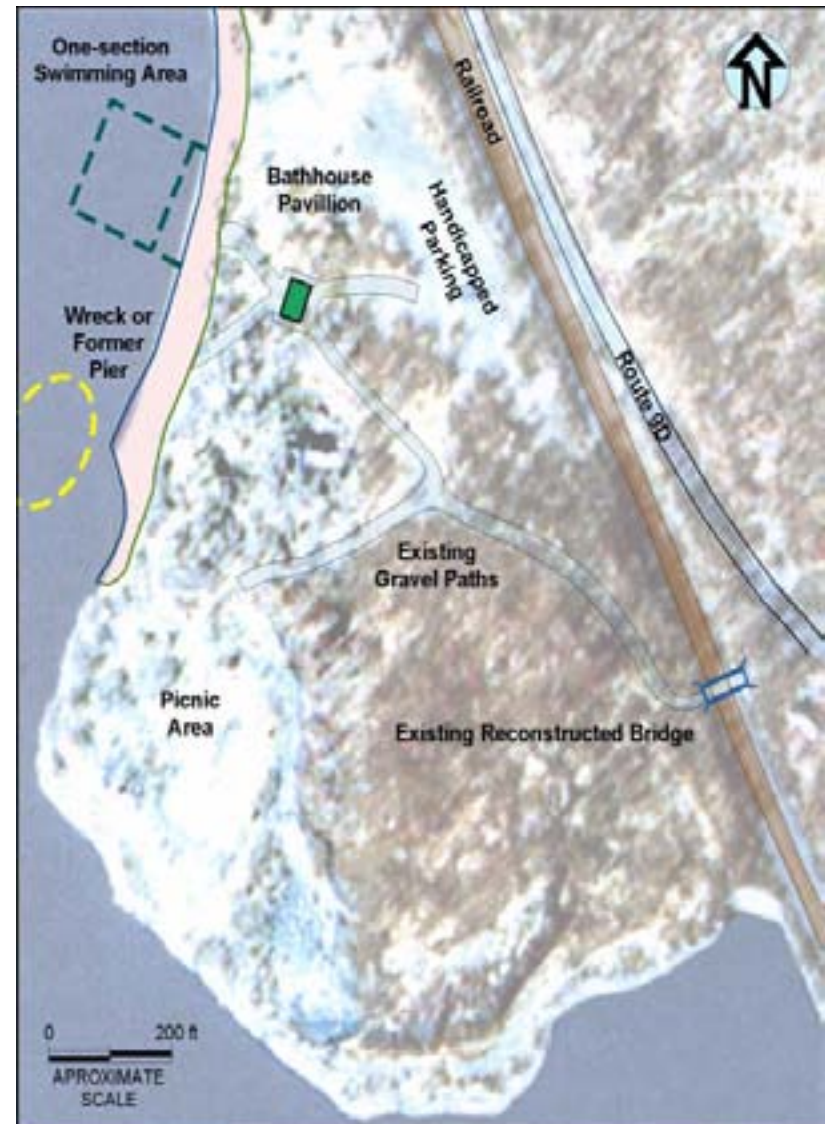
Size of Feasible Facility and Other Potential Site Uses: The construction and operations costs representing “small” beach facilities may be appropriate for this site, even after adjustments to allow for a few mutually offsetting program components. This beach would accommodate an instant* beach population of 150 people, and a design day population of 300 people.

A combination walkway and service entrance road would lead to a bathhouse located behind the potential swimming beach, and perhaps to a picnic area located at the northeastern end of the peninsula. If the bathhouse is placed sufficiently far back from the beach it will allow for a natural visual buffer, preserving views from the river and to protect the structure from severe weather. The bathhouse would also serve as bathrooms for other activities planned for Little Stony Point.

It is unlikely that a sheltered pavilion will be part of the beach area design, given the tight spaces available at this location on Little Sony Point. Flood proofing of the building may be warranted in lieu of a pavilion. Additional costs may also be required to improve the bridge “ramps” and to bring utilities to the peninsula. Also adding parking in constrained locations may require added costs. These initial costs will however, open up the waterfront component of Hudson Highlands State Park for a number of activities, including swimming.

***Note:** "The design of recreational facilities is guided by how many people can be accommodated. Beaches and pools can be represented by the number of people found at a site on the afternoon of the design day, often the 10th. highest weekend day. This number is called the "instant population" accommodated by the site. Other times of the day or less popular days are then easily accommodated, while a few really crowded afternoons may exceed this number and necessitate turning away people or pre-scheduling the use to accommodate the pool or beach limitations."

Facility Budget Estimate: The estimated basic costs are \$600,000 for construction and \$30,000 for annual beach operations. The beach operations may be supervised



from the swimming operation at nearby Canopus Lake.

Environmental Conditions: The Highlands section of the Hudson River between mile points 44 and 56 has been designated the Hudson River Miles 44-56 Significant Coastal Fish and Wildlife Habitat Area. The significant habitat area also includes the New York Natural Heritage Program's Hudson River Miles 44-56 area. Little Stony Point is located on the eastside of the Hudson River just south of Breakneck Ridge. The proposed beach site runs along the north side of the Point. The Hudson River Miles 44-56 Significant Coastal Fish and Wildlife Habitat area is a relatively narrow 12-mile long deepwater section of the Hudson River with the habitat characterized as uniform that of excellent quality that has experienced limited disturbance. One limiting feature for shore zone development in the area is the railroad tracks that run along both sides of the River.

Two species listed as endangered by the NYSDEC, the shortnose sturgeon and the peregrine falcon are known to occur within the vicinity of Little Stony Point. In addition, two NYSDEC threatened species, the bald eagle and the fence lizard have also been observed in the vicinity. Although impacts to these species are not anticipated as a result of beach construction, further individual site analysis would be conducted should plans for construction be advanced at this site.

Water Quality Considerations: The closest water quality stations to this location are data collected by the Poughkeepsie STP and data collected by the Rockland County Department of Health at Riverfront Park. These stations are located about 21 miles upstream and 16 miles downstream of the site respectively. Data from the Poughkeepsie sampling location is of limited use since no bacteriological data was collected. Data collected at Riverfront Park show that NYSDOH bacteriological criteria are exceeded at times. Since this sampling station is located far away from the beach site, additional data collection should be performed.

Tides, Currents, Waves and Wakes. The short, rocky peninsula protecting this northwest-facing beach also protects the site from the south and southwest. Located on a narrow reach of the Hudson, wakes from the ship channel to the west travel the length of the beach, and ebb tidal currents increase near the open river. Locating the guarded beach toward the middle or east side of the peninsula will limit these potential concerns. Wind generated waves from the northwest will cause occasional choppy conditions. The channel current at Little Stony Point is 1.7 fps, maximum tidal range is 3.1 feet.

WHITE BEACH (VERPLANCK)

Town of Cortlandt

Westchester County

River Mile 41

Ownership: Consolidated Edison Company of
New York, Inc.

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: The shoreline at White Beach (Verplanck) is composed of sand that is of good quality. The beach slope could support an excellent swimming beach. Natural deposition on the inside of this “meander” in the River will likely continue adding sand to this beach. A site just south of the former Consolidated Edison Company of New York, Inc. (Con Ed) fish hatchery appears to have the best slope for a beach. River currents may also favor this beach section for the development of swimming facilities.

Currently access to the ConEd site in White Beach (Verplanck) is via a quiet residential street. The total property does have the potential for a direct connection to Broadway, an arterial road street serving this community. Additionally, this same wide street has a roadside buffer that can be used to continue a landscaped walkway that would connect to “Hudson Greenway” trails proposed to connect from the south to Steamboat Landing Park, located at the south end of Broadway in Verplanck. A park on the Hudson would be a logical terminus to this section of the Hudson Greenway.

The former quarry operations on the White Beach (Verplanck) property present both a constraint and an opportunity. The sizable, deep, clear lake with steep sides is attractive, but can also be regarded as a hazard, if not treated effectively. A Hudson River beach adjoining this “lake” area would channel swimmers to a “beach”, an attraction that will readily compete with the quarry-lake for most people.



The concrete silos can be considered for adaptive uses such as prepared and supervised climbing walls, or art projects, which can also run by concession and/or by permit. If these silos are not used, there are demolition costs associated with these structures that must be considered. The towers of a power transmission line crossing the site would also need to be secured from public access. Adjoining land uses may need to be separated from the potential facility by fence or screen. This includes a gypsum plant to the north and an oil transfer site to the south of the site.

Size of Feasible Facility and Other Potential Site Uses: Though the White Beach (Verplanck) site offers a generous length of potential beach, the upland constraints of this site suggest a “small” scale beach swimming program, with an instant* population of 150 persons and a design day population of 300 persons. The designated swimming beach would be approximately 150 feet long and could be placed in a location that has the best slope and current conditions. The beach area would also be in close proximity to sufficient land and facilities to serve the beach. Also this level of use would not pose any traffic constraints on local roads, which are primarily residential. Though this project would have statewide significance in preserving an important Hudson River beach and access site, the park may function as a facility that primarily serves local and tourist needs.

The former fish hatchery building has ample space to support adaptive reuse as a bathhouse and comfort station and also serve as a park maintenance building and office, concession space, or for a small community meeting space. These and other adaptive uses require careful review to determine what activities are the best combinations of uses for the building. The suitability of this structure for adaptive reuse would need to be evaluated.

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Other times of the day or less popular days are then easily accommodated, while a few really crowded afternoons may exceed this number and necessitate turning away people or pre-scheduling the use to accommodate the pool or beach limitations."

Facility Budget Estimate: Adaptive use of a portion of this existing structure would not be less expensive than the construction of a simple new bathhouse. The existing on-site gravel road system may offer some benefits for future uses, but parking and perhaps most of the internal road system will probably be redesigned as part of any park project. In contrast, utilities on site may be readily adapted to park uses. The "small site" costs, discussed above, may be applicable for the proportional cost of a swimming program at this site, indicating \$600,000 for construction and \$30,000 / year for operation of the swimming facility.

The design of the park utilizing the remainder of the site will require careful planning to make the best use of the existing property and its resources and to minimize visual and security concerns. It is likely that construction and operation costs for the rest of the potential park at White Beach (Verplanck) may equal or exceed the costs associated with the Hudson beach elements. Acquisition of the site would add to these site development costs.

Environmental Conditions: The property along the eastern shore of the Hudson River was previously used as an environmental laboratory and fish hatchery. It is located south of the Indian Point Nuclear Generating Station and just north of the extensive Haverstraw Bay Significant Coastal Fish and Wildlife Habitat area. The Haverstraw Bay area is described as a vast shallow bay containing extensive shallows, especially along the eastern shore and a shipping channel maintained by periodic dredging to a depth of 35 feet below mean low water. The site is north of the significant habitat area and is currently used by boaters and area residents as a swimming site.

The bald eagle, listed as threatened by both the U.S. Fish and Wildlife Service and the NYSDEC, and the least bittern, also listed as threatened by the NYSDEC are the only protected species that have been found to occur within the vicinity of the potential White Beach (Verplanck) beach site. Although impacts to these species are not anticipated as a result of beach construction, further individual site analysis would be conducted during Phase II should plans for construction be advanced at this site.

Water Quality Considerations: The water quality stations closest to this site are those sampled by the Rockland County Department of Health. Four sites (Riverfront Park, Bowline Point, Hook Mountain, and Piermont Pier) were sampled between June 1990 and August 2000. The closest station, Riverfront Park is located about 3 miles upstream of the site. Data collected at Riverfront Park show that NYSDOH bacteriological criteria are exceeded at times. Additional water quality investigation should be performed to provide data that are more current.

Tides, Currents, Waves and Wakes. The beach site found most suitable because of its gradual slope at this location is also somewhat protected from the north and south by a very slight shoreline indentation, which also offers near shore protection from tidal currents and winds from the south, east and northeast. Wake from shipping along this narrow river reach at this location will require similar lifeguard procedures as are exercised at Ulster Landing Park. Winds from the southwest and northwest will carry occasional choppy waves to the beach. The channel current at White Beach (Verplanck) is 1.4 fps, maximum tidal range is 3.4 feet.

NYACK BEACH STATE PARK

Town of Clarkstown

Rockland County

River Mile 30.5

Ownership: New York State Palisades Interstate
Parks Commission

***The following analysis is offered to guide potential development of a beach. No action will be taken by the State of New York to develop swimming at this site without further examination and review.**

Beach Conditions: Though “small”, the beach has the slope and sand consistency for swimming, hinting at what this site may have looked like during its prime period of use. A small area, about 125 linear feet of this beach could accommodate a swimming program. This beach section is located at the far, southern end of the existing Park, distant from potential support facilities, making it less than optimal for a swimming program. Also the Park currently attracts substantial use, and serves as a point of access to a popular shoreline bike trail. This use fills the site’s limited parking.

The vertical stone wall along the Nyack Beach shoreline requires significant maintenance in the near future. The southern 150 feet of this wall is protecting an open blacktop area which offers little activity. This area is closer to the existing support facilities in the Park. A redesign of this section of the Park to eliminate part of the seawall, restore a groin, and restore the beach slope upland may bring a larger “beach” back to Nyack Beach in an area more suitable to the public. If this project is considered, then a period of evaluation of the reconstructed beach would follow, and precede any swimming program. This would include an analysis of access including adequate parking. It is recommended that removal of a portion of the sea wall be evaluated as part of any planned sea wall maintenance.

Nyack beach was used for swimming during the first half of the past century and may have necessitated on-shore developments during the 1930s at this popular park. A vertical stone wall located along the shoreline was a part of this project. Wave action deflected from this wall may have, however, contributed to the



erosion of the beach in front of the wall. A short stretch of natural beach remains south of the walled shoreline, and this section of beach was considered for a swimming program.

Size of Feasible Facility and Other Potential Site Uses: This site currently operates as a state park and is heavily used. Parking is currently a significant constraint and this problem would worsen if swimming were provided. With 125 feet of potential beach, if restored, this site would be a “small” site with instant population of 100, design day of 300.

Facility Budget Estimate: Not evaluated.

Water Quality Considerations: Not evaluated.

Tides, Currents, Waves and Wakes. A project to enhance the east-facing beach at this site should include groins, similar in scale to those successfully deployed at Riverfront Park and demonstrated by the pile of rubble on the neighboring shoreline, to the south. In addition to enhancing and protecting sand conditions, this project should also protect the shallow waters from wind-generated waves from the north and south and help restore sand beaches. The wide river can increase the fetch of wind generating winds from the east and from the north or south in open water facing this site. The channel current at Nyack Beach is 1.9 fps, maximum tidal range is 3.7 feet.

HUDSON RIVER PARK

Borough of Manhattan

New York County

River Mile 3.5

Ownership: New York State Department of Parks, Recreation and
Historic Preservation

Operator: Hudson River Park Trust

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: A new park with great promise to serve millions of New York City residents, regional visitors and tourists is now being developed along the Hudson River shoreline of Manhattan. The opportunities along the west side of Manhattan for additional recreational activities are now being planned. Swimming, an historic use of the City's shorelines, including the Hudson, is one of the activities that are included in plans and were considered in this study.

Plans for the Hudson River Park in Manhattan indicate opportunities for a constructed beach at Piers 52-53, a peninsula with sufficient land to support a beach program, and offshore slopes that look promising for this consideration. Additionally several piers designated for active recreational uses, could accommodate a floating pool.

The possibility of providing a floating geotextile fabric filter that would allow the development of a beach in Hudson River waters off Manhattan, or as part of a natural water filtration and protection system for a floating pool using these same waters, is



discussed in Section 7. This study recommends tests of these filtering materials, to see if the water quality issues, in particular combined sewer overflows, can be solved in this area with filtering fabric enclosures. Additionally, a floating pool that has an on-board water treatment system, also discussed in Section 7, would meet Sanitary Codes, but perhaps would encounter environmental constraints.

The Hudson River Park Trust, along with State and City agencies' staff, are considering the possibilities discussed in this report, and perhaps other options as well, to address the need for additional swimming facilities along the Hudson in Manhattan. A number of organizations and many individuals responded enthusiastically to the concept of once again offering swimming along the Hudson in New York City, so these interests and needs will receive careful consideration.

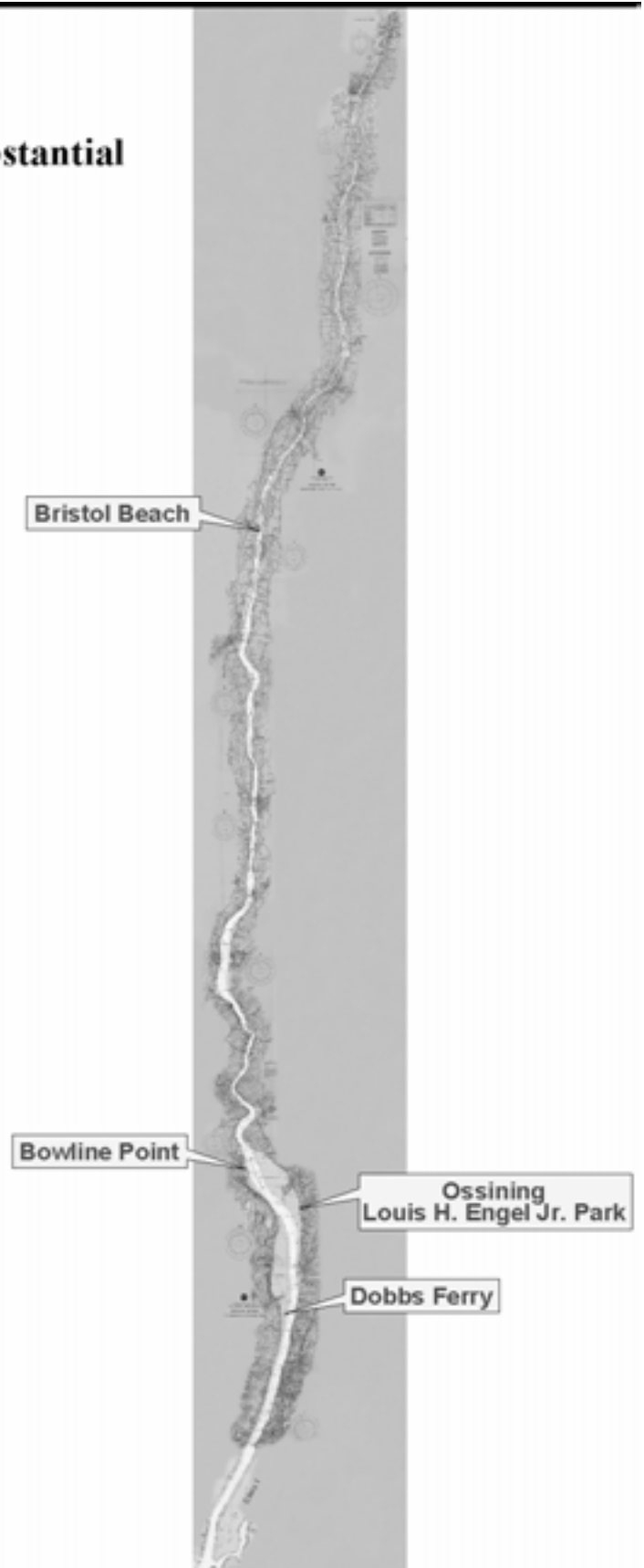
Size of Feasible Facility: Requires further evaluation.

Facility Budget Estimate: Requires further evaluation.

Water Quality Considerations: Unofficial swimming activities already occur at sites along Hudson River Park, noted and discussed in the survey. Some of the long and interesting history of floating pools along the Hudson is discussed in section 2.1 of this report. State water quality classification and NYC Swimming Regulations, section 4.2 of this report, make the implementation of a swimming beach or pool program within the Hudson's waters in New York City improbable at this time unless innovative concepts are not a part of the beach or pool design.

Tides, Currents, Waves and Wakes. Either a north or a south-facing beach on this peninsula can be considered at piers 52 / 53. A north-facing beach would be more consistent with other successful peninsula beaches upriver. Also a little sand deposition is already found along the north facing, pier 53 side. Such a location would offer good shelter for a north-facing beach. Long piers, only open to the west, protect the site from the wake of large vessels, small boat traffic and some of the wind from the northwest. A south facing beach, as is shown on conceptual plans, would be more exposed to wave systems from the open harbor. The channel current at piers 52/53 is 2.4 fps, maximum tidal range is 5.5 feet.

**6.3.4. Category D:
Potential New Sites with Substantial
Barriers to Development**



6.3.4 Category D: Potential New Sites With Substantial Barriers to Development

BRISTOL BEACH STATE PARK

Town of Saugerties

Ulster County

River Mile 105

Ownership: New York State Office of Parks,
Recreation and Historic Preservation

***The following analysis is offered to guide potential development of a beach. No action will be taken by the State of New York to develop swimming at this site without further examination and review.**

Beach Conditions: Bristol Beach State Park is essentially undeveloped property located north of the Town of Saugerties, in Ulster County. The northern end of the Park, Eve's Point, is maintained as a pastoral park, as initially intended by Scenic Hudson and other organizations that helped to secure this part of the Park. Eve's Point offers fine views of the Hudson, woods and open fields, a gazebo and portable toilets. At the south end of the Park and on properties that are soon to be added to the Park, long abandoned brickyard and clay mining operations have left a few dirt roads and industrial artifacts within dense woods and scrub and along the shoreline. The northern, Eve's Point and the southern "brickyard" shorelines are either steep with rock, brick or abandoned barges protecting the shore, or solid clay, both conditions are unsuitable for swimming beaches. The shoreline between the sections described above includes dense woods, scrub and wetlands, and a section that is regarded as the "beach".

This central section of Bristol Beach shore is currently difficult to access and is best approached by boat. A scenic bay has narrow, but promising looking beaches along its south shore. Unfortunately the water depth on the entire beach side of the bay is only one to two feet in depth and has considerable mud deposits. Approximately 200 feet south of the bay, depths improve for swimming and there is a longer section of sand, still overlain by mud.



The highest point of the “beach” is under a few inches of water at low tide. Wave-caused ripple marks continue from the beach into the nearby woods. There is no dry beach. The sand is a compact, clean, fine-grained dredged material. Over decades, these sediment deposits have been flattened to the base of wave troughs, so it is more of a sand bar than a beach. It may be fun to wade out to this site, then swim, but it is difficult to conceive of offering public swimming at Bristol Beach without providing any nearby dry beach. This in turn could require a significant beach building project or the careful consideration of adding clean sand from future dredging projects to create a beach design.

Size of Feasible Facility: Not evaluated due to obstacles presented at this site.

Facility Budget Estimate: Not evaluated due to obstacles presented at this site.

Environmental Conditions: The presence of aquatic plants in this area would likely make this site unsuitable from the standpoint of environmental impact. Wetland and habitat conditions in this part of the Park, as well as the engineering required to retain sand at this location make it a challenge for beach development. If swimming is ever to be contemplated at Bristol Beach, a master plan for the entire Bristol Beach State Park property and a full feasibility study evaluating a beach section for reconstruction and protection would be required. This study may not support development of swimming facilities.

Tides, Currents, Waves and Wakes. This site is open to ship wakes and wind-generated waves from the north, east and south. The wide river can increase the fetch of these wind-generated waves. In effect, the beach is facing open water in a 270-degree arc. The channel current at Bristol Beach is 2.4 fps, maximum tidal range is 4.2 feet.

BOWLINE POINT

Town of Haverstraw

Rockland County

River Mile 37

Ownership: Town of Haverstraw

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: Groins have been developed along the northwest Hudson shore of Bowline Park to prevent erosion. These groins have collected enough sand to form small beaches that have not been emphasized in the Park's design. These beaches are composed, in part, from red sand and pebbles left from bricks discarded in the 19th century (this same material is also characteristic of the Rockland County Park beach, one mile to the north). The beach slopes are a little steep, but acceptable. The Town of Haverstraw staff should review opportunities associated with the Bowline Point Park, as well as the actions that are taken at Rockland County Park to determine if a swimming program is warranted at the Town Park now or in the future.

The close proximity of a fuel off-loading pier, and the designed orientation of Bowline Point Park away from the Hudson beaches, removes this site from consideration for a swimming site. Additionally, the close proximity of Rockland County Park has to be noted if this location is considered. If a swimming program is successfully advanced at the nearby County Park, then Bowline Point Park beach could be reserved for future consideration, assuming demands warrant additional swimming in this area. If the county decides not to provide swimming at their site, this site would warrant further investigation and may be suitable for a small size facility, designed around existing structures.

Size of Feasible Facility: Not evaluated due to obstacles presented at this site.



Other Potential Site Uses: The Town of Haverstraw Park located on Bowline Point offers a number of notable attractions including a sizable outdoor stage, playgrounds and grassed playing fields, walkways, and fishing access. Power generating facilities and an oil delivery pier share this southeast end of the Bowline Peninsula with the Park, so scenic areas in the Park concentrate on a bay to the west and on the part of the Hudson to the southeast.

Facility Budget Estimate: Not evaluated due to obstacles presented at this site.

Tides, Currents, Waves and Wakes. Short groins protect shallow sections of east facing beaches at this site. The wide river in this reach can increase the fetch of wind-generated winds from the north, east or south in open water facing this site. Ships destined to unload at the adjoining pier can cause turbulence perhaps including wakes that would have to be evaluated if this site is considered. The channel current at Bowline Point is 1.4 fps, maximum tidal range is 3.4 feet.

OSSINING, LOUIS H. ENGEL Jr. PARK

Town of Ossining

Westchester County

River Mile 32

Ownership: Town of Ossining

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: Louis H. Engel Jr. Park, in Ossining, includes a small crescent shaped beach at the south end of the property. A narrow grassed strip is located behind the beach, separated from an adjoining road by a fence. This strip of land is used by visitors to access an old prison guard tower, which could serve as an interpretative site for visitors to the Ossining Urban Cultural Park. Other Park facilities are located several hundred feet to the north. A small restroom is closest, but probably too far removed and too small to be directly used as a bathhouse. Parking used by the Park as well as for the Metro-North railroad station, is further north from this area, but appears to be already in full use.



Though the upland section of the Park beach is considerably limited by the space available, a Step II survey was conducted for this beach due to interest expressed locally. The underwater slope and the sand quality of this beach were found to be good, and under other circumstances would have been feasible for a swimming facility.

A wastewater treatment plant is located approximately 500 feet to the south of Louis H. Engel Jr. Park beach. It is not clear where the treated effluent from this plant is discharged or if this effluent would remove this beach from consideration because of the provisions of the State Sanitary Code. There are, however, noticeable airborne sewage odors near the treatment plant. Though these odors are probably not associated with the discharge to the River, this condition may discourage acceptance of the site by some swimmers.

If the treated discharge location is found not to be a problem, if airborne odor control becomes more effective, and if the limited upland space can be resolved, Louis H. Engel Jr. Park would be a good swimming site. Pending these many conditions, it may be prudent to protect this beach for future consideration, but not to advance a swimming program at this site at this time.

Size of Feasible Facility: Not evaluated due to obstacles presented at this site.

Facility Budget Estimate: Not evaluated due to obstacles presented at this site.

Tides, Currents, Waves and Wakes. The southern bay in Louis H. Engel Jr. Park is well protected from waves and currents from the south by the peninsula housing the prison facilities. The channel current at the Park is 1.5 fps, maximum tide range is 3.6 feet. The bay is far enough from mid channel to negate wake problems. Winds from the west and northwest can generate choppy waves.

DOBBS FERRY

Village of Dobbs Ferry

Westchester County

River Mile 23

Ownership: Village of Dobbs Ferry

***This analysis is offered to guide potential development of a beach if the site owner wishes to pursue it. No action will be taken by the State of New York to develop swimming at this site without the consent and support of the site owner.**

Beach Conditions: Popular waterfront parkland with good access at Dobbs Ferry and community interests suggested that a small swimming program might be possible at a waterfront park located adjacent to the railroad station. A small crescent shaped beach located in this park offers good shelter from river currents. While this site would require additional upland area, this space could be gained only through the sacrifice of parking spaces.



A review of underwater conditions was advanced as the next stage of investigation of this site. Unfortunately, the survey boat could not get close to shore at low tide. Dense mud was within a foot of the water surface 210 feet from shore. Hand driven probes of this deposit indicated a heavier clay-like material up to 2 feet in depth. Once inserted, the probe could only be removed with some difficulty, and it is possible that this unacceptable material is even deeper. This sub-surface condition is unsuitable for a swimming beach. It is unlikely that this mud and clay deposit can be dredged and removed easily. Furthermore, there is a good chance that new mud would be deposited in the bay within a short time.

A second site was reviewed in Dobbs Ferry, located at the mouth of Wickers Creek. The sand deposited by the Creek was of good quality, both upland and underwater. The small delta formed by the Creek extended close to the open river, however, and water currents close to this location were strong and inconsistent. Therefore, this condition probably makes this site unacceptable for a swimming beach.

Size of Feasible Facility: Not evaluated due to obstacles presented at this site.

Facility Budget Estimate: Not evaluated due to obstacles presented at this site.

Tides, Currents, Waves and Wakes. This narrow beach is well protected by waves and currents from the south by a peninsula with park facilities and from the north by a larger landmass. The beach area is far enough from mid channel to negate wake problems. It is possible that the small scale of the bay and its protected location contribute to the deposition of silt. Winds from the west can generate choppy waves because of the width of the River at this location. The channel current at Dobbs Ferry is 2.2 fps, maximum tide range is 4.0 feet.

6.4 PERMIT NEEDS

This section describes the probable state, federal and local approvals associated with the development of public swimming facilities on the Hudson River.

The Hudson River is a State regulated water body pursuant to Article 15 of the Environmental Conservation Law (ECL). The NYSDEC is responsible for implementing this regulatory program through a permit system prescribed in 6NYCRR Part 608 – Use and Protection of Waters (Article 15). Accordingly, a Protection of Waters permit will be needed from NYSDEC for any proposed activities resulting in excavation or fill below mean high water and for structures or activities disturbing the river shoreline. Permitting for areas within New York City would be handled by Region 2 (Long Island City); areas between the southern Westchester and Rockland County lines north to the Greene/Columbia and Ulster/Dutchess County lines would be handled by Region 3 (New Paltz); beaches to the north would be handled by Region 4 (Schenectady). An expedited permitting and approval process will be available for smaller projects defined as “minor” under New York State DEC’s Uniform Procedures permit process. At some sites wetlands may be present. Wetlands which fall under U.S. Army Corps of Engineers (USACE) jurisdiction would require permits for any filling activity and could also trigger permits for some types of excavation.

Hudson River wetlands in many cases are mapped and regulated under Article 24 ECL in which case permits are required for activities that could impair any of the functions or benefits of wetlands. For new facilities or expansions of existing facilities located south of the Tappan Zee Bridge, Article 25 tidal wetlands permits may also be required (6 NYCRR Part 661). However, some activities are exempt from Article 25, such as the maintenance of existing facilities, including beaches. Each project would need to be reviewed on a case-by-case basis to determine if Article 25 applies. All State agency decisions, including decisions on the issuance of permits, the provision of financial assistance, or activities directly proposed or undertaken by a State agency, are required by Article 42 of the New York State Executive Law to be consistent with the New York State coastal policies found in 19 NYCRR Part 600.5, or as expressed in a Local Waterfront Revitalization Program (LWRP) approved by the Secretary of State.

Since some of the anticipated structures (both temporary and permanent) associated with the beaches might be considered “fill” under Section 404 of the Clean Water Act, approval from the U.S. Army Corps of Engineers (USACE) will also be required. As the work is expected to be modest at each of the proposed sites, the work will likely be covered by one or more Nationwide Permits (NWP) currently authorized by USACE. NWPs potentially applicable to the proposed creation of bathing beaches are #3 (Maintenance), #18 (Minor Discharges) and #19 (Minor Dredging). The NWPs #18 and #19 are applicable to discharges and dredge activities of not more than 25 cubic yards, respectively. Individual water quality certifications pursuant to Section 401 of the Federal Water Pollution Control Act may be required from NYSDEC. All federally permitted activities must be consistent with the applicable policies of the New York State Coastal Management Program and will be reviewed by the Department of State as required by 15 CFR Part 930 and the federal Coastal Zone Management Act of 1972, as amended.

Mooring buoys, swim floats, and other structures are also regulated by a Floating Objects Permit under New York State Navigation Law. Aids-to-Navigation permits may also be required from the U.S. Coast Guard. The NYSOPRHP regulates floating objects in state navigable waters. The NYSOPRHP should also be consulted regarding the potential for historic/archaeological resources at the proposed bathing beach sites. The New York State Office of General Services (NYSOGS) administers permits for the use of underwater lands owned by the state. Prior grants and easements for each bathing beach site will have to be reviewed to determine if approval is needed from NYSOGS. Areas within Hudson River Park in New York City are subject to the jurisdiction of the Hudson River Park Trust. Other permits and approvals that may be required on a location-by-location basis include but are not limited to County Health Department approvals, Town or County highway departments (road opening or road closures), New York State Department Transportation (railroad crossings), and local building departments.