

ATWATER PARK MASTER PLAN

FINAL SUMMARY REPORT

MARCH 2010

JJR



Incredible views of Lake Michigan

ACKNOWLEDGEMENTS



This master plan is the culmination of the efforts of many citizens, individuals, and groups who devoted their time and energy to the future of Atwater Park. We wish to extend our sincere appreciation to everyone who made this plan possible through their enthusiasm, commitment, and creative input. A very special thanks is owed to the following individuals for their leadership throughout the planning process:

Atwater Park Master Plan Steering Committee:

Dan Ford, Parks Commission, Chair
Leeann Butschlick, Director DPW, Village Staff
Sam Essak, Parks Commission, Friend of Atwater Beach
Kim Forbeck, Conservation Committee, Urban Ecology Center
Chris Gallagher, Parks Commission, Plan Commission
Margaret Hickey, Village Trustee
Doug McDonald, Public Arts Committee
Lucia Petrie, Member at Large
Jay Urban, Friends of Atwater Beach
Kelvin Walton, Shorewood Police Department

Village of Shorewood Staff:

Chris Swartz, Village Manager
Leeann Butschlick, Director of Department of Public Works
Mustafa Emir, Village Consultant Engineer, Bonestroo
Ericka Lang, Village Planning & Zoning Administrator
Jim Swenson, Department Public Works Operations Director
Kelvin Walton, Shorewood Police Department

Plan Prepared by:

JJR, LLC • 625 Williamson Street • Madison, Wisconsin 53703
608.251.1177 • www.jjr-us.com

All photography by JJR unless otherwise noted.

CONTENTS

ACKNOWLEDGEMENTS	ii
EXECUTIVE SUMMARY	v
1.0 INTRODUCTION	1
OVERVIEW	1
PROJECT PROCESS	2
GOALS AND OBJECTIVES	3
2.0 INVENTORY AND ANALYSIS	5
SITE HISTORY	5
PARK PHYSICAL CHARACTERISTICS	6
3.0 CONCEPT DEVELOPMENT	11
COMMON DESIGN THEMES	11
CONCEPT A	12
CONCEPT B	16
CONCEPT C	20
4.0 FINAL MASTER PLAN	23
PLAN COMPONENTS	23
5.0 IMPLEMENTATION	35
PHASING PLAN	35
PROBABLE CONSTRUCTION COSTS FOR FACILITIES	36
FUNDING STRATEGY	36
PERMITTING ISSUES	39



Existing park entry signage and Graves Memorial Rose Garden

Atwater Park Master Plan

- ① Terrace Pavilion and Plaza/
Overlook
- ② Play Area
- ③ Open Lawn
- ④ Appomattox Overlook
- ⑤ Plensa Sculpture Garden
- ⑥ Contemplative Overlook/
Rose Garden/ Veterans
Memorial
- ⑦ Entry Feature & Gate
- ⑧ Improved Central Stairs
- ⑨ Widened Bluff Service Drive
- ⑩ Accessible Bluff Connector
- ⑪ Overlook w/ Shade Structure
- ⑫ Beach Pavilion w/
Expansion Area
- ⑬ Beach Plaza with
Foot Wash Station
- ⑭ Beach Boardwalk
- ⑮ Covered Seating Areas
- ⑯ Swim Beach Activity Zone
- ⑰ Active Sports Zone
- ⑱ Coastal Structures
(To be Improved)
- ⑲ Optional Funicular
- ⑳ Optional Plaza/Spray Park



EXECUTIVE SUMMARY

Atwater Park is Shorewood's premier park, located on the shore of Lake Michigan. It has historically functioned as a key community gathering space, a recreational destination, and a festival grounds for Village celebrations. From the upper terrace to the water's edge, the park offers a variety of activities for all ages, including active play and beautiful views along the streetside upper terrace, exercise on the bluff, and swimming and wading on hot summer days at the beach.

Although many improvements have been constructed in Atwater Park beginning in the early 1900s, the age and condition of the current facilities and the recent vision provided by the 2007 Comprehensive Outdoor Recreation Plan (CORP) prompted the Village to undertake this master planning process beginning in December 2009. The Atwater Park Master Plan offers a cohesive vision for the future of the park, intended to guide the design and implementation of key facilities over the next decade and beyond. It represents a general consensus achieved by the Steering Committee, Parks Commission, Village Board and residents that participated in the process. The

purpose of the plan is to provide a structured basis for the desired park program elements, which allows flexibility to entertain valid new ideas or proposals that may come forward in the near future. Proposed major improvements of the plan include the following:

Upper Terrace

- Renovated and expanded playground
- Expanded Terrace Pavilion restroom facility
- Contemplative area with relocated Graves Memorial Rose Garden and Veterans Memorial
- Overlooks and seating areas
- Integrated public art
- Park entrance features
- Optional splash pad/spray plaza

Bluff

- Widened and stabilized vehicular access
- Aesthetic enhancement of the existing stairs
- ADA-compliant pedestrian path or optional funicular

Beach

- Beach Pavilion with restrooms, changing facilities, and concessions
- Boardwalk for accessibility along the length of the beach
- Expanded playground with shade structure
- Repaired coastal structures with public access

An important component of the master plan also relates to community involvement, stewardship, and education. The proposed park facilities support educational programming for local schools as well as service opportunities for youth organizations, teaching about the importance of urban natural areas and the use of sustainable construction practices. Also, the interactive public process that created both the CORP and this master plan provides the groundwork for involving the community in implementation, as the support of neighbors and park users is critical for the recommendations in this plan to come to fruition.

This document is the culmination of the master planning process. It presents an analysis of existing park facilities, the alternative concepts developed during the planning process, and the final master plan facility recommendations. It also includes recommendations for phased implementation, probable construction costs, potential funding sources and partnerships, and regulatory and permitting issues. Overall, this plan represents the first step in the Village's commitment to a planning and design process that will unfold over the next several years, enhancing Atwater Park as the true jewel of the Village.



Quiet areas to sit and relax

1.0 INTRODUCTION

OVERVIEW

Atwater Park is Shorewood's premier park, located on the shore of Lake Michigan. It has historically functioned as a key community gathering space, a recreational destination, and a festival grounds for Village celebrations. From the upper terrace to the water's edge, the park offers a variety of activities for all ages, including active play and passive views along the streetside upper terrace, exercise on the bluff, and swimming and wading on hot summer days at the beach. The park's prominent location near the intersection of East Capitol Drive and North Lake Drive provides a spectacular vista of Lake Michigan that is unmatched.

The Village has constructed many improvements to Atwater Park over its long history. The initial bluff paths and wood jetties built in the early 1900s were replaced by a large beach house, three concrete beach groins, and a large-scale bluff stabilization effort during the Works Progress Administration of the 1930s. Cable cars improved beach access in the 1960s, but service was discontinued ten years later due to maintenance issues. The deteriorating WPA beach house was removed in 1987, and the current park facilities were generally constructed in the late 1980s and 1990s. Given the age and condition of the facilities and the recent vision for park improvements provided by the 2007 Comprehensive Outdoor Recreation Plan, the Village decided in Fall 2009 that a master plan was needed to evaluate facility use and to provide recommendations for the future park improvements.

The Atwater Park Master Plan emerged from an interactive public process, with many community members volunteering their time and enthusiasm by serving on the Master Plan Steering Committee or by attending public meetings. The plan is intended to guide the implementation of key facilities in the park over the next decade and beyond, building upon the considerable groundwork of past planning efforts including the successful 2007 Comprehensive Outdoor Recreation Plan, the recently completed Bluff Stabilization Reports and UW-Milwaukee Ecological Study and Management Plan, and the Atwater Bluff Planting Project initiated in 1997.

This document is the culmination of the master planning activities that began in December 2009. It presents the analysis of existing park facilities, the alternative concepts developed during the planning process, and the final master plan facility recommendations. It also includes recommendations for phased implementation, probable construction costs, potential funding sources and partnerships, and regulatory and permitting issues. Given the recommendations of the UWM Ecological Study for reconstruction of the park's coastal structures, this master plan focused on future park improvements only to the water's edge. However, conceptual overlays of the UWM recommendations are included in this report.



Lake view from the Veterans Memorial Overlook



Park signage near the Graves Memorial Rose Garden & Plaza



The central staircase connects the terrace and beach levels

PROJECT PROCESS

The master planning process was led by the Atwater Park Master Plan Steering Committee. This group of nine community members represented a broad spectrum of organizations, including the Village Parks Commission, Friends of Atwater Beach, the Department of Public Works, the Urban Ecology Center, and the Shorewood Police Department. The process involved four general phases: (1) analysis of site opportunities and constraints, (2) creation of the master plan alternatives, (3) creation of the preliminary master plan, and (4) review and refinement of the preliminary plan into the final master plan and document. The plan assessed the public comments received during the Comprehensive Outdoor Recreation Plan, solicited recommendations through an online survey, and provided two public workshops for the community to review and comment on the alternatives and preliminary master plan.

Phase 1: Analysis of Site Opportunities and Constraints

To create an effective master plan, the Steering Committee and public needed to fully understand the possibilities and limitations presented by the existing park facilities and natural resources. The planning team assembled and reviewed previous planning studies and existing site information, including topography, surface drainage patterns, utilities, trails, vegetation, viewsheds, and park structures. From this research, a site analysis diagram was created that displayed the physical site characteristics of Atwater Park, as well as opportunities and constraints for locating desired master plan components. Overall, the information collected and graphically summarized in this project phase allowed participants to visualize how the existing environment and infrastructure of the park could inform the creation of the master plan.

Phase 2: Master Plan Alternatives

Concurrently with the site analysis, a kickoff meeting was held with the Steering Committee to discuss project goals and identify potential program elements for the master plan. The Village also solicited ideas from the community through an online survey. Based on the results of the site analysis and the feedback from the Committee and the public, three master plan alternatives with optional overlays were created for Atwater Park. The alternatives considered the following items:

- Design of the upper terrace, bluff, and beach zones.
- Accommodation of active and passive recreation.
- Placement of potential facility improvements, such as playgrounds, restrooms, concession facilities, veterans' memorial, overlook platforms, the proposed public art piece, and the historical marker for *The Appomattox*.
- Public access from the upper terrace to the beach, including ADA accessibility standards, emergency personnel and vehicle access, and the proposed beach boardwalk.
- Incorporation of coastal structure recommendations from the Ecological Study and Management Plan.
- Relative cost implications between the alternatives.

The master plan alternatives and the site analysis graphic were presented to Village staff, the Steering Committee, and public for review and comment. Feedback from the meetings was used to create a single preferred draft plan including the desired program elements of the various alternatives.

Phase 3: Preliminary Master Plan

Based on direction from the Steering Committee, the preferred alternative was refined into the preliminary master plan including a draft report document. In addition to the issues addressed above, the preliminary master plan also provided:

- A landscape concept for the terrace area that included recommendations for park identity and entry elements.
- A discussion on educational opportunities.
- An implementation/phasing plan.
- Identification of potential funding opportunities such as grants and public/private partnerships.

The preliminary master plan was presented to the Steering Committee and public to solicit input for the final plan.

Phase 4: Final Master Plan

The final phase of the master planning process consisted of refining the report document and the final master plan graphic, incorporating comments received from the Steering Committee and public. Although this report represents the "final" plan created by the master planning process, the plan should continue to be assessed and refined as components are selected for schematic design and implementation. This will ensure that the plan remains flexible, responding to future strategies, ideas, community needs, and engineering analysis that will help create a more sustainable Atwater Park for future generations to enjoy.

GOALS AND OBJECTIVES

Preliminary goals and objectives for the Atwater Park Master Plan were drafted based on comments received from Village staff and the Steering Committee during the initial kickoff meeting. After presentation to the Committee for refinement, the following project goals and objectives were formally established to guide the creation of the master plan:

Goal #1: Increase the popularity of the park, including active recreational use.

Objective A: Enhance the park facilities to better provide active and passive recreational opportunities for all ages and skill levels, including swimming, boating, walking, exercising, contemplative areas, and play.

Objective B: Focus on creating a park for all seasons, considering access during winter and shade in summer.

Objective C: Provide facilities that support community gatherings, including the Fourth of July festival, music in the park, and the Men's Club Barbeque.

Objective D: Increase the sense of identity for the park through enhanced entry features and a unified design theme for park facilities.

Goal #2: Improve connectivity between the upper terrace and the beach.

Objective A: Provide barrier-free access to the beach for both park users and maintenance / emergency personnel.

Objective B: Improve the views of the lake from the street, through facility placement, grading, and landscaping.

Objective C: Provide seating facilities or stopping points along the bluff paths.

Objective D: Provide greater accessibility along the beach.

Goal #3: Promote safe use of the park.

Objective A: Improve water quality at the beach and provide better public access to information on current water conditions.

Objective B: Repair the park facilities to correct perceived hazards.

Objective C: Increase both visual and physical access to the beach for police surveillance and emergency responders.

Objective D: Evaluate park lighting to increase public safety while protecting night skies.

Goal #4: Enhance use of the park for community education.

Objective A: Provide facilities that support efforts by the Urban Ecology Center and local schools to study water quality, geology, biology, and other topics.

Objective B: Celebrate the park's history and the unique structures that existed there.

Objective C: Promote sustainable design of park facilities to increase public awareness of the benefits to the environment.

Objective D: Provide opportunities for public art at the upper terrace, bluff, and beach.

Goal #5: Maximize alternative funding sources for plan implementation.

Objective A: Consider partnering with a vendor or community group to provide concessions or café-type sales which will draw more users to the park.

Objective B: Provide facilities that build on the park's current popularity for wedding photography to explore revenue from facility rental.

Objective C: Identify grants from state and federal agencies and private philanthropic and non-profit groups for construction of park facilities.

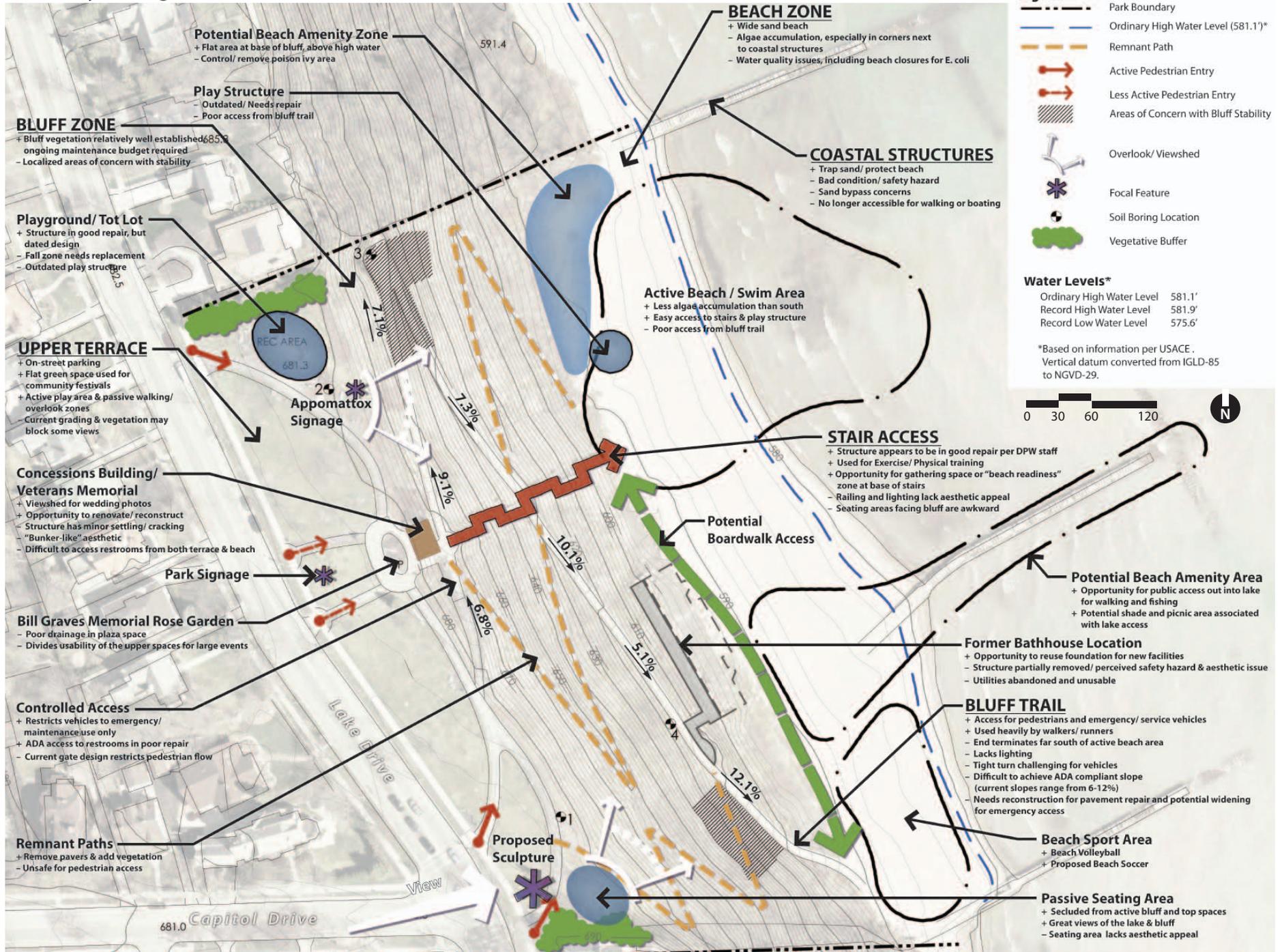


Kickoff meeting site visit, December 2009



Public presentation of master plan alternatives, January 2010

Site Analysis Diagram



2.0 INVENTORY AND ANALYSIS

This section summarizes the site opportunities and constraints phase of the project, which assessed the current physical characteristics of the park and the opportunities and limitations for future uses and improvements. The analysis was based on review of previous planning studies, the Village's 2007 Comprehensive Outdoor Recreation Plan, construction drawings for past park improvements, and other background materials as provided by the Village. GIS data and aerial photography for the graphics were provided by Milwaukee County.

The site analysis considered the project site and its immediate surrounds in an environmental, cultural, educational and historical context. This narrative gives a brief history of the park, followed by details on individual physical characteristics. The diagram on Page 4 summarizes the opportunities and constraints in graphic format.

SITE HISTORY

Atwater Park has historically been a prominent park and key gathering space for the community. Over its long history, the Village constructed many improvements in the park to support recreational activities for residents. In the early 1900s, initial developments included a switchback trail system, bluff fill and stabilization, wooden jetties, and a wood beach house. During the Works Progress Administration of the 1930s, three concrete jetties were constructed to create a larger beach, and a new beach house with an overlook deck was built to serve swimmers. A large-scale stabilization effort was also initiated on the bluff, and a fountain was constructed on the upper terrace.

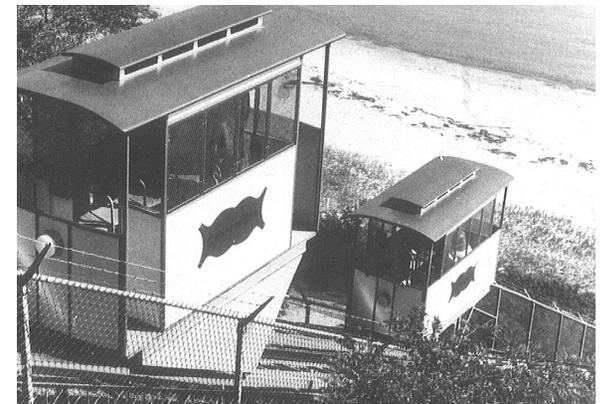
Two cable cars named "Able Cable" and "Twinkle Tow" were added in the center of the site in the 1960s to improve public access to the lakefront, but were shut down in the 1970s due to an inability to obtain replacement parts. In 1987, the cable cars, fountain, and most of the WPA beach house structure were removed, and the current restroom and stairs were constructed. The 1990s saw the addition of the Graves Memorial Rose Garden and the Veterans Memorial to the park's central plaza, and the construction of the playgrounds at the upper terrace and beach. Control of black locust trees and other invasive species on the bluff began at this time, with restoration of vegetation continuing today. The Village charged an access fee to beach users from the 1930s through 2003, but this was discontinued when water quality declined and the School District discontinued providing lifeguards.



Early view of Atwater Beach (Shorewood Historical Society)



Overlooking the WPA era beach house (Shorewood Historical Society)



'Able Cable' and 'Twinkle Tow' (Shorewood Historical Society)



View looking north at the "Bunker" and terrace level



Remnants of the former beach house



View of the beach and play structure

PARK PHYSICAL CHARACTERISTICS

Park Structures, Uses and Amenities

Atwater Park is a unique setting, with three distinct zones: the upper terrace, steep bluff face, and beach. The flat lawn of the upper terrace provides the setting for many community events, including the Village's Fourth of July celebration and the Men's Club BBQ. Although the entire length of the terrace provides tremendous views of the shoreline and lake, there is a popular sitting area at the south property line that offers a quiet, contemplative area to view the lake. The central portion of the upper terrace includes a paved plaza featuring the Graves Memorial Rose Garden and flagpole. Just east of the plaza is a rectilinear restroom and concessions facility that is tucked into the side of the bluff. The roof of the structure is a popular overlook and is often used for wedding photography. The railing on the edge of the roof structure pays tribute to Shorewood's Veterans.

In addition to these passive spaces and overlooks, the existing memorial playground located on the north end of the terrace is heavily used by neighborhood children. The location provides a setback from the busy street as well as the steep slopes of the bluff. The structure is in relatively good repair, although the plastic components are beginning to fade in color and the design is becoming outdated.

There are currently few amenities on the bluff. In addition to the maintenance and pedestrian access trail to the beach, the primary use for the bluff is by joggers and exercise enthusiasts.

Historically, the beach has been a primary draw for Atwater Park. Recent water quality issues with algae deposition and *E. coli* have resulted in a decline in the number of swimmers. The north end of the beach tends to see the most users, as that area often

presents better perceived water quality, is in close proximity to the stairs, and has a rudimentary play structure. The remnant concrete foundation of the WPA beach house remains on the south end of the beach.

Upper Terrace Findings:

- The central brick paver plaza and rose garden obstructs set up, views and use of the upper terrace lawn area for large community events.
- Several memorials and signage elements are at the upper terrace and should remain or be relocated in the proposed master plan.
- The restroom structure is functional with three restroom stalls each for men and women; however, it is currently not ADA accessible from the upper terrace and is located too far from the beach to serve either area well.
- The restroom structure's concrete façade creates a "bunker-like" aesthetic. Opportunities could consider renovation, relocation or upgrading to a new facility that would provide a large community space that could be used for education, meetings, or rented out for receptions.
- Although the play structure is becoming outdated, it is in relatively good repair. At a minimum, the safety surface beneath the structure needs to be replaced or repaired.
- The historic Appomattox shipwreck monument is in a location that is not well connected to the path system.

Bluff Findings:

- Few amenities currently exist on the bluff. There are opportunities for rest areas or exercise stations along the bluff trail or stairs.
- Appropriate lighting is desired along the bluff stairs and throughout the park.

Beach Findings:

- The partial concrete foundation of the historic beach house is an eyesore, is perceived as potentially dangerous, and is not functional.
- Restrooms and seasonal facilities at the beach level are desired.
- The beach play structure is outdated, in poor repair, and needs to be appropriately located.
- There is currently little to no shade at the beach, and past efforts to rent umbrellas were unsuccessful.
- Local school and educational groups have expressed the desire to have classroom facilities for curriculum use at the beach level.

Topography and Surface Hydrology

The upper terrace gently slopes from Lake Drive east to the bluff. Elevations in this area range from approximately 680 to 689 feet. The bluff is approximately 90 feet in height, ranging from an approximate elevation of 680 at the top to 590 at the beach. The slope of the sand area at the beach is approximately 10H:1V at the base of the bluff, and 18H:1V closer to the waterline. The Ordinary High Water Mark (OHW) provided by the US Army Corps of Engineers for this site is 581.1 feet. Record high water is 581.9, and record low water is 575.6. (All elevations given in vertical datum NGVD29.)

Drainage on the relatively flat upper terrace generally flows to the plaza surrounding the Graves Memorial Rose Garden, which causes problems with pavement settlement. Ponding water around the plaza is an issue in spring, as well as after heavy rain events. Remnants of drainage systems on the bluff paths are visible; however, inlets have settled to the point that they no longer collect water and the state of the outlet pipes from these structures is unknown.

According to the UWM Ecological Study and Management Plan, stormwater runoff from the park is not likely to be impacting water quality at the beach. However, two stormwater outfalls north of the park along the Lake Michigan shoreline may be partially responsible for *E. coli* issues at the beach.

Findings:

- The flat areas of the upper terrace provide active recreation space and grounds for community festivals, but restrict view of the lake from the street.
- Surface runoff from the upper terrace is causing issues with settlement of the Rose Garden plaza.
- The existing path on the bluff is 1,150 feet long and varies from 7 to 12% slope. Providing an ADA compliant trail with a maximum slope not exceeding 5% would require almost 2,000 linear feet of path, or double the current trail length.
- The existing catch basins along the bluff path are not functioning.
- Ordinary High Water is elevation 581.1 (NGVD29). Any structures or amenities at the beach level should be placed a minimum of 5 feet above this elevation due to wave height and wave run-up.
- The Village is actively working to address the impacts of the offsite stormwater outfalls on beach water quality.



View of the lake from Graves Memorial Rose Garden & Veterans Memorial



The play structure at the beach is in poor repair



Steep slopes along the bluff present challenges for accessibility



View of the bluff trail from the switchback with localized path failure



Existing catch basin along the bluff trail



The terrace plaza shows signs of drainage issues

Soils and Bluff Stability

Native soils on the site are silty-clays. Past stabilization efforts added fill at the upper terrace as well as along the bluff. Fill material at the upper terrace is relatively shallow topsoil. Fill material on the bluff has deeper zones, and includes materials such as crushed concrete, cinders from the Village incinerator, and wood fragments. While the majority of the bluff appears generally stable, localized areas of concern include an erosive area near the north bluff trail switchback and a slump block located just above the lower trail on the south end of the site. Recent stabilization efforts have included the installation of filled geocells near the switchback. A detailed geotechnical investigation is currently being conducted by Giles Engineering Associates.

Findings:

- Historic stabilization efforts appear to have maintained a generally stable bluff.
- Localized areas of concern should be addressed during detailed design of proposed site improvements from the Master Plan.

Vegetation

Vegetation on the upper terrace primarily consists of a mown lawn with canopy trees placed along the street and scattered through open areas. Dense tree and shrub massings provide effective buffers along private properties to the north and south. In addition to these plantings, a rose garden and focal perennial and shrub beds are in place along the top edge of the bluff. Beginning in the late 1990s, efforts have been made to remove black locust trees and invasive species from the bluff, and the area has been replanted with a mix of native shrubs and grasses. These plantings have been more successful near the top of the bluff due to water availability and ease of maintenance

access. The City has added a rudimentary irrigation system to aid plant establishment.

Findings:

- Views should be considered when reviewing existing tree locations and proposed plantings.
- Removal of invasive species will continue to be an on-going effort.
- Establishment of native shrub and grass plantings along the bluff has seen varied levels of success mainly due to access. Sufficient budget for maintenance is critical for continued success.
- The western edges of the beach could allow for native dune habitat plantings that would be an educational opportunity for classroom study.

Vehicular Access & Parking

Vehicular access in the park is restricted to use by emergency and service vehicles. Walking paths on the upper terrace provide easy access for the police to survey the park without driving the bluff trail. Vehicular access to the bluff is controlled by a gate just south of the existing restroom facility. Although this gate prevents unauthorized vehicular access, it also restricts flow of pedestrian traffic on this trail. The bluff trail is 8-feet wide, and the switchback turn limits access to a small DPW pickup truck and a Shorewood Police Department (SPD) jeep vehicle.

Parking is limited to on-street stalls along North Lake Drive and is restricted during busy rush hour times and during community events. Additional street parking is available on side streets in adjoining residential neighborhoods. However, because of the density and walkability of the community, many visitors arrive at the park on foot.

Findings:

- Because of the narrow road and challenging turning radius at the switchback, emergencies

are generally handled on foot. Better access is desired by DPW, SPD, and medical emergency agency North Shore Fire Department.

- Design alternatives for the upper terrace should continue to facilitate police surveillance and ‘eyes on the park’ design from the top of the bluff.

Pedestrian Connections

Asphalt pedestrian paths in the upper terrace link the street sidewalks along Lake Drive to overlooks, playground and plaza. Both the north and south entrances to the park are heavily used, but the center paths with the park identity signage do not see as much traffic. Pedestrian crosswalks with traffic controls at the intersection of North Lake Drive and East Capitol Drive provide safe access from the residential neighborhood across the street.

The trail down the bluff serves a dual purpose for pedestrians as well as emergency and service vehicles. As noted under the topography section, the existing trail allows barrier free access, but does not meet ADA standards for accessibility. In addition to the primary bluff trail, several remnant switchbacks are still visible along the bluff. These areas are in poor repair and are generally unusable as walking paths.

The stairs provide a more direct connection from the upper terrace to the beach. Much like the bluff trail, the stairs are heavily used for exercise as well as more relaxing walks that offer overlook stops with seating. The stairs are in good repair, though the railings lack aesthetic appeal. Several stairway overlooks are awkwardly laid out with benches facing the bluff rather than the lake.

There are no accessible paths along the beach or waterfront area. A grant has been awarded to the Village by the Wisconsin Coastal Management

Program to fund construction of a boardwalk in 2010 to improve beach accessibility.

Findings

- The center paths to the plaza at the upper terrace are underutilized.
- The major pedestrian entrances to the park lack identity or a sense of arrival.
- Paths on the upper terrace and the bluff are in need of minor regrading and resurfacing.
- The bluff trail is not ADA compliant (slope ranges from 7 to 12%).
- The bluff trail ends at the south property line, not near the active beach zone.
- For safety and aesthetics, remnant bluff trails should be removed.
- Design considerations for the stairs should at a minimum consider an update to the railings.
- Landings on the stairs could be redesigned as “destinations” that offer more focused views, and could include shade structures.
- Ramp systems to achieve ADA accessibility require a large grading effort and would need multiple switchbacks. Other vertical transportation alternatives such as a funicular or an elevator could be considered to improve accessibility to the beach.



Remnant pieces of former bluff stabilization projects



Native sumac plantings on the bluff



View of grasses along the bluff trail



Atwater Park provides many breathtaking views of Lake Michigan



The current coastal structures are a perceived safety hazard



Public access is no longer allowed out on the groins

Viewsheds

The Village of Shorewood contains just over a mile of Lake Michigan shoreline. Along this span, Atwater Park is one of the few public access points and shoreline/lake views. In addition to the open span along Lake Drive, there is a focused view looking east from Capitol Drive. From the beach, park users appreciate the open views looking up the bluff. This open feeling provides visitors with a feeling of safety and gives police clear views through the entire site.

Findings:

- The proposed donated Plensa sculpture should be incorporated into the focal view from Capitol Drive.
- Existing and proposed vegetation should enhance views of the lake, not block it.
- Potential buildings could be integrated into the bluff or placed adjacent to property lines, reducing impact on street-level views.

Coastal Structures

Although this Master Plan effort is focused on the park to the water's edge, it should be noted that the coastal structures (groins) installed in the 1930s are in poor repair. Public access is no longer possible on the groins, and the structures are regarded as a safety hazard to children using the beach. As noted by the UWM Ecological Study and Management Plan, the 1930s design also is not likely to be the most effective arrangement for the twin goals of beach creation and water quality. The rectilinear shape of the groins creates zones of stagnant water in the corners next to the structures, which traps algae and decreases water quality.

Findings:

- The groin structures are in need of replacement or repair.
- Redesign of the structures should consider sediment transport and water quality issues, as well as opportunities for public walkways and overlooks.
- If the structures are replaced, a curvilinear coastal structure arrangement may reduce algae entrapment by creating a scallop-shaped beach with better water circulation.

3.0 CONCEPT DEVELOPMENT

The purpose of the alternatives analysis was to show the range of options available for park improvements, and to allow the Steering Committee and the public to provide feedback on desired program elements, sizes, and locations. The three Master Plan alternatives vary from minimal improvements to more intensive design approaches. Additional overlays were provided for Concepts A and B that explored alternative arrangements of space within the same general theme.

COMMON DESIGN THEMES

Based on the results of the site analysis, several ideas are similar throughout the concepts:

- Universal, ADA-compliant access down the bluff is difficult to achieve. There is not a way to combine ADA pedestrian access (less than 5% slope) with the vehicular service drive without a massive regrading effort with multiple retaining walls on the bluff, which is not a desirable solution. Therefore, each concept takes a different approach to an ADA pedestrian route that is separate from the vehicular trail.
- The current vehicular trail is in the best location for this access to avoid costly reshaping of the bluff. In all concepts, this trail is reconstructed in place, but is widened to a constant 10' width with shoulders to provide better access for maintenance and emergency vehicles. The switchback turnaround on the north end of the trail is also widened by reshaping the bluff above to reduce the steepness of the slope, which also resolves the erosion issue. This results in slightly less space at the terrace level between the existing playground and the edge of the bluff.

- The general arrangement of space on the upper terrace currently functions well, with the playground located at the north end and a contemplative overlook at the south end.
- The location chosen by artist Jaume Plensa for the sculpture near the intersection of Capitol Drive has been honored in the concepts, although the actual location shifts slightly within the south zone of the park.
- Each concept assumes that the coastal structures have been either rehabilitated or rebuilt in a new configuration, although each shows a different possibility for the arrangement. In some designs, alignment of coastal amenities with land based features is a key element of the overall park design layout.
- All concepts feature designed entrances to the park at both the north and south ends, and eliminate the central sidewalks for a more open 'Great Lawn' area.
- All concepts have assumed buildings to be located at both the upper terrace and beach levels, although the scale of these buildings varies between concepts.
- All concepts retain the active swim area at the north beach cell, with a sports zone at the south end featuring volleyball and beach soccer.



Play structures provide activities for a variety of ages



Amenities draw visitors to the beach



Entry features can incorporate public art



Concept Alternative A.1

- | | | |
|------------------------------|--|---------------------------------------|
| ① Terrace Pavilion | ⑦ Contemplative Overlook/Rose Garden/
Veterans Memorial | ⑬ Active Sports Zone |
| ② Play Area | ⑧ Existing Stairs | ⑭ Access Ramp |
| ③ Open Lawn | ⑨ Widened Bluff Trail | ⑮ Rehabilitated Coastal
Structures |
| ④ Appomattox Overlook | ⑩ Beach Pavilion | ⑯ Optional Funicular |
| ⑤ Plaza/ Overlook | ⑪ Beach Boardwalk | ⑰ Beach Habitat Education Area |
| ⑥ Plensa Sculpture
Garden | ⑫ Swim Beach Activity Zone | ⑱ Plaza/ Spray Park |

CONCEPT A

Concept A is the simplest of the alternatives, and has three overlay options labeled A.1, A.2, and A.3.

Concept A.1

At the upper terrace, the existing restroom structure is replaced with a Terrace Pavilion consisting of a small restroom and café building at the terrace-level on the north edge of the park. This location serves the adjacent playground as well as a new spray-play plaza, which provides water play activities at the park even during beach closures. The existing building location in the center of the terrace has been replaced with a circular shaped overlook plaza and stairs. The Graves Memorial Rose Garden and Veterans Memorial are moved to a contemplative space at the south edge of the park, in combination with a garden area around the proposed Plensa sculpture. The bluff trail is separated from the upper walk in order to provide improved, graded access to the top of the stairs.

The existing stairs remain in place, with new railings and overlooks provided to enhance the aesthetics of the walk down the bluff. ADA-compliant access to the base of the bluff in this scheme is provided as an optional funicular at the south end of the site. This maintains the bluff in its current natural state, without adding several switchback trails. Barrier-free pedestrian access is provided on the bluff trail; however, the slope on the trail remains as it is today.

At the beach level, a new pavilion provides a café/ concession and overlook, restrooms, a multipurpose room, and equipment storage. This pavilion is located in approximately the same location as the former beach house. A series of ADA-compliant exterior ramps allow users to move from the top of the structure to the first floor, then down to the beach. A

boardwalk is also located along the beach, connecting the pavilion, stairs, and a new play structure located on the flat terrace at the north end. A tensile structure is provided over part of the play structure to bring shade to this area. The coastal structures are assumed to be rehabilitated in the exact configuration they are today with public access walks for fishing, swimming, and boating, per Alternative 1 of the UWM Ecological Study and Management Plan.

Concept A.2

Concept A.2 and A.3 are variants of the upper terrace based on the location of the restroom and café structure. Concept A.2 moves the structure to the bluff-side of the play area. This scheme provides a large plaza overlooking the lake for café users, and allows the foundations for the new structure to be used to help stabilize the switchback turn on the bluff trail. The spray-play plaza is also moved to the outside of the sidewalk adjacent to the playground.



Concept Alternative A.2

- | | | |
|------------------------------|--|---------------------------------------|
| ① Terrace Pavilion | ⑦ Contemplative Overlook/Rose Garden/
Veterans Memorial | ⑬ Active Sports Zone |
| ② Play Area | ⑧ Existing Stairs | ⑭ Access Ramp |
| ③ Open Lawn | ⑨ Widened Bluff Trail | ⑮ Rehabilitated Coastal
Structures |
| ④ Appomattox Overlook | ⑩ Beach Pavilion | ⑯ Optional Funicular |
| ⑤ Plaza/ Overlook | ⑪ Beach Boardwalk | ⑰ Beach Habitat Education Area |
| ⑥ Plensa Sculpture
Garden | ⑫ Swim Beach Activity Zone | ⑱ Plaza/ Spray Park |

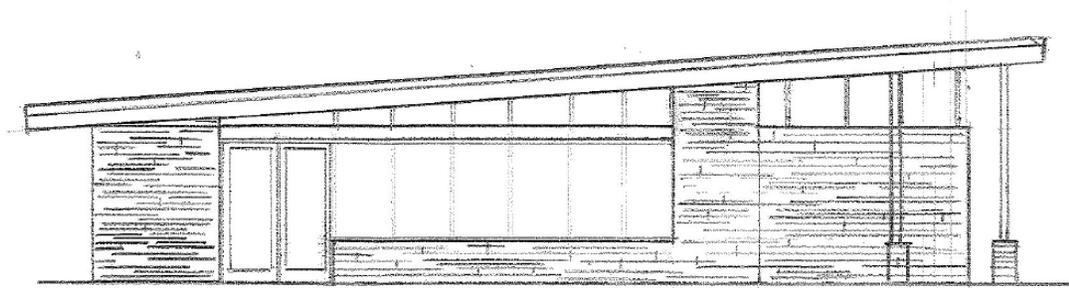


Concept A.3

Concept A.3 moves the terrace structure to the top of the existing building footprint. This building would be at the upper terrace level rather than accessed off the trail below like the existing building, allowing better access to restrooms and visibility for a potential café vendor.

Concept Alternative A.3

- | | | |
|------------------------------|--|---------------------------------------|
| ① Terrace Pavilion | ⑦ Contemplative Overlook/Rose Garden/
Veterans Memorial | ⑬ Active Sports Zone |
| ② Play Area | ⑧ Existing Stairs | ⑭ Access Ramp |
| ③ Open Lawn | ⑨ Widened Bluff Trail | ⑮ Rehabilitated Coastal
Structures |
| ④ Appomattox Overlook | ⑩ Beach Pavilion | ⑯ Optional Funicular |
| ⑤ Plaza/ Overlook | ⑪ Beach Boardwalk | ⑰ Beach Habitat Education Area |
| ⑥ Plensa Sculpture
Garden | ⑫ Swim Beach Activity Zone | ⑱ Plaza/ Spray Park |

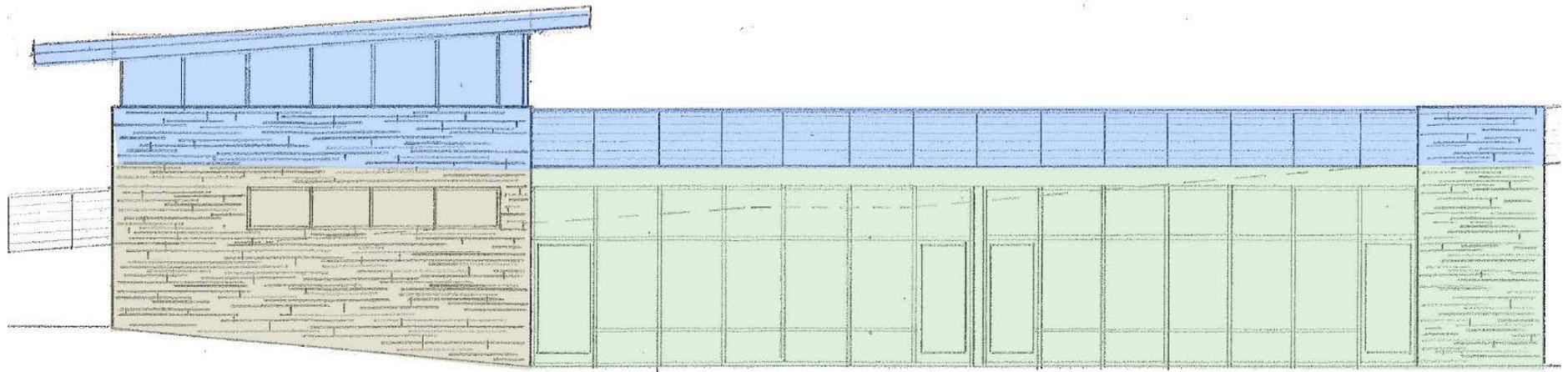


Terrace Pavilion

- 1 Story
- Cafe/ Concessions (675 sf)
- Restrooms (2 Stalls Each)



Concept A.1 and A.2: View of the Terrace Pavilion Looking North



Upper Level

- Cafe/ Concessions (500 sf)
- Overlook Patio (1800 sf)

Mid Level

- Restrooms/ Changing Rooms (3 Stalls Each)

Beach Level

- Multipurpose Room (1200 sf)
- Beach Amenities/ Equipment Storage (600 sf)



Concept A: Elevation of the Beach Pavilion Looking West



A relaxing stroll down the beach boardwalk



Balancing shade and sun in play areas



Water play at the top of the bluff



Concept Alternative B.1

- ① Plaza & Terrace Pavilion
- ② Play Area
- ③ Open Lawn
- ④ Appomattox Overlook
- ⑤ Overlook
- ⑥ Plensa Sculpture Garden
- ⑦ Contemplative Overlook/ Rose Garden/ Veterans Memorial
- ⑧ Proposed Stairs
- ⑨ Widened Bluff Trail
- ⑩ Beach Pavilion
- ⑪ Beach Promenade
- ⑫ Swim Beach Activity Zone
- ⑬ Active Sports Zone
- ⑭ ADA Bluff Path
- ⑮ Rehabilitated Coastal Structures
- ⑯ Lake Plaza

CONCEPT B

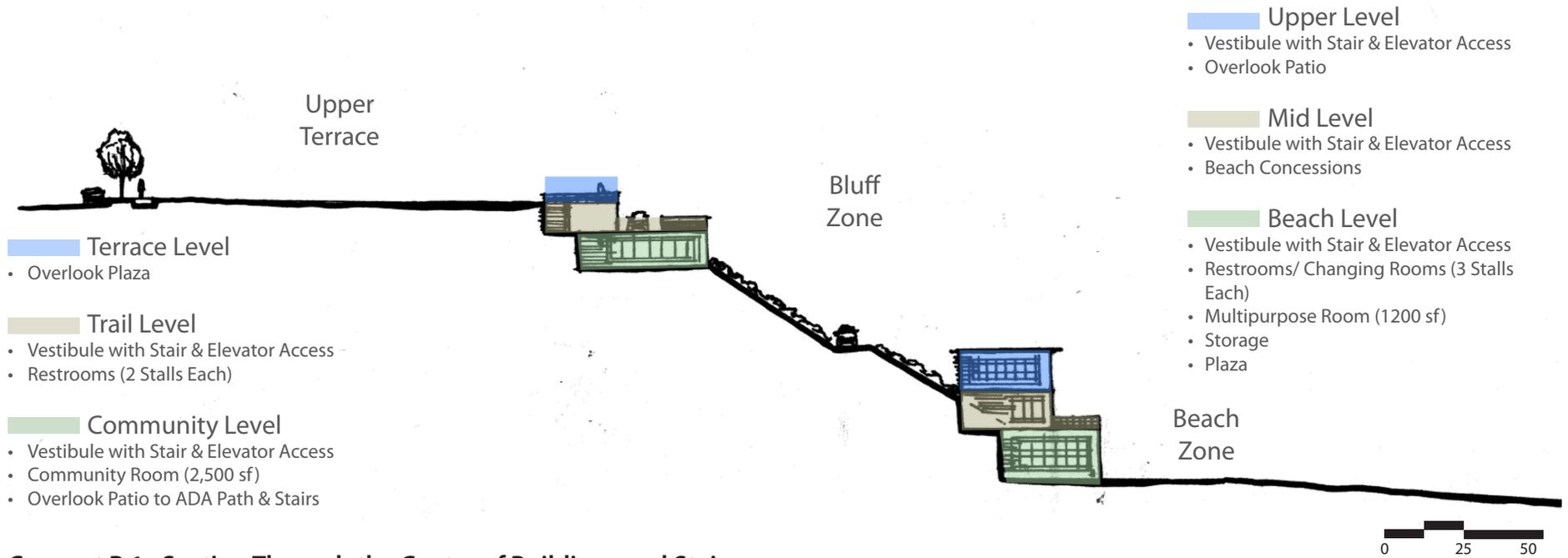
Concept B.1 and B.2 are options on a theme that provides ADA accessibility using elevators within the upper terrace and beach pavilion buildings, and an accessible walk system between the structures.

Concept B.1

Concept B.1 places a rebuilt terrace pavilion at its current location. The walk from the Capitol Drive and north park entries is graded a 5% slope to the front of the pavilion at elevation 670, with a retaining wall to keep the upper terrace relatively flat. A secondary walk on the upper terrace surrounds an open lawn area, with an overlook plaza on top of the building. The playground is located at the north end between the walks. As in Concept A, the Graves Memorial Rose Garden and Veterans Memorial are moved to a contemplative space at the south edge of the park.

The terrace pavilion includes an elevator with access to a lower level community room and exit to an ADA accessible path graded into the hillside to the beach pavilion. Trail overlooks are aligned with the coastal structures to provide structured views of the lake. A new exterior stairs is provided between the buildings.

At the beach level, a new three-level pavilion provides concessions, an overlook, restrooms, a multipurpose room, and equipment storage. This pavilion is aligned with the stairs and centered between the coastal structures. A beach promenade connects the bluff service road, the pavilion, and the rebuilt groins, which are rehabilitated in the location they are today. The promenade also provides the opportunity to create lawns above the beach elevation, which could be planted with trees to provide shady picnic and play areas. A new breakwater at the central groin may be considered in future coastal studies to form a scallop-shaped beach per Alternative 3 of the UWM study.



Concept B.1: Section Through the Center of Buildings and Stairs



Beach-side amenities



Overlooks and connected walkways



A place for the community to celebrate together



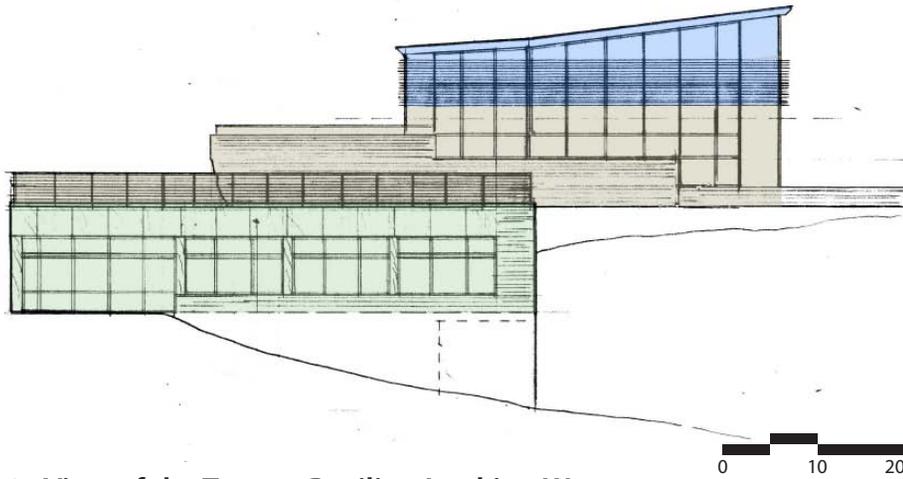
Concept Alternative B.2

- | | | |
|--|---------------------------------------|------------------------------------|
| ① Plaza & Terrace Pavilion | ⑥ Plensa Sculpture Garden | ⑪ Beach Promenade |
| ② Play Area | ⑦ Contemplative Overlook/ Rose Garden | ⑫ Swim Beach Activity Zone |
| ③ Open Lawn | ⑧ Proposed Stairs | ⑬ Active Sports Zone |
| ④ Appomattox Overlook/ Veterans Memorial | ⑨ Widened Bluff Trail | ⑭ ADA Elevated Boardwalk |
| ⑤ Overlook | ⑩ Beach Pavilion | ⑮ Rehabilitated Coastal Structures |
| | | ⑯ Public Lake Access Walk |

Concept B.2

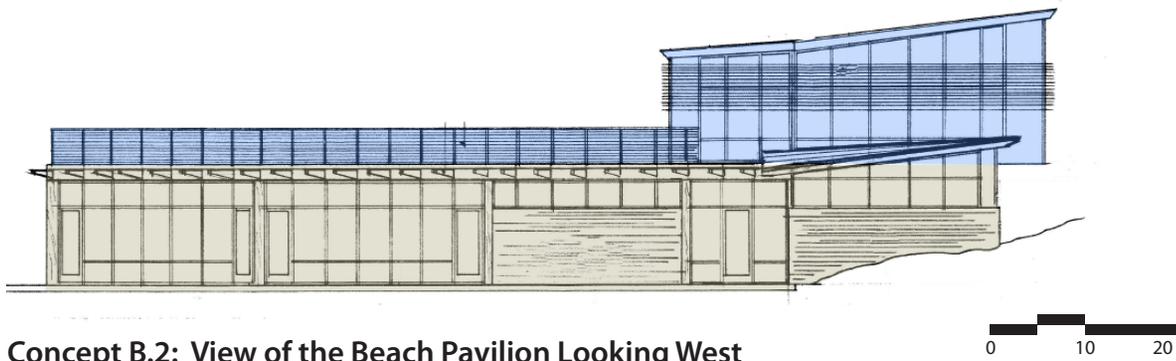
Concept B.2 differs from Concept B.1 in that the upper terrace remains flat, with a small elevator and stair access at the terrace level (approximately elevation 680). This eliminates the need for retaining walls to keep the upper terrace flat. The building is also moved to the south of the current restroom location, providing a straightened stair access on a diagonal between the terrace pavilion and beach structure. The playground remains at the north end, and the Graves Memorial Rose Garden and Veterans Memorial are moved to a contemplative space at the south edge of the park. The Plensa sculpture is shifted towards the bluff, creating a garden and overlook area at the trail intersection.

As in Concept B.1, the new upper terrace building has an elevator that provides access to a lower level community room and exit to an ADA-compliant pedestrian trail. In this alternative, the ADA path is a raised boardwalk structure that transitions the bluff face without the need to regrade the hillside. This allows a two-level structure for the beach pavilion, with a patio and elevator access on top with concessions and restrooms below. The beach promenade remains the same as Concept B.1, with the exception of stone breakwaters shown for an alternative rehabilitation of the coastal structures.



- Terrace Level**
 - Vestibule with Stair & Elevator Access
 - Overlook Plaza
- Trail Level**
 - Vestibule with Stair & Elevator Access
 - Overlook Terrace & Landscaped Plaza
- Community Level**
 - Vestibule with Stair & Elevator Access
 - Restrooms (2 Stalls Each)
 - Community Room (2,500 sf)
 - Overlook Patio to Ramp & Stairs

Concept B.2: View of the Terrace Pavilion Looking West

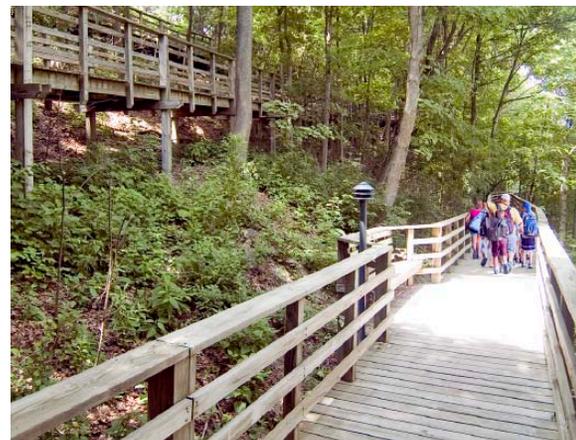


- Upper Level**
 - Vestibule with Stair & Elevator Access
 - Overlook Patio
- Beach Level**
 - Vestibule with Stair & Elevator Access
 - Beach Concessions
 - Restrooms/ Changing Rooms (3 Stalls Each)
 - 2 Classrooms (500 sf Each)
 - Storage
 - Boardwalk Patio

Concept B.2: View of the Beach Pavilion Looking West



Enjoying the views from a lakeside promenade



Minimizing impact to bluff slopes with raised walks



Restoring public access out over the lake



Concept Alternative C

- | | | |
|---|--|--------------------------------------|
| ① Plaza & Terrace Pavilion | ⑥ Plensa Sculpture Garden | ⑪ Beach Promenade |
| ② Play Area | ⑦ Contemplative
Overlook/ Rose Garden | ⑫ Swim Beach Activity
Zone |
| ③ Open Lawn | ⑧ Proposed Stairs | ⑬ Active Sports Zone |
| ④ Appomattox Overlook/
Veterans Memorial | ⑨ Widened Bluff Trail | ⑭ Public Lake Access Walk |
| ⑤ Terraced Amphitheater | ⑩ Beach Pavilion & Plaza | ⑮ Reconfigured Coastal
Structures |

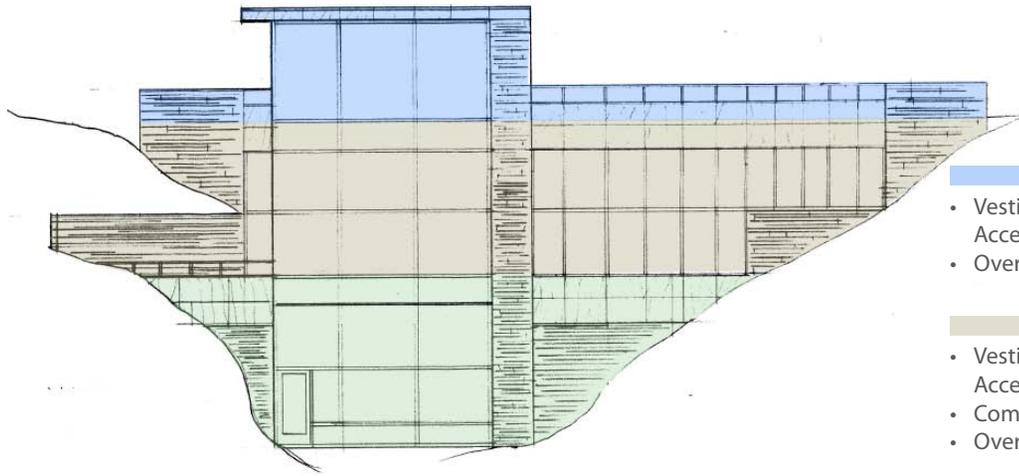
CONCEPT C

Concept C provides ADA accessibility to the beach exclusively by using two elevator towers in larger terrace and beach pavilion structures, preserving the natural landscape of the bluff intact without new switchback paths.

At the terrace level, a plaza and elevator vestibule are located at the approximate location and elevation of the existing restroom structure. To transition the grade to reach this plaza with an accessible path from the south end, the hillside has been cut away to create a stepped lawn amphitheater that could be used for concerts or other festivals. To the north of the amphitheater, a flat lawn area has been retained to accommodate event tents. The play area remains at the far north end of the site, combined with the relocated veterans memorial overlook and flagpole. The Plensa sculpture and rose garden are located in a contemplative space at the south end.

The terrace pavilion is a three-story structure with an elevator access vestibule, a community room and overlook, and a restroom level at the bluff trail crossing. The beach pavilion is a four-story structure with an elevator access vestibule, an overlook café and educational classroom level, a restroom level with changing rooms, and a beach level with a multipurpose room and concession. It is assumed that both of these buildings would be set into the hillside, and that the roof would be a series of terrace and green roof gardens that would blend into the hillside.

The bluff trail connects to a beachfront promenade and plaza area, with a new play area at the north end. The coastal structures are shown as in Alternative 3 of the UWM study, with new stone groins constructed in a curvilinear design to form a scallop shaped beach. An access walk is proposed on the central groin structure to allow access out into the lake.



- Terrace Level**
 - Vestibule with Stair & Elevator Access
 - Overlook Plaza
- Community Level**
 - Vestibule with Stair & Elevator Access
 - Community Room (2,500 sf)
 - Overlook Patio to Stairs
- Restroom Level**
 - Vestibule with Stair & Elevator Access
 - Restrooms (3 Stalls Each)
 - Access to Exterior Stairs & Ramp



A grand performance venue with terraced seating



Redefining the beach experience

- Restroom Level**
 - Vestibule with Stair & Elevator Access
 - Restrooms (3 Stalls Each)
 - Changing Rooms
 - Overlook Plaza/ Green Roof
- Beach Level**
 - Vestibule with Stair & Elevator Access
 - Beach Concessions
 - Multi-purpose Room (600 sf)

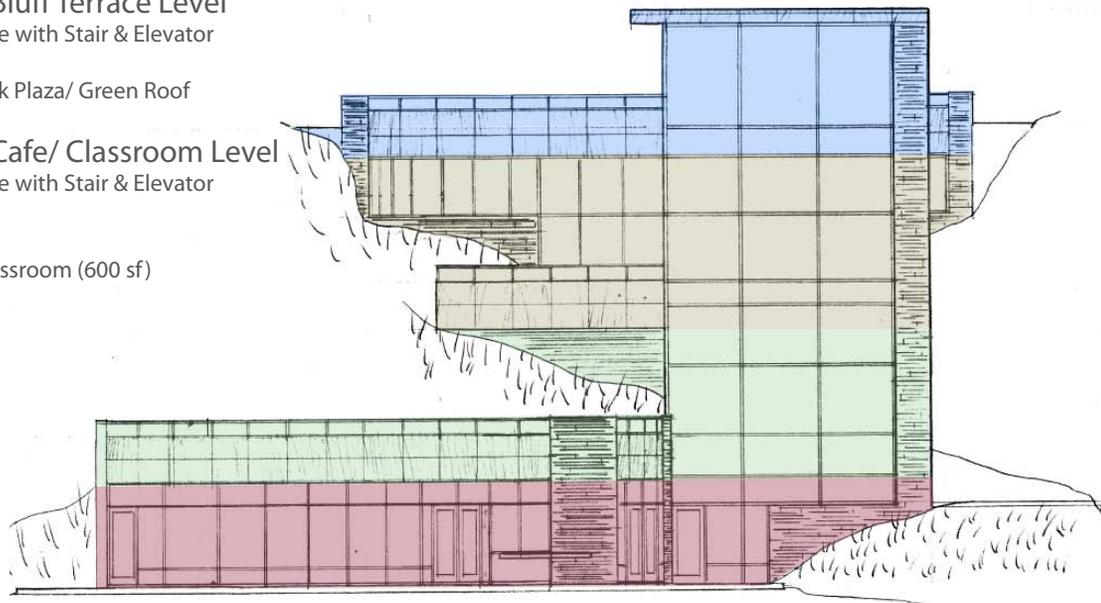
Concept C: View of the Terrace Pavilion Looking West

Bluff Terrace Level

- Vestibule with Stair & Elevator Access
- Overlook Plaza/ Green Roof

Cafe/ Classroom Level

- Vestibule with Stair & Elevator Access
- Cafe
- Bluff Classroom (600 sf)



Concept C: View of the Beach Pavilion Looking West

Atwater Park Master Plan

- ① Terrace Pavilion and Plaza/
Overlook
- ② Play Area
- ③ Open Lawn
- ④ Appomattox Overlook
- ⑤ Plensa Sculpture Garden
- ⑥ Contemplative Overlook/
Rose Garden/ Veterans
Memorial
- ⑦ Entry Feature & Gate
- ⑧ Improved Central Stairs
- ⑨ Widened Bluff Service Drive
- ⑩ Accessible Bluff Connector
- ⑪ Overlook w/ Shade Structure
- ⑫ Beach Pavilion w/
Expansion Area
- ⑬ Beach Plaza with
Foot Wash Station
- ⑭ Beach Boardwalk
- ⑮ Covered Seating Areas
- ⑯ Swim Beach Activity Zone
- ⑰ Active Sports Zone
- ⑱ Coastal Structures
(To be Improved)
- ⑲ Optional Funicular
- ⑳ Optional Plaza/Spray Park



4.0 FINAL MASTER PLAN

The design team presented the concepts and preliminary cost estimates to the Steering Committee and the public in January 2010. Based on the comments heard at the public meeting, the Steering Committee selected the program elements that met the needs of the community, and provided design direction for the final master plan. Below is a listing of the major elements at each zone in the final plan:

Upper Terrace

- Renovated and expanded playground
- Terrace Pavilion restroom facility set into the bluff
- Contemplative area with relocated Graves Memorial Rose Garden and Veterans Memorial
- Overlooks and seating areas
- Plensa sculpture
- Park entrance features
- Optional splash pad

Bluff

- Widened and stabilized vehicular access
- Existing stairs, enhanced with new railings and seating areas
- ADA-compliant pedestrian path or optional funicular

Beach

- Pavilion with restrooms, changing facilities, and concessions
- Boardwalk
- Expanded playground with shade structure
- Repaired coastal structures with public access

PLAN COMPONENTS

This section discusses the plan components, grouped into the categories of educational opportunities, connections and access, architectural improvements, play areas, park amenities, terrace landscaping, and coastal structures.

Educational Opportunities

The master plan for Atwater Park envisions an increased use of the park for community education. The park's unique setting provides opportunities to study geology, water quality, ecology, photography, coastal dynamics, and survival skills. A joint effort between the New Horizons Charter School and the Urban Ecology Center is exploring curricula on these topics that could be expanded for coursework at schools throughout the Shorewood area. The proposed master plan facilities support this use of the park as an outdoor classroom by constructing universal access to the beach, accommodating storage for kayaks or other curriculum items in the beach pavilion, providing expanded restroom facilities, and promoting the repair of the deteriorated coastal structures.

In addition to the structured education programs sponsored by the Urban Ecology Center, interpretive signage for self-guided study will be developed to educate visitors about wildlife, vegetation, historic structures, Lake Michigan, and other site features. These signs would potentially be located at rest stops along the trails on the bluff, beach, and terrace levels, or on the stair overlook landings.



Interpretive signage will educate visitors on wildlife, history, or the Great Lakes



Habitat structures could be part of an environmental curriculum on wildlife



The unique ecosystems of Atwater Park will provide service projects for youth



The plan recommends a widened vehicle access and switchback

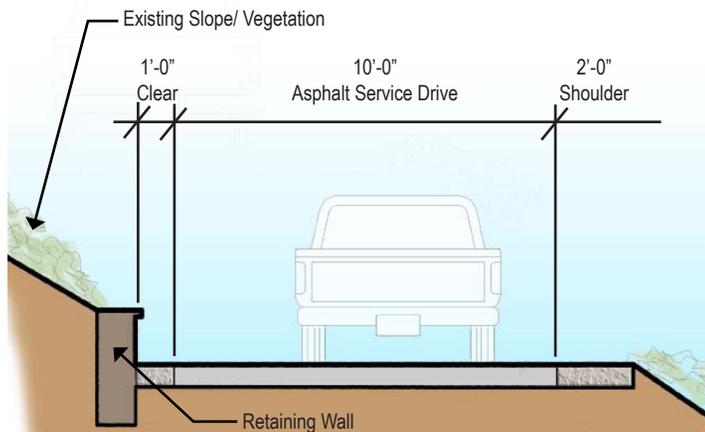
Connections and Access

Widened Bluff Service Drive

The existing bluff trail will remain the vehicular service drive to the beach for maintenance and emergency access. However, several changes are planned for the drive in order to provide safer and easier access for vehicles to navigate the slope, to offer a more enjoyable pedestrian experience, and to resolve bluff stability issues. Improvements to the trail include:

- A 10-foot wide asphalt surface.
- A 2-foot gravel shoulder on the lake side edge.
- An improved switchback at the north park boundary. The bluff above the switchback will be reshaped to reduce the steepness of the slope, create a wider turn, and resolve the erosion issue. This results in slightly less space at the terrace level between the existing playground location and the edge of the bluff.
- A turn-around at the beach level.
- Two overlook locations with seating areas for pedestrians to rest and enjoy the view.

The upper segment of the bluff service drive will also be relocated to align with the south crosswalk on Capitol Drive. From this connection, the path will be graded at a maximum 5% slope to provide ADA-compliant access to the existing restroom facility and the top of the stairs. Although the trail does not provide a universally accessible connection between the terrace pavilion and the beach, it offers pedestrians an alternate route along the bluff.



Section of the widened bluff trail

Accessible Bluff Connector

Providing an accessible connection between the terrace and beach is a high priority for the Village, as it is critical to the continued usability and success of the park. Due to space constraints and the steep slope of the bluff, the best option for an ADA-compliant accessible path is a series of sloped ramps (1:12) with 5-foot long flat landings spaced every 30 feet.

Additional features along the bluff connector include rest stops with benches and an overlook seating area at the path switchback. This overlook is proposed to include a trellis-like shade structure and seating area, which could blend into the landscape of the bluff with vines and other plantings.



An arbor over the switchback on the accessible path provides needed shade...

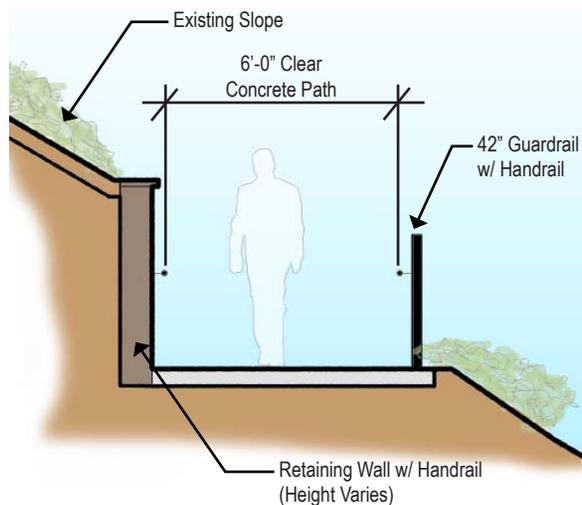


...and could fit into the bluff landscape with integrated plantings and vines

Two options were explored for the construction of the accessible bluff connector: a concrete path at grade and an elevated boardwalk. Both options have a 6-foot clear path width, and connect the upper restroom facility to the proposed beach pavilion. Above the terrace restroom facility, the accessible path follows the relocated vehicular access to the south park entry. From the proposed beach pavilion, an additional ramped walk connects down to the beach boardwalk at the base of the stairs.

At-Grade Concrete Walk Design

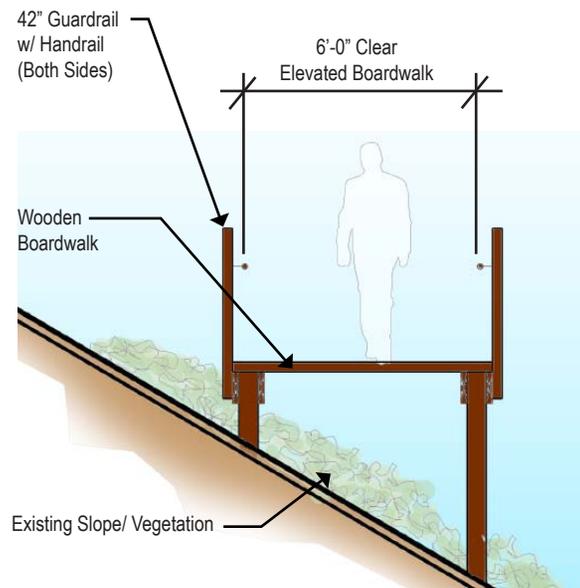
- Concrete surface maintains the required slopes on the ramp and landing surfaces and would be more easily replaced than an asphalt surface.
- Requires retaining walls to grade the trail into the bluff face.
- A guardrail is provided at the lake side edge. Handrails are required on both sides of the ramp, and could be mounted on the retaining wall and guardrail.
- Projected lower maintenance and replacement costs than a wooden walkway.



Section of an at-grade, ADA-compliant concrete path along the bluff

Elevated Boardwalk Design

- Built above the bluff slope to minimize soil disturbance.
- Does not require retaining walls.
- Wooden guardrails with attached handrails required on both sides.



Section of an ADA-compliant elevated boardwalk along the bluff

Funicular

As an alternate to the accessible bluff connector, a funicular or 'inclined elevator' would provide a mechanized access between the upper terrace and the beach. The funicular has many benefits, including ease of transport for visitors with beach gear and a reduced impact on the bluff compared to an accessible path. However, this system also requires more money for operations and maintenance, and may require staffing for liability issues.

If the Village selects the funicular option, the following features are recommended:

- At-grade elevator tracks (4' wide)
- 2000 lb care (5 person)
- Operation controls at the terrace and beach
- Fence restricting access to the tracks and car



A "closed car" carries visitors down the bluff (Marine Innovations, Inc.)



Funicular tracks are constructed to match the slope (Marine Innovations, Inc.)

Central Stairs

As the most direct pedestrian connection between the terrace and the beach, the central stairs are used both for exercise and access. Aesthetic upgrades and redesign of the landings are proposed to integrate the stairs into the renovated park. The current landings are designed with benches facing both towards and away from the lake. The benches facing away from the lake should be eliminated. The railings in these sections should be designed with the following characteristics:

- Combination of decorative wood and metal to incorporate stair tread material while maximizing transparency for views of the lake.
- Design to allow people to comfortably lean on the railings while looking out at the water.
- Incorporate educational signage.



Railing design for comfortable leaning, with a wide foot plate and a sloped top



Potential railing design that incorporates wood from the stair decking

Beach Boardwalk

To increase accessibility along the sand edge, an 8-foot wide wooden boardwalk is planned along the base of the bluff. The boardwalk connects the length of the beach, from the northern play area to the vehicular service drive at the south. Plaza areas with footwash stations are proposed at the central stairs and the stairs to the beach pavilion. Benches would be located along the bluff side of the walk, and could have overhead tensile structures or trellises for shade.



Boardwalks provide accessibility for all ages and abilities



Rest areas on the boardwalk could provide benches and trash receptacles

Pavement Materials

Selection of pavement materials during detailed design of the park paths should consider aesthetics, maintenance requirements, life-cycle costs, and sustainability. Suggested pavement materials for Atwater Park include the following:

Standard Concrete

- Use for terrace-level walkways and the accessible bluff connector
- Low cost and easy to maintain and repair
- Simple aesthetic
- Allows winter snowplowing

Colored/Stamped Concrete

- Use to highlight gathering spaces such as plazas and overlooks
- Provides texture and color similar to pavers at a reduced cost
- Difficult to color match if repairs are needed
- Easily damaged by snowplowing unless brushed

Concrete Unit Pavers

- Use to highlight gathering spaces such as plazas and overlooks
- Easy to remove and repair
- Aesthetically pleasing
- May be more prone to settlement

Permeable or porous pavements are not recommended for Atwater Park for the following reasons:

- Given the direct connection between subsurface water flow and bluff stability, porous pavements could potentially exacerbate the erosion issue.
- Sand would quickly clog the pavement system if used at the beach level, which would require constant cleaning and maintenance.

Architectural Improvements

Two buildings are proposed in the master plan, one that serves the upper terrace and one at the beach level. Design, construction and materials should complement the natural setting and should consider sustainable practices, including:

- Expanded ceiling height and windows to provide natural daylighting
- Operable windows
- Use of local and renewable materials
- Incorporating energy production, such as solar and/or wind power
- Use of roof decks for overlooks or green roofs
- Sustainable harvested wood

Terrace Pavilion

As part of a future phase of park improvements, the terrace restroom building will be replaced with an updated and expanded building. Based on the desire to keep open lake views, it is preferred that the replacement structure be tucked into the bluff where the current building now stands. In addition to providing restrooms for users at the upper terrace, the terrace pavilion could include expanded space for vendors or a multipurpose room for small group events, such as educational or exercise classes.

Beach Pavilion

The beach pavilion is envisioned as a seasonal-use building that would be open during summer months. This simple, two-story structure is located for service from the vehicular access drive, and is a short distance above the beach to provide a setback from potential high water. The pavilion offers a number of amenities, including:

- Second-story overlook deck with concession
- Restrooms with changing area
- Beach equipment storage
- Future expansion area (shown dashed on plan)

Play Areas

Atwater Park serves as the community playground for the residential area east of Atwater School. Because of the high use that the park sees by neighborhood children, the park's play areas are an essential component of the master plan. Both the terrace and beach level play areas are proposed to be replaced and expanded, and a potential spray plaza is included at the terrace level.

Terrace Level Play Area

As identified in the planning process, an updated play structure at the terrace level is a high priority for residents. Selection of the replacement equipment should consider the views from the street, provide structures for both toddler and younger school-aged children, and provide a safety surface that is universally accessible. Benches for adult supervision are placed surrounding the play area, and trees are located to provide shade on the western edge.

Beach Level Play Area

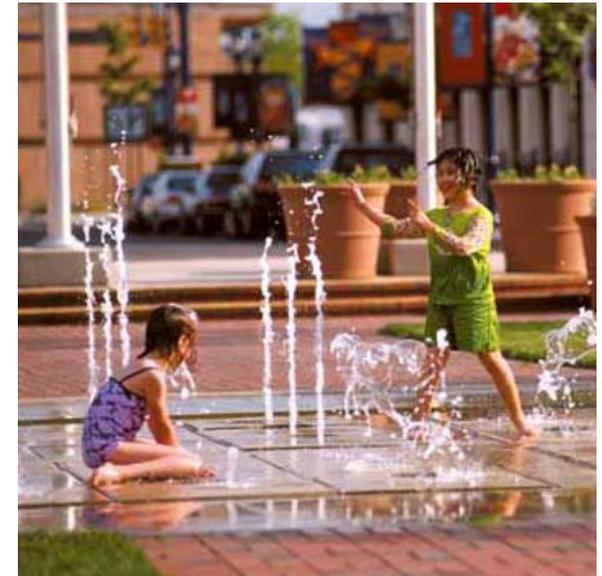
A new play structure will also be located at the north end of the beach boardwalk. In this location, a natural flat surface exists at the base of the bluff that allows the play structure to be placed above the ordinary high water mark of the lake. A seasonal tensile structure is included to provide shade for picnics and protection on hot summer days. The play equipment could take on a nautical, ecological, or historical theme as in a previous Village plan. The safety surfaces should be sand to blend with the natural setting of the beach.

Optional Spray Plaza

The optional spray plaza or splash pad could provide an alternative area for water play when the beach water quality is poor, as well as a fountain feature for the park. The plaza is located near the terrace-level play area to allow children to circulate between the two activity centers. Creative paving patterns highlight the plaza's water jets, which are envisioned as simple vertical fountains.



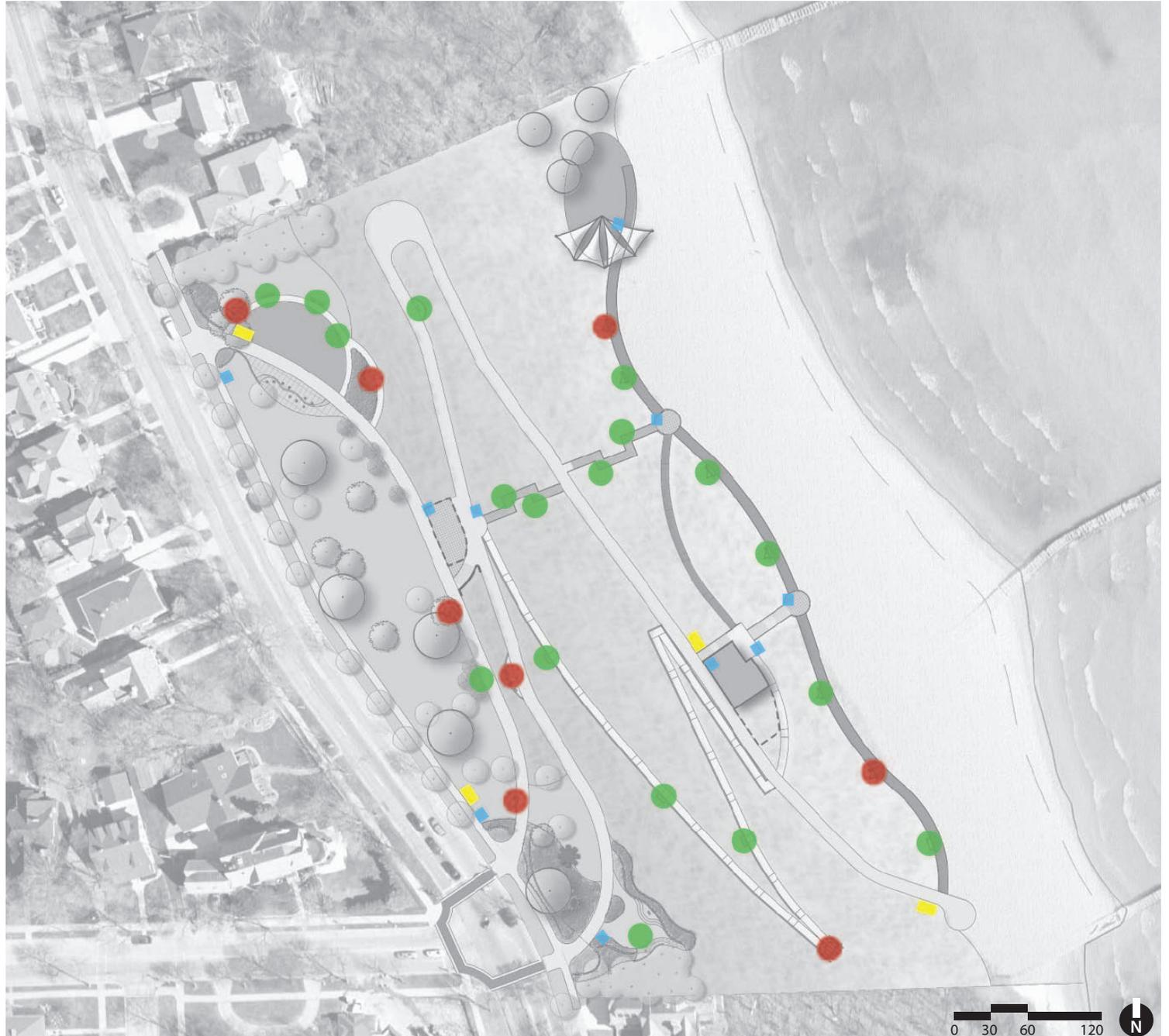
The terrace-level playground should have a universally accessible surface



A splash pad converts a plaza into water play

Park Amenities Diagram

-  Benches with Trash Receptacle
-  Benches
-  Trash & Recycling Receptacles
-  Bike Rack



Park Amenities Palette

Park amenities include elements such as benches, trash receptacles and lighting. Style, color and material of park amenities should form a cohesive palette and complement each other. In addition to aesthetic considerations, selections should be durable, comfortable, vandal-proof, easy to maintain or replace, and use sustainable materials. Sustainable materials should consider:

- Environmental impact of manufacturing process
- Local source
- Recycled or FSC-certified content

Seating

Seating areas with benches are identified at several locations on the terrace, bluff and beach levels. Seating elements may include a combination of benches and seatwalls, varying in layout to offer both intimate and small group gathering spaces. Wood or composite slats are recommended for the seat surface as these materials are more comfortable during both hot summer days and cooler seasons. Colors, styles and materials may vary slightly depending on location within the park, but should correspond to the overall palette. Suggested materials include the following:

Terrace Seating

- Metal benches with wood slats in a combination of back and backless models for flexibility in facing the terrace or the lake.
- Stone seat walls at the Appomattox Overlook and near the park entries.

Bluff Seating

- Seatwalls at two overlooks along the vehicular path. Materials should reflect the adjacent retaining walls.
- Benches along the stairs and accessible path may be wood or a combination of wood/metal.

Beach Seating

- Benches along the beach boardwalk may be wood or a combination of wood/metal.
- Beach concessions may consider renting portable beach chairs for use on the sand.

Trash & Recycling Receptacles

To help reduce litter, trash receptacles should be located throughout the terrace, bluff and beach levels. Locations should be easily visible to park visitors and consider easy access for collection and maintenance. Receptacle style, color and materials should reflect the chosen park amenities palette.

Currently, recycling containers are only located along the street edge due to the collection agreement with the Village's recycling contractor. It is a recommendation of the master plan that recycling containers be located throughout the park for ease of use by visitors. Containers may need to be serviced by DPW staff and transferred to a single collection point for the contractor.

Lighting

In addition to architectural lighting at the terrace and beach pavilions, pedestrian-scale lighting should be provided at key locations for safety and security. These locations include along the central stairs, at the overlook deck on the beach pavilion, and at the switchback and beach turnaround on the vehicular access drive.

Style and materials should complement the park amenities palette, respect the natural aspect of the park, and reflect a "dark skies" aesthetic. Selection of lighting components should also consider low energy fixtures, such as LED or those that incorporate solar power.



A classic style metal - wood combination bench



Backless benches offer flexibility to face the lake or the terrace



Amenities should be cohesive or complementary in material, style & color

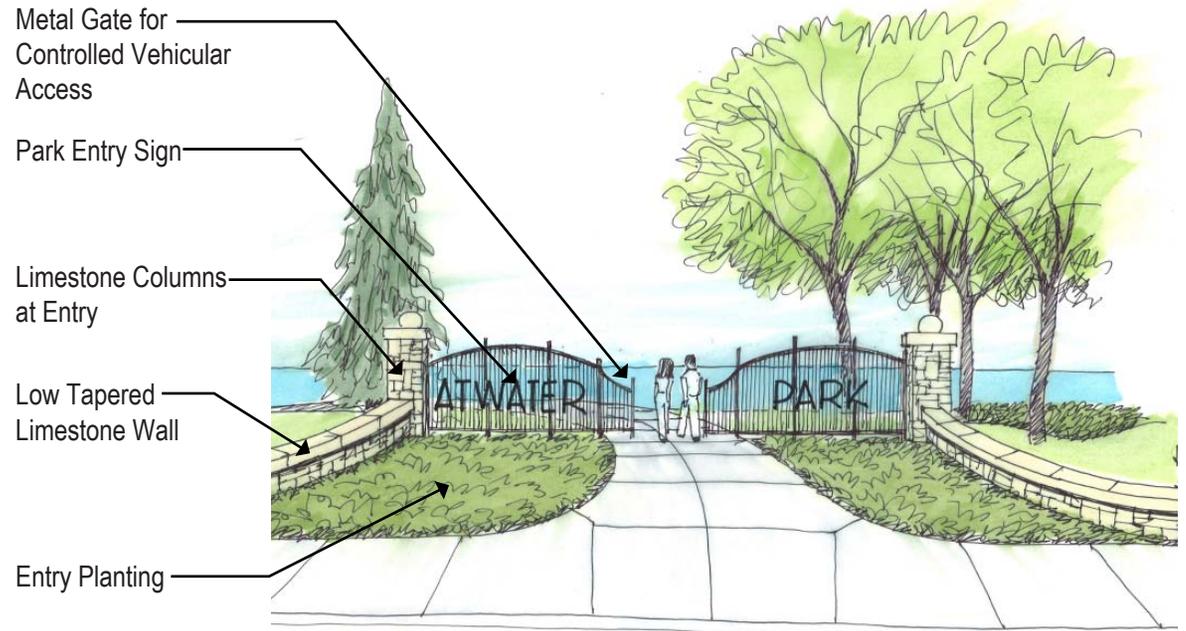
Terrace Landscaping

The terrace-level landscape is distinct from the natural vegetation of the bluff and beach. The master plan recommends having a more designed and manicured park appearance for the terrace level, with an open 'great lawn' area for community events and festivals. Existing trees locations in the great lawn should be evaluated when the existing paths to the central rose garden are removed. Trees should be preserved where they provide shade for park users or frame views to the lake. Trees with a limited life span or those threatened by pests such as the Emerald Ash Borer should be considered for removal. Future tree plantings should include species with wide spreading canopies to maximize shade while minimizing the number of trunks. The canopies should be high off the ground surface to provide clear views of the lake.

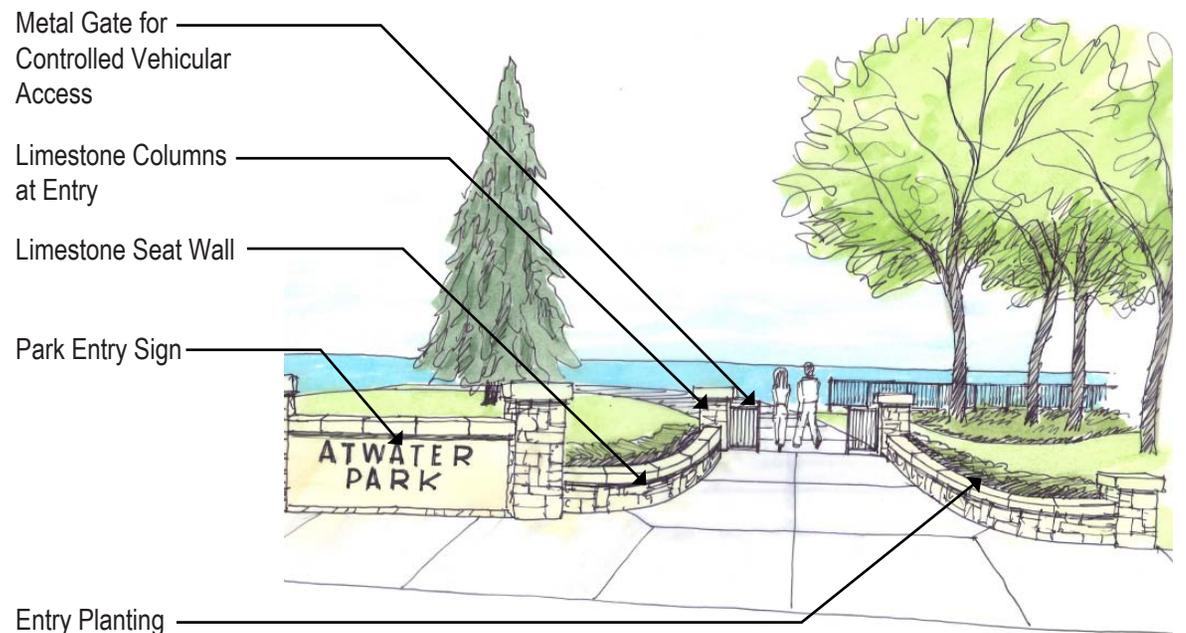
Park Entry Feature

The park entry feature plays an important role in creating an identity for Atwater Park. While entry features should be located at all pedestrian connections to the public sidewalk, the primary entry and signage should be located at the south, near the intersection of Capitol and Lake Drive. This location offers good visibility from both streets and creates an opportunity for the entry to frame the view of Lake Michigan. Two concept sketches for potential entry features are provided at right, which include the following elements:

- Draw on classic limestone features unique to Shorewood to connect the park's image to the greater community.
- Provide entry signage with the park name.
- Frame the view with landscaping.
- Provide a gate or removable bollards to limit access to only service vehicles while allowing free pedestrian flow.



Entry Feature Option 1



Entry Feature Option 2

A secondary entry feature would be located at the north end of the park that uses the same style, materials and colors as the primary entrance at a smaller-scale.

Signage

Design for wayfinding signage throughout the park should complement the entry features. By replicating the forms and materials of the entry, such as random ashlar limestone patterns or metal work, consistent signage cues are given to park visitors. Signage locations should help park visitors find their way through the park and highlight programmed spaces.

As discussed under educational opportunities, interpretive signage provides park visitors with a better understanding of the history and ecology of Atwater Park. In addition to signage at the Appomattox shipwreck marker on the terrace, providing educational signage along the central stairs and accessible bluff connector will offer users points of interest as they walk to the beach.

Much like wayfinding signage, memorial markers should replicate the forms and materials of the entry features, creating a consistent and recognizable design palette. In addition to existing memorials, future planning should provide opportunities for additional remembrances as a way to fund park components.

Contemplative Garden

Several program elements are proposed to be located at the south park boundary. In addition to the entry feature, a contemplative garden is planned that incorporates the Veterans Memorial, Graves Memorial Rose Garden, flag pole, and Plensa sculpture. Three concept sketches were developed as part of the master plan to look at preliminary ideas for the arrangement of these elements into a series of spaces that provide structured glimpses of the proposed artwork and memorials.



Contemplative Garden Concept A

- | | |
|--------------------------------------|--------------------------|
| ① Free-standing Limestone Wall | ⑥ Contemplative Plaza |
| ② Sculpture Garden | ⑦ Rose Garden |
| ③ Plensa Sculpture on Limestone Slab | ⑧ Veterans Memorial |
| ④ Entrance Gate and Signage | ⑨ Terraces to Bluff |
| ⑤ Entry Plantings | ⑩ Graves Memorial Plaque |



Contemplative Garden Concept C

- | | |
|--------------------------------------|--|
| ① Free standing Limestone Wall | ⑥ Contemplative Plaza |
| ② Sculpture Garden | ⑦ Rose Garden |
| ③ Plensa Sculpture on Limestone Slab | ⑧ Veterans Memorial |
| ④ Entrance Gate and Signage | ⑨ Retaining Wall |
| ⑤ Entry Plantings | ⑩ Informal Limestone Path and Seating Area |

Garden Concept A works with the existing spruce and canopy trees to create an asymmetrical garden space around the Plensa sculpture. The sculpture is envisioned to be placed on a solid slab of limestone at the edge of the garden area, where it would be visible to visitors walking towards it on the terrace-level or bluff access paths. The Veterans Memorial has a large plaza space on the edge of the bluff that would accommodate group events for ceremonies around a formal memorial sculpture and flagpole. Special paving and benches would be incorporated into the design, and curvilinear terraced walls blend into the bluff landscape. The rose garden is integrated throughout the space, with the memorial located between the paths leading into the plaza area.

Similar to Concept A, Garden Concept B takes cues of the natural aspects of the park, creating an informal and asymmetrical form. By aligning the Plensa sculpture with the Veterans memorial sculpture and flagpole, a more formal axis is introduced, connecting the two garden spaces. To do this, the existing spruce tree is removed. The Plensa sculpture is placed closer to the street than in Concept A, to be more visible from the terminus of Capitol Drive. The outer shape of the Veteran's Memorial is curvilinear, yet key alignments are held between the formal memorial and the Plensa sculpture. The sculptures are also aligned with the plaza access path, allowing glimpses of each while entering or leaving the space. An informal limestone path transitions to the natural landscape of the bluff, with benches provided for structured seating.

As planning studies transition into design development and implementation for the contemplative garden and park entrance, these concepts should be considered potential starting points for design, as program features are integrated with actual surveyed topography, street and crosswalk improvements, and existing landscaping.

Coastal Structures

Many of the comments received during the master planning process concerned the deterioration of the coastal structures, also known as beach groins. The Village is committed to repairing the structures, and recently contracted with UW-Milwaukee (UWM) for an Ecological Study and Management Plan that assessed the condition of the groins. The study found that much of the damage to the structures is likely due to their advanced age, and that the current groin layout may not be the most efficient design to maximize water quality, reduce stagnation and algae deposition, and create a large, stable beach.

The UWM study proposed three potential alternatives to repair the groins, in order of decreased preference:

1. Abandon the existing groins and replace with a shorter, curvilinear form that creates a scallop shaped beach. This would improve circulation,

bypass longshore currents, and reduce stagnant corners.

2. Reconstruct the groins in their current location, with (1) an increased height above the water to reduce overtopping by waves and (2) a less pervious design to bypass longshore currents.
3. Remove the groins entirely. This would likely reduce algae deposition, but would also decrease the size of the beach. This was determined not to be a feasible option.

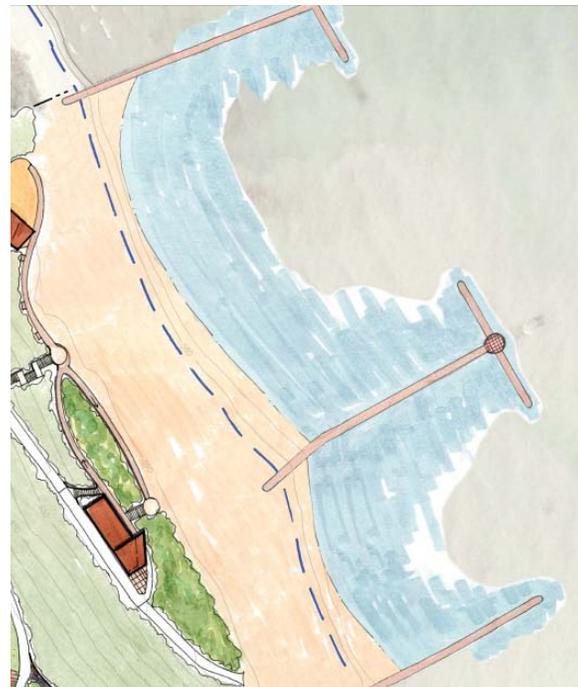
Although this master plan study focused on improvements only to the water's edge, the conceptual overlays below graphically depict potential design solutions based on the UWM Ecological Study and Management Plan findings. Option A depicts the curvilinear breakwater structures and scallop shaped beach proposed by UWM Alternative 1. A

public access walk could be located on the central breakwater. Option B shows repair of the structures as proposed by UWM Alternative 2, with public access walks on all the groins. Option C shows a hybrid arrangement, with the north and south groins replaced by shorter breakwaters, the central groin reconstructed in place with a public access walk, and a beach promenade linking the groins together.

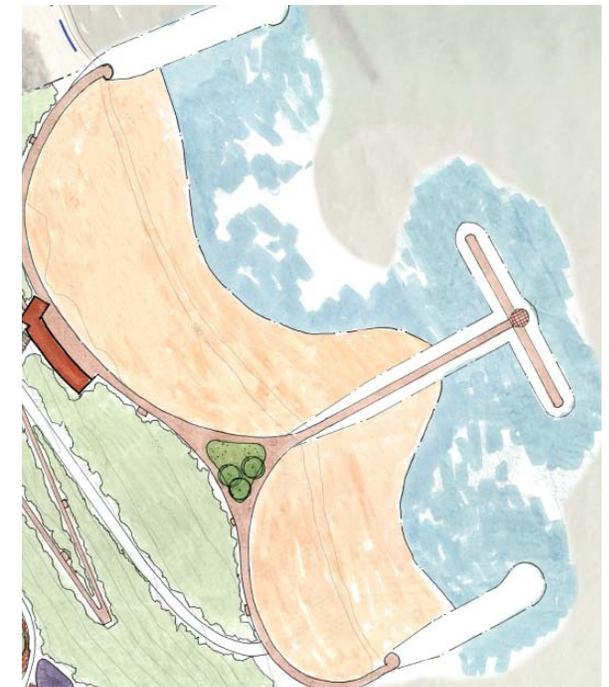
Before a recommendation can be made for any of these solutions, the Village needs to undertake a detailed engineering analysis to select an alternative, optimize the design for water quality and beach size, and determine probable cost of construction.



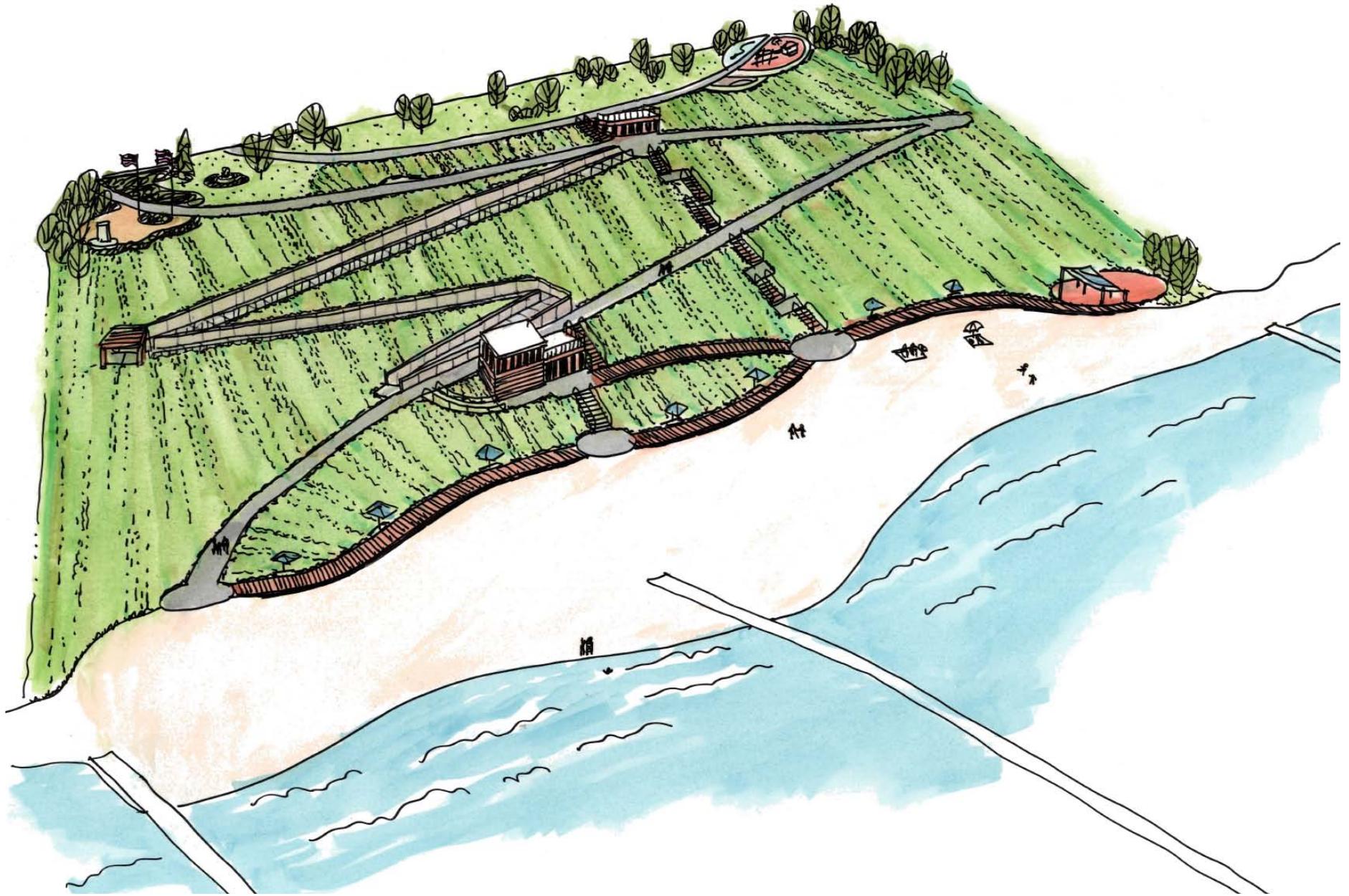
Option A: New curvilinear breakwater structures



Option B: Repair groins in the existing locations



Option C: Beach promenade



A Bird's Eye Perspective of Atwater Park Looking West

5.0 IMPLEMENTATION

PHASING PLAN

For implementation of the master plan, recommendations have been prioritized into three categories:

1. Action items for the next two years,
2. Improvements for two to five years out, and
3. Activities that should be undertaken at a later date as resources and circumstances permit.

The Village Parks Commission should continue to work with the Friends of Atwater Beach, other interested groups, and the public to ensure that the prioritized improvements meet community goals, and to secure funding sources for construction.

Near Future Action Items: 0-2 Years

The primary objectives of the first phase of plan implementation are to (1) address deteriorated facilities, water quality, and bluff stability and (2) construct items that have secured funding or are high priorities for the Village. Action items are as follows:

- Repair the vehicular access path, including bluff stabilization and grading the section to the top of the stairs to be ADA compliant.
- Construct the beach pavilion and remove the WPA beach pavilion foundation.
- Maintain the existing restroom facility to serve the upper terrace.
- Initiate the coastal engineering study to assess design alternatives for groin repair or replacement.
- Locate and install the Plensa sculpture.
- Construct segments of the beach boardwalk as funded by the WI Coastal Management Grant.

- Replace the playground at the terrace level.
- Continue ongoing vegetation management.
- Improve the upper terrace walkways, great lawn, contemplative area, and park entry.

Mid-Term Action Items: 2-5 Years

The following mid-term action items for the park are recommended for implementation after initial high priority initiatives have been addressed:

- Implement the ADA accessible path or funicular.
- Begin the groin repair or replacement project.

Long-Term Action Items

The following items are long-term goals that should be implemented as funding or volunteer resources are available:

- Replace the beach playground and add the tensile shade structure.
- Update the beach stair aesthetics.
- Assess the condition of the existing terrace level restroom facility. When replacement is required, determine appropriate size and program.
- Consider installation of the optional splash pad.
- Install interpretive signage along paths.



Beach improvements are high priority



Portions of the beach boardwalk have already secured funding

PROBABLE CONSTRUCTION COSTS

General Site Work and Demolition	\$105,000
Widened Bluff Service Drive and Stabilization	\$693,000
Central Stairs	\$69,000
ADA-Compliant Bluff Connector	\$850,000
Beach Boardwalk and Plazas	\$146,000
Terrace Pavilion	\$475,000
Beach Pavilion	\$990,000
Play Structures	\$240,000
Terrace Landscape and Entry Features	\$227,000
Contemplative Garden, Rose Garden, and Veterans Memorial	\$173,000
Park Amenities	\$143,000
Subtotal	\$4,111,000
Design and Engineering Fees (12%)	\$493,320
Contingency (25%)	\$1,027,750
Project Total	\$5,632,070
<u>Optional Program Items</u>	
Funicular	\$500,000
Spray Plaza / Splash Pad	\$250,000

PROBABLE CONSTRUCTION COSTS FOR FACILITIES

To assist in fundraising efforts and to select elements to move forward into detailed design, construction cost opinions are provided in the table at left for individual components recommended by the master plan. As projects are scheduled, these figures will provide a general idea of what costs may be anticipated during the early planning stages. This opinion of probable construction costs is limited to structural or built improvements only, and is based on a conceptual level of design detail. The accuracy of the opinion will be improved during the schematic design and construction documentation phase for each element, as full engineering requirements are determined.

The following assumptions were made for the opinion of probable construction cost:

- All costs are given in 2010 dollars.
- No adjustments have been made for inflation.
- Costs assume a single phase of construction. Completing the park in multiple phases will be higher given separate contractor mobilizations and general site work provisions.
- Design and Engineering Fees include site investigation services such as topographic survey, and environmental or geotechnical analysis; design and construction drawing preparation; and construction administration services.
- As environmental investigations have not been completed for the site, costs do not include removal of any potential hazardous materials during the demolition of existing structures.
- Costs listed for optional program items do not include design and engineering fees or contingency.
- Costs do not include analysis or design of coastal structures.

FUNDING STRATEGY

The need for funding sources in today's parks and recreation departments goes well beyond property tax supported budgets, demanding that communities become increasingly more creative and flexible in how facilities and programs are funded.

Grants and Loans

The tables on the following pages list funding sources that could potentially benefit Atwater Park. These sources can generally be classified into three categories:

- State of Wisconsin agency grants or loans
- Federal agency grants or loans
- Private corporation or non-profit organization grants or loans

Criteria for applicable projects, the grant matching requirement, and the application cycle are identified for each funding source. As competition for funding is high, communication with the sponsoring agency and political representatives prior to grant submission is essential to ensure a successful application.

Private Gifts

Private grants and gifts vary widely in both the types of projects that are funded as well as in the application processes and award types. Local businesses or corporations may be interested in investing in the community either by direct cash donation or by the sponsorship of special events or features. Corporate sponsorships often carry with them the expectation of recognition or advertising posted at the site.

The Friends of Atwater Beach also may be willing to assist the Village in private fundraising efforts with individuals or local businesses, or to provide volunteer labor for implementation of park features.

Program Name	Administered By	Applies To	Matching Requirements	Application Cycle	Contact
C.D. Besadny Conservation Grant	Natural Resources Foundation of Wisconsin	Local conservation projects including kiosks and interpretive signs, invasive species removal, BioBlitz sponsorship, boardwalk construction, prairie restoration, and other projects that benefit the public	50% Local Match, Grants of \$100 to \$1,500	Annually (Next Application January 15, 2011)	Natural Resources Foundation of Wisconsin PO Box 2317 Madison, WI 53701-2317 (866) 264-4096 http://www.wisconservation.org/
Clean Water Fund Program (CWFP)	Wisconsin Department of Natural Resources	Provides subsidized loans to municipalities for urban storm water projects that control runoff rates, volumes and discharge quality from existing developed areas	None	Annually (Next Intent to Apply December 31, 2010 for projects beginning July 1, 2011)	Dan Olson WI Department of Natural Resources (608) 267-7475 Daniel.Olson@Wisconsin.gov http://www.dnr.state.wi.us/Org/caer/cfa/EL/Section/clean.html
EPA Environmental Education Grant Program	U.S. Environmental Protection Agency	Education enhancing the public's awareness, knowledge and skills concerning environmental quality	100% Grant Grants of \$15,000 to \$25,000	Annually (Next Application December 2010)	Environmental Education Grant Program Office of Environmental Education 1200 Pennsylvania Avenue NW Washington, DC 20460 (202) 564-0451 http://www.epa.gov/enviroed/grants.html
Great Lakes Restoration Initiative	U.S. Environmental Protection Agency (and other Federal Agencies)	Stimulus funding for 2010 - 2015 focusing on toxic substances, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife protection and restoration	No local match required, but matching funds may increase chance of award	Annually (anticipated) (Next Application January 2011)	U.S. Environmental Protection Agency Great Lakes National Program Office 77 W. Jackson Boulevard (G-17J) Chicago, Illinois 60604-3511 (312) 353-2117 http://www.epa.gov/glnpo/gli/
Knowles-Nelson Stewardship Program - Local Assistance (Urban Rivers, Urban Green Spaces)	Wisconsin Department of Natural Resources	Acquiring land and easements for economic revitalization, construction of improved public access, and preservation of urban rivers and green spaces	50% State 50% Local	Annually (Next Application May 2010)	Amy Bradley WI Department of Natural Resources (608) 267-0497 Amy.Bradley@Wisconsin.gov http://dnr.wi.gov/org/caer/cfa/LR/Stewardship/subprogram.html
Land and Water Conservation Fund (LWCF)	Wisconsin Department of Natural Resources	Federal appropriation program that applies to the planning, acquiring, and developing of State and local recreation areas	50% State 50% Local	Annually (Next Application May 2010, joint application with Knowles-Nelson Program)	Amy Bradley WI Department of Natural Resources (608) 267-0497 Amy.Bradley@Wisconsin.gov http://dnr.wi.gov/org/caer/cfa/LR/Stewardship/subprogram.html

Table of Potential Funding Sources (Continued on Next Page)

Program Name	Administered By	Applies To	Matching Requirements	Application Cycle	Contact
Migratory Bird Conservancy	National Fish and Wildlife Foundation, Migratory Bird Conservancy	Acquisition, restoration, and improved management of priority bird habitats	50% Local Match	Annually (Next Application April 2010)	Peter Stangel National Fish and Wildlife Foundation (404) 679-7099 peter.stangel@nfwf.org http://www.nfwf.org/programs/
Nonpoint Targeted Runoff Management (TRM) Grant Program	Wisconsin Department of Natural Resources	Design, land acquisition, and construction of BMPs, including cropland protection, detention ponds, livestock waste management practices, stream bank protection projects and wetland construction	30% Local Match	Annually (Next Application April 2010)	Kathy Thompson WI Department of Natural Resources (608) 267-7568 kathleen.thompson@dnr.state.wi.us http://dnr.wi.gov/org/caer/cfa/EF/NPS/nonpoint.html
Sustain Our Great Lakes Community Grants Program	National Fish and Wildlife Federation (funded by private and federal partners)	Restoration, protection and enhancement of shoreline and upland habitats, wetlands, tributaries and riparian corridors, invasive species protection, community education	No Local Match Required Awards \$25,000 - \$150,000	Annually (Next Application October 2010)	Todd Hogrefe National Fish and Wildlife Foundation (612) 713-5185 http://www.sustainourgreatlakes.org
Sustain Our Great Lakes Stewardship Grants Program	National Fish and Wildlife Federation (funded by private and federal partners)	Large-scale restoration, protection and enhancement of shoreline and upland habitats, wetlands, tributaries and riparian corridors, invasive species protection, land acquisition	\$150,001 Minimum Local Match Awards \$150,001 - \$1.5M	Annually (Next Application October 2010)	Todd Hogrefe National Fish and Wildlife Foundation (612) 713-5185 http://www.sustainourgreatlakes.org
Urban Forestry Assistance Grants	Wisconsin Department of Natural Resources	Urban forestry plans, inventories, public awareness programs or materials, and tree planting, maintenance or removal	50% Local Match	Annually (Next Application October 2010)	Candice Sovinski WI Department of Natural Resources (608) 267-3775 http://dnr.wi.gov/org/caer/cfa/Grants/urbanforestry.html
Urban Nonpoint Source and Storm Water Grant Program	Wisconsin Department of Natural Resources	Urban stormwater and water quality management planning; construction projects such as detention ponds, filtration and infiltration practices, and streambank stabilization	30 - 50% Local Match	Annually (Next Application April 2010)	Kathy Thompson WI Department of Natural Resources (608) 267-7568 kathleen.thompson@dnr.state.wi.us http://dnr.wi.gov/org/caer/cfa/EF/NPS/urbannps.html
Wisconsin Coastal Management Program	Wisconsin Department of Administration	Wetland or habitat restoration, public education about the Great Lakes, public access construction projects, non-point pollution control	50 - 60% Local Match	Annually (Next Application November 2010)	Department of Administration Wisconsin Coastal Management Program (608) 267-7982

Table of Potential Funding Sources (Continued from Previous Page)

PERMITTING ISSUES

Prior to considering opportunities and design alternative along the bluff, beach, and waterfront, JJR contacted representatives of the Wisconsin Department of Natural Resources (WDNR), Milwaukee County, and the US Army Corps of Engineers (USACE) to gain a better understanding of permitting issues and allowed facility improvements. A summarization of the agencies' comments regarding permits is as follows:

- Atwater Park is part of the Lake Bed Grant held by Milwaukee County. It was established in Chapter 178 of the Wisconsin State Statutes in 1933. Therefore, WDNR does not have Chapter 30 permit authority over the park. Milwaukee County and Village of Shorewood local permitting could still apply.
- The lake bed grant is designated for 'park purposes' only. Beach-level bathrooms, footwashing stations, boardwalks, and play structures all appear to fit within the definition of park purposes. Milwaukee County will need to give final approval for any improvements as the holder of the lake bed grant. (Contact: Kevin Haley, Milwaukee County Parks Department) Although WDNR has limited jurisdiction, they have requested to review any project plans to ensure that the lake bed grant intent is upheld.
- If the Village determines in the future that they would like to expand the buildings to include rental space, WDNR feels that beach or park concessions fit the intent of the lake bed grant, but chain restaurants or stores do not. Rental of a flexible space for private reunions or weddings would be appropriate, but there is an annual cap on rental fees to approximately 15% of the operating cost of the park.
- Because Chapter 30 permitting is not required, WDNR will likely not be involved in permitting bluff

stabilization efforts. However, bluff work would be regulated by Village of Shorewood ordinances.

- USACE Section 10 governs any work within the ordinary high water mark (OHW). This includes any improvements proposed to be in, on, over, or under the water. USACE Section 404 permitting is required for the discharge of dredged or fill material into waters of the U.S. Therefore, if the coastal structures are renovated, they will likely trigger USACE Section 10 and 404 permitting. If Section 404 is required, USACE is required to receive a water quality certification (Section 401 permit) for the project from WDNR as well as a Shoreland Stabilization permit from Milwaukee County prior to approving the federal permit. Any fill materials can trigger Section 404 permitting, including backfill within a sheet pile pier structure.

WDNR and USACE staff also expressed the following cautions for moving forward with detailed design, which have been considered in the placement of the proposed master plan facilities:

- Lake water levels fluctuate. We continue to have near record-low water levels. Therefore, care should be taken in placing beach amenities where they will not be impacted by rising water levels.
- Staff noted that one of the reasons listed for razing the former beach house was that high water levels contributed to problems with the structure. They suggested locating proposed facilities at an elevation higher than the prior structure.
- WDNR is concerned about the interruption of the Lake Michigan sand transport system by the park's groins. The most southern structure seems to be impacting adjacent properties as shown by the narrow beach widths south of the park. Any reconfiguration or reconstruction of the coastal structures will require modeling and sediment bypass analysis.



The overall goal of the plan is to create an active, highly used waterfront park



Renovation of the coastal structures will require WDNR, County, and USACE permits



Bluff stabilization and repair falls under local jurisdiction, not WDNR