

- New lighting should follow standards in the lighting plan developed for the System. In the absence of a lighting plan, the overall historic character of the System should be considered.
- New signage should follow standards in the signage plan developed for the System. In the absence of a signage plan, the overall historic character of the System should be considered.
- New site furnishings, such as picnic tables and benches, should be in keeping with the overall character of the System. For example, wood benches may be preferred over synthetic plastic or another material that is less rustic in appearance.

## **E. Landscape and water features**

### **(1) Introduction**

Topography, landforms, vegetation, and water features were used by park landscape architects to define activity areas and create scenic views and vistas fulfilling the overall vision of creating a system of parks and parkways that provided an oasis from the harsh urban environment. Section 2.C addressed the vision of planners and the dominant theme that informed the design aesthetic used throughout the System. Parks were to appear as a natural extension of the Wisconsin landscape. While incorporating the various activities associated with parks, they were to also be places of beauty. This meant fitting park activities into the existing landscape or shaping topography so it would appear as it did naturally in the region. Vegetation was used for a variety of functions including screening, framing views, providing surfaces for sports, and picnicking. Use of indigenous plant material grouped according to ecological association was encouraged. Water features were used for recreation as well as to unify the landscape and act as centers of interest. Created water features had to look as if they had occurred naturally.

This design aesthetic is still easily recognized in the historic landscape and needs to be considered whether maintaining, rehabilitating, or constructing new within the System. The Secretary of the Interior's *Guidelines for the Treatment of Cultural Landscapes* are an important tool for the long-term care of historic landscapes and water features. These guidelines inform the following recommendations for maintenance, rehabilitation, and new construction of landscape and water features.

### **(2) Maintenance**

This section addresses the maintenance of landscape and water features within the System. It includes maintenance of topography and landforms, vegetation, and water features that are part of the characteristic park landscape and how maintenance of these individual features impacts the spatial organization of park activities and planned scenic views and vistas. For example, a lack of maintenance could allow vegetation to grow in previously open areas, which could alter the relationship between park activities and their original spatial organization. Studying the relationship of activities and recognizing how they relate to and impact each other is an important step to be taken before maintenance of landscape features is considered.

Specific guidance is provided by category as follows:

**(a) Topographic features**

Existing topography was used and shaped by park designers to creatively separate parkways from adjacent land uses, to provide natural separation of activities within the parks, and to provide a pleasing alignment of park and parkway roads and walks in relation to other park features thereby creating a series of changing scenes as one moved through the parks. Recognition of how topography was used to shape the park landscape is necessary prior to considering any alterations.

Maintenance is necessary prevent the loss or change of existing topographic features that could alter the historic character of the landscape. It should include the following:

- Repair unstable topographic conditions to prevent the situation from worsening.
- Implement erosion control on unstable slopes.
- Remove fallen logs and debris that inhibit water flow and contribute to erosion.<sup>15</sup>
- Prevent pedestrian and vehicular access on areas with unstable topography.

**(b) Vegetation**

Vegetation within the historic parks and parkways refers to the care of trees, shrubs, and ground covers, as well as preservation of their historic use and function in the landscape. When attempting to perform maintenance operations on vegetation, it is necessary to first understand its intended function. If a row of evergreens were planted to create separation between two use areas, removing all of their lower branches to allow a mower to easily pass underneath might help reduce maintenance, but would change the spatial character of the landscape.

Maintenance of vegetation is a major undertaking in parks. Attempts have been made to reduce costs by cutting back on maintenance of un-programmed turf areas. However, reductions in mow lines have resulted in open spaces filling in with dense vegetation, and in some cases altering planned views or relationships between adjacent park activities. Where an open viewshed is desired, a better course would be to use low growing plant materials such as a no-mow grass mix or a mix of meadow or prairie plants that, once established, will reduce maintenance needs while still retaining historic character.

When replacement of vegetation is needed, physical evidence of composition, form, and habit of existing vegetation should be used to inform replacement of deteriorating or declining vegetation features. Replacing a plant with the same species is not as important as duplicating the plant in character. For example, if trees need to be replaced due to an outbreak of disease such as Emerald Ash Borer, attempts should be made to find a replacement canopy tree that is of similar size and shape to the trees being

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<sup>15</sup> MMSD Rule 13.18 "Obstruction Prevention" addresses governmental units' responsibility to manage lands they own or management in public rights-of-way to prevent debris and sediment from creating obstructions at storm sewer outfalls. Riparian property owners have a responsibility to maintain their lands up to and including the stream bank. The MMSD will consider removal of obstructions if the obstruction can be demonstrated to cause the regional flood to damage structures that would not be damaged if the obstruction did not exist.

replaced. Replacing a mown lawn with a no-mow grass mix that requires significantly less maintenance once established is also an appropriate treatment. Species that are considered invasive to the area could be replaced with a native species of similar character; e.g., instead of planting Norway Maple (*Acer platanoides*) consider a native species such as Sugar Maple (*Acer saccharum*). The historic suggestion of using native vegetation (see Section 2.C) has not been strictly adhered to in parks for many years, but using native materials to replace vegetation that has been or will be removed is recommended as a means to restore this concept, as well as to improve habitat for wildlife.

Historic photographs, aerial photography, and early development plans can be used as resources to determine original placement of plantings and help determine original intent. Many canopy trees that predate park development show up on aerial photos and were incorporated into the System's original landscape plan.

**(c) Water features**

Creeks and rivers form the backbone of the System. Other water features include man-made lagoons, dams, and waterfalls. These features play a significant role in defining the character of the historic landscape. It is important to understand how these features were originally designed and how they have changed and/or evolved over time before undertaking maintenance. Most of the rivers and creeks have been altered and engineered over time to provide storm water management and flood control. Maintenance of these features must consider the original function and design, as well as how they are impacted by storm water runoff and natural forces. Historic aerial photography, surveys, and park development plans can be used to determine original courses of waterways and shape and size of lagoons.

The MMSD has permissive authority to address flood management along watercourses within the MMSD jurisdiction. Routine maintenance and repairs should be completed for the watercourses to retain their function and appearance.

Lagoons are another water feature used liberally throughout park and parkway system. Many of them are in poor condition containing large amounts of sediment that may contain toxins. Maintenance to stabilize remaining features includes stabilizing side slopes of lagoons, removal of debris, removal of invasive and volunteer vegetation, and maintaining plumbing and mechanical systems. Methods used to stabilize lagoon side slopes should attempt to provide solutions that appear natural to the regional Wisconsin landscape.

Dams, retaining walls, and waterfalls associated with park watercourses and lagoons should be maintained where they are still intact. Removal of volunteer vegetation that impacts structural integrity, annual inspections and removal or care of problems such as erosion can extend the life of these features.

**(d) Views and vistas**

Views and vistas are another important character-defining feature in parkways. Views and vistas are defined as the prospect created by a range of vision, conferred by the composition of other landscape features. Views are the expansive or panoramic prospect of a broad range of vision, which may be

naturally occurring or deliberately contrived. Vistas are the controlled prospect of a discreet, linear range of vision, which is deliberately contrived.

The introduction of the automobile impacted the way parkways were designed. The design of the landscape was adapted to being viewed at faster speeds. Road alignment along curves and over hills, placement of vegetation, and other features were all arranged to create pleasing pictures and changing scenes as one moved through the park. Designers controlled views along the parkways to reveal features in an ever-changing series of pictures. For example, parkway designers frequently used a bend in the parkway with a break in vegetation to frame scenes off the main axis of the parkway. Many of these views have changed with the growth or removal of vegetation or changes in other park features.

When maintaining the landscape, it is necessary to first identify where views were intended historically. Historic photos and aerial photos and plans can assist in identification of these spots. Refinement of vegetation along parkways should take historic as well as potential views and vistas into consideration. The Secretary's Standards for maintaining cultural landscapes and *Landscape Lines #16, Historic Roadways* include examples of maintenance of views and vistas and are good sources of assistance.

Heavy growth along waterways has obscured many earlier planned views. Although this may appear "natural," it often changes the historic design intent. Historic photos of the parkways depict groupings of vegetation alternating with openings that would have allowed periodic or filtered views as one drove along the parkway.

While exact placement of views may not be possible due to vegetation growth and changes made to the park landscape over the years, consideration should be taken to improve and not negatively impact remaining viewsheds. It is also possible with judicious pruning and replanting that opportunities exist to revive the historic design intent. These opportunities should be identified by park landscape architects and public works staff.

### **(3) Rehabilitation**

Rehabilitation of historic landscape and water features involves accommodating compatible uses while preserving the System's historic character and features. Rehabilitation is appropriate where extensively deteriorated, damaged, or missing landscape and water features need to be repaired or replaced. This treatment approach also provides the opportunity to make modifications based on improved technology or maintenance methods and allows for updating landscapes to accommodate changing park uses and activities. For example, if additional athletic fields are needed, consideration could be given to using existing un-programmed turf areas. It is necessary to consider overall spatial organization of the historic landscape when making these modifications, and how changes/alterations might impact adjacent uses.

Specific guidance is provided by category as follows:

#### **(a) Topography**

- Existing topographic features should be preserved. Identifying, retaining, and preserving existing topographic features should be considered before any modifications to topography are made.

- Any changes should respect overall character of the landscape. If proposed rehabilitation of topographic features is considered the only option, use of archival sources to understand original topography and subsequent changes, as well as preparation of a topographic survey to document current existing conditions are valuable first steps. It is important to assure that any proposed changes will not negatively impact the overall character of the landscape as well as relationships between park activities and uses.
  
- Alterations or additions to allow for new or changed park activities should be located and designed to blend with existing topography. For example, if a road alignment was determined to be unsafe due to increased traffic or vehicles travelling at excessive speeds for the designed roadway, consideration should be given first to using methods of traffic calming such as speed bumps, rumble strips, or improving site lines prior to grading a hill or straightening a curve that could alter the historic character of the parkway.
  
- Avoid major grading that could significantly alter the intended rural impact/feeling.

**(b)     *Vegetation***

Existing vegetation should be preserved. It is important to first identify existing historic vegetation prior to any work being done. Archival resources such as period aerial photos, photography, and early development and planting plans should be used for reference when designing and installing new vegetation features where the historic feature is completely missing.

**(c)     *Water features***

Water features such as lagoons, ponds, and fountains in the parks were designed as unifying features in the landscape. Their loss or removal would significantly impact the overall character of the historic landscape and is not recommended. Retention and preservation of these features is preferred.

If a water feature is deteriorated or missing, archival evidence should be used to design a replacement. If enough evidence is not available, then the feature should be designed in a way that it is compatible with the historic landscape. For example, a waterfall in a Lake Park ravine was deteriorated to the point that it could not be repaired. Some historic photos and early development plans were used to design and replace this feature so that it is compatible.





*This WPA waterfall in Lake Park in Lake Michigan Parkway (North) was restored in 2010 and is an example of the water features in the System.*

When alterations or additions to water features are planned, it is recommended that their design be compatible with the historic character of the landscape. For example, if a new retention basin is proposed, it could be designed to replace a lagoon by replicating natural geological forms and features in the Wisconsin landscape. Otherwise, it should be located in a site that has minimal impact on the historic character of the park landscape. If alterations or additions to water features are proposed as part of a federal or state undertaking, the SHPO should be consulted to avoid or minimize an adverse effect (see process outlined in Section 3).

Waterways are part of broader ecological systems and changes being considered to one feature must be understood for possible impact on other historic landscape features both up and downstream. For example, the opening of the Estabrook Dam due to structural problems has resulted in the upstream impoundment at the Lincoln Blatz Building drying up and becoming overgrown with vegetation. Rehabilitation of the Estabrook Dam is the preferred treatment to maintain historic character of the landscape. However, if it is determined that the dam cannot be repaired or modified due to environmental concerns, subsequent rehabilitation of affected park features needs to be designed in a manner that results in a solution compatible with the character of the historic landscape.

Storm water management and flood control are important functions of park waterways, and any proposed rehabilitation being considered must include these functions. The MMSD has been removing concrete liners that were added to water courses in the 1960s and naturalizing waterways and incorporating wetlands to improve flood water management. These changes can be very effective and are compatible with the historic objective of blending into the natural landscape. Impact on adjacent property must be considered when planning for these improvements. For example, additional capacity was needed for temporary storage of flood waters along the Menomonee River Parkway. The MMSD lowered the

topography adjacent to the river to accommodate flood waters. Such changes to topography need to be graded in a manner that they blend with the historic setting. Materials used, such as rock revetment, should be compatible to those considered historically appropriate for other park structures. See Section 5.B.(4) for recommendations on riprap, and Section 5.D.(4) for recommendations for new retaining walls.

**(d) Views and vistas**

Views and vistas are important character-defining features of the parkway landscape. Many changes to the landscape have occurred since original development both inside and outside of park property. Rehabilitation of original views and vistas should be based on historic documentation. Careful study of archival sources in relation to present day sources would reveal whether specific historic vistas and views are intact and whether rehabilitation would still be desirable.

Heavy growth of volunteer vegetation has obscured many views that were originally designed with careful placement of vegetation around park features. For example, historic plans and photos depict a vista from the terrace at the south end of the Boerner Botanical Garden Shrub Mall. The view from the Shrub Mall overlooked the Rock Garden below, as well as a sweeping vista of the larger Whitnall Park landscape, including the chain of lagoons to the south. This vista is now overgrown and the lagoons are no longer visible. Rehabilitation is possible with selective removal of vegetation. Archival sources could assist in the identification of trees that date back to original construction or predate construction. Identifying these trees in the park would be a starting point in reestablishing this vista.



*This 1975 photograph shows the view of the Rock Garden from the Shrub Mall in the Boerner Botanical Gardens in the Root River Parkway.*





*The photograph on the left was taken in 2012 from the same location as the 1975 photograph above; vegetation has filled in and completely blocked the view of the Rock Garden. The photograph on the right was taken from the south (outer) edge of the Rock Garden looking out to the south where the vegetation has also filled in and the lagoon and other scenery in the 1975 photograph are no longer visible.*

#### **(4) New construction**

New construction of landscape and water features may be necessary to meet changing needs, such as the addition of new recreational activities, providing accommodations for accessibility, or to address environmental concerns. Likewise, requests by friends groups, scouts, and other donors to develop rain gardens, donate trees, or other items in parks must be carefully considered if placement is intended within the historic boundary. Their location can lead to adverse effects to historic spatial organization and/or the historic character of the park landscape. If new construction is proposed as part of a federal or state undertaking, the SHPO should be consulted to avoid or minimize an adverse effect (see process outlined in Section 3).

Specific guidance is provided by category as follows:

##### **(a) Topography**

Construction of new features in parks should not lead to adverse effects to existing landforms and topography that help define the historic character of the system. In particular, the following should be considered:

- If it is determined necessary to site new features within the System, changes to topography should be made in a way that they blend with the historic landscape.
- Dramatic changes to topography should be avoided. For example, leveling a large area of a slope to locate an athletic field is not recommended.

##### **(b) Vegetation**

Considerations for the addition of new vegetation in the historic landscape include type and character of plant materials, as well as the impact of their placement on spatial arrangement of park facilities and related views and vistas. In particular, the following should be considered:



- Construction of new park facilities is typically accompanied by the removal and/or addition of vegetation. New plantings must consider the impact on existing uses and spatial organization of the historic park setting.
- New vegetation might also be considered for screening new facilities that are incompatible with the historic character of new developments adjacent to parks that detract from the park setting.
- Proposed addition of vegetative features such as donated trees, rain gardens, or flower beds should be located so as to be compatible and blend with existing park structures and vegetation. It is important to understand the impact of their placement on the surrounding site and viewsheds.
- Using native materials is recommended as a means to enhance and restore the System's naturalistic design concept. Historic photographs, aerial photography, and early development plans can be used as resources to determine original placement of plantings and help determine original intent. This can inform selection and placement of new vegetation.

**(c) Water features**

New construction of water features in parks could include facilities for flood and storm water management and for the improvement of water quality. Possible removal of water features that are environmentally problematic is also a current issue. As mentioned above, water features in the historic park system were designed as central and unifying features in the park landscape and were to look like they naturally belong in their setting. If new water features are considered, they should be designed to be compatible with the historic landscape. They should resemble natural water features in the Wisconsin landscape.

MMSD works with the parks department on improvements and changes made along park watercourses, including proposals for additional storage capacity to handle storm peaks that may impact the historic landscape. Design and materials used should be compatible with the existing historic character. For example, as part of the County Grounds Floodwater Management Basin Project in Wauwatosa, the MMSD needed to design an outlet to the Menomonee River to handle peak flows. The structure was built into the Depression era retaining wall, salvaging and reusing existing limestone and blending the new structure with the old.

**(d) Views and vistas**

Introduction of new views or vistas should not impact historic views and vistas both into and from the site. Topography, vegetation, water features and other park structures were designed and arranged purposefully to create pleasing "pictures" as one moved through the system. Change to any one feature impacts the overall arrangement and the views that were planned along the historic landscape. New or revised views and vistas should be consistent with the original design intent and historic character of the System.