



**MINNEHAHA CREEK**  
**WATERSHED DISTRICT**  
 QUALITY OF WATER, QUALITY OF LIFE

**Meeting:** Board of Managers  
**Meeting date:** 6/11/2020  
**Agenda Item #:** 11.4  
**Request for Board Action**

**Title:** Adoption of the Revised Interim Maintenance Protocol for the Minnehaha Preserve Boardwalk

**Resolution number:** 20-048

**Prepared by:** Name: Janna Jonely  
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**Reviewed by:** Name/Title: Michael Hayman, Project Planning Manager

**Recommended action:** Adoption of the revised interim maintenance protocol for the Minnehaha Preserve Boardwalk due to continued material durability issues, first observed in 2019 and ongoing through spring 2020. The Board adopted resolution 19-094 on November 7, 2019 and staff is recommending an adjustment to the protocol modifying the timeline for decking replacement.

**Schedule:** July 2020 – December 2020: “Batched” replacements conducted as necessary

**Budget considerations:** Fund name and code: 200-2003 Project Maintenance and Land Management  
 Fund budget: \$854,762  
 Expenditures to date: \$37,520  
 Requested amount of funding: \$0 – No specific funding request at this time

**Past Board action:**

Res # 13-074	Authorization to enter into Project with St. Louis Park
Res # 17-028	Authorization to execute Minnehaha Preserve Operations and Maintenance Plan
Res # 19-094	Adoption of an Interim Maintenance Protocol for the Minnehaha Preserve Boardwalk

**Summary:**

The Minnehaha Creek Preserve Boardwalk was constructed in 2014 as part of the Minnehaha Preserve (Reach 20) Restoration capital project. In April of 2017, the Minnehaha Preserve Operations and Maintenance Plan (Plan) was approved by the Board as fulfillment of the conditions of the Second Cooperative Agreement between Minnehaha Creek Watershed District (District) and the City of St. Louis Park. Specifically, the Plan outlines specific roles and responsibilities for the periodic and long-term maintenance of project elements associated with the project. Maintenance of the boardwalk is solely the responsibility of the District.

As outlined in the Plan, Project Maintenance and Land Management (PMLM) staff inspect the boardwalk bi-annually in the spring and fall, and after storm events. The Plan also dictates that boardwalk surfaces are to be replaced as necessary. Regular safety inspections, associated documentation, and maintenance on an as needed basis, is conducted to reduce the risk of hazards and prevent future liability claims.

Regarding the specifications for boardwalk installation, the materials used to construct the surface structures of the boardwalk are grade 1 southern yellow pine, above ground contact (UA3b), treated with micronized copper azole (MCA).

In 2018, routine staff inspections revealed the need for maintenance on boardwalk surfaces and a number of deck boards were replaced. In 2019, staff and partner inspections revealed additional boardwalk surfaces showing deterioration at a higher rate than previously experienced. Due to the observed deterioration in materials, staff began inspecting the boardwalk twice per month to ensure appropriate attention was being paid to user experience while recording the apparent expedited rate of material deterioration. Staff directed immediate replacement maintenance on four occasions in 2019 to ensure user safety was upheld. As material issues continued throughout the season staff began marking boards with bright colored spray paint to alert users to potential hazards. Over the course of 2019, 167 deck boards and three handrail boards were replaced to address materials that were clearly deteriorating (rot, holes, splintering). At that time it was estimated that an additional 400 or more boards would eventually require replacement, but as said boards did not pose an immediate risk to users, additional replacement was delayed until spring.

In September of 2019 staff had increased frequency of inspections and boardwalk maintenance due to the enhanced safety risk, and noted to the Board that the implementation of an interim inspection protocol may be necessary to protect user safety without unduly limiting use of the public facility or involving excessive staff time or cost.

Therefore, in November 2019 the Board adopted resolution 19-094, an interim maintenance protocol for the Minnehaha Preserve Boardwalk. The interim maintenance protocol outlined bi-weekly inspections of the surface structures, marking of boards with signs of deterioration with fluorescent orange spray paint, and replacement of decking and handrail with holes within about two weeks of observed deterioration.

The spring of 2020 revealed continued degradation of decking materials identified in 2019. At the beginning of May a limited replacement of boards displaying substantial deterioration was conducted with 149 decking boards and eight handrail boards replaced.

As of June 2020, there are more than 250 boards still remaining in the system which will likely need replacement over the course of the year. Therefore, in order to efficiently, practically and economically conduct decking replacements, staff is proposing an adjustment to the interim maintenance protocol which modifies the adopted replacement timeline. The current protocol calls for replacement of decking material within about two weeks of the observed evidence of deterioration. However, it is not practical or economically sound to replace a particular limited set of boards when evidence of deterioration first is observed. In addition, in the District's engagement of designer and contractor parties to determine responsibility for replacement cost, the District's ability to preserve public funds is facilitated by affording these parties the opportunity to inspect deteriorating boards before replacement. Staff, on the basis of its period of inspections and in consultation with the District engineer, finds that the safety risk is small and satisfactorily addressed by interim means until "batch" replacement can occur in a practical and cost-effective manner. Safety measures including but not limited to orange fluorescent spray paint, safety cones and/or plywood, and signage, as staff determines appropriate to the particular setting, will continue to be deployed to alert users to deteriorating decking material.

The revised interim maintenance protocol will allow the District to limit public safety risk, while preserving public use of the boardwalk and efficiently using public funds, during the period prior to implementation of the long term resolution of the Minnehaha Preserve Boardwalk materials issues.

**Supporting documents:**

- **Attachment A:** Minnehaha Preserve Boardwalk – Revised Interim Maintenance Protocol



**RESOLUTION**

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**Resolution number: 20-048**

**Title: Adoption of the Revised Interim Maintenance Protocol for the Minnehaha Preserve Boardwalk**

- WHEREAS the Minnehaha Creek Watershed District (MCWD) engages in regional capital improvement projects as described in its Water Resources Management Plan and manages facilities that require routine inspection and regular maintenance to continue functioning as designed and to limit loss of public use and safety hazard in areas with public access;
- WHEREAS MCWD entered into a cooperative agreement with the City of St. Louis Park to maintain the project, and the 2017 Operations and Maintenance Plan assigns specific maintenance responsibility and frequency of inspection and maintenance to each entity;
- WHEREAS the Project Maintenance and Land Management (PMLM) Program annually budgets for, inspects, and maintains District projects, infrastructure, and lands;
- WHEREAS through the PMLM Manual, regular maintenance is guided by inspection of specific project elements and annualized costs associated with this maintenance is budgeted through the annual PMLM budget process;
- WHEREAS the Board of Managers has been briefed by MCWD staff as to materials durability issues that have arisen with regard to boardwalk decking and handrail, and were advised on the increased inspection frequency and associated steps that MCWD staff are taking;
- WHEREAS at the November 7, 2019 Board of Managers meeting the Interim Maintenance Protocol was adopted by resolution 19-094;
- WHEREAS the District finds it prudent to reevaluate conditions from time to time, to ensure that the protocol continues to represent a sound approach to protecting public safety, and on the basis of the information and assessment presented by MCWD staff, the Board of Managers has evaluated the extent, nature and rate of materials deterioration; the nature and extent of public use of the boardwalk; the risk of safety hazard to the public; the options to manage the issue until resolved; and the staff resources and costs, as well as impact on public use, of those options;
- NOW, THEREFORE, BE IT RESOLVED, that the Minnehaha Creek Watershed District Board of Managers adopts the attached amended interim maintenance protocol providing, in summary, as follows: bi-weekly inspections of decking and railing material, marking of failed boards with fluorescent orange spray paint, utilization of safety cones, plywood, signage and/or other safety measures as appropriate to staff judgment of an increased safety risk, and replacement of boardwalk decking and handrails when a practical number (batch) of boards is deemed efficient for replacement, upon judgment of staff.

Resolution Number 20-048 was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_. Motion to adopt the resolution \_\_\_ eyes, \_\_\_ nays, \_\_\_ abstentions. Date: 6/11/2020

\_\_\_\_\_  
 Secretary Date: June 11, 2020



**Title:** Revised Interim Maintenance Protocol for the Minnehaha Preserve Boardwalk

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**Purpose:**

The purpose of this memo is to establish a protocol for interim management and maintenance of the Minnehaha Preserve Boardwalk during the period that the Minnehaha Creek Watershed District (District) is determining and implementing a long term resolution of the materials failure affecting wood elements. The intent of this interim maintenance protocol is to limit the hazard that may be posed by board decking and railing that is losing its structural integrity without unduly limiting public use of the boardwalk facility or incurring unnecessary public cost. Particular consideration is given to staff resources and costs, as well as impact on public use, while the material deficiency is further investigated. The revised interim maintenance protocol outlined in this memo replaces the interim maintenance protocol, resolution 19-094, and is adopted by the District Board of Managers through resolution 20-048

**Revised Interim Maintenance Protocol:**

The Minnehaha Creek Preserve Boardwalk was constructed in 2014 as part of the Minnehaha Preserve (Reach 20) Restoration capital project. In April of 2017, the Minnehaha Preserve Operations and Maintenance Plan (Plan) was approved by the Board to fulfill conditions of the Second Cooperative Agreement between the District and the City of St. Louis Park. Specifically, the Plan details clear roles and responsibilities for the periodic and long-term maintenance of project elements associated with the project. Maintenance of the boardwalk is solely the responsibility of the District.

Beginning in 2019 and continuing through present, staff inspections have documented boardwalk surfaces displaying unexpected materials durability issues. Multiple areas of boardwalk decking and handrail appear to be rotting. As boards begin to deteriorate, dark coloring is observed and the wood becomes soft as pressure is applied. Boards eventually begin to splinter and develop holes. The formation of holes typically only occurs on a specific portion of individual decking or railing boards, no greater than the width of one board (approximately 2-4 inches).

Staff will continue to perform bi-weekly inspections. In addition, staff will maintain contact with City staff, who recreationally walk the boardwalk on a more frequent basis and regularly report condition issues to District staff. This process has resulted in successful management of the boardwalk system to date and will continue.

The impact to users is considered minor as the relatively small size of a given hole does not appear to pose an immediate safety risk to the intended user. It is not logistically efficient or economically sound to replace one or several boards when deterioration begins to be observed. Rather, upon inspection, staff will respond to boards that develop holes through measures including marking with fluorescent orange spray paint, and within two weeks of observation staff will be placing safety cones, laying plywood, and using signage as necessary, to alert users to the damage until the planking is replaced. Ordinarily, safety cones and/or plywood will be deployed if an increased safety risk is observed, e.g. a hole of greater size or area. Replacement will occur when a number of decking boards indicate deterioration sufficient for a logistically efficient and economically sound batch replacement. This practice also will allow parties potentially responsible for replacement to inspect deteriorated boards before they are replaced.

In summary, the revised interim inspection protocol is adopted as follows: bi-weekly inspections of the surface structures with fluorescent marking of deteriorations, with further safety measures taken by staff within about two weeks including utilization of safety cones, plywood, signage and/or other safety measures. Decking and handrails will be replaced when a practical number (batch) of boards is deemed efficient for replacement, upon judgment of staff.