

Minnehaha Creek Watershed District

REQUEST FOR BOARD ACTION

MEETING DATE: November 7, 2019

TITLE: Adoption of an Interim Maintenance Protocol for the Minnehaha Preserve Boardwalk

RES. NUMBER: 19-094

PREPARED BY: Janna Jonely

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REVIEWED BY: Administrator Counsel Program Mgr.: Michael Hayman
 Board Committee Engineer Other

WORKSHOP ACTION:

<input type="checkbox"/> Advance to Board mtg. Consent Agenda.	<input type="checkbox"/> Advance to Board meeting for discussion prior to action.
<input type="checkbox"/> Refer to a future workshop (date):_____	<input type="checkbox"/> Refer to taskforce or committee (date):_____
<input type="checkbox"/> Return to staff for additional work.	<input type="checkbox"/> No further action requested.
<input checked="" type="checkbox"/> Other: Requesting approval at November 7, 2019 Board Meeting	

PURPOSE or ACTION REQUESTED:

Adoption of an interim maintenance protocol for the Minnehaha Preserve Boardwalk due to unexpected material durability issues observed in 2019. Staff recommends increased inspection frequency and maintenance until staff and partners have completed assessment and a satisfactory remedy is realized.

PROJECT/PROGRAM LOCATION:

Minnehaha Preserve (Reach 20) in St. Louis Park

PROJECT TIMELINE:

Ongoing vegetation and infrastructure maintenance

PROJECT/PROGRAM COST:

Fund name and number: Project Maintenance and Land Management (PMLM), 2003

Current budget: \$811,845

Expenditures to date: \$316,795

Requested amount of funding: \$0 (No specific funding is requested at this time)

PAST BOARD ACTIONS:

July 11, 2013	RES 13-074	Authorization to enter into Project with St. Louis Park
April 13, 2017	RES 17-028	Authorization to execute Minnehaha Preserve Operations and Maintenance Plan

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). This combination of wood grade and treatment was expected to provide a 20-25 year life span for surface structures and was recommended for use by the lumber supplier.

In the spring of 2018, routine staff inspections revealed the need for maintenance on boardwalk surfaces and 235 deck boards were replaced. In 2019, staff and partner inspections revealed additional boardwalk surfaces failing 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 failures continued throughout the season staff began marking boards with bright colored spray paint to alert users to potential hazards. To date, over 110 deck and handrail boards have been replaced and it is estimated that an additional 400 or more boards will require replacement prior to 2020.

At the October 10, 2019 Operations and Programs Committee (OPC) meeting, staff provided an update to the Board of Managers on the current condition of the boardwalk surfaces and the investigation being conducted with the contractor and supplier to resolve the material issue. Staff specifically reported on the increased frequency of inspections and boardwalk maintenance due to the enhanced safety risk, and noted 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.

As noted, staff is coordinating with the contractor and supplier to investigate the materials failure of the boardwalk, and until satisfactory remedy is realized, the interim maintenance protocol should be adopted. The interim maintenance protocol outlines bi-weekly inspections of the surface structures, marking of failed boards with fluorescent orange spray paint, and replacement of decking and handrail with holes within about two weeks of observed failure (see attachment A).

The interim maintenance protocol establishes a record of the District's efforts to determine and implement a long term resolution of the Minnehaha Preserve Boardwalk materials failure, while balancing the nature and extent of the materials failure, public use of the boardwalk, and public safety risk along with the options to manage the issue until resolved.

Attachment A:

- Minnehaha Preserve Boardwalk - Interim Maintenance Protocol

RESOLUTION

RESOLUTION NUMBER: 19-094

TITLE: Adoption of an 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

WHEREAS, these facilities 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; and

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; and

WHEREAS, the Project Maintenance and Land Management (PMLM) Program annually budgets for, inspects, and maintains District projects, infrastructure, and lands; and

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; and

WHEREAS, at the October 10, 2019 Operations and Programs Committee meeting, the Board of Managers reviewed the previously approved 2017 Minnehaha Preserve Operations and Maintenance Plan; and

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; and

WHEREAS, on the basis of the information and assessment presented by MCWD staff, the Board of Managers has evaluated the extent and nature of the materials failure; 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 Board of Managers adopts an interim maintenance protocol as follows: bi-weekly inspections of the surface structures, marking of failed boards with fluorescent orange spray paint, use of safety cones and/or plywood as needed, and replacement of decking and handrails with holes promptly, with a goal of doing so within about two weeks of observed failure.

Resolution Number 19-094 was moved by Manager _____, seconded by Manager _____.
Motion to adopt the resolution ___ ayes, ___ nays, ___ abstentions. Date: November 7, 2019.

Secretary Date: _____.



ATTACHMENT A: MEMORANDUM

To: MCWD Board of Managers

From: Janna Jonely

Date: November 4, 2019

Re: Minnehaha Preserve Boardwalk – Interim Maintenance Protocol

Purpose:

The purpose of this memo is to establish a record of the Minnehaha Creek Watershed District's (District) efforts to determine and implement a long term resolution of the Minnehaha Preserve Boardwalk materials failure. 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 interim maintenance protocol outlined in this memo is adopted by the Minnehaha Creek Board of Managers through resolution 19-094.

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 as fulfillment of the conditions of the Second Cooperative Agreement between Minnehaha Creek Watershed District (MCWD) 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 MCWD.

In 2019, staff inspections documented that the boardwalk surfaces are 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 decks boards, no greater than the width of one board (approximately 2-4 inches).

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. Boards which develop holes are marked with fluorescent orange spray paint to alert users to the damage until the planking is replaced. Maintenance repairs typically are conducted within one to two weeks after the development of a hole. The utilization

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of safety cones and/or plywood may also be deployed if an increased safety risk is observed, i.e. a hole of greater size or area, but this has not yet been necessary.

The deterioration of materials observed this spring has resulted in staff performing bi-weekly inspections of the Preserve Boardwalk throughout 2019. In addition, City staff 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 in 2019 and is the basis for the recommended interim protocol.

Therefore, staff recommends that until adequate resolution of the materials failure is determined and implemented, the interim inspection protocol is adopted as follows: bi-weekly inspections of the surface structures, marking of failed boards with fluorescent orange spray paint, and replacement of boardwalk decking and handrails with holes within one to two weeks of observed failure. Utilization of safety cones and/or plywood may also be deployed if an increased safety risk is observed, upon judgment of staff.

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