

## Recommendation to approve the amendment to the Pioneer-Sarah Creek Management Commission's Watershed Management Plan

### Purpose

The purpose of this report is to inform the county board of staff's review and recommendations to approve a proposed minor plan amendment to the Pioneer-Sarah Creek Watershed Management Commission's (commission) Watershed Management Plan (plan).

### Staff review and recommendations

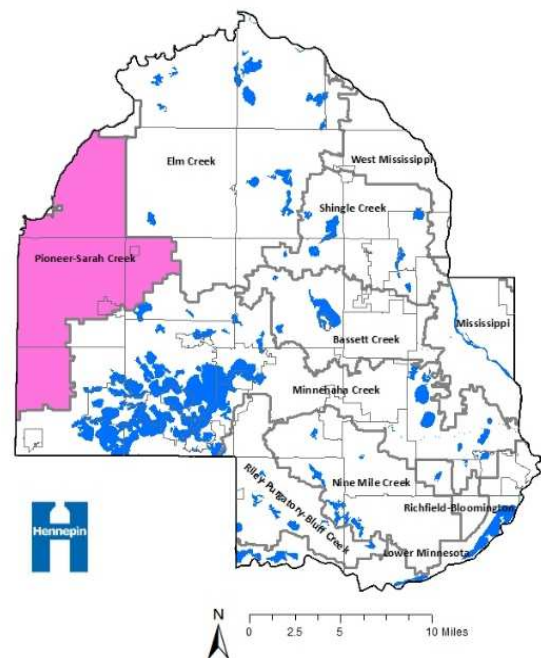
Hennepin County Environment and Energy staff reviewed the commission's proposed minor plan amendment and found it to be consistent with the Surface Water Management section of the Hennepin County 2030 Comprehensive Plan Update and the Hennepin County Natural Resources Strategic Plan.

The commission held a public hearing regarding the proposed minor plan amendment at its regular meeting on June 21, 2018.

Staff provided comments to the commission on two aspects of the proposed amendment. First, staff is encouraging more emphasis be placed on projects that address external sources of pollution, such as runoff from fields, yards, roads and parking lots, in addition to internal sources, or pollution that is already in the body of water. Secondly, staff has recommended that the commission consider using its levy authority to generate a more stable, predictable, and easily accessible source of funding for this work. Accessing this funding source could lead to more success in addressing external sources of pollution by making more cost-share funding available to private landowners. It would also increase the commission's capacity to perform outreach to landowners and assist them with navigating complex water resource projects, agencies, and procedures.

Staff recommends that the board approve this minor plan amendment.

**Figure 1. Pioneer-Sarah Creek Watershed Location**



## Background

The Pioneer-Sarah Creek Watershed is located in the western part of the county and includes portions of the cities of Greenfield, Independence, Loretto, Maple Plain, Medina, and Minnetrista (Figure 1).

The commission has proposed a minor plan amendment to revise the plan's Capital Improvement Program (CIP). Pursuant to Minnesota Statutes section 103B.231, subd. 7, the commission forwarded the proposed amendment to the county for review and action on water quality projects in the CIP where it may seek to certify funding to implement the water quality projects under Minnesota Statutes section 103B.251.

The amendment adds 15 new water quality projects to the plan's CIP.

## New projects

1. Ardmore Neighborhood Stormwater Best Management Practices (Medina) will install four best management practices on property controlled by the City of Medina in the Lake Ardmore Subwatershed. These were identified as high priority projects in the urban portion of the subwatershed in the Ardmore Area Subwatershed Assessment completed in 2017. The project will reduce phosphorus pollution to Lake Independence by about eight pounds per year as well as reduce sediment transport to Lake Ardmore. The estimated cost of the project is \$87,850 with the commission's share being \$58,317. This project is planned for 2018. The remainder of the project cost will be covered by grants and the City of Medina.
2. Lake Independence Carp Study, Phase 1 (Independence and Medina) will assess the population and movement patterns of carp in Lake Independence in order to understand the necessary measures to reduce the population of carp in the lake below the ecological threshold necessary to reduce internal phosphorus loading. The estimated cost of the project is \$20,000 with the commission's share being \$5,000. This project is planned for 2018. The remainder of the project cost will be covered by Three Rivers Park District.
3. Hydrologic Restoration 95 – Koch Property (Independence) will install a berm and outlet control structure to a partially drained site. This will increase water levels to pre-settlement levels, increasing the watershed capacity for water storage and filtration before reaching downstream resources. The estimated cost of the project is \$27,500 with the commission's share being \$6,875. This project is planned for 2018. The remainder of the project cost will be covered by grant funds and the City of Independence.
4. Lake Independence Carp Study, Phase 2 (Independence and Medina) will install carp barriers to prevent spawning and remove carp from the lake to below the ecological threshold necessary to reduce internal phosphorus loading of the lake. The estimated cost of the project is \$20,000 with the commission's share being \$5,000. This project is planned for 2019. The remainder of the project cost will be covered by Three Rivers Park District.
5. Wetland Restoration 18 (Independence) will install a channel weir control structure to increase water levels to pre-settlement levels. This will increase the watershed capacity for water storage and filtration before reaching downstream resources. The estimated cost of the project is \$559,205 with the commission's share being \$139,801. This project is planned for 2019. The remainder of the project cost will be covered by grant funds and the City of Independence.
6. Control Carp Population: Lake Sarah/Other Lakes (Greenfield and Independence, or other location) will assess the population and movement patterns of carp in Lake Independence, install carp barriers to prevent spawning, and remove carp from the lake to below the ecological threshold necessary to reduce internal phosphorus loading of the lake. The estimated cost of the project is \$10,000 with the commission's share being \$500. This project is planned for 2020. The remainder of the project cost will be covered by grant funds and the City of Greenfield.
7. Whaletail South Alum Treatment (Minnetrista) will significantly reduce the release of phosphorus from accumulated sediment during anoxic conditions through the application of aluminum sulfate (alum). The control of internal load in South Whaletail Lake is necessary to achieve water quality standards. The estimated cost of the project is \$300,646 with the commission's share being \$75,162. This project is planned for 2020. The remainder of the project cost will be covered by grant funds.

8. JB Gully Stabilization (Independence) will stabilize 700 feet of actively eroding gully using bioengineering techniques, rock cross vanes, rip-rap, regrading, and revegetation. The gully is eroding directly into Lake Sarah, contributing to sediment and nutrient pollution. The estimated cost of the project is \$75,000 with the commission's share being \$18,750. This project is planned for 2020. The remainder of the project cost will be covered by grant funds, the Lake Association and the City of Independence.
9. Wetland Restoration 91 (Independence) will install a channel weir control structure to increase water levels to pre-settlement levels. This will increase the watershed capacity for water storage and filtration before reaching downstream resources. The estimated cost of the project is \$529,205 with the commission's share being \$79,380. This project is planned for 2020. The remainder of the project cost will be covered by grant funds and the City of Independence.
10. Wetland Restoration 105 (Independence) will install a box weir control structure to increase water levels to pre-settlement levels. This will increase the watershed capacity for water storage and filtration before reaching downstream resources. The estimated cost of the project is \$543,205 with the commission's share being \$81,481. This project is planned for 2020. The remainder of the project cost will be covered by grant funds and the City of Independence.
11. Seasonal Pond 77 (Independence) will install a control structure to allow the landowner full control of water levels, allowing the pond to retain water after harvest in the fall until spring planting. The estimated cost of the project is \$10,420 with the commission's share being \$2,605. This project is planned for 2020. The remainder of the project cost will be covered by grant funds and the City of Independence.
12. Lake Independence Curlyleaf Pondweed Treatment (Independence and Medina) will assess levels of curlyleaf pondweed in Lake Independence to determine if treatment is necessary to reduce internal nutrient loading. The estimated cost of the project is \$122,000 with the commission's share being \$12,200. This project is planned for 2021. The remainder of the project cost will be covered by the Lake Independence Citizens Association and the City of Medina.
13. Opportunity-based watershed-wide project - stormwater best management practices/retrofits (entire watershed) would fund projects on public and private land as opportunities arise to reduce nutrient loading to all area lakes. Several projects are being removed from the CIP and grouped into this opportunity-based project. The commission anticipates making \$10,000 available for this project beginning in 2021 from the CIP fund. A match of 75 percent will be expected from project applicant and benefitting member cities.
14. Opportunity-based watershed-wide project – feedlot/manure management best management practices (entire watershed) would fund projects on public and private land as opportunities arise to reduce nutrient runoff from feedlots and other livestock operations through manure management practices. Several projects are being removed from the CIP and grouped into this opportunity-based project. The commission anticipates making \$10,000 available for this project beginning in 2021 from the CIP fund. A match of 75 percent will be expected from project applicant and benefitting member cities.
15. Opportunity-based watershed-wide project - agricultural best management practices (entire watershed) would fund projects on public and private land as opportunities arise to reduce nutrient runoff from agricultural land through implementation of best management practices. Several projects are being removed from the CIP and grouped into this opportunity-based project. The commission anticipates making \$10,000 available for this project beginning in 2021 from the CIP fund. A match of 75 percent will be expected from project applicant and benefitting member cities.

The amendment will remove nine projects because they have already been completed:

1. Lake Ardmore Infiltration Basin Project, Medina (completed in 2014)
2. Lake Sarah Curlyleaf Pondweed Treatment Project (completed in 2014 and 2015)
3. Dance Hall Creek Best Management Practices (BMPs) Project (1 project completed in 2016)
4. Lake Sarah Curlyleaf Pondweed Treatment Project (completed in 2016)
5. Gully Restoration: GS50 Project (design completed in 2017)
6. Lake Sarah Curlyleaf Pondweed Treatment Project (completed in 2017)
7. Sediment Sampling in Lake Independence Project (completed by Three Rivers Park District in 2016)
8. Ravine Study: Baker Park Campground Study (completed in 2016)

## 9. Lake Independence Subwatershed Assessment Study (completed in 2014)

The amendment will remove 11 projects for other reasons, as noted:

1. Hydrologic Restorations HR 67, 68, 29, 33 Project will be removed because the projects were determined to be infeasible or because landowners were not interested in participating.
2. Lake Independence Curlyweed Pond Treatment (2015) Project will be removed as the project was deemed to be unnecessary at this time after assessment.
3. Feedlot Improvement: Dance Hall Creek Project will be removed but projects will be considered as opportunities arise under new project 15 above.
4. Buffer Strips: Dance Hall Creek Project will be removed but projects will be considered as opportunities arise under new project 14 or 16 above.
5. Lake Ardmore Neighborhood Project will be removed because it has been re-submitted as new project 1 above.
6. Rain Gardens in Targeted Areas Project will be removed but project will be considered as opportunities arise under new project 14 above.
7. Wetland Restoration 1 (Kazin Property) Project will be removed because the impacted landowners are not interested in participating.
8. Hafften, Schendel, Schwaupauff BMP Project will be removed but projects will be considered as opportunities arise under new projects 14 and 16 above.
9. South Ravine Cleanup Project will be removed at the request of the City of Maple Plain.
10. Shoreline Restoration – Lake Sarah and Independence Project will be removed but projects will be considered as opportunities arise under new project 14 above.
11. Hydrologic Restoration GS50 (install) will be removed because this project was resubmitted as a new project in 2017.

The amendment moves two project to future years:

1. Tomahawk Trail Wetland Project will be moved from 2020 to 2021.
2. Control Carp Population: Other Lakes Project will be moved from 2016 to 2020 to allow time for initial assessment required leading up to a carp removal project.

## Contact

Karen Galles, Supervising Environmentalist – Land and Water Unit  
Office: 612-348-2027 | [Karen.Galles@hennepin.us](mailto:Karen.Galles@hennepin.us)  
June 2018