COON CREEK WATERSHED DISTRICT
Request for Board Action

MEETING DATE: February 11, 2019
AGENDA NUMBER: 11
ITEM: 319 Grant Application for Coon Creek Water Quality Restoration Project

AGENDA: Discussion

ACTION REQUESTED
Authorize staff to pursue 319 grant funding for the Coon Creek Water Quality Restoration project

BACKGROUND
In January, the MPCA opened a round of funding for FY 2019 federal Clean Water Act Section 319 grant funds. The purpose of the 319-grant program is to provide funding to implement projects that reduce nonpoint source pollution in impaired waters. To be eligible, the impaired waterbody must have an EPA-approved TMDL study and the proposed project activities must be identified in an MPCA-approved TMDL implementation plan or WRAPS implementation table. The MPCA anticipates approximately $2.5 million will be available; the minimum grant request is $50,000 with no cap and all grantees are required to contribute at least 40% of the total project costs as a cash or in-kind match.

With the approval of the Coon Creek Watershed TMDL and WRAPS in 2016, the District is eligible to apply for 319 grant funding. District staff identified priority areas of Coon Creek to decrease sediment and nutrient loading and improve habitat for macroinvertebrates and fish.

The main stem of Coon Creek was added to Minnesota’s 303(d) list of impaired waters for aquatic life impairments in 2006 due to macroinvertebrate bioassessments and for aquatic recreation impairments in 2014 due to elevated levels of Escherichia coli (E. coli). Coon Creek also failed to meet standards for fish biotic condition, but this impairment was deferred until the adoption of Tiered Aquatic Life Use (TALU) standards. Excess total phosphorus (TP), total suspended solids (TSS), habitat alterations, and altered hydrology were identified as the primary stressors to Coon Creek’s biota. Since 2009, water quality in Coon Creek has been monitored annually at a minimum of 10 sites. During baseflow, concentrations of TSS and TP generally meet state standards (median = 9 mg/L and 93 ug/L, respectively). During storm events, both TSS and TP increase from upstream to downstream, with 25% and 63% of samples exceeding state standards at the downstream-most site. The primary sources of excess TSS and TP were determined to be stormwater inputs and stream bank erosion during high flow events. To attain pollution standards and reduce stress on biota, the TMDL study calls for annual load reductions of 49% of TSS and 61% of TP during the highest 10% of flows.
The 1.1-mile section of Coon Creek was selected as the project site because it was identified as a TSS loading hot-spot based on the results of annual water quality monitoring and a comprehensive inventory of erosion sites conducted in 2014. Specifically, all 124 miles of public creeks and ditches within the Coon Creek watershed were visually inspected and any incidences of erosion were measured and documented. Estimates of sediment loading at each erosion site were calculated using the Wisconsin NRCS direct volume method (bank length x height x lateral recession rate x soil density). The 1.1 mile project reach contained 16 erosion sites with an estimated cumulative annual TSS load of 237 tons and TP load of 201 lbs.

Over the past five years, many BMPs installed in the watershed to address stormwater inputs and rate control. To address the remaining non-point sources of TSS and TP in Coon Creek, in-channel BMPs are necessary to prevent further channel incision and bank erosion. This project will utilize a variety of BMPs to reduce sediment and nutrient loading and to improve in-stream and riparian habitat. Specifically:

1. To reduce in-stream erosion caused by channel incision and to create habitat heterogeneity (riffle-pool sequences), grade stabilization cross vanes will be installed.
2. To address bank erosion, a combination of bioengineering and hard-armoring practices will be implemented.
3. To stabilize severely eroded sites, vegetated rock riprap will be used along with stream barbs and/or root wads to deflect flow and create habitat features.
4. For less severely eroded sites, banks will be stabilized with log toes, cedar revetments, and/or regraded to a suitable slope and stabilized with vegetation as needed.

The proposed BMPs will reduce between 75% and 100% of the bank erosion presently occurring within the project reach which will reduce annual sediment loads in Coon Creek by approximately 177-237 tons. This TSS load reduction corresponds to an annual TP load reduction between 70 and 199 lbs depending on the nutrient content of the sediment (0.40-0.84 lbs of TP per ton of TSS; Cross & Schlesinger 1995). Additional TSS and TP load reductions can be expected from preventing further channel incision with grade control structures and from enhancing riparian vegetation to better treat overland flow.

Restoring the Coon Creek corridor will not only help address local biotic impairments in Coon Creek by reducing sediment and nutrient loading and enhancing habitat, but will also reduce TSS and TP loading to the Mississippi River. Additionally, the City of Andover maintains a popular public trail system adjacent to Coon Creek along the majority of the project reach. This project will also benefit source water protection efforts as it is located in the Priority ‘A’ Source Water Protection Area for the City of Minneapolis which supplies drinking water to roughly a half million people.
The deadline for applications is February 26\textsuperscript{th}, 2019; awardees will be notified by the end of April 2019 and work may begin as early as spring 2020.

**ISSUES/CONCERNS**

**Wenck Application:** District staff is unable to reasonably complete a grant application due to the short application window and current work load. Therefore, the District has solicited Diane Spector with Wenck to draft the application on the District behalf.

**2020 Budget Implications:** If awarded a 319 grant, the District would be responsible for a 40% cash or in-kind match.

**Potential Matching Funds:** It may be possible to receive additional match funds through state grant programs (e.g. Clean Water Fund grants administered by BWSR), but supplemental funding is not guaranteed.

**Necessity of Project:** If the District is not awarded a 319 grant for this project, there is still value in implementing this project or a portion of the project.

**Collaboration:** Staff have reviewed this proposal with the City of Andover

**OPTIONS**

- Pursue 319 grant opportunity
- Do not pursue 319 grant opportunity

**RECOMMENDATION**

Authorize staff to pursue 319 grant funding for the Coon Creek Corridor Restoration project