Item 4E.
BCWMC 5-15-14

Bassett Creek Watershed Management Commission

May 16, 2014

Mr. John (Jack) Gleason
Public Waters Program Hydrologist
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4040

Re: Response to Comments Regarding Major Plan Amendment for the Bassett Creek Watershed Management Commission's September 2004 "Watershed Management Plan"

Dear Mr. Gleason:

Thank you for your April 10, 2014 email regarding the Bassett Creek Watershed Management Commission's (Commission) proposed major plan amendment. In that email, Minnesota Department of Natural Resources (DNR) commented on the Commission's proposed addition to their capital improvement program (CIP) a project for 2015 (CR2015) to restore approximately 1.8 miles of the Main Stem of Bassett Creek from 10th Avenue to Duluth Street in the City of Golden Valley. The DNR's comments reiterated the following portion of the "Stream Restoration comments provided on August 31, 2012 as part of the Commission's 3rd Generation Plan development:

1. The DNR is concerned with the potential use of highly-engineered, hard-control solutions for the purposes of stream bank stabilization, even in urban environments. Stabilization projects that lock the stream in place pass the problem downstream and may degrade habitat, decrease connectivity, and degrade water quality. These results are contrary to the long-term goals of watershed management. Hard-control measures include techniques such as riprap on the lower one-third of the stream bank, gabions, check dams, bendway weirs, or other concrete structures. Also of concern are projects which address only hillslope erosion processes when there is a channel erosion component also involved. Projects which use geotextile, in combination with rock or vegetation, are not recommended because it restricts lateral or vertical connectivity, preventing, for example, the movement of aquatic invertebrates in and out of the hyporheric zone. A notable exception to the above restriction is the use of riprap to protect critical infrastructure, such as bridge pilings.

2. It is noted that the Commission has completed numerous stream bank stabilization projects, some of which are displayed on the Commission's website. An alternative to using riprap on both sides of the stream channel is the construction of a three or four stage channel. By incorporating small floodplains within constricted belt widths, the channel can still function by transporting both water and sediment. It also reduces the need for maintenance and is a viable option for build-out area's where infrastructure protection is one of the main goals.

Commission's Response to DNR's Comments

The Commission agrees with the DNR's comments and strives to implement projects that use bioengineering techniques as much as possible/where feasible, and does not rely on hard-control stabilization measures where they are not needed. Ideally, stream stabilization projects would include the construction of a "three or four stage channel" as recommended by the DNR. However, for many urban stream reaches this type of construction is not feasible due to lack of space and other constraints. This is the situation that the Commission faces with this particular stream stabilization project – much of the work would take place in backyards and other areas wherespace is tight.

The draft feasibility study analyzes a wide variety of stream stabilization techniques, including bioengineering and hard armoring methods. Where site conditions (including light and space) allow, the project will use bioengineering methods, such as biologs, vegetated reinforced soil stabilization (VRSS), root wads, live fascines, reshaping of streambanks, rock vanes, boulders, and tree removals. Where bioengineering methods are not feasible, or where private property owners object to the use of bioengineering methods, the project will use hard armoring methods, such as fieldstone riprap and boulders, in addition to reshaping streambanks and removing trees. The project will also include repair of failing infrastructure in the creek and the removal of other failing infrastructure and debris, such as gabion baskets and grouted riprap.

The Commission is currently reviewing and revising the draft feasibility study for this project. The final feasibility study will further explain the approach that will be used to determine which methods will be used at each stabilization site.

Again, thank you for your review and comments on the Commission's proposed plan amendment. If you have any questions, please contact Laura Jester, BCWMC Administrator at 952-270-1990 or laura.jester@keystonewaters.com.

Sincerely,

Jim de Lambert,
Chair, Bassett Creek Watershed Management Commission

CC: BCWMC Commissioners and Alternate Commissioners
CC: BCWMC Technical Advisory Committee