UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 26 2016

REPLY TO THE ATTENTION OF: WW-16J

Glenn Skuta, Division Director
Water Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Dear Mr. Skuta:

The U. S. Environmental Protection Agency has reviewed the final Total Maximum Daily Loads (TMDLs) for the Coon Creek watershed (Table 1 of enclosed decision document), including supporting documentation and follow up information. Minnesota submitted TMDLs for *E. coli*, Total Suspended Solids (TSS) and Total Phosphorus (TP) to address the bacteria, suspended solids and nutrient levels that impair the Recreational Use and Aquatic Life Use Support in the Coon Creek watershed. Based on this review, EPA has determined that Minnesota's TMDLs for *E. coli*, TSS and TP meet the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, EPA hereby approves Minnesota's eleven TMDLs for the impaired reaches in the Coon Creek watershed. The statutory and regulatory requirements, and EPA's review of Minnesota's compliance with each requirement, are described in the enclosed decision document.

We wish to acknowledge Minnesota's effort in submitting these TMDLs and look forward to future TMDL submissions by the State of Minnesota. If you have any questions, please contact Mr. Peter Swenson, Chief of the Watersheds and Wetlands Branch, at 312-886-0236.

Sincerely,

Peter Swenson

for Tinka G. Hyde
Director, Water Division

Enclosure

cc: Celine Lyman, MPCA
Rachel Olmanson, MPCA

wq-iw8-44g

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TMDL: Coon Creek watershed, Minnesota
Date: September/26/2016

DECISION DOCUMENT
COON CREEK WATERSHED
E. COLI, TOTAL SUSPENDED SOLIDS and TOTAL PHOSPHORUS TMDLs

Section 303(d) of the Clean Water Act (CWA) and U.S. EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. Additional information is generally necessary for U.S. EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and U.S. EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation. Use of the term "should" below denotes information that is generally necessary for U.S. EPA to determine if a submitted TMDL is approvable. These TMDL review guidelines are not themselves regulations. They are an attempt to summarize and provide guidance regarding currently effective statutory and regulatory requirements relating to TMDLs. Any differences between these guidelines and U.S. EPA's TMDL regulations should be resolved in favor of the regulations themselves.

1. Identification of Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the waterbody as it appears on the State's/Tribe's 303(d) list. The waterbody should be identified/georeferenced using the National Hydrography Dataset (NHD), and the TMDL should clearly identify the pollutant for which the TMDL is being established. In addition, the TMDL should identify the priority ranking of the waterbody and specify the link between the pollutant of concern and the water quality standard (see section 2 below).

The TMDL submittal should include an identification of the point and non-point sources of the pollutant of concern, including location of the source(s) and the quantity of the loading, e.g., lbs/per day. The TMDL should provide the identification numbers of the NPDES permits within the waterbody. Where it is possible to separate natural background from non-point sources, the TMDL should include a description of the natural background. This information is necessary for U.S. EPA's review of the load and wasteload allocations, which are required by regulation.

The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as:

(1) the spatial extent of the watershed in which the impaired waterbody is located;
(2) the assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
(3) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources;
(4) present and future growth trends, if taken into consideration in preparing the TMDL (e.g., the TMDL could include the design capacity of a wastewater treatment facility); and
(5) an explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments; chlorophyl *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Comments:

Waterbody Identification Discussion:

The Coon Creek watershed is located in the east-central portion of Minnesota in Anoka County (See Figure 1 of the final TMDL report). The Coon Creek watershed lies in the North Central Hardwood Forest Ecoregion, has a watershed area of approximately 68,182 acres, and drains to the Upper Mississippi River Basin. The submitted TMDLs for Coon Creek watershed include *E. coli*, Total Suspended Solids (TSS) and Total Phosphorus (TP) TMDLs to address *E. coli*, and macroinvertebrate biotic integrity impairments contributing to the nonattainment of the recreational and aquatic life uses affecting the impaired reaches in the watershed (See Table 1 below; and Table 1 and Figure 2 of the final TMDL report).

Table 1

Assessment Unit (AU) Name	AU ID*	Affected Use	Pollutant(s)	Impairment(s) Addressed by TMDL
Coon Creek	07010206-530	Aquatic Recreation	*E. coli*	*E. coli*
		Aquatic Life	TP, TSS	Macroinvertebrate Biotic Integrity
Sand Creek	07010206-558	Aquatic Recreation	*E. coli*	*E. coli*
		Aquatic Life	TP, TSS	Macroinvertebrate Biotic Integrity
Unnamed Ditch (Pleasure Creek)	07010206-594	Aquatic Recreation	*E. coli*	*E. coli*
		Aquatic Life	TP, TSS	Macroinvertebrate Biotic Integrity
County Ditch (Springbrook Creek)	07010206-557	Aquatic Recreation	*E. coli*	*E. coli*
		Aquatic Life	TP	Macroinvertebrate Biotic Integrity

* All the AUs/Impairments included above were listed in Minnesota's 2012 303(d) List.

The land use in the Coon Creek watershed is primarily composed of residential (35%), undeveloped/vacant (28%), parks/recreational (16%), agriculture (7%), commercial/industrial (5%), water (3%), government/university owned (2%), and Major Highway/Railway (2%) (See Figure 3 of the final TMDL report).

Pollutant(s) of Concern Discussion:

***E. coli* bacteria** are indicator organisms that are usually associated with harmful organisms transmitted by fecal matter contamination. These organisms can be found in the intestines of warm-blooded animals (humans and livestock). The presence of *E. coli* and fecal coliform bacteria in water suggests the presence of fecal matter associated bacteria, viruses, and protozoa that are pathogenic to humans when ingested. Based on bacteria sampling data collected from April through October in 2010 through 2014 (Table 7, and Appendix B of the final TMDL report), *E. coli* exceedances were found for both the monthly geometric mean and acute criteria which indicated *E. coli* impairment in the Coon Creek watershed. The water quality monitoring in the Coon Creek watershed is collected by the Anoka Conservation District (ACD) under contract by the Coon Creek Watershed District (CCWD).

Total suspended solids (TSS) is the concentration of suspended material in the water column as measured by the dried weight of solids filtered from a known volume of water. Suspended material can be present in a variety of forms including detritus, algae, organic matter, etc.; however, fine sediment generally comprises most of the suspended material in streams. Adverse ecological impacts caused by excessive TSS include hampering the ability of aquatic organisms to visually locate food, impaired gill function, and smothering of spawning beds and benthic organism habitat. The percentage of Ephemeroptera (i.e., mayflies), species with gills documented to be particularly sensitive to suspended sediment, led MPCA to conclude that suspended sediment was influencing

macroinvertebrate assemblages on the Coon Creek watershed impaired reaches (Figure 5 of the final TMDL report). The TSS data collected from 2005 through 2013 (Figure 18 of the *Coon Creek Watershed District Stressor Identification Report*, 2014) in biomonitoring sites located at each impaired stream reach outfall indicated than more than 10% of TSS samples in the Coon Creek watershed reaches exceeded the 30 mg/L TSS standard. In some instances, TSS concentrations greater than 10 times the standard have occurred.

Total Phosphorus (TP) is an essential nutrient for aquatic life, but elevated concentrations of TP can lead to nuisance algal blooms that negatively impact aquatic life and recreation (swimming, boating, fishing, etc.). Excess algae increases turbidity which degrades aesthetics and causes adverse ecological impacts (see above). Algal decomposition depletes oxygen levels which stress aquatic biota (fish and macroinvertebrate species). Oxygen depletion can cause phosphorus release from bottom sediments (i.e. internal loading), which contributes to increased nutrient levels in the water column. Excess phosphorus can alter biological communities by shifting species composition toward organisms better suited to deal with excess phosphorus. An increase in the number of planktivorous and/or detritivorous species is a common response to elevated phosphorus concentrations, a pattern observed in both Coon and Sand Creeks (Figure 6 of the final TMDL report). The monitoring data collected by ACD indicated TP concentrations were frequently above 0.100 mg/L in the Coon Creek watershed reaches, which exceeds the 100 µg/L TP standard (Table 18 of the *Coon Creek Watershed District Stressor Identification Report*, May 2014).

Sources Discussion:

Point sources contributing to the impairments in Coon Creek watershed include: nine (9) Municipal Separate Storm Sewer Systems (MS4s) (Table 2 below and Table 10 of the final TMDL report); and construction and industrial stormwater (Table 3 below). Stormwater from MS4s can transport bacteria, phosphorus, and TSS to surface water bodies during or shortly after storm events. Construction and industrial sites may contribute pathogens, phosphorus, and sediment via runoff during stormwater events. These areas within the Coon Creek watershed must comply with the requirements of the MPCA's NPDES Stormwater Program. The NPDES program requires construction and industrial sites to create Stormwater Pollution Prevention Plans (SWPPPs) which summarize how stormwater pollutant discharges will be minimized from construction and industrial sites.

Table 2

Impaired Reach Subwatershed	MS4 Permittees	Permit #
Coon Creek 07010206-530	MnDOT Metro District	MS400170
	Anoka County	MS400066
	Coon Creek WD	MS400172
	Andover City	MS400073
	Blaine City	MS400075
	Coon Rapids City	MS400011
	Ham Lake City	MS400092
Sand Creek 07010206-558	MnDOT Metro District	MS400170
	Anoka County	MS400066
	Coon Creek WD	MS400172
	Blaine City	MS400075
	Coon Rapids City	MS400011
	Ham Lake City	MS400092

Table 2

Impaired Reach Subwatershed	MS4 Permittees	Permit #
Pleasure Creek 07010206-594	MnDOT Metro District	MS400170
	Anoka County	MS400066
	Coon Creek WD	MS400172
	Blaine City	MS400075
	Coon Rapids City	MS400011
Springbrook Creek 07010206-557	MnDOT Metro District	MS400170
	Anoka County	MS400066
	Coon Creek WD	MS400172
	Blaine City	MS400075
	Coon Rapids City	MS400011
	Spring Lake Park City	MS400050
	Fridley City	MS400019

Table 3

Stormwater Discharge Type	Permit #
General Stormwater Permit for Construction Activity	MNR100001
Industrial Stormwater Multi-Sector General Permit	MNR050000
General Permit for Construction Sand & Gravel, Rock Quarrying and Hot Mix Asphalt Production facilities	MNG490000

Nonpoint sources contributing to the impairments in Coon Creek watershed include non-regulated stormwater runoff, livestock, wildlife, failing/nonconforming subsurface sewage treatment systems (SSTS), and streambank erosion (Section 4.1 and Section 4.2 of the final TMDL report).

Non-regulated stormwater runoff can add bacteria, phosphorus, or sediment to the waterbodies. The sources of pollutants in stormwater include organic material such as leaves, animal/pet wastes, fertilizers, etc. MPCA noted that failing Individual Subsurface Sewage Treatment Systems (SSTS), where waste material can pond at the surface and eventually flow into surface waters or be washed in during precipitation events, are potential sources of phosphorus and bacteria. Livestock with access to stream environments can deliver bacteria and phosphorus loads directly to the receiving water, as well as trampling streambanks and washing sediment into the system. In-channel/streambank erosion was identified as a source of sediment (as well as a minor source of phosphorus) in the Coon Creek watershed. Altered hydrology, such as channelization and increased impervious cover, can direct larger, faster flows into streambanks, increasing erosion. (Section 4.1 of the final TMDL report).

Priority Ranking:

Minnesota's 2012 303(d) list includes a projected schedule for TMDL completions. This schedule reflects the state's priority ranking of impaired waters. MPCA identified a TMDL completion target date of 2018 for the impaired reaches addressed in the Coon Creek watershed TMDLs (Table 1 of the final TMDL report).

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this first element.

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribal water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the antidegradation policy. (40 C.F.R. §130.7(c)(1)). U.S. EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

The TMDL submittal must identify a numeric water quality target(s) – a quantitative value used to measure whether or not the applicable water quality standard is attained. Generally, the pollutant of concern and the numeric water quality target are, respectively, the chemical causing the impairment and the numeric criteria for that chemical (e.g., chromium) contained in the water quality standard. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. Occasionally, the pollutant of concern is different from the pollutant that is the subject of the numeric water quality target (e.g., when the pollutant of concern is phosphorus and the numeric water quality target is expressed as Dissolved Oxygen (DO) criteria). In such cases, the TMDL submittal should explain the linkage between the pollutant of concern and the chosen numeric water quality target.

Comments:

The Coon Creek watershed is located in the North Central Hardwood Forest Ecoregion. The TMDL targets were chosen to accommodate Class 2 waters, which are the most protective designated beneficial use class in the project area. Class 2 waters include all waters of the state that support or may support fish, other aquatic life, bathing, boating, or other recreational purposes and for which quality control is or may be necessary to protect aquatic or terrestrial life or their habitats or the public health, safety, or welfare (Minnesota Rules Ch. 7050.0140 Subp. 3).

The beneficial use classification for all the impaired reaches in the Coon Creek watershed included in Table 1 above is 2B. Classification as a 2B water is intended to protect cool and warm water fisheries.

E. coli Criteria:

The *E. coli* standard for Class 2 waters (Minn. Rules Ch. 7050.0222 Subp. 5) states that *E. coli* concentrations shall "not exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples in any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1st and October 31st."

MPCA used the geometric mean portion of the criteria (126 org/100 mL) to develop loads for the TMDL. While this portion of the standard was used for TMDL purposes, both portions of the WQS must be met. The *E. coli* TMDL target included above is applicable to the following Coon Creek watershed *E. coli* impaired reaches: AUs 07010206-530, 07010206-558, 07010206-594 and 07010206-557.

TSS Criteria:

The TSS standard for Class 2B rivers and streams located in the Central River Nutrient Region is 30 mg/L (Minn. R. Ch. 7050.0222 Subp. 4). This standard may be exceeded no more than 10% of the time from April 1st through September 30th.

The TSS standards for Minnesota's rivers and streams were developed using a combination of biotic sensitivity to TSS concentrations and reference streams/least impacted streams. The TSS standards vary throughout the state of Minnesota based on geographic location (north, central, and southern river region) and the river/stream's beneficial use classification. See the MPCA's Aquatic Life Water Quality Standard Draft Technical Support Document for Total Suspended Solids (Turbidity) (May 2011) for background and methods for developing TSS numerical criteria. Deposited and bedded sediment do not have specific state standards but are often positively correlated with elevated TSS concentrations.

The TSS TMDL target included above (30 mg/L) is applicable to the following Coon Creek watershed impaired reaches: AUs 07010206-530, 07010206-558, and 07010206-594.

TP Criteria:

The eutrophication standard for Class 2B rivers and streams are based on summer average data by region (Minn.R. 7050.0222, subp. 4b). All four streams in this TMDL report are located in the Central River Nutrient Region. In the Central River Nutrient Region, rivers and streams that exceed the TP standard of 100 µg/L, and at least one of the response variables (seston chlorophyll-*a*, diel dissolved oxygen (DO) flux, five-day biochemical oxygen demand (BOD_5), or pH) are considered impaired (Table 4 below and Table 3 of the final TMDL report). The eutrophication standards are compared to data averaged over the summer season (June through September).

Table 4

Parameter	River and Stream WQS
Total Phosphorus	≤ 100 µg/L
Chlorophyll-a (Seston) [1]	≤ 18 µg/L
Diel Dissolved Oxygen Flux	≤ 3.5 mg/L
Biochemical Oxygen Demand (BOD_5) [2]	≤ 2.0 mg/L

The eutrophication standards vary throughout the state of Minnesota based on geographic location (north, central, and southern river region) and the river/stream's beneficial use classification. See the MPCA's draft Minnesota Nutrient Criteria Development for Rivers Report (January 2013) for background information and methods pertaining to the development of eutrophication standards for rivers and streams.

In developing the eutrophication standards, the MPCA evaluated data from a large cross-section of rivers and streams within each of the state's regions. Clear relationships were established between the causal factor TP and the response variables Chlorophyll-a (Seston), Diel DO Flux and BOD_5. Based on these relationships MPCA believes that by meeting the TP target of 100 µg/L, the response variables standards will likewise be met. Therefore, in order to maintain the water quality conditions

[1] Seston is defined to be the total concentration of suspended particulate matter including phytoplankton and their detrital material, if present.
[2] BOD_5 stands for 5-day BOD test period.

that provide full support of the designated uses for the impaired reaches in the Coon Creek watershed, the submitted TMDLs adopted the TP criteria of 100 µg/L average concentration over the summer season (June through September) as the primary TMDL target.

The TP TMDL targets included above are applicable to the following Coon Creek watershed impaired reaches: AUs 07010206-530, 07010206-558, 07010206-594 and 07010206-557.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this second element.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a waterbody for the applicable pollutant. U.S. EPA regulations define loading capacity as the greatest amount of a pollutant that a water can receive without violating water quality standards (40 C.F.R. §130.2(f)).

The pollutant loadings may be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)). If the TMDL is expressed in terms other than a daily load, e.g., an annual load, the submittal should explain why it is appropriate to express the TMDL in the unit of measurement chosen. The TMDL submittal should describe the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In many instances, this method will be a water quality model.

The TMDL submittal should contain documentation supporting the TMDL analysis, including the basis for any assumptions; a discussion of strengths and weaknesses in the analytical process; and results from any water quality modeling. U.S. EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

TMDLs must take into account *critical conditions* for steam flow, loading, and water quality parameters as part of the analysis of loading capacity. (40 C.F.R. §130.7(c)(1)). TMDLs should define applicable *critical conditions* and describe their approach to estimating both point and non-point source loadings under such *critical conditions*. In particular, the TMDL should discuss the approach used to compute and allocate non-point source loadings, e.g., meteorological conditions and land use distribution.

Comments:

E. coli TMDL:

The total loading capacities, i.e. total maximum daily loads, of *E. coli* determined by MPCA for the Coon Creek watershed are included in Table 5 below, and Table 14 of the final TMDL report.

Table 5

***E. coli* TMDL Allocations (*billions of organisms/day*)**						
Impaired AU	**Name**	Coon Creek				
	ID	07010206-530				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		1249.1	410.0	448.5	232.9	NA
TMDL		**755.8**	**372.1**	**230.4**	**153.6**	**99.3**
Load Reduction		493.35 (39%)	37.90 (9%)	218.13 (49%)	79.30 (34%)	NA

Table 5

***E. coli* TMDL Allocations (*billions of organisms/day*)**						
Total WLA		**357.5**	**176.0**	**109.0**	**72.7**	**46.9**
MnDOT (MS400170)		7.41	3.65	2.26	1.51	0.97
Anoka County		9.90	4.87	3.02	2.01	1.30
*Regulated stormwater (categorical)****		340.16	167.48	103.69	69.14	44.67
Total LA		**322.70**	**158.89**	**98.37**	**65.59**	**42.38**
MOS (10%)		**75.58**	**37.21**	**23.04**	**15.36**	**9.93**
Unallocated Load**		0	0	0	0	0
Impaired AU	**Name**	Sand Creek				
	ID	07010206-558				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		168.65	846.04	NA	196.91	192.66
TMDL		**345.11**	**197.64**	**124.89**	**75.90**	**22.11**
Load Reduction		0 (0%)	648.4 (77%)	NA	121.01 (61%)	170.55 (89%)
Total WLA		**136.39**	**159.84**	**101.00**	**61.38**	**17.88**
MnDOT (MS400170)		3.65	4.28	2.70	1.64	0.48
Anoka County (MS400066)		3.78	4.43	2.80	1.70	0.50
*Regulated stormwater (categorical)**		128.96	151.13	95.50	58.04	16.91
Total LA		**15.39**	**18.04**	**11.40**	**6.93**	**2.02**
MOS (10%)		**16.87**	**19.76**	**12.49**	**7.59**	**2.21**
Unallocated Load**		176.46	0.00	NA	0.00	0.00
Impaired AU	**Name**	Pleasure Creek				
	ID	07010206-594				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		**90.36**	**65.86**	**50.74**	**38.84**	**26.57**
TMDL		**47.00**	**31.28**	**23.46**	**18.64**	**12.62**
Load Reduction		43.36 (48%)	34.58 (53%)	27.28 (54%)	20.20 (52%)	13.95 (53%)
Total WLA		**41.90**	**27.88**	**20.91**	**16.62**	**11.25**
MnDOT (MS400170)		5.80	3.86	2.90	2.30	1.56
Anoka County (MS400066)		0.80	0.53	0.40	0.32	0.21
*Regulated stormwater (categorical)**		35.29	23.49	17.62	14.00	9.48
Total LA		**0.40**	**0.27**	**0.20**	**0.16**	**0.11**
MOS (10%)		**4.70**	**3.13**	**2.35**	**1.86**	**1.26**
Unallocated Load**		0.00	0.00	0.00	0.00	0.00
Impaired AU	**Name**	Springbrook Creek				
	ID	07010206-557				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		**172.1**	**106.8**	**102.29**	**33.4**	**26.1**
TMDL		**71.92**	**47.86**	**35.89**	**28.51**	**19.40**
Load Reduction		100.18 (58%)	58.94 (55%)	66.40 (65%)	4.89 (15%)	6.70 (26%)
Total WLA		**64.28**	**42.78**	**32.08**	**25.48**	**17.34**
MnDOT (MS400170)		4.22	2.81	2.11	1.67	1.14
Anoka County (MS400066)		1.94	1.29	0.97	0.77	0.52
*Regulated stormwater (categorical)**		58.12	38.67	29.00	23.04	15.68
Total LA		**0.44**	**0.30**	**0.22**	**0.18**	**0.12**
MOS (10%)		**7.19**	**4.79**	**3.59**	**2.85**	**1.94**
Unallocated Load**		0.00	0.00	0.00	0.00	0.00

Table 5

***E. coli* TMDL Allocations (*billions of organisms/day*)**

* A categorical WLA was established for all permitted stormwater including municipal (Table 2 above), construction (MNR100001 & MNG490000), and industrial (MNR050000) stormwater sources discharge.

** For some flow regimes, calculated pollutant loads fell below the allowable pollutant load. In an effort to follow antidegradation requirements, the existing pollutant load was used for load and wasteload calculations rather than the allowable load. The difference between the existing and allowable load was classified as the "unallocated load."

TSS TMDLs:

The total loading capacities, i.e. total maximum daily loads, of total suspended solids (TSS) determined by MPCA for the Coon Creek watershed to address biological integrity impairments are included in Table 6 below, and Table 12 of the final TMDL report.

Table 6

TSS TMDL Allocations (*tons/day*)						
Impaired AU	**Name**	Coon Creek				
	ID	07010206-530				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		38.71	19.2	6.61	2.13	1.08
TMDL		**19.87**	**9.80**	**6.10**	**4.08**	**2.63**
Load Reduction		18.84 (49%)	9.40 (49%)	0.51 (8%)	0 (0%)	0 (0%)
Total WLA		**9.40**	**4.64**	**2.89**	**1.01**	**0.51**
MnDOT (MS400170)		0.19	0.10	0.06	0.02	0.01
Anoka County (MS400066)		0.26	0.13	0.08	0.03	0.01
*Regulated stormwater (categorical)**		8.94	4.41	2.75	0.96	0.49
Total LA		**8.48**	**4.18**	**2.60**	**0.91**	**0.46**
MOS (10%)		**1.99**	**0.98**	**0.61**	**0.21**	**0.11**
Unallocated Load**		0	0	0	1.95	1.55
Impaired AU	**Name**	Sand Creek				
	ID	07010206-558				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		10.06	2.99	0.44	0.7	0.18
TMDL		**9.07**	**5.19**	**3.28**	**1.99**	**0.59**
Load Reduction		0.99 (10%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total WLA		**7.34**	**2.42**	**0.36**	**0.57**	**0.15**
MnDOT (MS400170)		0.20	0.06	0.01	0.02	0.004
Anoka County (MS400066)		0.20	0.07	0.01	0.02	0.004
*Regulated stormwater (categorical)**		6.94	2.29	0.34	0.54	0.14
Total LA		**0.83**	**0.27**	**0.04**	**0.06**	**0.02**
MOS (10%)		**0.00**	**2.20**	**2.84**	**1.29**	**0.41**
Unallocated Load**		0.91	0.30	0.04	0.07	0.02
Impaired AU	**Name**	Pleasure Creek				
	ID	07010206-594				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		2.81	0.48	0.83	0.18	0.21
TMDL		**1.23**	**0.82**	**0.62**	**0.49**	**0.33**
Load Reduction		1.58 (56%)	0 (0%)	0.21 (25%)	0 (0%)	0 (0%)
Total WLA		**1.10**	**0.43**	**0.55**	**0.16**	**0.19**
MnDOT (MS400170)		0.15	0.06	0.08	0.02	0.03
Anoka County (MS400066)		0.02	0.01	0.01	0.003	0.004
*Regulated stormwater (categorical)**		0.92	0.36	0.47	0.14	0.16

Table 6

TSS TMDL Allocations (*tons/day*)					
Total LA	**0.01**	**0.004**	**0.01**	**0.002**	**0.002**
MOS (10%)	**0.12**	**0.05**	**0.06**	**0.02**	**0.02**
Unallocated Load**	0.00	0.34	0.00	0.31	0.12

* A categorical WLA was established for all permitted stormwater including municipal (Table 2 above), construction (MNR100001 & MNG490000), and industrial (MNR050000) stormwater sources discharge.

** For some flow regimes, calculated pollutant loads fell below the allowable pollutant load. In an effort to follow antidegradation requirements, the existing pollutant load was used for load and wasteload calculations rather than the allowable load. The difference between the existing and allowable load was classified as the "unallocated load."

Total Phosphorus (TP) TMDLs:

The total loading capacities, i.e. total maximum daily loads, of TP determined by MPCA for the Coon Creek watershed to address the biological integrity impairments are included in Table 7 below, and Table 13 of the final TMDL report.

Table 7

TP TMDL Allocations (*lbs/day*)						
Impaired AU	**Name**	Coon Creek				
	ID	07010206-530				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		340.45	123.04	50.12	25.06	12.41
TMDL		**133.44**	**65.36**	**40.74**	**27.29**	**17.58**
Load Reduction		207.01 (61%)	57.68 (47%)	9.38 (19%)	0 (0%)	0 (0%)
Total WLA		**63.12**	**30.92**	**19.27**	**11.85**	**5.87**
MnDOT (MS400170)		1.31	0.64	0.40	0.25	0.12
Anoka County (MS400066)		1.75	0.86	0.53	0.33	0.16
*Regulated stormwater (categorical)**		60.05	29.41	18.33	11.28	5.58
Total LA		**56.98**	**27.91**	**17.40**	**10.70**	**5.30**
MOS (10%)		**13.34**	**6.54**	**4.07**	**2.51**	**1.24**
Unallocated Load**		0.00	0.00	0.00	2.23	5.17
Impaired AU	**Name**	Sand Creek				
	ID	07010206-558				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		90.34	29.52	16.61	9.55	2.6
TMDL		**60.53**	**34.64**	**21.86**	**13.30**	**3.96**
Load Reduction		29.81 (33%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total WLA		**48.95**	**23.87**	**13.43**	**7.72**	**2.10**
MnDOT (MS400170)		1.31	0.64	0.36	0.21	0.06
Anoka County (MS400066)		1.36	0.66	0.37	0.21	0.06
*Regulated stormwater (categorical)**		46.29	22.57	12.70	7.30	1.99
Total LA		**5.52**	**2.69**	**1.52**	**0.87**	**0.24**
MOS (10%)		**6.05**	**2.95**	**1.66**	**0.96**	**0.26**
Unallocated Load**		0	5.12	5.25	3.75	1.36
Impaired AU	**Name**	Pleasure Creek				
	ID	07010206-594				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		9.05	3.19	3.61	2.41	1.54
TMDL		**8.23**	**5.47**	**4.10**	**3.26**	**2.21**
Load Reduction		0.82 (9%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total WLA		**7.34**	**2.84**	**3.22**	**2.15**	**1.37**

Table 7

TP TMDL Allocations (*lbs/day*)						
MnDOT (MS400170)		1.02	0.39	0.45	0.30	0.19
Anoka County (MS400066)		0.14	0.05	0.06	0.04	0.03
*Regulated stormwater (categorical)**		6.18	2.40	2.71	1.81	1.16
Total LA		**0.07**	**0.03**	**0.03**	**0.02**	**0.01**
MOS (10%)		**0.82**	**0.32**	**0.36**	**0.24**	**0.15**
Unallocated Load**		0.00	2.28	0.49	0.85	0.67
Impaired AU	**Name**	Springbrook Creek				
	ID	07010206-557				
Flow Zones		**Very High**	**High**	**Mid-Range**	**Low**	**Dry**
Existing Load		NA	8.88	9.65	6.47	3.02
TMDL		**12.58**	**8.38**	**6.28**	**4.99**	**3.38**
Load Reduction		NA	0.50 (6%)	3.37 (35%)	1.48 (23%)	0 (0%)
Total WLA		**11.24**	**7.49**	**5.61**	**4.46**	**2.70**
MnDOT (MS400170)		0.74	0.49	0.37	0.29	0.18
Anoka County (MS400066)		0.34	0.23	0.17	0.13	0.08
*Regulated stormwater (categorical)**		10.17	6.77	5.07	4.03	2.44
Total LA		**0.08**	**0.05**	**0.04**	**0.03**	**0.02**
MOS (10%)		**1.26**	**0.84**	**0.63**	**0.50**	**0.30**
Unallocated Load**		NA	0.00	0.00	0.00	0.36

* A categorical WLA was established for all permitted stormwater including municipal (Table 2 above), construction (MNR100001 & MNG490000), and industrial (MNR050000) stormwater sources discharge.

** For some flow regimes, calculated pollutant loads fell below the allowable pollutant load. In an effort to follow antidegradation requirements, the existing pollutant load was used for load and wasteload calculations rather than the allowable load. The difference between the existing and allowable load was classified as the "unallocated load."

Calculation Method Used for the E. coli, TSS and TP TMDLs:

Stream flow data was used for the development of the *E. coli*, TSS and TP TMDLs (Section 3.4.3 of the final TMDL report). Stations S003-993 (Coon Creek) and S003-619 (Sand Creek) both had a 10-year flow record from 2005-2014 (Appendix C of the final TMDL report). This data was recorded as part of the CCWD's annual water quality monitoring program and used to generate the flow duration curves for these reaches. Daily streamflow data were averaged to produce a mean daily flow for each reach. Flow records for Pleasure Creek were not as robust so to compensate for the shorter flow record, flow regressions were conducted between Pleasure Creek and three other stations; two outside the TMDL study area (Elm Creek, Shingle Creek) and one inside (Sand Creek) (Appendix D of the final TMDL report). The regression relationship between Sand and Pleasure Creeks showed the strongest correlation ($R^2 = 0.67$) and was subsequently used to fill data gaps from 2005-2014. The following equation was used to estimate flows:

$Q_{PleasureCreek} = 0.1057 \times Q_{SandCreek} + 3.276$

Where,

$Q_{PleasureCreek}$ = estimated Pleasure Creek flow (cfs)

$Q_{SandCreek}$ = gaged Sand Creek flow (cfs)

There was no field verified flow data available for Springbrook Creek so two separate methods were used to estimate flows for Springbrook Creek; flow simulation modeling using XP-SWMM Hydrodynamic Modeling Software and the use of a conversion factor to adjust measured flows by subwatershed size. Based on the results of these two methods, it was determined Springbrook Creek flow estimates were most accurately represented by adjusting measured Pleasure Creek flows by a

conversion factor to reflect the larger subwatershed size of Springbrook Creek (Figure 9 and Appendix D of the final TMDL report). The following equation was used to estimate flows:

$$Q_{ungaged} = \frac{A_{SpringbrookCreek}}{A_{PleasureCreek}} \times Q_{PleasureCreek}$$

Where,

$Q_{ungaged}$ = Springbrook Creek daily flow (cfs)
$A_{SpringbrookCreek}$ = Springbrook Creek Subwatershed drainage area (sq. miles)
$A_{PleasureCreek}$ = Pleasure Creek Subwatershed drainage area (sq. miles)
$Q_{PleasureCreek}$ = Pleasure Creek daily flow (cfs)

Flow duration curves were developed by generating flow frequency tables and plotting data points to form a curve for each impaired reach (Figure 10 of the final TMDL report). Using previously calculated flow duration curves, flows were separated into five distinct flow regimes (Figure 12 of the final TMDL report). The flow duration curve relates mean daily flow to the percent of time those values have been met or exceeded. The 50% exceedance value is the midpoint or median flow value. The curve is divided into flow zones which include very high (0-10%), high (10- 40%), mid (40-60%), low (60-90%) and dry (90 to 100%) flow conditions. The flow duration curves were transformed to load duration curves (LDC) by applying the water quality criteria values (TP – 100 µg/L; TSS – 30 mg/L; and *E. coli* – 126 cfu/100 ml) and appropriate daily load conversion factors (0.002695 for TSS; 0.005393 for TP; and 0.02446 for *E. coli*). The LDC method assimilated the flow and pollutant data across stream flow regimes, and provided assimilative capacities from which reductions can be derived by comparing to measured loads. Refer to the following figures of the final report for the calculated load duration curves (LDCs): Figures 13, 14 and 15 are the TSS LDCs; Figures 16, 17, 18 and 19 are the TP LDCs; Figures 20, 21, 22 and 23 are the *E. coli* LDCs. The median load of each flow zone was used to represent the total daily loading capacity (TMDL) of the pollutant (TSS, TP and *E. coli)* for that flow zone. Plotted values (blue dots) above the curve lines represent exceedances of the WQ standard (red line) while those below the lines are below the WQ standard. Although there are numeric loads for each flow regime, the LDC is what is being approved for this TMDL.

Critical Conditions for E. coli TMDLs:

The critical conditions for the *E. coli* TMDLs in the Coon Creek watershed are summer - fall flow related conditions. Data analysis showed that *E. coli* WQS exceedences occur under all flow regimes during summer and fall months, indicating that the *E. coli* impairment is due to a variety of sources and conditions. High flows can deliver great amounts of pollutants into the streams in runoff conditions. Low flows can concentrate pollutants because the stream's assimilative capacity is being exceeded and the potential for dilution is the lowest.

The Coon Creek watershed TMDLs accounted for the critical conditions by using the load duration curve approach to develop the *E. coli* TMDLs. The load duration curve approach directly accounts for flow and allows for the evaluation of the flow zones for which the largest load reductions are needed.

Critical Conditions for TSS and TP TMDLs:

The critical conditions for the TSS and TP TMDLs in the Coon Creek watershed are flow related conditions. The data showed most TSS and TP exceedances occurred during "High" and "Very High" flow regimes, suggesting TSS and TP levels are primarily driven by precipitation events. Influxes of in-stream TSS and TP concentrations are also often observed during or shortly after precipitation events. High flows can deliver great amounts of pollutants into the streams in runoff conditions.

The Coon Creek watershed TMDLs accounted for the critical conditions by using the load duration curve approach to develop the TSS and TP TMDLs. The load duration curve approach directly accounts for flow and allows for the evaluation of the flow zones for which the largest load reductions are needed.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this third element.

4. Load Allocations (LAs)

U.S. EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity attributed to existing and future non-point sources and to natural background. Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. §130.2(g)). Where possible, load allocations should be described separately for natural background and non-point sources.

Comments:

E. coli LAs:

The load allocations (LAs) of *E. coli* determined by MPCA for the Coon Creek watershed are included in Table 5 above, and Table 14 of the final TMDL report. The existing nonpoint sources contributing to the *E. coli* LA include fecal matter from livestock and wildlife, human wastewater from failing or noncompliant SSTS, and domestic pet waste (Section 4.2.2 of the final TMDL report).

The *E. coli* LA for non-permitted sources was based on the land area within each subwatershed not served by MS4 conveyance. Areas not served by MS4 tend to be more "natural" landscapes such as forested areas, wetlands, and vegetated fields. Land use classifications provided in Appendix G of the final TMDL report were used to make the distinction between areas served by MS4 conveyance and those that were not. A bacteria source assessment was conducted to provide an estimate for the relative contributions for a variety of sources within each subwatershed (Section 4.3.2 and Appendix B of the final TMDL report). The intent of the bacteria assessment was to guide implementation planning by comparing the potential contributions of various sources rather than separate sources for LA calculations. The quantification of LAs for separate sources was considered difficult due to the complexity of die-off and re-growth of *E. coli* in urban stream environments.

TSS LAs:

The load allocations (LAs) of TSS determined by MPCA for the Coon Creek watershed to address biological integrity impairments are included in Table 6 above, and Tables 12 of the final TMDL report. The existing nonpoint sources contributing to the TSS LA include non-regulated stormwater runoff, In-channel/Streambank erosion, and Individual Subsurface Sewage Treatment Systems (SSTS) with improper installation, inadequate design, or breakdown due to age (Section 4.1.2 of the final TMDL report).

To determine the TSS LA for each impaired reach, the total area not served by MS4 conveyance was calculated with 2020 projected land use data obtained from Metropolitan Council and Geographic Information System (GIS) mapping software. This method is a surrogate to land cover methodology

and operates under the assumption that more urbanized land uses, such as "industrial" or "commercial," are more likely to be served by a regulated MS4 than rural land uses, such as "agriculture". Guidance published by the MPCA was used to determine which land use classifications were included in the LA. The 2010 U.S. Census Bureau defined urban area was the dividing line for most land use classifications placed in the LA. This was considered appropriate since land uses inside the urban area are most often served by an MS4 conveyance system. Land use classifications placed in the LA were verified through the addition of city stormwater infrastructure into GIS mapping. In some instances, specific land areas were transferred into the WLA portion of the TMDL after addition of city stormwater infrastructure maps. Refer to Section 5.1.2 and Appendix G of the final TMDL report for further details.

TP LAs:

The load allocations (LAs) of TP determined by MPCA for the Coon Creek watershed to address the nutrient/eutrophication impairments are included in Table 7 above, and Table 13 of the final TMDL report. The existing nonpoint sources contributing to the TP LA include non-regulated stormwater runoff, In-channel/Streambank erosion, and Individual Subsurface Sewage Treatment Systems (SSTS) with improper installation, inadequate design, or breakdown due to age (Section 4.1.2 of the final TMDL report). The overall TP LA was approximated based on the percentage of land area not served by MS4 conveyance as previously described above in the TSS LAs section.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this fourth element.

5. Wasteload Allocations (WLAs)

U.S. EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.

The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers where it can be shown that this solution meets WQSs and does not result in localized impairments. These individual WLAs may be adjusted during the NPDES permitting process. If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL. If the WLAs are not adjusted, effluent limits contained in the permit must be consistent with the individual WLAs specified in the TMDL. If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments will not result. All permittees should be notified of any deviations from the initial individual WLAs contained in the TMDL. U.S. EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases, and there is no reallocation between the total WLA and the total LA.

Comments:

E. coli WLAs:

The wasteload allocations (WLAs) of *E. coli* determined by MPCA for the Coon Creek watershed are included in Table 5 above, and Table 14 of the final TMDL report. The only point source contributing to the *E. coli* WLAs in the Coon Creek watershed was regulated stormwater (there are no WWTFs, CSOs, SSOs, or CAFOs). The *E. coli* WLA for permitted stormwater was based on the land area within each subwatershed served by MS4 conveyance consistent with methodology used in both TSS and TP WLA calculations outlined in Appendix G of the final TMDL report. The potential future growth impact on the *E. coli* WLAs for permitted point sources in the Coon Creek watershed is discussed in Section 5 of the final TMDL report.

TSS WLAs:

The wasteload allocations (WLAs) of TSS determined by MPCA for the Coon Creek watershed to address the turbidity impairments are included in Table 6 above, and Table 12 of the final TMDL report. The point sources contributing to the TSS WLAs in the Coon Creek watershed include: MS4s (Table 2 above and Table 10 of the final TMDL report), stormwater from industrial activity (General Permit# MNR50000 and MNG490000), and construction activity (General Permit# MNR100001). The potential future growth impact on the TSS WLAs for permitted point sources in the Coon Creek watershed is discussed in Section 5 of the final TMDL report.

The TSS WLA for regulated stormwater was calculated based on the land area served by an MS4 conveyance using GIS mapping software and Met Council 2020 land use projections (Section 5.1.3. of the final TMDL report).

A TSS categorical WLA for all permitted stormwater was established, which included municipal, construction, and industrial stormwater. The use of a categorical WLA was considered appropriate given the difficult nature of calculating pollutant loads from construction and industrial stormwater sites. Reasons for this determination included:

- Lacking monitoring data from construction sites;
- Highly transient and variable nature of construction activity that often results in inaccurate WLA estimates for this regulated source;
- Industrial stormwater sites have relatively small contributions if permit conditions are met.
- Variability in the types of industrial facilities.

Additionally, in the TMDL study area, all construction and ISW sources discharge to a regulated MS4.

An individual WLA for the Minnesota Department of Transportation (MnDOT) was calculated based on the land area of their road right-of-ways. MnDOT is a regulated MS4 only within the U.S. Census Urban Area and provided road right-of-way information for roads under their jurisdiction. Anoka County is also a regulated MS4 only within the U.S. Census Urban Area and therefore given an individual WLA similar to MnDOT. Anoka County Highway Department was unable to provide road right-of-way widths for roads under their jurisdiction so land area under their control was estimated by applying a 50 foot buffer to centerlines of roads under their jurisdiction. All remaining MS4s were given a categorical WLA including the CCWD, which has jurisdiction over several ditches in the impaired subwatersheds. The use of a categorical TMDL is also consistent with the MPCA policy and guidance for incorporating MS4 stormwater programs into TMDLs which states, “Categorical WLA may be appropriate when a single MS4 or other entity will track BMP implementation and associated

load reductions. An example would be a watershed district." CCWD will work with all municipal MS4s in the watershed to track progress towards achieving WLAs assigned in the Coon Creek watershed TMDL. (Section 5.1.3 of the final TMDL report).

TP WLAs:

The waste load allocations (WLAs) of TP determined by MPCA for the Coon Creek watershed to address nutrient/eutrophication impairments are included in Table 7 above, and Table 13 of the final TMDL report. The point sources contributing to the TP WLAs in the Coon Creek watershed include: MS4s (Table 2 above and Table 10 of the final TMDL report), stormwater from industrial activity (General Permit# MNR50000 and MNG490000), and construction activity (General Permit# MNR100001). The TP WLAs were calculated based on land area served by MS4s determined by the same methods previously described in the *TSS WLAs* section above. The potential future growth impact on the TP WLAs for permitted point sources in the Coon Creek watershed is discussed in Section 5 of the final TMDL report.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this fifth element.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). U.S. EPA's 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Comments:

MOS for the E. coli TMDLs:

The MOS incorporated into the *E. coli* TMDLs for the Coon Creek watershed are included in Table 5 above, and Table 14 of the final TMDL report. An explicit MOS equal to 10% of the loading capacity for each flow regime was subtracted before allocations were made among wasteload and non-point sources. A 10% MOS was considered appropriate based on the use of load duration curves in the development of the *E. coli* TMDLs. The LDC approach minimized variability because the calculation of the loading capacity was a function of flow multiplied by the target value.

The MOS for the Coon Creek bacteria TMDLs also incorporated certain conservative assumptions in the calculation of the TMDLs. No rate of decay, or die-off rate of pathogen species, was used in the TMDL calculations or in the creation of load duration curves for *E. coli*. Bacteria have a limited capability of surviving outside their hosts, and normally a rate of decay would be incorporated. MPCA determined that it was more conservative to use the WQS (126 cfu/100 mL) and not to apply a rate of decay, which could result in a discharge limit greater than the WQS.

As stated in *EPA's Protocol for Developing Pathogen TMDLs* (EPA 841-R-00-002), many different factors affect the survival of pathogens, including the physical condition of the water. These factors

include, but are not limited to sunlight, temperature, salinity, and nutrient deficiencies. These factors vary depending on the environmental condition/circumstances of the water, and therefore it would be difficult to assert that the rate of decay caused by any given combination of these environmental variables was sufficient enough to meet the WQS of 126 cfu/100 mL. Thus, it is more conservative to apply the State's WQS as the MOS, because this standard must be met at all times under all environmental conditions.

MOS for the TSS TMDLs:

The MOS incorporated into the TSS TMDLs for the Coon Creek watershed to address turbidity impairment are included in Tables 6 above, and Table 12 of the final TMDL report. An explicit MOS equal to 10% of the loading capacity for each flow regime was subtracted before allocations were made among wasteload and non-point sources. A 10% MOS was considered appropriate based on the use of load duration curves in the development of the TSS TMDLs. The LDC approach minimized variability because the calculation of the loading capacity was a function of flow multiplied by the target value.

MOS for the TP TMDLs:

The MOS incorporated into the TP TMDLs for the Coon Creek watershed to address nutrient/ eutrophication impairment are included in Table 7 above, and Table 13 of the final TMDL report. A 10% MOS was considered appropriate based on the use of load duration curves in the development of the TP TMDLs. The LDC approach minimized variability because the calculation of the loading capacity was a function of flow multiplied by the target value.

U.S. EPA finds that the TMDL document submitted by MPCA contains an appropriate MOS satisfying all requirements concerning this sixth element.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The TMDL must describe the method chosen for including seasonal variations. (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)).

Comments:

Seasonal Variation for E. coli TMDLs:

The *E. coli* exceedances in the Coon Creek watershed varied seasonally. The majority of *E. coli* exceedances occur during late spring, summer and fall months (Table 7 of the final TMDL report).

Seasonal variation in the *E. coli* TMDLs is addressed by establishing load allocations based on the *E. coli* standard, which is applicable to the aquatic recreational period of April 1 through October 31. Seasonal variation was also considered in the *E. coli* TMDLs through the use of the LDC to establish the TMDLs. The development of the LDCs utilized multi-year flow record for April-October which represented a range of flow conditions within the watershed and thereby accounted for seasonal variability. The LDC approach captures the variation in pollutant concentrations occurring over a range of flow regime conditions in each waterbody reach.

Seasonal Variation for TSS TMDLs:

The TSS exceedances in the Coon Creek watershed varied seasonally. Available TSS data for impaired reaches in the study all show most TSS exceedances occur during "High" and "Very High" flow regimes, suggesting TSS is primarily driven by precipitation events.

Seasonal variation was considered in the TSS TMDLs through the use of the LDCs to establish the TMDLs. The LDC approach accounts for seasonality by calculating allowable loads on a daily basis over a wide range of estimated flows. The use of multiple years of flow data in conjunction with water quality data accounts for seasonal variation and provides adequate protection during differing times of the year.

Seasonal Variation for TP TMDLs:

The TP exceedances in the Coon Creek watershed varied seasonally. Influxes of in-stream TP concentrations are often observed during or shortly after precipitation events. This is not surprising since regulated and non-regulated stormwater are both identified as primary contributing pollutant sources. Seasonal variation in precipitation patterns was accounted for through the use of the LDCs to establish the TP TMDLs. The LDC approach indirectly encapsulates a wide range of precipitation events through long term flow records. The range of flows experienced over a 10 year period accounts for seasonal variation in TP concentrations.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this seventh element.

8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL.

When a TMDL is developed for waters impaired by both point and non-point sources, and the WLA is based on an assumption that non-point source load reductions will occur, U.S. EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that non-point source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for U.S. EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

U.S. EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL load allocations in waters impaired only by non-point sources. However, U.S. EPA cannot disapprove a TMDL for non-point source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

Comments:

Section 6 of the final TMDL report contains a list of several factors at the local, state and federal level

that MPCA considers could provide reasonable assurances that the Coon Creek watershed TMDLs will be successfully implemented. These factors include:

Regulatory programs:

Existing regulatory programs such as those under NDPES will continue to be administered to control discharges from permitted sources (Sections 6.1 – 6.3 of the final TMDL report, and Table 8 below).

Table 8

Regulatory Programs For Permitted Sources
Municipal Stormwater The Small MS4 General Permit requires regulated municipalities to implement BMPs that reduce pollutants in stormwater to the Maximum Extent Practicable (MEP). A critical component of permit compliance is the requirement for the owners or operators of a regulated MS4 conveyance to develop a Stormwater Pollution Prevention Program (SWPPP). The SWPPP program addresses all permit requirements, including the following measures: Public education and outreach, Public participation, Illicit Discharge Detection and Elimination (IDDE) Program, Construction site runoff controls, Post-construction runoff controls, Pollution prevention and municipal good housekeeping measures A SWPPP is a management plan that describes the MS4 permittees activities for managing stormwater within their regulated area. In the event of a completed TMDL study, MS4 permittees must document the WLA in their future NPDES/ State Disposal System (SDS) Permit application and provide an outline of the BMPs to be implemented which address any needed reductions. The MPCA requires MS4 owners or operators to submit their application and corresponding SWPPP document to the MPCA for their review. Once the application and SWPPP are deemed adequate by the MPCA, all application materials are placed on 30-day public notice, allowing the public an opportunity to review and comment on the prospective program. Once NPDES/SDS Permit coverage is granted, permittees must implement the activities described within their SWPPP, and submit an annual report to the MPCA documenting the implementation activities completed within the previous year along with an estimate of the cumulative pollutant reduction achieved by those activities. For information on all requirements for annual reporting, please see the Minnesota Stormwater Manual. The Small MS4 General Permit requires permittees to develop compliance schedules for EPA approved TMDL WLAs not already being met at the time of permit application. A compliance schedule includes BMPs that will be implemented over the permit term, a timeline for their implementation, and a long term strategy for continuing progress towards assigned WLAs. For WLAs being met at the time of permit application, the same level of treatment must be maintained in the future. Regardless of WLA attainment, all permitted MS4s are still required to reduce pollutant loadings to the MEP.
Construction Stormwater Regulated construction stormwater was given a categorical WLA. However, construction activities disturbing one acre or more in size are still required to obtain NPDES Permit coverage through the MPCA. Compliance with TMDL requirements are assumed when a construction site owner/operator meets the conditions of the Construction General Permit and properly selects, installs, and maintains all BMPs required under the permit, including any applicable additional BMPs required in Appendix A of the Construction General Permit for discharges to impaired waters, or compliance with local construction stormwater requirements if they are more restrictive than those in the State General Permit. **Industrial Stormwater** Regulated industrial stormwater (ISW) was included in the categorical stormwater WLA. Industrial activities still require permit coverage under the State's NPDES/SDS ISW Multi- Sector General Permit (MNR050000), or NPDES/SDS General Permit for Construction Sand & Gravel, Rock Quarrying and Hot Mix Asphalt Production facilities (MNG490000). If a facility owner/operator obtains stormwater coverage under the appropriate NPDES/SDS Permit and properly selects, installs and maintains all BMPs required under the permit, their discharges are considered compliant with WLAs set in this study.

Water Management Plans:
(Sections 6.4 – 6.5 of the final TMDL report)

The Coon Creek Watershed District (CCWD) was formed in 1959 as a public body organized pursuant to the Minnesota Watershed Law (Minn. Stat. 103D). In 2013, the District completed a second

generation Comprehensive Management Plan identifying the organization's mission goals and providing a framework for its operational objectives through 2023. The protection of water quality was identified as a major goal in this plan and included the following objectives:

- To identify and plan for means to effectively protect and improve surface and groundwater quality.
- To prevent soil erosion into surface water systems.
- To protect and, where needed, improve the physical, chemical, biological, and aesthetic quality of the water resource consistent with the purposes of the CCWD along with state and national water quality goals.

In an effort to meet these objectives, the CCWD has committed to a series of strategies and related actions to protect water quality (Table 9 below).

Table 9

Monitoring

The CCWD's monitoring program includes all water provided for public domestic purposes and primary contact water sports (lakes and rivers), to ensure public health and safety. Annually, the CCWD evaluates its water quality monitoring approach and situates monitoring locations where most appropriate. At a minimum, the outfalls of all four impaired reaches are monitored on a yearly basis for continual evaluation of water quality. The Anoka SWCD is actively engaged in the annual evaluation of the District's monitoring approach. Monitoring design is consistent with applicable state or federal regulations and the MPCA's online database (EQUIS) serves as the primary repository for all stream and lake water quality data. This program is expected to continue into the foreseeable future.

Operations and Maintenance

The Operations and Maintenance program works to:

- Solve local streambank erosion problems in a manner that minimizes the effect on stream behaviors and impacts on affected property owners.
- Construct, modify, or retrofit stormwater treatment devices to increase water quality treatment.
- Investigate, evaluate, and resolve or mediate water resource issues.

All of these activities are directly related to this TMDL study and are expected to continue.

Planning

Planning efforts undertaken by the CCWD establish objectives for managing the quality of the water resources through land and resource management plans. Future planning efforts will include the outcomes of this TMDL study.

Public and Governmental Relations

This program accounts for the water quality needs of local, regional, and national public interests both inside and outside the CCWD boundary to determine appropriate water quality management activities. A key aspect of this program is the publication of communication and educational material related to CCWD programs and water resource related issues.

Regulation

The District's regulatory program oversees numerous components important to the attainment of WLAs resulting from this study. The CCWD's regulatory program exercises control over proposed developments or activities to ensure the proper conveyance and disposal of stormwater. Oversight of development activities provides assurance that permit requirements and the goals, objectives, and rules of the CCWD will be met.

The CCWD has partnered with the MPCA to develop the CCWD Watershed Restoration and Protection Strategy (WRAPS). A WRAPS report is a document summarizing scientific studies of a watershed including the physical, chemical, and biological assessment of the water quality of the watershed; identification of impairments and water bodies in need of protection; identification of biotic stressors and both point and NPSs of pollution; TMDLs for the impairments; and an implementation table containing strategies and actions to achieve and maintain water quality standards and goals. Upon completion of the WRAPS process, implementation strategies will be amended into the CCWD Comprehensive Management Plan.

Clean Water Legacy Act (CWLA):

The CWLA was passed in Minnesota in 2006 for the purposes of protecting, restoring, and preserving Minnesota water. The CWLA provides the protocols and practices to be followed in order to develop TMDL implementation plans. TMDL implementation plans are expected to be developed within a year of TMDL approval and are required in order for local entities to apply for funding from the State. The CWLA outlines how MPCA, public agencies and private entities should coordinate in their efforts toward improving land use management practices and water management. The CWLA anticipates that all agencies (i.e., MPCA, public agencies, local authorities and private entities, etc.) will cooperate regarding planning and restoration efforts. Cooperative efforts would likely include informal and formal agreements to jointly use technical, educational, and financial resources.

The CWLA also provides details on public and stakeholder participation, and how the funding will be used. In part to attain these goals, the CWLA requires MPCA to develop Watershed Restoration and Protection Strategies (WRAPS). The WRAPS are required to contain such elements as the identification of impaired waters, watershed modeling outputs, point and nonpoint sources, load reductions, etc. (Chapter 114D.26; CWLA). The WRAPS also contain an implementation table of strategies and actions that are capable of achieving the needed load reductions, for both point and nonpoint sources (Chapter 114D.26,Subd. 1(8); CWLA). Implementation plans developed for the TMDLs are included in the table, and are considered "priority areas" under the WRAPS process (Watershed Restoration and Protection Strategy Report Template, MPCA). This table includes not only needed actions but a timeline for achieving water quality targets, the reductions needed from both point and nonpoint sources, the governmental units responsible, and interim milestones for achieving the actions. MPCA has developed guidance on what is required in the WRAPS (Watershed Restoration and Protection Strategy Report Template, MPCA). The Coon Creek WRAPS was approved by MPCA in April, 2016.

The Minnesota Board of Soil and Water Resources administers the Clean Water Fund as well, and has developed a detailed grants policy explaining what is required to be eligible to receive Clean Water Fund money (FY 2014 Clean Water Fund Competitive Grants Request for Proposal (RFP); Minnesota Board of Soil and Water Resources, 2014).

U.S. EPA finds that the TMDL document submitted by MPCA adequately addresses this eighth element.

9. Monitoring Plan to Track TMDL Effectiveness

U.S. EPA's 1991 document, *Guidance for Water Quality-Based Decisions: The TMDL Process* (U.S. EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and non-point sources, and the WLA is based on an assumption that non-point source load reductions will occur. Such a TMDL should provide assurances that non-point source controls will achieve expected load reductions and, such TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDL are occurring and leading to attainment of water quality standards.

Comments:

Two types of monitoring will track the progress toward achieving the load reductions required in the Coon Creek watershed TMDLs, and the attainment of WQS: (1) tracking implementation of Best Management Practices (BMPs) on the ground; and (2) physical and chemical monitoring of the waterbody resource.

Periodic monitoring is necessary for the adaptive management approach that will be utilized to efficiently meet the TMDL, in which management strategies/activities will be re-evaluated, changed or refined as the water quality dynamics within the watershed are better understood. The results of the monitoring will identify progress toward benchmarks as well as shape the next course of action for implementation of the TMDLs.

The Coon Creek Watershed District (CCWD) will take the lead on tracking progress through its annual water quality monitoring efforts and BMP tracking. The CCWD has contracted with the Anoka Conservation District (ACD) to do the water quality monitoring of lakes and streams, precipitation patterns, groundwater levels, and other hydrologic parameters for nearly 20 years. Annual water quality monitoring is expected to continue in the future and likely expand as a result of this TMDL study. Water quality parameters that will be collected by the ACD include pH, conductivity, turbidity, temperature, salinity, DO, TP, TSS, chlorides, hardness, sulfate, and *E. coli*. Since biotic impairments are included in this study, biological sampling (macroinvertebrates and fish) is an important piece of progress assessment. Biological sampling in the CCWD was conducted by the MPCA in 2000, 2005 and 2010, and is expected to continue to occur roughly every 10 years. The CCWD and ACD will meet annually to discuss the success and necessary improvements to existing water quality efforts and work together to develop a plan for future monitoring. This includes updating equipment, modifying the number of sampling locations, or relocating sampling gear based on review of the cumulative dataset.

The CCWD also plans to work with its municipal partners to track the total number of BMPs completed to achieve WLAs set in this study. The CCWD has a long history of collaboration with MS4 stakeholders which will help facilitate this process. When possible, on-site monitoring of implementation practices should take place to determine the BMP effectiveness. A variety of criteria such as land use, soil type, site access, monitoring feasibility, and site specific characteristics will be used to determine which BMPs to monitor. Under certain criteria, monitoring results from a specific BMP may be able to be extrapolated to BMPs with similar conditions.

U.S. EPA finds that this ninth element has been adequately addressed in the TMDL document submitted by MPCA, although U.S. EPA is not approving these recommendations for monitoring or any other aspect of Minnesota's monitoring program through this decision.

10. Implementation

U.S. EPA policy encourages Regions to work in partnership with States/Tribes to achieve non-point source load allocations established for 303(d)-listed waters impaired by non-point sources. Regions may assist States/Tribes in developing implementation plans that include reasonable assurances that non-point source LAs established in TMDLs for waters impaired solely or primarily by non-point sources will in fact be achieved. In addition, U.S. EPA policy recognizes that other relevant watershed management processes may be used in the TMDL process. U.S. EPA is not required to and does not approve TMDL implementation plans.

Comments:

Section 8 of the final TMDL report presents implementation alternatives for resolving the water quality problems associated with the Coon Creek watershed TMDLs. A brief summary of the recommended implementation alternatives is included in Table 10 below. A separate document following this TMDL report will contain the formal TMDL Implementation Plans. Since the impairments of *E. coli*, TSS and TP have several sources and some common delivery pathways, most of the recommended implementation strategies will have multiple water quality benefits in terms of load reductions through implementation. The selection of appropriate management practices for the pollutant(s) of concern will depend on site-specific conditions, economic factors, and stakeholder attitudes and knowledge.

Table 10

<table>
<tr><th colspan="3">List of Recommended Implementation Strategies/ Specific Best Management Practices (BMPs)</th></tr>
<tr><td colspan="3">For Permitted Sources - TSS and TP</td></tr>
<tr><td>Municipal Stormwater
The MS4 General Permit requires permittees to address all WLAs in TMDLs approved prior to the effective date of the Permit. In doing so, they must determine if they are currently meeting their WLA(s). If the WLA is not being achieved at the time of application, a compliance schedule is required that includes interim milestones, expressed as BMPs, that will be implemented over the current five-year permit term to reduce loading of the pollutant of concern in the TMDL. Additionally, a long-term implementation strategy and target date for fully meeting the WLA must be included.</td><td>Construction Stormwater
The WLA for stormwater discharges from sites where there are construction activities reflects the number of construction sites of one or more acres expected to be active in the watershed at any one time, and the BMPs and other stormwater control measures that should be implemented at the sites to limit the discharge of pollutants of concern. The BMPs and other stormwater control measures that should be implemented at construction sites are defined in the state's NPDES/SDS General Stormwater Permit for Construction Activity (MNR100001). If a construction site owner/operator obtains coverage under the NPDES/SDS Permit General Stormwater Permit and properly selects, installs and maintains all BMPs required under the permit, including those related to impaired waters discharges and any applicable additional requirements found in Appendix A of the Construction General Permit, the stormwater discharges would be expected to be consistent with the WLA in this TMDL. It should be noted that all local construction stormwater requirements must also be met.</td><td>Industrial Stormwater
The WLA for stormwater discharges from sites where there is industrial activity reflects the number of sites in the watershed for which NPDES ISW permit coverage is required, and the BMPs and other stormwater control measures that should be implemented at the sites to limit the discharge of pollutants of concern. The BMPs and other stormwater control measures that should be implemented at the industrial sites are defined in the State's NPDES/SDS ISW MultiSector General Permit (MNR050000) or NPDES/SDS General Permit for Construction Sand & Gravel, Rock Quarrying and Hot Mix Asphalt Production facilities (MNG490000). If a facility owner/operator obtains stormwater coverage under the appropriate NPDES/SDS permit and properly selects, installs and maintains all BMPs required under the permit, the stormwater discharges would be expected to be consistent with the WLA in this TMDL. It should be noted that all local stormwater management requirements must also be met.</td></tr>
<tr><td colspan="3">For Non-permitted Sources - TSS and TP</td></tr>
<tr><td colspan="3">Streambank Stabilization
Continuation of the CCWD’s streambank stabilization program. Give priority to sections of streambank contributing the most sediment and phosphorus loading. When feasible, use “naturalized” stabilization techniques when engineering streambank stabilization practices, (e.g., native vegetation, vegetated rip-rap).</td></tr>
</table>

Table 10

List of Recommended Implementation Strategies/ Specific Best Management Practices (BMPs)
Riparian Buffer Installation/Enhancement Install and/or maintain adequate buffer strips adjacent to impaired waters to filter pollutants from watershed runoff. Target high priority areas (i.e., livestock pastures, agricultural fields, large areas of connected impervious surface) immediately adjacent to impaired waters. Minnesota's buffer law establishes new perennial vegetation buffers of up to 50 feet along rivers, streams and ditches that will help filter out phosphorus, nitrogen and sediment. The law provides flexibility and financial support for landowners to install and maintain buffers. The DNR's role in Minnesota's buffer law is to produce and maintain a map of public waters and public ditch systems that require permanent vegetation buffers. The DNR released the buffer protection map in July, 2016. The map will help guide the implementation of Minnesota's buffer law by landowners with the help of the Board of Water and Soil Resources (BWSR), Soil and Water Conservation Districts (SWCDs), Drainage Authorities and other local governments. Refer to the following weblink for additional info: http://dnr.state.mn.us/buffers/index.html.
Urban Stormwater Retrofits Continue the implementation of cost effective stormwater improvement projects identified through urban stormwater retrofit studies.
Street Sweeping Identify target areas for increased frequency and/or timing of street sweeping activity. Consider upgrades to traditional sweet sweeping equipment when appropriate.
Stormwater Asset Inventory & Maintenance Conduct an inventory of the "critical" stormwater BMPs within the CCWD. An asset inventory includes a field assessment of BMP condition to determine if corrective maintenance is needed. Corrective maintenance could include practices such as stormwater pond dredging, stormwater pond outlet repair, soil amendments in aging rain gardens, etc.
Education and Outreach Program Provide education to citizens on pertinent topics (i.e., pollutant sources, effects of specified pollutant, landowner BMPs) through a variety of methods to inform and engage citizens. Potential education avenues include (but are not limited to): press releases, trainings, e-newsletters, public workshops, website updates, etc.
SSTS Inspections While failing septic systems do not appear to be a significant source of TP, the state, Anoka County, and municipalities should continue to inspect individual SSTS and order followup action to achieve, and maintain, a 100% load reduction as required by the MPCA.
Watershed Condition Assessment Conduct a watershed wide condition assessment on a minor subwatershed scale to rank minor subwatersheds from "best condition" to "worst condition." Each minor subwatershed will be scored on its physical and biological condition for both aquatic and terrestrial components.
For Permitted Sources – *E. coli* **Municipal Stormwater** The MS4 General Permit requires permittees to address all WLAs in TMDLs approved prior to the effective date of the permit. In doing so, they must determine if they are currently meeting their WLA(s). If the WLA is not being achieved at the time of application, a compliance schedule is required that includes interim milestones, expressed as BMPs, that will be implemented over the current five-year permit term to reduce loading of the pollutant of concern in the TMDL. Additionally, a long-term implementation strategy and target date for fully meeting the WLA must be included. **Illicit Discharge Detection and Elimination (IDDE) Programs** IDDE programs required by the MPCA's NPDES program typically focus on the conventional "pipe" discharges. Current IDDE programs implemented by MS4s in this TMDL should be enhanced to include other potential NPSs of bacteria loading (i.e., hobby farm runoff, improper manure management, etc.).
For Non-permitted Sources – *E. coli* **Pet Waste Management** Review local ordinances and associated enforcement programs for residents not properly disposing of pet waste. Consider increasing penalties for residents improperly disposing of pet waste.

Table 10

List of Recommended Implementation Strategies/ Specific Best Management Practices (BMPs)
Promote infiltration When feasible, promote and install stormwater BMPs utilizing infiltration and bioretention to decrease the amount watershed runoff entering surface waters. Scale of these BMPs may range from a one property owner rain garden to larger projects such as a regional infiltration basin. BMPs increasing infiltration will also reduce the amount of TSS and TP transported to surface waters as well.
Education and Outreach Educate property owners on the importance of proper pet waste management to increase awareness. Target educational efforts in highly urbanized areas where bacteria loadings from pet waste are a significant contributor. Provide property owners with information on the proper disposal options and penalties for not complying with local ordinances.
Emerging Technologies Continue to follow research and identify implementation opportunities as new technologies emerge. Current areas of need that would be beneficial to implementation planning include: • Better understanding of bacteria load reduction capabilities for structural and non-structural BMPs; • Models to evaluate bacteria loading and track reductions; • Methods to evaluate bacteria re-growth capability and the potential for stormwater infrastructure (pipes, sumps, etc.) to serve as a source; • Refined DNA "fingerprinting" to identify specific sources in urban environments.

Although a formal implementation plan is not required as a condition for TMDL approval under the current U.S. EPA regulations, U.S. EPA finds that the TMDL document submitted by MPCA adequately addresses this tenth element.

11. Public Participation

U.S. EPA policy is that there should be full and meaningful public participation in the TMDL development process. The TMDL regulations require that each State/Tribe must subject calculations to establish TMDLs to public review consistent with its own continuing planning process (40 C.F.R. §130.7(c)(1)(ii)). In guidance, U.S. EPA has explained that final TMDLs submitted to U.S. EPA for review and approval should describe the State's/Tribe's public participation process, including a summary of significant comments and the State's/Tribe's responses to those comments. When U.S. EPA establishes a TMDL, U.S. EPA regulations require U.S. EPA to publish a notice seeking public comment (40 C.F.R. §130.7(d)(2)).

Provision of inadequate public participation may be a basis for disapproving a TMDL. If U.S. EPA determines that a State/Tribe has not provided adequate public participation, U.S. EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by U.S. EPA.

Comments:

A stakeholder participation process was undertaken to obtain input from, review results with, and take comments from the public and interested and affected agencies regarding the development of allocations and conclusions set forth in the Coon Creek watershed TMDL report (Section 9 of the TMDL report).

Public participation opportunities for the Coon Creek watershed TMDLs were provided in the form of public meetings, electronic newsletters and CCWD's website (http://www.cooncreekwd.org/). There were also several stakeholder committees established for the CCWD. A Technical Advisory Committee (TAC) consisting of project stakeholders was developed to allow active collaboration throughout development of the Coon Creek watershed TMDL. TAC members were asked to provide input on the overall project approach, review and comment on draft documents, and develop consensus

on key project related decisions. TAC members included the following partners: Anoka County Highway Department, Anoka Soil and Water Conservation District, Board of Water and Soil Resources, City of Andover City of Blaine, City of Coon Rapids, City of Ham Lake, City of Fridley, City of Spring Lake Park, Metropolitan Council Environmental Services, MDNR, MPCA. A Citizen Advisory Committee (CAC) was established from a group of interested citizens to provide a public perspective on direction and activities of the CCWD. The existing CAC was used to provide input on the project approach and review draft documents. A list of CAC meeting dates is provided below. Several stakeholder committee meetings (14 TAC and 22 CAC meetings) were held and public outreach efforts made. The CCWD also presented information regarding the TMDL project during its regular scheduled Board of Managers meetings the second and fourth Mondays of every month, all of which were open to the public.

The Coon Creek watershed TMDLs were public noticed from December 28, 2015 to January 28, 2016. Copies of the draft TMDL Report for Coon Creek watershed were available to the public upon request and on the MPCA website at http://www.pca.state.mn.us/water/tmdl/tmdl-draft.html.

As part of the final TMDL submittal to EPA, the state provided copies of the press releases of public notice, letters of invitation to interested parties, the mailing list of interested parties, and copies of the written comments received during the public comment period and the state responses to these comments.

MPCA received comments from various parties (i.e. MN Department of Agriculture, and U.S. EPA) during the Coon Creek watershed TMDL public comment period. Most of the comments were in regards to stream flow data, load source contribution, and TMDL allocations calculations. All comments received were adequately addressed by MPCA.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this eleventh element.

12. Submittal Letter

A submittal letter should be included with the TMDL submittal, and should specify whether the TMDL is being submitted for a *technical review* or *final review and approval*. Each final TMDL submitted to U.S. EPA should be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for U.S. EPA review and approval. This clearly establishes the State's/Tribe's intent to submit, and U.S. EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final review and approval, should contain such identifying information as the name and location of the waterbody, and the pollutant(s) of concern.

Comments:

The U.S. EPA received the formal submission of the final Coon Creek watershed TMDLs on April 2016 along with a cover letter from Glenn Skuta, Division Director, Water Division, MPCA dated April 18, 2016. The letter stated that the Coon Creek watershed TMDLs were final TMDLs submitted under Section 303(d) of CWA for EPA review and approval. The letter also contained the waterbody segment names, and the causes/pollutants of concern for the TMDLs submitted.

U.S. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning

this twelfth element.

13. Conclusion

After a full and complete review, U.S. EPA finds that the TMDLs for the Coon Creek watershed satisfy the elements of approvable TMDLs. These approvals address four (4) segments for three (3) pollutants for a total of eleven (11) TMDLs addressing eight (8) impairments (See Table 1 above).

U.S. EPA's approval of the Coon Creek watershed TMDLs extend to the waterbodies which are identified in this decision document and the TMDL study with the exception of any portions of the waterbodies that are within Indian Country, as defined in 18 U.S.C. Section 1151. U.S. EPA is taking no action to approve or disapprove the State's TMDLs with respect to those portions of the waters at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.