



3235 Fernbrook Lane N • Plymouth, MN 55447  
Phone (763) 553-1144 • Fax (763) 553-9326

[www.shinglecreek.org](http://www.shinglecreek.org)

## MINUTES October 11, 2007

**I.** A meeting of the West Mississippi Watershed Management Commission was called to order by Chair Tina Carstens on Thursday, October 11, 2007, at 1:50 p.m., at Lancer at Edinburgh, 8700 Edinbrook Crossing, Brooklyn Park, MN.

Present were: Kathleen Carmody, Brooklyn Center; Tina Carstens, Brooklyn Park; Matt Swenson, Champlin; Karen Jaeger, Maple Grove; Charlie LeFevere, Kennedy & Graven; Ed Matthiesen, Wenck Associates, Inc.; and Judie Anderson, JASS.

Also present: Shelley Schwaninger, Brooklyn Center.

**II.** Motion by Carmody, second by Swenson to **approve the agenda**. Motion carried unanimously.

**III.** Motion by Carmody, second by Jaeger to approve the **minutes of the September 13, 2007 meeting**. Motion carried unanimously.

**IV.** Motion by Swenson, second by Carmody to approve the **Treasurer's Report**. Motion carried unanimously.

**V.** Motion by Carmody, second by Swenson to approve the **October claims**. Claims totaling \$6,925.91 were approved by roll call vote: ayes – Carmody, Carstens, Swenson, and Jaeger; nays - none; absent - Osseo.

### **VI. Communications.**

The Commissioners received the **September Communications Log**. No action required.

### **VII. Water Quality.**

The Commission received the **City of Brooklyn Park's Nondegradation Report** for review and comment. Brooklyn Park and Maple Grove are among the 30 cities required by the MPCA to conduct a special Nondegradation Assessment as part of its National Pollutant Discharge Elimination System (NPDES) Phase II permit. The Cities are required to determine whether stormwater volume and pollutant loads, total phosphorus (TP) and total suspended solids (TSS), increased between 1988 and the present and between the present and 2020, and whether sufficient BMPs are in place to prevent or mitigate those increases. If not, the Cities must propose amendments to its SWPPP to accomplish this. Cities are required to obtain review and input from the public and various agencies before finalizing their Nondegradation Plans. Maple Grove has not submitted its plan to the Commission for review and comment.

The City of Brooklyn Park used the Simple Method (applying literature values of pollutant loading and stormwater runoff volume by land use class to the area of the city by each land use class) to estimate the stormwater volume and pollutant loading exported from the City in 1990, 2006, and 2020. The Plan assumed that all development occurring after 1990 was treated to NURP standards, thus the analysis simply calculated the increased loading between the time periods and applied reduction rates of 60% for TP and 85% for TSS to the increase. Because high-loading untreated agricultural lands have been and will continue to be converted to treated developed uses, the City projects an overall decrease in TSS and TP load due to land use change between 1988 and 2020. The Plan estimates the new stormwater volume generated by land use change, and subtracts from that amount a volume reduction for evaporation and infiltration from the new ponds. The Plan assumes 36" of evaporation per year from pond surfaces and infiltration of 0.03"/hour for 240 days per year. The effect of the infiltration required by Commission rules since 2002 was not estimated.

The final task in the Nondegradation Plan is to assess the impacts of any increases in pollutant loading and runoff volume since 1988 and identify ways to either prevent or mitigate those impacts. The Plan notes that there are Impaired Waters in the City, including Magda Lake, Shingle Creek, Bass Creek, and the Mississippi River. The Plan states that no degradation to water resources associated with TSS or TP is expected through 2020 as those pollutant loads have not increased over the 1988 levels. The Plan also argues that the annual runoff volume increase is insignificant for the following reasons:



1. The increase averaged over the 240 day rain season is too small to significantly alter channel base flows.
2. Development rules prohibit an increase in peak discharge rates for storm events up to the 100-year, 24-hour event.
3. The drainage system has been designed to accommodate ultimate development.
4. The increase in annual volume equates to an increase generated by 3" of rainfall. Over the ten years of precipitation record used in the Plan, annual rainfall varied from 25" to 44", so an increase of 3" is within the natural variability.
5. The City and watersheds have policies in place and perform BMPs to minimize or correct erosion.

The City proposes to undertake two activities in response to the findings of the Plan: evaluate and implement reasonable, cost-feasible opportunities for regional runoff volume reduction as opportunities arise; and monitor actual pond infiltration rates. If rates are found to be significantly different than those used in the Plan, the findings will be recalculated and the results reevaluated.

The report provides a simple estimate of the pollutant loading and runoff volume impacts of development and redevelopment since 1988 and projected to 2020. Much of the area of the City in the Shingle Creek watershed was developed prior to the implementation of rules requiring treatment, but much of the City in the West Mississippi watershed developed after rules were in place to require BMPs.

1. The Plan should better describe how the runoff volumes were calculated. Adding to the text a sample calculation and a table presenting the average annual runoff by land cover/soil type used in the calculations (as detailed in the table in Appendix I) would greatly help the lay reader to better understand this crucial calculation. This is important to the Commissions because we are evaluating volume management as a nutrient loading reduction activity and want the scientific conclusions between the City and the Commissions to be aligned. The Plan should also show all results by major watershed.

2. Pollutant loadings are derived from net runoff volumes. The Plan estimates the new stormwater volume generated by land use change, and subtracts from that amount a volume reduction for evaporation and infiltration from the new ponds. This Plan assumes 36"/year of evaporation from pond surfaces. It is not clear how it accounts for the precipitation on pond surfaces. It may be accounted for in the impervious fraction for each land use, but that is not clear from the short description of runoff volume calculation methods in the Plan. In Minnesota it is typically assumed that surface evaporation is approximately equal to surface precipitation and it is disregarded. More information should be provided explaining and justifying this proposed volume reduction.

The Plan also estimates a significant volume of infiltration from ponds and subtracts that from the total volume. Acknowledging that siltation in ponds would gradually reduce infiltration capacity, the Plan uses an infiltration rate of 0.03"/hour, which is the NRCS standardized infiltration rate for Hydrologic Soil Group D soils, rather than the rate for the actual soil type. Ponds in Brooklyn Park have been observed to infiltrate, so much so that in some developments the ponds are constructed with clay or plastic liners to prevent infiltration and maintain a permanent pool. It is not clear in the Plan whether lined ponds were included in the pond acreage used to calculate infiltration. The growing practice of pond lining is at odds with the proposal to rely on pond infiltration for volume management. As a side note, the Commissions' rules do not allow infiltration below the NWL of ponds in the calculations to meet the 0.5" infiltration rule, but do allow for sideslope and pond bench infiltration above the NWL. The Mitigation section of the Plan includes a proposed new activity to monitor actual infiltration rates in ponds in various soil conditions. More information should be provided justifying this proposed volume reduction, including how the City intends to balance the competing interests of pond infiltration versus maintaining a permanent pool.

3. The Plan notes that some of the water resources in the City are Impaired Waters and those TMDLs will identify and address any impacts associated with increased annual volumes of runoff or pollutant loads. It is important to note that TMDLs and Nondegradation are linked. The Nondegradation analysis evaluates not only whether pollutant loading and runoff volume has increased, but whether there have been adverse impacts on water resources. The impairments to Shingle and Bass Creeks and 13 of the 16 lakes in the watershed indicate that



development has adversely impacted the water resources. It is not known what impacts specifically occurred during the period 1988 to the present. What is known is that there is a need for pollutant loading reduction and runoff volume management to restore water quality and biologic integrity to the water resources throughout the watershed.

4. While not located in Brooklyn Park, a portion of the city drains to the Twin and Ryan Lakes chain, which are also Impaired Waters and should be noted in the Plan. The Twin and Ryan Lakes TMDL identifies the need for up to a 76% reduction in phosphorus loading to North (Upper) Twin Lake, which receives runoff from Brooklyn Park's Southwest subwatershed. While the Plan indicates that the Southwest subwatershed is expected to experience minimal increase in phosphorus loading to 2020, and thus may meet the Nondegradation requirement for the period 1988-2020, the TMDL load reduction is more restrictive and takes precedence. It requires the city to implement phosphorus reduction BMPs as opportunities arise and to participate in other activities that reduce internal phosphorus loading.

The 30-day public comment period for the TMDL addressing those four lakes concludes on October 17, 2007. Shortly thereafter the TMDL will be submitted to the EPA for final approval. That approval is expected prior to the end of 2007. The Implementation Plan guiding the cities in the lakeshed (including Brooklyn Park) in their nutrient reductions to the lakes was approved by the Shingle Creek Watershed Commission today and will be submitted to the MPCA for approval. The Magda Lake TMDL is under development and will likely also require additional phosphorus load reductions.

The report should add North Twin Lake to the list of Impaired Waters receiving discharge from the City. It should acknowledge the TMDL findings and reductions and describe how the City intends to evaluate and implement the management activities identified in the TMDL and Implementation Plan.

5. In several places the report refers to the *chlorine* impairment in Shingle Creek. The impairment is for *chloride*. The chloride TMDL is complete, was approved by the EPA in February 2007, and is currently in Implementation. The report should make this correction throughout the document.

Motion by Carmody, second by Swenson to approve the comments and forward them to the City of Brooklyn Park. Motion carried unanimously.

#### VIII. Project Reviews.

There were no projects.

#### IX. Second Generation Plan.

A. **Major Plan Amendment.** In May the Commissioners adopted a Major Plan Amendment to the Second Generation Plan revising the Capital Improvement Program (CIP) and adopting the Water Quality Plan. Members have two years to **complete functions and values assessments for priority wetlands in their cities.** Members with projects listed on the CIP must request the Commission to **initiate the project approval process.**

B. **Local Water Management Plans.** Except for those with land in the Minnehaha Creek Watershed District or the Mississippi WMO, all the cities in Shingle Creek/West Mississippi should have completed a local plan update by the end of 2006. Currently, Brooklyn Center has a completed and approved plan; Brooklyn Park anticipates completing their plan by the end of 2007; and Maple Grove will complete their LWP in tandem with the completion of their Comprehensive Plan. The status of the Champlin and Osseo plans is unknown.

#### X. Education and Public Outreach Program.

##### A. Water Quality Education Grants.

**City of Brooklyn Park.** Last month the Commission approved Brooklyn Park's application for grant funds to install two interpretive signs explaining the restoration of Shingle Creek in the vicinity of the Village Creek redevelopment. The Commission approved the Education and Public Outreach Committee's recommendation to fund this project in the amount of \$1,000, rather than the \$2,000 amount requested, with stipulations. The City has declined the grant award.



**B. Joint Activities** (with the Elm Creek and Bassett Creek WMOs).

**1. Public Opinion Survey.** Decision Resources is making final revisions to the questions and is developing the sampling strategy. Calling will begin in mid-November. Results should be available by the end of the year.

**2.** The joint EPOC had previously considered and rejected a **partnership with Metro Blooms** to provide rain garden seminars because it would have cost the commissions too much to participate. Metro Blooms has a new director and business model and is interested in exploring lower-cost opportunities that may be more suitable and affordable for the four Commissions. On October 2, 2007, representatives from the four Commissions met with Kristen Denzer from Metro Blooms to discuss possible partnerships for 2008.

Metro Blooms offers a three-part rain garden educational opportunity: **Workshop A** is conducted by a landscape ecologist/educational consultant who presents a do-it-yourself/how-to approach for constructing a rain garden. A lead landscape design assistant (LDA) conducts **Workshop B**. Each Workshop B has one LDA per five participants in order to provide hands-on help and advice on individual rain garden plans. **On-site consultation** is also offered as part of the program. An LDA will come to your site to help take measurements, size and site your garden and offer advice on plants and drainage issues, etc.

Cost for 100 participants in Workshop A is \$2,837. Of that amount, \$2,321 is the City/Commission share. Cost for 40 participants in Workshop B is \$1,086, with \$822.80 being the City/Commission share. Participants pay \$10 for each workshop and receive \$65 worth of plants. Cost for on-site consultation is \$40 and is paid by the property owner. The subcommittee recommended that the four watershed organizations partner in offering two Workshops A and one Workshop B, for a total cost of \$5,465.

Workshops are proposed to be held in Plymouth and Maple Grove. Brooklyn Center and Brooklyn Park are also planning to jointly sponsor a workshop in their cities. It is intended that these three sites, with collaborative promotion, would outreach residents in all four watersheds. Proposed cost share would be \$1,000 from Bassett Creek, \$2,000 from Elm Creek, and \$3,000 from Shingle Creek/West Mississippi.

Motion by Swenson, second by Jaeger to reallocate \$1,500 from the Commission's Water Quality Education Grant budget to sponsor a Metro Blooms Rain Garden Workshop. Motion carried unanimously.

**3.** EPOC's October 16 meeting will be dedicated to developing partnerships with **Three Rivers Park District** to benefit from their expertise, presence, and reputation in advancing public knowledge about water resources.

**XI. Grant Opportunities.**

**XII. Other Business.**

**A.** The Commission's annual **Golf Outing** was cancelled.

**B. Adjournment.** There being no further business before the Commission, motion by Jaeger, second by Carmody to adjourn. The meeting was adjourned at 1:56 p.m.

Respectfully submitted,

A handwritten signature in black ink that reads "Judie A. Anderson".

Judie A. Anderson  
Recording Secretary  
JAA:tim