

**Minnehaha Creek Watershed District *REQUEST FOR BOARD ACTION***

**MEETING DATE:** March 24, 2016

**TITLE:** Authorization to Contract with Wenck Associates, Inc. for Consulting Services for the Ecosystem Evaluation Program for July 1, 2016 – December 31, 2017

**RESOLUTION NUMBER:** 16-017

**PREPARED BY:** Yvette Christianson, Water Quality Manager  
Kelly Dooley, Water Quality Manager

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**REVIEWED BY:**  Administrator    Counsel    Program Mgr. (Name): Craig Dawson  
 Board Committee    Engineer    Other

**WORKSHOP ACTION:**

<input checked="" type="checkbox"/> Advance to Board mtg. Consent Agenda.	<input type="checkbox"/> Advance to Board meeting for discussion prior to action.
<input type="checkbox"/> Refer to a future workshop (date): _____	<input type="checkbox"/> Refer to taskforce or committee (date): _____
<input type="checkbox"/> Return to staff for additional work.	<input type="checkbox"/> No further action requested.
<input type="checkbox"/> Other (specify): Not reviewed at a workshop	

**PURPOSE or ACTION REQUESTED:**

Approval to contract with Wenck Associates for consulting services for the final development of the Ecosystem Evaluation Program for July 1, 2016 – December 31, 2017.

**PROJECT/PROGRAM LOCATION:**

District Wide

**PROJECT TIMELINE:** See attached Proposal for Services for July 1, 2016-December 31, 2017

**PROJECT/PROGRAM COST:**

Fund name and number: Ecosystem Evaluation Program (5002)  
Approved project costs (2014-2017): \$653,600  
Current 2016 budget: \$333,522  
Requested amount of funding: \$183,000 (2016) and \$141,000 (2017)  
Is a budget amendment requested? No  
Is additional staff requested? No

## **PAST BOARD ACTIONS:**

### Planning and Policy Committee:

- November 7, 2013: The Committee asked staff to return with a budget that outlines the effort and estimated costs associated with rewriting report cards.
- January 16, 2014: The Committee approved to forward onto the Operations and Programs Committee the concept of the scientifically defensible watershed wide ecosystem evaluation/grading tool. They asked for staff to provide a clear and simple framework of the concept as how the tool will enhance the work done by the Planning and Communication Departments and a more detailed timeline/budget.

### Operations and Programs Committee:

- February 6, 2014: The Committee approved to forward the Ecosystem Evaluation Program to the Board of Managers Meeting on February 27, 2014, for discussion and action. The Committee directed staff and a representative from Wenck Associates to present a further refined timeline/budget with detailed description of tasks, and address the need of additional staffing to assist the performing of current staff's critical monitoring duties.

### Board Meeting:

- February 27, 2014: Resolution # 14-017
  - Board Directed Amendments to the Proposed Resolution – Authorization to Continue Developing the Ecosystem Evaluation Program for 2014, Develop the Workplan for 2015
- March 27, 2014: Resolution # 14-017
  - Authorization to Continue Developing the Ecosystem Evaluation Program for 2014, Develop the Workplan for 2015
- April 24, 2014: Resolution # 14-028
  - Authorization to Contract with Wenck Associates, Inc. for Consulting Services for the Ecosystem Evaluation Program for 2014
  - Cost for services in contract not-to-exceed \$99,500
- November 20, 2014: Resolution #14-096
  - Authorization to contract with Wenck Associates, Inc. for Consulting Services for the Ecosystem Evaluation Program for January 1, 2015 – June 30, 2016
  - Cost for services in contract not-to-exceed \$230,000

## **SUMMARY:**

The Ecosystem Evaluation Program's process began with the language, "Developing a Water Quality Index that includes such factors as water chemistry, clarity, ecological value, human use, and aesthetics" which was stated in the Minnehaha Creek Watershed District (MCWD) Comprehensive Water Resources Management Plan in 2007. In 2011, Joe Bischoff, Wenck Associates, presented to the Board of Managers an ecosystem based approach for watershed management. Around the same time, MCWD staff, directed by the Hydrodata Committee, performed a Gap Analysis to identify monitoring needs that were not currently being addressed. Staff recognized the Water Quality Index as one of these gaps.

The Ecosystem Evaluation Program's purpose is to promote greater understanding of the overall health of the watershed. A management evaluation tool will be developed to identify data needs, assess watershed conditions, identify areas that need improvement, and management strategies to protect and improve water resources.

The management evaluation tool being developed will assess and grade deep and shallow lakes, streams, wetlands, landscape, groundwater, and hydrology. These natural resources will be evaluated for their functions of biodiversity, habitat diversity, nutrient cycling, recreation, flood control, and groundwater recharge.

The results from the scored metrics will lead to increased collaboration within the organization in the following ways: developing management and protection strategies, feasibility studies, rule revisions, and plan development; communicating to the public and other stakeholders the watershed's key resources and ecosystem complexity; and implementation of new monitoring plans to fill in the data gaps. All of which can be used in the development of the 2017 Comprehensive Water Resources Management Plan.

## **Proposal to Continue and Complete Development of Ecosystem Evaluation Program:**

Staff has been working closely with Joe Bischoff, Wenck Associates, Inc. in the process of preparation and presentation of the Ecosystem Evaluation Program since January 2013. Mr. Bischoff and his colleagues have assisted staff with the original scope of work, estimated timeline and budget, and initial development of the program in 2014.

The estimated proposal, Phase 3, by Wenck Associates for the Ecosystem Evaluation Program is included in Attachment 1. The work covered by the proposal spans July 2016 – December 31, 2016 for \$183,000, and January-December, 2017, for \$141,000. Phase 3 services include the completion of the development of the management evaluation tool which includes developing the evaluation system for groundwater, terrestrial habitat, and watershed hydrology.

Wenck Associates is uniquely qualified due to its intimate knowledge of the watershed. Wenck provides a unique mix of limnologists, ecologists, wetland ecologists, fisheries biologists, landscape designers and engineers with an extensive background in watershed management to develop the ecosystem watershed evaluation. Wenck's familiarity with the District and the development of the Ecosystem Evaluation Program should result in overall cost efficiencies with its continued involvement with the project.

**Recommendation:**

Staff requests authorization the Board of Managers to approve contracting with Wenck Associates, Inc. for continuation of consulting services for the development of the Ecosystem Evaluation Program. The total cost for Wenck's services for Phase 3 of the Ecosystem Evaluation Program (July 1, 2016 through December 31, 2017) is \$324,000. The total cost for consulting service to fully develop the E-Grade program through Phase 3 would be \$653,500, which compares to the original estimate of \$653,600 that was presented to the Board under Resolution # 14-017.

## RESOLUTION

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**RESOLUTION NUMBER: 16-017**

**TITLE: Authorization to contract with Wenck Associates, Inc. for Consulting Services for the Ecosystem Evaluation Program for July 1, 2016 – December 31, 2017**

- WHEREAS, A gap was identified in the 2007 Comprehensive Water Resources Management Plan to develop a water quality index; and
- WHEREAS, the objective of the program is to develop a scientifically defensible watershed wide ecosystem evaluation/grading tool in which the metrics will be developed using literature research and stressor responses and using indexes that are already available; and
- WHEREAS, the results from the application of management evaluation tool will lead to increased collaboration throughout the organization in the following ways: developing management and protection strategies; communicating to the public and other stakeholders; and implementing new monitoring plans to complete the data gaps; and
- WHEREAS, these results can all be used in the development of the 2017 MCWD Comprehensive Water Resources Management Plan; and
- WHEREAS, the District's current lake-grading system uses water-clarity parameters exclusively, which does not provide an overall assessment of water quality. The implementation of the Ecosystem Evaluation Program ("E-Grade") will include revision of the District lake-grading system to account for the many factors in addition to water clarity that affect water quality and health; and
- WHEREAS, the purpose of the Ecosystem Evaluation Program is to develop a watershed ecosystem management tool to assess watershed conditions on a graded scale, identify target areas, and develop management strategies to protect and improve water resources; and
- WHEREAS, The Ecosystem Evaluation Program is in its final stages of development and plans to release the report of the first three subwatersheds, Six Mile Marsh, Schutz, and Minnehaha Creek Fall 2018; Group 2 subwatersheds will be released in 2021; Group 3 released in Summer 2024; and the first watershed-wide E-Grade report in Fall 2024; and
- WHEREAS, the Board of Managers approved Resolution # 14-028 and Resolution # 14-096 Authorization to Contract with Wenck Associates, Inc. for Consulting Services for the Ecosystem Evaluation Program for 2014 –June 2016; and

WHEREAS, Internal Governance Policy #6 provides for a competitive process when purchasing any professional service in excess of \$25,000. Staff recommends, and the Board finds, that it is appropriate to deviate from that policy in light of Wenck's unique knowledge of the hydrologic and hydraulic behavior of the Minnehaha Creek watershed and the organizational goals of the District, as well as its work to date in developing the concept of the Ecosystem Evaluation Program, which together make Wenck uniquely qualified to develop a sound product cost-effectively; and

WHEREAS, Wenck Associates, Inc. provides a unique mix of limnologists, ecologists, wetland ecologists, fisheries biologists, landscape designers and engineers with an extensive background in watershed management to develop the ecosystem watershed evaluation; and

WHEREAS, the proposed cost of consulting services for the Ecosystem Evaluation Program for July 1, 2016 – December 31, 2016 (\$183,000), and January – December 2017 (\$141,000) by Wenck Associates, Inc., thus totaling \$324,000; and

WHEREAS, In authorizing the present scope of work for Wenck Associates, Inc., the Board recognizes that the Ecosystem Evaluation Program as a whole is a four-year project with an estimated total cost of \$653,500; and

NOW, THEREFORE, BE IT RESOLVED, that the MCWD Board of Managers authorizes the District Administrator to execute an agreement with Wenck Associates, Inc. for the development of Phase 3 of the Ecosystem Evaluation Program (July 1, 2016 – December 31, 2017) and upon advice of counsel and with such further minor revisions as may be necessary to effect the intent of the parties, not to exceed \$324,000.

Resolution Number 16-017 was moved by Manager \_\_\_\_, seconded by Manager \_\_\_\_\_.  
Motion to adopt the resolution \_ ayes, \_ nays, \_ abstentions. Date: March 24, 2016

\_\_\_\_\_  
Secretary

Date: \_\_\_\_\_

**ATTACHMENT 1**



Responsive partner.  
Exceptional outcomes.

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**Ms. Kelly Dooley**

**Ms. Yvette Christianson**

Minnehaha Creek Watershed District  
15320 Minnetonka Blvd.  
Minnetonka, MN 55345

RE: Proposal for Services  
Phase 3 E-Grade Ecosystem Evaluation Program

**Dear Kelly and Yvette,**

Thank you for the opportunity to provide this proposal to assist the Minnehaha Creek Watershed District (District) with developing an ecosystem assessment for watersheds. Wenck's long term relationship with the District along with our intimate knowledge of the watershed and the District's structure uniquely qualifies us to develop an ecosystem evaluation for the Minnehaha Creek Watershed. Wenck provides a unique mix of limnologists, ecologists, wetland ecologists, fisheries biologists, landscape designers and engineers with an extensive background in watershed management to develop the ecosystem watershed evaluation.

Joe Bischoff (aquatic ecologist) will serve as project manager, supported by Diane Spector (Planner/Stream Ecologist), Jeff Strom (limnologist), Tom Langer (fisheries), Wes Boll (wetland ecologist), Joel Toso (hydrology), and Jordan Shuck (GIS). As with previous projects, this team is committed to direct communication and coordination with the MCWD project staff to ensure that the project outcome is the most effective use of resources towards achieving MCWDs goals.

### **Project Understanding**

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It is our understanding that the Minnehaha Creek Watershed District would like to develop an ecosystem based watershed evaluation process to assess and grade watershed resources in the District. The purpose of this study is to identify data needs and develop a management evaluation tool to assess watershed condition, identify target areas that need improvement, and develop management strategies to protect and improve water resources. A scientifically defensible watershed wide ecosystem evaluation/grading tool for the following features should be developed to help communicate the watershed's condition to the public and stakeholders.

- ▲ Deep Lakes
- ▲ Shallow Lakes
- ▲ Streams
- ▲ Wetlands
- ▲ Terrestrial Habitat
- ▲ Groundwater
- ▲ Precipitation/Hydrology



The overall process will follow the 6 steps below:

1. Identify the key components that describe the health of the watershed feature (lake, stream, wetland, upland).
  - a. Identify the key ecosystem services you are trying to protect
2. Identify the metrics or indices required to evaluate health of each of the identified components
  - a. Collect and analyze data associated with each of these metrics
3. Develop scales for each of the metrics or indices using statistical analyses, reference sites, and literature values
  - a. Statistical analysis of the data
  - b. Literature review of index values at different scales (metro, ecoregion, state, region)
4. Develop grades for each of the resource features and watershed as a whole
  - a. Develop scales combining metrics
5. Develop lists of poor scoring metrics or data gaps
6. Develop programmatic approaches to addressing scored resources
  - a. Developing monitoring approach to fill data gaps (Hydrodata)
  - b. Develop management actions focused on improving resources and areas with low scoring metrics (Planning)
  - c. Develop outreach programs to communicate grades (Communications)
  - d. Develop protection strategies for resources and areas with high scoring metrics (Planning)

Phase three addresses tasks 1 through 6 along with summer data collection activities for terrestrial systems, groundwater and watershed hydrology.

## Scope of Work

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Following is a scope of work developed for Phase 3 of the Ecosystem Evaluation Program. Phase one addressed tasks 1 through three for lakes, streams and wetlands except for data collection activities. Phase 2 addressed summer data collection and completion of the grading system for lakes, streams and wetlands including publication of the final technical document. Phase three takes the project to completion including developing the system for terrestrial, groundwater and watershed hydrology.

### **Task 1. Identify key features of health and ecosystem services (terrestrial, groundwater and hydrology).**

The first step in the process is to develop a list of key features for each of the watershed components (terrestrial, groundwater, and hydrology) that are critical to the health of that feature. The list will be based on conceptual models of the components and the critical features that need to be graded. Each of the identified features will be assigned metrics for their evaluation.

### **Task 2. Identify appropriate metrics and indices (terrestrial, groundwater and hydrology).**

Once the project is initiated and the key features of health are identified, the next step is developing the list of potential metrics for the watershed resources (terrestrial, groundwater,

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hydrology). To develop the list of potential metrics, a list of already developed studies and data for the watershed components will be compiled. The goal of the process is to base the key metrics on available data as much as possible. A list of data gaps will be provided along with the potential metrics. The key features and available data will be summarized for the project.

### **Task 3. Data collection for terrestrial, groundwater and hydrology in the test subwatersheds.**

Once the key features and appropriate metrics are defined, the next step is to fill data gaps associated with the metrics that were identified for terrestrial, groundwater, and hydrology. However, since these tasks are not scheduled to be completed until the end of May 2016, data collection needs have not yet been identified. Prior to initiation of this task, a written agreement will be developed with MCWD staff that outlines data collection and budgets.

### **Task 4. Meetings.**

Task 4 covers the time to prepare for and present at a technical and stakeholder meeting covering the results of the above mentioned tasks as well as MCWD staff and Board meetings as necessary. The following meetings were identified as a part of this scope of work:

1. Meetings with the technical advisory group and the stakeholders group
2. MCWD Board Updates and Final Presentation
3. Final meeting with partners to present and discuss overall system

While the number of meetings has not been established, Wenck will work closely with MCWD staff to ensure the maximum amount of meetings are conducted for the budget.

### **Task 5. Literature research and stressor response.**

Task 5 will be conducted concurrently with tasks 1 and 2 to support the development of the key features, the primary stressors to those features, appropriate metrics to evaluate the features and the range of expected values for each of the metrics.

### **Task 6. Data analysis and develop grade break points for terrestrial, groundwater and hydrology.**

Once all of the field data are compiled, Wenck will use the appropriate indices to develop scores for the watershed features and develop grading break points based on reference conditions. These grading systems will be reviewed by the TAC and will consider scales such as regional, state-wide, and possibly larger.

### **Task 7. Test scoring system for terrestrial, groundwater and hydrology.**

Testing the scoring system requires comparing the outcomes developed in task 2 versus what is already known about the conditions in the watershed feature. Wenck will review the scores in the context of literature values and MCWD diagnostic studies to evaluate the effectiveness of the scoring system.

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**Task 8. Finalize grading process and publish technical paper (terrestrial, groundwater, and hydrology).**

The final step in the process is to develop final documentation of the scoring system including methodology, data gaps, results of the scoring system, strengths and weaknesses, and summary of results and recommendations. Three reports will be generated, one each for terrestrial systems, groundwater and watershed hydrology.

**Task 9. Develop watershed-wide grading scale and watershed ecosystem service condition summary.**

Once all of the features are completed, they all need to be brought back together into an overall grading scheme that accounts for the interplay between each of the watershed features and ecosystem services. Wenck will develop an overall watershed grading scheme that accounts for all of the water features and ecosystem services.

**Task 10. Provide support to MCWD staff in the development of final reports.**

Once the scientific framework is completed, the overall grading system needs to be rolled out for public outreach. This task will be led by MCWD, however Wenck has included time to support the development of these documents. This can include, but is not limited to, writing, graphics, presentations, flyers, or other outreach materials at the discretion of the District.

## Budget

The following table outlines the budget for each of the tasks to be conducted in 2016 and 2017 (Table 1). Each of the tasks will be completed on a time and materials basis. These tasks were separated for budgetary purposes and only tasks scheduled for that year will be completed. In other words, Wenck will not begin 2017 tasks until January 1, 2017. However, this Phase III work plan takes the grading development for all watershed components to completion for Lower Minnehaha Creek, Schutz Lake, and the Six Mile Creek subwatershed. A \$30,000 contingency was spread across the 2 years to cover unforeseen, out of scope activities or additional field activities. These funds will only be spent upon written consent from MCWD staff.

Table 1. Estimated budget for completing the EEP assessment for terrestrial, groundwater and hydrology).

Task	Description	July – December 2016 Total	2017 Total
1	Identify key features of health and ecosystem services (terrestrial, groundwater, hydrology)	\$18,000	
2	Identify appropriate metrics and indices (terrestrial, groundwater, hydrology)	\$24,000	
3	Field data collection (terrestrial, groundwater, hydrology)	\$30,000	
4	Meetings	\$30,000	\$36,000
5	Literature research	\$18,000	
6	Develop grade break points	\$24,000	
7	Test scoring system	\$9,000	
8	Finalize grading process and publish technical paper (terrestrial, groundwater, hydrology)		\$42,000
9	Develop watershed-wide grading scale and watershed ecosystem service condition summary		\$45,000
10	Provide support to MCWD staff in the development of final reports		\$18,000
	Contingency	\$30,000	
<b>Annual Totals</b>		<b>\$183,000</b>	<b>\$141,000</b>
		<b>TOTAL</b>	<b>\$324,000</b>

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## Timeline

The following table outlines the proposed timeline for the project.

Task	Description	Completion Date
1	Identify key features of health and ecosystem services (terrestrial, groundwater, hydrology)	May 31, 2016
2	Identify appropriate metrics and indices (terrestrial, groundwater, hydrology)	June 30, 2016
3	Field data collection (terrestrial, groundwater, hydrology)	September 30, 2016
4	Meetings	March 2016 through December 2017
5	Literature research	May 31, 2016
6	Develop grade break points	October 31, 2016
7	Test scoring system	November 31, 2016
8	Finalize grading process and publish technical paper (terrestrial, groundwater, hydrology)	April 30, 2017
9	Develop watershed-wide grading scale and watershed ecosystem service condition summary	July 31, 2017
10	Provide support to MCWD staff in the development of final reports	September 30, 2017

Wenck Associates is ready to start immediately and will commit the necessary resources to the project team in order to assure technical excellence and customer service. Thank you for this opportunity to continue working with the Minnehaha Creek Watershed District. If you have any questions or need additional information, please do not hesitate to contact me at (763) 479-4200.

Sincerely,

**Joe Bischoff**  
 Project Manager/Principal