



*Wednesday, March 3rd, 2021*

## **CITIZENS ADVISORY COMMITTEE MEETING**

**Virtual Meeting Minnehaha Creek**

**Watershed District Offices**

**15320 Minnetonka Boulevard**

**Minnetonka, MN 55345**

***www.minnehahacreek.org***

### **Board of Managers:**

**Sherry White, President; William Olson, Vice President; Jessica Loftus, Treasurer;  
Eugene Maxwell, Secretary; Richard Miller, Manager; Arun Hejmadi, Manager**

### ***Board Liaison: Manager Maxwell***

- 1. Committee Meeting Call to Order and Roll Call**
- 2. Approval of Agenda (*Additions/Corrections/Deletions*)**
  - 2.1 Approval of March 3rd, 2021 Agenda
- 3. Approval of Minutes (*Additions/Corrections/Deletions*)**
  - 3.1 Approval of February 17th CAC Minutes
- 4. Discussion Items**
  - 4.1 Climate Adaptation Series Wrap-up:
    - a. Climate Adaptation Series Report and Next Steps - Christopher
    - b. Overview of Phase I Plans – Beck and Cermak
- 5. Information Items and Updates**
  - 5.1 CAC Member Updates
  - 5.2 Board Liaison Updates
  - 5.3 Staff Updates
- 6. Adjournment**

### **Upcoming Meeting**

Wednesday, April 14th, 2021 Citizen Advisory Committee (Board Liaison Manager Miller)

### Conversation Guidelines

1. Everyone participates; no one dominates.
2. Seek to understand, not to be understood.
3. Try hard to understand the views of those with whom you disagree.
4. Ask questions if you are uncertain of the meaning of someone else's comments.
5. Help to keep discussions on track and bring closure to discussion by practicing "I can live with it."

**MINUTES OF THE REGULAR MEETING OF  
THE MINNEHAHA CREEK WATERSHED DISTRICT  
CITIZENS ADVISORY COMMITTEE  
Wednesday, February 17, 2021**

**Members Present**

Balogh, Bushnell, Flo, Girard, McGovern, Nyquist, Ordway, Otlmans, Rechelbacher, Rosenberg, Salditt

**Managers Present**

Manager Olson

**Others Present**

MCWD Staff: James Wisker, Kim LaBo, Trevor Born

**Approval of Agenda and Minutes**

Eighth virtual meeting of the 2021 Citizen Advisory Committee.

Meeting chaired by Rechelbacher and called to order at 6:30 p.m.

Bushnell motioned to approve the agenda, Nyquist seconded, motion approved.

Nyquist motioned to approve the December 09, 2020 CAC meeting minutes, seconded by Rosenberg, minutes approved.

Due to the January meeting being canceled, there were not any minutes from January to approve.

**Discussion Items:**

**Executive Committee Election Results – Rechelbacher**

Rechelbacher reviewed the CAC Executive Committee election process and results. All CAC members who ran for the four Executive Committee seats were elected. As outlined in email communications to CAC members, Executive Committee members decided internally who will hold the four officer positions. Salditt will now serve as the CAC chair, Rechelbacher is vice-chair and Bushnell and Girard are the at-large members.

Rechelbacher turned the meeting facilitation over to Salditt.

**CAC Assessment: Phase 1 - LaBo/Born**

Purpose:

In this second of three CAC discussions on defining the CAC's role in MCWD's work, staff reviewed the results of the first phase of the CAC assessment process: findings and insights drawn from discovery research and conversations with diverse stakeholders. Staff also sought the CAC's thoughts on the assessment's key insights and how these insights on the CAC's strengths help define the CAC's unique value to the District.

Background:

An overview of the purpose, goals and process for the CAC assessment was provided by staff and is summarized below.

In February 2017, the MCWD Board of Managers approved Resolution #17-007, setting a comprehensive strategic direction for the organization as outlined in the 2017 Strategic Alignment Report. Since then, MCWD has systematically evaluated and realigned each of its programs to best support the organization's goals laid out in the plan. The result of this wholesale shift in MCWD's work has been a more focused, aligned, and successful suite of programs working toward the vision outlined in MCWD's In Pursuit of a Balanced Urban Ecology policy.

The CAC is the only program within the organization that has not yet undergone this reassessment since 2016. As a result, the Executive Team has expressed a desire to clarify the role of the committee to ensure it is providing maximal value for the District and for its members. At the Q3 CAC Executive Team meeting, the committee noted that MCWD must define the strategic value of the CAC and adjust the structure, schedule, and meeting formats accordingly.

At the December 17, 2020 Board meeting the MCWD Board of Managers approved Resolution #20-094, authorizing District staff to assess the CAC with the same evaluative process used to assess all District programs.

#### Assessment Goals:

To ensure the strategic alignment and focus of the CAC in 2021 and beyond, the District is undertaking an assessment process with the following goals:

1. The CAC is focused on work which provides value to the organization and its value is proportional to its organizational cost. MCWD is currently at a strategic juncture where it is moving from planning various strategic and change management initiatives to implementing those initiatives. During this process, the CAC has played the role of strategic advisor by vetting ideas, providing insight and flagging considerations. This work has been supported by a District staff liaison, Board liaisons and additional staff as needed. Now that the focus of the District has changed, the focus and role of the CAC will need to change accordingly. As the District's focus for 2021 and beyond is clarified, it is important to clarify how the CAC supports the District's future work and the level of organizational supported needed to do so.
2. The committee's structure and operations are determined by the needs of the CAC's new scope of work. The committee's structure and operations have been determined by historic past practices rather than being driven by the needs of the committee's work. Future operational considerations such as agenda focus, meeting structure, frequency and other logistics, will need to flow from a clearly refined strategic picture.
3. The work of the CAC is satisfying to committee members. Advisory committees are most effective when they feel they are providing value to the organization they advise and the work is satisfying to its members. This dynamic increases member engagement in the work of the committee by drawing on the skills, experiences and knowledge of its members.

#### Process:

The process for evaluating the CAC follows the same approach used for other programs: (1) defining the issue or opportunity; (2) gathering data and information from which insights can be drawn; (3) framing and evaluating options for decision.

### Small Group Discussion:

In facilitated group discussions CAC members reflected on the discovery process results, explored the inherent strengths of the CAC, and discussed how these strengths inform the CAC's value proposition to the District.

The CAC reflected on key insights from the discovery process which identified how resident advisors provide advice which is different and unique from other types of advisors.

Below are highlights from the discussion:

*The committee's diversity of skill sets and experiences allows the committee to remain nimble.*

In contrast to technical or expert committees who are best suited to provide advice on specific topics related to their fields of expertise, a resident advisory committee can cover a wider range of topics due to their generalist rather than specialist composition. This flexibility allows the committee to consider a diversity of initiatives which the District is undertaking.

*The fresh perspectives provided by a committee comprised of people with diverse backgrounds and experiences can be leveraged to strengthen District initiatives.*

Resident advisors can use the lenses of their various backgrounds, professions or experiences to vet District initiatives by targeting any blind spots, identifying gaps or connections staff may miss. As a committee comprised of residents from different communities within the watershed, committee members can also serve as a microcosm of the public by identifying community expectations and potential reactions to the District's work. This public perspective can strengthen the District's messaging to the broader public.

*The CAC serves as an organic conduit of community information.*

Committee members' community networks, whether informal neighborhood connections or more formal group memberships, serve as an additional linkage between the District and communities within the watershed. Through these relationships and memberships, committee members organically convey information about the District's work out to their networks and also relay information from these networks back to the District. This information flow can serve to update the District on the status and progress of other water related planning processes CAC members are involved in at the local level or flag community dynamics that could impact an initiative.

*Committee members want clarity on how they can provide value to MCWD's work*

Committee members repeatedly stressed the desire to have clear direction on how they can best serve the needs of MCWD's work and the public it serves – as this is the shared desire of the committee's volunteers.

*There are pro's and con's to each of the preliminary options framed in the discussion*

Some members liked the opportunity to engage with a particular long-range planning issue over a sustained period of time. Others were excited by the opportunity to respond to a variety of key initiatives in "one off" presentations. Another suggested fluidly changing the scale and scope of CAC engagement over time according to the dynamic needs of the organization.

### Next Steps:

Staff reviewed the next steps in the CAC assessment process which are outlined below:

1. Based on the results of the discovery process and discussions with the OPC and CAC in February, staff will develop and evaluate a range of options for the strategic orientation of the CAC. Evaluation criteria and operational considerations will be used to assess the various options.
2. This assessment will be reviewed and discussed by District staff, OPC, and CAC throughout April.
3. After this phase of discussion, staff will develop a final report with recommendations and seek Board approval in May.

### **Updates:**

#### **CAC Member Update**

- McGovern announced Hennepin County is seeking public comments until March 3<sup>rd</sup> on their climate action plan and encouraged members to submit comments.
- Flow reported the MN EQB has published draft recommendations on integrating climate change into the state's environmental review process and comments can be submitted until March 31<sup>st</sup>.
- Nyquist reported on a MWMO project which drains stormwater from Columbia Parkway and golf course into the river and making water quality improvements.

#### **Staff Report**

Wisker reported MCWD staff have been involved in Hennepin County climate action planning.

MCWD staff will send out the Climate Adaptation report for CAC feedback in advance of the March meeting.

At the March 3 CAC meeting, staff will provide an overview of the feedback received, and the next steps in the process. This meeting will also be used to provide the CAC with a deeper understanding of the first phase of work. The Research & Monitoring staff will discuss the District's current capabilities and preliminary plans for further developing capabilities to understand and predict the impacts of climate change.

A new MCWD Board member will be appointed at their March meeting in two weeks given Manager Rogness is not seeking reappointment.

Meeting adjourned at 8:30 p.m.

**Next Meeting is Wednesday, March 3, 2021 at 6:30 p.m.**

Board of Managers Liaison: Manager Maxwell



**Title:** Climate Adaptation Series Wrap-up

**Prepared by:** Name: Becky Christopher and Brian Beck  
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bchristopher@minnehahacreek.org

**Purpose:**

The primary purpose of the March Citizens Advisory Committee (CAC) Meeting is to obtain CAC concurrence on the draft framework that has been developed for the District's Climate Adaptation Strategy as an outcome of the CAC's 2020 climate adaptation discussion series. This meeting will close out the discussion series as we transition into the first phase of work under the framework: Understand and Predict.

**Background:**

Over the course of 2020, the CAC has been engaged in a series of discussions to advise the District as it develops its strategy for responding to climate change. This process has included the following conversations:

1. Climate Science – a presentation on Hydroclimatic Conditions & Changes from a State Climatologist ([March 3, 2020 CAC Meeting](#))
2. Governance Scan – review of existing plans and defined roles in climate adaptation across state, regional, and local governments ([June 16, 2020 CAC Meeting](#))
3. Role Framing – discussion and stress-testing of a high-level framework for the District's climate adaptation strategy ([October 14, 2020 CAC Meeting](#))
4. SWOT Analysis - conducting a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to inform the District's response to climate change ([November 10, 2020 CAC Meeting](#))

Staff has used these discussions with the CAC to draw insights about the District's role in responding to climate change and develop a high-level framework for its Climate Adaptation Strategy. The framework serves to delineate the District's role in climate adaptation across three areas:

1. Understand and Predict – The District will utilize and expand its capabilities in data collection and analysis to understand and predict the impacts of climate change, establish goals, and evaluate potential solutions.
2. Communicate, Convene and Plan – The District will convene its partners to build consensus around the issues, align goals, and guide the development of a coordinated watershed-wide implementation plan.
3. Implement, Measure and Adapt – The District will implement projects, programming, and policy changes, in coordination with its partners, to achieve measurable progress toward the goals.

These three roles also represent three largely-sequential phases of work, with each informing the next. Staff will use this framework to build out a more detailed roadmap in 2021 that will guide the District as it works with its partners to develop a Climate Adaptation Implementation Plan in the coming years.

The findings and insights from the CAC discussions, and the resulting framework, were summarized in a CAC Climate Adaptation Series Report and distributed for the CAC's review on February 18. Staff is accepting CAC feedback on the report through February 26 and will summarize the feedback, and any proposed changes to the report, at the March 3 meeting.

From there, staff will take the following next steps to advance the District's climate adaptation efforts:

1. Brief the Board of Managers on the CAC Climate Adaptation Series Report (March 22 OPC meeting)
2. Proceed with work under Phase I (ongoing through 2021 and beyond)
3. Expand and enhance the framework into a public-facing Climate Adaptation Strategy for Board adoption and incorporation into the Watershed Management Plan (4<sup>th</sup> quarter 2021)

### **Summary:**

At the March 3 CAC meeting, staff will:

1. Recap the work to date and next steps in the District's climate adaptation planning process
2. Review feedback received on the CAC Climate Adaptation Series Report and any proposed revisions
3. Provide an overview of the work currently planned for Phase I: Understand and Predict (described below)

### Overview of Phase I: Understand and Predict

The MCWD recognizes that climate change is already impacting our state and its water resources, and the effects of climate change are expected to accelerate in the coming decades. To successfully adapt to the impact of increased flood risk, communities must optimize their infrastructure to maximize existing capacity, while more effectively implementing new climate adaptation strategies on the landscape by understanding what investments will yield the largest return. As a regional watershed entity, and with its technical expertise, MCWD is uniquely positioned to serve as an information broker and work with other regional partners (e.g. USGS, DNR, counties) to understand the water budget and the upstream-downstream cause and effect across communities.

MCWD's ability to help communities understand and adapt to these changes requires computer modeling tools to improve short term flood predictions and characterize impacts of increased precipitation on flooding locations, extent, and frequency. However, the ability to do so has been hampered by fragmented models built for each community or low resolution stormwater infrastructure data that makes it difficult to predict how specific areas will be impacted and quantitatively compare potential solutions.

Fortunately, advances in data science have made it affordable to collect exponentially more data and analyze it in more sophisticated ways. MCWD is developing a program to integrate and maximize the value of recent public investments in data collection to better predict the impacts of changing precipitation across the watershed, and to pinpoint, quantify and evaluate solutions.

This program would draw on existing investments made by MCWD, U.S. Geological Survey and Hennepin County in monitoring precipitation and watershed response across the District, which will collect more than 1 million real-time data points per year for precipitation, surface and shallow ground water levels, and pollutant loading. It will integrate this local understanding with state investments in producing detailed topography of Minnesota, along with local municipal investments in digitizing storm sewer information.

The tools currently being proposed for development include:

- *Real Time Sensor Network (RESNET)*: High resolution water level, flow, and water quality data collection to provide real time water level information to the public and support future model development
- *Machine Learning*: Develop a machine learning model that can forecast future water levels based on the vast quantity of newly available remote sensing data, which will provide real time flood forecasting at 25 locations throughout MCWD
- *2-Dimensional (2D) Watershed Model*: Integrate state topographic and municipal infrastructure data to create a high resolution planning tool to pinpoint, quantitatively evaluate, and drive decisions on climate adaptation projects and policies

#### *Real Time Sensor Network Implementation*

In 2019, MCWD partnered with the USGS and Hennepin County Emergency Management to invest \$150,000 in a remote sensing network that will collect more than 1 million real-time water level and flow data points per year at 25 sites throughout the District. District staff spent 2020 developing the water level data pipeline, testing equipment, and developing an interactive web dashboard to prepare the RESNET system for a soft rollout in 2021.

Next steps for the Real Time Sensor Network (RESNET):

- Spring 2021: Deploy interactive web dashboard that displays real time water levels and flow to a small beta testing group
- Spring 2022: Public rollout of interactive web dashboard

#### *Short-Term Flood Forecasting with Machine Learning*

In 2020, MCWD staff developed a machine learning model using weather data from Hennepin County Emergency Management and water level data from the USGS and MCWD water level stations. The first machine learning model demonstrated that water levels could be predicted with relatively high accuracy using a small subset of the data available.

Next steps for the Short-Term Flood Forecasting with Machine Learning:

- Summer 2021: MCWD will solicit academic review on the development of the District's predictive machine learning model to ensure that it is being built in a scientifically defensible manner
- Winter 2021/2022: The machine learning model will be incorporated into the MCWD RESNET dashboard to provide future forecasting
- Mid 2022: Assess potential options for dam optimization methodology using machine learning model developed in 2023

#### *Long Term Quantitative Planning Models*

Developing a long term climate change adaptation strategy requires a quantitative modeling framework that can inform how the District can leverage water resource policy, rules, and projects. However, the first step in developing modeling tools is identifying what questions need to be answered with modeling scenario output. In 2020 and 2021, MCWD staff met with internal work groups and the CAC to create a list of questions they deemed important to address climate concerns. The questions from the CAC and MCWD staff workgroups fell into two categories:

1. *Understand the Impacts of Climate Change*: characterize the location, frequency, and magnitude of issues under current and future conditions

2. *Evaluate Climate Adaptation Strategies:* Identify what climate strategies will be most effective based on our understanding of types of flooding, areas impacted, frequency of flooding, and strategy cost

MCWD has divided model development into an initial pilot model assessment as a proof of concept and to inform the full scale model development. The timeline of the process is as follows:

- Pilot Watershed Model Timeline
  - March 2021: R&M staff are developing a summary document that summarizes the modeling needs based on staff and CAC understanding of climate change threats. This document will be reviewed by a model consultant to comment on MCWD's staff assumptions, direction, and approach to model development.
  - May 2021: Release RFP for pilot model build
  - June 2021-April 2022: Development of the pilot model
  - April 2022-July 2022: Climate change scenario analysis
  - April 2022-July 2022: Model and scenario documentation
- Watershed Wide Model Partners, Timeline, and Funding Strategy
  - MCWD intends to submit an application to the Legislative-Citizen Commission on Minnesota Resources (LCCMR) request for proposals in April 2021. The LCCMR Environmental and Natural Resource Trust Fund (ENRTF) is large enough to support the entirety of MCWD's watershed model build.
  - MCWD has received letters of support from eight cities, the Minnesota DNR, USGS, Hennepin County Emergency Management, Hennepin County Environment and Energy, Metropolitan Council, Minnesota Cities Stormwater Coalition, and Minneapolis Park and Recreation Board.
  - The model build will begin in 2022 and end in 2024 if MCWD receives funding from the LCCMR ENRTF.
  - MCWD is also identifying other regional, state, and federal funding sources in the event that we are not selected for funding by the LCCMR.

**Supporting documents (list attachments):** N/A