

PROCEEDINGS OF THE CENTRAL BROWN COUNTY WATER AUTHORITY
TECHNICAL COMMITTEE

Pursuant to §19.84 Wis. Stats, a regular meeting of the **Central Brown County Water Authority – Technical Committee** was held on Tuesday, May 12, 2020 at the Town of Ledgeview Public Works Shop, 1915 Scray Hill Road, De Pere, WI, and via video conference. Note that in light of public health concerns regarding COVID-19, this was a telephone/video conference meeting for Committee members. Members of the public were offered the opportunity to either hear the meeting broadcast live at the location noted above or to contact the Water Authority to obtain telephone access to the meeting.

Members Present: Allouez – Sean Gehin (via video conference), Mike Mahloch (via video conference)
Bellevue – Shawn Geiger (via telephone), Andy Rowell (via video conference)
De Pere – Scott Thoresen (via video conference), Eric Zygarlicke (via video conference)
Howard – Geoff Farr (via video conference)
Lawrence – Kurt Minten (via video conference), Tyler Mueller (via video conference)
Ledgeview – Andy Tenor

Also Present: Rob Michaelson – Manitowoc Public Utilities (via video conference)
Gary Rosenbeck – McMahan, Inc. (via video conference)
Nic Sparacio, CBCWA General Manager (via video conference)

The May 12, 2020 Central Brown County Water Authority – Technical Committee Meeting was called to order at 1:30 p.m. by Chairman Kurt Minten of Lawrence.

Roll Call:

1. Attendance was recorded as shown above.

Approval of Agenda:

2. Approve Agenda
Motion made by Ledgeview, seconded by De Pere to approve the agenda.
MOTION UNANIMOUSLY APPROVED

Approval of Minutes:

3. There were no questions or comments on the April 14, 2020 minutes.
Motion made by Bellevue, seconded by Allouez to approve the April 14, 2020 minutes as presented.
MOTION APPROVED UNANIMOUSLY

Appearances:

4. None

Communications:

5. None

Agenda Items:

6. McMahan report on 48-Inch Pipeline Assessment along Maritime Drive
Gary Rosenbeck presented the results of this study. The Water Authority and McMahan worked together to compile data from the original pipeline construction including soil borings, trench backfill compaction tests, and construction field notes. McMahan acquired the assistance of a geotechnical firm, ECS, to interpret these data. The history of Lake Michigan water levels, forecasted water levels, and related trends were also considered.

The extent of current erosion was surveyed by McMahan for about 7,000 feet of the Lake Michigan shoreline in Manitowoc – from the north shore of the Manitowoc River to Johnston Drive. The potential threat to the Water Authority transmission main was then assessed and categorized over this length of shoreline. About 400 feet of the surveyed shoreline area was of greatest concern, and another 870 feet was also of concern. These areas of concern were distributed within two particular stretches of the shoreline – along Maritime Drive from the Little Manitowoc River south to the area near the Manitowoc Yacht Club, and along Memorial Drive north of the wayside parking lot heading toward Johnston Drive.

McMahan developed five different options for addressing the areas of concern. These options vary by the type and extent of shoreline treatment and whether the remediation measures are designed as temporary or permanent. For the temporary options, it is assumed that they may need to be removed or modified if a different permanent solution is installed in the future. The cost of each alternative was provided including an estimated cost of moving a portion of the transmission main away from the shoreline, which was included for comparison.

Scott Thoresen asked whether the City of Manitowoc is planning to partner with the Water Authority on this and whether we have started planning for these expenses. General Manager Sparacio responded that discussions with the City are ongoing, and the request for Section 14 funds was submitted jointly between the City and the Water Authority. The City's initial response is that these areas of shoreline are not a priority for them compared to other areas facing erosion damage like the wastewater treatment plant and harbor breakwater wall.

Thoresen then asked for the terms of the grant. Sparacio responded that the grant would fund a feasibility study at 100% up to \$100,000 and then fund 65% of construction costs with a 35% local match. A major downside to this program is the timing. It will take at least 2 to 3 years to construct a solution with these funds. Andy Tenor asked whether this grant would fund temporary measures. Sparacio responded that the funded measures must meet

Army Corp design requirements, but any work we do prior to grant award will not count as match.

Sparacio continued that the Board has also reviewed this report and is requesting the recommendation of the Technical Committee. Additional factors to be weighed include the timing of further potential shoreline damage, the timing of a potential Army Corp grant award, and the estimated costs of the various alternatives. We know that we need to take some action this year to prevent further erosion, but we also know that our current efforts are not being leveraged against a grant. It is also possible that the initial measures installed this year can become a phase 1 effort to be built upon with a permanent future solution.

The Committee discussed the various shoreline remediation alternatives. The points of consensus included:

- Temporary measures should be avoided as much as possible especially for the alternatives that spend more than \$25,000.
- Work completed this year should be done in a fashion that makes it a phase 1 approach that can be built upon with a future phase 2 without doing rework.
- Cost should be a secondary consideration at this point. It is better to spend more now to avoid wasted resources with future rework and to avoid undue risk to the pipeline.
- There is zero tolerance for risk to the pipeline. Too much is at stake to allow further damage to the stability of the trench.
- Leveraging grant funds would be beneficial but may not be practical due to the timing. If it takes longer than 2 to 3 years, that is too long.
- Section A (area south of the Little Manitowoc River) is the top priority area due to the rapid erosion taking place with each storm, but something also needs to be done in the near-term in Section B (north of Waldo Blvd). This can be a less aggressive approach in Section B, but it must be substantial enough to prevent further encroachment into the trench.
- Of the remediation options discussed in the report, the starting point should be Option 2B which addresses the full 500 feet of Section A. However, the design should be modified to allow it to become a phase 1 approach. This is likely something in between the Figure 9 and Figure 10 approaches for Section A.

Geoff Farr asked for the timing details on the Section 14 funding program. Sparacio responded that Congressional funding decisions are typically made by mid-summer in a normal year. We have yet to see whether COVID-19 issues will delay that timing. If awarded, the first step is a feasibility study, which would take us into 2021. Army Corp staff have indicated that construction can occur 2 to 3 years after an award if the project is fast-tracked. However, it is possible that it could take longer to construct. Sparacio further noted that this program will contractually require future maintenance commitments for the constructed measures.

Thoresen asked for clarification on the level of urgency determined by the geotechnical engineer. Rosenbeck responded that the geotechnical engineer looked at the soil and construction data we provided and determined that each native soil profile surrounding the trench includes highly erodible layers. We do not want the erosion to reach those layers.

Farr asked how quickly the construction of the various alternatives could proceed based on the labor and material availability research done by McMahon. Rosenbeck responded that a smaller effort could begin quickly. He has already been in contact with a Manitowoc area contractor that has availability and a supply of revetment stone. If we are talking about a larger project, then it may require some additional design work and a request for bids. The timing for a larger approach is less certain. Many contractors are already booked up for the year.

Tenor asked how quickly the erosion appears to be advancing based on the observations after the last storm. Sparacio responded that we appear to be losing about a foot of additional shoreline in Section A with every storm that comes out of the east-northeast. Rosenbeck added that Section B does have some shoreline protection in place, but it is not continuous and has several pockets that need to be filled in.

Discussion continued on whether this work should go through the design and bid process. No conclusions were reached. Rosenbeck added that the members can take a look at the Lake Michigan shoreline in Two Rivers (near the wastewater treatment plant) as an example very similar to the approach we are discussing.

Farr asked what McMahon and the Water Authority are recommending. Sparacio responded that he is recommending a hybrid approach between Options 2A and 2B if we can get confirmation from the Army Corp that this approach would be accepted as a Phase 1 that can be added onto in the future if a grant is awarded.

Motion made by De Pere, seconded by Howard to hold this item over and request clarification from the US Army Corp of Engineers on a phased approach.
MOTION UNANIMOUSLY APPROVED.

Farr left the meeting at this time due to another commitment.

7. Proposal from Preferred Controls for Finished Water Pump Station logic and hardware
Sparacio explained that this proposal is related to the Finished Water Pump Station Optimization Study that was completed in cooperation with Manitowoc Public Utilities (MPU). This hardware and programming work represent expenses that the Water Authority is agreeing to pay for. He pointed out the updates to this proposal from the previous version. The cost is still reasonably close to the budget amount for this project. Rosenbeck introduced the description of operations. It was primarily written by Rob Michaelson at MPU with some input from Preferred Controls and McMahon. Shawn Geiger stated that his main concern is whether Rob Michaelson is comfortable with the operational plan. Michaelson confirmed that he is.

Motion made by Ledgeview, seconded by Bellevue to recommend to the Board approval of the proposal from Preferred Controls for Finished Water Pump Station logic and hardware.

MOTION UNANIMOUSLY APPROVED.

8. Proposed easement related to the vacation of Johnston Drive in Manitowoc Sparacio reported that this easement is related to the development plan that was shared with the Technical Committee in past meetings. This easement recognizes that the Water Authority pipeline already exists in the street right-of-way that is being vacated. It establishes the permanent easement to be 40 feet wide with another 10 feet each side as temporary construction easement when needed (for a total of 60 feet). It requires the owner to obtain Water Authority permission to dig, plant anything, or build anything. It is understood that the owner wants to have parking and landscaping over the pipe, but again, only after Water Authority approval of their plans, which would not be unreasonably withheld. It allows Water Authority access for all utility purposes and the right to clear any obstructions. Upon access, it requires the Water Authority to return the site to grade, but not to restore, repave, or re-landscape. The Water Authority attorney has reviewed and approved the document.

Thoresen raised a concern over ensuring that the Water Authority has the opportunity to review the owner's plans for the property. He is also reluctant to allow parking and landscaping over the pipeline and cited lighting foundations as a particular concern. Sparacio responded that City of Manitowoc staff are aware of the requirements of the easement and can assist us with ensuring review of development plans. We can also modify the easement language to prohibit lighting-related and other foundations.

Tenor asked whether we can add permanent utility markers to the property and require the owner not to disturb those markers. Sparacio responded that the easement does provide for the right to install markers on the property and for their required protection in Section 7.e. Sparacio added that this document is very similar to the easement we have in place just to the north where the pipeline goes under the parking lot of the former Mid-Cities Mall property.

Motion made by De Pere, seconded by Allouez to recommend to the Board approval of the easement with the following conditions:

- a. **The Water Authority will request assistance from the City of Manitowoc to ensure that development plans for the property are forwarded for review.**
- b. **Parking lot lighting foundations are to be prohibited from the permanent easement area.**
- c. **Permanent markers may be installed informing of the pipeline location.**

MOTION UNANIMOUSLY APPROVED.

9. Project status updates
- a. **Shoreline erosion in Manitowoc**
There was no further discussion on this topic beyond that recorded for item 6 above.

b. Chlorine system solenoids and analyzers

Sparacio presented the comparison between the Hach and Depolox analyzers. The Depolox alternatives shown do not include pH sensors as this is not necessary given our typical water chemistry. Eric Zygarlicke expressed support for the Depolox option. Thorsesen asked for clarification on the complexity of maintenance between the two Depolox units. Sparacio responded that the comments from MPU at the last meeting highlighted that changing out the bare electrode is more mechanically complex than changing the membranes.

Sparacio provided his recommendation to go with the Depolox unit and asked for the preferences of the members at this point. Minten responded that Lawrence also prefers the Depolox. Mahloch responded that Allouez prefers the Depolox. Geiger stated that he prefers the reagents and the existing Hach units, but Bellevue is willing to go along with the change to Depolox. Tenor also likes the existing Hach units but stated that Ledgeview is willing to change to Depolox.

Sparacio then explained the proposal for cost responsibilities. The Water Authority would pay for purchase and installation on replacement of the existing analyzers. There are eight of them. Each member electing to install chlorine solenoids and a second downstream analyzer would be responsible for those costs. He asked for preferences on how the affected members would like to proceed with the second analyzer installation. The Committee discussed this, and there was a consensus that De Pere, Lawrence, and Allouez can select their own vendor to do their additional installation with some technical guidance from McMahan. The Water Authority will purchase their second analyzers, then turn the analyzers over to Allouez, De Pere, and Lawrence to handle their own installation, and bill them accordingly.

Farr returned to the meeting at this time. He asked whether the bare electrode or the membrane electrode is recommended where chlorine is not being regularly dosed. Michaelson responded that MPU uses both types, and where chlorine is not being dosed, the membrane electrode is more stable. Discussion continued on the timing of installation for the replacement analyzers as compared to the downstream additional analyzers. It may make sense to have them both installed at the same time while the vendor is already onsite.

Motion made by De Pere, seconded by Howard to recommend to the Board acceptance of the proposal for 2020 Chlorine System Modifications with the following clarifications:

- a. The Water Authority will purchase all the needed analyzers, and coordinate installation with the selected vendor, Energenecs;**
- b. Water Authority funds will pay for the purchase and installation of one replacement analyzer at each connection station (eight total);**
- c. The Water Authority will bill Allouez, De Pere, and Lawrence accordingly for the costs of their additional post-chlorination analyzers;**
- d. Allouez, De Pere, and Lawrence, with some technical support from McMahan, will be responsible for the purchase and installation of chlorine solenoids and**

all the labor and materials related to the addition of a post-chlorination analyzer.

MOTION UNANIMOUSLY APPROVED.

c. Modified system pressure

Sparacio stated that this item will remain on the agenda as a placeholder in case any future issues come up. Rosenbeck asked for an update from MPU on testing maximum flows for the Village of Howard. Michaelson responded that there are two additional tests they are preparing to perform at some point this summer in coordination with the Village.

d. Manitowoc pump station optimization

Sparacio gave an overview of the VFD installation proposal for the Finished Water Pump Station. He stated that this is something the Water Authority needs to do, but the budgeted funds are not adequate to move forward this year. Both the VFD cost and this additional engineering are not available in the 2020 budget. Michaelson added that MPU staff do have these skills and have done these projects in the past, but with a recent staffing change, there is less capacity to do the engineering in-house. This Jacobs proposal was requested to show the cost for a turn-key installation.

Sparacio asked for clarification on whether MPU in-house resources could still be used to accomplish the engineering. Michaelson responded that participation by MPU staff resulting in lower consultant costs is still possible. The turn-key proposal shows the maximum not-to-exceed engineering cost, so it could be less. He added that he was also hoping to have a vendor cost estimate on the purchase of a VFD in time for this meeting, but it was not yet available. There was a consensus to hold on this proposal until the next meeting so that the VFD vendor cost can also be considered.

e. CTH R bridge replacement project

Sparacio reported that pile driving for the bridge project in Denmark is complete, and there were no exceedances of the maximum allowable vibration. This means that the budgeted funds for pre-boring are now available to deal with the Lake Michigan shoreline erosion issue.

f. SPLASH Study implementation

This item will be discussed at a future meeting.

g. Satellite leak detection services

Sparacio reported that MPU and the Water Authority received the satellite data from Utilis. He is working with MPU to determine the approach and timing for investigating the points of interest.

h. Bayshore Drive excavation

Sparacio reported that work continues on developing a specification that can be provided as guidance for construction projects that involve working in close proximity to

the Water Authority transmission main. The joint plan review with MPU and McMahon continues to be implemented, and work has started on documenting this process to ensure good communication.

10. Water sales report through April 30, 2020

Sparacio noted that water consumption impacts of the state's Safer-At-Home orders started to appear in April. April 2020 water consumption was about 11% lower than April of 2019, so we are now a little over 3% percent behind this time last year. If this trend continues, we are on track for a very low water use year, similar to 2017. Business and public use water consumption numbers are down the most, reflective of the ongoing closures. He also noted that he was contacted by NEW Water which is trying to get a handle on their upcoming revenue expectations based on reduced water use in the municipalities. He has shared Water Authority water consumption data with NEW Water. Geiger added that he is seeing these same trends at the local level. In particular, residential use is up reflecting more people being at home. Commercial, industrial, and public customers are using less water.

Old Business:

11. None.

Next Meeting:

12. **Agenda Items for the Tuesday, June 9, 2020 Meeting**

None identified at this time.

Adjourn:

Motion made by Ledgeview, seconded by Allouez to adjourn at 4:00 p.m.

MOTION UNANIMOUSLY APPROVED

Respectfully submitted,
Nic Sparacio, General Manager