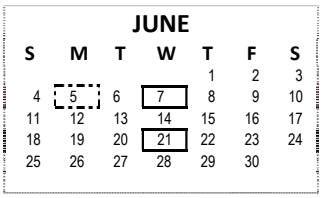
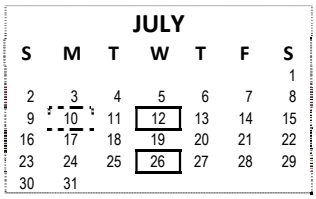
RCWD
RICE CREEK WATERSHED DISTRICT




# RCWD BOARD OF MANAGERS SPECIAL WORKSHOP

Monday, June 5, 2023, 9:00 a.m.

**Rice Creek Watershed District Conference Room**
**4325 Pheasant Ridge Drive NE, Suite 611, Blaine, Minnesota**
**or via Zoom Meeting:**
**Join Zoom Meeting**
**https://us06web.zoom.us/j/87215051036?pwd=Y2tycHN1bDl5SFBHL2FhcmF4SWRKZz09**
**Meeting ID: 872 1505 1036**
**Passcode: 961649**
**Dial by your location +1 312 626 6799 US (Chicago)**
**Meeting ID: 872 1505 1036**
**Passcode: 961649**

## Agenda

### ITEMS FOR DISCUSSION (times are estimates only)

9:00 Anoka County Ditch 10-22-32 Summary of Comments Received and Next Steps

# MEMORANDUM
# Rice Creek Watershed District

**Date:** May 23, 2023
**To:** RCWD Board of Managers
**From:** Tom Schmidt, Public Drainage Inspector
**Subject:** Anoka County Ditch 10-22-32 Summary of Comments Received and Next Steps

**Introduction**

RCWD held a public meeting concerning the proposed maintenance alternatives for Anoka County Ditch 10-22-32 (ACD 10-22-32) north of Pine Street. The primary intent of the June 5th special workshop is to discuss the technical consideration of written and verbal comments received at that meeting.

**Background**

On April 26, 2023, the District held a public information meeting on the maintenance alternatives for ACD 10-22-32 north of Pine Street. The District Engineer provided a presentation on its 1/23/2023 memo on the potential alternatives to further restore drainage function. The District provided notice of the meeting. Public participation included attendance in person and virtually with both written and verbal comments. The public was provided the opportunity to ask questions and engage in dialog on managing the drainage system in this area. Many comments were received, and the Board closed the record and directed its engineer to summarize and evaluate all received comments regarding their applicability to the technical evaluation of the maintenance alternatives and how they might affect the engineer's alternatives. The Houston Engineering memo that follows captures all comments and the engineer's consideration.

As the Board, in its role as the drainage authority for that public drainage system, considers the District engineer's work and deliberates on its options for a maintenance approach for ACD 10-22-32 north of Pine Street, it is limited in what the statute allows. The Board has been presented with a series of maintenance alternatives and their impact. In considering each of these alternatives, they have been counseled by the District's drainage attorney that one of the things to consider is that there is a threshold decision under the drainage code regarding repair/maintenance to consider if it is necessary and in the best interest of the landowners that utilize the drainage system. And to further consider the purposes for which ACD 10-22-32 was originally constructed. The drainage system was constructed to support agriculture but not industrial, commercial, or residential land uses.

**Request for Board Consensus**

Staff requests that the Board consider the information and deliberate in developing a consensus position in choosing a maintenance alternative at a subsequent board meeting.

**Attachment**

Houston Engineering memo dated May 23, 2023, Subject: Anoka County Ditch 10-22-32 Summary of Comments Received and Next Steps

# Technical Memorandum

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| **To:** | Nick Tomczik |
| | Rice Creek Watershed District |
| **Cc:** | Tom Schmidt |
| | John Kolb |
| **From:** | Chris Otterness PE |
| **Subject:** | Anoka County Ditch 10-22-32 |
| | Summary of Comments Received and Next Steps |
| **Date:** | May 23, 2023 |
| **Project:** | R005555-0333 |

## INTRODUCTION

On April 26, 2023, the Rice Creek Watershed District (RCWD) held a public information meeting to discuss alternatives for restoring drainage function on a portion of Anoka County Ditch (ACD) 10-22-32 north of Pine Street in the City of Columbus. At this meeting, the RCWD received commentary and questions from several landowners (including municipalities) and their representatives. One landowner (Perry Wagamon) provided paper documentation for consideration of maintenance/repair alternatives.[1] In addition, the RCWD received written comments from landowners prior to and following the public information meeting.

The purpose of this memorandum is to summarize the information and comments received, provide engineering responses (as appropriate) and identify how the information may be considered with respect to a decision on further management of ACD 10-22-32 in this location. The memorandum also will recommend next steps in proceeding forward with a management alternative.

## COMMENT SUMMARY

Written comments were submitted by eleven individuals, including landowner, cities, and their representatives. **Table 1** tabulates the comments, along with a technical response regarding engineering considerations related to the comment. Comments from the 4/26/23 Board meeting are quoted directly from the approved meeting minutes.

[1] These documents are supplemental to documents received from Mr. Wagamon during a 2021 proceeding to reestablish the public drainage system record.

**Table 1 – Written Comments and Engineering Responses.**

| ID | Comment | Engineering Response |
|---|---|---|
| **Mike Kettler, P.E., Sunde Engineering; 4/18/2023 Letter to Perry Wagamon (comments 1-10) and 4/26/23 Board Meeting (comments 11-12)** | | |
| MK.01 | The goal of the Watershed District is to establish a recommendation on how to best restore the drainage capacity of the ditch, referred to by Anoka County as ditch 10-22-32. The restoration will in turn alleviate flooding on the Wagamon Property and neighboring parcels of land. | The RCWD is tasked, both under its Watershed Management Plan and under Minnesota Statute (M.S.) 103E, to inspect and maintain its drainage systems. Although this maintenance facilitates the use of the system as an outlet, it cannot eliminate all flooding on the landscape. |
| MK.02 | In reviewing the above materials, we are concerned that the analysis of flooding elevations with respect to the downstream Jodrell Street culvert crossing elevations was reviewed against the as-constructed and subsequently improved condition (ACSIC) with is higher than the ditch profile that existed prior to the construction of Jodrell Street as indicated in the profile drawings. There is no doubt the higher elevation of the current ditch contributes to higher water levels upstream of the ditch such as on the Wagamon Property and neighbor properties. | The ACSIC grade is lower than the ditch profile that existed prior to the construction of Jodrell Street. Two to three feet of sediment has been removed from the ditch bottom during repair activities in the last 12 years. |
| MK.03 | To restore water levels to the condition that previously existed, we believe that the ditch profile needs to be part of the solution. We don't believe that the profile should have been raised as part of the adjacent road construction even if wetland mitigation were to be required as a result. | The construction of Jodrell Street did not change the elevation of the ditch, but rather placed a culvert above the ACSIC grade. The RCWD has since cleaned out the ditch to the ACSIC and cannot lawfully clean lower than that as a maintenance activity. |
| MK.04 | Additionally, the culvert crossing on Jodrell Street and the soil correction that took place for the Jodrell Street construction as it crosses the ditch are wrong and have caused serious flooding problems for the Wagamon property and neighboring properties. When you built your home around 1982, the runoff from your property did not drain to the ditch. It was only as a result of the construction of Jodrell Street in 2003, in which the street acted as a dam for the surface water runoff that cause your previous drainage pattern to become altered and re-directed to the ditch. This is | As RCWD does not manage groundwater, we have not evaluated the historic effects of Jodrell Street's construction on subsurface flow. |

| ID | Comment | Engineering Response |
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| MK.05 | Exhibit A depicts a modified ditch profile that was changed by the Watershed Engineers to be higher than the elevation of the original ditch that dates back more than 100 years. | HEI has identified the ACSIC grade, replicating the condition of the ditch as it was originally constructed, based on significant field data collection. This grade was adopted by the Board as a matter of record. |
| MK.06 | Exhibit A also shows a cross-section of Jodrell Street thru the ditch. The culvert was constructed as part of the roadway crossing to pass runoff under the street. However, it was erroneously not placed at the bottom of the ditch profile, but rather approximately 3' above the bottom of the ditch making the ditch grade irrelevant as the water levels now are controlled by the elevated culvert height, which further increased the upstream flooding on the Wagamon Property and neighboring | Correct – the developer of the project installed the Jodrell Street culvert at roughly the elevation of the existing sediment in the ditch at the time of construction, which was approximately 2.2 feet above the original ditch bottom. |
| MK.07 | Poor soils were encountered under the proposed Jodrell Street alignment which necessitated significant soil correction during construction. Some 60' of compacted material was placed below the pavement section in order to stabilize the road. IN addition to the surface water flooding, this action trapped the flow of groundwater and raised the water table higher on the Wagamon property and neighboring properties causing severe damage to structures, septic systems, and the killing of hundreds of 50-60 year old oak trees and other valuable trees during freeze and thaw cycles due to saturated soils. These soils had not been saturated before the compacted material was installed under the new street. | As RCWD does not manage groundwater, we have not evaluated the historic effects of Jodrell Street's construction on subsurface flow. |
| MK.08 | Attached Exhibit B depicts a proposed culvert crossing Jodrell Street at the bottom of the ditch instead of 3' above it, which would considerably reduce high water levels behind it and the flooding on the Wagamon Property and neighboring properties. | The profile identified in Exhibit B is considered an "improvement" under the drainage statute. Under M.S. 103E, a drainage authority cannot complete maintenance that is deeper or provides a greater capacity than the as-constructed and subsequently improved condition. The profile indicated in Exhibit B is also lower than downstream infrastructure which would negate most of its effectiveness in further draining this region. |

| ID | Comment | Engineering Response |
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| MK.09 | Finally, in our opinion and as stated in the RCWD Stormwater Management Rule C the storm even for flood protection should be established is the 24-hour, 100-year rainfall event (7.12") and not simply rainfall events of 2-year and 10-year probabilities. The larger storm events will yield higher peak flood elevations and correctly change what an appropriate recommended solution to the flooding situation needs to be. It will require a larger, but necessary scope of work than what is being considered in the January 31, 2023 Memorandum. Proposed changes will be more in line with what we are outlining in Exhibit Bs. We would encourage the District's model to use this storm event to establish a better cost benefit recommendation. | Under the drainage statute, the RCWD cannot increase the size of the drainage system beyond what it was originally constructed (less than a 10-year rainfall event). However, RCWD can and has evaluated road culverts for their ability to pass a 100-year rainfall event without flooding upstream structures. RCWD has modeled and mapped the 100-year flood event along ACD 10-22-32 under existing conditions. We are unaware of structures adjacent to this portion of the public drainage system that are potentially inundated by the 100-year floodplain, and thus did not evaluate the 100-year rainfall for the alternatives. If potential structural flooding locations are identified, the RCWD can consider additional analysis for relief of 100-year flooding under one of its other programs. |
| MK.10 | In our opinion, we believe there is a solution (see paragraphs 7 and 8) that will eliminate flooding on the Wagamon Property and neighboring property. This should be the goal even if the scope of work and permits needed to accomplish this has to broaden out from the analysis and options presented by the Watershed District in their January 31, 2023 memorandum. | Although there are activities, both in RCWD's role as Drainage Authority and through its other programs, that can be completed that alleviate some surface water issues in this vicinity, it should be noted that it is infeasible to eliminate all water pooling on these properties. |

| ID | Comment | Engineering Response |
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| MK.11 | Mike Kettler, Civil Engineer, Sunde Engineering, stated that he was asked by Perry Wagamon to study the alternatives developed by the District as they relate to his property which is upstream of the Jodrell crossing. He explained that originally his property did not drain to ditch that is being discussed and noted that the natural drainage was towards what is now the Jodrell Street alignment. He noted that it was just because of the Jodrell Street construction that his drainage pattern changed to be directed to that existing ditch profile. He stated that part of the construction of Jodrell Street was a requirement from the Army Corps of Engineers to not impound water behind that roadway. He stated that he believes that the higher original culvert crossing of Jodrell Street essentially conflicted with that Corps requirement of impounding water and was essentially providing a pond behind the Jodrell Street crossing. He explained that Mr. Wagamon has witnessed significant flooding over a period of time on his property to his home, structures, septic, and other useable areas. He stated that he studied the alternatives that the District has presented and felt the modeling by District Engineer Otterness provided a lot of great information. He stated that it is very flat and would hesitate to even call it a ditch because it is essentially ponding water behind a lot of culvert crossings, which are storm sewer crossings. | Noted. RCWD was not the permitting authority for the construction of Jodrell Street and thus does not have the authority to enforce the conditions established by the permits issued at that time. |

| ID | Comment | Engineering Response |
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| MK.12 | He stated that he thinks for a 100-year storm event there would be a difference in water elevations behind the culvert crossings and asked that the District compare those flood elevations with some critical elevations on the Perry Wagamon property. He explained that Mr. Wagamon is essentially sitting in a landlocked area and feels that makes it a bit more relative to provide a 100-year storm event for an analysis and not just general pipe sizing in the District. He stated that he thinks all the alternatives that were presented are very well played out and thinks Alternative 4 with some amendments, such as the 100-year event information, the Jodrell Street crossing, and making the pipe large enough to not flood upstream structures. He stated that it would basically either be amending Alternative 4 or creating a new Alternative 6. He stated that they feel lowering Jodrell down to the spirit of the Corps permit down to the original ditch bottom and not ACSIC in order to give Mr. Wagamon the condition that existed prior to the construction of Jodrell Street, which he believes was the intent of the Corps of Engineers. He explained that he believed this approach would be better suited for upstream flooding. He reiterated that he thought the model and the report given by District Engineer Otterness was very thorough but believes the other items should be considered for Mr. Wagamon's property. Mr. Kettler stated that they have not done any studies and explained that his intent was not to recreate District Engineer Otterness' model because they think it is accurate but would ask that the District plug in some different elevations and different storm events. | See response to Comment MK.09 |
| **Kirby Becker, landowner: 4/12/23 email to RCWD** | | |
| KiB.01 | What land use was input into the model runs? Was it existing or future land use? If only existing, It would be nice to see results with a full 20-year build (i.e., counties, cities, townships) for each model run alternative (less Alt 1). | Existing land use was used for this report. The RCWD has previously completed future land-use modeling in this location. as part of other water management efforts. This modeling is relevant to municipal stormwater planning and for other District programs, but not so for the public drainage authority in completion of its drainage system maintenance decisions. |

| ID | Comment | Engineering Response |
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| KiB.02 | Why were alternatives only modeled at 2.7" and 4.1" rainfalls? "There has been a shift in recent decades for more significant rainfall events. Minnesota has seen 16 mega-rains, but 11 of these 16 events have been in the most recent 22 years (2000 through 2021), compared to five confirmed events in the 27 years from 1973 through 1999. Put another way, these major rainfall events have been over 2.5 times more common during the first few decades of the 21st century than they were during the last few decades of the 20th century. Although it is difficult to assess the statistical significance of that increase, we do know that these observations are consistent with observed increases in the frequency and intensity of heavy rainfall events at historical observing stations, and also are consistent with the expectation that Minnesota and the Upper Midwest will receive more precipitation, and more precipitation from large events opens in a new browser tab, in response to increasing global temperatures and increased available moisture for passing storm systems." (https://www.dnr.state.mn.us/climate/summaries_and_publications/mega_rain_events.html) | Alternatives were modeled for the current 2-year and 10-year rainfall depths as defined by NOAA's Atlas 14, consistent with RCWD program administration. Minnesota has experienced more high-intensity rainfalls in recent years. Some of this has been accounted for already in the Atlas 14 rainfall depths. NOAA has not updated rainfall frequency data since Atlas 14, and utilizing alternative depths would be arbitrary for the purpose of the RCWD maintenance effort. |
| KiB.03 | Were downstream ditches, storage/retention ponds, and water flows modeled to determine impacts if upstream culverts were increased in size or lowered? | The entire ACD 10-22-32 system, down to its outlet at Marshan Lake, is included in the model. Focus on the study was critical locations upstream of maintenance locations, as the function and utility of the drainage system downstream will not be affected by lowering culverts. |
| KiB.04 | Were the cities of Columbus and Lino Lakes coordinated with during the selection and modeling of alternatives (prior to)? | No. The RCWD Engineer and staff recommended alternatives to be evaluated (from a technical basis) to the RCWD Board, which the RCWD Board approved. When the Board makes a management decision, it will consult with the Cities regarding next steps. |

| ID | Comment | Engineering Response |
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| KiB.05 | What is the expense and impact of lower a pipeline? Did the pipeline companies provide a cost to lower and description of impact? If not, I would suggest removing this language from memo. | We cannot provide an estimated expense – that can only be provided by a pipeline company, and we have not received that information. Due to very low tolerances for deflection, lowering a pipeline a few feet can require modification of the pipeline up to a half mile in either direction. It is this understanding (and prior experience in working with pipeline companies regarding other lowering efforts) that is the basis of this statement. |
| KiB.06 | What are the expense/costs for alternatives 3, 4 and 5? Aside from the hydraulic modeling impacts, It would be nice to understand costs for each alternative in the near and long-term including the cost to "lower the culvert under Pine Street". | The costs for constructing these alternatives was not in the scope of this analysis. The regulatory costs of each alternative are not well understood and will require the expenditure of additional District investment in order to more accurately understand the relative cost. |
| KiB.07 | This is the last paragraph of the memo. The last part of sentence one states "other near term solutions". Is this is reference to recommendations outlined on page 5 of 7, or are there other near term solutions not identified and included in the memo? If not, what would those solutions be? | These solutions include regular inspection of the crossing sites, beaver dam removal, beaver trapping, and coordination with the pipeline companies for maintenance activities. |
| KiB.08 | Additionally, both Columbus and Lino Lakes should also be listed in the last sentence for continued partner/stakeholder engagement. While I understand the need to coordinate with the pipeline companies, it's also important to ensure both cities are kept in the loop and ensure the best interests of their residents. | The last sentence was intended simply to reflect the coordination necessary at the pipeline crossing sites. The RCWD has, and will continue to, coordinate with the Cities in the intersection of the ditch system with City infrastructure (i.e., public roadways) and with landowner engagement. The Cities have been invited to the public information meeting on April 26, and we look forward to further engagement with them. |
| **Diane Hankee, City of Lino Lakes, in an email dated April 20, 2023 (comments 1 and 2) and in a Zoom chat window during the April 26, 2023 Public Meeting (comment 3)** | | |

| ID | Comment | Engineering Response |
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| DH.01 | As you know, when RCWD lowered the culvert under Pine St. to the east, some of our residents felt as though it created issues downstream in Lino. | We are aware of some of these concerns, including the perception that "we are getting more water." However, the hydrology does not bear that concern out. Lowering the culvert has a minimal effect on downstream runoff delivery. In addition, it is important to note that the RCWD is obligated to maintain the entire drainage system (including portions upstream and downstream of these landowners, and the baseline for that maintenance is the as-constructed condition. The effort to lower the Pine Street culvert on Branch 4 was intended to restore that condition. |
| DH.02 | We will need some understanding of the impacts downstream. | No impacts downstream are intended from the maintenance work considered in Houston Engineering's memo. Again, the culvert elevations will not change the capacity or burden on the downstream system, and maintenance here is consistent with maintenance in other parts of the system, including that already completed downstream several years ago |
| DH.03 | How does the flood elevation change impact downstream in Lino Lakes. Can you provide a map showing the pre and post project floodplain in the Lino Lakes? for the flood alternates that were ~-1' | None of the alternatives is anticipated to have a significant effect on flood elevations in Lino Lakes, as the capacity of the public drainage system is not being changed. No floodplain mapping was completed downstream of Jodrell Street. |
| **Kevin Bittner, Columbus City Engineer, in a letter dated April 19, 2023 (Comments 1-3) and testimony at 4/26/23 Board Meeting (comment 4)** | | |
| KeB.01 | In general, the Mayor and City Council, as well as city staff, are very supportive of maintenance and improvement activities on all the ditch systems within the city limits and those outside of the city that provide a positive drainage benefit to the city. Given its flat topography, effective drainage systems are critical to maintaining the integrity of existing residential and commercial properties as well as providing mechanisms for future development within the city. | Agreed and noted. Please note comment KeB02 below with regard to the term "improvement." |

| ID | Comment | Engineering Response |
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| KeB.02 | In regard specifically to ACD 10-22-32, we are very supportive of improvements that provide relief to properties that have experienced high saturation levels over the past 20 years, due to numerous factors that are at play. The City also recognizes that the RCWD is the authority for this system and controls the decision-making process for any improvement. | Under MS 103E, the term "improvement" is specific to deepening or enlarging the drainage system. RCWD cannot lawfully initiate an "improvement" in this sense. However, understanding that Mr. Bittner's the use of the term "improvement" here is intended to be synonymous with repairs, then the statement would be correct. It is important to note that road authorities are ultimately responsible for decision-making related to roadway culverts along the drainage system, though the District can order modification to these culverts if they are determined to be an obstruction. |
| KeB.03 | From a technical viewpoint, in my review of the alternatives that are laid out in Houston Engineering's Technical Memorandum dated January 23, 2023, I'm of the opinion that Alternative 4 would provide the maximum benefit to the city and its property owners. | Noted. |
| **KeB.04** | Kevin Bittner, Bolton & Menk, explained that he was also the appointed City Engineer for the City of Columbus. He stated that had provided the letter to the District and wanted to reiterate that, as a city, they are very supportive of activities that maintain the ditch systems within the city because they are very critical to their drainage. He stated that as it has been noted, Columbus is a very flat community so maintaining the ditches are critical. He stated that regarding the alternatives that were shared, from a technical perspective and his evaluation, he would support Alternative 4, but noted that they are open to consideration of other alternatives if other information comes forward. He noted that there was a statement from the presentation regarding lowering Jodrell culverts not measurably changing flood extent in upstream properties. He stated that he would agree with that from the perspective of the model, but when it comes to the event itself, he can see where the profiles may not change considerably based on the elevation of the culverts, but he thinks this is really a problem with saturation levels after the event is over. He stated that he believes at that point it acts less like a ditch and ends up being pools behind culverts and would say that the culverts play a really big part in controlling the saturation level and lowering them to the ASCIC level would be very beneficial. | Noted |

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| **Roger and Sherri Nase, landowners, in a letter dated April 24, 2023 (Comments 1 and 2) and testimony at 4/26/23 Board Meeting (Comment 3)** | | |
| RSN.01 | We want to express our concerns regarding the high water levels that flow from the large swamp (noted below) onto our property flooding the trees behind and to the East of our pole building. Standing near the property line we could see the current in the water running from the swamp on Perry Wagamon's property onto our property. We have had about 10 trees that were in water that eventually died and many others that may die if it continues to flood. This is not a problem every year but on wet years the water really backs up in that region and doesn't seem to drain down. The ditches probably need to be cleaned back to their original depth to restore the drainage. Ditches naturally fill in as sediment deposits or bog plugs them up. They need maintenance to prevent flooding. | The ditches have been cleaned out to the original depth in recent years. Minimal sediment currently exists in the ditch. However, as the commenter notes, ditches do experience sedimentation and other blockages, and RCWD staff remains vigilant in inspecting the drainage system and maintaining it as blockages occur. |
| RSN.02 | When we looked at the culverts at Jodrell Street they were not at the ditch bottom, which is contributing to the problem by increasing the water level from where it was before the road was built. | The original culvert under Jodrell Street was at the elevation of sediment in the ditch bottom when it was constructed. However, as the ditches have been cleaned out to the original grade, the culvert is now substantially higher than the current ditch bottom. |
| RSN.03 | Mr. Nase stated that the property directly to the south of them had two 40 acre plots that were converted into commercial industrial property from residential property. He stated that in the last request for a CUP, they were permitted to allow 12-15 acres of the 30 acre plot to be impervious which was scheduled to flow into a pond, however the pond was at 904-906 in elevation and the wetland delineation line is right around 905-906 which means the pond will be full in the spring. He stated that if there was a large rain, their concern was that water would flow from the impervious surface and go toward the pond, but because it would be full it would then spill over onto his property and the Wagamon's property and exacerbate the problems that they are already seeing. He asked that Board to keep this in mind as they look at possibly having more water that could flow into the area. | Noted |
| **Tim and Helen Kessler, landowners, in an email dated April 24, 2023** | | |

| ID | Comment | Engineering Response |
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| THK.01 | We have lived in Lino Lakes since 1986 on Main Street. Back in about 2006 there was discussion on the Blanding Turtle in Anoka County and the fact it was endangered. My wife and I express wishes that in all you do, you also consider this turtle habitats, if you still see it as threatened. | Blanding's turtles are listed as "threatened" by the Minnesota Department of Natural Resources (DNR). As the RCWD is aware of multiple sightings of these turtles in Columbus and Lino Lakes, it has taken precautions to avoid inadvertent takings of the species during ditch maintenance, including educating equipment operators. |
| **Clark Robinson, landowner: 4/26/23 letter to RCWD** | | |
| CR.01 | As a landowner within this drainage system my question is, has the ACSIC been applied to entire 10-22-32 system, or just in the areas north of Pine St.? | An ACSIC has been determined for the entire system. For the portions of the system south of Pine Street, the ACSIC is consistent with the Functional Grade identified in the 2011 Historical Review |
| CR.02 | Has every culvert from Main St. south been checked to see if the culvert is set at the level that would match the ACSIC level? | Yes – every culvert has been verified for consistency with the ACSIC grade. |
| CR.03 | In other words, if the ditch has been improved to a lower level than the original profile, shouldn't all the culverts/obstructions be lowered to match the bottom of the ditches? | Excavation of the ditch by private landowners outside of a public drainage proceeding is <u>not</u> considered to be part of the as-constructed and subsequently improved condition |
| **Perry Wagamon, landowner: Paper documentation provided to the Board on 4/26/2023 (Comment 1) and testimony at the 4/26/23 Board meeting (Comments 2 and 3)** | | |
| PW.01 | See **Appendix A** for summary of documentation provided | The documentation provided by Mr. Wagamon details observed historic hydrologic conditions and a partial history of water management decisions near Jodrell Street by the RCWD, City of Columbus, Coon Creek Watershed District, DNR, and Corps of Engineers. |

| ID | Comment | Engineering Response |
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| PW.02 | Perry Wagamon, stated that he has heard a lot of things today that he feels make a lot of sense regarding ditch cleaning. He stated that what does not make sense to him is that he lived in his home for 25 year prior to this road being constructed and had no flooding issues. He stated that the trees on his property that were killed by the flood were 40-50 years old. He stated that he does not think there is a question that when they built the road, it flooded, killed the trees, and ruined his home. He stated that he came to the District when the road was built and they were putting in the culvert. He explained that he had reported that a neighbor had told him that they were putting the culvert in 3 feet too high and requested help to take care of the flooding problem. He stated that they promised to do that and mentioned cleaning up ACD 10-22-32. He noted that he did not come to the District and ask them to clean ACD 10-22-32 because he did not know what that was, he just knew that his land was flooding. He reiterated that his land was not flooding prior to the road being built but did after it was built and the culvert was placed too high. He stated that he thinks it is obvious why his land was flooding and did not believe it should take a 15-20 year ditch cleaning process in order to take care of the problem. He stated that, to him, it would be common sense to go lower the culvert to the as constructed condition. He stated that if that would have been done, his land would not have been flooded, his property would not have been destroyed, and his trees wouldn't be dead. He stated that he feels this is a lot more simple than this group is trying to make it. He reiterated that he has never requested that any kind of kind of ditch cleaning be done and simply asked to have relief from the flooding. | Noted |
| PW.03 | He expressed frustration that the expectation is that the Board would believe that it took them 15 years to figure out that there was a beaver dam over the pipeline and get it cleaned out. He stated that it was not a beaver dam and was a 2.5 foot obstruction that continued for 50-100 feet on either side of the pipeline. | It is correct that a portion of the obstruction was remnant cover placement by the pipeline owner (NNG) when the pipeline was installed. RCWD initially cleaned off a portion of this cover material to the extent that the on-site pipeline representative would allow. Beaver dams were then built on top of the remaining hump and subsequently removed by RCWD multiple times. In 2021, RCWD in coordination with NNG representative was able to remove the remainder of the hump down to the ACSIC grade. |

| ID | Comment | Engineering Response |
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| **Janet Hegland, Columbus City Council Member, in testimony at 4/26/23 Board Meeting** | | |
| **JH.01** | Janet Hegland, Columbus City Council, stated that she has attended a few meetings and has learned a tremendous amount and understands the District has done a lot of work trying to solve this problem. She stated that the letter presented by Mr. Bittner reflect the position of the Columbus in terms of their interests, but noted that she had heard this morning that there is additional information and additional perspectives that may be considered. She stated that it would be very reassuring to the City of Columbus if that information was considered as part of the selection of the alternatives. She stated that the District has done a lot to try to solve this problem and it has been tremendously frustrating for Columbus to have residents have repeated flooding events and not get relief. She stated that the attempts that they have tried thus far, have not solved the problem. She stated that it may have kept them ahead of the development and increased pressure on the ditch system to handle storm water run-off, but it has not solved the problem. She stated that if it requires taking another meeting or two in order to look at the alternative perspectives and additional information and incorporate that into the selection process, that would offer some assurance to Columbus. | Noted |
| **Scott Robinson, landowner, in testimony at 4/26/23 Board Meeting** | | |
| **SR.01** | Scott Robinson, 8179 4th Avenue, Lino Lakes, stated that his property is directly south of this area and noted that he felt that drainage rights were property rights which give an intrinsic value to the property. He asked if there was representation from the City of Lino Lakes also present at today's meeting because they mentioned a culvert on Pine Street and asked if there was a proposed size that the cities want to install | The Cities have not proposed an alternative size. The alternatives evaluated utilizing the same size pipe, with exception of Alternative 5. |
| **SR.02** | Mr. Robinson asked if that would go to the ACSIC level or to the official profile of the ditch because those are two different things. Mr. Robinson asked if the District was aware that there are areas of the watershed that the ACSIC level is not the official profile and is not the maintained level of the ditches. | The RCWD does not manage to an "official profile." Rather, it manages to the ACSIC alignment, grade, and cross-section. In most of the system, the ACSIC is the same as the "Functional Profile" indicated in the 2011 Historic Review. |

| ID | Comment | Engineering Response |
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| SR.03 | Mr. Robinson stated that there were also surveys done of the ditch from south of the center of Section 6 which is a half mile south of Pine Street all the way down to the lake. He stated that there have been core samples done and they know the ditch was dug deeper at one time than what it was being maintained at now. He stated that his larger question is whether the Board decides to put in ACSIC upstream from them, what the effects will be on the water coming down to him when they are not doing to the ACSIC level below them and through them. | We are unaware of core samples that would indicate that the grade of the ditch as it was originally constructed and subsequently improved via drainage proceedings is lower than the ACSIC grade recognized by the District. Lowering the Pine Street culvert will not increase the burden on the downstream system nor change its capacity. |
| SR.04 | Mr. Robinson asked if the District's hands were tied by the Corps of Engineers and the DNR. | The District has the authority to maintain the drainage system pursuant to M.S. 103E, but is likewise subject to other local, state, and federal laws. |
| SR.05 | Mr. Robinson referenced a 10 year rain event and stated that he knows their back fields will be flooded because the downstream culverts are not adequate enough to handle it. He stated that if they put in a 48 inch culvert or two -24 inch culverts on Pine Street, they will be flooded. He stated that he feels there is no way that it will not flood because they are downstream and their culverts are smaller. | The District does not intend to increase the capacity of the Pine Street culvert. |
| SR.06 | Mr. Robinson stated that wanted to know if it was the District's testimony that they had done the study on downstream and have determined that they can take the water and that it will have no adverse effects. | No increase in water volume will occur downstream as a result of any of the proposed alternatives, and thus the burden on the system will not be increased by the alternatives. That said, other factors including climatic changes have increased the frequency of higher magnitude rainfall events. The RCWD is limited in its ability to address the climatic changes through its role as drainage authority but has and will continue to address these changes through other District programs. |

| ID | Comment | Engineering Response |
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| SR.07 | Mr. Robinson stated that in a perfect world you would be able to say that the ACSIC is the official profile and have it maintained at that level. He stated that if the Board is doing to take the position that they will try to lower it to the ACSIC level, he would like to see that done District-wide and have it put down to the level where the ditches have been dug to. | The RCWD has completed prior comparisons of the ACSIC grade on ACD 10-22-32 to existing road/field crossings and has replaced and/or lowered the culverts where crossings have been determined to be an obstruction. |
| **Ron Moss, Tatonka Real Estate Advisors, in testimony at 4/26/23 Board Meeting** | | |
| RM.01 | Ron Moss stated that almost all of the discussion thus far today has been about the area north of Pine Street and he is representing a party who has property just south of Pine Street. He stated that this individual has 80 acres that they would like to sell and noted that it was platted back in 1980 as Pine Oaks Addition. He explained that at the time it was platted all the land was dry and right now, a reasonable amount of it is wet and he believes it is related to the topic being discussed today. He stated that they would like to sell it and have a potential buyer but the dryness of the land will have a great effect on the value of the land. He stated that he believes the decisions the Board makes will impact property owners south of Pine Street as well. | The referenced property is located upstream of Branch 2 of ACD 10-22-32 and is in no way impacted by the proposed alternatives upstream of Pine Street. However, we understand the concerns, which are consistent with concerns raised by a prior owner of the property, which are unrelated to the condition of the ACD 10-22-32 drainage system. We are unaware of disrepair on Branch 2 that has cause the chronic drainage issues on the subject property. |

## CONSIDERATION OF COMMENTS AND DOCUMENTS WITH RESPECT TO ENGINEER'S TECHNICAL REVIEW

Written comments and additional documents are not in conflict with the technical findings summarized in the Houston Engineering, Inc. (HEI) memorandum dated January 23, 2023 regarding maintenance alternatives for ACD 10-22-32 north of Pine Street. However, a few of the comments suggested additional analysis be completed within the report, as follows:

- Comment MK.05 and MK.08 suggest an alternative repair profile (denoted as Exhibit B in the Mike Kettler letter) and recommend its consideration. This profile is considered an "improvement" under M.S. 103E. Improvements cannot be initiated by the RCWD. Therefore, we do not recommend its evaluation at this time.
- Comment MK.06 suggests modeling the alternatives utilizing the 100-year rainfall event. Although the alternatives can readily be modeled using higher rainfalls than evaluated in the report, doing so will provide limited value in determining the ditch's ability to convey its design capacity (which is less than a 10-year rainfall event).
- Comment KiB.01 suggests modeling the alternatives under future land use conditions. Note that the drainage system was designed for land use as existed it existed in 1898, and maintenance/repair of the drainage system is limited to the capacity as it was originally constructed.
- Comments DH.02 and DH.03 request mapping and assessment of impacts downstream in Lino Lakes. It is important to note that none of the alternatives envision an increase in capacity of the drainage system from its originally established/constructed condition. The downstream portions of the drainage system were designed to accommodate the flow from the upstream portions of the system.

We can complete one or more of these suggested additional analyses upon request from the Board of Managers. However, at this time it does not appear that the results of such analysis would be pertinent to the Board's decision regarding repair approach.

## CONSIDERATION OF COMMENTS AND DOCUMENTS WITH RESPECT TO BOARD DECISION ON REPAIR APPROACH

In considering maintenance/repair of the public drainage system, the RCWD as drainage authority under 103E and as a watershed district under 103D evaluates several factors, including but not limited to the value of the work to the landowners served by the system; the value of the work to the general public; the cost of the work, potential environmental effects, and prioritization of District efforts. The public comments provided touched on most of these factors. General themes of the comments included:

- Desire to maximize the efficiency of the drainage system, as reflected in Alternative 4. Multiple reasons cited for the critical nature of the drainage system condition, including "very flat" topography in the community and a lack of grade in the original construction of the ditch.
- Concern regarding compromising of downstream capacity and of ecological resources. These concerns have been addressed in the response to comments above.
- Requests for additional analysis of rainfall events. This is discussed in detail in the previous section of this report. The commentors did not indicated how this analysis would factor into decision-making by the Board.
- Detail on prior hydrology conditions and decision making by water management authorities (RCWD, Coon Creek Watershed District, City of Columbus, DNR, US Army Corps of Engineers). These conditions and decisions were in part directly related to the ACD 10-22-32 system and in part to other factors such as development construction. Although this history cannot be modified by current decisions, it may inform the value placed on quantified and/or observed incremental changes in performance of the drainage system in this region.

Although the hydrologic effects of the repair alternatives have been quantified within the 1/23/23 engineer's report, the value of these changes, and the prioritization of these repairs within the RCWD's overall public drainage system maintenance program, is subjective and can be informed by the verbal and written comments received. We recommend the Board weigh this information with respect to the factors outlined above in making a decision regarding a repair approach.

## NEXT STEPS

We recommend the RCWD proceed with the following steps in addressing drainage concerns on ACD 10-22-32 north of Pine Street:

1. Board of Managers to approve a motion to direct staff to proceed with implementation of a specified alternative from the 1/23/23 engineer's report (either Alternative 3 or 4), subject to and dependent upon applicable regulations.
2. RCWD staff to coordinate with City staff regarding the approach and roles in executing subsequent actions in implementation of the preferred alternative.
3. If Alternative 4 is selected, RCWD staff to make formal application to DNR for lowering of the Jodrell Street and 137th Avenue culverts to the ACSIC grade. This step may include a coordination meeting with the DNR and potentially development of additional materials to support an application.
4. RCWD to complete an investigation of the wetland complex potentially affected by the lowering of the Pine Street culvert (including a wetland delineation) and make either a no-loss or wetland mitigation application to the LGU.

Depending on the outcomes of Steps (3) and (4), RCWD and Cities to develop plans and implement construction of culvert lowering projects.

## APPENDIX A – SUMMARY OF DOCUMENTS RECEIVED FROM PERRY WAGAMON 4/26/23.

| ID | Title | Author | Date | Notes | Relevance to ACD 10-22-32 |
|---|---|---|---|---|---|
| PW_11 | Sunde Memo and Cover Letter | Mike Kettler - Sunde Engineering | 4/18/2023 | See detail in Table 1 | Recommended management |
| PW_12 | 1099-MISC Tax Statement | Precision Landscape and | 2010 | 1099 Tax Statement for Sale of Wood Chips | Historic hydrologic conditions |
| PW_13 | Cover Letter for Document Submittal | Perry Wagamon | 4/25/2023 | Cover letter for document attachments | Historic management decisions |
| PW_14 | Excerpt from EOR Repair Report | EOR | | Excerpt of profile analysis along current Main Trunk | Historic management decisions |
| PW_15 | Tree Analysis Report | Paul Kujawa - Metro Tall | 2016 | Report on investigation of tree stands on Perry Wagamon property. | Historic hydrologic conditions |
| PW_16 | Excerpt of Meeting Minutes | Coon Creek Watershed | 7/14/2003 | Highlighted excerpt of CCWD meeting minutes | Historic management decisions |
| PW_17 | DNR field map/notes | Judy Davidson - DNR | 3/20/1981 | Notes from DNR staff regarding wetlands on Perry Wagamon property | Historic hydrologic conditions |
| PW_18 | ACD 32 cut sheets | Anoka County Engineer | 1898 | Cut of cut sheets from 1898 design documents for ACD 32 Branch 15 (now ACD 10-22-32 Main Trunk near Jodrell St.) | Historic design |
| PW_19 | ACD 10-22-32 Profile | Greg Graske - EOR | 2/16/2007 | Excerpt of EOR Repair Report indicated profile analysis along Main Trunk | Historic management decisions |
| PW_20 | Carlos Avery Estates Field Inspection Notes | Unknown | 5/14/2003 | Notes from inspection of plat construction, indicating standing water along a road | Historic hydrologic conditions |
| PW_21 | Completed ACD 10-22-32 Work Activities | Unknown | Unknown | Map and narrative indicating work completed on ACD 10-22-32 north of pine street prior to 2015 | Historic management decisions |
| PW_22 | Anoka County Protected Waters Map | DNR | Unknown | Excerpt from Anoka County Protected Waters map | Historic hydrologic conditions |
| PW_23 | Property History Narrative | Perry Wagamon | 4/11/23 | Narrative on history of conditions at Perry Wagamon property | Historic hydrologic conditions |
| PW_24 | Letter regarding HEI map dated 1/18/21 | Perry Wagamon | 6/10/21 | Opinion on ACSIC grade determined by RCWD Engineer and prior RCWD management decisions | Historic management decisions |
| PW_25 | Property History Narrative | Perry Wagamon | 7/16/2021 | Narrative on history of conditions at Perry Wagamon property up to construction of Jodrell St. | Historic hydrologic conditions |
| PW_26 | Letter regarding ACSIC grade | Perry Wagamon | 4/9/2022 | History on ACD 10-22-32 management grade and relevance to ACSIC | Historic management decisions |
| PW_27 | Summary of Events | Perry Wagamon | 10/25/2016 | Summary of water management activities related to portion of ACD 10-22-32 on Wagamon property | Historic management decisions |

| ID | Title | Author | Date | Notes | Relevance to ACD 10-22-32 |
|---|---|---|---|---|---|
| **PW_28** | Cover Letter – DNR information | Perry Wagamon | Unknown | Cover letter sending historic DNR field inspection data | Historic hydrologic conditions |
| **PW_29** | COE Permit – Carlos Avery Estates | UW Army Corps of Engineers | 8/6/2003 | COE permit for discharge of fill in wetlands at Carlos Avery Estates. Excerpts highlighted regarding culvert sizing conditions | Historic management decisions |
| **PW_30** | Misc. correspondence related to COE permit | Multiple | 2003 | Miscellaneous correspondence between COE and local landowners regarding hydrologic effects of the construction of Carlos Avery Estates | Historic management decisions |