

All,

Please see attached change order request from UPI. This request stems from groundwater issues and onsite material for construction of the wet ponds for stormwater management. Main items relating to the CO are below:

- The change order covers:
 - Dewatering for (1) pond (North East) by Contract Dewatering (required due to persistent high ground water that RAMS has not been able to lower with their equipment)
 - Dewatering for the South and North ponds by UPI (UPI has submitted another change order for \$14,385.88 for dewatering costs incurred for the ponds up through this point. A reasonable middle ground might be one (proposed pond dewatering) or the other (previously incurred pond dewatering costs)
 - Synthetic liner installation & material cost for (3) wet ponds (MSA recommends incorporating a different liner material than the onsite soils which have failed in the North pond)
- In spring/early summer 2026, RAMS used onsite material which met DNR specifications to construct the North pond liner. They were able pump down water and install the soil for liner material on the North Pond
- The remaining (2) ponds were excavated and work was paused with the hope that dryer conditions in the summer would allow for further dewatering and shaping of the ponds. However, as the summer & rain events continued, the water level did not recede, and UPI brought forth the need for utilizing a specialized dewatering firm to lower the ground water in the North East pond enough to properly construct the remaining ponds.
- In the North pond, where RAMS was able to dewater and place onsite material for the liner, it was observed that the material did not hold the desired shape and sloughed off into the water. It is assumed that the material is not holding shape partially due to the high ground water and partially due to the high sand content, even though lab testing shows it technically meets DNR requirements.
- The sloughing and geometry is a problem because the state requires a specific cross section for ponds holding permanent water level. If the material cannot hold this shape, we can't certify the pond is built to requirements and could result in safety concerns down the road.

- The biggest concern with variation from the proposed cross section is lack safety shelf. There is a flat area that extends 10' into the wet pond below the normal water elevation. This provides an area for a person to stand if they stumble down the side slopes in the pooled water. Although this feature does not provide additional stormwater treatment benefits, it is crucial from a safety and liability standpoint. Especially considering these ponds abut residential lots, proximity to the school and discussions regarding future walking paths within the development. To address this, MSA recommends either the synthetic liner or a trucked in clay liner of better material than onsite.
- I have discussed other options apart from the synthetic liner with the contractors including trucking in compacted clay liner and mixing clay material, such as bentonite, with the native material to create a clay liner onsite.
 - Trucked in Clay Liner – RAMS provided an estimate for trucking in clay from a site in Muskego, which is the only guaranteed location in the area for clay. The trucking cost alone for the clay liner was higher than the proposed synthetic liner.
 - I inquired about clay borrow sites closer to the site and RAMS does not have a reliable source nearby.
 - There is potential RAMS could locate a clay borrow site if we were to delay pond construction into next spring, however it's not a guarantee that the site would be closer than the Muskego location.
 - RAMS indicated recent work in Dousman required clay imported from Milwaukee area due to lack of adequate clay in the area.
 - Bentonite/Equivalent additive to native material
 - RAMS said they did not have experience with this method, would be willing to attempt this, but they couldn't provide guarantee on the success of the efforts or the time/material cost. They proposed this be done on a T&M basis
 - My concern with this option is we begin venturing down the T&M route and we end up spending more on acquiring the material, mixing it, placing it and the total cost exceeds the known product of the synthetic liners.

- Dewatering
 - RAMS is confident they can the North and South Ponds with their equipment.
 - The water level of the North East Pond is persistent and high enough that UPI will need a specialized dewatering subcontractor to lower the water level enough to install the liner.
- Timeframe/Restrictions
 - Contract Dewatering is nearby for another job so UPI contacted them about dewatering at Westfield.
 - Given that they are close, the pricing will likely be cheaper than having to remobilize in spring.
 - UPI has scheduled Contract Dewatering to begin efforts next week. So if we want to hold off on approval of this CO, we should let UPI know as soon as possible.
 - Synthetic liners cannot be installed over the winter as the material becomes brittle and risks cracking.
 - Currently a 2-3 week lead-time for the synthetic liner.

Options for Approval:

1. Approve entire CO to get all ponds dewatered and lined with synthetic liners in 2026
2. Approve the dewatering and liner of North Pond only while Contract dewatering is in the area for 2026. Then have RAMS wait until 2027 in hopes they can find clay sources nearby and construct the remaining (2) ponds with clay liners
3. Deny the CO and leave the ponds unconstructed until next year and revisit the groundwater level and liner material based on current conditions.

Please review and let me know your thoughts. Assuming the Change Order needs to go before Village Board, if we know what direction we want to go I can update UPI so they can adjust schedule as needed or put in orders for the dewatering/liner material.

Feel free to call to discuss.

Thanks,
Josh

