



December 20, 2013

Timothy J. Myers  
Gogebic Taconite, LLC  
402 Silver Street  
Hurley WI 54534

Subject: Stormwater Permit Application for Bulk Sampling

Dear Mr. Myers:

See below for the items that need to be clarified before I can move forward on your permit application:

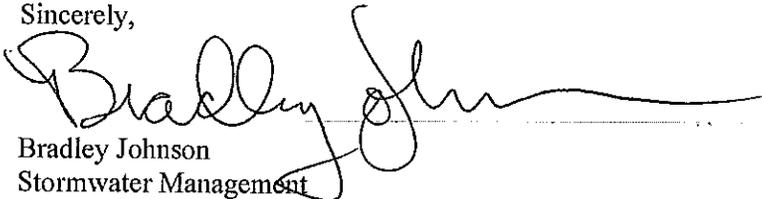
1. Please provide a detail of the Runaway Truck Protection Area.
2. Please include provisions to install rock check dams in the Moore Park Road ditch if flow is significant enough that scour or transport of sediment is observed.
3. Will improvements to Access Road 3 be permanent? If so, restoration details need to be addressed that discuss getting the side slopes of the berm vegetated. In addition, details on how the permanent structures (rip rap ditch/channel and sedimentation basin) will be maintained, must be included.
4. Please use the WDNR Sediment Trap Technical Standard (1063) to design your sedimentation control devices rather than the riprap sump detail in the current plan.
5. Will 3 inch riprap in the Access Road 3 road ditch be of sufficient size to reduce the velocity of the water given the length and slope? Do you have data or technical information that verifies your assertions? If not, I would advise you to install rock check dams and or use larger aggregate. Please use the Ditch Check Technical Standard (1062) to make sure whatever design you choose is appropriate for the length and slope of your ditch.
6. Please verify whether a culvert exists in the old railroad grade downslope of Bulk Sample Site 5 (BS5).
7. Access Road 6, stations 7+00 to 15+00:
  - a. Since the contributing drainage area to this segment appears significant and indicates that a lot of water will be flowing downslope, please calculate the drainage basin area and determine whether the corresponding amount of water can be reasonably passed over the road at station 12+50 and at the terminus of the silt fence at approximately 6+80. Please evaluate whether riprap should be used here to slow the water down before it crosses the road.
  - b. Station 12+50 is the low spot that will receive water from around 400 feet of roadway and an undefined drainage basin. Stormwater is proposed to discharge over the road in this area and right into the proposed safety berm. Based on conversations with your design engineers, a cut in the berm to pass this water was inadvertently omitted. Please provide a revised plan sheet that details this area and shows the opening in the berm. Also your analysis should serve to help you evaluate whether a culvert is warranted here.
  - c. Please explore the possibility of installing upslope silt fence in this area to collect clean water and direct it to a culvert under the roadway. It will function as a clean water diversion and will significantly decrease the amount of water that comes into contact with the roadway and its sediment.

8. Please provide a better detail of what is proposed for station 16+00 to 18+00. Specifically, it is unclear where water goes around the wetlands in this location. Further, on the south, left going uphill, it appears that the water will be directed all the way down the slope from 23+50 to around Station 17+00. Due to the proximity of the wetlands in this location, please verify whether the outfall from the silt fence will impact wetlands. I have essentially the same comment for the north side of the road except it has an even longer flowpath. I would advise a break in the silt fence at around station 18+50 to 19+00. A discharge in this location appears to completely miss wetlands and bleeds off some of your stormwater.
9. I am also trying to square Detail 4 with the reality that you will likely have to cut on the uphill side of the roadway and fill on the downhill side; if only to have a good place to lay down your roadbed. This may mean that your roadway footprint is considerably larger than 12 feet +/- (toe of slope will need to extend out a ways on downhill side). It further means that restoration will be a bit more involved than the simple removal of gravel and geotextile material. It also prevents an erosion control challenge when you are taking water across the road and down a longer, steeper, unvegetated slope. Please indicate areas of cut and fill on your plan set. Are you able to calculate fill slopes, how far the toe of slope extends and whether additional BMPs are warranted? It would seem that this information would allow you to determine where and whether culverts are a reasonable option.
10. Since it appears that a considerable amount of the area around the switchback will be discharging through Station 28+00, provisions will need to be made to make sure the BMPs designed to be implemented in BS2 are of sufficient size to accommodate the expected flow. Please conduct an analysis of the expected runoff volumes to determine the efficacy of the proposed sedimentation practices. In addition, please prepare a contingency plan for implementing additional BMPs should conditions warrant during construction. Again, based on the calculated flow, it may be advisable to install a culvert here to divert flow away from BS2.
11. Please provide a detail of the Truck Passing Lane.
12. More detail is needed on the safety and wetland protection berms. Specifically:
  - a. How are they terminated?
  - b. Since water will be essentially channelized at the outfall of the berms you will need to make sure those areas are armored so the channelized flow is not erosive. Alternatively you could use Sedimentation Basins in these areas.
  - c. Please provide plans that clearly provide the detail necessary (zoom in) to evaluate the water flow around the berms.
13. Please use the Sedimentation Basin Technical Standard rather than the hay bales with sump detail proposed for BS1.
14. Due to the proximity of the wetland north of BS1, you are advised to develop contingencies to install additional erosion controls if those implemented are insufficient to control sediment.
15. During Bulk Sampling activities, you are advised to excavate the lower part of the sampling area first so that a depressional area will be created for the storage of runoff water.
16. Please update the plans to highlight the points of discharge.
17. Per the site map requirements of s. NR 216.46(5) Wis. Adm. Code, please provide a site map that contains all the requisite elements. Specifically, I am unable to locate a site map that identifies wetland and surface waters within a quarter mile of the construction site.
18. Your plan reads as if the construction activities and therefor the implementation of erosion controls and ultimately restoration will occur when the ground is not frozen. If work is to be conducted in winter, a different suite of best management practices will likely need to be implemented. These alternatives need to be discussed at length. In addition, snow removal activities may need to be addressed. Please also discuss the possibility of starting construction and then having to stop for a length of time should road limit bans be put on Moore Park Road.
19. Please indicate where construction will occur on slopes of 20% or greater.
20. Extremely long runs of silt fence, especially those on slopes, tend to cause stormwater to pick up speed, be erosive, and ultimately cause the silt fence to fail. Periodic diversions into sedimentation basins or other BMPs will need to be employed here to address this significant issue.

21. On the plan it is unclear where water will discharge at Station 36+80. Based on conversations with your engineer, it is your intention to take the water south. If so, you will need to protect the downslope wetland (Wetland 7) with a BMP like silt fence. Please fix this in the plan and provide a detail.
22. Your application indicates an anticipated construction duration of 16 months. To the best of your ability, please narrow down your timeline, or qualify your decision.
23. Section 2.1.2.2 of the narrative plan says "improvements will generally consist of the addition of gravel with or without geotextile". Please clarify this statement as it seems that gravel removal and restoration of the temporary roadway will be accomplished better if geotextile prevents gravel from mixing with native soils.
24. Your narrative says that you will be using commercial gravel. Commercial gravel contains a significant amount of fines. You are advised to rethink that and instead use a larger aggregate product with less fines. I also disagree with the contention in Section 2.2.2 that commercial gravel will provide tracking control; as it will not.
25. In Section 2.5, erosion control matting is proposed to be used on slopes 3:1 or steeper. Please indicate where erosion control matting will be used.
26. In Section 2.1.1, "topsoil is to be segregated and reserved for future use". Please provide detail on the segregation that is going to be done. The Section further says, "bedrock is to be cleared of extraneous material". Please provide detail on what extraneous material is expected to be encountered and how it will be cleared.
27. Will you need to screen rock prior to removal? If so, where will over and under sized material be stored? I assume it will be a different area than the topsoil piles. Indicate on plans and figures.
28. Will restoration activities include restoring the site back to current conditions or will Access Road 6 be left in place, minus gravel and fabric, as a logging road?
29. In light of the number of comments above, please make sure the narrative plan jives with changes made to the drawings and figures

Please note the 14 day review timeline is on hold pending your submittal of the above information. Please contact me to discuss or if you have any questions at [bradleya.johnson@wi.gov](mailto:bradleya.johnson@wi.gov) or 715-359-2872.

Sincerely,



Bradley Johnson  
Stormwater Management

Copy: Larry Lynch-WA/5  
Russ Rasmussen-WT/3