STATE OF MICHIGAN

DEPARTMENT OF ENVIRONMENTAL QUALITY

LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

March 13, 2012

Mr. James M. Iwanicki, Engineer-Manager
Marquette County Road Commission
1610 North Second
Marquette, Michigan 49849

Dear Mr. Iwanicki:

SUBJECT: DEQ File Number 11-52-0075-P
T47N, R29W, Section 2, Humboldt Township, Marquette County

The Department of Environmental Quality's Water Resources Division (WRD) has initiated review of the Marquette County Road Commission's (MCRC) permit application to construct a new, 21.4 mile long north/south primary county road between US-41 and County Road IAA, known as "County Road 595". The application is being reviewed under the statutory criteria of Part 31, Floodplain Regulatory Authority, found in Water Resources Protection; Part 301, Inland Lakes and Streams; and Part 303, Wetlands Protection; of the Natural Resources and Environmental Protection Act, 1994 PA 451 as amended.

WRD staff has met and corresponded with MCRC a number of times regarding this proposal, with the discussions focused primarily on the project purpose and alternatives analysis. The WRD has determined that the permit application is administratively complete and agrees that the project purpose stated in the application is appropriately defined. The level of detail provided in the application may not be adequate to support the conclusions drawn in the alternatives analysis. As discussed in this letter, it is the applicant's responsibility to demonstrate that there are no feasible and prudent alternatives to the proposed activity.

This letter outlines areas where WRD believes clarification and/or amplification of the information provided in the application is appropriate. MCRC may also choose to provide additional information in response to public comments received during the public hearing, to assist WRD in processing the application. In addition, we have reviewed the hydraulic analysis of stream crossings and find, as indicated below under the Part 31 review, necessary detail lacking for our review.

WRD will fully evaluate all information MCRC provides which is relevant to the statutory criteria in making a decision on the application. This letter is based on WRD review of the "Revised Alternatives Analysis and Project Assessment" found in tab 3, "Project Use and Alternatives" ; and tab 18 "Alternatives Analysis/Project Assessment"; of the application, as well as the hydraulic analysis report (HEC-RAS) and corresponding application information for the proposed stream crossings.

This request for clarification under Part 303, Wetlands protection is based on Rule 2a(2) and 2a(6)of the Administrative Rules for Part 303, which state, in pertinent part:

Rule 2a*(2)... a permit applicant shall bear the burden of demonstrating that an unacceptable disruption to aquatic resources will not occur as a result of the proposed activity and demonstrating either of the following:*
(a) The proposed activity is primarily dependent upon being located in the wetland.
(b) There are no feasible and prudent alternatives to the proposed activity.

Rule 2a(6) An alternative is feasible and prudent if both of the following provisions apply:
(a) The alternative is available and capable of being done after taking into consideration cost, existing technology, and logistics.
(b) The alternative would have less adverse impact on aquatic resources.

The information requested for review under Part 303 is as follows:

Part 303 Administrative Rule 2a (2) referenced above requires that the applicant demonstrate there are no "feasible and prudent" alternatives to the proposed activity. The demonstration shall include, among other things, a consideration of logistics, cost and adverse impacts on aquatic resources [Rule 2a(6)]. Therefore, in order for WRD to better evaluate the alternatives in accordance with this statutory requirement, please provide the following information:

1) The application states that: both the Mulligan West and Mulligan East alternative routes meet the project purpose. The Mulligan West alternative route was eliminated from consideration for the following reasons:
    a. the MCRC does not consider it prudent to condemn an area having an existing recorded conservation easement;
    b. the MCRC does not consider it prudent to locate the road for a mile parallel to the Yellow Dog River; and
    c. the MCRC does not consider it prudent to locate the road downstream of the Silver Lake Dam.

2) The application states that the Mulligan East alternative route is not feasible and prudent due to the necessity of crossing an extensive gorge along the route at the crossing of the Yellow Dog River and also because of the route is located downstream of the Silver Lake Dam.

3) To assist the WRD evaluation, the following information may be necessary to adequately demonstrate that the Mulligan West and Mulligan East alternatives are not either feasible and prudent:

    a. Indicate and describe the method used to estimate wetland impacts for each of these alternatives.

    b. Provide a comparison of the cumulative impacts to aquatic resources that would result from construction of each of these alternatives to the cumulative aquatic resource impacts that would result from the proposed County Road 595 construction.

    c. Provide a cost comparison for each of these alternatives to proposed County Road 595, including:

        i. Information regarding cost and logistical reasons to document why crossing the conservation easement is not considered to be feasible and prudent, in consideration of potential mitigating measures that could be put in place. You may wish to consider requesting determination of whether a Threatened and Endangered species permit is required by DNR for the specific route shown in the application, affecting sections 20 and 28 of the conservation easement area.

ii. Cost for the engineering and construction of a bridge over the Yellow Dog River gorge.

iii. Overall cost for construction, operation and maintenance of each of these alternatives, compared to the cost of the proposed County Road 595 construction, including the cost of relocating the snowmobile trail. For ease of comparison, these costs should be expressed as a present value. The assumptions used to determine present value should be provided.

iv. Cost for compensatory wetland mitigation for the actual wetland acres and types that would be impacted on each of these alternatives, assuming that these impacts would be avoided and minimized to the extent possible. Include a comparison to the cost for compensatory wetland mitigation for the proposed County Road 595 route.

v. Comparison of the number stream crossings on each of these alternative routes, with the number of stream crossings on the proposed County Road 595 route, including the associated costs of construction of the stream crossings.

vi. Anticipated cost of stream mitigation for each of these alternatives, compared to stream mitigation costs for proposed County Road 595. Please consider that stream mitigation would likely not be required for bridging the Yellow Dog River gorge.

4) The application states that the "Sleepy Hollow" alternative does not meet the project purpose and is not a feasible or prudent alternative to proposed County Road 595. To assist in WRD's assessment of this alternative, please provide the following information:

a. A cost comparison for construction, operation, and maintenance of this route to proposed County Road 595, including relocation of the hairpin curve, stream crossing construction costs, compensatory stream mitigation costs (stream channel areas currently running adjacent and parallel to the road are likely to be improved by proper relocation), and compensatory wetland mitigation costs.

b. A comparison of the emergency response time for this route, to that for the proposed County Road 595, including response time from/to Marquette General Hospital and Bell Memorial Hospital.

c. A comparison of the effects of the use of this alternative to the use of proposed County Road 595 on the recreational uses of the land area affected by each.

d. A comparison of the estimated commercial, industrial, and other business benefits of this route to those for the proposed County Road 595.

e. Documentation to indicate whether this route has been evaluated as a potential primary county road by MDOT, and whether it meets the criteria, as determined by MDOT.

f. A comparison of the cumulative impacts to the aquatic resources that would result from the use of this route, to those for proposed County Road 595.

Also, it does not appear that a determination has been sought from the Michigan Department of Natural Resources, regarding the requirement for a threatened and endangered species permit(s), for the entire County Road 595 route, especially for areas relocated from the previously proposed Woodland Road route. It is suggested that this information also be obtained for the alternative routes discussed above.

The information requested for review under Part 31 is as follows:

The request for clarification under Part 31, Floodplain Authority, is based on our review of the HEC-RAS analysis, and apparent conflicts with information presented in the application.

The hydraulic reports submitted were completed by a P.E., but are not sealed by an engineer licensed in Michigan, as required in the administrative rules for Part 31. The vertical datum is not identified for any of the crossings. The HEC-RAS analysis information for the crossings of the Middle Branch Escanaba River, Second River, Dead River, Mulligan Creek, and Yellow Dog River need to be clarified. Clarification of the information submitted for the proposed work involving the East Branch Salmon Trout River is also needed. The information being requested follows:

1) Provide sealed hydraulic reports for all crossings, by a licensed Michigan engineer.

2) Clarify the vertical datum used in the models for all crossings.

3) For the proposed crossing of the Middle Branch of the Escanaba River:

    a. The flood damage waiver submitted does not cover all of the properties which will be affected by the increased stages. The flood stage increases extend to station 6538 and the flood damage waiver only covers the properties upstream 1,759 feet. In addition, the flood damage waiver letter states an increase of 0.09 feet, which differs from what is in the engineering report. The affected landowner(s) should be signing off on the correct increase value. Please provide new flood damage waivers with correct flood stage increase data, and which include all property owners within the actual area affected by the increase in flood stage.

    b. The recommended structure in the hydraulic report and the structure shown in the profile view drawing differ from what is stated in the application. The recommended structure and the structure shown in the profile view have 4 auxiliary culverts in the overbank area, differing from the application. Please provide clarification of information provided to ensure that it accurately depicts the proposed activity. **Please note that this information will also affect the flood level increases and the above mentioned flood damage waivers.**

4) For the proposed crossing of Second River:

    a. There is no compensatory floodplain cut proposed. If the Middle Branch Escanaba cut is to be used, this must be clarified. Provide clarification of the proposed compensating cut for the Second River crossing.

5) For the proposed crossing of the Dead River:

    a. The upstream fill volume (rock rip rap) shown on the application drawings does not appear to match the quantity given in the application form. There are

discrepancies between the size of proposed bridge stated in the hydraulic report and in the profile plan view submitted with application. Provide clarification of the proposed bridge span (24 or 32-foot span).

6) For the proposed crossing of the Yellow Dog River:

   a. The application contains discrepancies with the hydraulic report (riprap fill volume and existing bridge size). Provide clarification of the proposed rip rap fill volume and the existing bridge size.

   b. The cross-sections drawn at the upstream and downstream ends of the Yellow Dog river crossing extend through the bridge structure. Provide corrected cross sections.

7) For the proposed crossing of the East Branch Salmon Trout River:

   a. The Mannings "n" values selected seem inappropriate for the conditions observed during on-site review. A value of 0.035 for the channel and 0.08 for the overbank areas appears more appropriate. Provide clarified/corrected Mannings values for this crossing.

   b. Four cross sections are required for a complete culvert and/or bridge analysis. The cross sections should be taken at the upstream and downstream faces; one upstream; and one downstream. The upstream/downstream cross sections should be located outside of the influence of the bridge/culvert and in close proximity to the bridge/culvert. Please provide the appropriate cross sections.

   c. There is a need for more cross-sections in the model, especially between station 776 and 1128. There is no cross-section between the 2nd and 3rd culverts, which is needed. Coefficients of contraction/expansion should be 0.3 and 0.5 at the crossing locations. Provide the required additional cross sections, including the corrected coefficients of the referenced contraction/expansion.

   d. The geometry file shows four culverts, not three, as stated in the application. If there is an extra crossing in the stream model, this must be explained. Cross-section 342 shows a bridge and culvert at the same location, and therefore needs to be clarified. The cross section does not show fill around the culvert. Provide clarification of the referenced cross section and indicate if there is both a culvert and a bridge at this crossing, and if there is an existing culvert, the fill associated with it needs to be shown.

   e. The hydraulic report states there are three existing culverts, and the geometry file shows four (4). The application states that there are three existing 30-foot long, 36 to 48-inch diameter culverts. The model shows four culverts varying from 15 to 41 feet in length. Provide clarification of the existing number and lengths of the existing culverts.

   f. The distance to the upstream cross-sections for the culverts and/or bridge are depicted as varying from 0.375 feet to 2 feet in the model, which does not reflect what is shown in the geometry file. Provide clarification/correction of the distances to the referenced upstream cross sections.

g. The culverts at cross sections 752 and 1150 are shown to be below the stream invert. This needs to be fixed in the model.

h. The cross-sections should be checked to make sure they were drawn perpendicular to the stream flow. Provide corrected cross-sections to properly reflect what is occurring at the referenced locations.

i. When the proposed condition model was run, it was found that the flows and starting conditions had not been input into the Steady Flow input page, and therefore the model would not run. Provide a corrected proposed condition model, including the missing flow and starting conditions information.

Please be advised that WRD will not finalize review of the application until after pertinent agency comments have been received and reviewed, including those from the U.S. Environmental Protection Agency (EPA), and Michigan Department of Natural Resources (DNR). WRD will fully evaluate all information relevant to pertinent statutory criteria in making a decision on the application. Please be advised that the Marquette County Road Commission is not compelled to provide the requested clarification and amplification of the information provided in the application. However, without the requested clarifications and amplifications, a decision would be made in accordance with the statutory criteria of Part 31, Part 301, and Part 303, based on available information.

WRD is raising these questions now in the belief that it will assist in making an appropriate decision on this application in a timely manner. Additional questions or comments on this subject may arise during review of public and agency (including EPA and DNR) comments.

Thank you in advance for your continued cooperation in this matter. If you have any questions, please contact Ms. Ginny Pennala at 906-346-8559, or at pennalav@michigan.gov, or you may contact me at 906-346-8535, or at caseys@michigan.gov.

Sincerely,

Steve Casey
Water Resources Division

SC:GP:DN
cc: Ms. Melanie Haveman, EPA
Mr. Chuck Wolverton, King and MacGregor Environmental, Inc.
Ms. Colleen O'Keefe, DEQ
Ms. Sue Conradson, DEQ