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STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES

LANSING



REBECCA A. HUMPHRIES
DIRECTOR

March 21, 2007

Mr. Joseph R. von Wahlde
JFNew
11181 Marwill Avenue
West Olive, MI 49460

Dear Mr. von Wahlde:

Thank you for providing me with information regarding modifications to the Harbor Shores Community Redevelopment, Inc. (HSCRI) project. The modifications involved re-designing the ninth hole of the proposed golf course to avoid the rose-pink (*Sabatia angularis*; State threatened) population within Jean Klock Park. I am providing this letter to: 1) summarize the process used to define the potential spatial extent of the rose-pink population; 2) indicate whether 'take' of rose-pink could be avoided under the current design of the ninth hole; and 3) describe the additional measures that would be necessary to avoid 'take' of rose-pink and other threatened species within the proposed project area.

Potential Rose-pink Population Area within Jean Klock Park

In 2006, four qualified botanists conducted surveys for rose-pink near the area of the proposed ninth hole within Jean Klock Park. I expect that the combined results of those surveys adequately document the general locations of rose-pink that were visible in 2006. However, the actual extent of an entire rose-pink population may not be visible in any given year, because a portion of the population may remain dormant in a seed bank until appropriate hydrologic conditions trigger germination and growth. Given that potential situation, on March 6, 2007 I suggested using buffers around direct observations of rose-pink to define the potential extent of the rose-pink population within Jean Klock Park. During a phone call on March 7, we agreed that appropriate buffers and boundaries could be defined by delineating the potential habitat for the species. On March 8, JFNew conducted a survey to delineate the southern limit of potential rose-pink habitat within the park. Based on the survey, JFNew indicated that an existing two-track road represents the southern limit of potential habitat, in part because shrub densities to the south of the road are generally too high to be suitable for rose-pink. We therefore agreed that the southern limit of the potential population area should be defined by the two-track road. We also agreed the western limit of the potential population area should be defined by a small buffer around the westernmost observation points. The line labeled *rose pink locations* on the enclosed map depicts the estimated southern and western boundaries of the potential area of the rose-pink population.

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Adequacy of Design

It is my understanding that the ninth hole, as currently designed, would not overlap with the estimated potential area of the rose-pink population. That is, the fairway would be divided or otherwise configured to avoid the area. If construction of the ninth hole occurred according to the current design and according to the conditions outlined below, I would not expect it to cause degradation or destruction of habitat within the potential rose-pink population area. Therefore, take of rose-pink in Jean Klock Park could be avoided under the current design.

Additional Measures to Avoid Take

The current project design would allow the avoidance of 'take' of rose-pink and other State-threatened species within the HSCRI project area. The following measures will be necessary to ensure 'take' does not occur.

Rose-pink near the ninth hole

The estimated potential area of the rose-pink population must not be used for parking, access, or for stockpiling materials during or after construction of the fairway. While construction associated with the fairway is occurring, the estimated potential area of the rose-pink population must be protected by using snow fencing or by marking areas using flagging. In addition, methods (e.g., grading) must be used to prevent erosion and sedimentation associated with construction that could adversely impact the rose-pink population. **All contractors associated with the construction and subsequent maintenance and management of the fairway must be informed of these requirements, verbally and in writing.**

Following construction of the ninth hole, maintenance and management of the fairway must not adversely impact the rose-pink population. The estimated potential area of the rose-pink population must not be mowed, but woody vegetation may be cut down and removed by hand. In fact, I recommend removal of woody vegetation in this manner to help maintain the habitat in a condition suitable for rose-pink. In addition, measures must be taken to prevent harmful effects of pesticides, fertilizers, golf-course runoff and altered hydrology on the rose-pink population. Approaches for preventing such impacts could involve the use of a natural vegetated buffer strip between the maintained fairway and the estimated area of the rose-pink population, seasonal restrictions on pesticide application, soil grading, and appropriately designed drainage systems.

Reasonable measures must be taken to prevent golfers from entering the estimated area of the rose-pink population. Barriers such as split-rail fences, boulders, walls or shrubs must be used to help prevent entry. In addition, clearly visible signs must indicate that entry is prohibited and that golfers may not retrieve golf balls that land in the area. Golf-course workers may enter the area only as necessary to remove woody vegetation.

Rose-pink near the second hole

Rose-pink occurs in a second location within the HSCRI project area. This location is south of Ox Creek, north of Graham Avenue, and in the general area of the second hole of the proposed golf course. The design of the second hole, as provided to me on February 21, 2007, is adequate to allow avoidance of 'take' of rose-pink. To ensure 'take' does not occur, the measures outlined above for rose-pink near the ninth hole are also required for rose-pink near the second hole.

Clean-up of debris and trash currently in the general area of the second hole is expected to occur as part of the proposed project. Measures must be taken to avoid take of rose-pink while achieving clean-up objectives. Approaches for avoiding take could involve seasonal restrictions on clean-up activities, staking/flagging and then avoiding rose-pink areas, and minimizing the use of heavy equipment. In the event debris removal would require the temporary disturbance of rose-pink, we can discuss options for permitting and mitigating adverse impacts.

Wild sweet potato

Based on current information, wild sweet potato (*Ipomoea pandurata*; State-threatened) occurs in one general location within the proposed HSCRI project area, northeast of Modern Plastics Corporation. Current plans depict a 'residential development area' adjacent to the location of the wild sweet potato. However, no details regarding the development are provided. In the absence of those details, the only measure that can be proposed to avoid take is to avoid development that could encroach on or otherwise adversely affect the species or its habitat. If more information on the 'residential development area' is provided, more-specific measures could be identified.

Prairie trillium

Based on current information, prairie trillium (*Trillium recurvatum*; State-threatened) occurs in one general location near the proposed HSCRI project area, northeast of the intersection of Golf Road and Higman Park Road. This location does not currently occur within the proposed area of the HSCRI project, and take of the species is not anticipated. However, if the proposed project area expands such that it could affect the species, measures must be identified and implemented to avoid adverse impacts.

Conclusion

If the golf course and associated facilities are constructed as currently designed and the measures outlined above are implemented, we would not expect 'take' of threatened species to occur within the HSCRI project area and the project could proceed lawfully under the provisions of Michigan Public Act 451 of 1994, Part 365 (Endangered Species Protection). Particular changes to the project design or failure to implement the required measures could lead to 'take' of threatened or endangered species. In that case, evaluation of a Michigan Threatened &

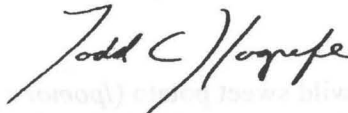
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Endangered Species Permit application would be necessary to determine whether that 'take' could be legally authorized under the provisions of Part 365.

Regardless of the extent to which the preceding conditions are met, we recommend the development of a rose-pink monitoring program as part of the HSCRI project. The recommended program could provide valuable information by annually estimating size and distribution of the rose-pink population and by assessing any relevant effects of construction, management and maintenance in adjacent areas. However, we can not require such a program under Part 365 unless 'take' is anticipated and a Michigan Threatened & Endangered Species Permit is issued.

Thank you for your assistance regarding the threatened species within the HSCRI project area. Please contact me if you have any questions or if you need additional information.

Sincerely,



Todd C. Hogrefe
Endangered Species Coordinator
Wildlife Division
517-373-1263

Enclosure

cc: Ms. Maureen Houghton, DNR
Mr. Ben Zimont, DEQ