Illinois Department of
Natural Resources
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Pat Quinn, Governor
Marc Miller, Director

May 5, 2014

Mr. Charles Nordman, Director
Development Services Department
Village of Huntley
10987 Main Street
Huntley, IL 60142

RE: Project Freeman, Huntley, Kane County
Endangered Species Consultation Program
EcoCAT Review #1409010

Dear Director Nordman:

The Department has received this proposed action from Jacob & Heffner Associates for the purpose of consultation between the Department and the Village in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action on Freeman Road is in the vicinity of a number of records of state-listed endangered and threatened species and Illinois Natural Areas Inventory (INAI) Sites.

The Department believes the proposed action is unlikely to adversely affect essential habitat for the endangered **Swainson's Hawk**, *Buteo swainsoni*. The nearby former nesting site has been abandoned for several years and the currently known nesting areas are located beyond the influence of this proposed action.

The Department believes the proposed action is unlikely to adversely modify environmental conditions within and associated with the **Freeman and Powers Road Fen & Woods Natural Heritage Landmark and INAI Site**, located about 1,500 feet east-northeast of the site of the proposed action. The position of the INAI Site on the local landscape relative to the proposed action suggests the ground water recharge area which is the source of the Fen's unique character will not be modified by the proposed action.

However, the Department believes the proposed action is likely to adversely modify the essential habitat of the state-listed endangered **Blanding' Turtle**, *Emydoidea blandingii*, and the state-listed threatened **Iowa Darter**, *Etheostoma exile*.

A significant population of the Blanding's Turtle, containing both adults and juveniles, has been documented and studied by the Kane County Forest Preserve District at its Freeman Kame Forest Preserve and Nature Preserve since 2007. Among other characteristics, this semi-aquatic species is known for its overland mobility and movements between wetlands during its active season. The wetlands at Freeman Kame are part of a larger wetland complex, whose largest component is the large wetland immediately adjacent to the proposed action on the northeast. While this wetland is on private property and has not be scientifically surveyed for the presence of the Blanding's Turtle, the Department believes it is very likely that at any given time a significant proportion of the local Blanding's Turtle population is located in the adjacent wetland. Moreover, this species is known to use local streams as movement corridors, and the close location of Eakin Creek to this wetland may promote genetic exchanges with other nearby local populations of this species known to occupy wetlands associated with the Del Webb Sun City development west of Route 47.

Another unique characteristic of the Blanding's Turtle is it use for nesting of dry uplands farther from wetland habitat than any other North American aquatic turtle species, with nesting locations often located half a mile or more from wetland habitats. Moreover, this long-lived species, which can reach ages of 70 or more years in the wild, demonstrates extremely strong fidelity to successful nesting locations, with females returning again and again to the same location. It is also likely that females, which need 15-20 years to reach sexual maturity, attempt return to the site of their own nativity. Studies with this species have shown that gravid female Blanding' turtles which encounter an obstacle on their way to their nesting grounds will persistently attempt to circumvent the obstacle to resume their journey but, if unable to do so, will deposit their eggs near the obstacle, regardless of the suitability of the location for successful hatching. Access to nesting locations or suitable substitutes is a critical need of this species, and the unintentional development of nesting sites may be a principle cause of this species' decline, in Illinois and elsewhere.

Because this species does not nest earlier than late May, and nestlings typically emerge in August and September, agricultural operations normally precede and follow these phases of the reproductive cycle, tending not to interfere with it. Thus, farmed areas may continue to serve as active nesting sites. The Department believes it is likely the site of the proposed action contains one or more traditional nesting sites for the Blanding's Turtle which may be rendered permanently unavailable through development. This has implications, not only for the construction phase of the project, but for the operation and management of the site into the future.

The Department offers the following recommendations to minimize, avoid, or mitigate for adverse effects to the essential habitat of the Blanding's Turtle.

Recommendation #1: The Village should consider a requirement the applicant arrange for a trapping and/or radio-telemetry survey of the adjacent wetland to verify the presence of this species and estimate the numbers present. In doing so, the applicant should consult with the Kane County Forest Preserve District, which in the course of its studies permanently marked turtles to aid recognition of recaptures. It is likely that turtles marked by KCFPD periodically occupy this wetland and may be captured during such a study and this would provide valuable information about turtle ranges. Radio-telemetry of female turtles will help establish the degree to which these animals attempt to enter the project area to nest. [The Department notes scientific surveys of state-listed species require a permit from the Department of Natural Resources pursuant to Title 17 *Illinois Administrative Code* Part 1070.]

Recommendation #2: The Village should consider a requirement for the applicant to erect a silt fence around the entire perimeter of the proposed development area for the purpose of excluding adult turtles to prevent nesting in the pending construction area. Properly installed silt-fencing (i.e., the toe of the fence is located below the ground surface so that water must flow through the fence material) is an effective barrier to turtle movement. This is perhaps the only reliable means to assure that nesting, which normally occurs at night, will not occur in areas to be later disturbed during construction, resulting in prohibited taking of turtle eggs. This is also an alternate means of determining the presence of the species, since females attempting to enter upland areas will be stopped by the fence but remain in its vicinity, attempting to circumvent it. Early morning inspections of the 10-15 feet outside the fence should reveal these animals. (Care should be taken not to force these animals out onto Freeman Road by setting the perimeter fence back from the roadway.) As an alternative to morning inspections, game cameras set along the periphery may also reveal the movements of turtles, although the Department is not aware of successful applications of this technology to this species. Unless the applicant obtains a permit pursuant to Part 1070, care should be taken to avoid any situation which would require the physical handling of turtles, which constitutes a prohibited taking.

Recommendation #3: The Village should consider a requirement to add design features to the proposed development which will enhance the conservation of this species during subsequent use of the property. Turtles will be most at risk if they enter traffic or parking areas from which they cannot easily escape, exposing them to injury from vehicles and to unauthorized capture or collection by employees or visitors. This species cannot scale a vertical surface six inches high; a stone or concrete feature of this height can exclude this species from areas of high risk, and would be suitable for installation around the perimeter of traffic, parking, and ornamental landscape areas. However, it would be helpful if turtles retained access to proposed stormwater detention basins and upland terrestrial areas near them, such as the proposed excess soil stockpile.

Recommendation #4: The Village should consider a requirement that all contractors, tenants, occupants, and their employees be trained to recognize the Blanding's Turtle, to understand its protected status and penalties, and be instructed on what [not] to do if the species is encountered, and how to report its presence. This can be accomplished through a brochure or notice distributed to employees or posted in lunch or break areas.

Recommendation #5: If the Blanding's Turtle is expected to have an on-going presence on the property, the land owner should give serious consideration to seeking an Incidental Take Authorization from the Department of Natural Resources pursuant to Title 17 Illinois Administrative Code *Part 1080.* The possession of such an Authorization can provide greater flexibility in managing the presence of the Blanding's Turtle without risking criminal penalties for prohibited taking of this animal. Such an Authorization requires filing a Conservation Plan. The actions recommended above can serve as elements of such a Conservation Plan.

The Iowa Darter is a small but colorful fish, seldom exceeding four inches in length. During the spring spawning season, this small fish ascends into headwater streams, and can often be found in very narrow and shallow waters, often only one foot wide and less than six inches deep, between April and June. This species has been collected during surveys of the South Branch of the Kishwaukee River and its headwaters, including Eakin Creek, several times since 2002, most recently in 2012. The species can be

presumed to be present at least each spring in the reaches of Eakin Creek adjacent to the parcel and which will receive storm water discharges from it. While all recognize that clean unpolluted water is a benefit to aquatic organisms, too often the temperature of such waters is ignored. The thermal regime of a stream or other body of water is a major determinant of which organisms can thrive there. For most stream organisms, cooler water is essential to maintain ideal conditions for survival and propagation.

The Department offers the following recommendations to minimize, avoid, or mitigate for adverse effects to the essential habitat of the Iowa Darter.

Recommendation #6: The Department recommends the Village require the use of wet detention basins with a sufficient depth (>four feet) to allow the development of thermal stratification of stored waters in the spring, summer, and fall.

Recommendation #7: The Department recommends the Village require the discharge structures of each basin be designed so that discharged waters are taken from the bottom of the basin, or at least below the level of expected thermal stratification. Catch-basins containing restrictor weirs are ideal for this purpose. In this manner, waters heated by contact with roofs, parking areas, and other impermeable surfaces will collect on the surface of the detention basins, while the hydrostatic pressure of the inflow will force the discharge of the cooler waters stored below the thermocline, thus avoiding sudden disruption of the thermal regime in the receiving stream. Not incidentally, oil and other lighter-than-water fluids will remain in the basin, as will floating trash and debris.

Recommendation #8: The Department recommends the Village require that each detention basin be designed with an emergency overflow to safely pass rainfall events which exceed the design storm flow, without excessive erosion into the receiving stream, to protect stream substrate habitats.

Consultation on the part of the Department is closed, unless the Village desires additional information or advice related to this proposed action. In accordance with 17 Ill. Adm. Code 1075.40(h), the Village should notify the Department of its decision regarding these recommendations, whether it will:

- Proceed with the action as originally proposed;
- Require the action to be modified per Department recommendations; or
- Forgo the action.

This consultation is valid for two years unless new information becomes available which was not previously considered; or the proposed action is substantially modified; or additional species, essential habitats, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review primarily reflects the information existing in the Illinois Natural Heritage Database at the time of this consultation, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments.

If additional protected resources are encountered during the project's implementation, the applicant must comply with the applicable statutes and regulations. Also, note that closure of consultation does not imply IDNR's authorization or endorsement of the proposed action. Please contact me if you have questions regarding this review.

Sincerely,

Keith M. Shank
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cc: Jared Kenyon, Jacob & Hefner Associates
William Graser, Kane County Forest Preserve District