

13 May 2010

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Dear Ms. Schwarzer:

We are responding to your call for entries for this year's Federal Highway Administration Exemplary Ecosystem Initiative and Exemplary Human Environment initiative recognition programs. The Illinois Department of Transportation (IDOT) nominates the Illinois State Toll Highway Authority (ISTHA) and the IDOT North Chicago permittee responsible wetland mitigation. The site is located in North Chicago, IL— at coordinates X=2914380.847 feet and Y=2060230.35 feet, NAD 1983 State Plane, Illinois West coordinate system.

The ISTHA and IDOT have partnered in an effort to rehabilitate and protect a 150-acre remnant of Illinois native landscape heretofore threatened by invasive species and development. The remnant contains a complex of uplands and wetlands. In 1966, the land was acquired by the IDOT for highway expansion that never occurred. In 1977 and 1989, the Clean Water Act and the Illinois Interagency Wetland Policy Act were passed, respectively. Selling the excess parcel was proposed in 1989 and IDOT legal counsel suggested "the site may be worth more to us for future mitigation purposes than any ordinary appraisal would ever show." In 1991, studies were conducted to determine the suitability of the site for wetland mitigation. Wetland scientists gave high potential for repair of degraded habitats. More studies followed in 1996 and 2006. Time and again, the remarkable discovery was the presence of high quality prairie and wetland beneath the dense cover of exotic invasive species of shrubs. In the herbaceous layer, field botanists found populations of four state-listed species of plants. Listed species locations and wetland boundaries were mapped using GPS data and GIS software. Site assessment reports are available for viewing at the IDOT Environment Section Website (www.dot.il.gov).

Twice the site had been proposed for use as a wetland mitigation bank site and prospectuses were submitted to the US Army Corps of Engineers (USACE). In 1997, the site was approved, but funds were never programmed by the IDOT for its development. In 2006, the ISTHA approached the IDOT to discuss use of the North Chicago site for wetland mitigation for an ISTA project. In exchange for the value of the land, the ISTHA would fund and implement a plan and would give half of the wetland mitigation to the IDOT. A Letter of Understanding between the ISTHA and IDOT was signed. In 2008, the ISTHA submitted a wetland mitigation bank site prospectus to the USACE. The USACE responded that the site could not be approved because wetland credits would be generated almost exclusively through the rehabilitation of degraded wetland and upland habitats. Instead, the USACE suggested the ISTHA pursue use as a permittee responsible wetland mitigation site. Late 2008, the ISTHA submitted to the USACE, a compensatory wetland mitigation plan, following the new 2008 mitigation rule. A year later, the plan was approved and, shortly thereafter, a contract was awarded by the ISTHA to repair 150 acres

of degraded habitats. Approximately 5.3 acres of wetland impacts from two IDOT projects and 10 acres of impacts from one ISTHA project will be compensated at the North Chicago site.

Before rehabilitation began, the aerial cover of exotic invasive species of shrubs was quantified by field botanists using cutting-edge technology. A digital camera fitted with a HemiView lens and oriented vertically in sample plot centers photographed the canopy of the plot area. Percent visible sky and leaf area index were calculated from the digital images using HemiView Canopy Analysis Software, ver. 2.1. Percent canopy cover was calculated as 100 - % visible sky. A horizontal habitat image also was taken of each plot oriented from the southwest to the northeast corner, for comparison following rehabilitation.

Repair of habitats began winter 2010. Exotic invasive species of shrubs (e.g. buckthorn or *Rhamnus* spp.) are being cut using mostly hand tools (Figure 1). The cuttings are piled and burned on-site. Approximately 44 acres of upland and 15 acres of wetland have been cleared to date. Following the cutting, herbicides will be applied to the stumps to prevent suckering. Prescribed fires also will be used to control the spread of woody plants and to maintain the open-canopied structure of prairie and emergent wetland vegetation. Except for the removal or deactivation of 3,000 feet of buried drain tile, no earth work is proposed as project sponsors desired to preserve the original soil structure and site topography. Performance standards have been established to judge success of the rehabilitation; all are tied to plant species composition. In the wetlands, at least 80% of the dominants should be native species at the end of the five-year monitoring period. In the uplands, none of dominants should include *Rhamnus* spp.



or *Lonicera mackii*. In both uplands and wetlands, the floristic quality should increase over the five-year effort, as measured by the Floristic Quality Index.

Figure 1. Hand removal of the exotic invasive buckthorn and honeysuckle shrubs. Note the dense thickets beyond the small clearing.

With estimates of less than one-tenth of one-percent of Illinois native prairie remaining, the importance of repairing and protecting places like the North Chicago site from degradation or development cannot be overemphasized. Environmental planners within the ISTHA and IDOT are very pleased knowing that 150 acres of the native landscape will be saved and are thankful for the cooperation of the US Army Corps of Engineers and the Illinois Department of Natural Resources in approving the rehabilitation of degraded habitats as a form of wetland compensation.