

# Western Prairie Fringed Orchid Land Acquisition Proposal

## Section 6 Recovery Land Acquisition

### Iowa

#### PROJECT STATEMENT

##### NEED:

The proposed project will protect a population of the western prairie fringed orchid and provide potential habitat for this federal and state threatened species. Habitat for this species is moist prairies and sedge meadows. Existing moist tallgrass prairie and sedge meadow in Iowa is extremely limited with less than one percent of the prairie and only one to two percent of the sedge meadow remaining. The remaining fragments continue to be threatened by improper grazing, cultivation, and invasive species. Long-term survival of the species depends on protection from the effects of agricultural practices including herbicide drift and drainage. Management strategies to control invasive species and woody plant encroachment that mimic natural disturbances under which the species evolved are necessary to recovery and survival of this species. Acquisition and management of additional habitat and buffer areas will help ensure that orchid populations will recover and thrive.

The 1996 recovery plan lists 6 recovery actions with 30 priority 2 tasks and 10 priority 3 tasks. Maintain habitat of known populations is listed as the top priority action for the western prairie fringed orchid.

##### Recovery Action/Task #1: Maintain habitat of known populations as native prairie.

Task number 112 lists maintaining protective management of all sites presently owned by public agencies or conservation organizations in ecoregion 251B as a priority 2 task.

The 2009 5-Year Review: Summary and Evaluation for the western prairie fringed orchid identified off-site drainage that would directly or indirectly lower water levels and pesticide and herbicide impacts as two of the threats not adequately addressed in the Recovery Plan. Protective ownership and management can prevent drainage of suitable habitat but does not protect against increased drainage of adjacent properties which may adversely impact orchid populations. Also the use of pesticides and herbicides on agricultural fields adjacent to prairies and sedge meadows with orchids may threaten these populations.

##### OBJECTIVE:

Land adjacent to a known population western prairie fringed orchid will be protected through fee-simple acquisition. Acquisition will protect a known population from an off-site drainage plan that may alter the water level of the orchid habitat at Steele Prairie

State Preserve. Purchase of the property will also provide protection of the orchid population by removing the threat of pesticide and herbicide drift from the south and southeast by seeding cultivated fields to native grasses and forbs.

The Iowa DNR will attempt to acquire based on appraised value about 80 acres adjacent to the 40 acre tract of Steele Prairie State Preserve. The landowner has verbally expressed interest in selling the property to the IDNR. The end result of this project will be permanent protection and management of potential habitat and buffer for a population of the western prairie fringed orchid.

#### **EXPECTED RESULTS OR BENEFITS:**

The expected benefit of this project is to protect a population of western prairie fringed orchids from off-site drainage that could lower water levels in the rooting zone and reduce the potential for adverse impacts from pesticide and herbicide spray drift. This project will advance the objectives of the recovery plan by protecting a site presently in private ownership, enhancing the protection of a known population, acquiring suitable habitat for expansion or reintroduction.

Steele Prairie State Preserve is a 200 acre state owned mesic tallgrass prairie and sedge meadow in Cherokee County, Iowa. State preserve designation is highest form of protection the State of Iowa provides. Once an area is designated as a preserve it is considered to be the highest, best and most important use of the property for the public benefit. It is held in trust and cannot be changed except to another public use upon a finding of the State Preserves Advisory Board of imperative and unavoidable public necessity and with the approval of the Natural Resource Commission, the General Assembly by concurrent resolution and the Governor. The preserve is in two tracts, one is 160 acres and the second is 40 acres and located ½ mile east of the larger tract. The last comprehensive survey of the 40 acre tract of Steele Prairie State Preserve found 10 flowering plants in the late 1980's. The property proposed for purchase is directly south of the 40 acre tract of Steele Prairie.

Western prairie fringed orchid was seen on both tracts in 1987, but observations since then have focused on the larger, western tract, where they have seen several times since, including this year. The two tracts are nearly identical habitat, thus the 40 acre tract holds the same potential as the 160 acre tract to have maintained a population of the orchid.

The current owner, of the property proposed for purchase, is considering a plan to drain the sedge meadow swales to allow cultivation of the entire area. This could reduce the water holding capacity of the soils on the state preserve and specifically in the sway area where the orchid population occurs. Acquiring the area will protect swale or surface drainage ways on the preserve and the adjacent property. This will ensure that the habitat that remains off the preserve will continue to be as potential habitat for the western prairie fringed orchid. Acquisition will also increase the size of the area, reducing potential for spray drift and place the area under permanent protection and management.

**APPROACH:**

The landowner was contacted and he expressed a willingness to sell the property if the appraised value is acceptable. Iowa DNR is familiar with and will comply with all federal standards for land acquisition. We have successfully acquired property previously under the Recovery Land Acquisition program.

Iowa’s cost share (25%) will be from State Habitat Stamp funds.

Upon approval of funding, the IDNR will contact the landowner to arrange for an appraisal and negotiate acquisition. It is anticipated that about 18 months will be required to complete the acquisition.

The IDNR requests cost share for pre-agreement costs, including appraisal and land survey costs.

Any land acquired under this project by the IDNR will be listed on our Land Inventory, which lists cost of the property, size, and funding sources. Also it will be noted on the deed that there is a federal interest in the acquired property.

The acquired property will be managed by retiring row-crop acres and seeding them to prairie species using seed from Steele Prairie or other nearby prairie preserves. Management responsibility may be transferred to the Cherokee County Conservation Board, current manager of Steele Prairie State Preserve. This will be done through a management agreement with IDNR specifying management techniques and timing.

The addition to the eastern tract will be reviewed for possible state preserve designation once restoration efforts have been initiated.

**LOCATION:**

The 80 acre tract is located in Cherokee County, Iowa (T93N, R 39W, South ½ of the Southwest ¼ of Section 15) and is adjacent to the 40 acre tract of Steele Prairie State Preserve.

**ESTIMATED COST:**

80 acres at \$4,200/acre	\$336,000
Appraisal, land survey and closing costs	\$ 10,000
<b>Total</b>	<b>\$346,000</b>
<b>Federal Share (75%)</b>	<b>\$259,500</b>
State Share (25%)	\$ 86,500