

Project 3

Agency: Oklahoma's Office of the Secretary of Environment
In Cooperation with:
Oklahoma Conservation Commission
Lincoln County Conservation District
City of Chandler
Chandler Public Schools
Oklahoma Department of Wildlife Conservation
USDA Natural Resources Conservation Service

Title: **Lincoln County Wetland Rehabilitation and Outdoor Learning Center**

Background:

The Deep Fork of the Canadian River Watershed is recognized by both state and federal agencies for its high quality, important wetland functions, and its excellent fish and wildlife values. For example, the watershed in Lincoln County has been identified as the number one wetland site in Oklahoma in the U.S. Fish and Wildlife Services' Regional Wetlands Concept Plan (USFWS, 1991). The project efforts are also consistent with objectives of the Partners in Flight Program for conservation and management of bottomland hardwoods for neotropical migratory birds (Fitzgerald et al., 2000). Project efforts are complimentary to the *Eastern Oklahoma Wetlands Plan*, which is the state of Oklahoma's implementation plan for the Lower Mississippi Joint Venture of the North American Waterfowl Management Plan (NAWMP) (Brabander et al., 1985). This area is one of seventeen priority-one sites listed in the *1985 Texas and Oklahoma Land Protection Plan* (USFWS, 1985). In addition, it has the highest priority ranking for protection in *Oklahoma's State Comprehensive Outdoor Recreation Plan (SCORP)* (Oklahoma Tourism and Recreation Department, 1987). The majority of the area contains palustrine, forested wetlands of the type that have been identified as rare and/or declining habitats in the *National Wetlands Priority Conservation Plan (NWPCP)* (USFWS, 1989). The proposed project with Lincoln County Conservation District (LCCD) and City of Chandler would help demonstrate to the public the benefits and importance of wetlands.

A large portion of the Deep Fork Watershed is located in Lincoln County, Oklahoma. The project area is about 40 miles northeast of Oklahoma City, Oklahoma. The moderately rolling landscape ranges from about 800 to 1,150 feet above sea level. The area of the county is about 973 square miles. About 17 percent of the county is bottomland, 39 percent is upland prairie and 44 percent is partially wooded. The Deep Fork River Crosses the county from west to east.

The LCCD has experience in watershed based planning including five watershed protection and flood prevention (Public Law 566) projects. These upstream flood control projects included implementation of land treatment practices on at least seventy percent of their watersheds. These practices included, but were not limited to, riparian corridor restoration to minimize erosion. The conservation district understands the need for district support and involvement in planning and management of local wetland resources. There are a number of local groups whose interests span the spectrum from flood loss reduction to waterfowl habitat enhancement.

The *Wetland Watershed Management Plan for the Deep Fork Watershed in Lincoln County* stresses public education and outreach since the most critical obstacle to overcome in wetland protection is lack of knowledge. Historically negative attitudes coupled with lack of proven, science-based knowledge necessitate considerable outreach efforts. The *Wetland Resource Management Guide for Lincoln County Landowners* (LCCD), published at the recommendation of the Lincoln County wetland advisory committee, is intended for distribution to those who make decisions that affect our wetland resources, including current and potential landowners. Lincoln County's location in the center of the state and its close proximity to the state's two major metropolitan areas attract many investors with hunting and other recreational interests. By providing this publication to realtors, investment groups, hunting clubs, recreational organizations, and other such entities, the hope is to reach potential landowners and/or land users.

The City of Chandler owns a 75-acre area near the center of the city limits. Much of this area consisted of wetlands prior to conversion for agricultural use. In the summer of 2006 the City and NRCS completed the initial phase of a Wetlands Reserve Program (WRP) project to restore 23-acres of wetlands on this piece of property. In order to make this area more user-friendly the LCCD with OCC and other partners felt that this grant would be a valuable use for this area. The proposed project would rehabilitate two areas, one approximately 7 acres and the other about 1 acre, and connect these wetlands and the WRP wetland in the area with a series of trails. The rehabilitation activities would include some earth moving activities to create microtopography and to enable the area to retain water, while preventing the road nearby from flooding. The watershed is 38.4 acres, 39% pasture or range and 61% residential (38% impervious), with the low areas containing hydric soils capable of impounding water. A 1-year frequency, 24-hour rainfall event of 3 inches would impound approximately 1 acre-foot of water. The average annual precipitation for Lincoln County is 34.44 inches, which would be more than adequate water to sustain the hydrological needs of the wetland areas. Also, plant species management will be conducted (including removal of undesirable exotics and other species), increasing diversity by limiting monotypic vegetation, and planting diverse native species to restore the degraded areas back to wetlands. The City of Chandler will maintain these areas by including them in their existing long-term maintenance plans for their WRP project.

In addition, LCCD would like to use the entire area as a demonstration for outreach and education for wetland and riparian areas. The idea is to create an outdoor learning center/demonstration site for both agricultural producers and public and school groups. The learning center will be modeled after several successful sites across the state. The center will be comprised of: an ADA compliant boardwalk with interpretive features, an education shelter/gazebo, and wildlife viewing and habitat structures. This type of facility is needed to provide a focal point demonstrating the importance of wetlands in the community, and the location within the city limits near the school and a ball field complex provides a great opportunity for education because it will be highly visible to the public. In addition, areas surrounding the wetland will continue to be in hay production demonstrating that agricultural and city activities can coexist with wetlands.

In order to maximize the potential of this site, the City of Chandler will use it as a gateway to the rich and numerous wetlands of the Deep Fork River. Events such as the Governor's Duck Hunt and Chandler Public Schools outdoor educational days will help demonstrate the importance of wetlands to the community. LCCD will work with OCC and NRCS in developing restoration and enhancement plans for the various wetland areas in the county as well as utilize the rehabilitation process to teach students about wetland functions. Furthermore, LCCD, with OCC, NRCS, and Oklahoma Department of Wildlife (ODWC) conservation will continue to host wetland outdoor field days, natural resource days and other activities geared for youths, producers, and the general public. Also, the OCC will host WOW!/WET workshops to educate the local teachers on the importance of wetlands and other water quality issues.

Goals:

3. Rehabilitation of the wetland areas.
4. Development of an outdoor learning center.

Measures of Success:

- 4) Rehabilitate 2 wetland areas.
 - a) Restore hydrology
 - b) Creation of microtopography
 - c) Planting diverse native species
- 5) Incorporate educational and experiential opportunities for students and the public in the design and implementation of the restoration effort. The design and implementation will specifically involve input and effort from the LCCD, City, and OCC.
 - a) LCCD will host tours for area producers
 - b) OCC will host at least 2 WOW!/WET workshops at the facility targeting teachers and local school districts.
 - c) LCCD and ODWC will host annual natural resource days at the site.
- 6) Construction of an outdoor learning center
 - a) Construction of a boardwalk
 - b) Construction of trails
 - c) Incorporation of interpretive features and signage
 - d) Installation of wildlife viewing and habitat structures

Workplan: November 2006 through September 2008

Task 1: Educational Outreach

Educational seminars will be held to relate the importance of wetland environments. At least six presentations will be specifically designed and directed towards the appropriate audience, which would include: (a) agricultural producers; (b) teachers, (c) primary and secondary students; and (d) private groups and citizens. Each seminar will be age and education level appropriate as well as relevant to the interest of audience. LCCD will conduct the tours, with input and participation from the OCC and NRCS, geared towards local and regional producers. LCCD and OCC will host WOW!/WET and natural resource days.

Milestone Date: September 2008

Deliverable: Letter report detailing the attendance, agenda and practical educational materials
Costs: \$12,000 (\$9,000 federal)

Task 2: Development of the Restoration Plan & Outdoor Learning Center Design

A restoration and enhancement plan for the two wetland areas of the property will be developed by the LCCD and NRCS, with input from the OCC. This would include: boardwalk design, interpretive features, hydrologic evaluation, species selection and planting design, minor earthwork plans, and other activities.

Milestone Date: June 2007

Deliverable: Detailed plans and engineering drawings of the implementation plan along with a narrative description of the overall learning center design.

Costs: \$8,000 (\$6,000 federal)

Task 3: Implementation of the Restoration Plan and Construction of the Outdoor Learning Center

Based on the design generated and approved by EPA, the plan will be implemented through the use of volunteers and contracted labor. Implementation will involve vegetative planting, minor earthwork, construction of the boardwalk and interpretive features, and other ancillary activities. These activities would include creating microtopography with minor earthwork and planting more diverse species to provide a diverse riparian habitat.

Milestone Date: September 2008

Deliverable: Letter report detailing the effort along with photo documentation of pre and post construction.

Costs: \$45,000 (\$33,750 federal)

Task 4: Quarterly and Final Reports

Milestone Date: December 2006 through September 2008

Deliverable: Quarterly reports will be written to provide an update on the status of the project. A final report will be submitted to EPA, which summarizes all the activities associated with this project.

Costs: \$4,000 (\$3,000 federal)

Budget Categories:

	<i>Federal</i>	<i>State</i>	<i>Total</i>
Personnel	\$10,000	\$3,333	\$13,333
Fringe Benefits	\$2,000	\$667	\$2,667
Equipment	\$0	\$0	\$0
Travel	\$850	\$283	\$1,133
Supplies	\$3,000	\$1,000	\$4,000
Contracting	\$33,500	\$11,167	\$44,667
Total Direct Charges	\$49,350	\$16,450	\$65,800
Indirect Charges @ 20%	\$2,400	\$800	\$3,200
<i>Total</i>	<i>\$51,750</i>	<i>\$17,250</i>	<i>\$69,000</i>

Personnel:

<i>Personnel</i>	<i>Years</i>	<i>Cost</i>
Executive Director	0.01	\$620
Assistant Director	0.01	\$600
Administrative Officer	0.03	\$1,320
Administrative Assistant	0.03	\$793
Wetland Educator	0.025	\$1,000
Wetlands Program Coordinator	0.2	\$9,000
<i>Total</i>		<i>\$13,333</i>

Supplies:

<i>Supplies</i>	<i>Cost</i>
Office Supplies (paper, pens, staples, etc.)	\$200
Computer Supplies (program updates, etc.)	\$200
Documentation Material (camera, film, etc.)	\$300
Waders, boots, shovels, gloves, etc.	\$1,000
Resource Materials	\$500
Sign materials	\$1,800
<i>Total</i>	<i>\$4,000</i>

Contracting:

<i>Type</i>	<i>Cost</i>
Restoration Design (boardwalk, hydrology, veg. species, etc.)	\$8,000
Minor Earthwork	\$8,000
Vegetative Planting	\$3,000
Educational Outreach	\$3,000
Boardwalk Construction	\$12,000
Interpretive Features	\$5,000

Trail Construction	\$5,667
<i>Total</i>	<i>\$44,667</i>

References:

Brabander, J.J., R.E. Master, and R.M. Short. 1985. Bottomland Hardwoods of Eastern Oklahoma. USDI, Fish and Wildlife Service and Oklahoma Dept. Wildlife Conservation. 147 pp.

Fitzgerald, J., B. Busby, M. Howery, R. Klataske, D. Reinking, and D. Pashley. 2000. Partners in Flight Bird Conservation Plan for the Osage Plains (Physiographic Area 33) Version 1.0. 56 pp.

Oklahoma Tourism and Recreation Department. 1987. Oklahoma statewide comprehensive outdoor recreation plan. 184 pp.

U.S. Fish and Wildlife Service. 1985. Land Protection Plan, Texas/Oklahoma Bottomland Hardwoods, Migratory Waterfowl, Category 3. Albuquerque, N.M. 30 pp.

U.S. Fish and Wildlife Service. 1989. National Wetlands Priority Conservation Plan. var. pp.

U.S. Fish and Wildlife Service. 1991. Region II Regional Wetlands Concept Plan. 186 pp.



LINCOLN COUNTY CONSERVATION DISTRICT



201 N. SANDY LANE × CHANDLER, OK 74834 × PHONE: 405/258-5011 × FAX: 405/258-1237 × EMAIL: LINCOLNCCD@OKCC.STATE.OK.US

January 17, 2006

Jennifer Wasinger
Office of the Secretary of Environment
3800 N. Classen
Oklahoma City, OK 73118

Dear Ms. Wasinger,
Please accept this letter as an expression of support for the wetland grant project (FY03 EPA grant # CD976400-01-0) proposed for Lincoln County. The Conservation District has been very active in promoting public awareness of the benefits these ecosystems provide to our area. The District Board would welcome another opportunity to further demonstrate that. Thank you for your assistance with this project.

Respectfully,

Verlin Hart
Chairman

Enclosure (1)

cc: Chris Dubois, Oklahoma Conservation Commission

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WATER QUALITY

CONSERVATION — DEVELOPMENT — SELF-GOVERNMENT

City of Chandler

414 Manvel • Chandler, Oklahoma 74834 • 405-258-3200

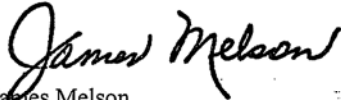
September 18, 2006

Ms. Tricia Soderstrom
Lincoln County Conservation District
201 N. Sandy Lane
Chandler, OK 74834

Dear Ms. Soderstrom:

Thank you for taking time to attend the September City Council meeting to discuss the proposed wetlands project. The City of Chandler fully supports the development of the outdoor classroom and walking trails as outlined in your presentation. We look forward to its completion and the educational opportunities it will provide for the youth of Chandler and the surrounding communities.

Sincerely,



James Melson
City Manager

**PARK ROAD ELEMENTARY SCHOOL
901 S. CHS STREET
CHANDLER, OK 74834
405-258-1828**

September 11, 2006

To: Lincoln County Conservation District
Trisha Soderstrom

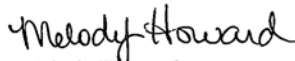
This is a letter of support for the Lincoln County Conservation District's outdoor, wetlands classroom.

Fifth grade students at Park Road School have participated in a field trip to the Wetlands for several years. The teachers were given activities for the classroom to teach the basics of science and ecology as an inquiry-based curriculum. We have found the program to be very educational as well as fun for our students.

We would be very interested in participating with the Lincoln County Conservation District in developing and implementing an outdoor classroom. This would not only allow all students at every grade level to be involved with classroom activities, but to experience hands-on activities to apply to their knowledge in the outdoor classroom. Students will be able to learn in a stimulating environment about the intricate food webs of a wetland, the ecological and wildlife systems within a wetland, as well as an awareness of what the wetlands do for us, and an appreciation for the wetlands.

I would encourage you to give full support of this awesome opportunity for our students as well as other students within the county to become active learners in the area of science.

Sincerely,



Melody Howard
Principal



House of Representatives

STATE OF OKLAHOMA

Danny Morgan

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Democrat Caucus Chairman
Committees:
Energy & Utility Regulation
Insurance
Career Technology Education

January 24, 2006

Oklahoma Conservation Commission
Mike Thralls, Executive Director
2800 Lincoln Boulevard, Suite 160
Oklahoma City, OK 73105-4210

Dear Mr. Thralls:

Re: FY03 EPA grant # CD976400-01-0

I want to offer my complete support for the consideration of the wetland grant project involving the City of Chandler. This grant will capitalize on a highly visible setting to do not only public information/education but youth education as well. I lend all of my support for this project.

If I can be of any assistance to you, please do not hesitate to call.

Sincerely,

Danny Morgan
State Representative
District 32

DM/eg

cc: Tricia Soderstrom

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