

**Environmental Protection Commission  
Iowa Department of Natural Resources**

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**ITEM****4****DECISION****TOPIC**

**Contracts with the Division of Soil Conservation, Iowa Department of  
Agriculture and Land Stewardship, for Watershed Improvement  
Projects**

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**Recommendations:**

Commission approval is requested for one-year and multiple-year service contracts with the Division of Soil Conservation, Iowa Department of Agriculture and Land Stewardship. The contracts will begin on April 23, 2009. The total amount of these contracts shall not exceed \$1,560,405. DNR shall have the option to renew these contracts as long as the contracts and any extensions do not exceed a six-year period.

**Funding Source:**

These contracts will be funded through FFY 2008 EPA Section 319 grant funds.

**Background:**

The following project contracts are presented for approval:

Iowa Learning Farm	1-Year	\$158,325
Water Quality for Rathbun Lake	3 Years	\$250,793
Tete des Morts Watershed Project	5 Years	\$472,862
Lake Geode Watershed Project	5 Years	\$90,000
Williamson Pond Watershed Project	4 Years	\$238,425
Muchakinock Creek Watershed Project	5 Years	\$350,000
<b>Total</b>		<b>\$1,560,405</b>

**Purpose:**

The parties propose to enter into these contracts for the purpose of retaining the Contractor to implement watershed improvement activities for the projects selected.

**Contractor Selection Process:**

These projects were chosen using a grant proposal application and committee review process.

Steve Hopkins  
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April 23, 2009

Attachment(s): Project Summaries

## FFY2008 SECTION 319 PROJECT SUMMARIES

### **Iowa Learning Farm Project**

This funding will combine with funding from the Division of Soil Conservation to support an inter-agency, multi-disciplinary program administered by the ISU Leopold Center for Sustainable Agriculture which works directly with farmer-cooperators to demonstrate and promote innovative conservation practices on their farms as a means of providing outreach to the general farm community in Iowa on the role of farmers in minimizing nonpoint source pollution from agriculture. The primary strategy behind this outreach effort is to have farmers communicating with farmers to promote conservation-based farming practices. The farm demonstration sites are selected from within each of the five primary soil regions in order to consider soil uniformity in comparing different tillage practices. The project includes five main components: water quality, agronomic, economic, sociological, and outreach. The core project partners include the ISU Leopold Center for Sustainable Agriculture, DSC, DNR, ISU Extension, NRCS, Conservation Districts of Iowa, and Iowa Farm Bureau.

Section 319 funding proposed

1 year

\$158,325

### **Water Quality in Rathbun Lake: BMPs for Targeted Sub-Watersheds 2008**

This is an extension of a successful, existing project targeting four new subwatersheds in the Rathbun Lake watershed in southern Iowa, cosponsored by the Wayne County Soil and Water Conservation District and Rathbun Land and Water Alliance, with matching funds from the Division of Soil Conservation. The 11,000-acre Rathbun Lake is one of the largest lakes in Iowa, is the primary source of drinking water for the Rathbun Regional Water Association, offers recreational opportunities for over one million people annually, and is the site of the future Honey Creek Resort State Park. The Iowa DNR has identified Rathbun Lake and other waterbodies in the lake's watershed as sediment and phosphorus-impacted through nonpoint source pollution. Nine water bodies in the Rathbun Lake watershed are included on Iowa's 2004 303(d) List of Impaired Water Bodies.

A comprehensive Rathbun Lake watershed assessment and geographic information system (GIS) analysis were used to select targeted sub-watersheds. Chariton River #2 Targeted sub-watershed in Decatur and Wayne Counties has a total of 4820 acres, which includes 1952 acres of cropland, 2000 acres of grassland, and 70 acres of woodland.

Best Management Practices (BMPs) that are needed to address priority land in the targeted sub-watersheds have been identified based on landowner interest, technical and financial assistance available, and effectiveness in reducing the delivery of sediment and phosphorus to Rathbun Lake and its tributaries. Selected BMPs for priority land include: (a) installation of terrace systems; (b) construction of grade stabilization structures, debris basins, and water and sediment control basins; (c) conversion of priority land to grassland and wildlife habitat with associated improved grazing and management practices; and (d) establishment of riparian forest buffers, filter strips, and grassed waterways. In addition, activities that will be conducted in support of BMP application for priority land include: (a) GIS analysis to help plan, select, and evaluate the impact of BMPs; (b) continued water quality monitoring in Rathbun Lake and its tributaries; and (c) watershed outreach targeted at landowners including farm visits, field days, signage, newsletter, displays, and a media campaign combining advertising, public service announcements, and press releases. The Alliance also proposes to maintain the current level of four field staff that assist landowners to plan and apply BMPs as well as carry out the day-to-day technical and administrative activities of the Rathbun Lake

Section 319 funding proposed

3 years

\$250,793

### **Tete Des Morts Watershed Project**

This is a new project sponsored by the Jackson County Soil and Water Conservation District, with matching funds from the Division of Soil Conservation. Tete Des Morts Creek watershed encompasses 30,433 acres flowing 15 miles through Dubuque and Jackson Counties. The last 5.2 mile segment from the confluence with Lux Creek to the mouth is listed on the 2004 303(d) List of Impaired Waters due to low biotic index. The creek has been scheduled for the total maximum daily load (TMDL) determination in 2011.

A Land Use assessment and Rapid Assessment of Stream Corridor Along Length (RASCAL) was completed in 2007. As a result of the assessment, the project has set a goal to reduce nutrient and sediment delivery by 40 percent over five years and improve the aquatic habitat. Results of a landowner survey identified stream bank and gully erosion as the two main physical problems, with soil run-off and livestock access to the stream as the major contributors of poor water quality. Eighty-five landowners said they would be willing to support the project, and thirteen producers have joined the advisory board.

The goal of the Tete Des Morts Watershed Project is to improve water quality by promoting structural BMPs that reduce the amount of sediment and nutrients reaching the stream. BMPs will include animal waste facilities, grade stabilization structures, water and sediment control structures, grassed waterways, riparian buffers, filter strips, streambank stabilization, pasture management, and exclusion fencing. Watershed outreach activities will also be conducted by project staff.

Section 319 Funding proposed

5 years

\$472,862

### **Lake Geode Watershed Project**

This is a new project proposed by the Des Moines and Henry Soil and Water Conservation Districts, which includes additional project funding from IDALS DSC and DNR Lakes Restoration. Lake Geode is a 187-acre lake located in a 1640 acre state park located in Henry County. The lake was constructed in 1950 and is a well known fishing destination. However the lake is impaired due to bacteria and elevated levels of pH. A comprehensive assessment for the Lake Geode watershed was completed using the IDAL, IDNR, and NRCS watershed planning protocol and associated tools. Results of the assessment identified potential source contributors for bacteria as livestock, wildlife populations (geese/deer) and septic systems.

An outreach campaign is planned to educate homeowners in the watershed of their possible septic issues. Along with information and education components, wildlife management and strategically placed sediments basins will assist in addressing the bacteria issue.

Section 319 funding proposed

5 years

\$90,000

### **Williamson Pond Watershed Project**

This is a new project proposed by Lucas Soil and Water Conservation District. Williamson Pond is a 26-acre publicly owned lake located about 2 miles east of the town of Williamson, in Lucas County. It has a watershed area of 1499 acres (including the lake itself). Williamson Pond is on the 2004 EPA 303(d) List of Impaired Waters. It is also on Iowa's 2000 Nonpoint Source Management Program (NPSMP) list of priority lakes, and it is considered a priority watershed within Lucas County by Lucas SWCD. Iowa DNR completed a TMDL for Williamson Pond in 2005.

The nature of Williamson Pond's 303(d) impairment is excessive turbidity caused primarily by suspended sediment. The TMDL set reduction targets for both suspended sediment and phosphorus. Problems within the lake directly related to turbidity include a loss of recreational value and reduced recreational use. DNR's 2004 and draft 2006 305(b) reports on water quality recognize Williamson Pond's turbidity impairment, and rate the lake as "partially supporting" its Class A1 and Class B(LW) uses.

The overall goal of this project is to reduce sediment delivery to Williamson Pond by 484 tons/year, with the expectation that this will also result in a corresponding reduction in phosphorus delivery. This project has plans to install/implement the following structures, most of them targeted toward high-priority gullies that drain directly into the lake; grade stabilization structures, sediment control basin, grass waterways, terraces, livestock facility improvements.

Section 319 funding proposed

4 years

\$238,425

### **Muchakinock Creek Watershed Project**

This is an extension to an existing successful project led by the Mahaska Soil and Water Conservation District. The Muchakinock Creek watershed is 49,200 acres. Approximately 3,000 acres at the headwaters are in Marion County. The remaining land is in Mahaska County except for about 60 acres in Wapello County and 40 acres in Monroe County where the creek enters the Des Moines River near Eddyville. About 94 percent of the watershed is in Mahaska County. The watershed is about 23 miles long and ranges from 2 to 5 miles wide.

Since 2002 Muchakinock Creek has been on the 303 (d) state impaired waterbodies list. The impairment listed is habitat alteration and the impaired use is aquatic life by one or more pollutants. The goal of this project is to reduce soil erosion and sediment delivery and acid mine drainage to the stream in order to improve water quality. This will be accomplished by implementation of BMPs within priority areas resulting in a sediment delivery reduction of over 4,500 tons on an annual basis.

The current funded application, which is scheduled to end in September of 2008, only allows grant funds to be used in 4 targeted subwatersheds in the upper half of the watershed. This proposal is requesting an expansion of the current priority areas. The District would like to allow landowners who own priority land in the entire watershed to receive funding through the Project. This method will ultimately allow the district to target the highest sediment delivery areas within the watershed. With the current ranking system in place, the application that saves the most soil for the least amount of money will receive funding regardless of location in the watershed. Priority areas are defined as fields that contribute 1 ton/ac/yr of soil to Muchakinock Creek.

Section 319 funding proposed

5 years

\$350,000