

**Rathbun Lake, Iowa Targeted Watershed Project Quarterly Performance Report**  
**Reporting Period: April to June 2004**

| <b>Work Elements</b> | <b>Description</b>                   | <b>Measures</b>   |   |                      |
|----------------------|--------------------------------------|---|---|----------------------|
|                      |                                      | <b>Infrastructural</b>  | <b>Implementation</b>   | <b>Environmental</b> |
| #1                   | Assign a team of professional staff. | <ol style="list-style-type: none"> <li>As previously reported, the Alliance and its partner organizations have identified the need for a four member team of professionals to carry out the day-to-day project activities at the field level. The Alliance and partner organizations have taken the steps necessary to assign the staff required to the project.</li> </ol> | <ol style="list-style-type: none"> <li>A third professional has been assigned to the project's team of field staff. This position is supported by an agreement between two Alliance's partners, the Iowa Department of Natural Resources (DNR) and Iowa Department of Agriculture and Land Stewardship's Division of Soil Conservation (DSC).</li> <li>The Iowa DNR and Iowa DSC are also in the process of identifying a fourth professional that will be assigned to the project team at the field level.</li> <li>As previously reported, the Alliance partners continue to assign staff as needed to complete project activities, e.g., assist with geographic information system (GIS) applications, financial management, and public outreach.</li> </ol> |                      |

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| Work Elements | Description                     | Measures  |   |               |
|---------------|---------------------------------|---|---|---------------|
|               |                                 | Infrastructural   | Implementation  | Environmental |
| #2            | Create a project advisory team. | 1. The project advisory team as identified in previous reports continues to include representatives from the following Alliance partner organizations: <ul style="list-style-type: none"> <li>• Iowa DSC;</li> <li>• Iowa DNR;</li> <li>• US Army Corps of Engineers (ACOE);</li> <li>• USDA Natural Resources Conservation Service (NRCS); and</li> <li>• US Environmental Protection Agency (EPA).</li> </ul> | 1. Members of the advisory team met with the Alliance and project staff during the reporting period. In addition to progress on project work elements, topics addressed included: (a) criteria for the use of funds to apply best management practices (BMPs); (b) tracking and reporting the results of project activities; (c) GIS analysis of land in the watershed enrolled in the Conservation Reserve Program (CRP); and (d) strategies to overcome barriers to BMP application faced by farmers.<br><br>2. Advisory team members also continued to assist the Alliance and project staff through individual contacts, by phone and via email as well as by participating in Alliance board meetings. |               |

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| #3                   | Complete project technical and administrative reviews and reports. | <ol style="list-style-type: none"> <li>1. As previously reported, partner organizations have assigned staff and developed procedures for information collection and analysis to assist the Alliance with the completion of project reviews and reports.</li> <li>2. The Alliance, advisory committee, and staff have identified a number of changes to tracking and reporting procedures that will likely improve the presentation of project accomplishments and results. These changes will be reflected primarily in the GIS analysis and maps prepared for the project. Project maps submitted with reports are updated twice annually (April and October).</li> </ol> | <ol style="list-style-type: none"> <li>1. Alliance members and partner organizations have reviewed the performance of project activities at a meeting of the Alliance's board of directors conducted during the reporting period (June 2004).</li> <li>2. Project field staff and staff assigned from partner organizations continue to communicate daily and meet regularly to monitor progress on, and make any adjustments required to improve, the performance of project activities.</li> <li>3. The Alliance has prepared this performance report and associated financial reports to provide a record of progress in completing the project's work elements and managing project resources.</li> </ol> |                      |

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|               |  | Infrastructural  | Implementation  | Environmental  |
| #4            | Identify, collect, and process information required for GIS analysis.      | <ol style="list-style-type: none"> <li>As previously reported, project staff has identified the information needs and developed collection and processing procedures required for the GIS analysis that will be performed to support the completion of related project work elements.</li> </ol>                               | <ol style="list-style-type: none"> <li>The collection and processing of information for the GIS analysis associated with other project work elements are ongoing activities. As reported, information being collected and integrated into the GIS includes soils data, land use, farming practices, existing BMPs, and the location, type, and cost of newly planned and applied BMPs.</li> </ol> | <ol style="list-style-type: none"> <li>Activities on this work element are being conducted in a manner that is consistent with the GIS Quality Assurance Project Plan (QAPP) developed for the project.</li> <li>Activities on this work element are resulting in the development and acquisition of data layers and procedures required to perform the GIS analysis for work elements #5, #6, #8, and #10.</li> </ol> |
| #5            | Perform GIS analyses to identify priority land in targeted sub-watersheds. | <ol style="list-style-type: none"> <li>As previously reported, partner organizations used the results of the Rathbun Lake watershed assessment to identify seven targeted sub-watersheds in which project activities have been initiated. A map that identifies these sub-watersheds has been previously submitted.</li> </ol> | <ol style="list-style-type: none"> <li>As reported, the findings of extensive field verification have been combined with ongoing GIS analysis to refine the identification of priority land in the seven targeted sub-watersheds. As a result, the revised estimate of priority land in these sub-watersheds is approximately 5,800 acres.</li> </ol>   | <ol style="list-style-type: none"> <li>Activities on this work element are being conducted in a manner that is consistent with the GIS QAPP developed for the project.</li> <li>Activities on this work element have resulted in the development of GIS procedures and maps that identify priority land in targeted sub-watersheds.</li> </ol>   |

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| #5 contd.            | Perform GIS analyses to identify priority land in targeted sub-watersheds | 2. Also reported was the use of watershed assessment results to identify an additional five targeted sub-watersheds in which project activities could be expanded. A map that identifies these sub-watersheds has been previously submitted. | 1. contd.<br>Maps that identify priority land in the seven targeted sub-watersheds were previously submitted.<br><br>2. Project staff continues to collect the information required to identify priority land as well as perform the GIS analysis for other work elements in the five additional targeted sub-watersheds in which project activities could be expanded. |                      |

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| #5<br>contd.         | Perform GIS analyses to identify priority land in targeted sub-watersheds |                        | 3. As previously reported, project field staff determined that the need existed for a means to identify areas of severe and very severe gully erosion in targeted sub-watersheds as priority land that should be addressed with BMPs. Project staff has initiated this activity using existing GIS data, field evaluation, and sediment delivery estimates to identify qualifying gully erosion areas as priority land. |                      |

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|                      |  | <b>Infrastructural</b>  | <b>Implementation</b>  | <b>Environmental</b>   |
| #6                   | Utilize GIS analyses to assist with the selection of BMPs. | <ol style="list-style-type: none"> <li>1. As previously reported, GIS analysis and associated maps have been the primary means used by project field staff to identify farmers to contact regarding the application of BMPs for priority land in targeted sub-watersheds that will reduce the potential impact of runoff from this land on water quality in Rathbun Lake.</li> <li>2. As reported, project staff developed procedures to collect and integrate information related to newly planned and applied BMPs into the GIS. This information includes the location, type, cost, and estimated effectiveness of BMPs applied to address priority land in targeted sub-watersheds</li> </ol> | <ol style="list-style-type: none"> <li>1. Project field staff continues to make follow-up contacts with farmers who own and/or operate farms with priority land in the targeted sub-watersheds. These contacts serve primarily to encourage farmers to evaluate the need for and initiate or expand the application of BMPs to address priority land through their participation in the project.</li> <li>2. The Alliance and partner organizations have agreed that an important objective of the project should be to identify barriers to BMP application for farmers who are not yet participating in the project and alternatives to address these barriers. Staff will develop activities to pursue this aspect of the project, including possible assistance from ISU Extension specialists.</li> </ol> | <ol style="list-style-type: none"> <li>1. Activities on this work element are being conducted in a manner that is consistent with the GIS QAPP developed for the project.</li> <li>2. Activities on this work element have resulted in the identification of farmers who own and/or operate farming operations with priority land in the targeted sub-watersheds. Contacts with these farmers have led to the planning and application of BMPs to address this priority land and reduce the impact of runoff from this land on water quality in Rathbun Lake as described in work elements #8, #9, and #10.</li> </ol> |

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|---------------|--|-----------------|--|---------------|
|               |  | Infrastructural | Implementation   | Environmental |
| #6 contd.     | Utilize GIS analyses to assist with the selection of BMPs. |                 | 3. As previously reported, project staff continues to develop and use GIS analysis as a tool to integrate watershed assessment results, soil erosion and sediment deliver estimates, and information about practice cost and effectiveness to help farmers evaluate and select BMPs to address priority land in the targeted sub-watersheds. |               |

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| #7                   | Coordinate sources of assistance for BMP planning and application. | 1. As reported, Alliance partner organizations continue to contribute significant staff and funds to the "Rathbun Lake Special Project" as a complement to the EPA's Targeted Watershed Grant. Recent additional commitments bring the current value of these contributions of staff and funds, including farmers' share of costs to apply BMPs, to approximately \$3.5 million. Again, most of this staff and financial support is used to help farmers plan and apply BMPs to address priority land in targeted sub-watersheds identified by the project's GIS activities. Principal sources of this additional support include the Iowa DSC, Iowa DNR, NRCS, and cooperating farmers. | 1. As previously reported, the Alliance and project staff continue to integrate the financial support committed by partner organizations into an overall multi-year budget for the project. The Alliance, staff, and partner organizations have also evaluated guidelines for the coordinated use of project funds to assist farmers with the application of BMPs. The guidelines have been adjusted to improve the effectiveness of BMPs applied to address priority land in targeted sub-watersheds. The adjusted guidelines increase the consideration given to the minimum percentage of priority land and estimated rate of sediment delivery associated with an area to be addressed with BMPs. |                      |

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|----------------------|-----------------------------------|--|--|--|
|                      |                                   | <b>Infrastructural</b>   | <b>Implementation</b>  | <b>Environmental</b>   |
| #8                   | Assist farmers with BMP planning. | 1. As previously reported, the activities completed for project work elements #1, #4, #5, #6, and #7 support the efforts of the Alliance and project field staff to provide BMP planning assistance to farmers to address priority land in targeted sub-watersheds. Again, these activities include assigning project staff, initial and follow-up contacts with farmers, and use of GIS analysis to identify priority land and select the most effective BMPs to reduce the impact of runoff from this land on water quality in Rathbun Lake. | 1. Project field staff has continued to provide assistance to farmers to evaluate, plan, and initiate the application of BMPs. Again, this assistance is provided through one-on-one contacts between project field staff and farmers that occur primarily during on-farm and field office visits. | 1. Activities on this work element have resulted in assistance being provided to close to 100 farmers to help them with the evaluation, planning, and application of BMPs to address priority land in targeted sub-watersheds. |

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|                      |                                      | <b>Infrastructural</b>   | <b>Implementation</b>  | <b>Environmental</b>   |
| #9                   | Assist farmers with BMP application. | <ol style="list-style-type: none"> <li>1. As previously reported, the activities completed for project work elements #1, #4, #5, #6, #7, and #8 support the Alliance's efforts to assist farmers with the application of BMPs to address priority land in the targeted sub-watersheds.</li> <li>2. As reported, the Alliance and Monroe County Extension District have entered into a cooperative agreement to implement the integrated crop management (ICM) practice component of the project. The agreement provides the Alliance, partner organizations, and farmers with technical assistance from Iowa State University (ISU) Extension specialists to complete the ICM activities associated with this work element.</li> </ol> | <ol style="list-style-type: none"> <li>1. Ongoing assistance by project staff has enabled farmers to apply BMPs to address priority land in the targeted sub-watersheds. BMPs applied include terraces, grade stabilization structures, water and sediment control basins, waterways, filter strips, conversion of cropland to forage production, and nutrient management.</li> <li>2. Project staff and ISU Extension specialists conducted an ICM field day at the McNay Research Farm in the watershed during the reporting period. Field day activities offered farmers in attendance an overview of the project's ICM component, provided information on improved fertilizer and herbicide use, and identified farmers interested in learning more about and applying ICM.</li> </ol> | <ol style="list-style-type: none"> <li>1. Activities on this work element have resulted in 22 farmers applying BMPs that will reduce the impact on water quality of runoff from priority land in the targeted sub-watersheds.</li> <li>2. Activities on this work element also resulted in the completion of an ICM field day that provided 13 participating farmers with information to improve their use of fertilizer and herbicide on land in the watershed. Specific workshop topics included alternatives to atrazine for weed control, soil testing, nitrogen fertilization in corn, use of phosphorus fertilizers, and tillage systems.</li> </ol> |

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|               |                                      | Infrastructural   | Implementation  | Environmental  |
| #9 contd.     | Assist farmers with BMP application. |   | 2. contd.<br>In addition, project staff continued to contact farmers in the watershed regarding assistance to apply ICM practices.  |  |
| #10           | Evaluate the impact of BMPs.         | <ol style="list-style-type: none"> <li>As reported, activities completed for project work elements #4, #5, and #6 support the use of GIS to evaluate BMP effectiveness in terms of reducing the impact that runoff from priority land in targeted sub-watersheds has on water quality in Rathbun Lake.</li> <li>The Alliance and partner organizations continue to carry out water quality monitoring activities according to the work plan developed for 2004, which will include the entering of data into STORET by the ACOE.</li> </ol> | <ol style="list-style-type: none"> <li>As previously reported, project staff continues to collect information required for the use of GIS analysis to estimate the impact of BMPs on water quality in Rathbun Lake. Again, this information consists primarily of the type and location of BMPs.</li> <li>As reported, the Alliance and partner organizations will present the results of water quality monitoring activities completed in 2003 in a separate written report later in 2004. In addition, water quality monitoring data from 2003 activities will be input into STORET by the ACOE.</li> </ol> | <ol style="list-style-type: none"> <li>Activities on this work element are conducted in a manner that is consistent with the GIS QAPP developed for the project.</li> <li>GIS analysis is being used to evaluate the impact of BMPs. Results of the GIS analysis provided in previous reports will be updated and presented, with maps, in the July to September 2004 performance report. As previously reported, these results will include the approximate number of acres addressed with BMPs and the estimated reduction in the delivery of sediment and phosphorus to Rathbun Lake due to the practices.</li> </ol> |

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| #10 contd.    | Evaluate the impact of BMPs.  |   |   | 3. Water quality monitoring activities are performed according to the quality assurance procedures established by the ACOE and ISU, the two Alliance partner organizations primarily responsible for these activities. |
| #11           | Design the watershed protection enhancement agreements and associated activities. | <ol style="list-style-type: none"> <li>1. As previously reported, project staff has received input from the Alliance board, advisory team, partner organizations, and farmers to develop guidelines for the project's watershed protection enhancement component.</li> <li>2. The Alliance has shared the guidelines for the "Rathbun Lake Protectors Program" with partner organizations in an effort to obtain the additional funds needed to fully implement the program as proposed.</li> </ol> | <ol style="list-style-type: none"> <li>1. As reported, project staff has developed proposed guidelines for a "Rathbun Lake Protectors Program" as the project's watershed protection enhancement component. As proposed, this program will consist of: <ul style="list-style-type: none"> <li>• Activities to recognize farmers in the watershed as "Rathbun Lake Protectors" for their efforts to apply BMPs that protect water quality in the lake. Proposed activities may include financial incentives, on-farm signage, and media releases; and</li> </ul> </li> </ol> |  |

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|               |  | Infrastructural  | Implementation   | Environmental |
| #11 contd.    | Design the watershed protection enhancement agreements and associated activities.            | 2. contd.<br>Specifically, the Alliance has presented proposals for the "Rathbun Lake Protectors Program" for consideration of financial support to the Iowa DSC, Iowa DNR, Farm Bureau, and businesses that provide agricultural products and services to farmers in the watershed. | 1. contd.<br><ul style="list-style-type: none"> <li>Activities to encourage communication between recognized farmers as mentors for other farmers in the watershed, with a particular emphasis on farmers who are interested in learning more about specific BMPs to address priority land in targeted sub-watersheds. Proposed activities may include fact sheets describing the farming operations and BMPs applied by recognized farmers and self-guided tours of fields in which these farmers have applied BMPs.</li> </ul> |               |
| #12           | Develop and implement watershed protection enhancement agreements and associated activities. | 1. Please refer to the measures reported for work element #11 above.   | 1. Please refer to the measure reported for work element #11 above.  |               |

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|               |  | Infrastructural  | Implementation   | Environmental |
| #13           | Establish and manage the forage and livestock production demonstrations. | 1. As previously reported, the Alliance and Lucas County Extension District have entered into a cooperative agreement to implement the forage and livestock demonstration component of the project. The agreement provides the Alliance, partner organizations, and farmers with technical assistance from ISU Extension specialists needed to successfully conduct the forage and livestock demonstrations. | 1. ISU Extension specialists and project staff continue to contact farmers who are interested in establishing and managing forage and livestock production demonstrations on their land in the watershed and plan demonstration related activities with staff at the McNay Research Farm in the watershed. |               |

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| #14           | Plan and conduct forage and livestock production field days and workshops. | 1. Please refer to the measure reported for work element #13 above. | 1. ISU Extension specialists and project staff conducted a series of forage and grazing workshops during the reporting period. The workshops were directed at farmers and veterinarians in the Rathbun Lake region, with particular emphasis on those in the watershed. Workshop activities gave farmers and veterinarians in attendance an overview of the project's forage and livestock component, provided information on topics related to forage production and grazing system management, and identified farmers who are interested in the project's forage and livestock demonstrations. | 1. Activities on this work element resulted in the completion of four workshops that provided more than 150 participating farmers and veterinarians with information to improve their management of forage and livestock production. Workshop topics included managing fescue pastures, selecting forage species and varieties, planning grazing systems, watering system alternatives, and predicting animal forage needs. |

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| #15           | Conduct outreach activities directed at farmers in targeted sub-watersheds. | <p>1. As previously reported, activities completed for project work elements #1, #5, #6, #9, #11, #13, and #14 support the Alliance's outreach efforts directed at farmers in the targeted sub-watersheds. Again, these activities include assigning project field staff, identifying priority land, contacting potential cooperating farmers, developing the watershed protection enhancement component of the project, and planning and conducting the ICM and forage and livestock production field days, workshops, and demonstrations.</p> | <p>1. As reported, the Alliance and project staff continue to rely primarily on one-on-one contacts made during field and office visits with farmers to inform and educate them about the project and water quality protection efforts in the watershed. Please refer to measures reported for work elements #6, #8, and #9. In addition, personal contacts with farmers in the watershed were made during activities completed and reported for work elements #13 and #14.</p> <p>2. Project staff prepared a project-related article for Rathbun Regional Water Association's newsletter. The newsletter was sent to Association customers, which includes almost all of the farmers in the Rathbun Lake watershed.</p> |               |

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| #16                  | Perform public information activities. | <ol style="list-style-type: none"> <li>As previously reported, the Alliance has made arrangements with a local Internet Service Provider (ISP) to assist project staff with the re-design of, and posting of updates to, the organization's Internet site in order to improve its effectiveness as a tool for public information and education about water quality protection efforts at Rathbun Lake.</li> </ol> | <ol style="list-style-type: none"> <li>Project staff and staff with the local ISP continue to work together on the re-design of the Alliance's Internet site. Again, the Alliance's re-designed site will be one of the principal means of informing and educating the public about water quality related topics at Rathbun Lake and the project's water quality protection activities.</li> <li>Project staff conducted presentations and tours to provide information about the Alliance and project activities to representatives from the North Fork Project in Missouri (June 2004, 70 participants) as well as to a group of representatives from the Farm Bureau, Practical Farmers of Iowa, Iowa Environmental Council, and Iowa Rural Water Association (July 2004, 12 participants).</li> </ol> |                      |

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| #16 contd.    | Perform public information activities. |                 | 3. The Alliance and staff delivered a project related presentation at the Iowa State Technical Committee Meeting (April 2004, 50 participants). |               |