

Rathbun Lake, Iowa Targeted Watershed Project Quarterly Performance Report
Reporting Period: January to March 2004

| Work Elements | Description | Measures | | |
|----------------------|--------------------------------------|--|--|----------------------|
| | | Infrastructural | Implementation | Environmental |
| #1 | Assign a team of professional staff. | <ol style="list-style-type: none"> The Alliance and its partner organizations have identified the need for a fourth professional to join the three-member project team at the field level. This additional staff person will better enable the project field team to address technical issues related to the design and installation of best management practices (BMPs). The Alliance and partner organizations are evaluating alternatives to provide this additional staff support to the project. | <ol style="list-style-type: none"> As previously reported, the Alliance and its partner organizations have completed arrangements for a third staff person to be assigned to the project team of field professionals. Plans are for this staff person to join the project team during the second quarter of 2004. Once again, this team of field staff is responsible for the day-to-day performance of activities to complete the project's work elements. In addition to this team of field staff, the Alliance's partner organizations continue to assign professional staff as needed to support the completion of project work elements, e.g., assist with geographic information system (GIS) applications, financial management, and public outreach. | |

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| #2 | Create a project advisory team. | 1. The project advisory team continues to include representatives from the following Alliance partner organizations: <ul style="list-style-type: none"> • Iowa Department of Agriculture and Land Stewardship's Division of Soil Conservation (DSC); • Iowa Department of Natural Resources (DNR); • US Army Corps of Engineers (ACOE); • USDA Natural Resources Conservation Service (NRCS); and • US Environmental Protection Agency (EPA). | 1. Members of the advisory team continue to provide assistance on a regular basis to the Alliance and project staff. This assistance is provided primarily through individual contacts conducted in person, by phone, and via email with project staff as well as advisory team member participation in Alliance board meetings. | |

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| #3 | Complete project technical and administrative reviews and reports. | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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 (March 2004). Project field staff and staff assigned from partner organizations communicate daily and meet regularly to monitor progress on, and make any adjustments required to improve, the performance of project activities. 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. | |

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| #4 | Identify, collect, and process information required for GIS analysis. | 1. 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. | 1. Project staff continue to collect and process the information required to perform GIS analysis in support of the completion of work elements, #5, #6, #8, and #10. Information being collected and integrated into the GIS includes items such as land use, farming practices, existing BMPs, and the location, type, and cost of newly planned and applied BMPs. | 1. 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. |
| #5 | Perform GIS analyses to identify priority land in targeted sub-watersheds. | 1. 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 seven targeted sub-watersheds accompanies this report. | 1. Project staff has combined the results of extensive field verification 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. | 1. Activities on this work element are being conducted in a manner that is consistent with the GIS QAPP developed for the project. |

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| #5 contd. | Perform GIS analyses to identify priority land in targeted sub-watersheds | 2. Partner organizations and project staff have also used the watershed assessment results to identify an additional five targeted sub-watersheds in which project activities could be expanded. The map that accompanies this report identifies these five additional targeted sub-watersheds as well as the original seven targeted sub-watersheds. | 1. contd. Factors that contributed to this revised estimate of priority land acres included the presence of existing BMPs identified through field verification and practical limits to the minimum size of priority land areas that can be cost effectively addressed with BMPs. Maps that identify this priority land in the seven targeted sub-watersheds accompany this report. 2. Project staff has initiated the collection of information required to begin the process of identifying 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 contd. | Perform GIS analyses to identify priority land in targeted sub-watersheds | | 3. Project field staff has determined that there is the need for a means to identify areas of severe and very severe gully erosion in the targeted sub-watersheds as priority land that should be addressed with BMPs. Project staff is evaluating alternative approaches for the identification of these gully erosion areas as priority land. | |

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| #6 | Utilize GIS analyses to assist with the selection of BMPs. | <ol style="list-style-type: none"> 1. Project field staff has continued to use the GIS generated maps of priority land in targeted sub-watersheds as the primary means of identifying farmers to contact regarding the application of BMPs that will reduce the potential impact of runoff from this land on water quality in Rathbun Lake. 2. Project staff developed procedures to collect and integrate into the GIS information related to newly planned and applied BMPs including location, type, cost, and effectiveness. This information and the associated GIS analysis could be used to assist with the future planning and selection of BMPs to address priority land in targeted sub-watersheds. | <ol style="list-style-type: none"> 1. Project field staff has made initial and follow-up contacts with almost all of the approximately 140 farmers who own and/or operate farming operations with priority land in the targeted sub-watersheds. During these contacts, staff provided these farmers with information about the project and the assistance available to apply BMPs that will reduce the impact of runoff from priority land on Rathbun Lake. 2. Project staff continues to use GIS analysis as a tool to integrate watershed assessment results, soil erosion and sediment deliver estimates, and expected practice cost and effectiveness to help farmers evaluate and select BMPs to address priority land in the targeted sub-watersheds. | <ol style="list-style-type: none"> 1. Activities on this work element are being conducted in a manner that is consistent with the GIS QAPP developed for the project. |

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| #7 | Coordinate sources of assistance for BMP planning and application. | <p>1. The Alliance’s partner organizations continue to contribute significant staff and financial resources to the “Rathbun Lake Special Project” as a complement to support from the EPA’s Targeted Watershed Grant Program. To date, the value of these additional contributions of staff and funds, including farmers’ share of the costs to apply BMPs, approaches \$2 million. Again, most of this support is used to help farmers plan and apply BMPs to address priority land in targeted sub-watersheds identified by GIS analysis. Principal sources of this staff and financial support, in addition to the EPA, include the Iowa DSC, Iowa DNR, NRCS, and cooperating farmers.</p> | <p>1. The Alliance and project staff continue to integrate financial support committed by partner organizations into an overall multi-year budget for the project. The Alliance, project staff, and partner organizations have also identified the need to evaluate the guidelines developed and followed for the coordinated use of project funds to assist farmers with the application of BMPs. As a result of this evaluation, possible adjustments to these guidelines are being considered to improve the potential effectiveness of BMPs applied with project cost share to address priority land in targeted sub-watersheds, e.g., establish a minimum percentage of priority land that must be located in an area addressed with BMPs.</p> | |

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| #8 | Assist farmers with BMP planning. | 1. As previously reported, the activities completed for project work elements #1, #5, and #6 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 identifying the need for and assigning project field 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 assisted 70 farmers to plan and initiate application of BMPs that will reduce the impact on water quality in Rathbun Lake of runoff from priority land in the targeted sub-watersheds. This assistance continues to be provided during one-on-one contacts between project field staff and farmers. These contacts are made primarily through on-farm and office visits. | |

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| #9 | Assist farmers with BMP application. | <ol style="list-style-type: none"> 1. As previously reported, the activities completed for project work elements #1, #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. 2. The Alliance and Monroe County Extension District have developed and entered into a cooperative agreement to implement the integrated crop management (ICM) practice component of the project. The agreement will provide the Alliance, partner organizations, and farmers with technical assistance from Iowa State University (ISU) Extension specialists needed to complete the ICM activities associated with this work element. | <ol style="list-style-type: none"> 1. Assistance provided by project staff has enabled 14 farmers to complete the application of BMPs to reduce the impact on water quality of runoff from priority land in the targeted sub-watersheds. BMPs applied include terrace systems, grade stabilization structures, water and sediment control basins, grassed waterways, and filter strips. 2. Project staff and ISU Extension specialists have initiated ICM activities including contacting farmers in the watershed regarding on-farm assistance to apply ICM practices and planning ICM field days. | |

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| #10 | Evaluate the impact of BMPs. | <ol style="list-style-type: none"> 1. As previously reported, activities completed for project work elements #4, #5, and #6 support the use of GIS to evaluate BMP effectiveness in terms of the estimated reduction in the impact that runoff from priority land in targeted sub-watersheds has on water quality in Rathbun Lake. 2. The Alliance and partner organizations have developed the work plan that will guide continued water quality monitoring activities in Rathbun Lake and watershed during 2004, which will include the entering of data into STORET by the ACOE. | <ol style="list-style-type: none"> 1. Project staff continues to collect the information required to perform the GIS analysis to estimate the impact of BMPs on water quality in Rathbun Lake. This information consists of the type and location of BMPs planned and applied including any associated changes in farming practices and land use. 2. The Alliance's partner organizations continue to analyze and interpret the results of water quality monitoring activities completed in 2003. These results will be presented in a separate written report later in 2004. In addition, water quality monitoring data from 2003 activities will be entered into STORET by the ACOE. | <ol style="list-style-type: none"> 1. The results of GIS analysis used to evaluate the impact of BMPs indicate that: <ul style="list-style-type: none"> • BMPs planned and applied will address an estimated 3,100 acres of land in the targeted sub-watersheds; • Approximately 1,500 acres of priority land are included in the 3,100 acres in the targeted sub-watersheds addressed by BMPs; and • Application of these BMPs will achieve a reduction in the delivery of sediment and phosphorus to Rathbun Lake by an estimated 4,300 tons and 21,000 pounds per year respectively. <p>The results of the GIS analysis are presented on the maps of the seven targeted sub-watersheds that accompany this report.</p> |

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| #10 contd. | Evaluate the impact of BMPs. | | | 2. Activities on this work element are being conducted in a manner that is consistent with the GIS QAPP developed for the project. 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. |

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| #11 | Design the watershed protection enhancement agreements and associated activities. | <ol style="list-style-type: none"> 1. As previously reported, project staff has received input from the Alliance’s board of directors, project advisory team, partner organizations, and farmers in the watershed to develop guidelines for the watershed protection enhancement component of the project. 2. The Alliance and project staff are sharing the proposed guidelines for the “Rathbun Lake Protectors Program” with partner organizations in hopes of obtaining additional commitments of financial support that will allow full implementation of the program. | <ol style="list-style-type: none"> 1. In response to the input received, project staff has developed proposed guidelines for a “Rathbun Lake Protectors: Producer Stewardship and Mentoring Program” that would be implemented as the watershed protection component of the project. As proposed, this program will consist of: <ul style="list-style-type: none"> • Activities to recognize farmers in the watershed as “Rathbun Lake Protectors” for their efforts to apply BMPs that protect water quality in the lake. These activities may include financial incentives, on-farm signage, and media releases; and | |

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| #11 contd. | Design the watershed protection enhancement agreements and associated activities. | | 1. contd. <ul style="list-style-type: none"> • Activities to encourage communication between these farmers as mentors for other farmers in the watershed, with a particular emphasis on farmers with priority land in targeted sub-watersheds, who are interested in learning more about specific BMPs. These activities may include fact sheets that describe the farming operations and BMPs applied by farmers recognized as “Rathbun Lake Protectors” and self-guided tours of fields in which these farmers have applied BMPs. | |
| #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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| #13 | Establish and manage the forage and livestock production demonstrations. | 1. 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 Iowa State University (ISU) Extension specialists needed to successfully conduct the forage and livestock demonstrations. | 1. ISU Extension specialists and project staff have initiated activities for the forage and livestock production demonstrations. These activities have included contacting farmers to discuss establishing and managing demonstrations on their land in the watershed and planning demonstration related activities with staff at the McNay Research Farm in the watershed. | |
| #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 initiated preparations for forage and grazing workshops. Activities have included program development, speaker selection and invitations, announcement of the workshop to farmers, and on-site arrangements at workshop locations. | |

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| #15 | Conduct outreach activities directed at farmers in targeted sub-watersheds. | <p>1. The activities completed for project work elements #1, #5, #6, #9, #11, and #13 have supported Alliance efforts to conduct outreach activities directed at farmers in the targeted sub-watersheds. These activities include assigning project field staff, identifying priority land, and contacting farmers as well as developing the watershed protection enhancement, ICM, and forage and livestock demonstration components of the project.</p> | <p>1. As planned, the Alliance and project staff have continued to rely primarily on personal contact through one-on-one field and office visits with farmers who own and/or operate priority land in targeted sub-watersheds to inform and educate them about the project and water quality protection efforts in the watershed. Refer to measures reported for work elements #6, #8, and #9.</p> <p>2. Project field staff prepared an article for the Wayne County Soil and Water Conservation District's newsletter that included project related information. The District's newsletter distribution list includes the farmers in the Wayne County portion of the Rathbun Lake watershed.</p> | |

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| #16 | Perform public information activities. | 1. The Alliance has made arrangements with a local Internet Service Provider 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. | 1. Project staff and staff with the local Internet Service Provider are in the process of re-designing the Alliance's Internet site. As planned, the re-designed site will be one of the principal means of informing and educating the public about water quality related topics at Rathbun Lake in general and the project's water quality protection activities in particular. 2. Project staff finalized the plans and associated arrangements for a presentation on Alliance activities and a tour of the Rathbun Lake watershed by representatives and partners of the North Fork Project in Missouri. | |

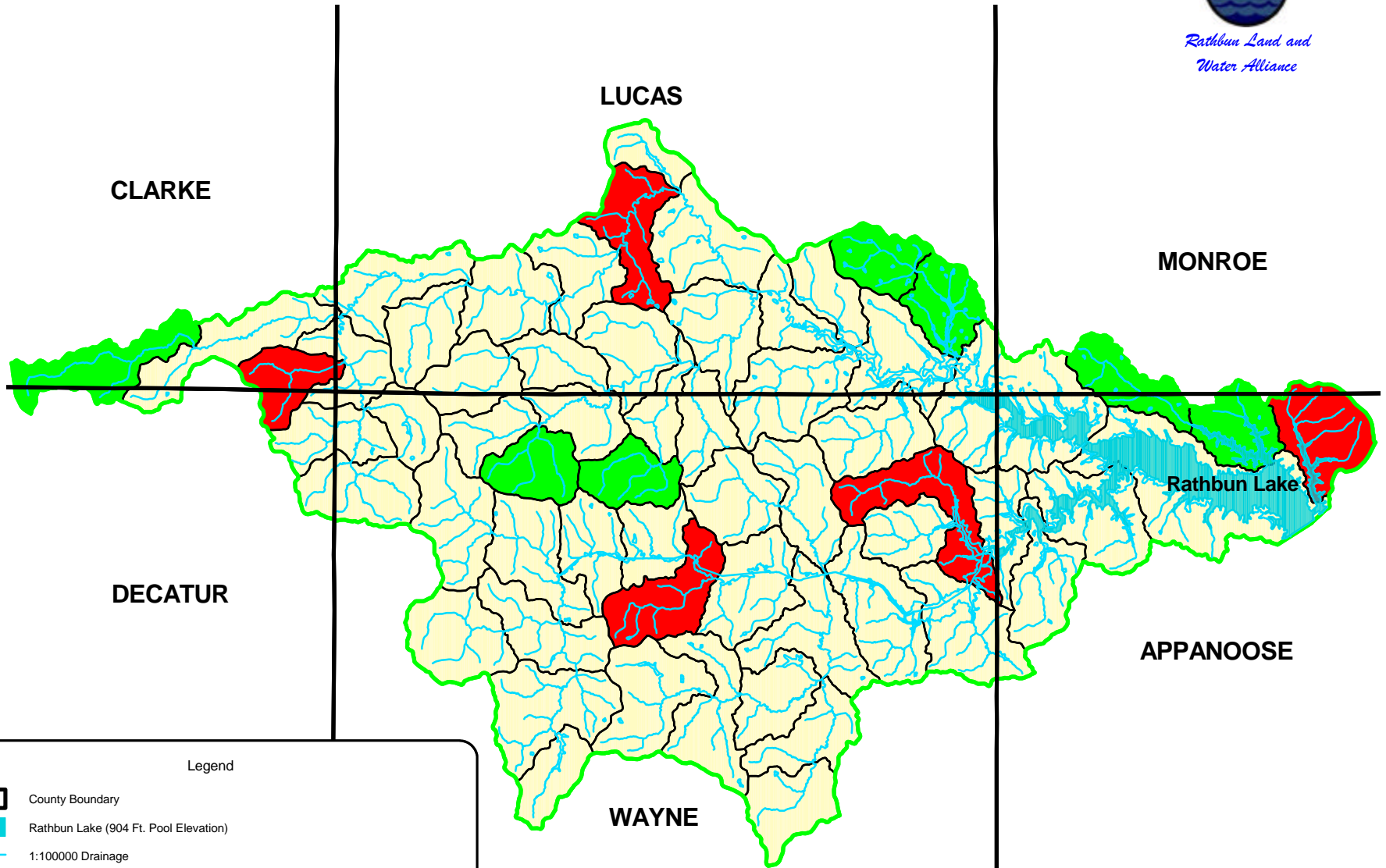
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| #16 contd. | Perform public information activities. | | 3. As planned, the Alliance and staff delivered project related presentations at the Iowa Watersheds' Annual Meeting (January 2004, 60 participants in the general session), Iowa Rural Water Association's Annual Conference (February 2004, 20 participants in one breakout session), and Rathbun Regional Water Association's Annual Meeting (February 2004, 30 participants). Project related displays were also developed and exhibited at these three events. | |

Targeted Sub-Watersheds Rathbun Lake Watershed



*Rathbun Land and
Water Alliance*



CLARKE

LUCAS

MONROE








Rathbun Lake

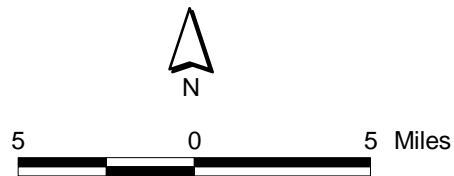
DECATUR

APPANOOSE

WAYNE

Legend

-  County Boundary
-  Rathbun Lake (904 Ft. Pool Elevation)
-  1:100000 Drainage
-  Rathbun Lake Sub-Watersheds
-  Additional Five Targeted Sub-Watersheds
-  Original Seven Targeted Sub-Watersheds
-  Rathbun Lake Watershed (354,062 Acres)



Source: Rathbun Land and Water Alliance
 USDA Natural Resources Conservation Service
 Iowa DNR NRGIS (Base Data)
 IDALS DSC

Prepared By: Rathbun Regional Water Association