BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED EXTENSION OF ADJUSTED STANDARD	)	AS 06-_____
APPLICABLE TO ILLINOIS-AMERICAN	)	(Adjusted Standard)
WATER COMPANY'S ALTON PUBLIC WATER	)	
SUPPLY FACILITY DISCHARGE	)	
TO THE MISSISSIPPI RIVER	)	

AFFIDAVIT OF ALLEY RINGHAUSEN

I, Alley Ringhausen, after being first duly sworn upon my oath, do depose and say as follows:

1. I work at Great Rivers Land Preservation Association, Inc., also known as Great Rivers Land Trust ("**GRLT**"), where I hold the position of Executive Director. I am providing this affidavit at the request of Brad Hiles, counsel to Illinois-American Water Company ("**Illinois-American**"), but I do so of my own free will. The statements in this affidavit are true to the best of my knowledge, information and belief, and I am providing these statements under oath. I would provide this same information in a hearing before the Illinois Pollution Control Board ("**IPCB**"), if necessary, also under oath and penalty of perjury.

2. I am familiar with the Piasa Creek Watershed Project (the "**Project**"), which has an objective of reducing sedimentation in the 78,000 acre Piasa Creek Watershed, located in portions of Jersey, Madison, and Macoupin counties. In 2001, GRLT and Illinois-American entered into an agreement to begin implementation of the Project, and the IPCB approved this agreement. In return for providing funding for the ten-year life of the Project, Illinois-American was granted a discharge permit by the Illinois Environmental Protection Agency ("**IEPA**").

3. I am responsible for administering and implementing all aspects of the Project. To implement the Project, I have helped GRLT construct rural sediment basins, retention basins, and urban water detention/retention basins. I have also helped GRLT implement riparian treatment measures including riparian corridor protection and restoration, streambank stabilization, sedimentation reduction, and wetland restoration. In addition, I have helped GRLT purchase property from willing sellers and establish conservation easements on property in a targeted area along the riparian corridor of Piasa Creek. Finally, I have helped implement the Project by working to educate area residents on the importance of watershed planning and how it affects water quality, erosion, and storm water management and encouraging participation by area land owners, farmers, community leaders, and other residents in the watershed.

4. The Project's goal is to reduce sedimentation in the Piasa Creek Watershed by approximately 6,600 tons of soil per year by the year 2010. This annual offset of 2:1 will prevent two tons of soil from entering the Mississippi River for every one ton of Total Suspended Solids that Illinois-American's Alton water treatment plant is anticipated to discharge into the River each year.

ATTACHMENT A

5. As of October 19, 2005, the Project had achieved a savings of approximately 6,487 tons of soil each year. As of October 12, 2006, the Project has achieved a savings of approximately 6,691 tons of soil each year. Over 200 erosion reduction structures have been completed on forty-two sites. However, as part of the Project, GRLT is working on other active and pending soil conservation projects that will benefit the Piasa Creek Watershed. These projects are at various stages of completion. In addition, GRLT has received numerous requests from nearby landowners interested in participating in the Project. When the Project is completed in 2010, my conservative estimate is that the Project will save approximately 10,000 tons of soil each year. My hope, however, is that due to this increased interest in landowner participation and the availability of supplemental funding sources, the Project will save 12,000 to 15,000 tons of soil — an amount that is approximately double the goal of 6,600 tons of soil saved.

6. The TSS reductions achieved by the Piasa Creek Watershed Project will repeat year after year provided that certain stewardship activities are completed. GRLT plans to develop a strategy of long-term funding for stewardship of certain projects designed to control erosion and trap sediment. The TSS reductions achieved by the Project will be sustained above 6,600 if these stewardship activities are performed on properties owned, leased or under cooperative agreement with GRLT. Additional funding by Illinois-American will be required for some period of time after the expiration of the ten-year agreement between Illinois-American and GRLT, but the Project is expected to reach a point at which it will be sustainable without future funding from outside sources. GRLT and Illinois-American are currently negotiating the terms of a contract for maintenance.

7. I prepared the Piasa Creek Watershed Project Report (the "**PCWP Report**") attached to Illinois-American's Petition for Extension of Adjusted Standard as Attachment B. The PCWP Report contains information on the Project's background and goals, detailed information on specific projects such as the Boy Scout Lake Project, the quarterly and annual reports submitted to IEPA, and a chart summarizing the soil savings achieved by each individual project. The PCWP Report is current through October 12, 2006. However, it is an evolving document that is updated as new information becomes available. All numbers set forth in the PCWP Report are based on calculations by the U.S. Department of Agriculture (USDA) and are consistent with industry standards. The information contained in the PCWP Report is true and accurate.

8. GRLT has received numerous awards in recognition of the Project's success. These awards include the Illinois Governor's Pollution Prevention Award for the Community Group Category, which is awarded by the Illinois Waste Management and Research Center ("WMRC") and the Illinois Governor's office to one organization that has helped the environment and the economy of Illinois by successfully reducing the generation of gaseous, liquid, and solid waste; the Innovate Illinois Award, which is awarded each year by WMRC and the Illinois Governor's office to one business or organization that has implemented a novel technology or process modification that leads to significant waste reduction or elimination; the Illinois Buffer Partnership Award, which is awarded by Trees Forever to one business or organization that has improved water quality and promoted land stewardship, as well as the Trees Forever National Award for the Business/Education/Nonprofit Category, which is awarded to one recipient of an award from a Trees Forever at the state level; a National Resource Conservation Service's Conservation Academy Award, which is awarded in recognition of

conservation-related achievements; a U.S. Department of Agriculture's Earth Team Volunteer Program Award, which is awarded to organizations that achieve a certain level of volunteer participation; and one of three Soil and Water Conservation Society's National Merit Awards, which are given in recognition of an outstanding project by an organization that promotes conservation of soil, water, and related natural resources. GRLT has also received an award from the National Parks Service identifying Rocky Fork, a stream in the Piasa Creek Watershed, as a site that makes a significant contribution to an understanding of the underground railroad; this grant makes GRLT eligible for funding to preserve the lands around Rocky Fork.

9. GRLT has also received numerous grants to implement the Project. Although these grants are too numerous to list here, it is notable that GRLT is the only organization in Illinois that has received a grant from Trees Forever in each year that such grant was offered.

10. The Project has received considerable attention and acclaim nation-wide as a result of its success. I have spoken about the Project at numerous nationwide and statewide events. Notable nationwide events include the National Forum on Synergies Between Water Quality Trading and Wetland Mitigation Banking (Washington, D.C.), at which the Project was presented as a model for water quality trading programs in the United States; the Clean Water, Livable Cities: Models That Work Conference (St. Louis, Missouri), hosted by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency; the National Conference on Nonpoint Source Pollution (Chicago, Illinois); the Land Trust Alliance Conference (Providence, Rhode Island); the Upper Mississippi River Water Supplier Coalition (Moline, Illinois); and the Mississippi to the Gulf Coalition (Memphis, Tennessee). Notable statewide events include the Illinois Watershed Conference; the Illinois Department of Natural Resources Conservation Conference; the Illinois Landmark Preservation Council Statewide Conference; the University of Illinois's Watershed Academy; and the Illinois River Coordinating Council Conference. In addition, I have given presentations at various colleges and universities, including Southern Illinois University (Edwardsville); Principia College; University of Missouri (St. Louis); Southern Illinois University (Carbondale); and Lewis & Clark Community College. I and other individuals responsible for implementation of the Project have also given presentations to an extensive list of local groups. Finally, articles about the Project have appeared in a number of national journals and publications, several regional publications, and numerous newspapers, and the Project has been the subject of over a dozen technical papers and theses.

11. I graduated with honors from Southern Illinois University (Edwardsville), where I received a master's degree in Environmental Studies. I specialized in Watershed Management.

12. I am familiar with the report titled Site-Specific Analysis of Impacts of Potential Alternatives for Handling Public Water Supply Residuals at Proposed Alton, IL Facility, which was prepared by ENSR in March 1999 (the "**Site Specific Impact Study**" or "**SSIS**"). To my knowledge, the SSIS accurately reflects the conditions present in the Mississippi River (the "**River**") near River Mile 204 at the time that study was prepared.

13. As the individual responsible for administering and implementing the Project, I am required to regularly observe and monitor the quality of water and of habitats in the Piasa Creek Watershed. I spend approximately four (4) days each week doing field work in the Watershed. My observations have given me no reason to believe that the TSS concentrations

and turbidity in the Mississippi River have deteriorated since the Site Specific Impact Study was prepared in 1999. Rather, these conditions appear to have improved since that time.

14. The Project has met and exceeded all of its goals to date. Interest and participation in the Project has been embraced on a local, regional, and national scale. Private foundations, governmental entities, service organizations, and even individuals have partnered in some way to assist in the success of the Project. From the environmental perspective, the Project has done exactly what it was intended to do — to reduce sediment input into the Mississippi River. The Project's positive effects go far beyond the innovate water quality trading aspect; benefits of the Project include reduced erosion, improved water quality, stormwater control, reduction of flash flooding, enhanced fish and wildlife habitat, protection of sensitive ecosystems, public education on watershed management, and financial incentives to farmers and landowners to implement conservation practices. On behalf of Great Rivers Land Trust, I strongly support Illinois-American's petition for an extension of Adjusted Standard 99-6.

Further, Affiant sayeth not.

Alley Ringhausen

State of Illinois)
) ss
County of Madison)

Subscribed and sworn to before me this 31 day of October, 2006.

Pamela S. Cunningham
Notary Public

My Commission Expires:

March 14, 2006

[SEAL]

"OFFICIAL SEAL"
Pamela S. Cunningham
Notary Public, State of Illinois
My Commission Exp. 03/14/2009

ATTACHMENT A

PIASA CREEK WATERSHED PROJECT

GREAT RIVERS LAND TRUST
MISSOURI • ILLINOIS
MISSISSIPPI

Illinois American Water

RWE GROUP

ATTACHMENT B

Piasa Creek Watershed Project

Illinois American Water

RWE

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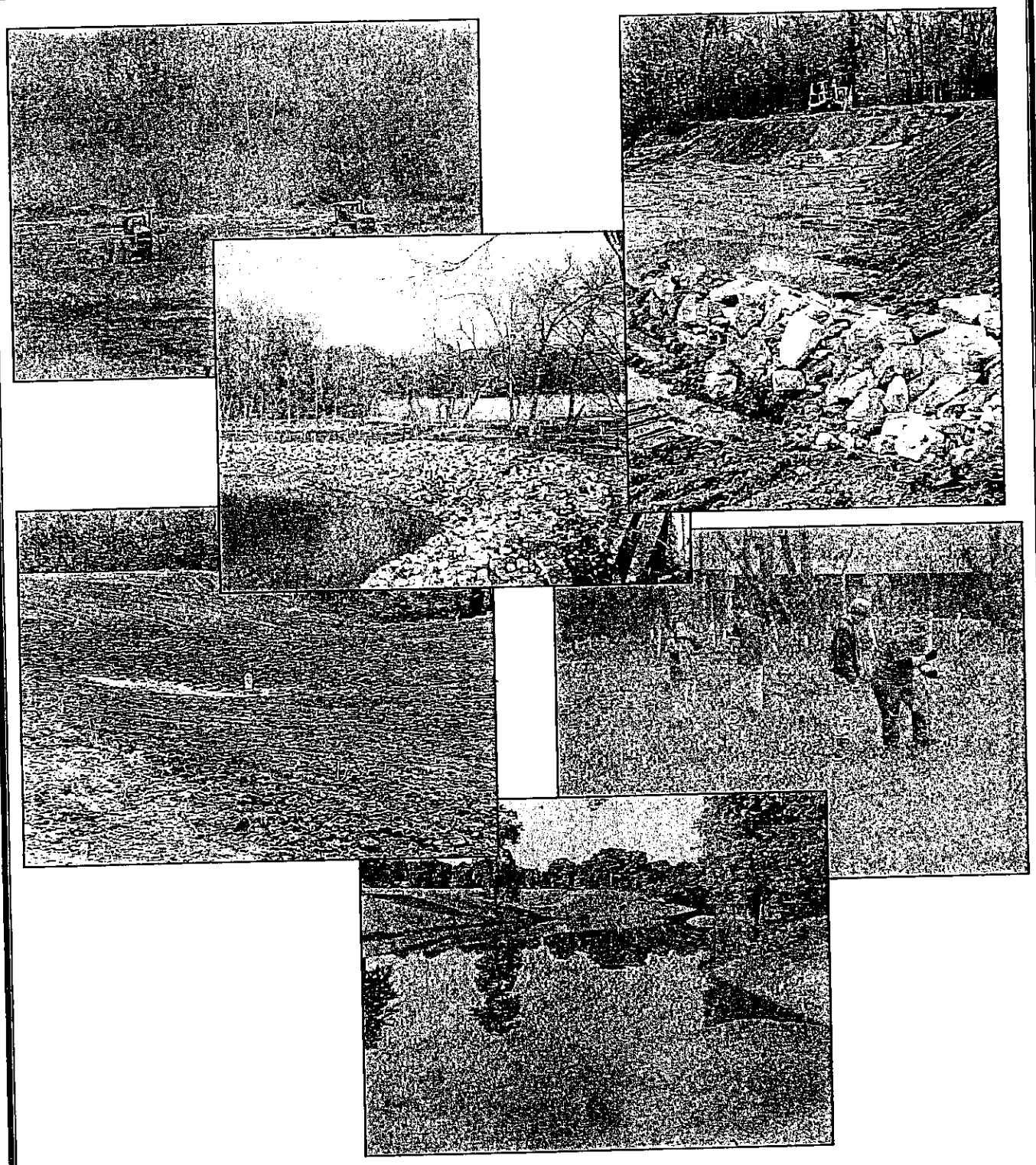

Illinois American Water

RWE

PIASA CREEK WATERSHED PROJECT

IMPLEMENTATION PLAN

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1. Project Background

The Alton Water Treatment Facility & Solids Trading

Illinois American Water (IAW) constructed a new 16.0 million gallon per day (mgd) water treatment facility in Alton, Illinois to replace a 100-year old facility that was susceptible to flooding. The old Alton Water Treatment Facility had site specific exemption as part of its National Pollutant Discharge Elimination System (NPDES) Permit for the direct discharge of residual solids and backwash water to the Mississippi River. The Illinois Environmental Protection Agency (IEPA) determined that the existing site specific exemption and NPDES Permit did not apply to the new facility and that standard discharge limits would apply unless new regulatory relief was granted. Ninety-one percent (91%) of the waste stream from the new facility is silt removed from the raw water and the other nine percent (9%) is inert residual coagulants utilized in the treatment process. Although a Site Specific Impact Study showed that a direct discharge would not adversely affect the Mississippi River, IEPA did not initially support the concept of an Adjusted Standard application for the new Alton Water Treatment Facility.

IAW continued to pursue the Adjusted Standard application because a direct discharge would eliminate the need for residuals lagoons, mechanical dewatering equipment and hauling the dewatered solids to a landfill. In addition to increased capital ($7.4 million) and O&M costs ($0.42 million/year) associated with dewatering, it was estimated that three (3) to seventeen (17) trucks per day would be required to haul the dewatered solids from the facility along the Great River Road to a landfill site. Local residents, government officials and environmental groups were opposed to the siting of lagoons and the hauling of de-watered solids along this roadway, which was recently established as a National Scenic Byway.

IAW developed a unique partnership with the Great Rivers Land Trust (GRLT) to implement a watershed project, which will provide a sustainable reduction in overall sediment loading of the Mississippi River. IAW will contribute $4.15 million over a ten (10)-year period to fund the Piasa Creek Watershed Project. The project is expected to obtain a 2:1 reduction in sediment load to the Mississippi River as compared to the direct discharge load (9.2 dry tons/day) from the new Alton Water Treatment Facility. IAW amended its Adjusted Standard application to include this unique suspended solids trading proposal. IEPA supported the amended application and the IPCB issued the adjusted standard AS 99-6. An NPDES Permit incorporating the terms of AS 99-6 was issued to allow IAW to start-up the new facility to meet a December 31, 2000 deadline.

The Piasa Creek Watershed

The Piasa Creek Watershed covers approximately 78,000 acres, or 121.9 square miles, in portions of Jersey, Madison and Macoupin Counties (Figure 1, Figure 2). Almost the entire Macoupin County portion of the watershed (12%) is devoted to intense agricultural practices. The Jersey County portion of the watershed (62%) is predominantly intense agriculture with the exception of areas of steeper topography and stream corridor, which are primarily grasslands and forest cover. The Madison County portion of the watershed (26%) is the only segment with any significant urban population. The landscape in the Madison County section all falls within the boundaries of Godfrey. The agricultural and forested areas of Godfrey are rapidly being replaced by subdivisions and commercial development.

As the result of years of hydraulic modification and increased drainage, Piasa Creek's natural ability to absorb flood waters, trap sediment or control erosion are greatly diminished. Alterations to the watershed hydrology from landscape modifications coupled with the region's highly erodible loess soils and steep topographic gradients have increased the magnitude and frequency of flash flooding. The instability of the unconsolidated streambanks has dramatically increased the sediment load of the water column. The most pervasive problem in the upper reaches is runoff from agricultural fields and urban landscapes. There are no known permitted point source discharges present within the Piasa Creek Watershed.

Great Rivers Land Trust & The Original Watershed Plan

GRLT is a local non-profit organization formed by private citizens in 1992. GRLT was one of the cooperating partners in the development of the original Piasa Creek Watershed Project in 1994.

In the summer of 1994, GRLT held a series of exploratory meetings to discuss possible solutions to water quality and flood related problems in the Piasa Creek Watershed. Although the Piasa Creek Watershed is impacted heavily by both urban and rural land uses, the local groups felt the need for assistance in addressing problems stemming from the agricultural sector. With funding from the McKnight Foundation, GRLT agreed to apply limited staff and financial resources to a one-year program for the purpose of working with members of the agricultural community to address environmental issues in the Piasa Watershed in a cooperative, pro-active way.

Using a process developed by the Natural Resource Conservation Service (NRCS) known as "resource planning", farmers, landowners and urban residents met to identify resource concerns and discuss possible solutions.

After several meetings using the nominal group process to identify concerns, some common themes emerged. Farmers and rural landowners were concerned about soil erosion and runoff from agricultural lands, but they also viewed urban pollution and encroaching land uses as equally serious threats to environmental quality in the watershed. They acknowledged that some flooding might be attributed to agricultural drainage and hydrologic modification on rural lands, but they felt that urban build-up and a lack of stormwater handling facilities in residential areas greatly contributed to flood-related problems.

Based on these concerns, members of the Piasa Creek Watershed Partnership steering committee, serving as facilitators for the meeting process, made the decision to focus the discussion regarding potential solutions on three main subject areas: 1) soil erosion, 2) water quality and 3) urban issues. Recommendations for solutions to address these problem areas were also listed, combined, and ranked using the nominal group process.

The original watershed management plan was finally developed in late 1995 at a time when watershed management was a relatively new concept. Although a number of watershed management projects have been implemented since the development of the plan, most of those projects have been small in scale, because no program existed to fully fund a total watershed treatment of this proportion.

The $4.15 million grant from IAW provides the funding resources to resurrect the Piasa Creek Watershed Project and provide the seed for other funding sources. IAW and GRLT fully expect the new Piasa Creek Watershed Project will provide the sediment reductions required to fulfill the NPDES permit suspended solids trading requirements.

2. Project Goals, Plan and Benefits

Project Goal

The Piasa Creek Watershed Project will reduce sedimentation in the watershed by approximately 6,700 tons per year by the end of the ten-year program in 2010.

Project Plan

The basic project plan is elaborated in the Agreement between IAW and GRLT and in IEPA's NPDES Permit, which are both included in Appendix A. In summary, the project plan includes:

- Year 1 (2001)
  - Employ Watershed Coordinator
  - Initiate Geomorphic Inventory Assessment (GIA)
  - Initiate watershed stakeholder contacts
- Years 2-5 (2002-2005)
  - Submit Watershed Assessment Report & GIA within 24 months after the effective date of the NPDES Permit (1/24/03).
  - Submit Watershed Implementation Plan within 30 months after effective date of the NPDES Permit (7/24/03)
  - Implement recommendations within 36 months after effective date of the NPDES Permit (1/24/04)
  - Address storm water ordinances in Godfrey
  - Monitor sediment reduction
  - Work to attract additional funding
  - Submit comprehensive assessment of the project status 180 days prior to expiration of the NPDES permit (7/24/05) to determine project viability for 5 more years.
- Years 6-10 (2006-2010)
  - Continue implementation
  - Monitor sediment reduction
  - Obtain 2:1 reduction goal (6,700 tons) by 12/31/08
  - Complete project –12/31/10
- All Years
  - Quarterly reporting to IAW and IEPA
  - Yearly meeting with IEPA

Project Benefits

There are multiple benefits beyond the sediment reduction goal. Some of the benefits are immediate, while others are long term.

One of the immediate benefits is that the water company received an NPDES permit from the IEPA allowing direct discharge to the Mississippi River. The result of awarding the permit to IAW is millions of dollars in savings in projected construction and operating expenditures. The lower construction and operating costs can result in lower water bills for area residents. Since a lagoon system

will not be necessary, sediment will not have to be transported to landfills, the benefits of which include: fewer semi trucks traveling area roads, lower air pollution, and saving of precious landfill space.

Factors effecting the Piasa Creek Watershed include reduced erosion, improved water quality, stormwater control, enhanced fish and wildlife habitat, protection of sensitive ecosystems, and financial incentives to farmers and landowners to implement conservation practices. The other major benefit in the end will be a cleaner Piasa Creek and a cleaner Mississippi River.

3. Current Watershed Conditions

GRLT secured the services of Shannon-Wilson, Inc. to conduct a Geomorphic Inventory Assessment (GIA) of the Piasa Creek Watershed. The GIA provides an assessment of the current geomorphology of the watershed and provides recommendations for reducing sediment load in Piasa Creek and ultimately the Mississippi River. The final report was published in October 2002 and is included in Appendix B. The following section serves to summarize the GIA findings.

Topography

Elevations in the Piasa Creek Watershed ranged from a low of 430 feet National Geodetic Vertical Datum (NGVD) at the mouth of Piasa Creek to a high of 740 feet NGVD on the bluffs along the Mississippi River. Elevations near the headwaters of Piasa Creek were approximately 660 feet NGVD.

Slope classifications include: 0-5% slope, 5-20% slope, 20-40% slope, and 40-100% slopes. GIA Table 1 presents the total and percent area of each slope classification within the watershed. Slope classifications were calculated from 30-meter USGS Digital Elevation Models (DEM) of the watershed.

Geology (Bedrock and Quaternary)

Mapping of the bedrock units within the watershed has been accomplished by the Illinois State Geological Survey and is presented in the 'Geological Map of Illinois' (Willman et. al., 1967). Six bedrock formations were identified within the watershed. Descriptions of the bedrock formations were obtained from the Handbook of Illinois Stratigraphy (Willman and et. al., Illinois State Geological Survey, 1975). GIA Table 1 presents a summary of the total and percent area of the bedrock units. Predominant bedrock deposits include: Mississippian-Upper, Middle, and Lower Valmeyeran, Pennsylvanian-Spoon and Carbondale Formations, and Pennsylvanian-Modesto Formation.

Information for the Quaternary deposits within the watershed was derived from the 'Quaternary Deposits of Illinois Map' (Lineback, 1979), published by the Illinois State Geological Survey. GIA Table 1 summarizes the total and percent area of the Quaternary deposits within the Piasa Creek watershed. The three predominant deposits included: Cahokia Alluvium, Peoria Loess and Roxana Silt, and Vandalia Till Member of Glasford Formation.

Soils

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service, (NRCS)], has mapped the distribution of soil types in the Piasa Creek watershed. Composite maps of soil types were developed for each county in the watershed, based on the NRCS soil surveys. Four predominant soil associations have been identified in the watershed. These soil associations were designated by the NRCS based on similar soil characteristics, including parent material, slope, and drainage. The percent coverage of these soil associations in each subbasin is presented in Table 1 of the GIA. The predominant soils associations and their percentages of coverage in the watershed are as follows: Clinton-Keomah Association (45%), Fayette-Stringhurst Association (23%), Bottomland and Terrace Association, (17%), and Tama-Muscatine/Harrison-Herrick Association (15%).

Climate

The Piasa Creek watershed lies within an area that is characterized by an interior continental climate. As such, weather is influenced by the Gulf of Mexico, Pacific Ocean and the Arctic Ocean, depending on the season. Precipitation events in the spring and summer months tend to be of short duration and high intensity. Precipitation events in the fall and winter months are generally of long duration, frequently lasting several days, but of relatively low intensity.

According to the National Oceanic and Atmospheric Administration, average monthly temperatures in the study area are 28.8° in January, 56.1° in April, 78.9° in July, and 57.9° in October. Average annual precipitation between 1990 and 2000 was 37.37 inches. GIA Table 2 presents a summary of monthly rainfall between 1990 and 2000.

Land Cover

Land cover, shown in figure 2, is grouped into five general categories: Urban land cover (3.9%), agricultural land cover (48.1%), grassland land cover (17.2%), wooded land cover (28.7%), and water land cover (2%). The further details of each of these land cover types in each subbasin are presented in GIA Table 1.

Vegetation and Wetlands

Vegetation and habitat were varied within the Piasa Creek Watershed. Very little pre-European-settlement vegetation remained, but pockets of relatively undisturbed habitat existed along sections of Piasa Creek. Forest loss can play a significant role in bank stability and ecosystem health. Vegetation, particularly forests provide shade and thus keep water temperatures cooler. Forests also provide organic matter, and contribute woody debris for use as habitat cover. The roots of vegetation will help stabilize channel banks.

Agricultural Lands

The majority of the land cover within the watershed was in agricultural production. Many of the bottomland areas adjacent to Piasa Creek and its sub-basins have been cleared, and have been used for row-crop production. Similarly, the flat to gently rolling uplands have been cleared of forest and prairie cover and converted to row-crop production. Row crops produced were primarily corn, soybeans, and winter wheat. Some pasture was located on areas of rolling topography. Pasture areas and grassland consisted primarily of fescue. Only small pockets of native grassland were present within the Piasa Creek watershed, primarily in upland areas. Most grassland areas were either pasture or suburban lawns. In addition, only a few orchards were present in the watershed.

Forests

Forest habitat occurred primarily adjacent to Piasa Creek and its tributaries and along slopes and deep draws that were too steep to be plowed for row-crop production. Several types of forest habitat occurred within the watershed. These were generally grouped into bottomland and upland forest types.

Bottomland forests were found in the flat areas immediately adjacent to the creeks, and across floodplains. Bottomland forests consisted of three types: wet, wet-mesic and mesic, depending on the hydrologic regime. Wet bottomland forests generally occur immediately adjacent to creek channels, but can also occur in low-lying areas adjacent to a creek. Common species include silver maple, slippery elm, box elder, cottonwood, sycamore, green ash and willows. Condition of the forests varied throughout the watershed. A few small pockets of older growth were scattered throughout the watershed, particularly on the steeper slopes of upland forests and in bottomland areas of the lower Piasa. In bottomland areas where agriculture practices have been abandoned, early successional species were dominant. Notable dominant species were silver maple and black willow. Elsewhere, species composition was varied.

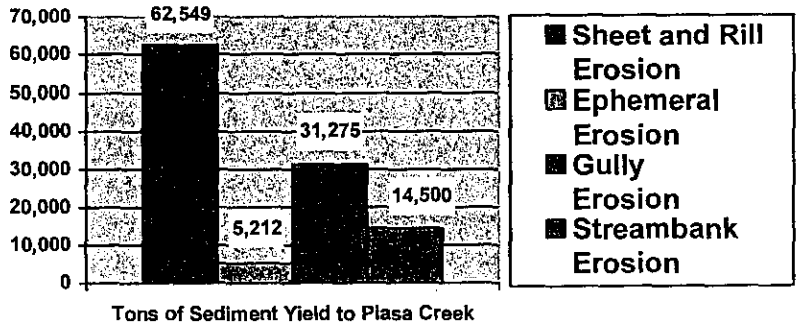
Wetlands

Wetland assessments included a review of NWI maps, NRCS Food Security Act Wetland Maps, the Illinois Wetlands Inventory data, aerial photography, and field investigations. Wetland habitat within the Piasa Creek watershed was limited to a few types. Most of the wetlands consisted of wetland woods or palustrine forested wetlands. Piasa Creek and its tributaries were riverine wetlands. No marsh wetlands, and only small pockets of shrub swamp wetlands, were identified. No natural lakes or ponds were present. Scattered livestock ponds occurred in some areas, but those were not hydrologically linked to waters of the United States, and therefore cannot be considered jurisdictional wetlands by USACE definition.

Sedimentation

Transport of sediment in stream channels can be characterized as 'supply-dependent' or as 'transport dependent'. A supply-dependent stream has sufficient transport capacity, but limited sediment is available for transport. Most steep mountain streams and large rivers are in this category. A transport-dependent stream has sufficient sediment in the system, but flow events of sufficient size to transport it are intermittent. Desert ephemeral streams are an extreme version of this category. Because an abundant amount of stored sediment exists in the Piasa Creek basin channels, this stream system can be considered transport dependent.

Figure 3: Estimates of Annual Sediment Yield to Piasa Creek



Sediment Sources

Sources of sediment in the Piasa Creek basin include erosion of agricultural uplands by sheet runoff, as well as more concentrated (and therefore, more eroding) rill and gully processes (Figure 3). Sediment is also generated and

delivered to the stream system as a result of soil erosion from construction sites and other areas of disturbed soil. Concentrated stormwater that is discharged onto slopes in an uncontrolled manner, such as from culverts or ditches, can also initiate gully erosion and contribute substantial volumes of sediment.

Sediment can also be generated from erosion of channel banks and beds. Flow velocities and depths can increase substantially during periods of flooding as seen in GIA Table 2. As a result, greater shear stress on the bed and banks is available to erode and transport sediment. In general, the size and shape of channels reflect the 1.5 to 2-year return interval flood, referred to as 'channel-forming events'. Because of the relative regularity of these flood events, they are considered responsible for most of the work done in eroding and transporting sediment within the basin.

The rate of runoff in the Piasa Creek Watershed has increased in recent years due to an increase in less-permeable surfaces, such as roofs, roads, and compacted bare soil. In addition, the time between rainfall onset and peak flow has decreased as a result of increased channelization, such as drain tiles, ditches and culverts. This change in basin hydrology has resulted in a greater frequency of channel-forming events, even though the average size and frequency of precipitation storm events probably has not changed. Because much of this hydrologic change has been recent relative to rates of stream-channel formation, the impacted stream channels are still adjusting (i.e., eroding) to accommodate the larger and more frequent storm flows.

In the Piasa Creek Watershed, the beds of many of the upper and mid-channel tributaries appear to be armored by bedrock or by gravel and cobbles derived from bedrock. As a result, incision in these channels is uncommon. It is not clear if these channel beds were once alleviated (deposited by flooding) and the channel bed sediment has since been eroded, or if the channels were primarily always founded on bedrock. It seems, at least for Mill Creek and Rocky Fork that the latter is most likely. In any event, because of the more resistant channel beds, channel erosion is concentrated primarily along the banks.

Mill Creek is relatively stable with respect to channel bed and bank erosion, and appears to be in relative equilibrium with respect to sediment and flow events. Where bank erosion does occur, it is generally limited to the outside of bends, which is a natural process.

In contrast, significant bank erosion is occurring all along Rocky Fork. While the uppermost reaches appear relatively stable, significant bank erosion is occurring in the reaches upstream and downstream from the confluence of two channels. In these reaches, the creek bed is composed of bedrock and the banks are undercut, near vertical and raw, with numerous trees having toppled into the

channel. Further downstream, Rocky Fork flows through what was once the Warren Levis Lake. This lake, which measured about 1,800 feet long and 400 feet wide, has filled with sediment to a depth of at least fifteen feet. A dam at the west end of the lake was breached, allowing the lake to drain and Rocky Fork to incise through the lake-deposited sediment. Banks along this reach were composed of steep, bare sediment that was sloughing into the creek. In the lower reaches of Rocky Fork, abundant sediment has been stored in lateral bars. Bank erosion has occurred as a result of flows deflected by these bars into the opposite banks. In addition, channel aggradation has led to increased bank erosion.

Similar to the lower reach of Rocky Fork, abundant sediment deposition in the low-gradient, lower reach of Piasa Creek has aggraded the channel and created lateral side bars that shift channel flow into the opposite banks. The middle reaches appear to be a zone of sediment transport and temporary storage, with abundant in-channel sediment but only scattered areas of bank erosion. Substantial aggradation can occur in reaches upstream of undersized stream cross-sections that impede flow, while bed scour and formation of pools commonly occurs where flow is constrained under bridges. Channel erosion appears to dominate in the uppermost reaches of Piasa Creek.

Although the other tributary channels were not investigated to the same extent as Piasa Creek, Mill Creek and Rocky Fork, based on similar land use and topography, channel conditions in East Newbern, East and West Little Piasa, and West Piasa Creeks as identified in GIA Figure 1 are probably similar to those in Upper Piasa Creek. Conditions in South Branch Creek may be closer to conditions in Rocky Fork Creek (i.e., relatively greater amounts of channel erosion) due to increased urban development resulting in increased storm runoff and more frequent high flow events.

Sediment Transport

Erosion and transport of sediment in the Piasa Creek basin occurs primarily during storm events. During the summer field season, only fine suspended sediment and fine sand bedload material was observed moving discontinuously. As shown in GIA Table 2, estimated average discharges in the tributaries and upper reaches of Piasa Creek are very low. These low discharges would correspond to low depths and velocities. As a result, the average stream energy to do 'work' (erode and transport) is also very low in these reaches during average flows. However, as the estimated hydraulic data shows in GIA Table 2 for a flood event, flow depths and velocities are relatively high, resulting in a greater amount of stream energy to do 'work'.

The type of sediment in the Piasa Creek system is generally the easiest on which to initiate movement because it is predominantly composed of silt and sand. As

a result, limited amounts of gravel and cobbles are available to provide a surface-armoring layer, and particle cohesion is relatively low compared to clay-dominated sediments. Although sediment data was not collected in Piasa Creek, visual observations during the field studies indicated the mean sediment size at most of the measured cross-sections probably ranges from fine to medium sand (0.1 to 2 millimeters in diameter). These particle sizes are entrained at velocities of 0.6 to 1 feet per second (fps). With estimated flood-event velocities in Piasa Creek and its tributaries of 3 to 7 fps as found in GIA Table 2, substantial sediment erosion and transport occurs during floods.

4. Sediment Reduction Project Plan

The sediment reduction project plan incorporates the findings of the GIA and separates the projects into two major categories-Upland Treatment (rural and urban) and Riparian Treatment.

The most effective measures to reduce the amount of sediment are those that reduce eroded sediment at the source before the sediment is transported off site and into creeks and rivers. Examples of this type of measure include vegetative cover such as reforestation; storm water management controls; best management practices for agricultural, construction and urban sites; and land-use changes that will result in a net reduction of erosion potential. Reducing the origin of in-channel sediment sources includes the use of channel grade controls to slow or eliminate head-cutting and measures to stabilize channel banks. The types and numbers of sediment reduction projects proposed for the Upland and Riparian treatment are presented in this section along with the current estimate of sediment reduction expected from these programs.

Upland Treatments

Due to increased runoff from agricultural and urban land uses, and improved subsurface drainage throughout much of the watershed, Piasa Creek and its tributaries are severely overtaxed during periods of excessive rainfall. Increased drainage and fast runoff during these periods create problems for both agricultural and urban residents. The primary tool is a sediment basin. There are a number of different designs of the basic sediment basin that can be introduced in different settings based need and site assessment. In some instances, additional Best Management Practices (BMPs) such as grass waterways, terraces and others may be used in conjunction with the basins to make them more efficient.

Rural Sediment Basins

The mechanical practices of sediment basins will be designed to control gully erosion, reduce sediment, and improve water quality. The sediment basins will preserve the capacity of ditches, waterways, streams, and Piasa Creek. The trapped sediment will reduce pollution by providing a place of deposition for soil particles.

The improved water quality will be based on a 24-hour dewatering time on cropland fields. This extended retention time will improve deposition time for sediment load. The majority of these structures are farm through basins that reduce the loss of production acres while still controlling erosion. The design criteria of a 24-hour dewatering time will maximize water retention without damage to growing crops.

Retention Basins

Another mechanical practice to improve water quality and retention of runoff is the use of upland retention basins. These structures will hold water on a year around basis. Their appearance is similar to a pond or lake, however they have a much greater temporary storage capacity during storm events. The retention basins have the added capability of providing water for livestock, irrigation, recreation and aesthetics. Upland retention basins will be designed to reduce the outflow to the standard of 0.15 cfs per acre of drainage. This reduced rate of release will control peak flow to the downstream drainage system and increase trapping efficiency 50%-90%. The 0.15 cfs is recommended by IDOT-DWR for stormwater reduction and water quality improvement.

The performance of the practice will be calculated on the amount of drainage acres of control. The control will be based on a 25-year storm event with stage height above normal pool to control the outflow of 0.15CFS/ac of drainage. Participation would be limited to structures draining a minimum of 25 acres.

Urban Water Detention/Retention

Detention/retention facilities will be constructed in the urban portion of the watershed, the Rocky Fork sub-basin, where feasible due to their increased effectiveness and positive public acceptance. Based on an analysis of each site, some structures may retain water year around while others will only detain water during storm events. These structures may also have an associated wetland area above the main structure. The constructed wetland will absorb stormwater and pollutants, trap sediment and extend the life of the structure.

Removing pollutants will be achieved by gravitational settling, algal settling, wetland plant uptake and bacterial decomposition. The degree of pollutant removal is a function of pool size in relation to the watershed area. Reliable

removal can be achieved if the permanent pool is sized to store between 0.5 and 1.0 inch of runoff per contribution watershed area.

Reported sediment removal typically ranges from 50-90%. Urban water detention/retention basins are not only reliable methods of pollutant removal but also are widely adapted to most developments and have a longevity of 20 years or longer.

An additional cause of water quality degradation is excessive streambank erosion. Studies confirm the effectiveness of these extended detention ponds not only for water quality improvement but also for "peak discharge control" and "streambank erosion control."

Design of detention facilities in the Rocky Fork Sub-Basin will follow the best design procedures available to improve effectiveness, protect public safety, increase wetland area, enhance wildlife habitat and consider aesthetic value of proposed sites before and after construction.

The urban water detention structures will be based upon site suitability and will focus on fewer but larger structures in the urban areas. Permanent sedimentation basins will require periodic maintenance, and removal and disposal of accumulated sediment. Maintenance will be the responsibility of the landowner.

Riparian Treatment

Riparian Corridor Protection and Restoration

The riparian corridor is the zone of vegetation in, along, and adjacent to a creek, stream, or river. The riparian corridor varies in width, but if left unaltered would include the out-of- bank-flow areas adjacent to streams. Forested areas of the corridor contain deeply rooted tree species and shrubs that help bind the soil in the creek banks. This reduces the rate of bank erosion and sediment delivery into the stream. Sediment from overland flow or from out-of-bank flow is trapped by vegetation at the top of bank and adjacent to the channel. Reduction in the size, or elimination of, the riparian corridor results in an increase in the amount of sediment eroded and the rate of transport. In addition to trapping sediment, trees, shrubs, and grasses in a riparian zone help remove nutrients, pesticides, pathogens, and other potential pollutants before they enter a stream or creek. A riparian corridor will help retain runoff and improve infiltration. A riparian zone can provide habitat, cover, and travel corridors for many species of wildlife.

Streambank Stabilization

Unstable streambanks along Piasa Creek contribute a significant amount of sediment to the channel. Because of the variability in channel flow and velocity,

the banks are prone to caving and undercutting during periods of high water or storm events. Agricultural producers in the watershed often exacerbate this problem by farming to the very edge of the watercourse. This increases the potential for the channel to cut into fields, damaging crops and property, and adding sediment load to the stream flow.

The primary objective of riparian corridor treatment is to improve and maintain the quality of streams within the Piasa Creek Watershed and ultimately the condition of the Mississippi River. Objectives for obtaining this goal include the implementation of streambank stabilization practices such as stream buffers, pool and riffle technology, incorporating peak stone protection, and debris removal.

In the past, bank protection usually meant hardening the bank with materials such as rock, broken concrete, old cars and other discarded materials. Rock usually was loose dumped, but was occasionally placed as an engineered, riprap revetment.

With changes in the Clean Water Act in recent years, more attention and effort has been directed at less 'hard' measures, and more 'soft' measures. These soft measures are typically referred to as 'biotechnical stabilization' or 'bio-stabilization' measures because they incorporate some of the engineered hard methods in combination with the use of live plant and wood material. Although the use of biotechnical measures can enhance the riparian habitat compared with a rock revetment, there are some instances where the hydraulic forces and/or the channel geomorphic conditions preclude the effective use of these softer measures. Deep-rooted riparian vegetation helps to bind the soil along streambanks, which helps prevent sloughing off of the banks. Because the bio-technical measures rely to varying degrees on the root reinforcement and channel roughening characteristics of live plant material, a lag period of several months to several years often occurs until the plants are well developed. Biotechnical bank stabilization measures are most vulnerable to damage from flooding and erosion during this lag time, and may require partial repair or replacement.

The following is a list of various bank protection measures, in approximate order from 'softest to hardest'. Subsequent items can be added to those listed previously for combinations with increased bank stability.

- Bank regrading and revegetation – bank is graded to a typical 2 Horizontal to 1
- Vertical (2H: 1V) slope or flatter, and planted with native grasses and shrubs. Water velocities of greater than six feet per second can adversely affect some vegetation.

- Erosion control blankets – natural or synthetic fiber blankets may be laid over regraded bank and incorporated into revegetation.

- Toe rock – appropriately sized rock is placed along the toe of the re-graded bank where scour and erosion is greatest. Toe rock works well with using vegetation to stabilize other portions of the bank. Living or non-living vegetated materials may also be used for toe protection. Reed or willow rolls and bundles, or rolls constructed of coir (wood) fibers are also useful. Cribbing of willow or other wood timber is another form of toe protection.

- Stone peaks – small piles of stone extending out a short distance from the bank provide a hard point that can anchor softer bank protection.

- Rock barbs – rock dikes built to normal high water elevation and extending out from the bank at an angle oriented upstream. The barbs are intended to deflect flow away from the bank.

- Rock spurs – similar to barbs, but larger in that they are built as high as the design flood level.

- Full rock revetment – typical bank riprap revetment extending from the toe up to the bank top or just above design flood elevation. Vegetation is commonly planted between the rocks.

Prior to construction of channel bank stabilization measures in Piasa Creek or its tributaries, a study is conducted of the reach, including drainage area for a given location, estimated peak storm flows and velocities and other hydrologic and hydraulic characteristics. Soil characteristics related to bank stability (grain size, permeability, areas of seepage) and types of vegetation the soil can support, and potential upstream sediment sources that could compromise the stability of an improvement at a specific location should also be investigated.

Section 404 of the Clean Water Act requires that the U.S. Army Corps of Engineers issue a permit for the dredging or filling of material into wetlands and waters of the United States. Section 10 of the Rivers and Harbor Act has similar requirements. Rules formulated for implementing Section 404 will limit the amount of 'hard' material that may be placed in a water of the U.S. for stabilization purposes.

Rock Riffles

In many areas of Illinois, increased flooding has prompted landowners to channelize i.e., straighten streams so that floodwaters leave their property more

quickly. Unfortunately, channelization increases stream power by increasing the slope of the channelized section. Increased power enables the stream to do more work to erode its channel and banks, thus increasing the potential for damage to adjacent properties.

Artificial riffles are made of stone to distribute the drop in streambed elevation over a longer distance. The technique drowns out the points of maximum channel incision and allows the riffles to adjust to future streambed changes.

The riffles are spaced so that local scour creates a pool downstream of each riffle. Essential to this technique is that sediment is not trapped in pools and bed material is allowed to move through each pool and riffle. The erosive energy of floods is dissipated in the deeper pools, thereby reducing bank erosion and lateral channel migration, and inhibiting the upstream movement of channel incision. Therefore, the rock riffles not only reduce bank erosion in channelized reaches, but they inhibit excessive bank erosion upstream. The technique provides stability to a stream reach while also protecting the entire watershed.

Other Best Management Practices

While sediment basins, water retention/detention basins and various streambank stabilization methods are the tools with the highest level of erosion control, there may be circumstances at a particular site where other options may be the best fit for that situation. In those instances, other Best Management Practices (BMPs) may be considered. Best Management Practices are those construction practices that will result in water quality improvements, particularly sediment reduction, in a watershed.

While many of the examples given are for use in urban areas, many are applicable to non-urban areas as well, particularly those that apply to construction sites. Applicable BMPs include:

- Protecting grassed buffers at the perimeter of the construction site to help trap sediment.

- Use of sediment fences or staked straw bales to trap sediment before it leaves a site.

In addition to Best Management Practices that apply to construction sites and urban areas, many BMPs apply to agricultural areas as well. These include:

- Filter strips of grass, legumes or other non-woody vegetation that filters runoff and significantly reduce the amount of sediment and nutrients entering a water body.

- Grass waterways that are either natural or manmade channels to stabilize small gullies and washouts.

Land Acquisition and Protection

Just as important as upland water detention sites, cropped wetlands, bottomland fields and riparian areas subject to seasonal flooding should be allowed to carry out temporary detention functions. From a watershed or community perspective, these lowlands are potentially more valuable for flood control purposes than they are for agricultural production. Cropped wetlands and bottomland fields in the floodplain of Piasa Creek should be targeted for acquisition and conservation easements.

The introduction of agricultural practices and urbanization into the watershed has resulted in the two largest causes of increased rates of erosion and sediment transport within the watershed. As land cover and land uses have changed over the years, the amount and velocity of storm water flow has increased with a resultant increase in the rate of erosion and sediment transport, and a resultant increase in the amount of sediment delivered downstream from its source. Certain land use practices can be effective in reducing the rate and amount of erosion, the rate and amount of storm water runoff, and the rate and amount of sediment delivery.

Agricultural areas loose an average of eight tons of soil per acre per year, and higher on highly erodible soils and slopes. Forest areas lose an average of one ton or less of soil per acre per year. Reforestation of agricultural areas would potentially yield an annual reduction of seven or more tons of sediment per acre. The majority of Piasa Creek Watershed is in agricultural production, making it the single largest contributor of soil loss and sedimentation in the watershed. Taking agricultural areas that are of marginal value out of production and allowing them to revert to forest will result in a significant annual reduction of sediment yields in the Piasa Creek.

Development of a greenway to protect the riparian corridor is a positive land use policy that will help to protect the channel banks, and trap and reduce sediment. This will have the added benefit of providing protected open space. Greenways can provide recreation opportunities for people living within the Piasa Creek watershed and nearby communities. Greenways can enhance adjacent property values. Greenways may be developed by property acquisition or by use of conservation easements. Greenways require little maintenance.

Greenway development, buffer zones along stream corridors, open space preservation along stream corridors and in highly erodible areas, and establishment of conservation easements for forested areas and riparian zones

may be used to help fulfill the National Pollutant Discharge Elimination System (NPDES) Phase II requirements of the Clean Water Act for small municipalities. This may be of additional benefit to urbanizing areas along Rocky Fork.

Wetland Restoration

One of the primary functions of wetlands is to trap sediment. In the case of Piasa Creek, this occurs for sediment transported by overland flow that passes through a wetland prior to entering the channel of Piasa Creek or its tributaries. It can also occur from sediment transported by out-of-bank flows (flooding) from the creek or its tributaries. For most of the existing wetlands adjacent to Piasa Creek and its tributaries, most sediment is captured during periods of flooding.

Restoring prior-converted wetlands and farmed wetlands to wetland conditions will have a positive affect on sediment transport in Piasa Creek. Prior-converted wetlands are those areas that have been converted or drained by some method for agricultural purposes. Farmed wetlands are those wetlands that have not been drained, but are dry enough to farm periodically.

Restoring wetland areas adjacent to Piasa Creek and the lower reaches of its tributaries will be more effective in reducing sediment than in restoring wetlands in the upper reaches of the watershed. Sediment loads in the stream are greater in the lower reaches. Longer duration flooding in the lower reaches allows interaction between sediment laden flood flows and wetlands to occur for a greater period of time. Letting prior-converted wetlands revert to wetlands in upland areas will intercept sediment that eroded from adjacent agriculture fields.

SEDIMENT REDUCTION PROJECT SUMMARY

Since the Piasa Creek Watershed Project began in 2001 numerous projects have been completed including a total of 113 sediment basins, 6 stormwater detention basins, 3 field terraces, a 500 foot buffer strip, 3 grass waterways, 1 grade control structure, 2 streambank stabilization projects that incorporated 3 stream barbs, 7 rock riffles, and 450 of stone toe protection (Figure 4). Each project is documented and has calculations of numerous statistics including cost and tons of soil saved. As of January 1, 2004, a total of 3,716 tons of soil have been controlled (Table 1).

Projects in the active phase include the restoration of the Camp Warren Levis Boy Scout Lake in the Rocky Fork Sub-basin. The Warren Levis Lake restoration is the largest individual project to date. It involves the excavation of 15 acres of a silted-in lakebed and the establishment of a 10 acre enhanced wetland above the restored portion of the lake. Completion is anticipated for April of 2004. Other projects in the active phase include an additional 15 smaller sediment basins in the agricultural sector (Table 2, Figure 5).

In the area of land protection, GRLT has acquired 169 acres in the Piasa Creek Watershed, holds conservation easements on 253 acres, has pledges of conservation easements on an additional 20 acres, and is in negotiations with landowners for the acquisition of an additional 151 acres. Already 422 acres of the Piasa Watershed have been protected and it is anticipated that over 600 acres will be protected by the completion of the overall project.

Numerous pending projects are at various stages in the planning process. Although a number of sediment basins are on the pending projects list (Table 3) many others are anticipated following the completion of the Warren Levis Lake Project. The Piasa Creek Watershed Project is expected to receive more requests for projects than are possible to complete in the years that remain in the project timeline. It is anticipated that projects that provide the highest level of erosion control at the lowest cost will receive highest priority. High quality projects will still be considered in the agricultural community. A small number of larger scale sediment control projects will be considered in the four sub-basins (West Little Piasa, West Piasa, Upper Piasa, and East Little Piasa) with the highest erosion control potential from agricultural practices and in the Rocky Fork Sub-basin, the only urban sector (Figure 6).

It is estimated that an additional 250 sediment basins will be constructed in the watershed, primarily in the agricultural sector. An additional 5 larger scale water retention/detention basins will be constructed, one in each of the three northern sub-basins and two in the Rocky Fork sub-basin. It is also anticipated that an average of two large-scale streambank stabilization projects will be completed in each of the next five years. Additional land and easement acquisition will be based on availability of priority properties, price, and supplementary grants and donations form outside sources. Other best management practices will be implemented on a case-by-case basis.

4. Piasa Creek Watershed Project Sediment Reduction Quantification

The method of quantifying sediment reductions into the Piasa Creek is the Sediment Input Reduction Analysis Method (SIRAM). SIRAM measures erosion and sediment trapped through the construction of sediment basins, stream buffers, retention and detention basins, and other best management practices. SIRAM is a summation of the sediment calculations from various erosion control practices. All calculations will be based on United States Department of Agriculture (USDA) standards, including USLE (Universal Soil Loss Equation) and RUSLE (Revised Universal Soil Loss Equation).

Different types of erosion have different methods of measurement. The four major forms of erosion include sheet and rill, ephemeral, gully and streambank.

- Sheet and Rill Erosion Rate for Cropped A / B slopes x Acres x SDR 1
- Sheet and Rill Erosion Rate for Cropped C / D slopes x Acres x SDR 2
- Sheet and Rill Erosion Rate for Pasture x Acres x SDR 3
- Sheet and Rill Erosion Rate for Timber x Acres x SDR 4
- Sheet and Rill Erosion Rate for Urban x Acres x SDR 5
- Ephemeral Rate x Acres of affected cropland x SDR 6
- Gully Erosion Rate x Feet of eroding gullies x SDR 7
- Streambank Erosion Rate X Feet of eroding streambank X SDR 8

Each type of erosion produces sediment, but each also produces differing amounts. The amount of sediment produced by the different forms of erosion is the Sediment Delivery Rate (SDR). Sheet and Rill erosion has the most variable SDR's due to the sheet flow. Ephemeral, gully, and streambank erosion are considered different forms of channel flow, with generally greater SDR's but less variability. The appropriate SDR is multiplied times the gross erosion amounts for that type of erosion, within a given land use, to obtain sediment "delivered to the field edge" and ready for flow into the stream system. The total of these products give the gross erosion in the watershed. The sediment delivery rate will then be used in the sediment trapping calculation of any of the erosion control practices. For example, if it was determined that the best practice to control a gully erosion problem on an agricultural site was to construct a sediment basin, an analysis of the site would be conducted. Factors considered would include the total number of acres drained, soil type, slope, land use, etc, to determine the gully erosion rate, multiplied by the total feet of eroding gully to give the sediment delivery rate for that site. If the SDR for this particular project was 100 tons and a sediment basin was constructed on the site with a trapping efficiency of 90%, the soil savings would be 90 tons. Soil erosion reductions will be further verified by periodic physical measurements at completed project sites.

Documentation of all structures and activities are compiled on an Access database that keeps a record of all completed, active, pending and future projects. (Table 1,2,3 and Figure 4,5) The program will maintain a composite of the total tons of soil saved from erosion, cost per ton, cost per acre, acres effected, ownership, cost share dollars, cost share sources and digital photos of

each project site. All of the data will be linked to a watershed map to further clarify the location of each project. GRLT will be responsible for the maintenance of all records and documentation on the Piasa Creek Watershed Project and will submit quarterly reports to IAW and the IEPA. The first and third quarterly report will include the most recent data on the tons of soil saved based on completed projects. Each end of year report will include the tons of soil saved to date and projections on the tons of soil savings based on active, pending and future projects. A time-line illustration will be included with the annual report.

A basis for long-term monitoring was established by identifying 30 monitoring sites, or "cross-sections, throughout the watershed. An evaluation of existing channel conditions at each site included an assessment of the bank and bed materials, and bank vegetation. Habitat adjacent to Piasa Creek and its tributaries was identified, including areas of riparian forest, wetlands, and others. Wetlands that were hydrologically linked to Piasa Creek and its tributaries were identified based on analysis of existing data and visually verified in the field. Soils with high erosion potential and hydric soils were identified within the watershed using NRCS soil surveys and other published data. The information compiled at the 30 cross-sections will be used not only during the course of this 10-year project, but well into the future. The cross-section data will provide baseline data for initial work, supporting documentation, and grant development. It will also serve as the foundation for future studies 15, 20 or even 30 years into the future. The methods of electronic documentation and the baseline identification of monitoring site will also serve as an example and guide to other watershed implementation efforts in the state and in the country.

The Piasa Creek watershed was divided into ten subbasins. These subbasins range in area from approximately 3,220 acres to 16,050 acres as shown in GIA Table 1. Thirty channel cross-sections of the existing channel were measured in the field at key points within the watershed, and at least one cross-section in each subbasin. Cross-sections were taken at points immediately above and below the location where a tributary joined the main channel, and where distinct changes in basin and sub-basin characteristics were observed. Channel and bed conditions, including hydraulic roughness, were identified at each cross-section. Channel slope instabilities, where they occurred, were also noted at each cross-section.

Vegetation was characterized at each cross-section, both in channel and adjacent to the channel. Identified habitats were correlated with published mapped data. The depth of rooting was measured on each bank, where it could be determined. Each cross-section was photo-documented. Elevations at each cross-section were determined using USGS Quadrangle maps of the watershed, and other sources of published topographic data. The channel width-to-depth ratio was calculated at each cross section, and used for further analysis of

channel morphology. The channel slope was determined from survey data collected in the field. Evidence of channel down-cutting, when present, was ascertained at each cross-section. As no historic stream-gage data was available, stream power was estimated using the channel slope, cross-section area and drainage area at key locations. Photographic documentation of each cross-section and other field data is found in the Geomorphic Inventory Assessment of the Piasa Creek Watershed.

The 30 cross-sections identified in the Geomorphic Inventory Assessment report will be monitored on periodic basis. A frequency of no more than every two years and no greater than every five years should be a sufficient interval. This will give a dynamic picture of how the channels are changing over time. The sections have been monumented, and located with a GPS system. This will make locating the sections relatively simple for future monitoring purposes.

The educational component (PC-WET program) will also conduct monitoring along the Piasa Creek. The monitoring will include physical, chemical, and biological parameters at twelve permanent site locations. Most of the chemical analyses will be done using instrumentation such as Computer Based Laboratory Calculator (CBLs) and Hach DRL instrumentation. The chemical parameters include: dissolved oxygen, nitrite/nitrates, five day BOD, phosphorous, pH, and hardness. All test procedures will meet EPA standards for data reporting. The physical parameters will include: flow rates, depths, sedimentation, and temperature. Field computers with interfacing probes will be used for the physical parameters. Biological parameters will include fecal coliforms and macroinvertebrates as water quality indicators.

5. Stormwater Ordinance Development

Urban runoff can be a significant source of sediment in a watershed, and is one of the primary components of urban non-point source pollutants. Urbanization will have the net affect of increasing the peak of a storm water hydrograph compared to a pre-urban condition. Urbanization will also result in the peak being reached more rapidly than in a non-urban situation. A higher, quicker peak means that a greater volume of storm water would enter a creek in a much shorter period of time with a greater velocity than would normally be expected in a non-urban situation. The end result is that the potential for erosion and sediment transport increases.

Implementing storm water management guidelines will help to level out the hydrograph following a storm in an urban area. The use of detention basins will limit or 'detain' water flowing from a development to pre-development levels. Detention basins may be either wet detention or dry detention. Detention basins

have the added benefit of trapping sediment at the source, in addition to reducing erosion potential downstream.

A storm water management, erosion control, and sediment-control ordinance for urban areas can provide requirements for reducing sediment production at its source and managing the rate and flow of storm water and sediment transport.

6. Education and Public Awareness Programs

The most effective methods for deliverance of a knowledge-based program involve public seminars, demonstrations, and extensive media promotions. This methodology can be used to focus on the specific issues unique to the Piasa Creek Watershed.

Brochures, Newsletters and Website

To encourage participation by area landowners, informational brochures have been developed for distribution throughout the watershed. GRLT publishes its own brochure about the Piasa Creek Watershed Project (PCWP). This brochure provides an overview of what a watershed is and basic facts regarding the Piasa Creek Watershed. The publication continues by illustrating the various problems associated by different types of erosion along with the tools GRLT uses to solve those particular problems. The brochure is distributed at Soil & Water Conservation Districts and USDA Service Centers, county courthouses, and libraries in the PCWP three county region.

GRLT distributes a newsletter twice a year to approximately 2,500 residents of the region. Updates on the Piasa Creek Watershed Project are included in each issue.

The Piasa Creek Watershed Project is highlighted on the GRLT website, showing maps and an assortment of projects and updates on the effort. The website is www.greatriverslandtrust.com.

Tours

As various projects are completed, such as stream buffers, sediment basins, riffle pools, etc., tours will be arranged for area landowners to further encourage their participation by viewing successfully completed projects. On June 14, 2002, GRLT together with the PC-WET program hosted a driving tour of the major projects in the Piasa Creek Watershed Project. The trip began at Lewis & Clark Community College and drove along the sites of various projects that have been implemented or are in the planning stages. Along the way, PC-WET participants performed water quality tests along certain areas of the creek. The tour proved

to be a hands-on approach to learning about how various tools can be utilized to prevent sediment reduction in the Piasa Creek Watershed.

Press

Piasa Creek Watershed Project has been publicized by various press releases since the project's beginning in 2000. These press releases have been in newspaper publications such as the St. Louis Post Dispatch, the Alton Telegraph, and the Illinois Business Journal. The project has also been featured in public radio announcements on WBGZ. Making the public more aware of this important project has made public acceptance of PWCP a reality. The following reflects in more detail some of the press releases during recent years.

- Illinois Business Journal (2001) – "Piasa Creek Watershed Project to have Benefits for All"
- Alton Telegraph (2002) – "Decision May Help River, Water Plant"
- St. Louis Post Dispatch (August 8, 2002) – "Organization Will Restore Lake at Boy Scout Camp"
- St. Louis Post Dispatch (September 5, 2002) – "Boy Scout Board OK's Plans to Develop Lake"
- St. Louis Post Dispatch (November, 2002) – "Piasa Watershed May Get Federal Fund Boost"
- Alton Telegraph (February 11, 2003) – " Council recommends Catholic Charities Lease"
- Alton Telegraph (February 11, 2003) – "After years of planning, road project to begin"
- Alton Telegraph (October 3, 2003) – "Deal will preserve Scout camp in Godfrey: Conservation group plans to restore 15 acres at Camp Warren Levis"
- St. Louis Post-Dispatch (October 29, 2003) – "Joint project will restore use of silted-up lake at Scouts' Camp Warren Levis near Godfrey"
- Alton Telegraph (October 30, 2003) – "Open house Sunday at Camp Warren Levis"

Awards

Piasa Creek Watershed Project was selected as a finalist for the 16th Annual Governor's Pollution Prevention Awards hosted by the Illinois Waste Management and Research Center (WMRC). The Governor's Pollution Prevention Awards annually honor Illinois companies and organizations that are making efforts to reduce their environmental impact and improve their economic viability. The award ceremony was held on October 18, 2002 in Champaign, Illinois. GRLT's Alley Ringhausen and Amanda Langford attended the event as well as Mark Johnson from IAW.

Piasa Creek Watershed Education Team Project

The Piasa Creek Watershed Education Team Project (PCWET) is an academic environmental education project that allows middle school students to better understand the importance of water quality to their community and fosters a sense of stewardship for their watershed.

Twenty public and parochial middle schools and two public high schools are currently participating in the project. It utilizes the watershed as and outdoor classroom for over one thousand students in the three southwestern Illinois counties. Through a comprehensive watershed monitoring program, involving the latest educational technology, the students collect baseline data for the determination of long-term changes in the physical, chemical and biological parameters of the watershed. The parameters include flow rates, sedimentation loads, temperature, depth, pH, dissolved oxygen, phosphates, nitrates, hardness, BOD, fecal coliform and macro invertebrate indices.

Grants

Many sources of funding have contributed to the success of the Piasa Creek Watershed Project. The fundamental funding source for the project comes from IAW. The water company will provide $4 million in funding for the 10-year project. Supplemental funding from other sources can be found from the following:

- Illinois Department of Natural Resources, C2000 Program - $15,000
- Trees Forever, Illinois Buffer Initiative - $2,000
- Illinois Department of Transportation - $5,400
- Illinois Clean Energy Community Foundation - $200,000
- Service Learning Grant - $4,000
- Illinois Department of Agriculture, Streambank Stabilization and Restoration Program - $25,000

- Illinois Environmental Protection Agency, Streambank Cleanup And Lakeshore Enhancement - $500
- Illinois Department of Natural Resources, Illinois Wildlife Preservation Fund - $1,000

Presentations

Watershed representatives will also be available for presentations at area schools and colleges, municipal meetings, local organizations and any other groups interested in learning more about the project.

Presentations have also been presented at special events on a regional, statewide and national scope. These include:

- National Conference on Nonpoint Source Pollution – Chicago
- Illinois Watershed Conference – Peoria
- "Clean Water, Models That Work", Missouri Botanical Gardens
- Tri County Regional Planning Commission – Peoria
- Southern Illinois University Biology Department – Edwardsville
- East/West Gateway Coordinating Council – St. Louis
- Illinois Department of Natural Resources Conservation 2000 Conference – Pere Marquette Lodge - Grafton

Scope of Services

CONSULTANT will revise and implement the Piasa Creek Macrosite: A Demonstration of Non Point Source Pollution Remediation and Water Quality Improvement Plant ("Piasa Creek Plan"0 developed in 1995, a copy of which is attached hereto and incorporated herein by reference, for the purpose of achieving within ten years from the date hereof a sustained 2:1 reduction of sediment loading in the Mississippi River when comparing control of sediment to the Piasa Creek to residual discharge from the IAWC 16 mgd Alton District potable water treatment facility on an average annualized basis (the "2:1 ratio"). CONSULTANT shall submit a draft of the revised Piasa Creek Plan to IAWC and the Illinois Environmental Protection Agency ("IEPA") for review prior to implementation. Revisions to such plan will be in accordance with the terms of this Agreement. CONSULTANT will implement the plan so as to reduce inputs of sediments into the Piasa Creek within the ten-year period 2001 through 2010. This ratio shall be sustainable or exceed able. CONSULTANT will undertake the reduction in silt loads entering the Piasa Creek through a variety of preventative measures including, but not limited to, stream bank stabilization, the creation of pool ripple areas, construction of silt basins, land acquisition and conversion of land use, and county and municipal zoning modifications. It is anticipated that CONSULTANT will obtain the assistance of third parties in performing many of said preventative measures.

CONSULTANT, or an approved subcontractor engaged by CONSULTANT, will conduct a geomorphic inventory assessment (GIA) of the Piasa Creek. Any such sub consultant shall be a fluvial geomorphologist. Prior to initiation of the GIA, CONSULTANT shall submit to IAWC and EPA for review the proposed inventory work plan, including specific task and target completion dates. CONSULTANT shall submit to IAWC and IEPA a written watershed assessment report including results of the GIA, within twenty-four (24) months of the effective date of IAWC's NPDES Permit No. 0000299 (the "Permit").

CONSULTANT will measure sediment input reductions into the Piasa Creek through the sediment input reduction analysis method (SIRAM) and also measure stream bank erosion and sediments trapped through silt basins, ponds, or lakes. For purposes of the SIRAM, stream bank erosion areas shall be identified. CONSULTANT shall submit a Project implementation plan with prioritized sites for sediment reduction based on the results of the GIA within thirty (30) months following the effective date of the Permit. CONSULTANT will begin significant implementation of the plan within thirty-six (36) months following the effective date of the Permit.

CONSULTANT will conduct a baseline analysis to determine the rate of erosion from the stream bank. The rate of erosion shall be determined by measuring the height and length of the erodible stream bank; placing stakes at intervals along the stream bank; and physically measuring the rate of erosion over a one-year period prior to installation of stream bank erosion protection methods. Analysis of erosion data will be conducted and reported, in writing, to IAWC and IEPA annually. Sufficient silt basins to accomplish the Project will be constructed. CONSULTANT will quarterly measure and analyze the

basins to quantify the amount of sediment retained therein. Measurements will be taken in accordance with the U.S. Department of Agriculture's standard for estimating sediment accumulation in reservoirs, Illinois Engineering Form 10, or any successor form. CONSULTANT shall also impose restrictions furthering the purpose of this agreement on all real property acquired by CONSULTANT with funds provided partially or fully by IAWC.

CONSULTANT shall report quarterly to IAWC and the IEPA on the status of the SIRAM and the ongoing GIA. Such reports shall detail: (i) progress in implementing the recommendations of the GIA and establishing the baseline for calculating sediment reductions in the Piasa Creek Watershed; (ii) progress in implementing sedimentation reduction measures; (iii) progress in acquiring land and easements and permission to implement anti-erosion and stream bank protection measures on private land; and (iv) progress in working with the Village of Godfrey to amend the Village's storm water ordinances to further reduce the amount of urban runoff tributary to the Piasa Creek, including submittal to the IEPA of draft storm water ordinance amendments. CONSULTANT shall submit these reports to IAWC and IEPA in March, June, September, and December of each calendar year. Monthly updates will be provided by CONSULTANT to IAWC and EEPA during the GIA. A minimum of three meetings will be held with IEPA during the GIA to discuss findings and proposed actions to conclude the Project. CONSULTANT shall participate in additional meetings, as reasonably requested by the IEPA or IAWC. CONSULTANT shall promptly notify IAWC and IEPA of any problems encountered in implementing any of the requirements of this Agreement or proposals which it has made as a part of the Project, including any requirements of the Special Conditions of the NPDES permit issued to IAWC by IEPA in connection with its Alton District water treatment facility, i.e. NPDES Permit No. IL0000299.

CONSULTANT will oversee the construction of silt dams or other erosion control mechanisms as recommended in the GIA, during the ten-year period contemplated herein in easement areas or within land purchased as a part of the Project. Unless otherwise identified in the GIA, the silt dams will primarily be build in tributaries to Piasa Creed and where tributaries enter Piasa Creek. If necessary, maintenance dredging will remove accumulated sediments and the sediments will be distributed to adjacent farms during the term of the Agreement; provided that such action may be undertaken without significantly decreasing the fertility of the soil or unreasonably increasing the amount of accumulated metals at the site of distribution. Should either of the foregoing situations be likely to result from proposed distribution of sediment, CONSULTANT shall utilize a different method for the handing of such sediments to be discussed and approved by IAWC and IEPA. CONSULTANT shall obtain any and all licenses, permit(s) and/or permission(s) with regard to any removal of sediment pursuant to this Agreement.

All reports to be provided to IEPA by CONSULTANT as a part of the Project shall be provided to the following address:

Division of Water Pollution Control
Non-Point Source Management Program
Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 north Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

In order to achieve the above objectives, CONSULTANT will perform all actions necessary, including the following:

7. PHASE 1

Year 1 November 2000 – June 2001

- Re-establish Piasa Creek Watershed Conservancy
- Hire Watershed Coordinator
- Update: Piasa Creek Watershed Plan
- Initiate Geomorphic Inventory Assessment (GIA) for watershed to target sediment reductions (fluvial geomorphologist)
- Provide monthly updates to IAWC and IEPA during GIA
- Begin baseline analysis
- Begin landowner contracts of targeted stream bank stabilization sites and sediment reduction sites
- Begin strategic land and easement acquisitions
- Begin conservancy meetings and media releases
- Hold March update meeting with IEPA
- Provide Annual Report – Every twelve months following effective date of the permit .

8. PHASE 2

Years 2-5 July 2001 – December 2004

- Submit an implementation plan to IAWC and IEPA with prioritized sites for sediment reduction controls based on the results of the GIA within thirty (30) months following the effective date of the Permit.
- Continue conservancy meetings
- Address storm water ordinances in Godfrey
- Work to attract additional project funding
- Implementation of recommendations from Geomorphic Inventory Assessment i.e., stream bank stabilization, pool ripple areas, silt dams – to commence within thirty-six (36) months following the effective date of the Permit.
- Hold annual meeting with IEPA and IAWC
- Continue sediment reduction analysis
- Provide comprehensive quarterly reporting

9. PHASE 3

Year 6 January – December 2005

- Work to attract additional project funding from sources other than IAWC
- Continue project implementation
- Continue sediment reduction analysis
- Provide project report and hold Threshold June 2005 Meeting to determine course of action and whether Project is proceeding according to expectations. If deemed so, Project continues onto second stage and funding to CONSULTANT continued to next phase. The Illinois Environmental Protection Agency will make the decision whether the Project is succeeding.

10. PHASE 4

Years 7-11 January 2006 – December 2010

- Demonstrate significant sediment reductions
- Attempt to achieve goal of sediment reduction of 2:1 minimum (approximately 6,600 tons of sediment) by December 2008.
- Obtain goal of retained reductions of 2:1 by December 2010
- Continue implementation
- Recommend measures for ongoing reduction levels after 2010
- Project ends December 2010

11. Exclusions

The following items are not included in the proposed Scope of Services:

1. Testing for in-stream sediments.
2. Any responsibility for testing Alton Water Treatment Facility.
3. Travel outside of Jersey County except for routine required travel to Springfield, Illinois to meet with IEPA or IDNR and travel to Alton or Belleville to meet with IAWC.

12. Fees and Payments

The fees for provision of professional services described herein shall be and be paid as follows:

$307,500.00 - Paid on or before January 2, 2001; and

$207,500.00 - Paid on or before July 1, 2001; and

$201,944.44 - Paid semi-annually, commencing on January 2, 2002 and continuing until the earlier of July 1, 2010 or such time as the Agreement is terminated by IAWC, or IAWC's ability to directly discharge treatment residuals from its Alton Water Treatment Facility ceases, unless, the parties mutually agree, in writing, on a different schedule deemed expedient to accomplish the Project.

Additional Services

The goal of CONSULTANT under this Agreement is a sediment reduction of 2:1 (approximately 6,600 tons of sediment on an average annual basis) by December 2008 (Phase 4). Sediment discharge at the Alton Water Treatment Facility is anticipated to be 3,300 tons annually. Should discharge of sediments rise above 4,000 tons annually and the Illinois Environmental Protection Agency require increased levels of offsets on Piasa Creek, a modification to the Agreement shall be negotiated.

If additional services beyond those described in the Scope of Services are required and agreed to by IAWC, and equitable adjustment in fee and time performance will be mutually determined prior to proceeding with the additional services, as contemplated in Article II of the Agreement

Completed Projects

Table 1

Year Completed 2001

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
Schef	1	10					$7,740.75	$5,161.00	$0.00	$62.03	$128.69	88	183	183	0		3,088	2,350
Willman, John		10					$2,402.00	$923.00	$5,909.00	$0.00	$0.00	36	68	69	108		2,502	1,685
Vorhees, Darrel			1				$7,233.75	$2,412.00	$0.00	$117.20	$797.00	10	68	68	0			
Jungk, Steve	1					1 waterway/ drop box	$2,745.00	$915.00	$0.00	$0.00	$159.13	23	108	108	0			
Lang	1					500' buffer strip	$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
Hansen, Bruce	1	7					$1,654.35	$2,205.80	$3,308.70	$0.00	$128.83	43	128	128	0		2,699	1,055
Summary for 'Year Completed' = 2001 (6 detail records)																		
Sum		27	1				$21,775.85	$11,616.80	$9,217.70	$179.23	$1,213.65	200	555	556	108		8,289	5,090

Year Completed 2002

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
Schultz, Kay		5		1		tile, outlet pipe	$837.50	$837.50	$2,512.50	$46.02	$370.58	11	91	91	0			
Wieland, John	1	8			3	waterways	$4,949.44	$1,649.81	$0.00	$26.40	$188.55	35	250	250	0		2,420	1,100

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost

Schef	II	4			$0.00	$0.00	$0.00	$0.00	$0.00	0	117	0	0	795	650
Jungk, Steve	II	3		tile, outlet pipe	$1,669.31	$556.44	$0.00	$17.55	$152.05	22	122	122	64	1,164	600
Schafer, Bill & Gary	I			drop box; dual wall pipe; repair structure	$910.00	$910.00	$0.00	$33.95	$138.93	13	54	54	0		
Schafer, Bill & Gary	II	4			$756.10	$756.10	$0.00	$4.96	$37.27	22	55	55	110	1,911	825
Brighton Storm Water			1	dam construction	$6,203.78	$6,203.78	$0.00	$40.93	$55.79	140	67	67	124	10,244	
Willman, Walter		3			$1,087.20	$2,536.80	$0.00	$99.29	$188.55	35	36	36	0	619	820
Gibbons, Tim			1		$3,500.00	$6,500.00	$0.00	$0.00	$0.00	134	202	0	0	13,390	2,002
Herring, Don		2			$502.20	$502.20	$1,506.60	$11.87	$31.78	16	24	24	18	2,264	520
Bartlett, Eugene			1		$2,500.00	$3,785.00	$0.00	$0.00	$0.00	183	246	0	0	6,614	
Eisler, Bob	I	5		tile; outlet pipes	$2,579.63	$859.87	$0.00	$33.23	$143.31	24	104	104	0	2,006	1,025
Roth, John	I	8	1	3	$2,500.00	$4,455.00	$0.00	$0.00	$0.00	5	25	25	11	2,420	0

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Newgent, John		1				$3,500.00	$6,404.00	$0.00	$21.28	$31.25	80	117	0	0		9,034	
Fessler, Joe & Edwin	6		2		tile, outlet pipes	$4,235.18	$1,815.07	$0.00	$30.91	$228.69	18	134	134	0			
Pfeiffer, Paul	14					$4,846.50	$1,615.50	$9,693.00	$248.00	$316.00	51	64	64	0		2,414	2,180
Summary for 'Year Completed' = 2002 (16 detail records)																	
Sum	62	5	3	6		$40,636.84	$39,447.07	$13,712.10	$614.39	$1,882.75	789	1708	1026	327		55,293	9,722

Year Completed 2003

Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
Andrew, Dale					3 stream barbs; 345' protected; 195 + 75	$1,258.76	$419.58	$6,713.40	$0.00	$0.00	0	450	0	0	450		
Roth, John II	0	0	0	0	7 rock riffles; 450 stone toe	$1,987.50	$662.50	$10,600.00	$0.00	$0.00	0	244	0	0	244	0	0
Wock, Jack I	10	0	0	0		$5,352.75	$2,011.10	$3,156.15	$39.84	$288.23	30	132	132	85		153	1,820
Campton, Mike I	14	0	0	0		$4,461.38	$1,784.55	$2,676.83	$44.12	$134.39	35	50	50	56		113	2,065
Summary for 'Year Completed' = 2003 (4 detail records)																	
Sum	24	0	0	0		$13,060.39	$4,877.73	$23,146.38	$83.96	$422.62	65	876	182	141	694	266	3,885

Year Completed 2004

Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
Nowland, Don I	5	0	0	0		$921.60	$921.60	$2,764.80	$47.99	$323.31	13	63	63	27		0	0

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Elsler, Bob	1	4	0	0	0	$311.40	$311.40	$1,334.20	$16.59	$213.06	12	101	103	56	0	0
Lurton, Howard	1	2	0	0	0	$406.95	$406.95	$1,220.85	$39.36	$230.71	7	27	27	14	0	0
Croxford, Hubert	1	9	0	0	0	$3,098.75	$1,239.40	$1,859.10	$32.63	$0.00	29	109	109	81	0	0
Herold Brothers	1	7	0	0	0	$1,581.00	$1,581.00	$3,601.00	$60.27	$221.01	31	51	51	61	0	0
Summary for 'Year Completed' = 2004 (5 detail records)																
Sum		27	0	0	0	$6,519.70	$4,660.35	$10,979.95	$198.64	$988.11	92	351	353	219	0	0

Grand Total

Total Project Costs			$199,650.86										
140	6	3	6	$81,992.78	$60,601.95	$57,056.13	$1,076.22	$4,507.13	1146	3490	2117	795	694	63,848	18,697
DB	SWRB	Terr.	RC	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost

Active Projects

Table 2

Date	Project	Phas	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
	Boy Scout Lake	I					lake excavation	$0.00	$0.00	$0.00	$0.00	$0.00	2560	1920	0	0			
2/2/2004	Campion, Mike	II	3	0	0	0		$2,352.60	$1,568.40	$0.00	$39.74	$266.23	15	54	54	44		0	0

Grand Total

Total Project Cost														
$3,921.00														
3	0	0	0	$2,352.60	$1,568.40	$0.00	$39.74	$266.23	2575	1974	54	44		0	0
DB	SWRB	Terr.	RC	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost

Pending Projects

Table 3

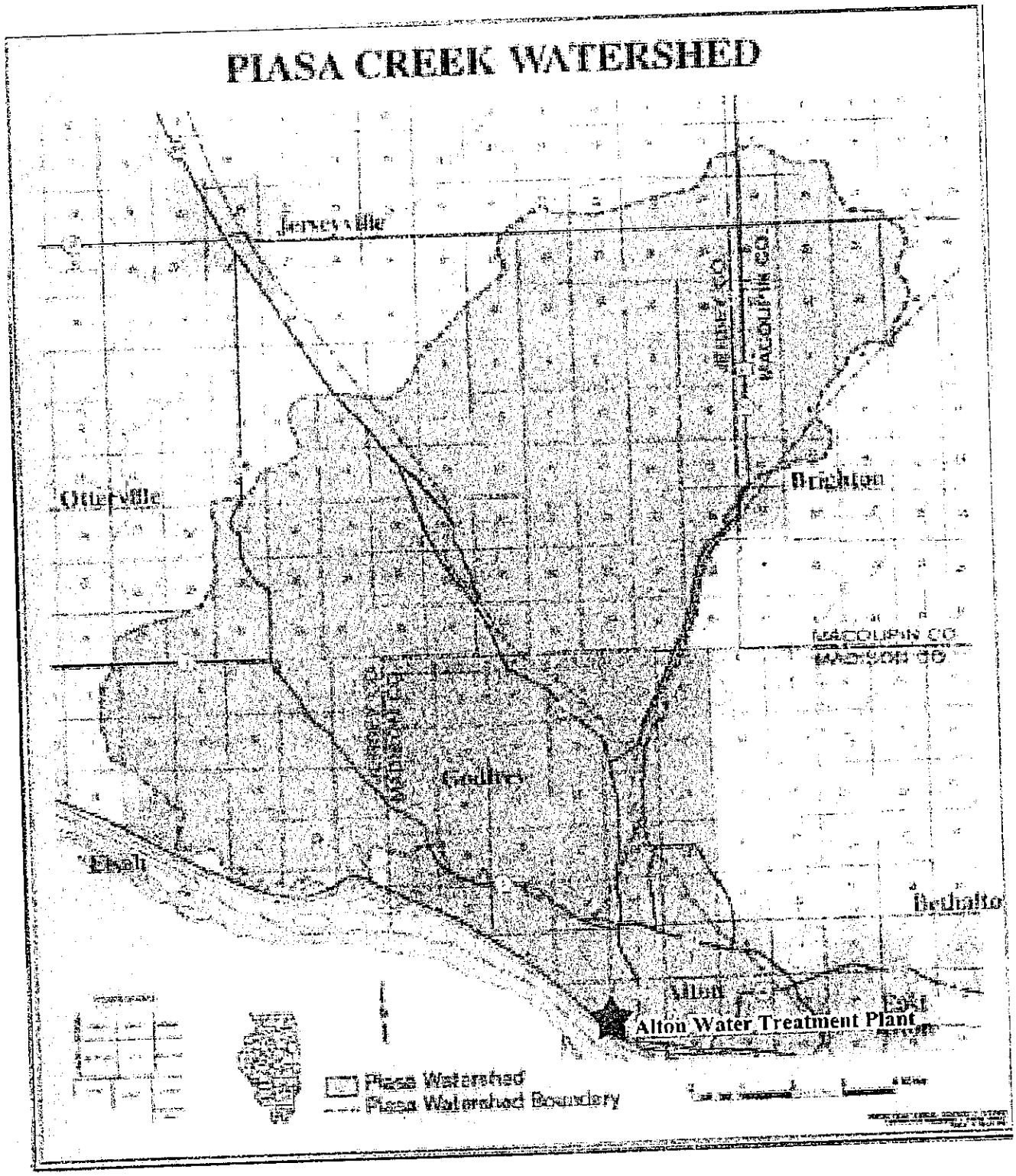
Date	Project	Phase	DB	SWRB	Terr.	RC	Other Proj	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
	Bartlett, Paul			1				$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Bechtold, Dan							$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Boy Scout Lake	II	0	0	0	0	spillway restoration	$0.00	$0.00	$0.00	$0.00	$0.00	15	0	0	0	0	0	
	Garrett, Calvin							$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Hansen, Bruce	II						$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Kuebrich, Timothy							$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Lang	II					wetland	$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Lang	III					bottomland prairie	$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
	Lash, Alan							$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost

Date	Project	Phase	DB	SWRB	Terr.	RC	Other Proj	PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.
	McFarland, Dave	1	0	0	0	0	rip rap plunge pool & waterway .3 ac.	$0.00	$0.00	$0.00	$58.82	$0.00	10	40	40	0		0	0
6/19/2003	Moody Bros.	1	9	0	0	0		$5,035.88	$2,711.62	$0.00	$67.36	$193.68	26	63	63	52		0	0
	Moore, Alan							$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0			
7/7/2003	Youngblood, Denny	1	0	1	0	0		$2,000.00	$3,150.00	$0.00	$33.06	$321.88	16	43	43	112		0	0
Grand Total								Total Project Cost		$12,897.50									
			9	2	0	0		$7,035.88	$5,861.62	$0.00	$159.24	$515.56	73	146	146	164		0	0
			DB	SWRB	Terr.	RC		PCWP $	LO $	Gov. $	Cost per Ton	Cost per Acre	Acres Benefited	Soil Saved	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Plasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost

Figure 1


PIASA CREEK WATERSHED
Jerseyville
Otterville
Brighton
MACOUPIN CO
Godfrey
Piasa Watershed
Piasa Watershed Boundary
Alton Water Treatment Plant

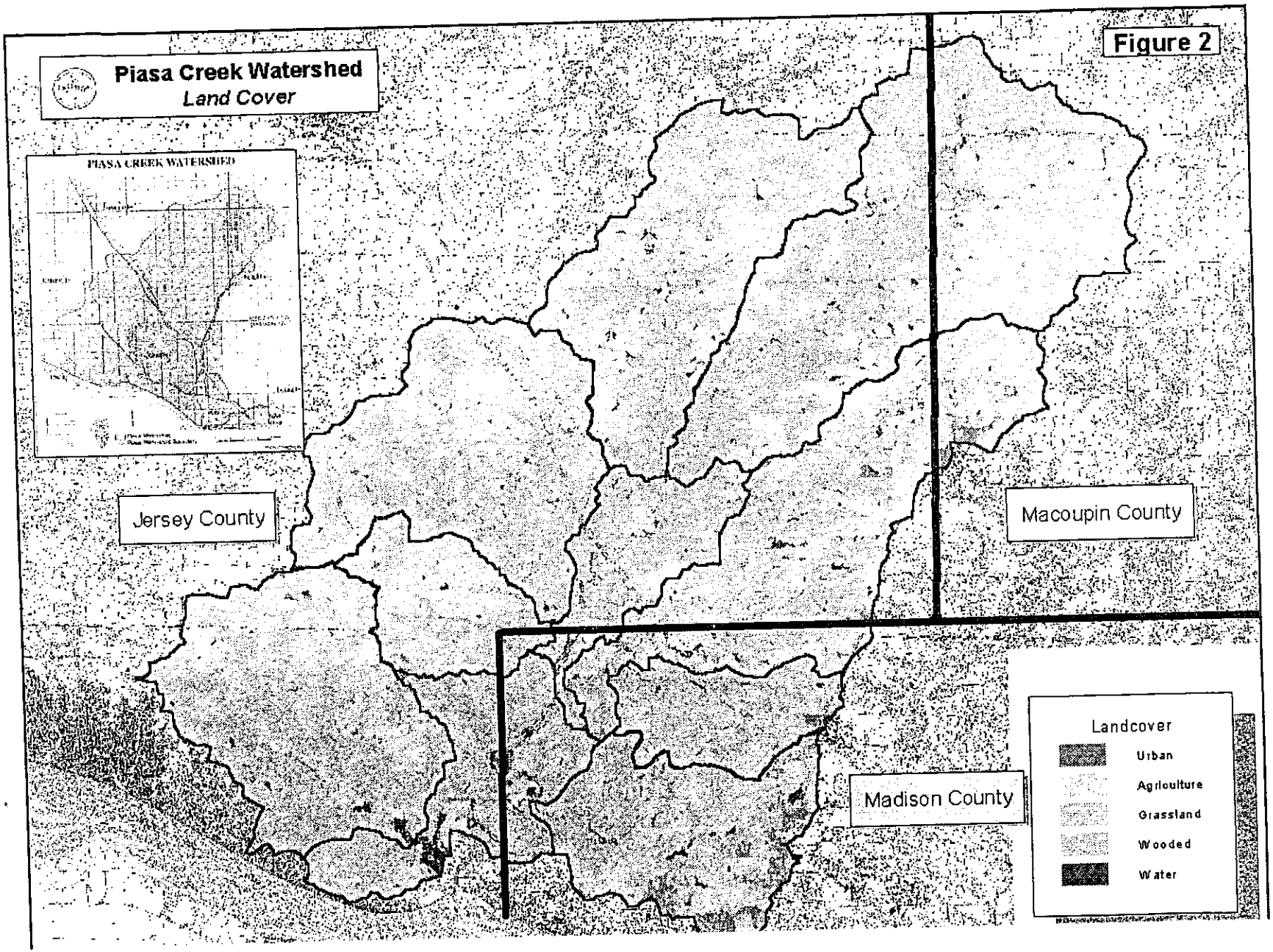


Figure 2
Piasa Creek Watershed
Land Cover
PIASA CREEK WATERSHED
Jersey County
Macoupin County
Madison County
Landcover
Urban
Agriculture
Grassland
Wooded
Water

Figure 4

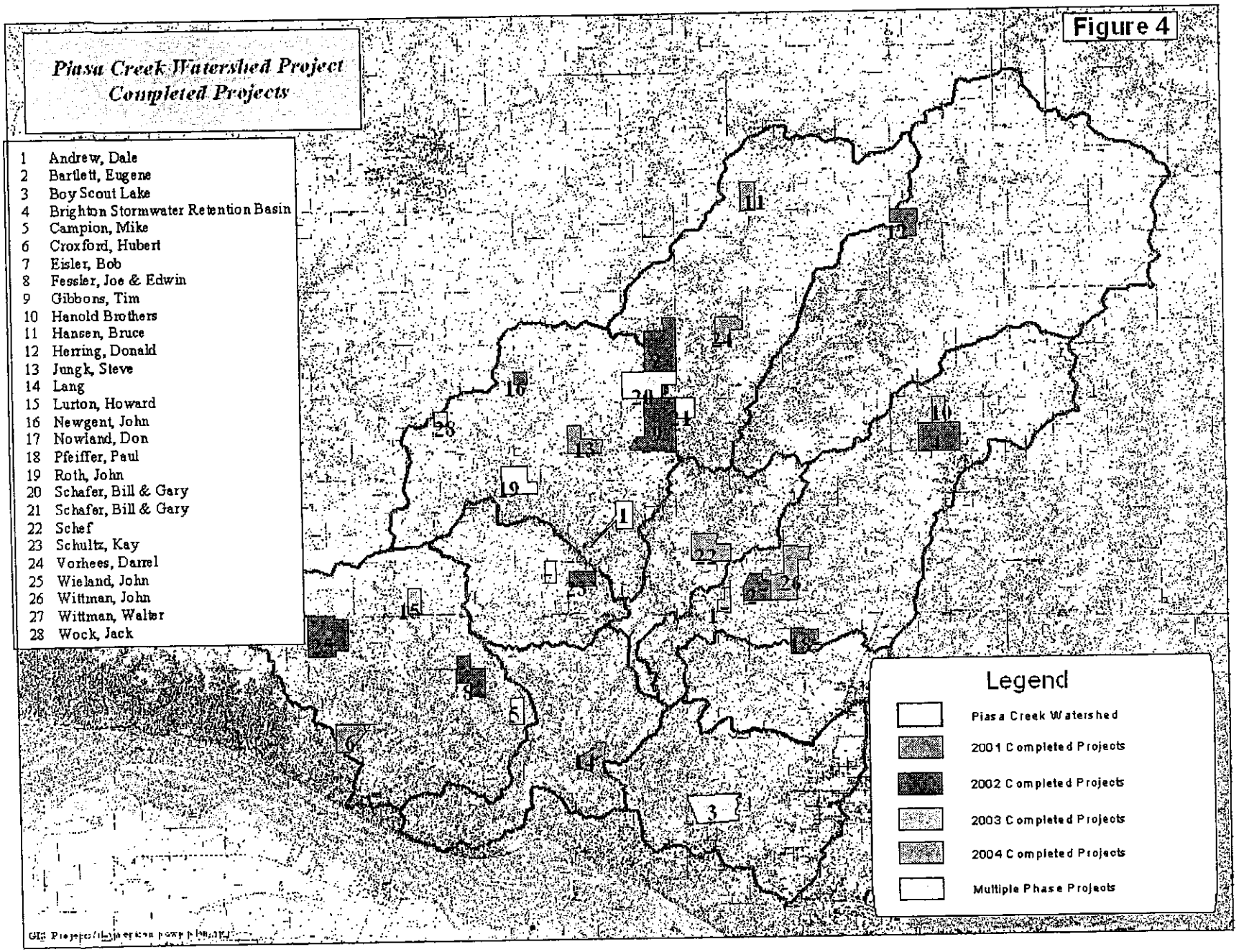
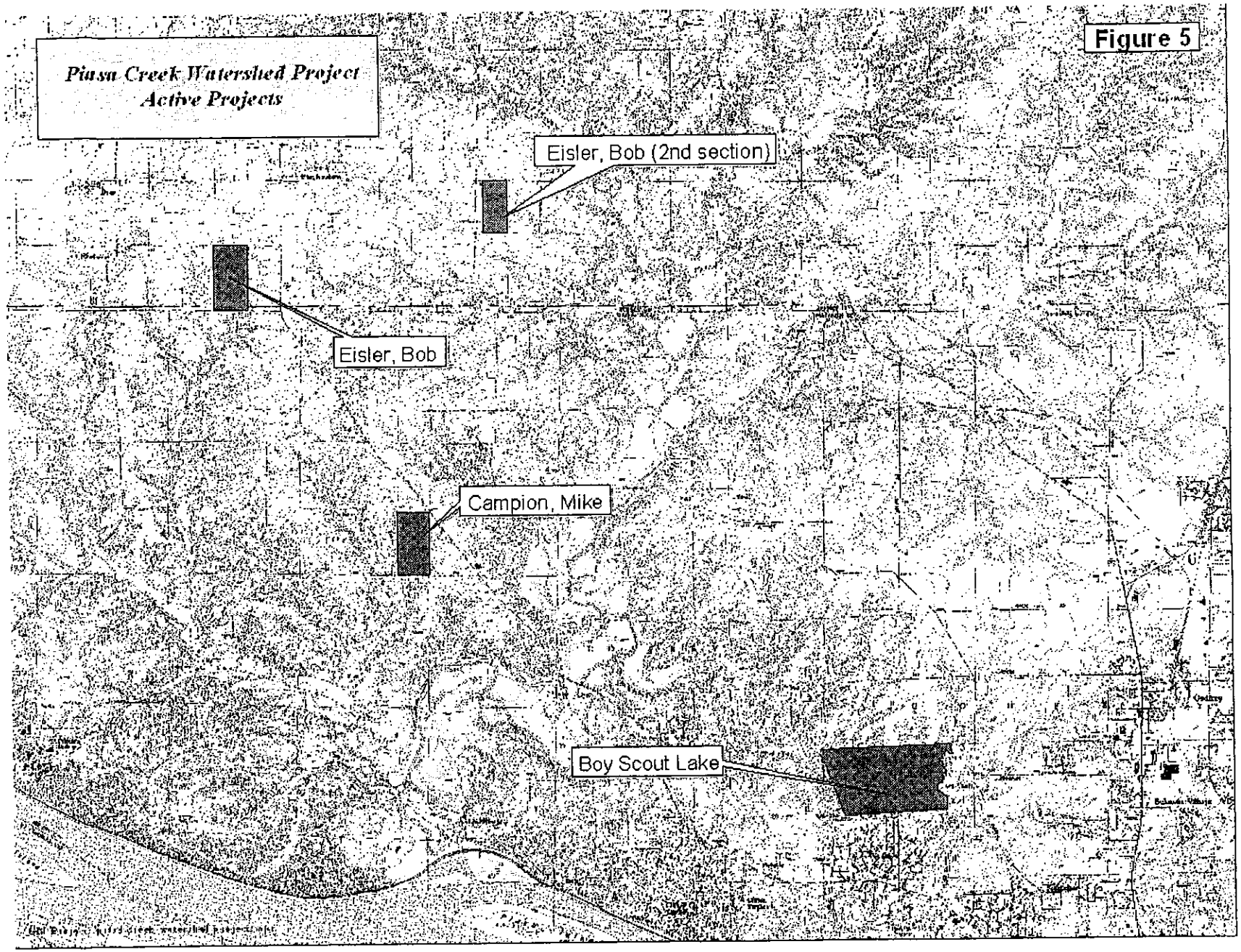
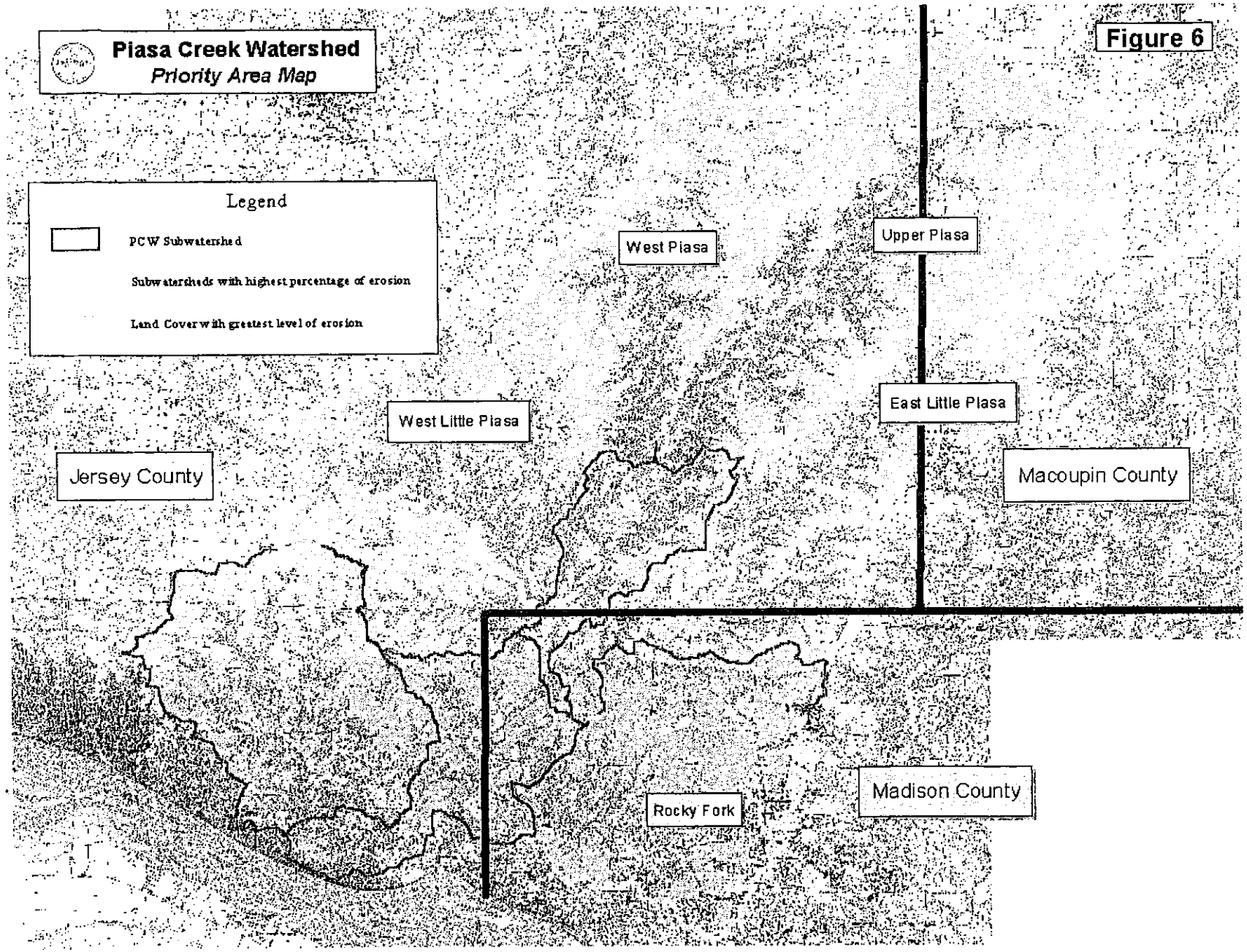

Piasa Creek Watershed Project
Completed Projects
1 Andrew, Dale
2 Bartlett, Eugene
3 Boy Scout Lake
4 Brighton Stormwater Retention Basin
5 Campion, Mike
6 Croxford, Hubert
7 Eisler, Bob
8 Fessler, Joe & Edwin
9 Gibbons, Tim
10 Hanold Brothers
11 Hansen, Bruce
12 Herring, Donald
13 Jungk, Steve
14 Lang
15 Lurton, Howard
16 Newgent, John
17 Nowland, Don
18 Pfeiffer, Paul
19 Roth, John
20 Schafer, Bill & Gary
21 Schafer, Bill & Gary
22 Schef
23 Schultz, Kay
24 Vorhees, Darrel
25 Wieland, John
26 Wittman, John
27 Wittman, Walter
28 Wock, Jack
Legend
Piasa Creek Watershed
2001 Completed Projects
2002 Completed Projects
2003 Completed Projects
2004 Completed Projects
Multiple Phase Projects

Figure 5


Piasa Creek Watershed Project
Active Projects
Eisler, Bob (2nd section)
Eisler, Bob
Campion, Mike
Boy Scout Lake


Piasa Creek Watershed
Priority Area Map
Figure 6
Legend
PCW Subwatershed
Subwatersheds with highest percentage of erosion
Land Cover with greatest level of erosion
West Piasa
Upper Piasa
West Little Piasa
East Little Piasa
Jersey County
Macoupin County
Madison County
Rocky Fork

PIASA CREEK WATERSHED REPORT
January 2001

The following is a brief summary of activities during the month of January in reference to the Piasa Creek Watershed Project.

- Great Rivers Land Trust hired Alley Ringhausen as the project manager on the Piasa Creek Watershed Project.

- Efforts are underway gathering data to update the original watershed plan.

- Discussions have been held with a number of geomorphologists in an attempt to hire an individual with the background, knowledge and scheduling flexibility to complete the study during the prescribed time frame. An agreement should be completed in the near future.

- The Project Manager has been working with Natural Resource Conservation Service (NRCS) and Soil and Water Conservation District (SWCD) staff from the participating counties. All of the agencies have been very cooperative in showing their support and willingness to provide information and expertise on the project.

- Based on a formal request by the project manager, the USDA State Geologist has been on a tour of the watershed and has mapped out a series of channel inventory monitoring sites along the various branches (# 2 streams) of the Piasa Creek.

- Groundwork has been completed for a meeting during the first week of February for various members of the original Piasa Creek planning group. The purpose of the meeting is to review the original plan and consequent projects during the years that followed. Participants will also be updated on the current effort being initiated in the watershed.

- Continued exploring additional matching funding sources to further enhance the overall goals of the project

If you have any questions or require additional information, feel free to contact Alley Ringhausen at (618) 467-2265 or e-mail pcwp@piasanet.com.

PIASA CREEK WATERSHED REPORT
February 2001

The following is a brief summary of activities during the month of February in reference to the Piasa Creek Watershed Project.

- Project Coordinator attended the Watershed Academy at the University of Illinois February 1-3. It was a program that focused on planning and implementation of watershed projects and was an opportunity to network with experts in the various scientific disciplines.

- Updates to the original watershed plan have included data from the Natural History Survey on fish populations as well as water quality data recently collected through a project conducted by Lewis and Clark Community College.

- Participated in a talk show program on WBGZ in Alton on February 22 explaining the background and goals of the Piasa Watershed Project.

- Submitted three grant proposals on the Piasa Creek Watershed Project to the Illinois Department of Natural Resources Conservation 2000 program. The total requested funding was approximately $260,000.

- A Request for Proposals (RFP) was developed and forwarded to a number of firms interested in conducting the geomorphic survey on the Piasa Creek Project. The deadline for submitting proposals is March 9, and we will be conducting interviews with prospective firms the week of March 19.

- The Project Manager has been working with Natural Resource Conservation Service (NRCS) and Soil and Water Conservation District (SWCD) staff from the participating counties. The Jersey County SWCD has a list of 15 potential projects within the watershed that may be interested in participating in the project.

- The Project Manager, along with the Resource Conservationist from Madison County are exploring the possibility of a demonstration stormwater/sediment retention structure in Godfrey Township and will be scheduling a meeting with the township engineer.

- The first meeting of some of the original Piasa Creek Watershed Partnership participants was conducted on February 7 at the Godfrey Town Hall. Those in attendance listened to a review of the original plan and an update of events and activities to the present. Attendees asked numerous questions and were very interested in participation in various aspects of the plan.

- The Boy Scout Lake Restoration Project on the Rocky Fork branch of the Piasa Creek has been the topic at a number of meetings with the Trails West Chapter of the Boy Scouts. The Boy Scout Camp had a 43-acre lake that was ruined by

siltation. The levy has been breeched and the lakebed is overgrown with weeds. The future goal is to dredge approximately 13 acres of the lake and restore it for recreational purposes. The remainder of the lake would be developed as a wetland by the installation of a low water berm. The wetland would serve as both a sediment trap and a storm water control structure. The Piasa Creek Project will assist in the initial planning effort.

- The Project Manager has been in the field meeting with a number of landowners who have contacted our office with questions about erosion control on their property. We will be following up on initial inquiries and utilizing the expertise of various technical staff in the region to assist on planning worthy projects.

If you have any questions or require additional information, feel free to contact Alley Ringhausen at (618) 467-2265 or e-mail pcwp@piasanet.com.

PIASA CREEK WATERSHED REPORT
March 2001

The following is a brief summary of activities during the month of March in reference to the Piasa Creek Watershed Project.

- Developed U.S.G.S. maps highlighting the watershed as well as other land use maps for use in identifying trouble areas within the watershed highlighting locations of active and targeted projects.

- Updates to the original watershed plan have included data from the Natural History Survey on fish populations as well as water quality data recently collected through a project conducted by Lewis and Clark Community College.

- Participated in a talk show program on WBGZ in Alton on February 22 explaining the background and goals of the Piasa Watershed Project.

- Submitted three grant proposals on the Piasa Creek Watershed Project to the Illinois Department of Natural Resources Conservation 2000 program. The total requested funding was approximately $260,000.

- A Request for Proposals (RFP) was developed and forwarded to a number of firms interested in conducting the geomorphic survey on the Piasa Creek Project. The deadline for submitting proposals is March 9, and we will be conducting interviews with prospective firms the week of March 19.

- The Project Manager has been working with Natural Resource Conservation Service (NRCS) and Soil and Water Conservation District (SWCD) staff from the participating counties. The Jersey County SWCD has a list of 15 potential projects within the watershed that may be interested in participating in the project.

- The Project Manager, along with the Resource Conservationist from Madison County are exploring the possibility of a demonstration stormwater/sediment retention structure in Godfrey Township and will be scheduling a meeting with the township engineer.

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The future goal is to dredge approximately 13 acres of the lake and restore it for recreational purposes. The remainder of the lake would be developed as a wetland by the installation of a low water berm. The wetland would serve as both a sediment trap and a storm water control structure. The Piasa Creek Project will assist in the initial planning effort.

- The Project Manager has been in the field meeting with a number of landowners who have contacted our office with questions about erosion control on their property. We will be following up on initial inquiries and utilizing the expertise of various technical staff in the region to assist on planning worthy projects.

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PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
4/1 – 6/30 2001

The following is a brief summary of activities during the months of April, May and June in reference to the Piasa Creek Watershed Project.

APRIL

Piasa Creek Watershed Project

- The engineering firm of Shannon and Wilson has been hired to conduct the geomorphological study of the Piasa Creek Watershed. The proposal was approved at the March GRLT board meeting. Since that time, the Illinois EPA and Illinois-American Water have also given their approval to the selection. A few minor modifications were made to the contract at the recommendation of Anita Cooper. The contract is now signed and a planning meeting has taken place to coordinate the initial phase and to provide Shannon and Wilson with the most current data on the watershed.

- The first review and assessment meeting of the Piasa Creek Watershed Project was conducted on March 28. Those in attendance included Mark Johnson from Illinois-American, Scott Tompkins from IEPA, Wayne Freeman and Alley Ringhausen. The meeting was to confirm that all of the contractual timeline goals are being achieved. All parties in attendance approved the progress to date.

- Additional landowner contacts have been conducted. All information is being compiled in a database. A number of individuals have indicated that they are willing to participate in projects this year. The first project to involve financial assistance from the Piasa Creek Watershed project will begin construction this month and will consist of the installation of 12 sediment basins along the Little Piasa East. The project is estimated to trap approximately 177 tons of sediment a year. Our portion of the funding is approximately $1,900. Other projects being developed with the assistance of the Soil and Water Conservation Districts include streambank stabilization projects, grass waterways, a stormwater retention basin, buffer strips and additional sediment basins. One landowner also expressed a willingness to sell a small priority property in the floodplain.

- Various map overlays have been developed that identify the watershed's land use, topography, prioritized properties, and an inventory of potential project sites along the stream corridor.

- Conducted a driving tour of properties for representatives of IDNR (Robert Davis and Randy Holbrook). It was an opportunity for them to view projects that have received funding through their agency and to learn more about projects that are currently being considered for future funding.

- Additional information was prepared for the Lang Property. The 61-acre tract is located on the upstream side of the Route 3 Bridge as it crosses the Piasa Creek. Funding for the purchase of the property is through then IDNR Conservation 2000 program. Title information and legal description are being forwarded to the appropriate offices in Springfield. Once the agreement is finalized, planning for streambank stabilization can begin.

MAY

Piasa Creek Watershed Project

- The sediment control project on John Witman's property has been completed. A series on 12 sediment basins were installed on his farm, which will trap an estimated 177 tons of soil each year. A ten-year maintenance contract will be developed, after which the Piasa Creek program will contribute approximately $1,950 toward the project.

- Plans are being finalized on another sediment control project located in Piasa Township, Jersey County, on a farm owned by Darrel Vorhees. The project will focus on gully erosion control as well as sheet and rill erosion control. The plan calls for the construction of a contour sediment control terrace above a stormwater retention basin. Piasa Creek will provide 70% of the funding, while the landowner will provide the remainder in either direct funds or in-kind services on the project.

- Conducted a number of site visits to other prospective projects and discussions with landowners and producers concerning priority projects on their property. All site-specific information is being included in a project database.

- Discussions are continuing with a landowner concerning the purchase of a small parcel of property along the Piasa Creek. The property is bottomland that could potentially be a part of a wetland restoration project, as well as a riparian buffer and streambank stabilization site.

- Work continues on the layout for an informational brochure on the Piasa Creek Watershed. Once completed, the brochures will be distributed to locations throughout the watershed as well as the possibility of direct mailings to landowners within the watershed.

- Conducted meetings with staff from Shannon and Wilson as part of the geomorphic assessment. We provided S&W with background materials and maps already compiled. Guidelines were established on the formats for any future materials developed to ensure their compatibility with current projects. The geomorphological assessment is schedule for completion by the end of October.

- Attended the Nonpoint Source Pollution Conference sponsored by the Environmental Protection Agency on May 15 – 16.

- Received a verbal agreement from Glenn Lloyd with the Save Our Soils (S.O.S.) initiative to conduct a program for contractors, developers, planners, engineers, road commissioners, government officials and any other interested individuals. The focus of the S.O.S. is to encourage soil erosion control in developing areas, such as Godfrey and the 267 corridor, using innovation and cost effective methods. An additional element of the program is the introduction of a model sediment control ordinance.

JUNE

Piasa Creek Watershed Project

- Geomorphic Inventory Assessment
- Time was spent in the field with the fluvial geomorphologist (Jeffery Laird) from Shannon and Wilson. In addition to site identification and property access contacts, a number of cross section studies have been completed. All information being compiled at this time is being documented in formats compatible with our programs. The final report will include a narrative on the condition of the Piasa Creek, a prioritized list of potential project sites, a recommendation of best management practices, and a table of GIS and GPS maps. The product produced by Shannon and Wilson will be a working document that can be expanded and modified throughout the life of the project.

- A draft contract for use on all future Piasa Creek sediment control projects has been completed. The Illinois EPA approved of our proposal of 10-year contracts on small structures and 20 year agreements on larger structures. Once the final contract is approved, we will close the John Wittman project, which consists of 12 sediment basins.

- Plans are being considered on another sediment control project located in Piasa Township, Jersey County, on property recently donated to the Village of Brighton. The town proposes to construct a stormwater retention basin that would cover approximately 5 acres. The initial overall estimated cost is approximately $7,000. The site is still being reviewed

- Discussions are continuing with yet another landowner concerning the purchase of a small parcel of property along the Piasa Creek. The property is bottomland that could potentially be a part of a wetland restoration project, as well as a riparian buffer and streambank stabilization site.

- A landowner near Delhi, Timothy Gibbons, has requested assistance on a multi-level sediment basin project. If the initial review and surveys are completed soon, the project should be ready to start immediately following the wheat harvest.

- Conducted a meeting early in the month with Rick Macho and Jeff Blackorby of the Madison and Jersey County Soil and Water Conservation Districts (SWCD). We are considering an agreement with the two organizations to have them conduct some of the survey work of the various structural projects in the agricultural settings. It was a preliminary meeting to consider various possibilities. I have since attended the SWCD board meetings in each county. Both Districts have tentatively agreed to assist on the project. The proposal should be finalized in July.

- Attended the Stream Restoration: Practices and Concepts workshop in Elgin on June 12 and 13.

- Attended a meeting on May 31 at the Illinois Department of Natural Resources in Alton. Jack White of Ecological Services made a presentation of a draft report on a historical study of the forest and bluff prairies of the Big Rivers Ecosystem Partnership. Information from the study will be useful in obtaining additional funding for the Piasa Creek Project in the future.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
7/1 – 9/30 2001

The following is a brief summary of activities during the months of July, August, and September in reference to the Piasa Creek Watershed Project.

JULY

Geomorphic Inventory Assessment

Landowner contacts are continuing on the geomorphic assessment. The contacts are to obtain permission for the engineers from Shannon and Wilson to have access to private property where they conduct their cross section measurements and analysis. The majority of the cross sections are immediately below confluences of both the major and minor streams. Approximately half of the targeted sites have been assessed to date.

Projects

The twelve sediment basins on the John Wittman property are complete and a final payment of $2,402 was made to the landowner. The project is estimated to save 177 tons annually.

The Village of Brighton gave approve to a proposal to construct a stormwater retention basin on the west edge of town. The drainage area is approximately 60 acres and the actual structure would affect roughly 5 acres. The initial estimate of the project is $7,500. A site review will provide the estimated tons of soil saved and the potential cubic footage of water that could be detained by the structure.

Excavation work has begun on a project near the northern edge of Piasa Township. The project will include a contour sediment basin and a larger basin on the same property. The first phase of the project is complete and the second phase will commence upon completion of additional survey work. The estimated cost is $9,000. Final soil numbers will be included in the next report.

There are 16 other Structural projects currently under consideration within the Piasa Creek Watershed. The types of structures include dry dams, sediment basins, rock riffles, streambank protection, stormwater retention basins, grass waterways, and buffer strips. Discussions have also been initiated on four parcels of property that may be considered for acquisition along the riparian corridor.

A memorandum of agreement between the Piasa Creek Watershed Project and the Jersey and Madison County Soil and Water Conservation Districts has been developed. The two districts would provide, for a fee, technical assistance of structure projects. The agreement would be on a project-by-project basis and would be based on our request. The Districts would provide a site review, survey, and designs. Both of the Districts' Board of Directors have approved the agreement at their most recent board meeting and are awaiting a final copy of the proposal.

GRLT Piasa Creek Watershed Committee

The four members of the Piasa Creek Committee met on July 12 to review a number of issues. At the meeting the committee approved a contract that will be used on each of the structural projects completed within the watershed. Depending upon the type of project, the maintenance agreement will exist for 10 or 20 years. The committee also approved a tentative agreement with the Jersey and Madison County Soil and Water Conservation Districts. The third issue was a discussion of erosion control structures associated with a large-scale lake in the watershed and whether or not it was a worthwhile project.

Other

Submitted a proposal to the IEPA on an Illinois River 2020 project. The water quality project would focus on the portions of Jersey, Greene, and Calhoun Counties that drain into the Illinois River. The total request is $950,000 to be spent over the next two years. The funds would be used for structural projects in the upland areas and for acquisition of sensitive ecosystems such as wetlands, hill prairies, and floodplains. Great Rivers Land Trust would serve as the administrator of the project.

Attended the Healthy Environment Conference at the Collinsville Convention Center on June 28.

AUGUST

Geomorphic Inventory Assessment

A total of 29 cross-section assessment sites have been completed by Shannon and Wilson as part of the Geomorphic Inventory Assessment (GIA). As part of the agreement with S & W, the Piasa Creek Watershed Project agreed to make the landowner contacts to obtain access permission at the various sites. Of the 29 sites, not a single landowner objected. The GIA is now in the analysis phase of the project and is expected to be complete by the end of October.

Projects

The layout and design work has been completed on the Brighton stormwater retention basin. Earthwork on the project should be completed in September.

The Vorhees project at the northern edge of Piasa Township is approximately half complete. Weather permitting; the project should be complete in three weeks. This particular project will have a soil savings of over 68 tons per year on gully erosion alone.

A series of 10 sediment basins have been flagged and designed on the Elfkin farm on the Little Piasa East. The estimate of soil saved on the project is 183 tons per year and the overall cost is $11,351. Construction work on the project will begin immediately after the soybean harvest.

A memorandum of agreement between the Piasa Creek Watershed Project and the Jersey and Madison County Soil and Water Conservation Districts has been updated and the attorneys for both districts are again reviewing the document.

Initial work has begun on a collection of streambank stabilization projects in conjunction with the Illinois Department of Agriculture. The program provides 75% funding of projects up to $10,000. Three projects are being considered for submission, two on the main Piasa and one on the Little Piasa East. Normally projects can be submitted through government entities, however we have been given permission to submit proposals on behalf of the watershed project.

The Trees Forever program in Iowa have expanded into Illinois recently where it has been renamed the Illinois Buffer Initiative. The program will fund twenty demonstration projects each year in the state. The funding provided is $2,000 per proposed site. The Buffer Initiative proposes a three-layered buffer along stream banks that includes trees, shrubs and native grasses. Background information and applications have already been obtained and proposal will be submitted next month.

Meetings were conducted with two landowners, not previously contacted, who are willing sellers of their property. They have been added to a database of potential property purchases within the watershed. The potential usefulness of each parcel will be evaluated and prioritized. Prior to taking any further action, we are awaiting result of a land acquisition grant submitted to the Illinois Department of Natural Resources. The requested funding is $200,000 to be matched with program funds.

Other

GRLT received a monetary offer for the purchase of a temporary and permanent easement on the Lang property from the Illinois Department of Transportation (IDOT). According to the information provided, IDOT plans to do work in the Piasa Creek directly above the Rt. 3 Bridge that involves revetment and scour. The permanent easement is for the actual work on the creek. The temporary easement is for a haul road to and from the site. The total offer by IDOT is $1,300. No action has been taken until specific information has been provided to our organization.

A meeting is scheduled with members of the Madison County Soil and Water Conservation District Board at the end of the month. The Madison County SWCD is considering cooperating with GRLT to participate is the Open Land Trust (OLT) program. Since GRLT is not eligible for OLT funds, the Madison SWCD would take ownership of the property with money provided by OLT and Great Rivers. Our focus would be to purchase priority properties along the Piasa Creek riparian corridor.

Updated files and activities on the Lang project and the Emmons Project based on requests by the Illinois Department of Natural Resources.

Conducted a tour of completed and proposed projects in the Piasa Watershed with Mark Johnson of the Illinois-American Water Company.

The Shedd Aquarium in Chicago is planning a documentary on innovative methods of non-point pollution control and is planning to devote a portion of the program to the Piasa Creek Watershed Project. They have been provided with additional background information on the program and are considering a visit to our area this fall.

SEPTEMBER

Geomorphic Inventory Assessment

A meeting was conducted with representatives of Shannon and Wilson concerning the Geomorphic Inventory Assessment (GIA) on the Piasa Creek Watershed. A preview of portions of the GIA was presented including a variety of maps, cross section profiles, stream slope and a pictorial booklet of each of the site assessments. An overall analysis of the data and recommendations are currently being completed.

Projects

The previous month's report the made reference to the Trees Forever program in Iowa, which has been expanded into Illinois where it has been renamed the Illinois Buffer Initiative. The Buffer Initiative proposes a three-layered buffer along stream banks that includes trees, shrubs and native grasses. An easement buy-out offer by the Illinois Department of Transportation was also referenced. Additional information from IDOT indicates that extensive work will be conducted on the Piasa Creek upstream from the Rt.3 Bridge. A number of trees will have to be removed to construct a haul road and to complete the work. The tree mitigation proposed by IDOT was minimal. An alternative proposal was presented to IDOT that would mitigate the tree removal by implementing the Trees Forever standards. If IDOT will provide and install the trees, shrubs and grasses, GRLT will waive the easement buy-out. The proposal is currently under review.

An additional meeting was held with members of IDOT's Environmental Division staff on a separate subject. A memorandum of agreement is being developed between GRLT and IDOT to implement wetland and tree mitigation projects. As the new 255 bypass and the 67 corridor are being constructed, any forest or wetland destroyed by the new road must be replaced in another area. GRLT will be working with IDOT to identify and purchase properties suitable for the required mitigation. The area of focus will be the Piasa Creek stream corridor. The initiation of the project is targeted for the spring of 2002.

Paper work on the Brighton stormwater retention basin is nearly complete and the contract will be signed before the end of the month. The Brighton mayor will make arrangements with the contractor to complete the earthwork.

The Vorhees project at the northern edge of Piasa Township is complete. Benefits of the structure will include a reduction of gully erosion and storage of water during flash flood

events. The additional storage space will help reduce streambank erosion in the lower reaches of the Piasa Creek.

A memorandum of agreement between the Piasa Creek Watershed Project and the Madison County Soil and Water Conservation District has been completed and signed. The same agreement with the Jersey County SWCD should be complete by the time you read this report.

An educational program on the Piasa Creek Watershed Project entitled PC-WET (Piasa Creek Water Education Team), has been operating in the Alton middle schools for the past two years. The program is being expanded into the Jerseyville and Southwestern School Districts. PC-WET teaches middle school children about the water quality of Piasa Creek. The program is funded by the Piasa Creek Watershed Project and an Illinois Department of Natural Resources' C-2000 Program through a grant prepared by GRLT.

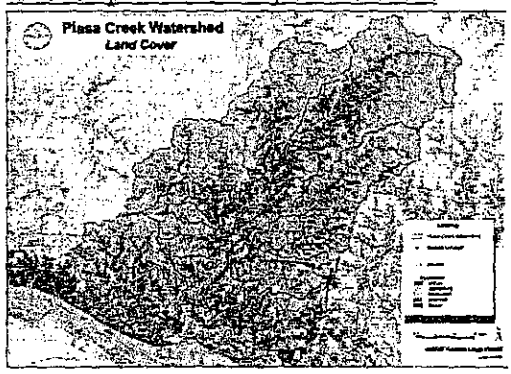
An article on the Piasa Creek Watershed was written and submitted to the Illinois Business Journal. The story appeared in the September issue of the publication.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
January 1 – March 31, 2002

Illinois-American Water Company

The following is a brief summary of activities during the months of January, February, and March in reference to the Piasa Creek Watershed Project.

Geomorphic Inventory Assessment



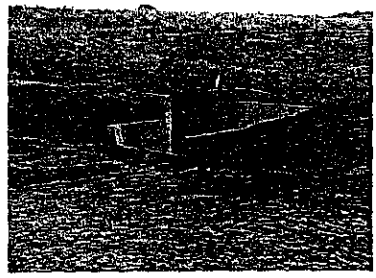
A preview of portions of the GIA was presented including a variety of maps such as, soil classification, land cover, bedrock geology, wetlands, quaternary geology, and prior converted wetlands covering the Piasa Creek Watershed. An overall analysis of the data and recommendations are currently being completed. A copy of the draft document is included with this report.

Projects

There were five Structural projects finished and closed out by the end of 2001 within the Piasa Creek Watershed. The types of structures include sediment basins, grass waterways, and storm water retention basins. The total cost for the following projects was $28,053.50 and Piasa Creek share was $14,035.10. The projects will save 421.2 tons annually through the Piasa corridor.

A series of 10 sediment basins have been complete on Elfkin Schef farms (Tim Gibbons) near the Little Piasa East. The estimate of soil saved on the project is 183 tons per year and the overall cost is $12,901. Piasa Creek Watershed closed the project out the beginning of January and paid $7740.75.

Excavation work has begun on five projects within the Piasa Creek Watershed. The types of structures will include sediment basins, grass waterways, and rock chutes. The total cost for the following projects, Piasa Creek's share and amount save annually through the watershed will be illustrated in the following graph and charts.



A series of two projects have been flagged and designed for B. Schafer and J. Fessler. The estimate

of soil saved and cost on the projects is still pending. Construction work on these sites will begin sometime this spring.

The Village of Brighton gave approval to a proposal to construct a storm water retention basin on the west edge of town. The drainage area is approximately 60 acres and the actual structure would affect roughly 5 acres. The cost of the project is $7,810. Piasa Creek Watershed will pay half the cost of the storm water retention basin and sediment control practices. The estimated tons of soil saved will be 190.8 annually by the structure. Brighton has selected Fester Bros. as their contractor, which plans to start in the spring.

There are 10 other Structural projects currently under consideration within the Piasa Creek Watershed. The types of structures include dry dams, sediment basins, rock riffles, streambank protection, storm water retention basins, grass waterways, and buffer strips.

Other

At the Illinois Buffer Initiative meeting at Springfield, we were accepted as a demonstration site along Piasa Creek. The program will fund Piasa Creek Watershed $2,000 at the Lang property directly above the Rt. 3 Bridge. The Buffer Initiative proposes a three-layered buffer along stream banks that includes trees, shrubs and native grasses. Illinois Department of Transportation (IDOT) has begun the construction process of clearing to stabilize the bridge supports. Once complete, we will begin planting the stream bank buffer. The $2,000 from the Buffer Initiative will be matched with $5,400 from IDOT to complete the project.

The Piasa Creek Water Education Team (PC-WET) has successfully expanded into the Jersey County and Southwestern School Districts. Program funds were matched with a grant from the Illinois Department of Natural Resources (IDNR) to expand the educational component.

An additional grant is being submitted through the Unit 100 School District to establish an Adopt-a-Stream Program in the Piasa Creek Watershed. Students from area schools would adopt a stretch of stream and assist in keeping it clean as well as participating in restoration efforts.

Great Rivers Land Trust received a $200,000 grant from the Illinois Clean Energy Community Foundation. The funds are earmarked for land acquisition along the riparian

corridor of the Piasa Creek and will be used as matching funds for existing program funds.

If you have any questions or require additional information, feel free to contact Alley Ringhausen or Pat Goetten at (618) 467-2265.

Attachments

Attachment A – PCWP 2001 Project Costs

Attachment B – PCWP 2002 Project Costs

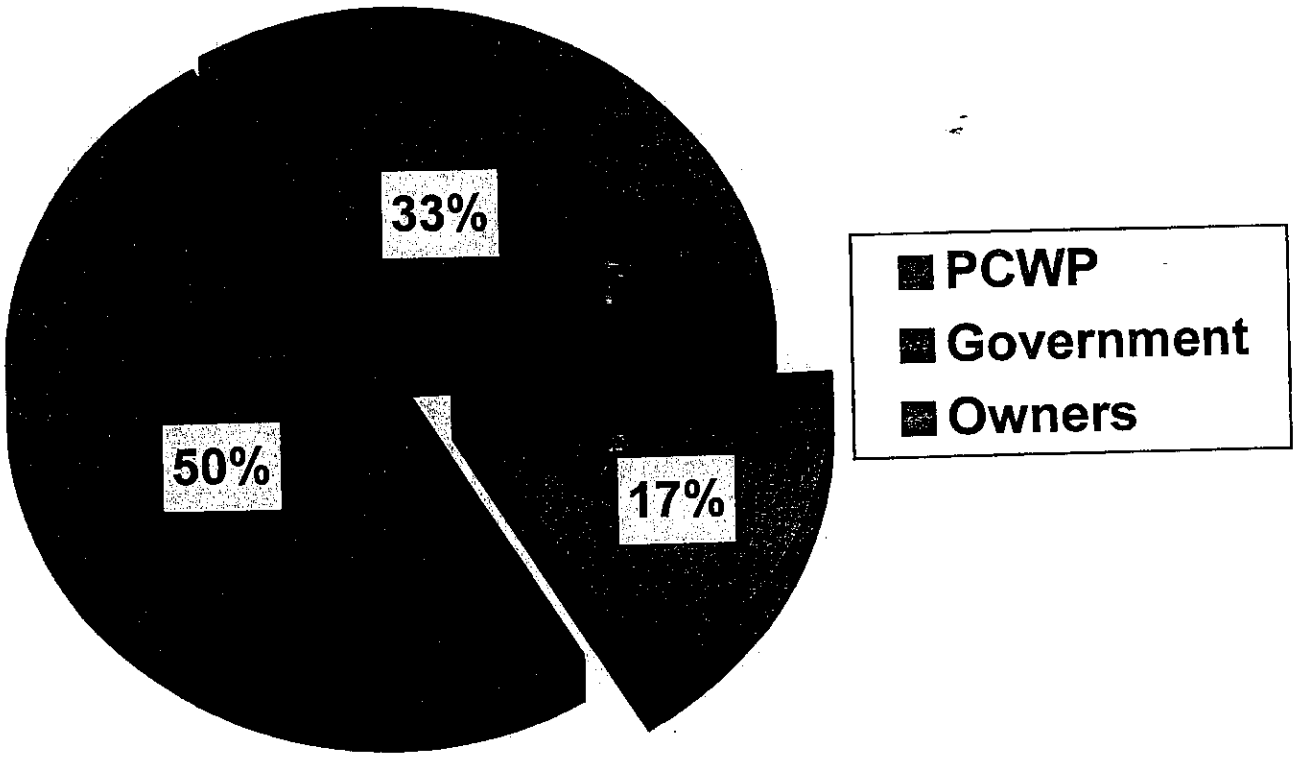
Attachment C – PCWP Total Project Costs

Attachment D – PCWP Total Tons Saved

Attachment A

Piasa Creek Watershed Project

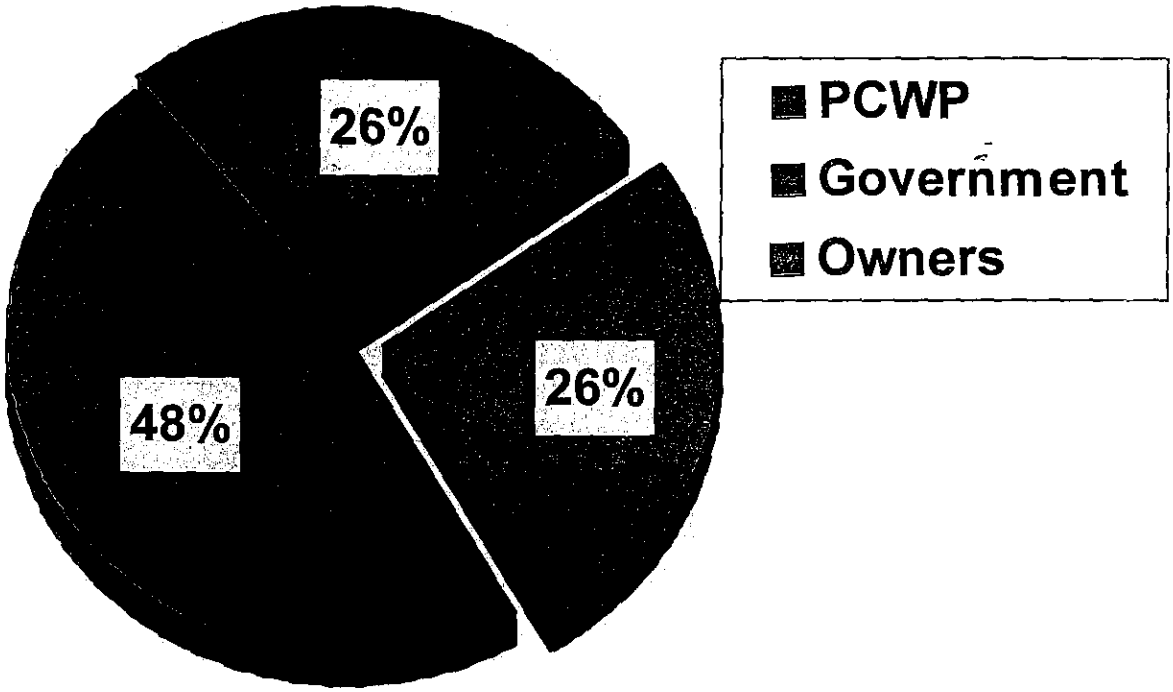
Total Project Costs 2001: $28,053.50



Attachment B

Piasa Creek Watershed Project

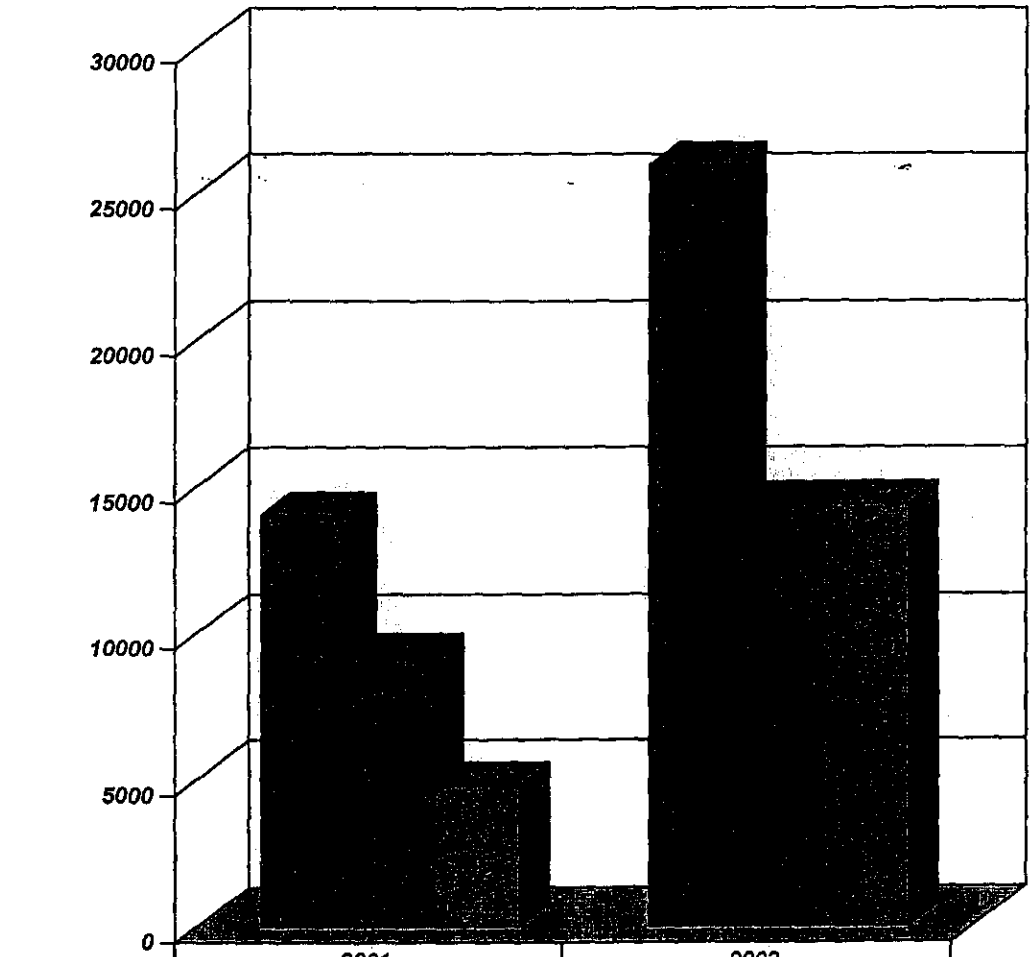
Total Project Costs 2002: $54,716.50



Attachment C

Piasa Creek Watershed Project

Total Project Costs: $82,770*



	2001	2002
PCWP	14035.1	25946.02
Government	9217.7	14379.9
Owners	4800.7	14390.58

*** Cost incurred over the last six months.**

Attachment D

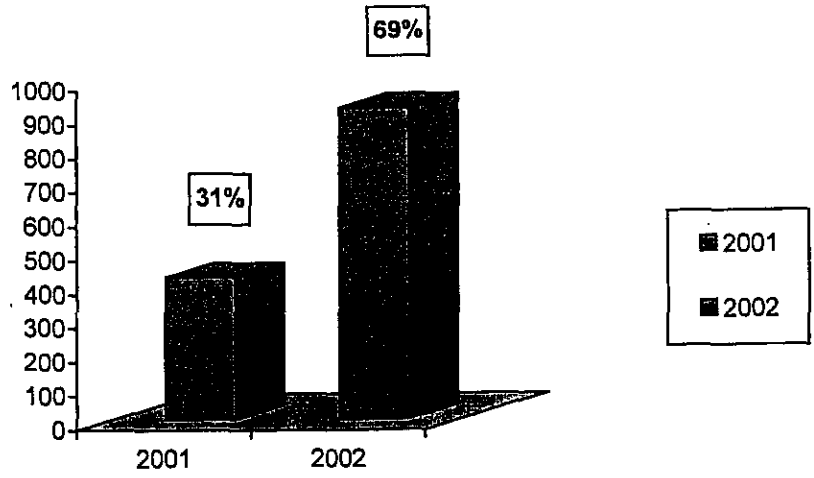
Total Tons Saved

2001

Owner Name	Tons Saved
J. Wittman	117.0
B. Hansen	128.0
S. Jungk	108.2
D. Voorhees	68.0
Total	**421.2**

2002

Owner Name	Tons Saved
T. Gibbons	183.0
J. Wieland	250.0
B. Eisler	103.5
K. Schultz	91.0
T. Joehl	64.0
W. Wittman	36.5
Brighton	190.8
B. Schafer	
J. Fessler	
Total	**918.80**



PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
April 1 – June 30, 2002

Illinois-American Water Company

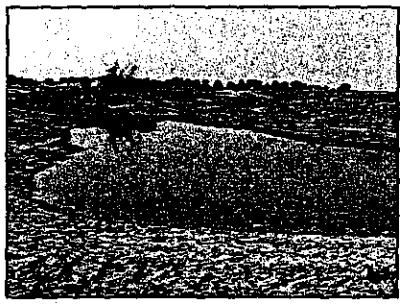
The following is a brief summary of activities during the months of April, May, and June in reference to the Piasa Creek Watershed Project.

Projects

The work on many projects was delayed due to weather circumstances. We were able to complete four basins on the Elfkin-Schef Farms near Little Piasa East. Tile work has been completed on Bob Eisler's, John Wieland's, and Walter Wittman's properties. The sediment basins and the waterways will be constructed this fall.

Survey work was conducted at several proposed sites. We will begin excavation on Bill Schafer's and Joe Fessler's properties sometime in July once the wheat has been harvested.

Brighton Storm Water Retention Basin



The Village of Brighton began construction in June on the stormwater retention basin on the west edge of town. The drainage area is approximately 60 acres and the actual structure would affect roughly 5-6 acres. Fester Bros. completed the project by the end of June. Piasa Creek Watershed will close this project out in the next few weeks after a final review has been completed.

Dale Andrews

We are currently reviewing Mr. Andrews's property and consulting with different agencies to find appropriate steps in controlling this severe erosion problem. Along the 200 feet of Piasa corridor on his property, he has lost over eight feet of embankment in the past five years. A number of potential sources are being considered for matching dollars.

Boy Scout Lake Project

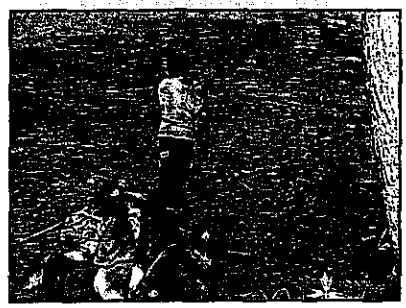
GRLT is currently conducting talks with the local chapter of the Boy Scouts to consider a wetland enhancement project at Camp Warren Levis in Godfrey. It would be a large scale project with high sediment trapping potential over a long period of time.

Future Projects

There are eight other Structural projects currently under consideration within the Piasa Creek Watershed. The types of structures include dry dams, sediment basins, rock riffles, streambank protection, grass waterways, and buffer strips. A series of three stormwater retention basins have been identified as potential projects for controlling sediment and stormwater volume.

PCWP Driving Tour - June 14, 2002

On June 14, 2002, GRLT together with the PC-WET program hosted a driving tour of the major projects in the Piasa Creek Watershed Project. The trip began at Lewis & Clark Community College and drove along the sites of various projects that have been implemented or of projects that are in the planning stages. Along the way, PC-WET participants performed water quality tests along certain areas of the creek. The tour proved to be a hands-on approach to learning about how various tools can be utilized to prevent sediment reduction in the Piasa Creek Watershed.



2002 Governor's Pollution Prevention Award

GRLT submitted an application for the 2002 Governor's Pollution Prevention Award and the "Innovate Illinois" award in early May. The Governor's Pollution Prevention Awards annually honor Illinois companies and organizations that are making efforts to reduce their environmental impact and improve their economic viability. The "Innovate Illinois" award is presented to one company or organization that illustrates a new and innovative pollution prevention technology. The submitted application for each award featured the Piasa Creek Watershed Project.

Recently, GRLT received notice that the Piasa Creek Watershed Project has been selected as a semi-finalist for the 16th Annual Governor's Pollution Prevention Awards hosted by the Illinois Waste Management and Research Center (WMRC). A technical advisor will arrive at GRLT for a site visit. Once the project is reviewed after the site visit, the WMRC will give notice whether the project has been selected as a finalist. If selected, the award ceremony will be held on October 18th in Champaign, Illinois. Information regarding this award is available at http://www.wmrc.uiuc.edu/governorsawards/.

IEPA Section 319 Nonpoint Source Pollution Control Program

The Illinois Environmental Protection Agency (IEPA) receives federal funding through Section 319(h) of the Clean Water Act to implement Illinois' Nonpoint Source Pollution (NPS) Management Program. The program works cooperatively with local units of government and other organizations toward protecting the quality of water in the state of Illinois by controlling NPS pollution. The program consists of funding for implementing cost-effective corrective and preventative best management practices (BMPs) on a watershed scale; funding for the demonstration of new and innovative BMPs on a non-watershed scale; and the development of information/education NPS pollution control programs.

Currently, GRLT is preparing a proposal to the IEPA for this program. Piasa Creek Watershed Project fits well in the criteria presented in Section 319(h). The project length under this program is two years. The program reimburses sixty percent of the total project costs. The remaining percentage remains the applicant's responsibility.

Trees Forever Illinois Buffer Initiative

Preliminary site preparation has gone underway at lower Piasa Creek for the anticipated buffer demonstration site. Planting will begin within three to four weeks after IDOT finishes it work stabilizing the bank side. A series of grasses, shrubs, and trees will be planted near the top of the riprap established by IDOT.

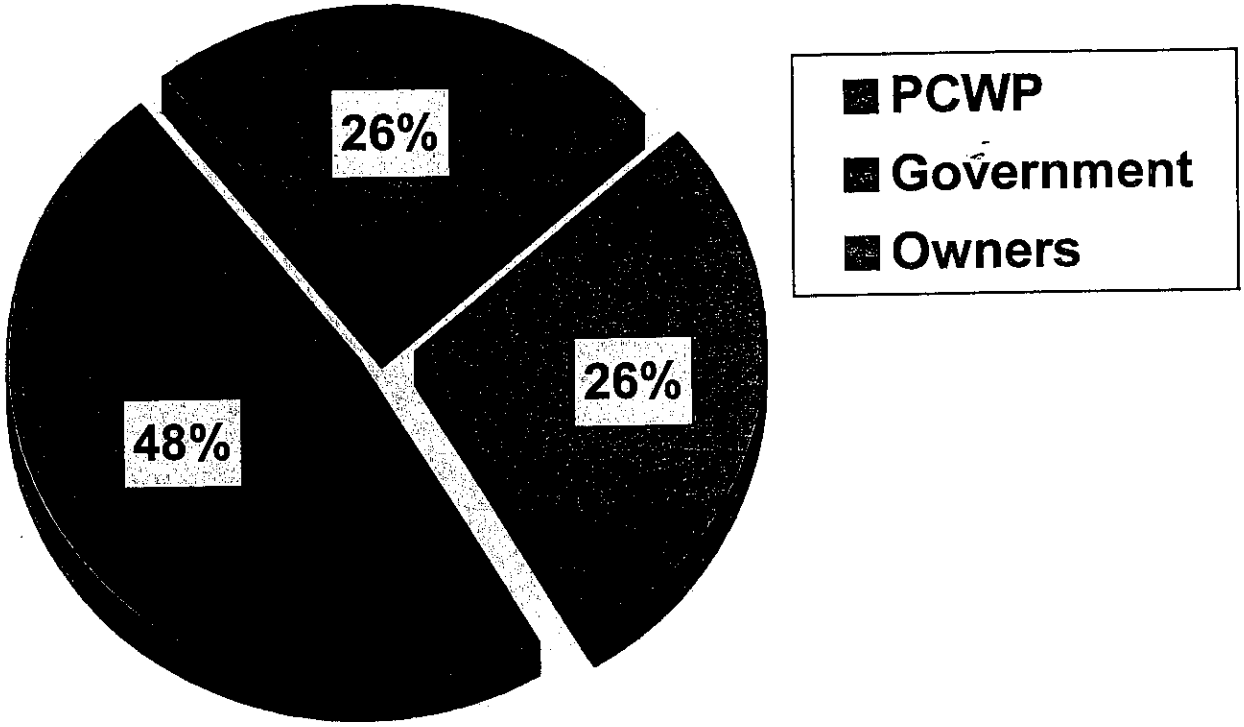
Attachments

Attachment A	Total Project Costs 2002
Attachment B	Total Tons Saved
Attachment C	Tour Handout
Attachment D	2002 Governor's Pollution Prevention Award Letter
Attachment E	Project Sign

Attachment A

Piasa Creek Watershed Project

Total Project Costs for 2002 to Date



Attachment B

Total Tons Saved

2001

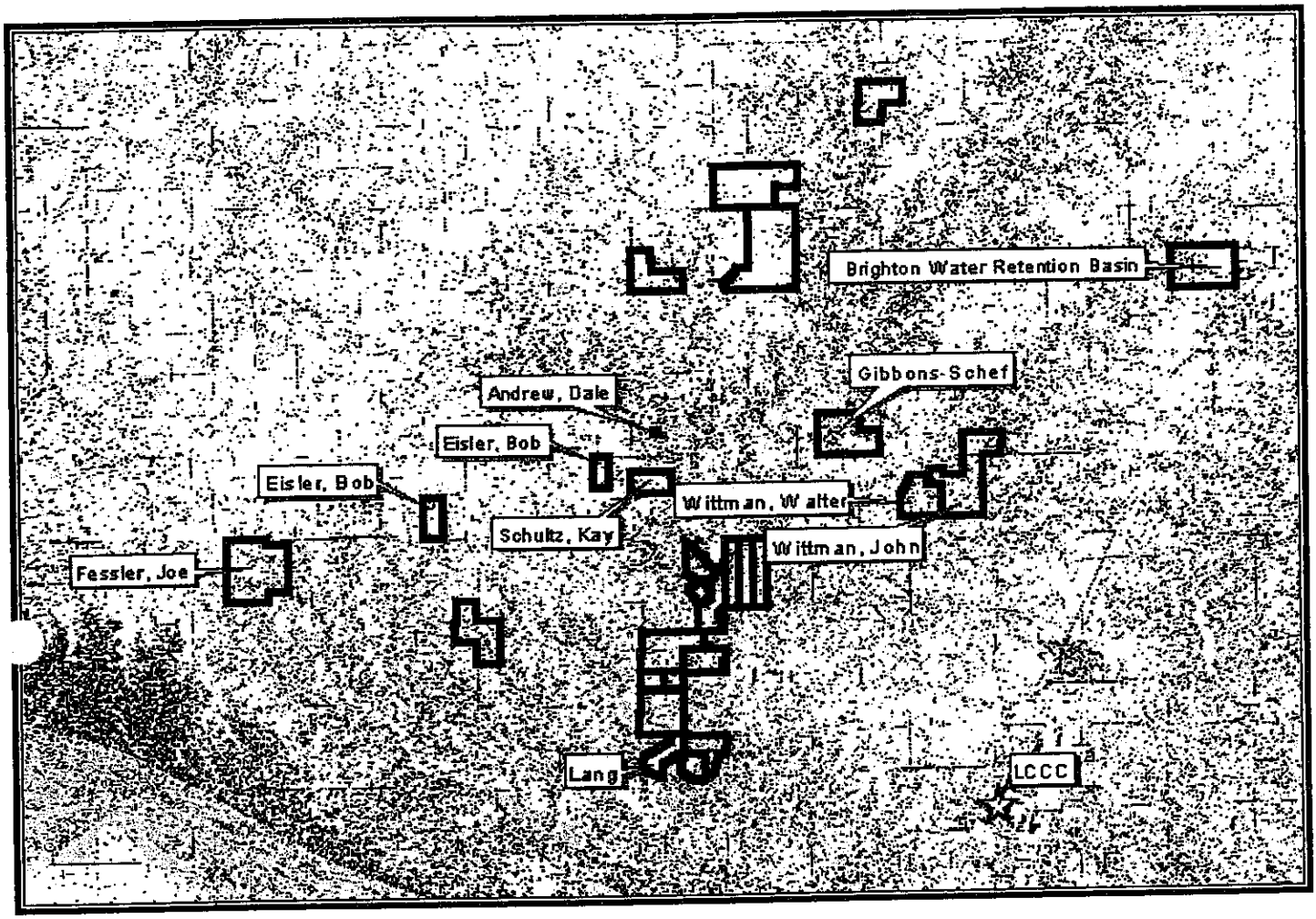
Owner Name	Tons Saved
Hansen, B.	128.0
Jungk, S.	108.2
Voorhees, D.	68.0
Wittman, J.	117.0
Total	**421.2**

2002

Owner Name	Tons Saved
Brighton Storm Water Retention Basin	190.8
Eisler, B.	103.5
Fessler, J.	133.9
Gibbons, T. / Schef-Elfkin *Phase I*	183.0
Gibbons, T. / Schef-Elfkin *Phase II*	116.8
Joehl, T.	64.0
Schafer, B	165.0
Schafer, G.	53.6
Schultz, K.	91.0
Wieland, J.	250.0
Wittman, W.	36.5
Total	**1334.5**

Attachment C

Piasa Creek Watershed Project
Driving Tour June 14, 2002

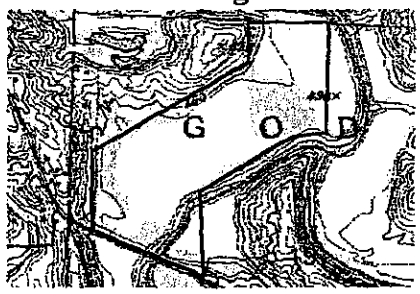


GREAT RIVERS LAND TRUST
MISSOURI · ILLINOIS · MISSISSIPPI

Illinois-American Water Company

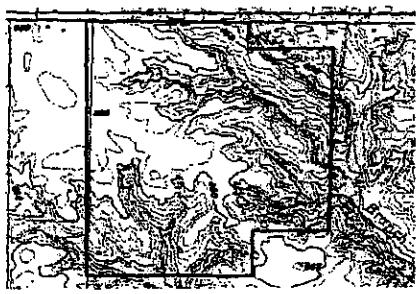
Attachment C

Lang



Joe Fessler

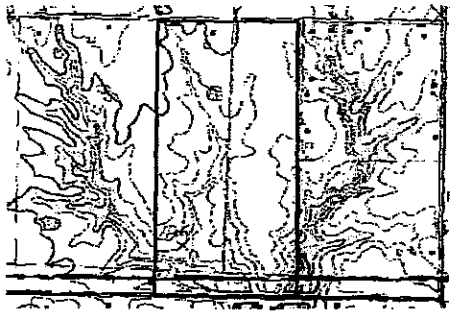
- Projects: basins, rock chutes, waterway
- Acres Benefited: 35
- Tons Saved: 250

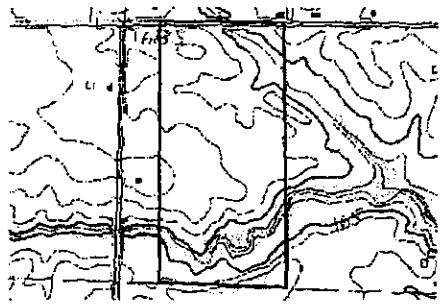


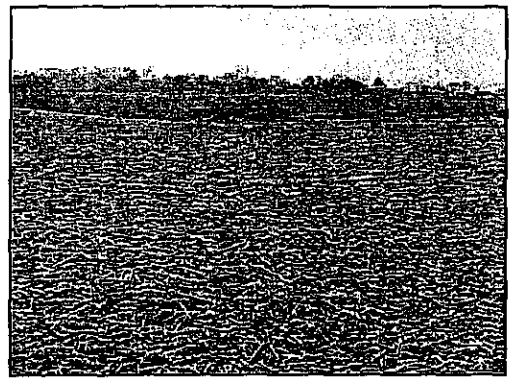
Attachment C

Bob Eisler

- Projects: basins, tile, and outlet pipes
- Acres Benefited: 24
- Tons Saved: 103.5

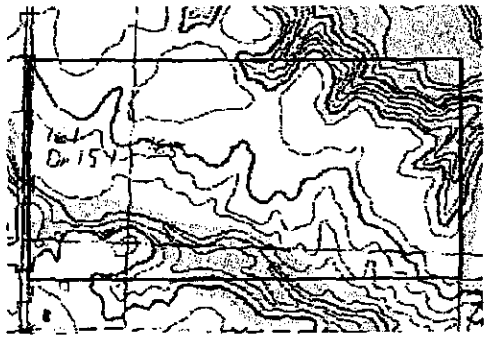


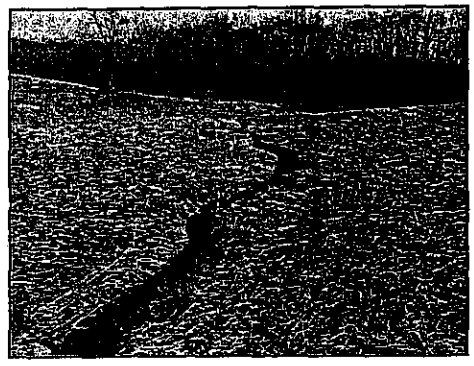




Kay Schultz

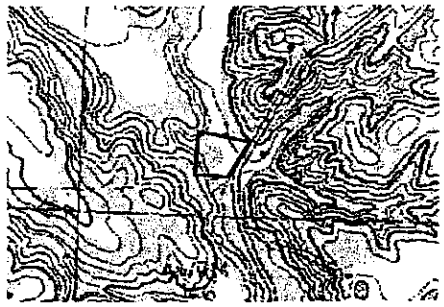
- Project: basins, tile, outlet pipe
- Acres Benefited: 11.3
- Tons Saved: 91



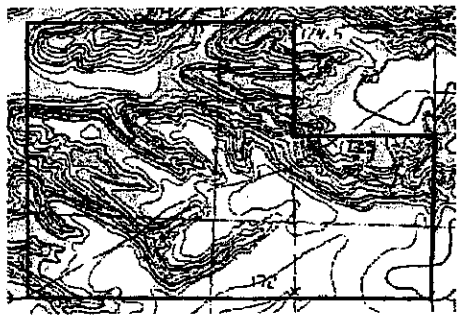


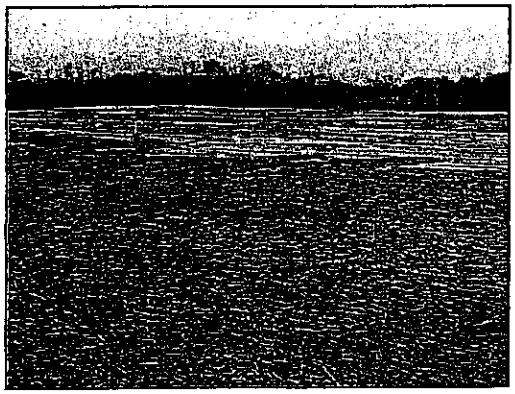
Attachment C

Dale Andrews



Tim Gibbons

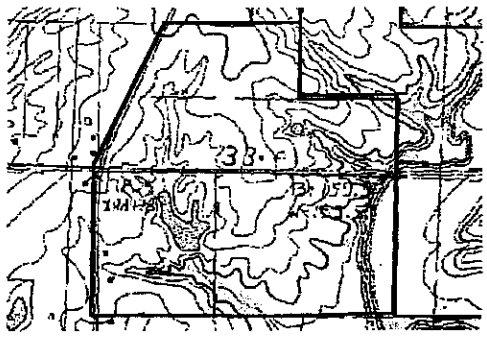




Attachment C

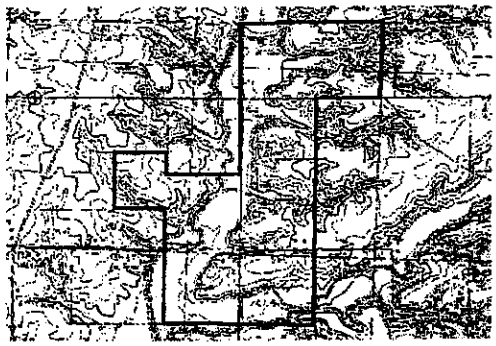
Walter Wittman

- Projects: basins
- Acres Benefited: 35.2
- Tons Saved: 36.5



John Wittman

- Projects: basins
- Acres Benefited: 36
- Tons Saved: 177



Attachment C

Brighton Storm Water Retention Basin

- Projects: storm water detention basin
- Acres Benefited: 140
- Tons Saved: 190.8

Projects on this property have been funded in part by the

Piasa Creek Watershed Project

A cooperative effort of

Great Rivers Land Trust

and

Illinois - American Water Company

Great Rivers Land Trust
P.O. Box 821
Alton, IL 62002

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
July 1-September 30, 2002

Illinois-American Water Company

The following is a brief summary of activities during the months of July, August, and September in reference to the Piasa Creek Watershed Project.

Projects

The projects this summer were very productive, tile work was laid and thirteen basins were constructed on Steve Jungk, Bill Schafer, and Joe Fessler properties. Once the crops are harvested, we will finish the sediment basins on John Wieland's and Walter Wittman's properties. In Madison County, we will construct six basins for Tony Joehl located on Little Piasa East.

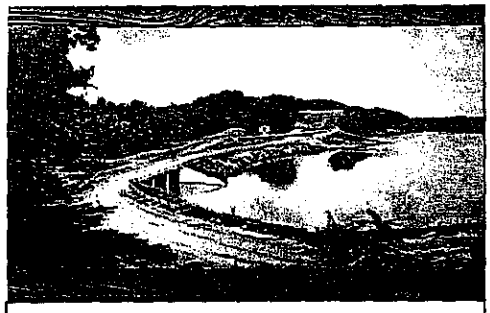
Survey work was conducted at potential sites such as John Newgent and Tim Kuebrich for future stormwater retention structures.

Storm Water Retention Basin

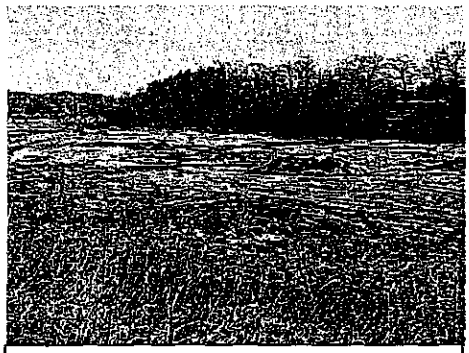
As shown in the photo, this summer we have finished four stormwater retention basins. The Brighton basin is operating to its capacity by holding sediment and water during peak rainfalls. The remaining three basins are located on Paul Bartlett, Tim Gibbons, and John Roth. Within these projects, we have over 300 acres of stored drainage area.

Boy Scout Lake Project

The Trails West Council of the Boy Scouts of America recently approved a tentative agreement with Great Rivers Land Trust to begin work on a project that will benefit both organizations. The Boy Scouts own a camp that is within the Piasa Creek Watershed. The facility, Camp Warren Levis, once had a 40-acre lake, which over the years filled with silt and became useless. The levy of the lake was breeched in 1989 in an attempt to dry the lakebed, however no funds were available to complete the restoration process.



Boy Scout Lake at Camp Warren Levis



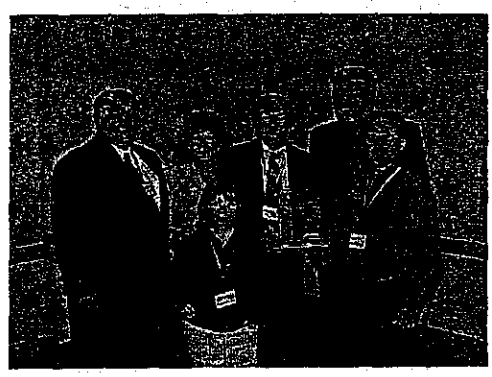
Current Condition of Lake

Great Rivers has proposed restoring approximately half of the original lake and the remainder will become an enhanced wetland. The restored lake will provide the Scouts with a variety of recreational activities and the wetland area will trap sediment and detain stormwater. In exchange for the restoration work, Great Rivers will receive a conservation easement on the entire 287-acre camp. Great Rivers is currently finalizing language on the easement and the restoration agreement.

Future Projects

There are five other structural projects currently under consideration within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, streambank protection, grass waterways, and buffer strips. A series of three storm water retention basins have been identified as potential projects located at Lewis and Clark Community College, Dick Killion's property and the city of Godfrey for controlling sediment and storm water volume.

2002 Governor's Pollution Prevention Award



GRLT has received notice that the Piasa Creek Watershed Project has been selected as a finalist for the 16th Annual Governor's Pollution Prevention Awards hosted by the Illinois Waste Management and Research Center (WMRC). The award ceremony was held on October 18th in Champaign, Illinois.

The Governor's Pollution Prevention Awards annually honor Illinois companies and organizations that are making efforts to reduce their environmental impact and improve their economic viability. The "Innovate Illinois" award is presented to one company or organization that illustrates a new and innovative pollution prevention technology. Information regarding this award is available at http://www.wmrc.uiuc.edu/governorsawards/.

IEPA Section 319 Nonpoint Source Pollution Control Program

The Illinois Environmental Protection Agency (IEPA) receives federal funding through Section 319(h) of the Clean Water Act to implement Illinois' Nonpoint Source Pollution (NPS) Management Program. The program works cooperatively with local units of government and other organizations toward protecting the quality of water in the state of Illinois by controlling NPS pollution. The program consists of funding for implementing cost-effective corrective and preventative best management practices (BMPs) on a watershed scale; funding for the demonstration of new and innovative BMPs on a non-watershed scale; and the development of information/education NPS pollution control programs.

GRLT sent a proposal to the IEPA for this program this August. The IEPA has received the proposal and it is now in review. Piasa Creek Watershed Project fits well in the criteria presented in Section 319(h). The project length under this program is two years. The program reimburses sixty percent of the total project costs. The remaining percentage remains the applicant's responsibility.

Trees Forever Illinois Buffer Initiative

Preliminary site preparation has gone underway at lower Piasa Creek and has been approved by the Illinois Buffer Initiative as a demonstration site for the Piasa Creek Watershed. The trees and shrubs will arrive the middle of October. We will plant and sow grasses later this month. Illinois Buffer Initiative has evaluated two potential projects at Dale Andrews and Boy Scout Lake. Both projects were submitted for extra assistance through the buffer initiative.

Before, during, and after pictures of the stream buffer project.

Service Learning Grant

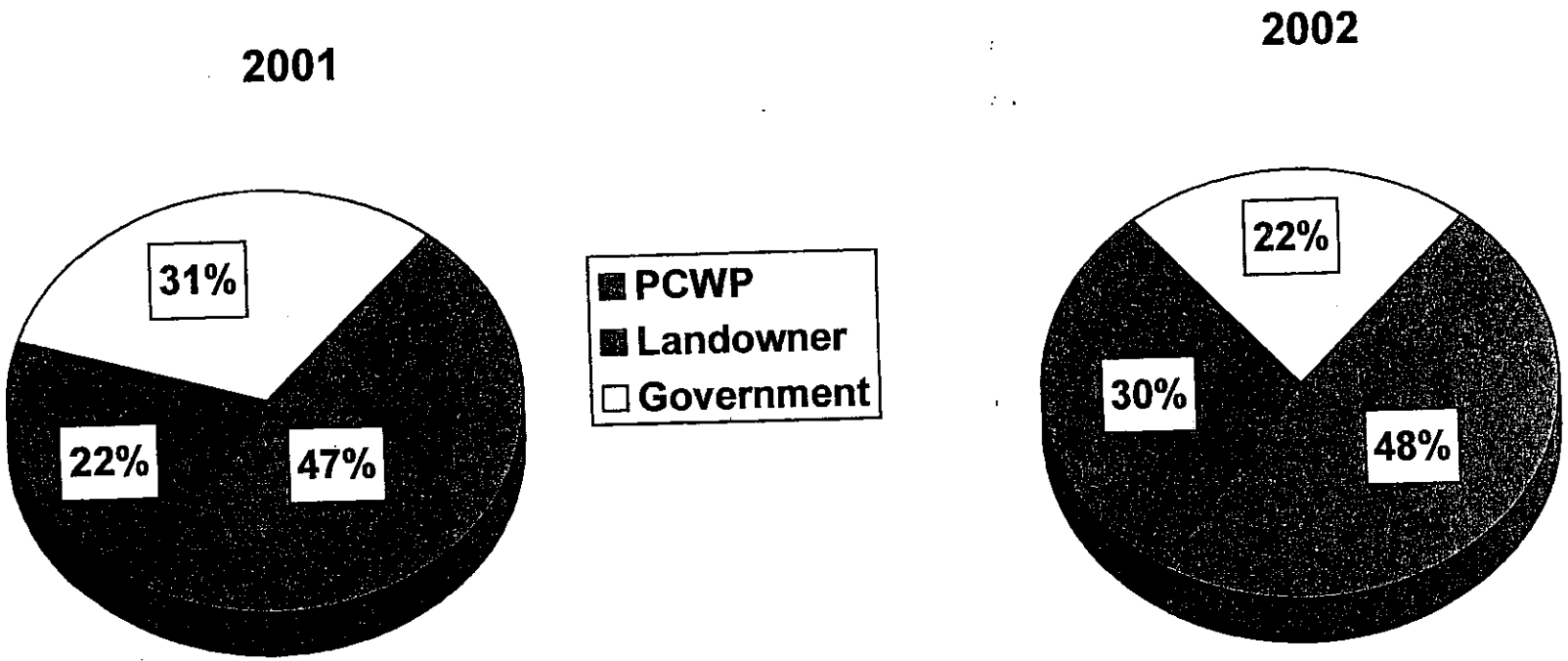
The planting work for the Illinois Buffer Initiative demonstration site will be made possible by a $4,000 Service Learning Grant awarded to District 100. GRLT will work cooperatively with Jersey Community High School students. The state grant will make it possible for the students to be involved in a stream buffer installation promoted by the Trees Forever program. Students will assist in planting trees, shrubs, and prairie grasses that will ultimately stabilize the streambank, control erosion and filter out pollutants.

Attachments

Attachment A	Cost Summary
Attachment B	Total Tons Saved
Attachment C	2002 Governor's Pollution Prevention Award Letter
Attachment D	Recent Press Releases

Attachment A

PCWP COST SUMMARY

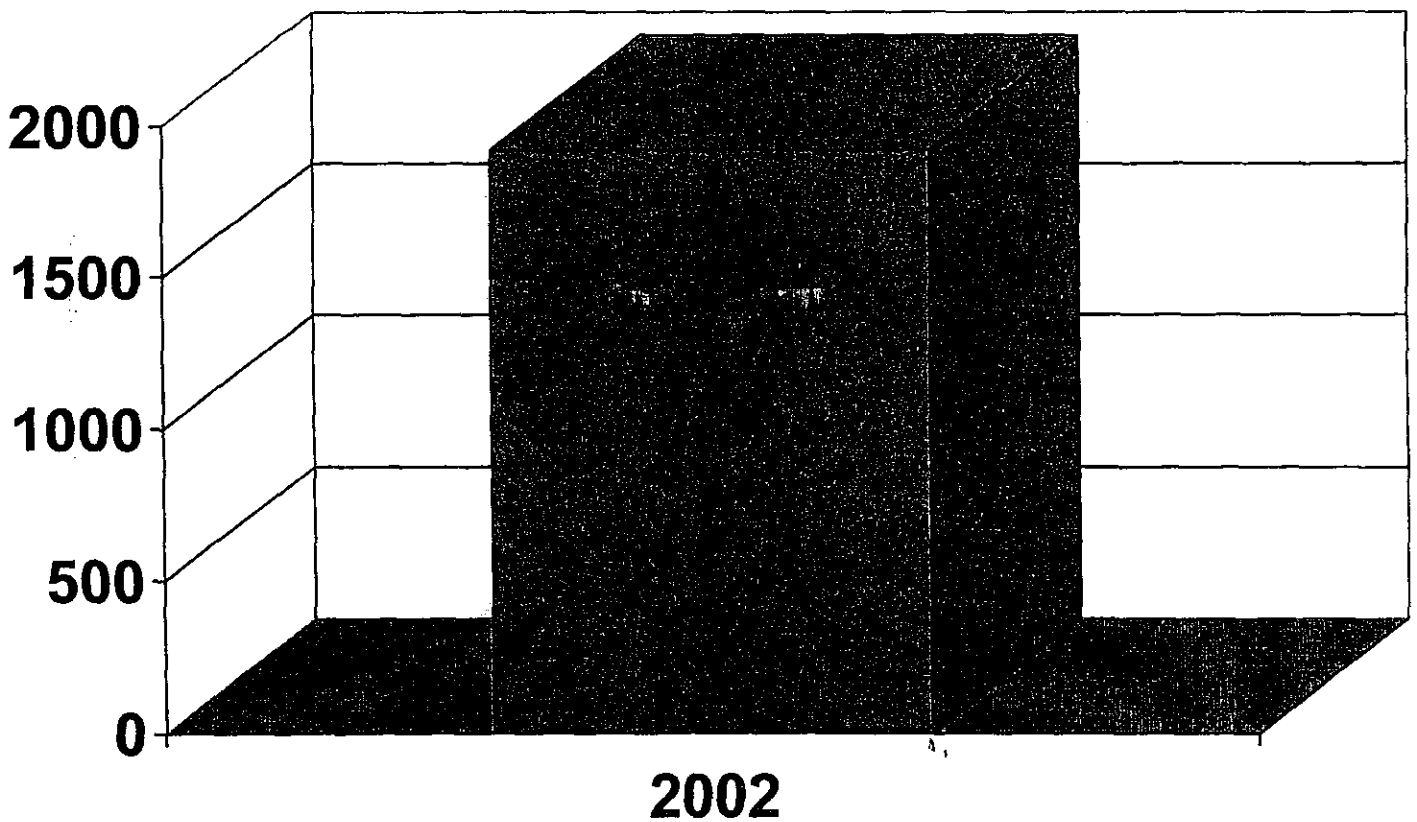


October 2002

GREAT RIVERS LAND TRUST
Piasa Creek Watershed Project

Attachment B

TOTAL TONS SAVED 2002



PRESS RELEASE
For Immediate Release

Re: **Illinois Buffer Partnership First Annual Celebration**
From: Diane White, Publicity Chairman ***Great Rivers Land Trust***

Great Rivers Land Trust (GRLT) is preparing to implement the final phase of an innovative stream buffer program. The stream buffer project is part of the ten year Piasa Creek Watershed Project administered by GRLT. This effort on the Piasa Creek, located above the Route 3 Bridge is one of only ten pilot projects in the state of Illinois to be implemented this year. Alley Ringhausen, Executive Director of Great Rivers Land Trust attended a luncheon in Springfield recognizing organizations involved in the Illinois Buffer Partnership. The special guest speaker was Mr. Joe Hampton, Director of the Illinois Department of Agriculture. The topic of the reception was "Celebrating the Stewards of our Streams." The Illinois Council on Best Management Practices and Trees Forever sponsored this event, which was held at the Illinois Executive Mansion in Springfield, Illinois.

Before, during, and after pictures of the stream buffer project.

The Illinois Buffer Partnership is a new program announced in November 2000 by Trees Forever, which will develop 100 demonstration projects along streams and rivers, primarily on farms, over the next five years. Types of landowner demonstration projects will include streamside buffer planting, plantings around livestock facilities, stream channel enhancements, streambank stabilization, and constructed wetlands. Their goal is to demonstrate how buffers, or living filters consisting of streamside plantings of trees, shrubs and native grasses, intercept runoff water, sediment and residue moving from fields.

Educating the public on the importance of using buffers to improve water quality is just one aspect that the Illinois Buffer Partnership endeavors to achieve. The Illinois Buffer Partnership not only promotes its own conservation efforts, but also those of other agencies and organizations through numerous presentations and interviews across the state. The program has brought increased attention in buffers at each level of government. This is verified by increased funding for buffer programs, increased research on the benefits of buffers for water quality, and numerous publications on buffer plantings.

Illinois Buffer Initiative project on Piasa Creek. Design depicts the locations of trees, shrubbery, and other vegetation that will be placed along the streambank.

The Illinois Buffer Partnership has completed its first year of the program. Great Rivers Land Trust is proud to be one of the select organizations that are participating in the 2001 Illinois Buffer Partnership that, in all, has improved 531 acres of land and has protected over 12 miles of buffered streams. The Illinois Buffer Initiative project on the Piasa Creek has been designed and is ready for implementation in the summer of 2002. The stream buffer will be a supplement to revetment work by the Illinois Department of Transportation. Ringhausen states, "Great Rivers is excited about being a part of the Illinois Buffer Initiative. It is encouraging when so many organizations with similar goals can work together for the health of our streams." For additional information regarding this project, please contact Alley Ringhausen at Great Rivers Land Trust, 618-467-2265.

PRESS RELEASE
For Immediate Release

Re: **Brighton Storm Water Retention Basin**
From: Diane White, Publicity Chairman ***Great Rivers Land Trust***

Great Rivers Land Trust (GRLT) is a local non-profit organization formed by private citizens in 1992. GRLT is dedicated to preserving the region's lands and waters through conservation and scenic easements, land acquisitions, and conservation projects. Two years ago, GRLT and the Illinois-American Water Company signed an agreement to begin implementation of the Piasa Creek Watershed Project. The 10-year project will attempt to reduce sedimentation in the Piasa Creek Watershed by approximately 6,600 tons per year by the end of the contractual agreement. The process of achieving the sediment reduction rates will include a variety of soil conservation practices such as silt basins, dry dams, streambank stabilization and various other practices to reduce sedimentation.

Alley Ringhausen, *GRLT Executive Director,* and Mayor Arlin Cunningham, *Village of Brighton*

One such sediment reduction practice that has been used recently in the PCWP is a stormwater retention basin. Water that runs off the land during and after a rainstorm is called stormwater runoff. This runoff and any pollutants it carries flows into streams, rivers, lakes throughout the landscape. In urban areas, natural physical, chemical, and biological processes are disrupted and litter, animal waste, oil, greases, heavy metals, fertilizers, and pesticides are carried downstream. A stormwater retention basin provides a temporary storage space for the runoff created by development in the watershed, releasing it slowly and reducing the potential for flooding. The basin also provides some treatment of the pollution carried by the stormwater runoff.

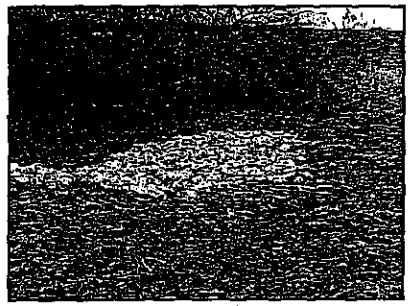
The Village of Brighton gave the approval to construct a stormwater retention basin on the west edge of the town. The Brighton stormwater retention basin has a drainage area of approximately 60 acres and the actual structure would affect roughly 5-6 acres. Nearly 190.8 tons of soil will be saved annually by the structure. This particular project has great importance since it will save such a significant amount of soil each year. The Brighton stormwater retention basin will not only be a vital effort in sediment reduction, it will also serve as a recreational lake used for fishing, canoeing, swimming, and other water recreational activities.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
October 1-December 31, 2002

Illinois-American Water Company

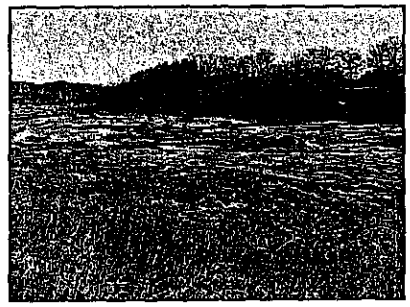
The following is a brief summary of activities during the months of October, November, and December in reference to the Piasa Creek Watershed Project.

Projects



This past quarter, GRLT closed out the following projects: John Roth, Paul Barlett, Kay Schultz, Joe Fessler, Tim Gibbons, John Wieland, Walter Wittman, Paul Pfieffer and Don Herring. These projects include three stormwater retention basins, thirty-six dry basins, and three rock chutes. The total cost of these projects was $72,577. Piasa Creek's share of the total cost was $28,342. The projects will save 1,218 tons annually through the Piasa Corridor.

Boy Scout Lake Project



GRLT and the Trails West Council of the Boys Scouts of America have a verbal agreement to reestablish approximately fifteen acres of lake and fifteen acres of wetlands. The project has multiple benefits for the parties involved. The Piasa Creek Watershed project will increase the total tons saved by constructing the wetland and add significantly to stormwater control. The Boy Scouts and the community in general will once again benefit from the recreational and environmental opportunities. In exchange for the enhancement work, the Boy Scouts will place their 287-acre camp under a conservation easement.

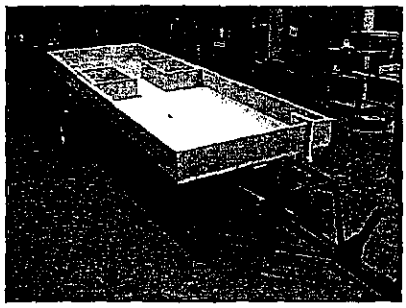
Future Projects

Survey work was conducted for a potential stormwater retention basin on Dick Killion's property and twenty-five dry basins to be built on the following properties: Campion, Lurton Farms, and the second phase of John Wieland. These projects will be conducted in the spring of 2003. There are many other structural projects currently under consideration within the Piasa Creek Watershed. Two stormwater retention basins are being developed as potential projects at Lewis and Clark Community College and the city of Godfrey for controlling sediment and storm water volume.

Trees Forever Illinois Buffer Initiative

The second stage of planting the trees and shrubs has been completed at the demonstration site for the Piasa Creek Watershed. The plantings were completed with the help of the Jersey Community School District High School students through the Service Learning Grant. The students also assisted in cleaning the surrounding area at the Piasa Creek of trash and debris. The final stage of planting native grasses will be sowed in the spring. The seed will arrive sometime in January or February.

Service Learning Grant



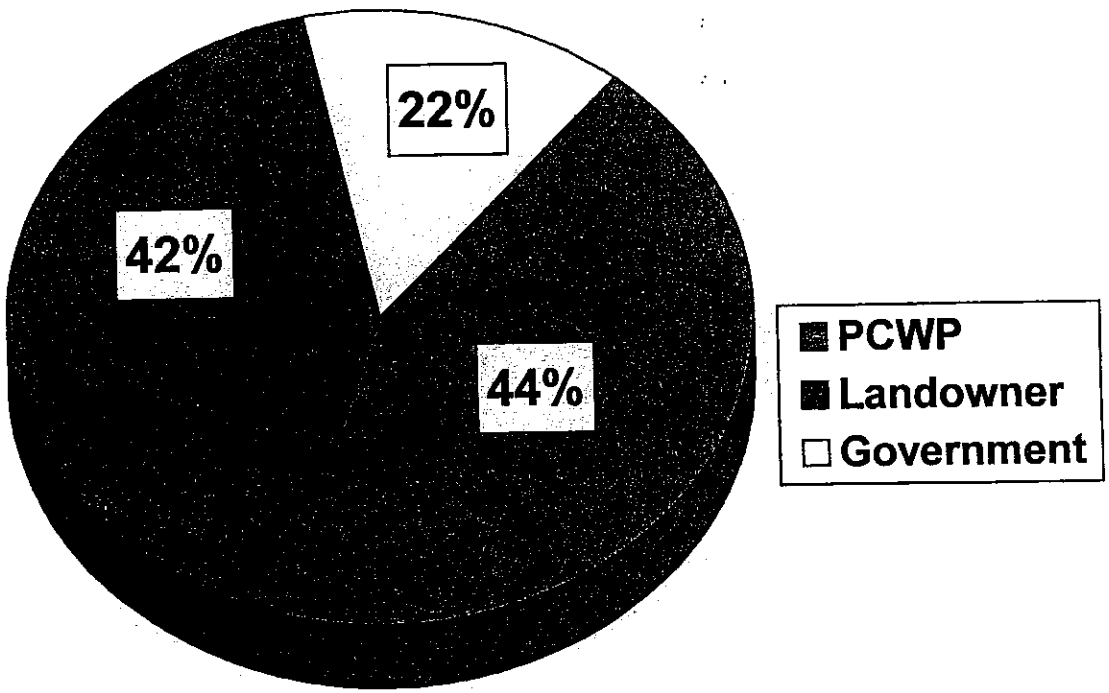
Currently the Jersey Community School District High School students are working on a streambank simulator project. This is being developed to demonstrate erosion, control methods, and stream current. The simulator will be made mobile to use it as a learning tool for local schools and the conservation offices. Great Rivers wrote the grant cooperatively with the Unit 100 school district.

Attachments

Attachment A	Cost Summary
Attachment B	Total Tons Saved
Attachment C	Recent Press Releases

Attachment A

PCWP COST SUMMARY -2002

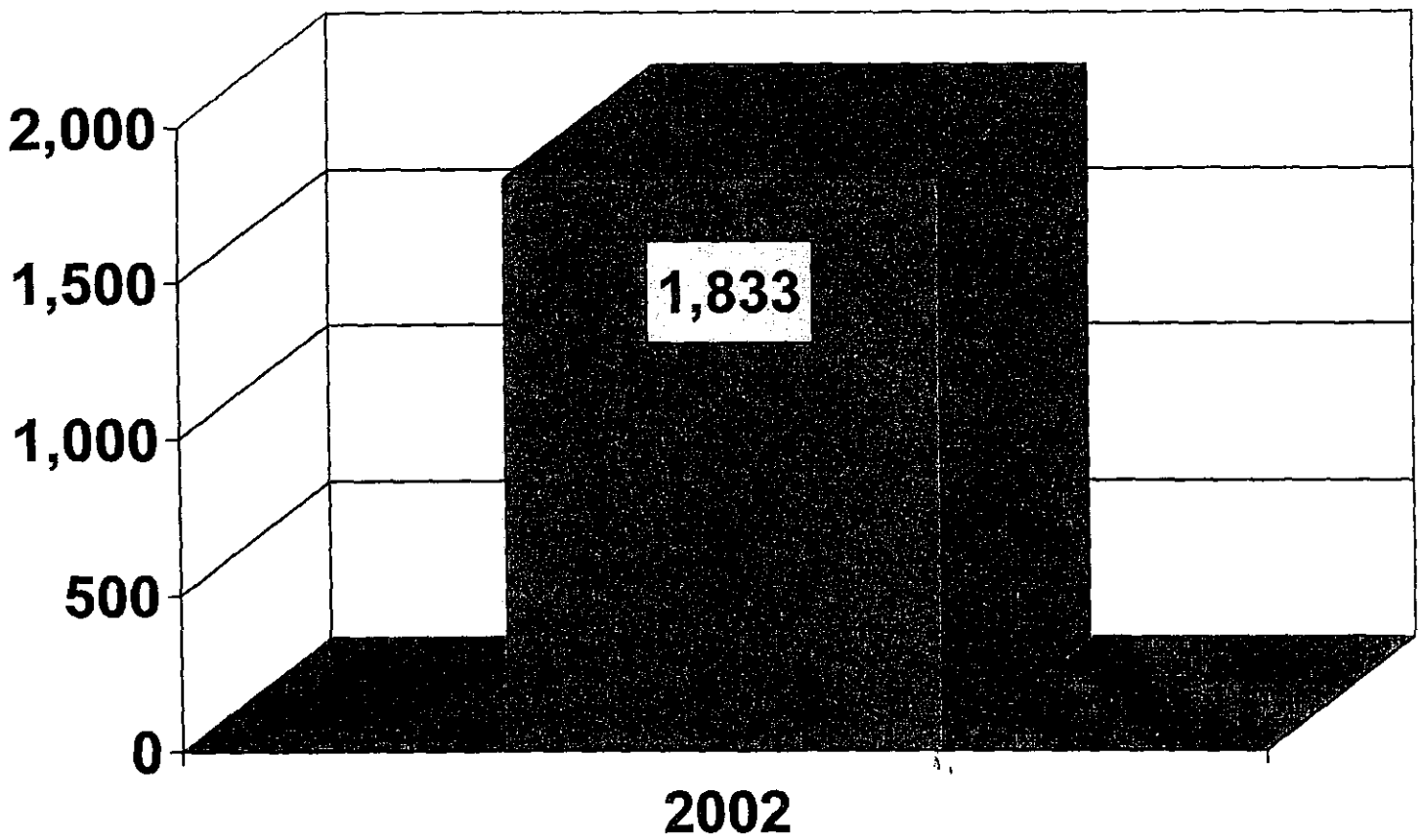


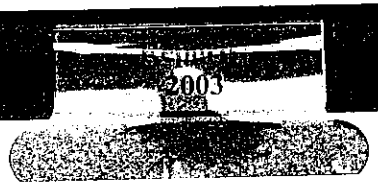
GREAT RIVERS LAND TRUST
Piasa Creek Watershed Project

December 2002

Attachment B

TOTAL TONS SAVED 2002




2003

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
January 1-March 31, 2003

Illinois-American Water Company

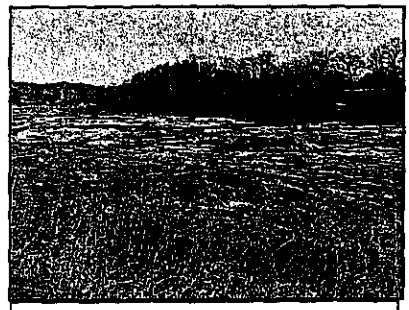
The following is a brief summary of activities during the months of January, February, and March in reference to the Piasa Creek Watershed Project.

Projects

This winter many projects have been reviewed and surveyed for construction starting in the spring. We plan to build 25 dry basins, 2 water retention basins and 1 grass waterway. These projects will be constructed on the following properties: Lurton Farms, John Wieland, Mike Campion, Dick Killion, and George Moody.

Boy Scout Lake Project

Preliminary drawings are being finalized and the construction contracts are being drawn for bid consideration. This large-scale project will consist of excavating over 140,000 cubic yards of soil from the Warren Levis Lake site. The excavation of this soil will remain on the Warren Levis site, which will reduce the overall estimated cost.



Warren Levis Lake

Survey Work on Wetland

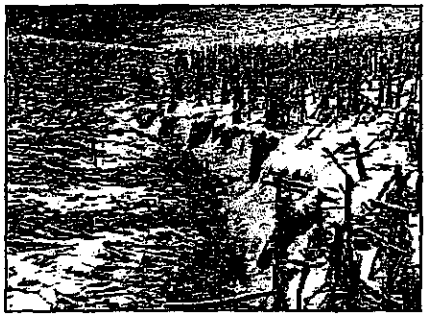
Wetland

GRLT has currently signed a contract with the city of Alton to rebuild 6.6 acres through mitigation on our property along Piasa Creek. Survey work has been completed by Madison County Soil and Water. We are anticipating the final drawings to be completed for the wetland. We will begin construction in the following months. This project will coincide with our buffer strip that was finished last fall.

Future Projects

Survey work was completed for a potential stormwater retention basin on the Lewis and Clark Community College property and on an estimated nine dry basins to be built on the Weaver and Youngblood properties. These projects will be conducted early summer. Many other structural projects within the Piasa Creek Watershed are currently under consideration. One of these projects is a stormwater retention basin located on Bruce Hansen's property in Jersey County.

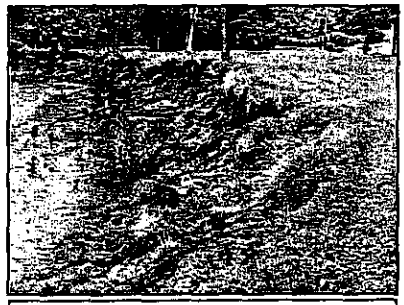
Lewis & Clark Community College



George Moody's Property

Trees Forever Illinois Buffer Initiative

Illinois Buffer Initiative evaluated Dale Andrew's property last year. They have agreed to assist us on reconstructing and stabilizing the following stream bank as shown in the picture. This project will be projected to start this summer.



Dale Andrew's Property

Student Tree Planting

Service Learning Grant

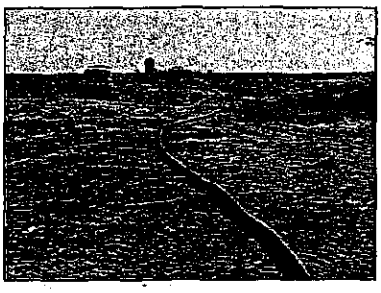
Through the Service Learning Grant, we have purchased 1,000 trees to plant along the Piasa Corridor. We will have 15-20 Jerseyville Community School District students and representatives from Trees Forever Illinois Buffer Initiative to assist in the planting on April 14.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
April 1-June 31, 2003

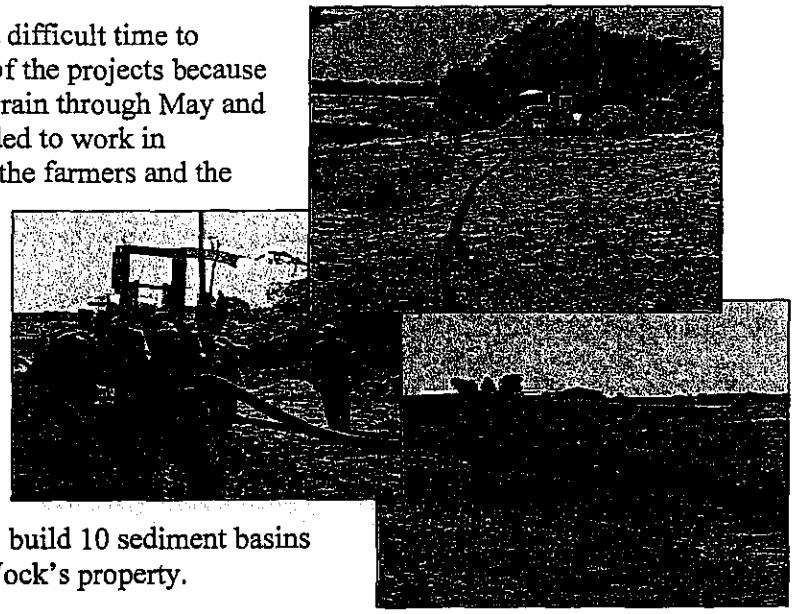
Illinois-American Water Company

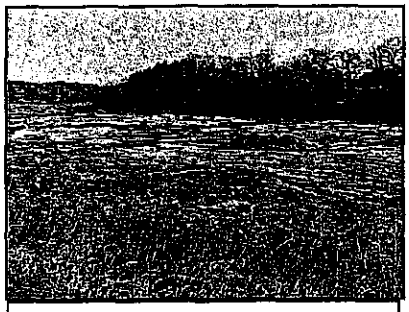
The following is a brief summary of activities during the months of April, May, and June in reference to the Piasa Creek Watershed Project.

Projects



This spring was a difficult time to excavate on any of the projects because of the continuing rain through May and June. We proceeded to work in conjunction with the farmers and the landowners on the proposed projects. We were able to lay field tile at Campion Farms and Lurton Farms, the dry basins will be completed this fall after crop harvesting to close out the projects. The survey work will be completed on Jack Wock, John Wieland and Hubert Croxford this summer. The construction on Jack Wock will start after the wheat is harvested. We plan to build 10 sediment basins that will save 217 tons of soil annually on Jack Wock's property.





Warren Levis Lake

Boy Scout Lake Project

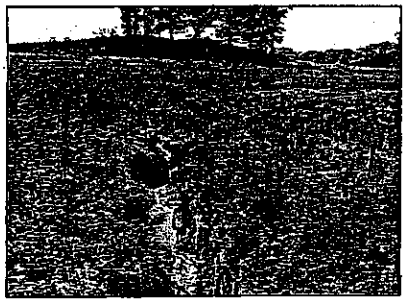
GRLT and the Trails West Council of the Boys Scouts of America have a letter of agreement to reestablish approximately fifteen acres of lake and fifteen acres of wetlands. Drawings are finalized and the construction contracts are being drawn for bid consideration. The bids will be posted by the early August and we plan to start excavating by mid August. The Piasa Creek Watershed Project will increase the total tons saved by constructing the wetland and add significantly to stormwater control. The Boy Scouts and the community in general will once again benefit from the recreational and environmental opportunities. Additional grants are being drafted to supplement the funding of the lake project.

Wetland

GRLT plans to start the excavating of the wetland by the end of the summer. Survey work has been completed by Madison County Soil and Water, and they have established a plan to create many different water cells and islands across the 6.6 acres. We anticipate the planting of shrub and tree this fall after they become dormant. The wetland project will be of benefit to the overall Piasa Watershed effort, but is funded entirely by an outside source.

Survey Work on Wetland

Future Projects



We have evaluated three more potential sites on Moody Bros., Dave McFarland and Denny Youngblood properties and estimated ten dry basins, two waterways and one water retention basin to be built. These projects could be conducted early spring. Many other structural projects within the Piasa Creek Watershed are currently under consideration.

Stream Bank Stabilization Projects

Through the Illinois Department of Agriculture, we received two $12,500 grants to assist on reconstructing and stabilizing the following stream bank as shown in the pictures located at Dale Andrews and Jon Roth. We will survey the proposed sites this summer to decide on the final costs, materials and methods use to restore the current stream banks. These projects will greatly reduce sediment along the Piasa corridor to continue achieving our annual goal. The majority of the funding for these projects, 80% will be providing by the Illinois Department of Agriculture. The high level of funding was attributed to the Watershed Plan.

Dale Andrew's Property

Service Learning Grant

On April 14, students from Jersey Community School District and representatives from Trees Forever assisted in the planting of 1000 trees. After two months of growth and a very wet spring, we estimated a survival rate of 80%. We feel this is an excellent stand for planting 6 to 12 inch seedlings. The trees were planted behind our original buffer strip that will also help control sediment reduction and slow down water runoff.

On June 6, Jersey Community School District High School students assist in a Streambank Cleanup and Lakeshore Enhancement (Scale) along Piasa Creek. We received a $500 grant from Illinois EPA to clean up litter along Illinois streams that impacts water quality and wildlife and fish habitats.

SIU-E

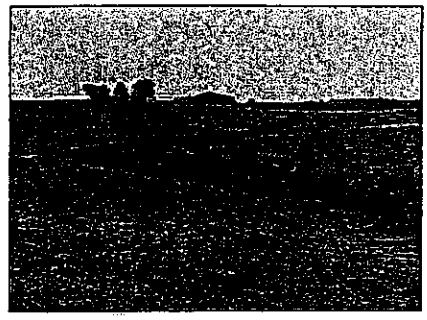
GRLT is working closely with a group of professors and graduates students at Southern Illinois University at Edwardsville in a number of projects on the Piasa Creek Watershed. Projects focus on mapping, land use, aquatic habitat, and test plots for stream buffer plants.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
October 1 - December 31, 2003

Illinois-American Water Company

The following is a brief summary of activities during the months of October, November, and December in reference to the Piasa Creek Watershed Project.

Projects



Wet conditions along with the late harvest made excavating many projects difficult. Great Rivers Land Trust (GRLT) proceeded to work in conjunction with farmers and landowners on proposed projects. Field tile was laid at Hanold Farms and Lurton Farms and dry basins were completed on Mike Campion's property. GRLT completed the pre-survey and cost estimate for this spring and summer on Hubert Croxford, Denny Youngblood, and Bob Eisler's property. Two projects were closed out for 2004 consisting of 24 sediment basins and 2 rock chutes that will save 217 tons of soil annually on Jack Wock's property. The twenty-four structures were designed with a storage capacity of up to 9,847 cubic yards or approximately 2 million gallons of water during a peak rainfall. These projects plus two streambank stabilization projects will save approximately 1,017 tons of soil per year along Piasa Creek.

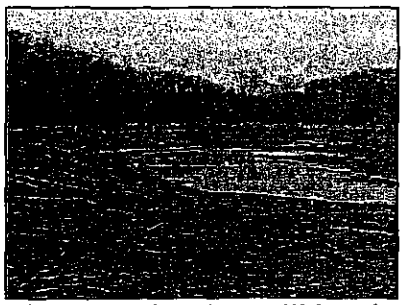
Stream Bank Stabilization Projects

The survey work was completed in late summer and construction began in late September on two sites where GRLT built seven rock riffles, laid 450 feet of stone toe protection and built three stream barbs that will protect up to 345 feet of Piasa Creek. The landowner, John Roth, worked with GRLT by planting over 500 trees above the stone toe that will assist in reinforcing the streambank. The projects will save 694 tons of sediment annually. GRLT will apply again next year to the Illinois Department of Agriculture for the streambank stabilizing grant since there are other projects along the Piasa Corridor under consideration.

Boy Scout Lake Project

GRLT and the Trails West Council of the Boys Scouts of America agreed on a contract this fall to excavate approximately fifteen acres of lakebed and enhance fifteen acres of wetlands. Drawings were finalized and the construction began in October. Due to the wet fall, progress has been slow however; GRLT will follow its original goal to complete the lake by spring in order to allow it to be in operation for summer activities. The lake will also increase the total tons saved by constructing the wetland, which also adds significantly to stormwater control. The Boy Scouts and the community will once again benefit from the project's recreational and environmental opportunities, while coinciding with the goals of the watershed project.

Wetland



GRLT created many different wetland cells and berms across the 6.6-acre wetland. A variety of 160 shrubs and 200 trees consisting of Oaks, Chestnuts, Dogwoods, and Chokecherry were planted this fall once they became dormant. The grasses were sowed early November and fortunately, the warm weather provided an excellent start as shown in the pictures.

The wetland project will be a benefit to the overall Piasa Watershed effort and is funded entirely by an outside source.

Future Projects

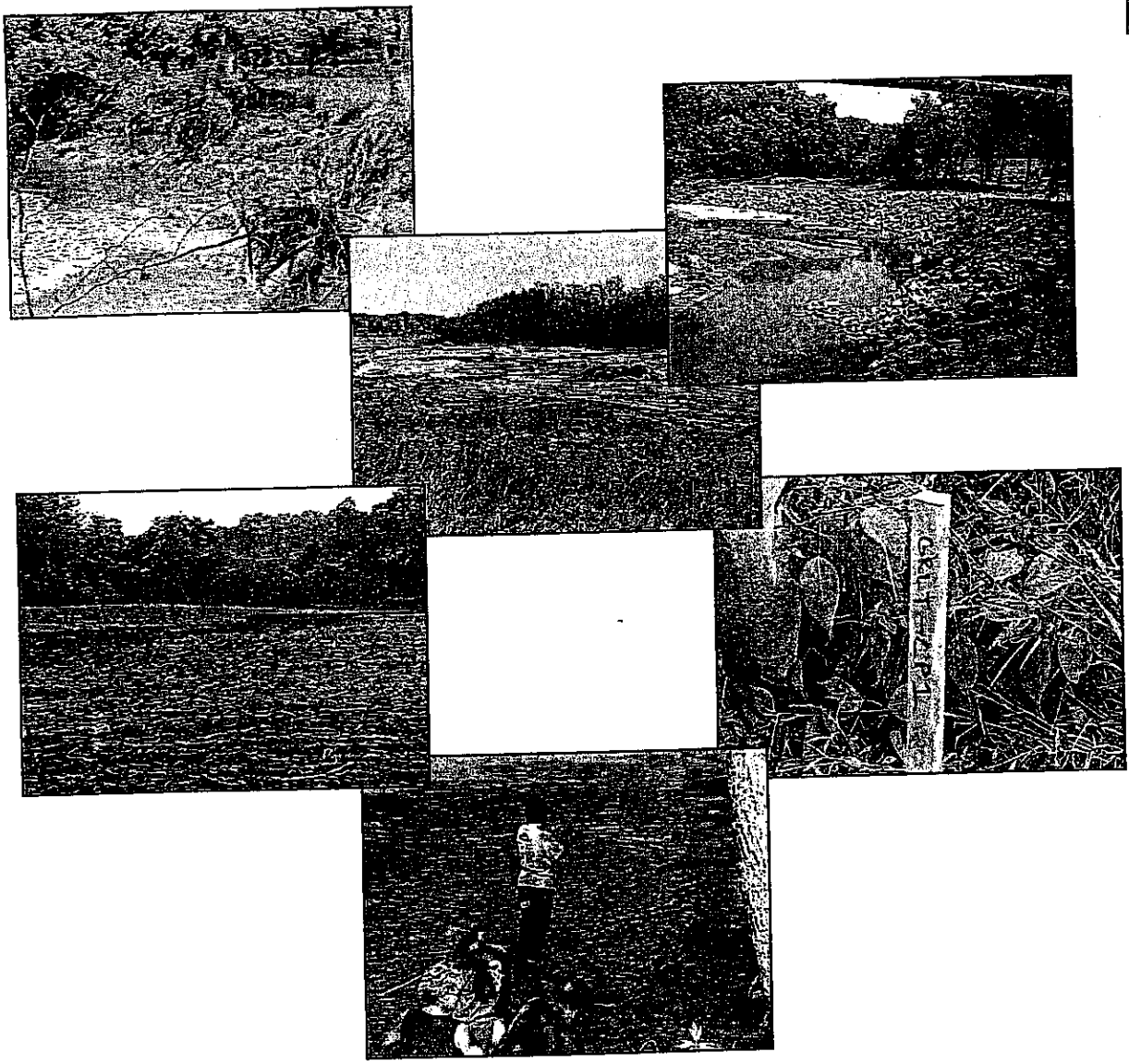
Two more potential sites on the Paul Weisaupt and Donald Nowland properties have been evaluated and an estimated five dry basins and one water retention basin will be built. These projects could be conducted next year during the spring. Many other structural projects within the Piasa Creek Watershed are currently under consideration.

Service Learning Grant

The final project conducted with funding from the Service Learning Grant involved property monitoring with survey equipment to mark the boundaries. This project will assist GRLT in patrolling the properties for hunting and trespassing issues. Next year the first project involves constructing a kiosk to provide information on the benefits of wetlands. The students will complete the next two projects during the 2003-2004 school year. A second Service Learning Grant has been approved for the next school year as well.

SIU-E

Professors and graduate students at Southern Illinois University at Edwardsville established three test plots for wetland and stream buffer plants located at our new 6.6-acre wetland. The plantings shown in the photo will assist GRLT in future projects to determine the best plants for wetlands along the Piasa corridor. The anticipated benefits will include reductions in overall costs and labor. The project was funded through an Illinois Wildlife Preservation Fund grant.



PIASA CREEK WATERSHED PROJECT
2003 ANNUAL REPORT

MISSOURI • ILLINOIS
GREAT RIVERS LAND TRUST
MISSISSIPPI

Illinois-American Water Company

INTRODUCTION

Three years ago, Great Rivers Land Trust and Illinois-American Water Company signed an agreement to begin implementation of the Piasa Creek Watershed Project. The 10-year project will attempt to reduce sedimentation in the Piasa Creek Watershed by approximately 6,600 tons per year by the end of the contractual agreement. The process of achieving the sediment reduction rates will include a variety of soil conservation practices such as silt basins, dry dams, streambank stabilization and various other practices to reduce sedimentation.

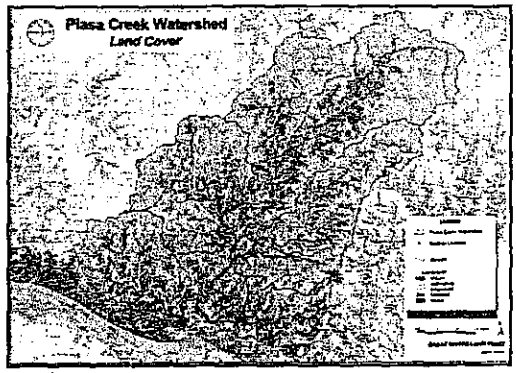
Illinois-American Water Company has been operating a water treatment facility along the Mississippi River at the west edge of Alton, Illinois for over 100 years. During that time the company drew water from the river, filtered the water, sold the clean water to the people in surrounding communities, and deposited the filtered sediment back into the river. The facility was subject to flooding, so in 1999 the water company began construction of a new water treatment plant. New environmental regulations would require the planned facility to construct sediment lagoons instead of discharging the materials back into the river. The new lagoons would be costly to construct and maintain. As an alternative, the Illinois-American Water Company proposed funding the Piasa Creek Watershed Project to reduce sediment entering the Mississippi River 2:1 compared to what the water plant would discharge into the river (3,300 tons per year). In return for approximately $4 million in funding for the life of the 10-year project, Illinois American would be granted a discharge permit by the Illinois Environmental Protection Agency.

The Piasa Creek Watershed Project works with local, state, and federal experts on assessing the Best Management Practices (BMP) for targeted sites within the Piasa Creek Watershed. A Geomorphic Inventory Assessment (GIA) has been helpful in prioritizing areas of the watershed with the greatest need for erosion control practices.

Year 2003 has been a productive year for the Piasa Creek Watershed Project. Not only has many successful conservation practices have been implemented, we began work on the Boy Scout Lake Project that will benefit not only Great Rivers but also the Community as well.

PROJECTS & GRANTS

Geomorphic Inventory Assessment

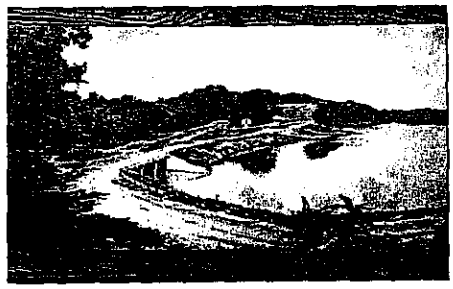


GRLT is currently reviewing the Geomorphic Inventory Assessment to assess the higher priority issues along Piasa corridor. Geomorphic Inventory Assessment of Piasa Creek Watershed was completed in 2002 in order to enable GRLT to better understand the critical areas in need of protection in the watershed. The assessment includes a variety of maps such as, soil classification, land cover, bedrock geology, wetlands, quaternary geology, and prior converted wetlands covering the Piasa Creek Watershed.

Boy Scout Lake

Excavating the Lakebed

During the winter of 2002, Great Rivers Land Trust (GRLT) and the Trails West Council of the Boy Scouts of America came to an agreement regarding a project that will benefit the Boy Scouts, the public, and the environment. The Boy Scouts own a camp that is within the Piasa Creek Watershed. The facility, Camp Warren Levis, once had a 40-acre lake, which over the years filled with silt and became useless. The levy of the lake was breeched in 1989 in an attempt to dry the lakebed, however no funds were available to complete the restoration process. Great Rivers has proposed restoring approximately half of the original lake and the remainder will become an enhanced wetland. The restored lake will provide the Scouts with a variety of recreational activities and the wetland area will trap sediment and detain stormwater. In exchange for the restoration work, Great Rivers will receive a conservation easement on the entire 287-acre camp. Excavation work on the lakebed began in Fall 2003.



Proposed Project

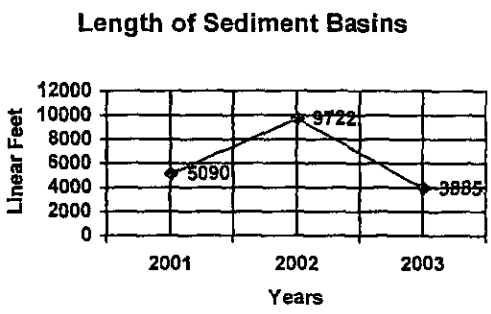
PROJECTS & GRANTS

Stream Bank Stabilization Projects

This year Great Rivers received two grants from the Illinois Department of Agriculture to reestablish streambanks along the Piasa corridor. The construction began in September on two sites where we built seven rock riffles, laid 450 feet of stone toe and built three stream barbs that will protect up to 345 feet of Piasa Creek. In working with the landowner, John Roth planted over 500 trees above the stone toe to assist on the reinforcing the streambank. The projects will save annually 694 tons of sediment.

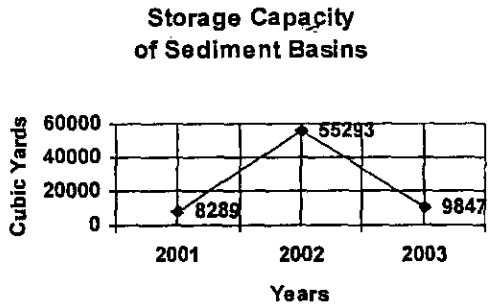
PROJECTS & GRANTS

Agricultural Land Improvements



Several important projects have been implemented this year. Due to the wet spring and fall, GRLT was only allowed to finish two projects. During 2003, the two projects consisted of twenty-four sediment basins and two rock chutes. Four projects have been evaluated and pre-surveyed to start in 2004. Support from the farming community has made this project a success by creating over 18,697 feet of sediment basins across Jersey & Madison County in three years.

These twenty-four structures plus the two-streambank stabilization projects is designed with a storage capacity to hold up to 9,847 cubic yards or approximately 2 million gallons of water during a peak rainfall. These projects will also save approximately 1,017 tons of soil per year along Piasa Creek.



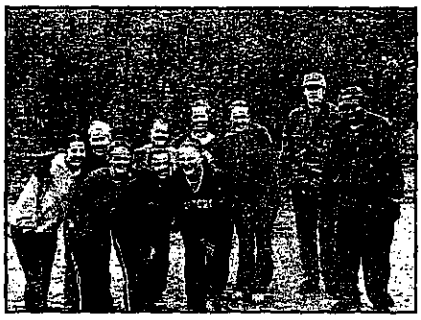
Wetland Mitigation

Great Rivers was instrumental in making the city of Alton's Indiana Avenue Economic Development Project happen. Great Rivers helped the city meet federal and state regulations in regards to wetland preservation. Because of this mitigation project, Alton moved forward in rebuilding its economic development base. The wetlands are preserved for wildlife habitat, recreation, and erosion control - all while federal and state regulations are being met.

PROJECTS & GRANTS

SERVICE LEARNING GRANT

Great Rivers Land Trust developed a Service Learning Grant cooperatively with the Unit 100 School District in Jersey County and submitted the proposal to the Illinois Board of Education for the second year. The approved grant will assist in funding student participation on four projects in the Piasa Creek Watershed for 2003. The project consisted of planting trees and shrubs for a Buffer Strip that was created along Piasa Creek, planting 1000 trees to extend a wooded corridor near Piasa Creek, and participating in a watershed festival at Lewis Clark Community College. The final project was a property monitoring with survey equipment to mark the boundaries.



Next year the first project involves constructing a kiosk to provide information on the benefits toward nature that the wetland posses along the Berm Highway in Alton. The students will complete the next two projects in the spring of 2004. The projects include prairie restoration at Ouatoga Bluff and implementing a plan to control and clear invasive species through Mayer Woods.

PROJECTS & GRANTS

Streambank Cleanup and Lakeshore Enhancement

GRLT acquired funds through the Illinois Environmental Protection Agency's Streambank Cleanup and Lakeshore Enhancement (SCALE) grant program. SCALE is aimed at funding cleanup events at streambanks and lakeshores. GRLT was awarded $500 from this program. On June 11, GRLT conducted a cleanup event in the Piasa Creek Watershed with the help of Jersey Community High School students. Our goal is to continue to make this project an annual event with the support from the surrounding community schools

IL Department of Natural Resources & IL Clean Energy Community

Long-term erosion control can best be achieved by long term protection of the stream's riparian corridor. It has been proven that the best method of accomplishing this goal is acquiring specifically identifiable stream corridor properties from willing sellers and placing them under perpetual conservation easements. Great Rivers has earmarked funds each of the first two years for land acquisition. Those funds have been matched with grant funds from the Illinois Department of Natural Resources the first year and a grant from the Illinois Clean Energy Community Foundation the second year, thereby doubling the earmarked funds for land acquisition. Implementation of both grants will take place in 2003.

EDUCATION

The educational component of PCWP is a vital asset in informing school-aged children about the importance of the watershed. Allowing students to have hands-on experience with this project not only yields more to their knowledge base regarding water ecology, but also gives them the realization of their own responsibility in ensuring clean water. Because of this, the value of stewardship is instilled in the stakeholders of tomorrow.

Piasa Creek Water Education Team (PC-WET)

An educational program entitled Piasa Creek Water Education Team (PC-WET) involves water quality testing at various sites in the watershed. Participants include students from the middle schools and high schools in the Alton, Southwestern, and Jersey County school districts. This past year PC-WET focused on five key locations to do a daily study on the changes in sediment and water flow along the Piasa Creek through out the summer.

Annual Meeting

The Jersey County Soil and Water Conservation District conducts an annual meeting to review their projects and accomplishments each year. A special segment of the program was dedicated to the Piasa Creek project. Highlights included the significant amount of sediment trapped and the financial assistance provided to landowners.

PRESS RELEASES

Piasa Creek Watershed Project has been publicized by various forms of press releases since the project's beginning in 2000. These press releases have been in various newspaper publications such as the St. Louis Post Dispatch, the Alton Telegraph, and the Illinois Business Journal. The project has also been featured in public radio announcements on WBGZ. Making the public more aware of this important project has made public acceptance of PWCP a reality. The following reflects in more detail the press releases during 2003.

- Alton Telegraph (February 11, 2003) – " Council recommends Catholic Charities Lease"

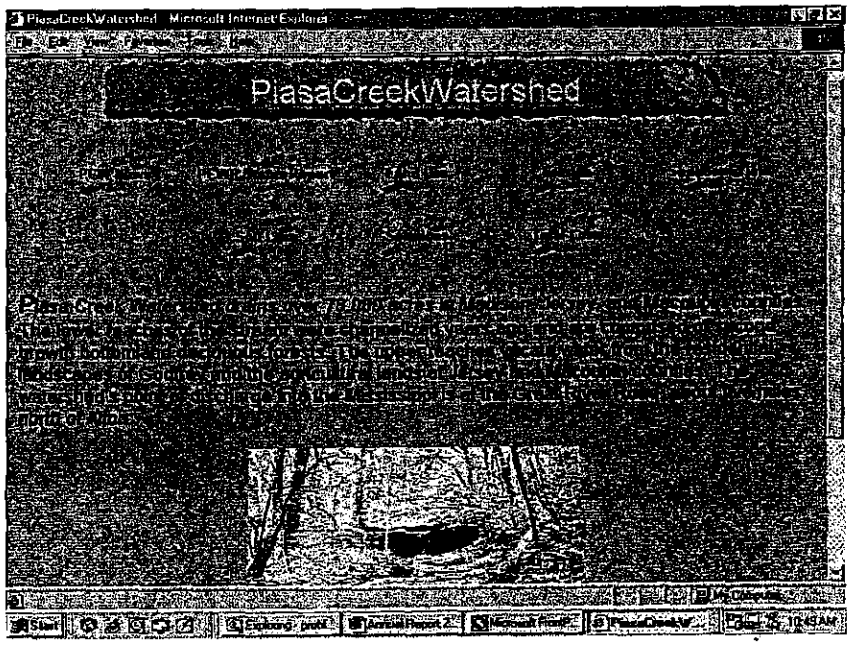
- Alton Telegraph (February 11, 2003) – "After years of planning, road project to begin"

- Alton Telegraph (October 3, 2003) – "Deal will preserve Scout camp in Godfrey: Conservation group plans to restore 15 acres at Camp Warren Levis"

- St. Louis Post-Dispatch (October 29, 2003) – "Joint project will restore use of silted-up lake at Scouts' Camp Warren Levis near Godfrey"

- Alton Telegraph (October 30, 2003) – "Open house Sunday at Camp Warren Levis"

Major events, updates, maps, and press releases regarding the project can also be located at Great Rivers Land Trust's website. The site is a direct method of dispersing information regarding PCWP and GRLT's other major projects. Great Rivers Land Trust's website address is www.greatriverslandtrust.org and information regarding Piasa Creek Watershed Project can be found on the navigational linked "PiasaCreekWatershed".



PARTNERING

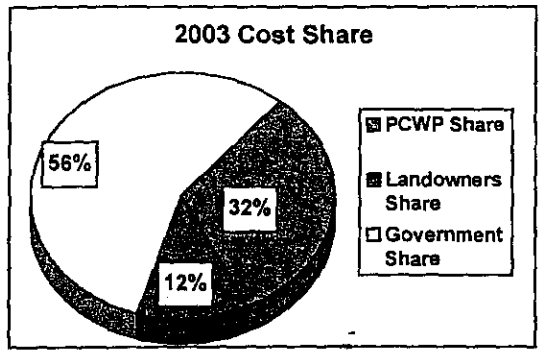
Great Rivers Land Trust has collaborated with many organizations, agencies, and municipalities while implementing the Piasa Creek Watershed Project. The following list highlights the various entities GRLT has collaborated with on this project.

- Illinois-American Water Company
- Illinois Department of Natural Resources
- Illinois Clean Energy
- Trees Forever
- Boy Scouts of America
- Village of Brighton
- Village of Godfrey
- Illinois Environmental Protection Agency
- Lewis & Clark Community College
- Illinois Department of Transportation
- Community School District 100
- The Nature Institute
- Illinois Nature Preserve
- University of Illinois
- Soil & Water Conservation District
- U.S. Department of Agriculture
- Resource Conservation &Development
- Cooperative Extension Service

CONCLUSION

Great Rivers Land Trust has succeeded in implementing many aspects of the project this year. In 2003, the project has not only accomplished its goals as far as sedimentation projects, it also has made great strides in its educational component. Planning has been underway for the acquisition component of the project and several parcels have been targeted for acquisition.

PCWP's land improvement projects both on agricultural and urban lands have been exceptionally successful this year. The total cost of these projects in 2003 has been over $41,000. PCWP's share of the total cost was 32%. This year over 1,000 tons of soil has been conserved because of this inventive project. Over 65% of the soil saved is derived from streambank stabilization. GRLT has eighteen sediment basins on four different properties, one riprap plunge pool, and a potential stormwater retention basin arranged for implementation in 2004.



Programs such as PC-WET and its work with the Unit 100 School District in Jersey County has made the Educational component prosper this year. Teaching today's youth will create environmentally conscience adults in the future. In the upcoming year, PCWP's commitment to education will continue with the aid of these programs. As mentioned, GRLT will work in conjunction with Jersey County High School students on three other Piasa Creek Watershed projects in 2004 with the Service Learning Grant.

Next year, PCWP will heighten its efforts in the acquisition aspect of the project. With the help of the Geomorphic Inventory Assessment, properties can be properly prioritized for acquisition. During 2004, GRLT plans to acquire property in order to perform wetland and streambank enhancements to improve wildlife habitat along the Piasa Creek Watershed.

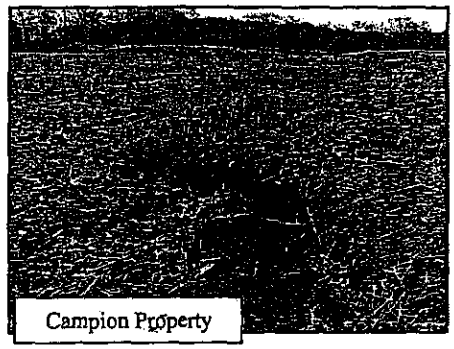
The enjoyed success of this project will surely lead to additional accomplishments next year. Its benefits reach beyond environmental values and touch upon other standards such as community and collaboration. PCWP will continue its endeavor to reduce the amount of sediment that enters the Mississippi River, which is illustrated in this photo showing the drainage point of the watershed into the river.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
JANUARY 1 - MARCH 31, 2004

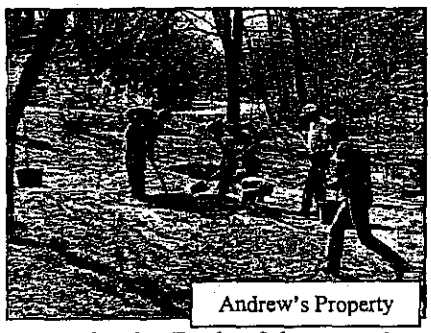
The following is a brief summary of activities during the months of January, February, and March in reference to the Piasa Creek Watershed Project.

Projects

Great Rivers Land Trust (GRLT) has been very productive this year on many projects started last fall. GRLT worked in conjunction with farmers and landowners on proposed projects. The final phase of constructing the basins at Hanold Farms and Lurton Farms was completed. The two projects that will be closed out this spring consist of 9 sediment basins saving 158 tons of soil annually. Last winter, GRLT completed the surveys and cost estimates for properties owned by Hubert Croxford, Mike Campion, Don Nowland, Denny Youngblood, and Bob Eisler. The total estimated amount of soil saved on these proposed projects is yet to be determined.


Campion Property

Streambank Stabilization Projects


Andrew's Property

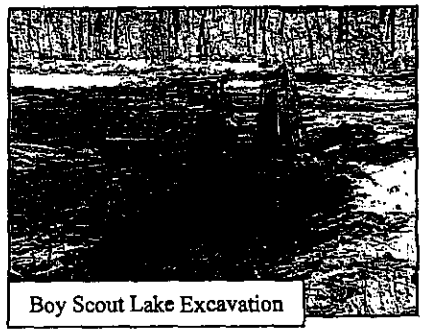
GRLT completed the final planting of trees and shrubs consisting of native Oaks and Birches along Dale Andrew's property. Final touches such as sowing prairie and wetland grasses along the Piasa corridor, added to the newly established rock riffles, stone toe protection and stream barbs that will protect up to 345 feet of Piasa Creek. John Roth worked with GRLT by planting over 500 trees above the stone toe that will assist in reinforcing the streambank. Both of these projects will save 694 tons of sediment annually.


Roth's Property

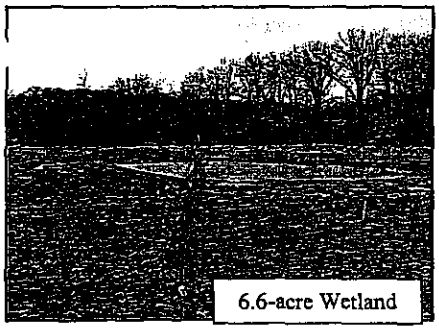
GRLT is currently reviewing several sites to submit to the Illinois Department of Agriculture for the Streambank Stabilization Program in 2004. There are numerous projects along the Piasa Corridor to consider that will qualify for the program.

Boy Scout Lake Project

GRLT will follow its original goal to complete Phase I of the Boy Scout Lake Project by late spring. Drawings were finalized for repairing the spillway and levy and construction should begin on phase II in late April. The lake will also contribute to the total tons saved. The enhanced wetland area will trap sediment and control flash flooding during significant storm events. The Boy Scouts and the community will once again benefit from the project's recreational and environmental opportunities, while coinciding with the goals of the watershed project.


Boy Scout Lake Excavation

Wetland



6.6-acre Wetland

GRLT created many different wetland cells and berms across the 6.6-acre site. A variety of 160 shrubs and 200 trees consisting of Oaks, Chestnuts, Dogwoods, and Chokecherry were planted last fall once they became dormant. Grasses were sowed in flat areas. This spring GRLT finished seeding in and around the cells before the spring rains. Every acre of cropland converted to native vegetation is estimated to save eight tons per acre per year.

Future Projects

The Kay Schultz property is an evaluated potential site and requires an estimated fifty-five dry basins. This project is so severe that it will be considered a higher priority case over many of our surveyed projects. This project could be implemented next year during the spring. Many other structural projects within the Piasa Creek Watershed, such as those listed previously in this report, are currently under consideration.

Service Learning Grant

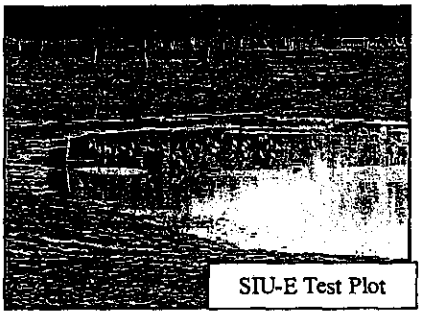
The Service Learning project under the new grant involved planting trees, shrubs and grasses along Dale Andrews property. A 30" posthole digger was rented to assist in planting 10-gallon trees and shrubs. The next project involves participation in the Annual Water Festival on the Lewis & Clark Community College's campus.

Posthole Digger assisted planting 10-gallon trees & shrubs.

Streambank Cleanup And Lakeshore Enhancement

GRLT acquired funds through the Illinois Environmental Protection Agency's Streambank Cleanup and Lakeshore Enhancement (SCALE) grant program for the second time. SCALE is aimed at funding cleanup events at streambanks and lakeshores. GRLT was awarded $500 through this program, and we plan to conduct a cleanup event along the Piasa Creek with the help of Jersey Community High School students. Our goal is to continue to make this project an annual event with the support from the surrounding community schools

SIU-E



SIU-E Test Plot

Professors and graduate students at Southern Illinois University at Edwardsville established three test plots for wetland and stream buffer plants located at our new 6.6-acre wetland. They have recently finished the final plantings this spring as shown in the photo. The project was funded through an Illinois Wildlife Preservation Fund grant.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
APRIL 1 - JUNE 30, 2004

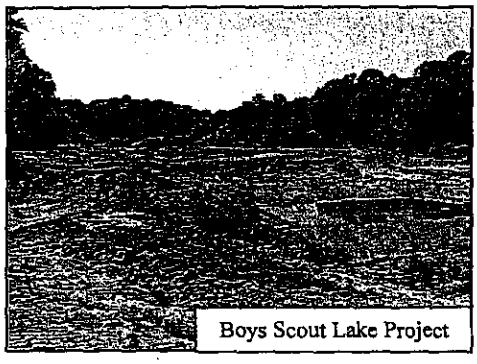
The following is a brief summary of activities during the months of April, May, and June in reference to the Piasa Creek Watershed Project.

Projects


Lurton's Property

This quarter, Great Rivers Land Trust (GRLT) has worked on four projects on the following properties: Eisler, Lurton, Nowland, and Hanold. (Figure 1) Projects closed out in early summer consisted of 19 dry basins, saving 244 tons of gully erosion and a total of 380 tons saved annually including sheet and rill erosion. The four projects will benefit over 60 acres of cropland in Jersey County at an average cost of $41.00 per acre. Tile work was completed on Mike Campion (Phase II) and Croxford Farms this spring before the crops were planted. GRLT's goal is to build the basins on the two projects this fall once harvest has been completed. The estimated tons of gully erosion saved are 162 tons annually.

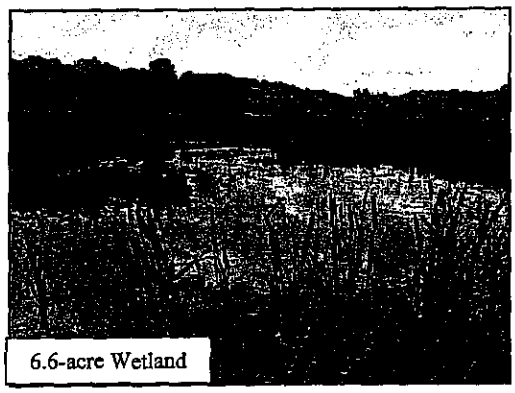
Boy Scout Lake Project


Boys Scout Lake Project

GRLT is only a few weeks away from completing Phase I of the Boy Scout Lake Project. Phase II of the project will consist of repairing the spillway, levy and boring out the previous drain line. Drawings have been finalized for Phase II but reclassification of the dam by the Illinois Department of Natural Resources (IDNR) from class III to class II has caused delays in the project. GRLT was required to complete a breach analysis before beginning the final phase construction. Ted Gray and Associates from Oakbrook Terrace, IL was hired to complete the stream analysis.

Wetland

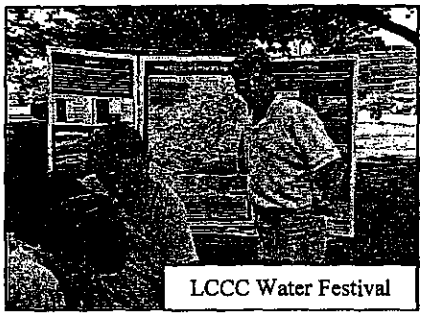
GRLT's 6.6-acre wetland has been extremely successful in erosion and stormwater control. The spring rains have filled the different wetland cells as planned. The conversion from intensive row crop cultivation to native wetland plants will provide an estimated savings of 8 tons of soil an acre annually. The wetland will also retain millions of gallons of runoff which will reduce intense flash flooding and streambank degradation.


6.6-acre Wetland

Future Projects

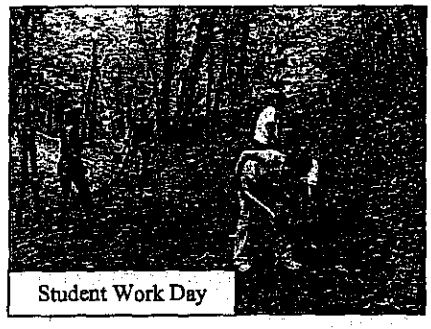
Kay Schultz's property was estimated to require fifty-five dry basins when first evaluated. After further review, there could be up to 60 – 70 basins built over the next three to four years in two or three phases. GRLT is planning to partner with the Jersey Soil and Water District in applying for additional funding for this project. This project is so severe that it will be considered a higher priority over many of the other surveyed projects along Piasa Creek. Many other structural projects within the Piasa Creek Watershed are currently under consideration.

Service Learning Grant



LCCC Water Festival

As part of the Service Learning Grant, GRLT participated in the Annual Water Festival on the Lewis & Clark Community College's campus. GRLT staff used display boards and the stream table, built as a result from a previous Service Learning Grant, to teach students the problems associated with streams and the methods used to help control erosion and stabilize streambanks.



Student Work Day

Another project completed under this grant involved a Student Work Day. On June 15th, 38 students from Jerseyville High School's summer Government Class completed four hours each of community service by assisting GRLT staff in painting a structure at the historic Riverview House in Elsah, trimming trees, cutting back brush, trash cleanup on a native prairie, streambank clean up along Piasa Creek and erosion stabilizing on the GRLT property.

Streambank Cleanup And Lakeshore Enhancement

May 24th Cleanup

Funds acquired through the Illinois Environmental Protection Agency's Streambank Cleanup and Lakeshore Enhancement (SCALE) program also contributed to the Student Work Day. A streambank cleanup day was first implemented this year on May 26th while the second day coincided with the Student Work Day. Programs such as SCALE allow GRLT to help establish strong stewardship values in today's generation.

June 15th Cleanup

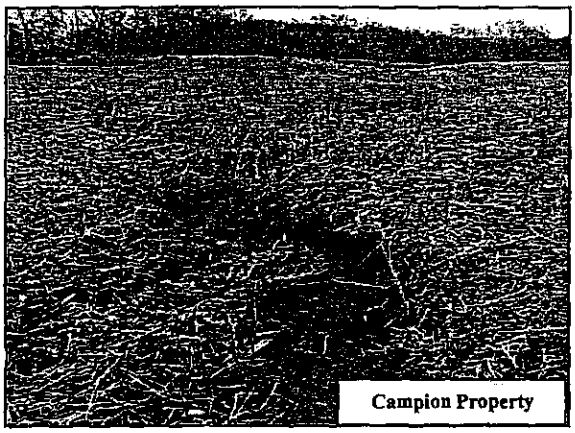
Total Gully Erosion as of July 1, 2004: 2,008 tons

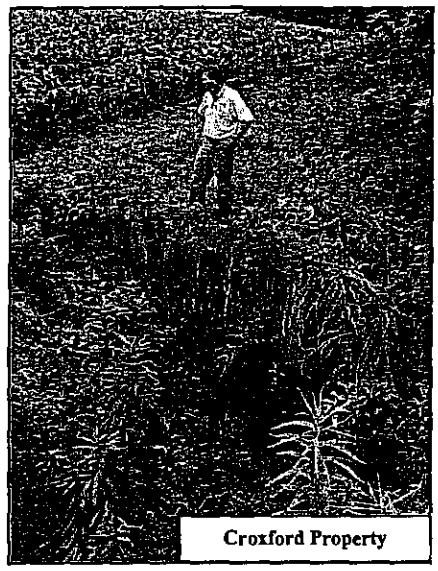
PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
JULY 1 - SEPTEMBER 30, 2004

The following is a brief summary of activities during the months of July, August, and September in reference to the Piasa Creek Watershed Project.

Projects

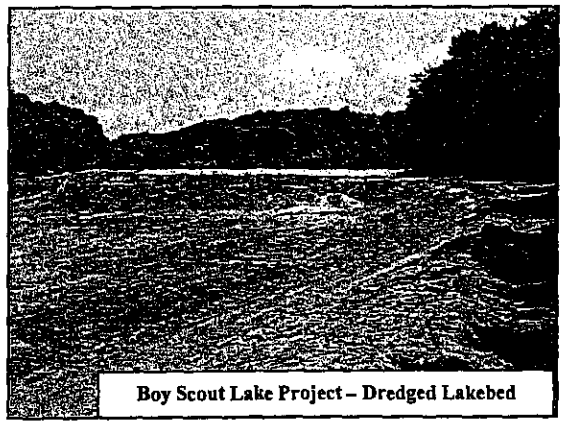
This quarter, Great Rivers Land Trust (GRLT) initiated four new projects on the following properties: Campion, Croxford, Youngblood, and Sandcamper (Figure 1). Tile work was completed on Mike Campion (Phase II) and Croxford Farms this spring before the crops were planted. Installing drainage tile in advance gives the soil time to settle and reduces structure failure in the long run. Excavation work for the dry basins is under way on both projects. Preliminary surveying was completed on the Youngblood project for a 1-2 acre water retention basin. On the property of Sandcamper, the design work was completed for 6 basins to be constructed this fall. GRLT's goal is to complete the remaining four projects by the end of the year.

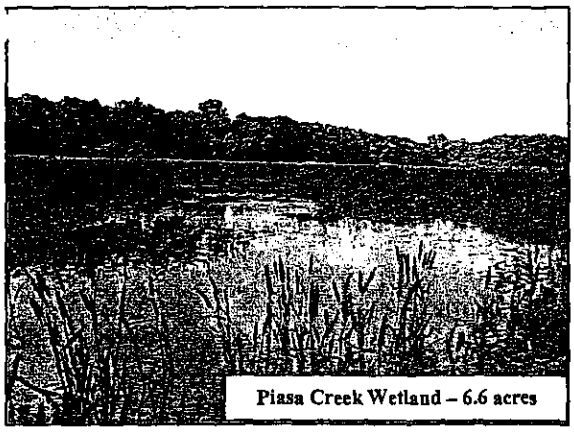

Campion Property


Croxford Property

Boy Scout Lake Project

GRLT has completed Phase I of the Boy Scout Lake Project. This particular phase of the project consisted of dredging 183,000 tons of soil from the lakebed and construction of an enhanced 10-acre wetland directly above the restored lake. GRLT seeded the wetland basin and berms. The berms built inside the basin will serve as a wildlife habitat. We are currently seeding the re-shaped slopes around the lakebed above the projected waterline. Once the dredge material deposition sites have been recontoured, seeding will also be completed. Planting has been put on hold due to the dry September weather. GRLT is waiting to begin Phase II of the project, which consists of repairing the spillway, levy and restoring the dewatering device. Drawings have been finalized for Phase II but reclassification of the dam by the Illinois Department of Natural Resources (IDNR) from class III to class II has caused a delay in the project. GRLT was required to conduct a breach analysis and hydraulic survey before beginning the final phase construction.


Boy Scout Lake Project – Dredged Lakebed



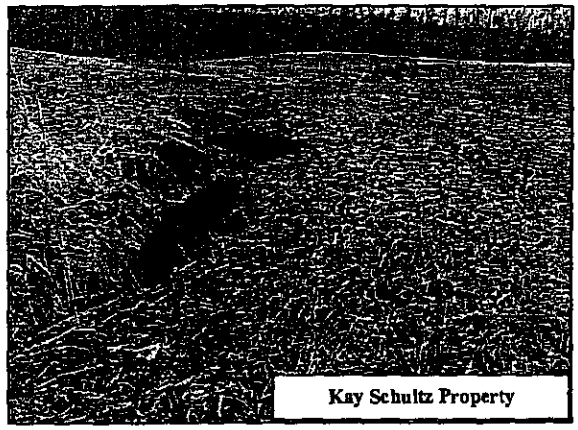
Piasa Creek Wetland – 6.6 acres

Wetland

After a successful spring for our new 6.6 acres wetland, a representative of the Corp of Engineers toured and evaluated the wetland for the final time to close out the mitigation project. GRLT received an excellent review on the project. The Corp was pleased with the success in converting the intensive row crop system back to a functioning wetland. It was stated that this wetland should be used as an example to other groups of a successful wetland project. The end result is less erosion, flood water storage capacity, enhanced wildlife habitat and stable streambanks.

Future Projects

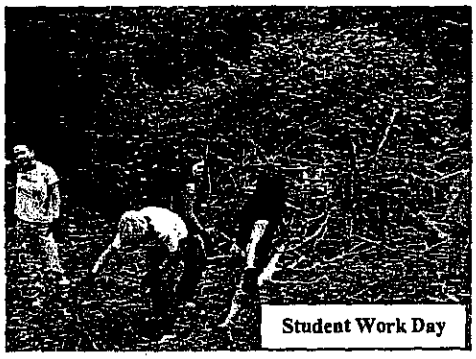
Kay Schultz's property was approved to start this winter or early spring based on weather conditions. There could be up to 60 – 70 basins built over the next three to four years. Jersey Soil and Water District applied for additional funding Conservation Practices Program funds and was accepted due to the severity of erosion at the site. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible consideration in the future.



Kay Schultz Property

Springfield Dioceses Youth Group Project

As part of GRLT involvement with educating our youth, 22 high school students and four advisors from Springfield Youth Group from Marquette Park Fellowship Camp came to help clean up brush and debris at the Boy Scout Lake and Wetland Site before GRLT sowed the wetland grasses. The students also helped control Johnson grass and Hop Vines, which are common invasive species in this area. The volunteers covered the 6.6 acres of wetland by using backpack sprayers and spot spraying specific areas.

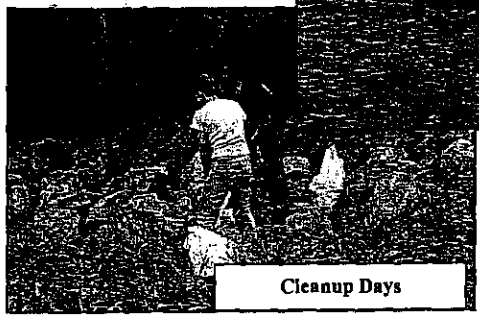


Student Work Day

Service Learning Grant

Once again this year, GRLT has submitted a grant to participate with the Jersey Community School District on the Service Learning Grant. This collaboration has been successful in the past and has been beneficial to the high school students. As part of the Service Learning Grant, GRLT participated in the Annual Water Festival, stream cleanup days, environmental outings, and tree plantings.

Tree Planting



Cleanup Days

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
OCTOBER 1 - DECEMBER 31, 2004

The following is a brief summary of activities during the months of October, November, and December in reference to the Piasa Creek Watershed Project.

Projects

Inclement weather through much of the fourth quarter, delayed many of the projects Great Rivers Land Trust (GRLT) was working on in November and December. Four projects on the following properties: Campion, Croxford, Youngblood, and Sandcamper are scheduled to be completed this winter or spring weather permitting. The projects are anticipated to save 441 tons annually. The total estimated cost of the projects is $15,268. Piasa Creek Watershed Project's share of the total cost will be $7,450. The projects will include 17 dry basins, 2 terraces and 1 water retention basin.

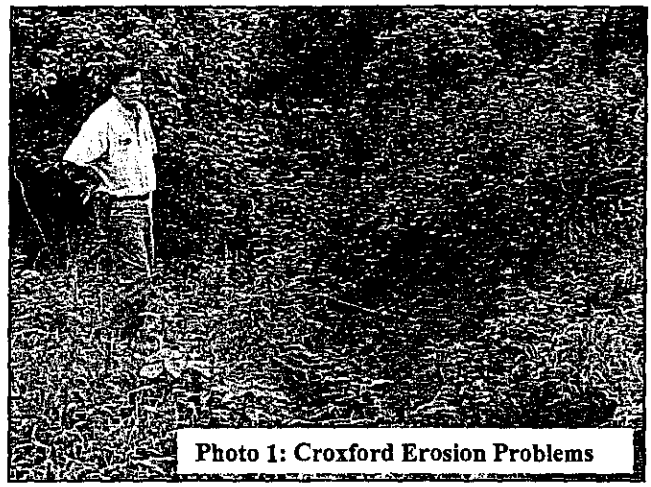


Photo 1: Croxford Erosion Problems

Boy Scout Lake Project

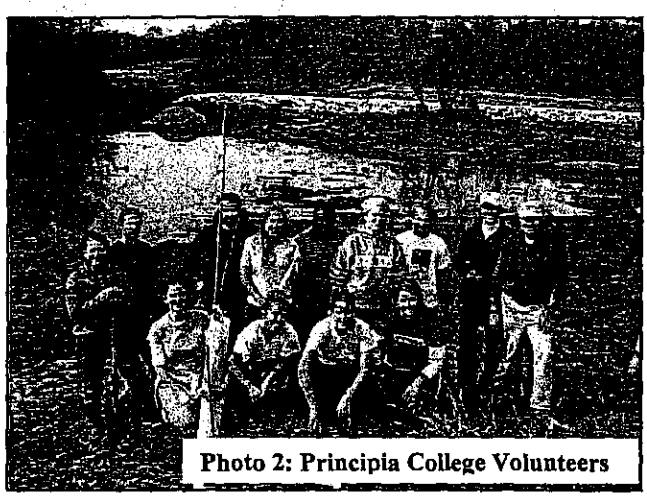


Photo 2: Principia College Volunteers

GRLT has completed Phase I of the Boy Scout Lake Project, including exaction of the lake bed and construction of the enhanced wetland. Berms built inside the wetland basin will serve as a wildlife habitat. Grass has been seeded around the new camping area and along the north side of the Lake. Bulldozers are currently putting the finishing grade on the new campground this winter, weather permitting. GRLT is waiting to begin Phase II of the project, which consists of repairing the spillway, levy and restoring the dewatering device. The Illinois Department of Natural Resources (IDNR) has delayed the project due to the dam reclassification from class III to class II. Engineers at Sheppard, Morgan, and Schwab have completed a breach analysis and hydraulic survey for the final phase of construction. On November 10th, trees were planted with the help of eighteen Principia College science students. The 12-acre wetland planting was completed in one day thanks to these volunteers. The trees were staked and wrapped to protect them from the wildlife in the surrounding area. Next spring GRLT will plant additional trees. The spring planting will be at the new campground that served as a deposition site for the soil dredged out of the lake.

Wetland

The 6.6 acres wetland has been functioning successfully this fall, retaining and absorbing excessive rains in November and December. Wetland benefits include less erosion, floodwater storage capacity, enhanced wildlife habitat and stable streambanks. We continue to maintain our trees, shrubbery and grasses as part of a stewardship plant in establishment of a healthy, sustainable wetland.

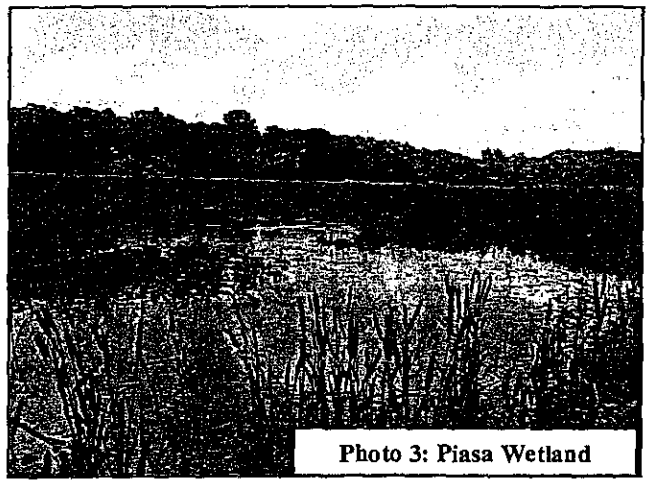


Photo 3: Piasa Wetland

Future Projects

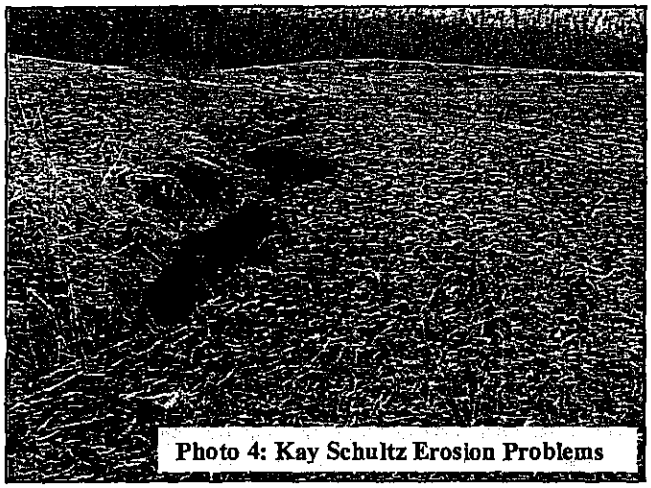


Photo 4: Kay Schultz Erosion Problems

There are five structural projects currently in the planning phase within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, stream bank protection, grass waterways, and buffer strips. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible consideration in the future. Alfred Galloy's (Kay Schultz's tenant) property was approved to start this winter or early spring based on weather conditions as a three to four phase project and George Moody's property is currently being reviewed for nine basins and one grass waterway.

Trees Forever Illinois Buffer Initiative

Previously this year, Trees Forever approved a $2,000 grant to purchase trees and grasses for the wetland area and surrounding embankment of the new Boy Scout Lake located at Camp Warren Levis. GRLT has received three Trees Forever grants in the past three years, all of which have been implemented as part of the Piasa Creek Watershed Project. The next proposal will involve a streambank stabilization project for the protection of a 40-acre wetland prairie. If approved, the project would be installed this summer with the assistance of volunteers.

Photo 5: Trees Planted at Boy Scout Lake Wetland

Erosion Saved as of December 2004:	
Gully Erosion	2,008 tons
Streambank Erosion	694 tons

Great Rivers Land Trust

Piasa Creek Watershed Project 2004 Annual Report

GREAT RIVERS LAND TRUST
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Illinois American Water

RWE

Project History

Four years ago, Great Rivers Land Trust (GRLT) and Illinois-American Water Company signed an agreement to begin implementation of the Piasa Creek Watershed Project. The 10-year project attempts to reduce sedimentation in the Piasa Creek Watershed by approximately 6,600 tons per year by the end of the contractual agreement. The process of achieving the sediment reduction rates will include a variety of soil conservation practices such as silt basins, dry dams, streambank stabilization and various other practices to reduce sedimentation.

Illinois-American Water Company has been operating a water treatment facility along the Mississippi River at the west edge of Alton, Illinois for over 100 years. During that time the company drew water from the river, filtered the water, sold the clean water to the people in surrounding communities, and deposited the filtered sediment back into the river. The facility was subject to flooding, so in 1999 the water company began construction of a new water treatment plant. New environmental regulations would require the planned facility to construct sediment lagoons instead of discharging the materials back into the river. The new lagoons would be costly to construct and maintain. As an alternative, the Illinois-American Water Company proposed funding the Piasa Creek Watershed Project to reduce sediment entering the Mississippi River 2:1 compared to what the water plant would discharge into the river (3,300 tons per year). In return for approximately $4 million in funding for the life of the 10-year project, Illinois American would be granted a discharge permit by the Illinois Environmental Protection Agency.

The Piasa Creek Watershed Project works with local, state, and federal experts on assessing the Best Management Practices for targeted sites within the Piasa Creek Watershed. A Geomorphic Inventory Assessment has been helpful in prioritizing areas of the watershed with the greatest need for erosion control practices.

Boy Scout Lake Project

During the winter of 2002, GRLT and the Trails West Council of the Boy Scouts of America came to an agreement regarding a project that will benefit the Boy Scouts, the public, and the environment. The Boy Scouts own a camp that is within the Piasa Creek Watershed. The facility, Camp Warren Levis, once had a 40-acre lake, which over the years filled with silt and became useless. The levy of the lake was breeched in 1989 in an attempt to dry the lakebed, however no funds were available to complete the restoration process. GRLT has proposed restoring approximately half of the original lake and the remainder will become an enhanced wetland. The restored lake will provide the Scouts with a variety of recreational activities and the wetland area will trap sediment and detain stormwater. In exchange for the restoration work, GRLT received a conservation easement on 253 acres of their camp.

Excavation work on the lakebed has been completed for Phase I as of Fall 2004. Phase II of the project, which consists of repairing the spillway, levy and restoring the dewatering device has been delayed by the Illinois Department of Natural Resources (IDNR) due to the dam reclassification from class III to class II. Engineers at Sheppard, Morgan, and Schwab have completed a breach analysis and hydraulic survey for the final phase of construction.

Wetland Mitigation Project

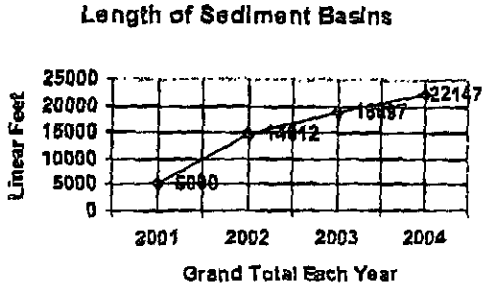
Great Rivers Land Trust was instrumental in making the city of Alton's Indiana Avenue Economic Development Project happen. GRLT helped the city meet federal and state regulations in regards to wetland preservation. Because of this mitigation project, Alton moved forward in rebuilding its economic development base. The wetlands are preserved for wildlife habitat, recreation, and erosion control - all while federal and state regulations are being met.

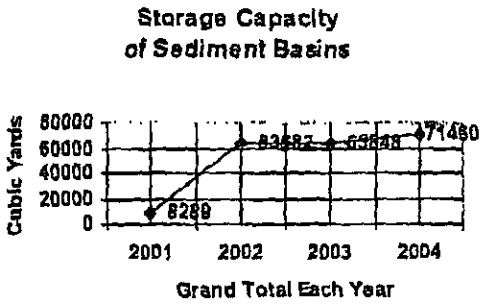
The 6.6 acres wetland has been functioning successfully and has retained and absorbed excessive winter rains. Work continues to maintain the trees, shrubbery and grasses as part of a stewardship plant in establishment of a healthy, sustainable wetland.

The wetland has been extremely successful in erosion and stormwater control. The rains filled the different wetland cells as planned. The conversion from intensive row crop cultivation to native wetland plants will provide an estimated savings of eight tons of soil an acre annually. The wetland will also retain millions of gallons of runoff which will reduce intense flash flooding and streambank degradation.

Agricultural Land Improvements

During 2004, the projects consisted of 18 dry basins. Support from the farming community has made this project a success by creating over 3,450 linear feet of sediment basins across Jersey & Madison County during 2004 bringing the total linear feet up to 22,147 since the project began.



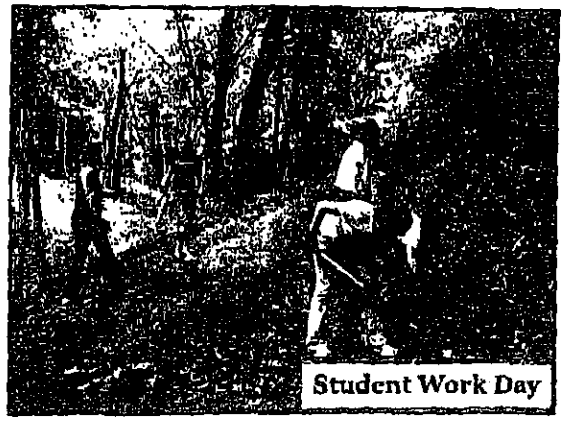


These 18 structures are designed with a storage capacity to hold up to 7,612 cubic yards or approximately 2.5 million gallons of water during a peak rainfall. These projects will also save approximately 244 tons of soil per year along Piasa Creek. This brings the total amount of soil saved per year up to 3,355 tons since the project first began.

Approximately eight project sites have been evaluated and pre-surveyed to start in 2005. GRLT has over 26 sediment basins, 2 terraces, 2 grassed waterways, and a stormwater retention basin on eight different properties arranged for implementation in 2005.

Grant Programs

Great Rivers Land Trust developed a **Service Learning Grant** cooperatively with the Unit 100 School District in Jersey County and submitted the proposal to the Illinois Board of Education for the third year. This collaboration has been successful in the past and has been beneficial to the high school students. With this grant, GRLT participated in the Annual Water Festival, stream cleanup days, environmental outings, and tree plantings.



Student Work Day

Streambank Cleanup Along Piasa Creek

GRLT acquired funds through the Illinois Environmental Protection Agency's **Streambank Cleanup and Lakeshore Enhancement (SCALE) grant** program. SCALE is aimed at funding cleanup events at streambanks and lakeshores. GRLT was awarded $500 from this program. On June 11, 2004 GRLT conducted a cleanup event in the Piasa Creek Watershed with the help of Jersey Community High School students. Our goal is to continue to make this project an annual event with the support from the surrounding community schools.

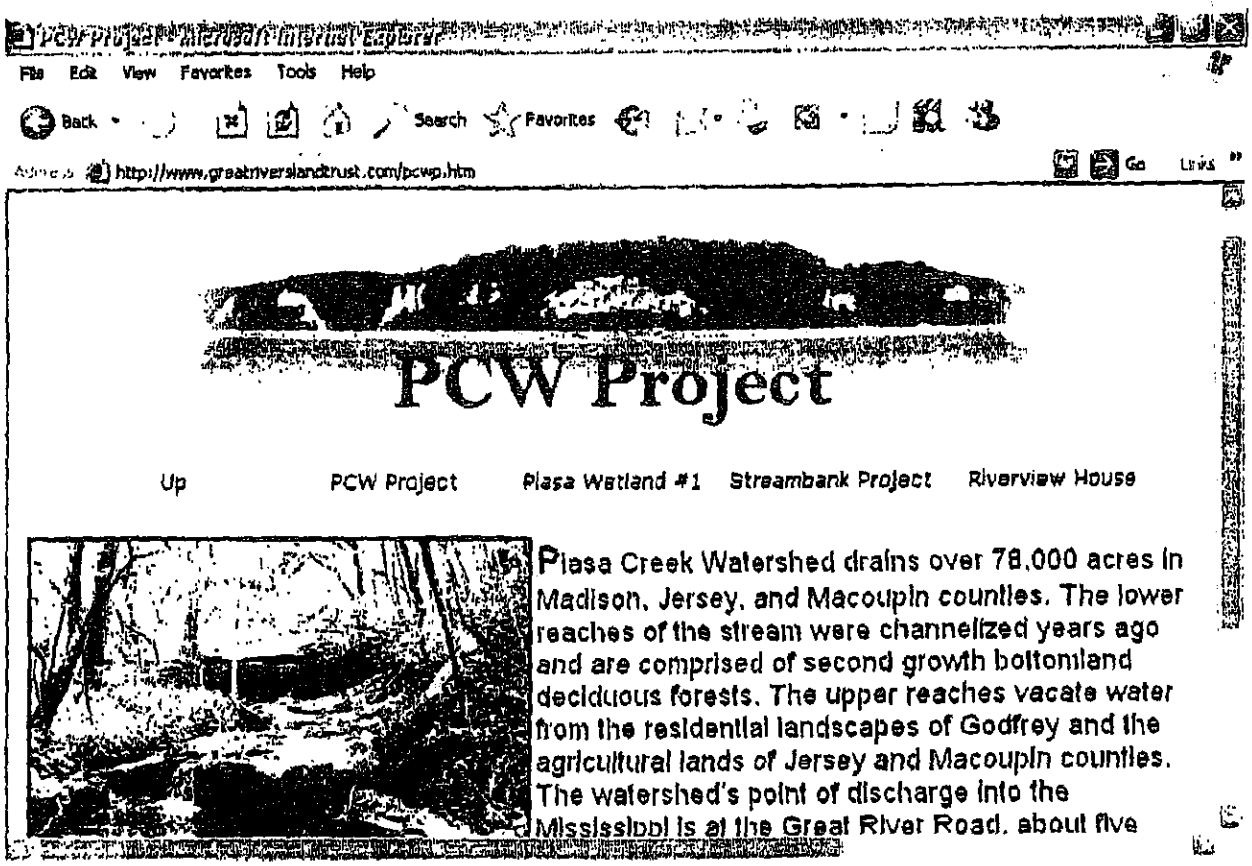
Trees Forever approved a $2,000 grant to purchase trees and grasses for the wetland area and surrounding embankment of the new Boy Scout Lake located at Camp Warren Levis. GRLT has received three Trees Forever grants in the past three years, all of which have been implemented as part of the Piasa Creek Watershed Project. The next proposal will involve a streambank stabilization project for the protection of a 40-acre wetland prairie. If approved, the project would be installed this summer with the assistance of volunteers.

Trees Planted at Boy Scout Lake Wetland

Press Releases

Piasa Creek Watershed Project has been publicized by various forms of press releases since the project's beginning in 2000. These press releases have been in various newspaper publications such as the St. Louis Post Dispatch, the Alton Telegraph, and the Illinois Business Journal. The project has also been featured in public radio announcements on WBGZ. Making the public more aware of this important project has made public acceptance of PWCP a reality.

Major events, updates, maps, and press releases regarding the project can also be located at Great Rivers Land Trust's website. The site is a direct method of dispersing information regarding PCWP and GRLT's other major projects. GRLT's website address is www.greatriverslandtrust.com and information regarding Piasa Creek Watershed Project can be found under "GRLT Projects".



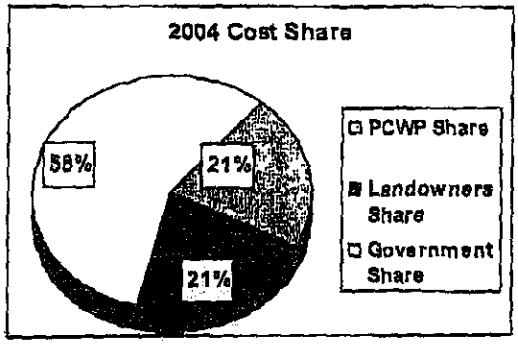
Partners

Great Rivers Land Trust has collaborated with many organizations, agencies, and municipalities while implementing the Piasa Creek Watershed Project. The following list highlights the various entities GRLT has collaborated with on this project.

- Illinois-American Water Company
- Illinois Department of Natural Resources
- Illinois Clean Energy
- Trees Forever
- Boy Scouts of America
- Village of Brighton
- Village of Godfrey
- Illinois Environmental Protection Agency
- Lewis & Clark Community College
- Illinois Department of Transportation
- Community School District 100
- The Nature Institute
- Illinois Nature Preserve
- University of Illinois
- Soil & Water Conservation District
- U.S. Department of Agriculture
- Resource Conservation &Development
- Cooperative Extension Service

Conclusion

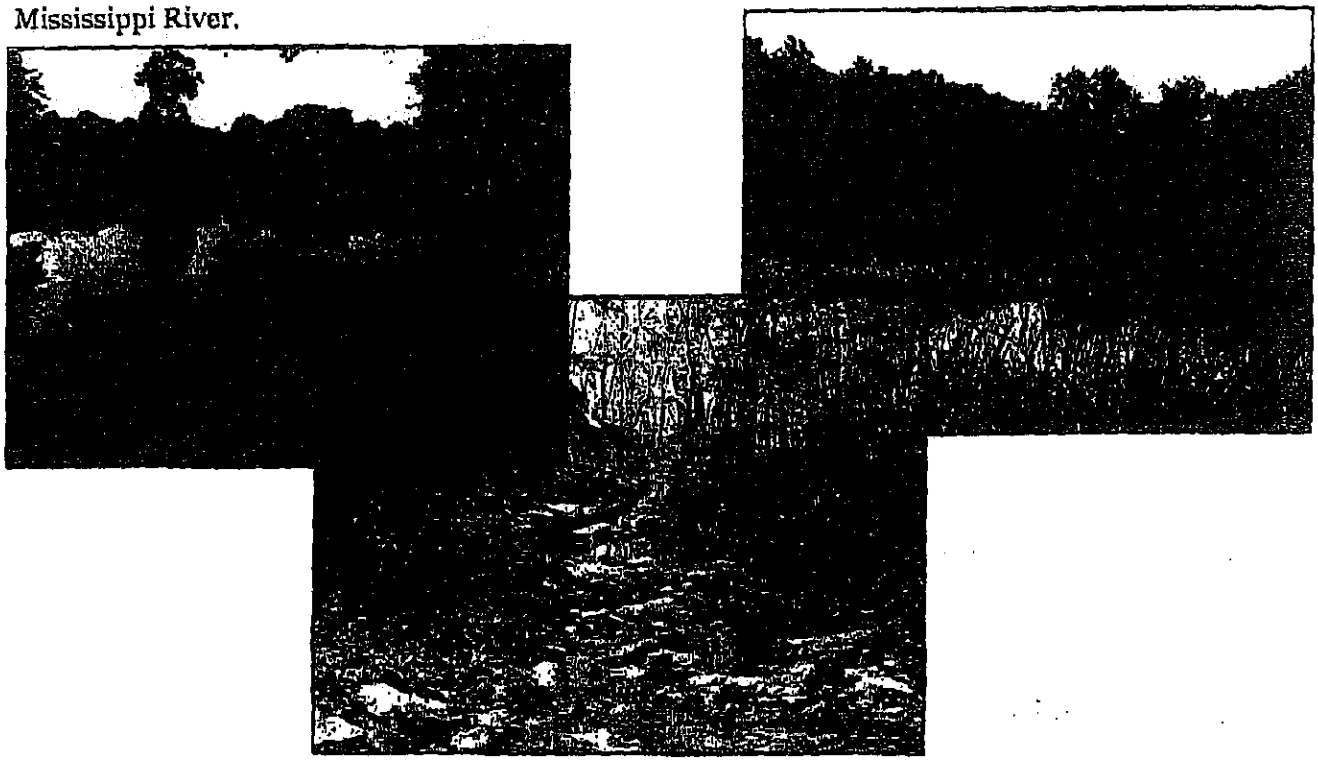
Great Rivers Land Trust has succeeded in implementing many aspects of the project this year. In 2004, the project has not only accomplished its goals as far as sedimentation projects, it also has made great strides in its educational component. Planning has been underway for the acquisition component of the project and several parcels have been targeted for acquisition.



PCWP's land improvement projects both on agricultural and urban lands have been exceptionally successful this year. The total cost of these projects in 2004 has been nearly $15,962.75. PCWP's share of the total cost was 21%. This year 244 tons of soil has been conserved because of this inventive project.

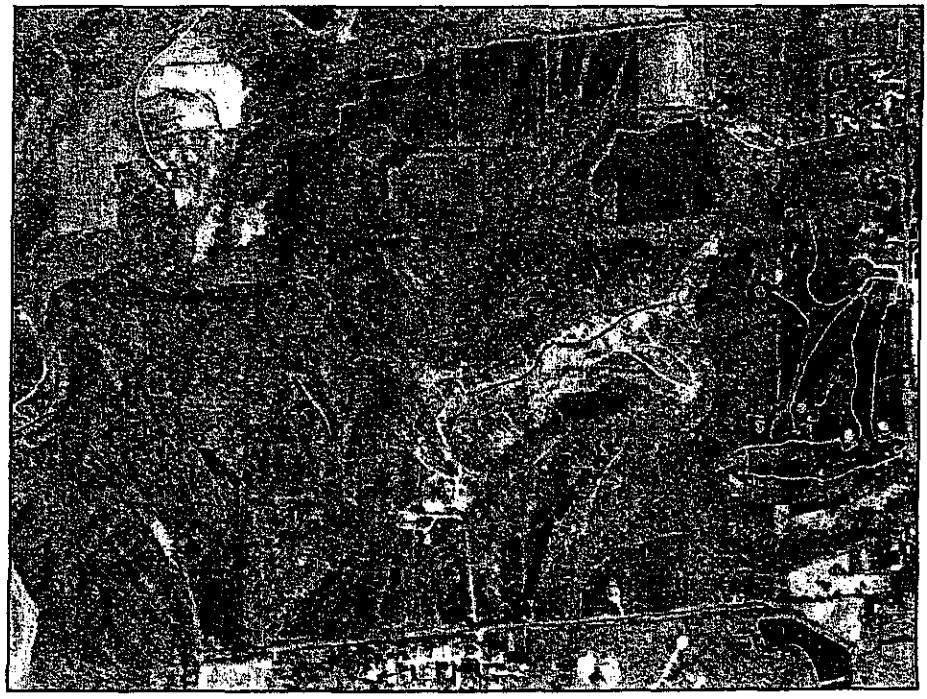
Next year, PCWP will heighten its efforts in the acquisition aspect of the project. With the help of the Geomorphic Inventory Assessment, properties have been properly prioritized for acquisition. During 2005, GRLT plans to acquire property in order to perform wetland and streambank enhancements to improve wildlife habitat along the Piasa Creek Watershed.

The enjoyed success of this project will surely lead to additional accomplishments next year. Its benefits reach beyond environmental values and touch upon other standards such as community and collaboration. PCWP will continue its endeavor to reduce the amount of sediment that enters the Mississippi River.

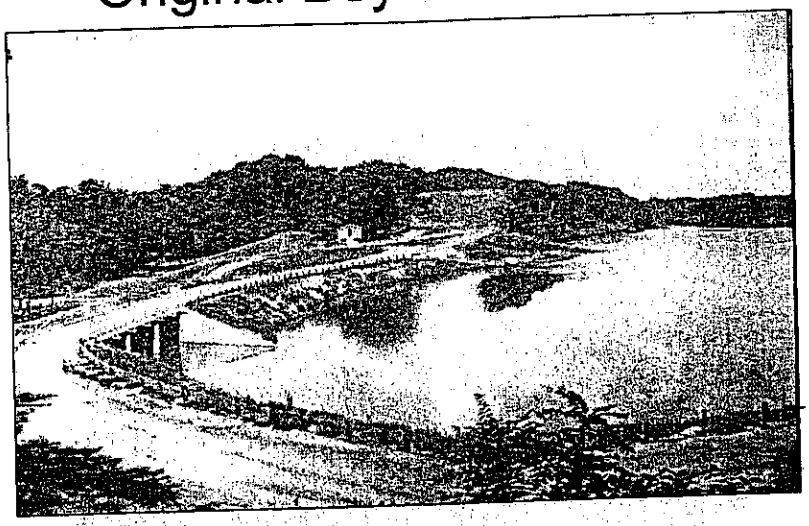


Boy Scout Lake Project

Great Rivers Land Trust
Illinois American Water
Boy Scouts of America



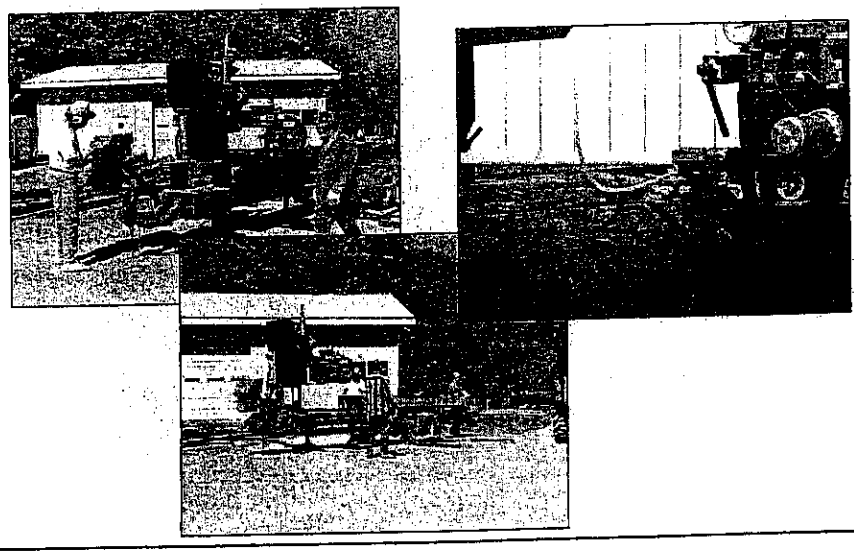
Original Boy Scout Lake



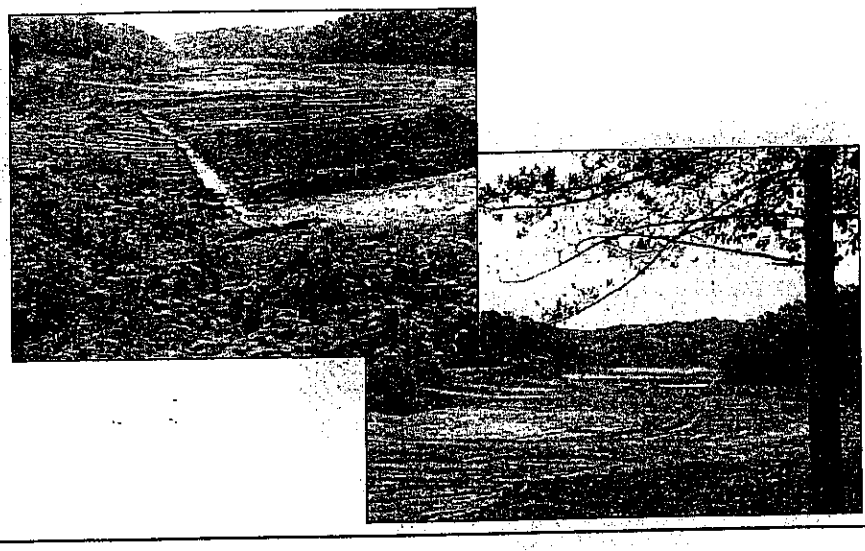
January 21, 2002

February 4, 2004

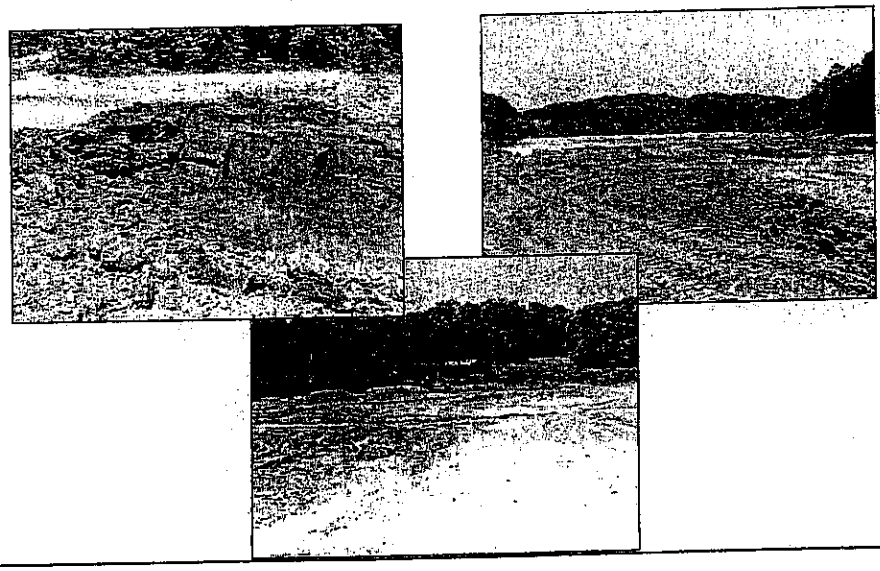
May 2004 – Saw Mill



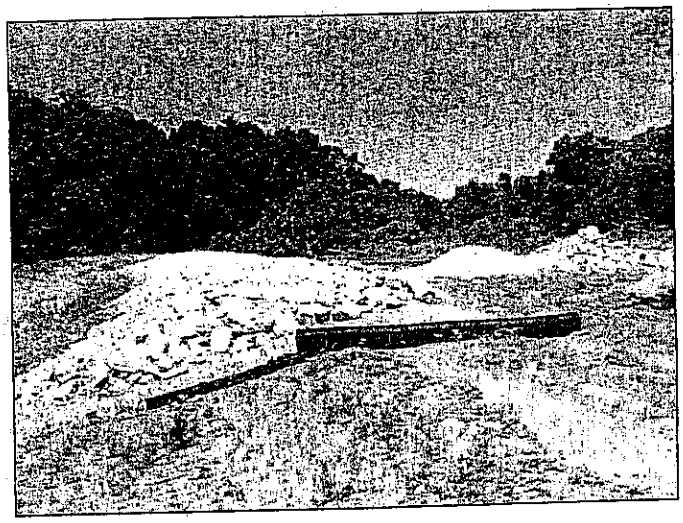
May 28, 2004



June 7, 2004



June 23, 2004



June 23, 2004

November 10, 2004
Tree Planting

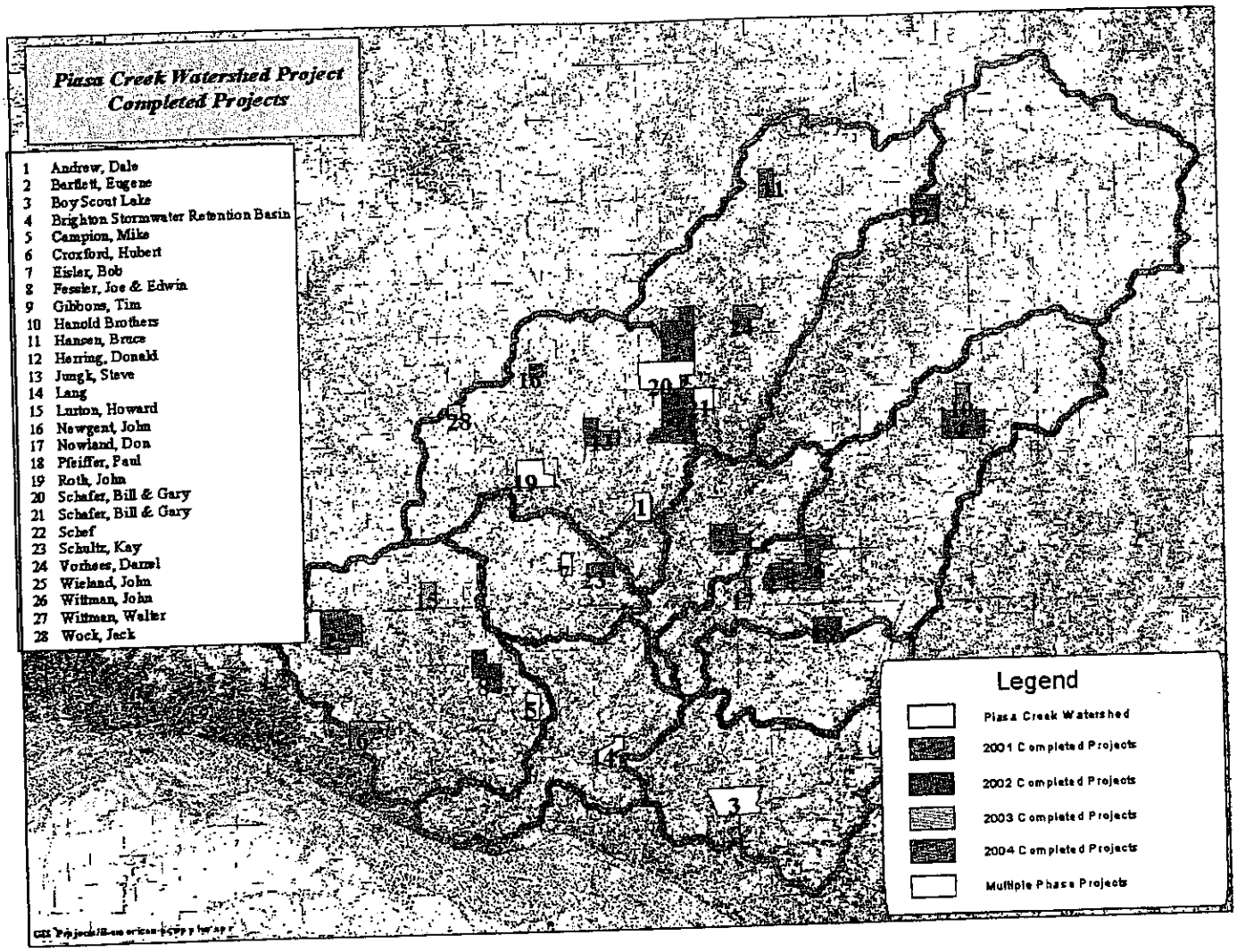
November 10, 2004
Tree Planting

November 10, 2004
Tree Planting

MISSOURI • ILLINOIS
GREAT RIVERS
LAND TRUST
MISSISSIPPI

Illinois
American Water

RWE


Piasa Creek Watershed Project
Completed Projects
1 Andrew, Dale
2 Bartlett, Eugene
3 Boy Scout Lake
4 Brighton Stormwater Retention Basin
5 Campion, Mike
6 Croxford, Hubert
7 Eisler, Bob
8 Fessler, Joe & Edwin
9 Gibbons, Tim
10 Hanold Brothers
11 Hansen, Bruce
12 Herring, Donald
13 Jungk, Steve
14 Lang
15 Lurton, Howard
16 Newgent, John
17 Nowland, Don
18 Pfeiffer, Paul
19 Roth, John
20 Schafer, Bill & Gary
21 Schafer, Bill & Gary
22 Schef
23 Schultz, Kay
24 Vorhees, Darrel
25 Wieland, John
26 Wittman, John
27 Wittman, Walter
28 Wock, Jack
Legend
Piasa Creek Watershed
2001 Completed Projects
2002 Completed Projects
2003 Completed Projects
2004 Completed Projects
Multiple Phase Projects

PCW Project Form

Date	Project ID
	60

Project Name
Andrew, Dale

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	25	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
34		complete	2003

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
3 stream barbs; 345' protected; 195 + 75 up/down

Project Cost Breakdown

Total Cost
$8,391.75

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$1,258.76	$419.58	$6,713.40

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
450	0	0	0		

Notes

PCW Project Form

Date	Project ID
	63

Project Name
Bartlett, Eugene

Operator
Paul Bartlett

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	6 & 7	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
37		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1			

Other Projects

Project Cost Breakdown

Total Cost
$6,285.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$2,500.00	$3,785.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
246	246	0	183		6614

Notes

PCW Project Form

Date	Project ID
	62

Project Name
Boy Scout Lake

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Madison	6N	10W	28	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
36	I	complete	2004

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
lake excavation & enhanced wetland

Project Cost Breakdown

Total Cost
$0.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$0.00	$0.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
1920	0	0	2560		

Notes
preliminary values on acres benefited and soil saved

PCW Project Form

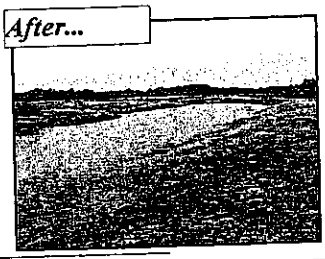
Date	Project ID
	37

Project Name
Brighton Storm Water Retention Basin

Operator

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W			0

Project Identification

PCWP ID	Phase	Status	Year Completed
11		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1			

Other Projects
dam construction

Project Cost Breakdown

Total Cost
$12,527.56

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$40.93	$55.79	$6,263.78	$6,263.78	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
67	67	124	140		10244

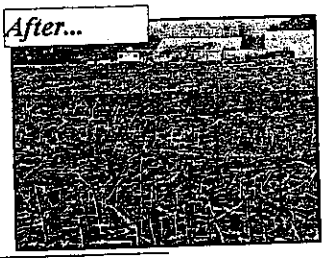
Notes

PCW Project Form

Date	Project ID
	74

Before...

After...



Project Name
Campion, Mike

Operator

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	6N	11W	SW 12	3373	3,9,10,11

Project Identification

PCWP ID	Phase	Status	Year Completed
48	I	complete	2003

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	14	0	0

Other Projects

Project Cost Breakdown

Total Cost
$8,922.75

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$44.12	$134.39	$4,461.38	$1,784.55	$2,676.83

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
50	50	56	35	2065	113

Notes

PCW Project Form

Date	Project ID
	57

Before...

After...

Project Name
Eisler, Bob

Operator
Bob Eisler

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	33 & 35	4334	1

Project Identification

PCWP ID	Phase	Status	Year Completed
31	I	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	5		

Other Projects
tile; outlet pipes

Project Cost Breakdown

Total Cost
$3,439.50

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$33.23	$143.31	$2,579.63	$859.87	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
104	104	0	24	1025	2006

Notes

PCW Project Form

Date	Project ID
1/30/2004	57

Before...

After...

Project Name

Eisler, Bob

Operator

Bob Eisler

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	33 & 35	3963	6

Project Identification

PCWP ID	Phase	Status	Year Completed
51	II	complete	2004

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	4	0	0

Other Projects

Project Cost Breakdown

Total Cost
$2,557.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$18.39	$213.08	$511.40	$511.40	$1,534.20

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
103	103	36	12	650	820

Notes

PCW Project Form

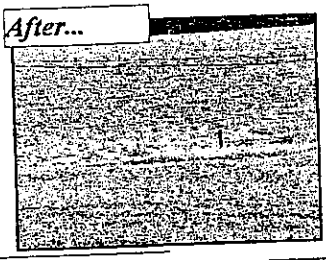
Date	Project ID
	59

Project Name
Fessler, Joe & Edwin

Operator
Joe Fessler

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	6N	11W	3, 10, 11	2382	4

Project Identification

PCWP ID	Phase	Status	Year Completed
33		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	6	2	

Other Projects
tile, outlet pipes

Project Cost Breakdown

Total Cost
$6,050.25

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$30.91	$228.69	$4,235.18	$1,815.07	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
134	134	0	18		

Notes

PCW Project Form

Date	Project ID
	56

Project Name
Gibbons, Tim

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	18	3598	1252

Project Identification

PCWP ID	Phase	Status	Year Completed
30		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1			

Other Projects

Project Cost Breakdown

Total Cost
$0.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$3,500.00	$6,500.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
202	202	0	134	2002	13390

Notes

PCW Project Form

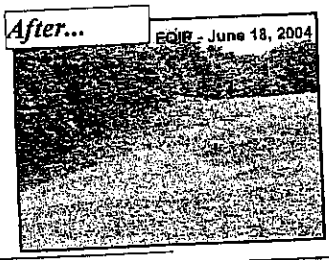
Date	Project ID
5/7/2004	80

Project Name
Hanold Brothers

Operator
Hanold Brothers

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	13 NE	3456	1

Project Identification

PCWP ID	Phase	Status	Year Completed
58	I	complete	2004

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	7	0	0

Other Projects

Project Cost Breakdown

Total Cost
$6,763.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$60.27	$221.01	$1,581.00	$1,581.00	$3,601.00

Benefits of Project

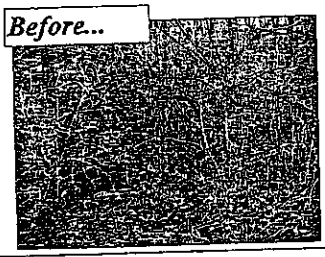
Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
51	51	61	31	1085	4544

Notes

PCW Project Form

Date	Project ID
	27

Before...



After...

Project Name
Hansen, Bruce

Operator

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	8N	10W	28	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
1	1	complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	7		

Other Projects

Project Cost Breakdown

Total Cost
$7,168.85

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$128.83	$1,654.35	$2,205.80	$3,308.70

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
128	128	0	43	1055	2699

Notes

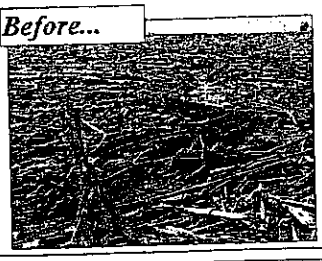
PCW Project Form

Date	Project ID
	70

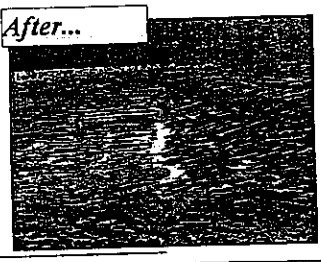
Project Name
Herring, Don

Operator
D. Smith

Before...



After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	8N	10W	25 SW	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
45		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	2		

Other Projects

Project Cost Breakdown

Total Cost
$2,511.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$11.87	$31.78	$502.20	$502.20	$1,506.60

Benefits of Project

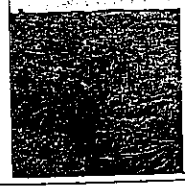
Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
24	24	18	16	520	2264

Notes

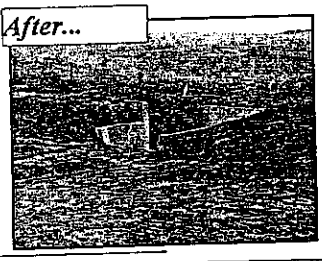
PCW Project Form

Date	Project ID
	33

Before...



After...



Project Name
Jungk, Steve

Operator

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	13	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
7	I	complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
1 waterway/ drop box

Project Cost Breakdown

Total Cost
$3,660.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$159.13	$2,745.00	$915.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
108	108	0	23		

Notes

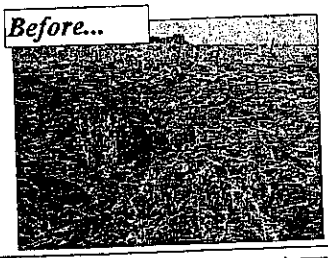
PCW Project Form

Date	Project ID
	33

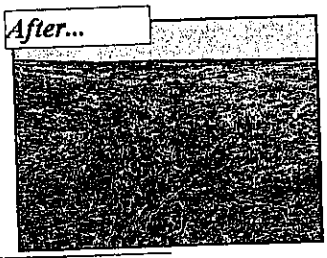
Project Name
Jungk, Steve

Operator
Steve Jungk

Before...



After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	13	675	14

Project Identification

PCWP ID	Phase	Status	Year Completed
10	II	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	3		

Other Projects
tile, outlet pipe

Project Cost Breakdown

Total Cost
$2,225.75

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$17.55	$152.05	$1,669.31	$556.44	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
122	122	64	22	600	1164

Notes

PCW Project Form

Date	Project ID
	50

Project Name
Lang

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Madison	6N	10W	19	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
24	1	complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
500' buffer strip

Project Cost Breakdown

Total Cost
$0.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$0.00	$0.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
0	0	0	0		

Notes

PCW Project Form

Date	Project ID
	50

Project Name: Lang

Operator:

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Madison	6N	10W	19	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
38	II	complete	

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects: wetland

Project Cost Breakdown

Total Cost
$0.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$0.00	$0.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
56	0		7		

Notes:

PCW Project Form

Date	Project ID	Before...	After...
	50		

Project Name
Lang

Operator

Project Location

County	Township	Range	Section	Farm Number	Field Number
Madison	6N	10W	19	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
43	III	complete	

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
bottomland prairie

Project Cost Breakdown

Total Cost
$0.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$0.00	$0.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
184	0	0	23		

Notes

PCW Project Form

Date	Project ID
6/16/2004	75

Project Name
Lurton, Howard

Operator
Marty Kirback

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	33 SW	815	2A

Project Identification

PCWP ID	Phase	Status	Year Completed
52	I	complete	2004

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	2	0	0

Other Projects

Project Cost Breakdown

Total Cost
$2,034.75

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$39.36	$230.71	$406.95	$406.95	$1,220.85

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
27	27	14	7	400	556

Notes

PCW Project Form

Date	Project ID
	61

Project Name
Newgent, John

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	11	2104	0

Project Identification

PCWP ID	Phase	Status	Year Completed
35		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1			

Other Projects

Project Cost Breakdown

Total Cost
$9,904.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$21.28	$31.25	$3,500.00	$6,404.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
117	117	0	80		9034

Notes

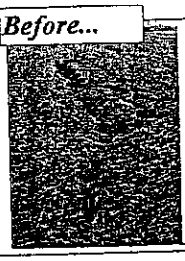
PCW Project Form

Date	Project ID
6/16/2004	81

Project Name
Nowland, Don

Operator
Bob Hawkins

Before...



After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	32 SE	4062	1

Project Identification

PCWP ID	Phase	Status	Year Completed
59	1	complete	2004

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	5	0	0

Other Projects

Project Cost Breakdown

Total Cost
$4,608.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$47.99	$323.31	$921.60	$921.60	$2,764.80

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
63	63	27	13	1315	1692

Notes

PCW Project Form

Date	Project ID
	66

Before...

After...

Project Name
Pfeiffer, Paul

Operator
Paul Pfeiffer

Project Location

County	Township	Range	Section	Farm Number	Field Number
Madison	6N	10W	10 & 11	1054	3

Project Identification

PCWP ID	Phase	Status	Year Completed
40		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	14		

Other Projects

Project Cost Breakdown

Total Cost
$16,155.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$248.00	$316.00	$4,846.50	$1,615.50	$9,693.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
64	64	0	51	2180	2414

Notes

PCW Project Form

Date	Project ID
	69

Project Name
Roth, John

Operator
Fessler

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11N	23	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
44	1	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1	8		3

Other Projects

Project Cost Breakdown

Total Cost
$6,955.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$2,500.00	$4,455.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
25	25	11	5	0	2420

Notes

PCW Project Form

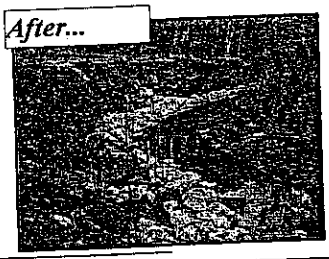
Date	Project ID
	69

Project Name
Roth, John

Operator

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11N	23	4477	17

Project Identification

PCWP ID	Phase	Status	Year Completed
49	II	complete	2003

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	0	0	0

Other Projects
7 rock riffles; 450 stone toe

Project Cost Breakdown

Total Cost
$13,250.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$1,987.50	$662.50	$10,600.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
244	0	0	0	0	0

Notes

PCW Project Form

Date	Project ID
	34

Before...

After...

Project Name
Schafer, Bill & Gary

Operator
Gary Schafer

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	7	1274	2

Project Identification

PCWP ID	Phase	Status	Year Completed
8	I	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes

Other Projects
drop box; dual wall pipe; repair structure

Project Cost Breakdown

Total Cost
$1,820.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$33.95	$138.93	$910.00	$910.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
54	54	0	13		

Notes

PCW Project Form

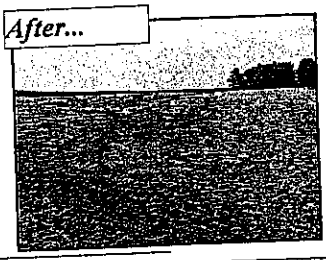
Date	Project ID
	35

Project Name
Schafer, Bill & Gary

Operator
Bill Schafer

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	17	1274	11

Project Identification

PCWP ID	Phase	Status	Year Completed
9	II	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	4		

Other Projects

Project Cost Breakdown

Total Cost
$3,780.50

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$4.96	$37.27	$756.10	$756.10	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
55	55	110	22	825	1911

Notes

PCW Project Form

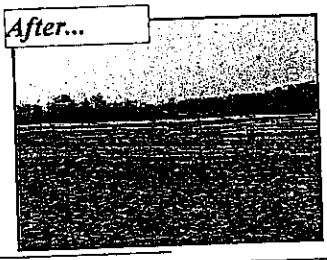
Date	Project ID
	29

Project Name
Schef

Operator

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	29	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
3	1	complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	10		

Other Projects

Project Cost Breakdown

Total Cost
$12,901.25

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$62.03	$128.69	$7,740.75	$5,161.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
183	183	0	88	2350	3088

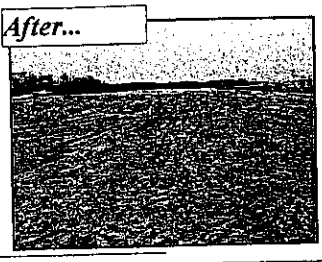
Notes

PCW Project Form

Date	Project ID
	29

Before...

After...



Project Name
Schef

Operator
Tim Gibbons

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	29	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
5	II	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	4		

Other Projects

Project Cost Breakdown

Total Cost
$2,587.50

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$22.15	$359.38	$1,552.50	$1,035.00	$0.00

Benefits of Project

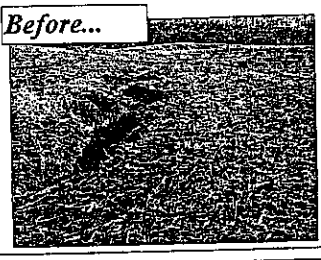
Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
88	88	29	7	650	793

Notes

PCW Project Form

Date	Project ID
	58

Before...



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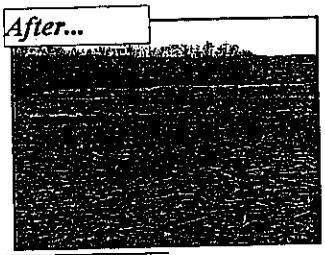


Project Name
Schultz, Kay

Operator
Kay Schultz

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	36	3550	8

Project Identification

PCWP ID	Phase	Status	Year Completed
32		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	5	1	

Other Projects
tile, outlet pipe

Project Cost Breakdown

Total Cost
$4,187.50

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$46.02	$370.58	$837.50	$837.50	$2,512.50

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
91	91	0	11		

Notes

PCW Project Form

Date	Project ID
	32

Project Name
Vorhees, Darrel

Operator

Before...

After...

Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	4 & 5	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
6		complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
1			

Other Projects

Project Cost Breakdown

Total Cost
$9,645.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$117.20	$797.00	$7,233.75	$2,412.00	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
68	68	0	10		

Notes

PCW Project Form

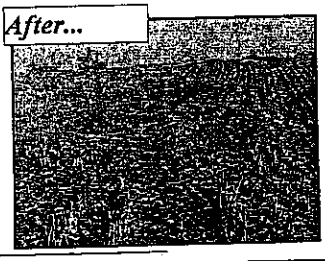
Date	Project ID
	28

Project Name
Wieland, John

Operator
Joe Fessler

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	6N	11W	5	8573	0

Project Identification

PCWP ID	Phase	Status	Year Completed
2	1	complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	8		3

Other Projects
waterways

Project Cost Breakdown

Total Cost
$6,599.25

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$26.40	$188.55	$4,949.44	$1,649.81	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
250	250	0	35	1100	2420

Notes

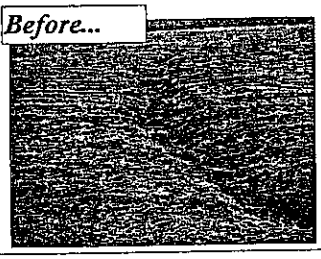
PCW Project Form

Date	Project ID
	30

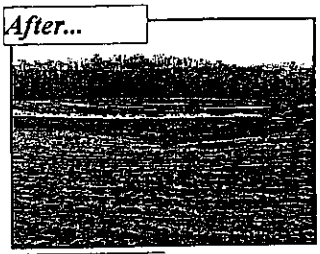
Project Name: **Wittman, John**

Operator:

Before...



After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	27, 33 & 34	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
4		complete	2001

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	10		

Other Projects:

Project Cost Breakdown

Total Cost
$9,234.02

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$0.00	$0.00	$2,402.00	$923.00	$5,909.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
69	69	108	36	1685	2502

Notes:

PCW Project Form

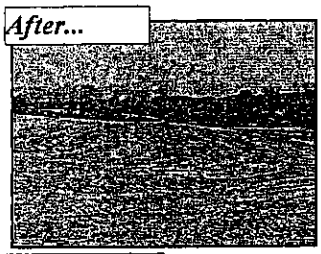
Date	Project ID
	38

Project Name: **Wittman, Walter**

Operator:

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	10W	33	0	0

Project Identification

PCWP ID	Phase	Status	Year Completed
12		complete	2002

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
	3		

Other Projects:

Project Cost Breakdown

Total Cost
$3,624.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$99.29	$188.55	$1,087.20	$2,536.80	$0.00

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
36	36	0	35	820	619

Notes:

PCW Project Form

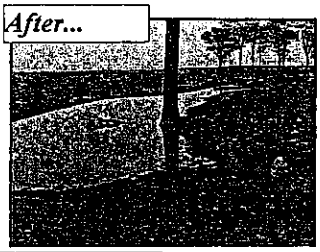
Date	Project ID
	73

Project Name
Wock, Jack

Operator
Randy Neal

Before...

After...



Project Location

County	Township	Range	Section	Farm Number	Field Number
Jersey	7N	11W	NE 1/4 16	3951	122

Project Identification

PCWP ID	Phase	Status	Year Completed
47	I	complete	2003

Project Description

# of SW Retention Basins	# of Dry Basins	# ofTerraces	# of Rock Chutes
0	10	0	0

Other Projects

Project Cost Breakdown

Total Cost
$10,520.00

Cost per Ton	Cost per Acre	PCWP Share	Landowners Share	Govenment Share
$39.84	$288.23	$5,352.75	$2,011.10	$3,156.15

Benefits of Project

Soil Saved (tons)	Gully Erosion	Sheet/Rill Erosion	Acres Benefited	Linear Feet	Storage Capacity
132	132	85	30	1820	153

Notes

Piasa Creek Watershed Project to have benefits for all

Do you want clean water? The natural response to this question is "yes," but it usually leads to additional questions such as: Are you referring to drinking water or water in a stream or river? I have a project that has a positive response all around.

Watershed planning has become a buzz phrase in the environmental and conservation fields. The problem is that the majority of projects rarely get past the planning phase and into the implementation phase. Even if they do reach implementation, the funding levels are so low that only small-scale demonstration projects are completed. The story is totally different with the Piasa Creek Watershed Project. All the players involved will see benefits of one form or another.

For those not familiar with the watershed concept, a watershed is the area of land that catches rain, snow and other precipitation that drains into a stream, marsh, river, lake or groundwater. Within the watershed, all water drains to the lowest point. On its way, water travels over the surface of the land or seeps into the soil and becomes groundwater. During its journey, water can pick up soil particles, oil, road salts, organic materials, pesticides, excess fertilizer and other nutrients.

Not all watersheds are alike. They come in all shapes and sizes. The area within a watershed can include any possible land uses such as farms, ranches, forests, small towns or large cities. A watershed can be as massive as all the land drained by the Mississippi River and its tributaries, a medium-sized drainage area like the Piasa Creek Watershed or an area as small as a couple of acres draining into a farm pond.

The Piasa Creek Watershed drains more than 78,000 acres in portions of Jersey, Madison and Macoupin counties. The lower reaches of the creek were channelized years ago and are made up of second growth bottomland deciduous forests. The upper reaches vacate water from the residential landscapes of Godfrey and the rich agricultural lands of Jersey and Macoupin counties. The watershed's point of discharge into the Mississippi River is at the Great River Road, about five miles north of Alton.

What sets the Piasa Creek Watershed Project apart from other watershed projects is the unique arrangement between the partners involved. In order for you to better understand the current arrangement, I need to give you a little background information.

Ringhausen

The original watershed management plan was developed in 1995 at a time when watershed management was a relatively new concept. Although a number of watershed management projects have been implemented since the development of the plan, most of those projects have been small in scale, because no program existed to fully fund a total watershed treatment of this proportion.

One of the partners in the agreement, Illinois-American Water Company, has been operating a water treatment facility along the Mississippi River at the west edge of Alton for more than 100 years. During that time, the company drew water from the river, filtered the water, sold the clean water to the people in surrounding communities and deposited the filtered sediment back into the river.

The facility was subject to flooding, so in 1999 the water company began construction of a new water treatment plant. New environmental regulations would require the planned facility to construct sediment lagoons instead of discharging the materials back into the river. The new lagoons are costly to construct and maintain. As an alternative, the Illinois-American Water Company proposed funding the Piasa Creek Watershed Project to reduce sediment entering the Mississippi River at a 2-1 ratio compared to what the water plant would discharge into the river (3,300 tons per year).

In return for approximately $4 million in funding for the life of the 10-year project, the water company would be granted a discharge permit by the Illinois Environmental Protection Agency.

Great Rivers Land Trust is a local, nonprofit organization formed by private citizens in 1992. GRLT was one of the cooperating partners in the development of the Piasa Creek Watershed Plan in 1994. Since the land trust had a strong history of negotiating land and easement acquisitions as well as grant management, its board agreed to act as administrators of the watershed project. The concept received the approval of both the IEPA and the Illinois Pollution Control Board.

Great Rivers Land Trust and the Illinois-American Water Company signed an agreement to begin implementation of the Piasa Creek Watershed Project. The 10-year project will attempt to reduce sedimentation in the Piasa Creek Watershed by approximately 6,600 tons per year by the end of the contractual agreement. The process of achieving the sediment reduction rates will include a variety of soil conservation practices such as silt basins, dry dams, streambank stabilization, land acquisition and various other practices to reduce sedimentation.

I mentioned at the start that all the players involved are winners, and they are. Some of the benefits are immediate, others are long-term. One of the immediate benefits is that the water company will receive a discharge permit from the IEPA. The result of awarding the permit to Illinois-American is millions of dollars in savings in projected construction and operating expenditures. The lower construction and operating costs can result in lower water bills for area residents.

Since a lagoon system will not be necessary, sediment will not have to be transported to landfills, the benefits of which include fewer semi trucks traveling the area roads, lower air pollution and the saving of precious landfill space.

Factors affecting the Piasa Creek Watershed include reduced erosion, improved water quality, stormwater control, enhanced fish and wildlife habitat, protection of sensitive ecosystems, and financial incentives to farmers and landowners to implement conservation practices. The other major benefit in the end will be a cleaner Piasa Creek and a cleaner Mississippi River.

Alley Ringhausen is a member of the Great Rivers Land Trust staff in Alton. He can be reached at (618)467-2265 or pcwp@piasanet.com.

Illinois Business Journal

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Piasa watershed may get federal fund boost

By Terry Hillig

GODFREY - An ongoing cleanup of the Piasa Creek watershed could be in line for a $1.2 million boost of federal funding.

The project is one of five in Illinois nominated last week by Gov. George Ryan to share in $21 million in grants to be awarded under a new federal watershed initiative. Ryan also nominated a similar project in the Kaskaskia River watershed in Southern Illinois for a grant of $975,000. About 20 projects will be funded nationwide.

The 10-year Piasa Creek project is the product of a partnership between the nonprofit Great Rivers Land Trust and Illinois-American Water Co. Several weeks ago, the governor's office announced the project had been honored with one of the governor's annual pollution-prevention awards.

The Illinois Pollution Control Board approved the project in 1999 as an alternative to requiring that Illinois-American build settling lagoons at its new water treatment plant. The lagoons would have kept sediment filtered from Mississippi River water from being returned to the river.

Illinois-American officials said the lagoons would have added $7.4 million to construction costs and an estimated $1.4 million a year in operating expenses. The company proposed instead to provide $4.15 million for a 10-year cleanup and restoration of the watershed.

The lagoons would have kept about 3,300 tons of sediment out of the river each year, but the watershed project will reduce sediment by twice that amount, said Alley Ringhausen, executive director of Great Rivers Land Trust.

Ringhausen said the plan will save money for the company and its customers while improving the environment.

"This is a win-win situation all around," he said.

Piasa Creek drains an area of more than 78,000 acres in Madison, Jersey and Macoupin counties and empties into the Mississippi River north of Godfrey. Experts estimate that the watershed discharges 113,000 tons of sediment into the Mississippi each year.

Ringhausen said the project is now in its third year and has taken important steps toward its goal. In cooperation with various organizations and public and private land owners, numerous erosion-control projects have been undertaken. He said Great Rivers is working with another nonprofit organization, Trees Forever, to plant trees, shrubs and grass to help stabilize stream banks and reduce runoff.

Ringhausen said the requested federal grant would allow an expansion of the project to further reduce the volume of sediment discharged into the river.

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ST. LOUIS POST-DISPATCH

Organization will restore lake at Boy Scout camp

This story was published in A-section on Thursday, August 8, 2002.

By Alexa Aguilar
Of The Post-Dispatch
The Boy Scouts of the Trails West Council have been longing for a lake at their summer camp since 1988, when their lake went dry.

They may be swimming in the lake by next summer, thanks to a deal struck Wednesday between the council and the Great Rivers Land Trust to re-establish the lake at Camp Warren Levis, near Godfrey.

In exchange for restoring the lake, the council has agreed to a conservation easement that prohibits development on the grounds.

The deal will go before the council's executive board later this month, where passage is expected.

The lake at Camp Warren Levis, a 287-acre camp operated by the council, was originally built in 1947. Once a central part of the campgrounds, the lake filled in with sediment from the surrounding areas by the late 1980s.

The council, which serves more than 9,000 boys in a six-county area of southwestern Illinois, had searched for a way to fix it for more than a decade but were unable to find an entity willing to shoulder the cost of the project. They began talking with Great Rivers Land Trust, a nonprofit organization, in December, said Mark D. Speciale, former council president and chairman of the lake development committee.

A lake is long overdue, Speciale said. The council operates another camp in Missouri, and Speciale said more Scouts camp there because it has a lake.

"The total camping experience for a Scout includes a lake," Speciale said. "It's been a really sore subject for us. Most camps have a lake, but no one was willing to take on the cost."

Alley Ringhausen, executive director for Great Rivers Land Trust, said he did not have an estimate for the project, but said it would easily be a six-figure job. Bids on the project will be sought by the end of the year.

The lake restoration will be part of the Great Rivers Land Trust's 10-year Piasa Creek watershed project, which works to reduce sedimentation of the Mississippi River, Ringhausen said. Camp Warren Levis is within the boundaries of the project.

He said 20 acres of the original 40-acre lake will be restored to a lake for use by the Scouts; the other 20 will become a wetland area that will keep the sediment from refilling the lake.

As part of the easement, the Scouts will be able to build, repair, or tear down any of their facilities in a 55-acre area. They can also build trails, restrooms, or shelters anywhere in the camp.

What they cannot do is develop the 287 acres. The Scouts are not prohibited from selling the land, but it has to be to an entity that will preserve the open space.

Speciale said it is likely the lake will be ready by camping season next year.

SUNDAY
THE TELEGRAPH
Serving the River Bend Since 1836
Vol. 167, No. 223
August 25, 2002 - A1

National group helps fund environmental project here

By SHAWN CLUBB
Telegraph staff writer

GODFREY — A local organization working to reduce sediment traveling from Piasa Creek into the Mississippi River is receiving assistance from a national organization.

The Great Rivers Land Trust has been working on a 10-year project to add natural filters to Piasa Creek, such as buffers and wetland areas. These actions would reduce the amount of sediment and chemicals flowing off farm fields and other sites into the creek and eventually to the Mississippi.

Now, a nonprofit environmental agency called Trees Forever has chosen creation of a natural buffer zone along one acre of the creek as one of its 20 projects in Illinois.

Alley Ringhausen, executive director of Great Rivers, said the project is above the Illinois Route 3 bridge on Piasa Creek. He said the Illinois Department of Transportation put in riprap along the bank by the bridge to keep the channel from shifting and affecting the bridge. He said Great Rivers will come in this fall and plant trees, shrubs and grasses as an extra buffer.

> "What they're doing down there, it's a pretty noble feat."
>
> Jason Anderson
> Trees Forever field coordinator, discussing Land Trust's work on Piasa Creek

"We're going to come in behind all that rock and put in

■ See PROJECT, Page A15

Project

■ Continued from Page A1

different levels of plants, well-established plants. Some will be eight feet tall to start with," Ringhausen said. "The benefits will be immediate."

Jason Anderson, Trees Forever field coordinator for the southern half of Illinois, said this is one of the smaller projects the organization is funding, but that means Great Rivers can do even more with the money. He said Trees Forever will fund 50 percent of the expenses, not to exceed $2,000.

"What they're doing down there, it's a pretty noble feat," Anderson said. "IDOT had removed vegetation. Great Rivers decided it wanted to restore the area. That's what we do. We look at restoring, repairing areas to filter water in rural areas. It's a natural fit."

Anderson said the roots of the plants, trees and grasses provide an ideal habitat for microorganisms.

"The biomass acts as a sponge to contaminants that enter our streams — sediments, nitrogen, phosphorus, any herbicides or pesticides," he said. "Native (plants) have high density and volume of roots. They're tougher. I've seen where Atrazine will move into the grass. The plant will turn brown, but later re-grow from the underground structure.

"The canopy also works in managing that stream. When it gets out of its bank, as it does there, tree roots will hold the banks, slow the water, spread the water. They steal energy from that water as it gets out of those banks. It's really a foolproof system."

ST. LOUIS POST-DISPATCH

METRO ST. LOUIS

"It is such an important asset to the council. Soon, kids are going to be boating and canoeing on the lake again." – Scout Executive Don Kinney

Joint project will restore use of silted-up lake at Scouts' Camp Warren Levis near Godfrey

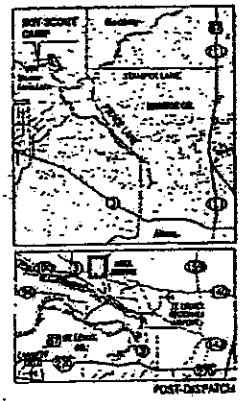
Land trust is donating work in exchange for conservation of site

By Terry Hillig
Of the Post-Dispatch

The Boy Scouts Trails West Council and the Great Rivers Land Trust are preparing for a long-awaited restoration of the lake at the Scouts' Camp Warren Levis in Godfrey.

"We're really excited about re-establishing the lake," Scout Executive Don Kinney said. "It is such an important asset to the council. Soon, kids are going to be boating and canoeing on the lake again."

The two organizations invite the public to attend an event celebrating the project from 3 to 6 p.m. Sunday. The camp is at 5500 Boy Scout Lane. Informative displays will describe the lake project and other activities of the land trust. There will be live music, snacks and apple cider, all free of charge.



The Scouts acquired the 287-acre camp property in 1924. The lake was built in 1947, but silting made it unusable by the late 1980s. It was drained but a planned dredging was never done.

Kinney said cost was a major obstacle for the council. Once, he said, an Army Reserve unit agreed to do some excavation, but the plan died when the unit was deployed to South America.

Boy Scouts and Great Rivers officials discussed the situation for several years before reaching agreement last summer.

Trails West Council serves nearly 10,000 boys in Madison, Jersey, Bond, Macoupin, Calhoun and Greene counties in southwestern Illinois; the land trust is a nonprofit organization established in 1992 for the primary purpose of preserving scenic, undeveloped land in the Alton-Godfrey-Grafton area.

See Camp, C4

The project will be part of Great Rivers' 10-year Piasa Creek watershed project, which is aimed at reducing sedimentation of the Mississippi River.

Camp

Joint project will restore use of lake for Scouts

Continued from C1

Great Rivers Executive Director Alley Ringhausen said the organization agreed to restore about 15 acres of the lake and develop a wetland on another 15 acres. In return, the Scouts gave Great Rivers a conservation easement for the entire camp. The easement protects the land from commercial or residential uses.

"They can continue to use it for Boy Scout purposes forever, but it can't be developed," Ringhausen said.

Work will begin soon and is expected to be done by March 31, Ringhausen said. He said contracts had not been awarded and he declined to estimate the cost of the project.

The project will be part of Great Rivers' 10-year Piasa Creek watershed project, which is aimed at reducing sedimentation of the Mississippi River.

Reporter Terry Hillig
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Kohl's store opening next week

By SHERI McWHIRTER
The Telegraph

EDWARDSVILLE — All of the kinks should be worked out by Thursday's grand opening of the Kohl's store, company officials say.

"We're getting ready to open, and the merchandise is already in place," store manager Rodney Hall said.

He said employees were wrapping up training this week on operational procedures, such as cash registers and customer service protocol.

The store has 168 employees, although 187 retail workers began setting up the interior fixtures and merchandise after construction was completed in late August, Hall said. More employees may be needed during the holiday season, he said.

Each of the stores in the Kohl's chain carries housewares and domestic items, as well as clothing and shoes for men, women and children.

The 95,090-square-foot store at 2120 Troy Road (Illinois Route 159) was renovated from the former Kmart store, which closed in early June last year.

The 95,000-square-foot store at 2120 Troy Road (Illinois Route 159) was renovated from the former Kmart store, which closed in early June last year. The work under the $2.2 million contract was done by Lauer Construction in St. Charles, Mo.

City officials estimate that the economic impact from sales and property taxes could possibly exceed $250,000 annually.

"When we learned that Kmart was going out, we were very proactive and hopeful that we could get something positive in that building," Edwardsville Mayor Gary Niebur said. "Kohl's is a very welcomed addition to our community."

Hall said he has been pleased with the positive reception and is glad to be a part of the tremendous commercial and residential growth in Edwardsville.

The Midwest department store chain started in 1962; today, it is one of the nation's most successful retailers. The company recently opened a store in Lincolnwood, Ill., and another in North Carolina.

According to reports to investors, Kohl's plans to open another 48 stores this month, including markets in the Southwest, Midwest, Mid-Atlantic, Northeast, Southeast and other central regions in the South. The company will end the year with 542 stores, compared to 437 stores at the end of 2002.

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PREPARING FOR STRIKE

St. Louis grocers advertise for replacement workers

ST. LOUIS (AP) — While calling their workers "the best at what they do," the St. Louis area's three largest supermarket chains on Thursday began looking for temporary replacements in case of a walkout early next week.

Schnuck Markets Inc., Dierbergs Markets Inc. and Shop 'n Save Warehouse Foods Inc. — which make up the Greater St. Louis Food Employers Council — placed a full page newspaper ad seeking temporary cashiers and clerks.

The ad, published two days after union workers at the stores rejected a nearly four-year contract proposal that supermarket officials have called their final offer, told consumers the makeshift hiring is a "precautionary measure and does not mean a strike or lockout will occur."

"Our companies must now accelerate our efforts to hire and train replacements in order to continue serving our customers," the ad says.

St. Louis has never had a grocery workers strike.

Ed Finkelstein, spokesman for United Food and Commercial Workers Union Local 655, said he was not surprised by the move. However, he said it was a "farce" to believe the stores could adequately train replacement workers in three days.

The decision whether to strike will come Tuesday morning, when Local 655 members are to gather at the America's Center convention center in downtown St. Louis. A two-thirds majority of those in attendance is required to authorize a strike.

About 5,600 of Local 655's 10,200 members voted on the contract proposal.

[illegible]

"It's a unique trade-off," Ringhausen said. "The Boy Scouts are getting recreational fulfillment out of the deal and guaranteeing it will be a Boy Scout camp for years and years to come. Great Rivers Land Trust will see the land protected and will achieve progress in our watershed project."

Great Rivers will pay for the work through its Plaza Creek Watershed Project. The stream that flows through the lake at Camp Warren Levis is the Rocky Fork Creek, a tributary to Plaza Creek. The wetland created at the lake would filter sediment from the water and improve water quality downstream, which is a goal of the watershed project, Ringhausen said.

The wetland also would help to control flash flooding in that area.

Ringhausen said the group soon would send out bid packets in seeking a contractor for the project. He said the project would hinge on whether an affordable bid to do the work gets submitted.

shawn_chase@hotmail.com

Running
Pifer wins Mud Mountain race at SIUE

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THE TELEGRAPH

Serving the River Bend Since 1836

167, No. 206 – 50 cents Thursday, August 8, 2002 www.thetele

Camp lake may be rebuilt

Boy Scouts used old site as bicycle track last summer

By SHAWN CLUBB
Telegraph staff writer

GODFREY — Boy Scouts "had a blast" this year using the empty lake at Camp Warren Lewis as a bicycle track, but that could change for future seasons at the camp.

The Executive Board of the Trails West Council of the Boy Scouts of America is expected to vote later this month on an agreement that would have the Great Rivers Land Trust create a 20-acre lake at the old lake site. The board's executive committee has recommended the board approve the agreement. Don Kinney, Scout executive of the council, said the council previously has seen estimates that it would take $700,000 to restore the lake.

Boy Scouts from the Trails West Council have used the camp since 1917. The council built a 40-acre lake there in 1947 by damming the Rocky Fork Creek, which branches off from Piasa Creek. Scouts used the lake for canoeing, fishing, rowing and swimming, but silting in the lake led the council to drain it in 1988.

Kinney said the Scouts used the dry lake bed as a BMX bicycle track last summer.

"We built berms and jumps on the lake bed," Kinney said. "The kids had a blast, but I'm sure they'd prefer traveling the same course in canoes and rowboats."

Alley Ringhausen, executive director of Great Rivers Land Trust, said the agreement would be mutually beneficial to the Boy Scouts, Great Rivers and Illinois-American Water Co.

Ringhausen said Great Rivers has worked to control the flow of sediment into the Mississippi River through the Piasa Creek Watershed project. He said Illinois-American, when it built a new water plant a couple of years ago, was told by the Illinois Environmental Protection Agency that it no longer could return sediment that it filters out of done for more than 100 years. The water company instead would have to have built large lagoons.

Illinois-American agreed to fund the watershed development if the EPA would approve its discharge permit, Ringhausen said. This would allow the watershed to reduce sediment going into the Mississippi River by twice as much as what Illinois-American would discharge, he said.

"The project has a number of benefits for a number of groups," Ringhausen said. "The agreement between Illinois-American and Great Rivers will enable us to trap sediment coming out of Godfrey. It will restore approximately half of the old lake, so Boy Scouts and others will have access to the lake.

"Above the lake, we want to establish a wetland area that will trap sediment before it gets to the lake, so it won't fill in like it did the last time. It will act as a storm water control measure, as well, and will prevent flash flooding issues below the lake."

Great Rivers, which would benefit by reaching the necessary levels of sediment control within the 10-year span of the watershed project, also would gain by a conservation agreement between it and Trails West Council. This agreement forever would keep the Scouts from selling 280 acres of the land to anyone who would develop it into subdivisions.

"It's a wonderful piece of property that does has encroachment issues from surrounding development," Ringhausen said. "Basically, it's a win-win situation for everybody involved."

Besides allowing the Scouts to move their canoeing and other water-related activities back to the camp from Sportsman's Lake in Godfrey, Kinney said development of the lake with a wetlands would provide other benefits.

ALTON AREA POST

SERVING: Alton, Bethalto, Brighton, East Alton, Elsah, Godfrey, Grafton, Hartford, Jerseyville, Roxana, South Roxana, Wood River

THURSDAY, SEPTEMBER 5, 2002 ST. LOUIS POST-DISPATCH (1) AA1

NEWS BRIEFS

GODFREY

Boy Scout board OKs plans to develop lake

The executive board of Boy Scouting's Trails West Council has approved plans to re-establish the lake at Camp Warren Levis in Godfrey.

The 57-member group, which functions as the council's board of directors, approved the plans last week. The decision ratifies an agreement made last month by the council's 12-member executive committee.

The Great Rivers Land Trust is footing the project's tab, estimated at $500,000. In return, the council's executive board has agreed not to develop the 287-acre camp and to establish a wetlands area next to the lake.

Trails West Council serves about 10,000 youth each year, *primarily* from the counties of Madison, Bond, Jersey, Macoupin, Greene and Calhoun.

ALTON

YWCA will honor two award winners at dinner

Bill Moyer and Jim Hanlon have been selected as winners of the YWCA of Alton's third annual Allies and Mentors Awards. The two will be honored at the YWCA's annual dinner on Nov. 21 at Lockhaven Country Club.

Each year, the YWCA uses the award to recognize men

Motorcycle rally will help abused children

Cycle Saints support new Hope Center

BY TERRY HILLIG
Of the Post-Dispatch

COTTAGE HILLS — Crystal Davis' dream of an emergency shelter for abused children has become reality, thanks to the generosity of area residents and organizations.

"The community has shown it is concerned about abused children," Davis said as she showed a reporter the recently completed Children's Hope Center, which is set to open in January. "We have such a wonderful, giving community."

The Cycle Saints chapter of the Christian Motorcyclists Association will show its community spirit again by *hosting* the *second* annual Bike Rally Benefit on Saturday. When the Cycle Saints hosted the event last year, about 14 motorcycle clubs participated, raising $4,000 for the children's center.

The 5,500-square-foot facility is behind Community Hope Center at 950 14th Street in Cottage Hills. The two centers are on the grounds of the former Forest Homes *Elementary School*.

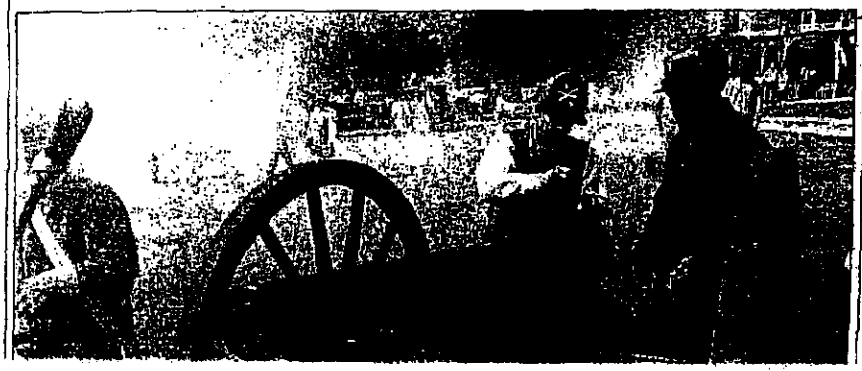
Davis borrowed money in the late 1980s to establish Community Hope Center, a crisis support center for people in need. Over the years, Davis said, she and others on the center's staff frequently became aware of situa-

See Rally, Page 4

Bike Rally Benefit

Where: Community Hope Center, 950 14th Street, Cottage Hills.
What: Music, prizes, games, a motorcycle show, an auction, food and fun.
When: Noon to 4 p.m. Saturday.
Why: To raise money for a new shelter for abused children.
Sponsored by: Cycle Saints.

THE GRAY AND THE BLUE



County is asking offices to reduce budgets

THE TELEGRAPH

SECTION C

REGION

FRIDAY
October 3, 2003

Former Clinton adviser speaks at SIUE

By SHENA McCLELLEN
The Telegraph

EDWARDSVILLE — A former national security adviser Thursday evening discussed and criticized the Bush administration before a few dozen students and visitors at Southern Illinois University Edwardsville.

Lesa Fuerth, now a research professor at George Washington University, discussed the Clinton administration's strategies regarding many international events. Topics included the economic collapse of the former Soviet Union, the nearly attained peace agreement between Israel and the Palestinians, the political maneuvering for military action in Kosovo and the counter-terrorism measures in place before the attacks of Sept. 11, 2001.

"Everybody always looked at the Middle East as a flash point to nuclear war," Fuerth said, further explaining that as the reason Clinton so dearly desired to establish a peace agreement between the Palestinians and Israel.

"We got so close we could feel it, and then it was destroyed by an assassination," he said. "We almost got there a second time, but the clock ran out on the Clinton administration."

Regarding counter-terrorism measures, Fuerth said that by the end of 2000, national leaders had heard of a major effort to attack the United States at home and abroad. He said every effort was made to figure out the plans, but getting the FBI and CIA to share information was practically an insurmountable task then.

"Sept. 11, (2001), had the effect of shaking the world to the United States. I don't think the rest of the world saw it that way, because they are more accustomed to violence. But, for us, it moved the world," Fuerth said.

He said that since then, perceptions of American purpose have changed at home and abroad.

"We've discovered that despite our tremendous power, it isn't enough. Maybe we've discovered that in order to succeed, we have to have the blessing of the rest of the world, and for that, we have to represent something important to them," Fuerth said.

He continued that the global community's impressions of American domination also have changed since the terrorist attacks and subsequent military actions in Afghanistan and Iraq. He said the sentiments are almost those of fear of what the United States has become.

"We have lost a sense of self-restraint and are intoxicated with our military power," he said.

Fuerth took several questions from the small crowd and was immediately asked whether 9/11 could have been prevented if a Democrat was president at the time.

"I couldn't tell you that I or (Al) Gore wouldn't have made our own mistakes," he said.

For The Telegraph/JAMES K. RITTER

Former national security adviser Lesa Fuerth speaks Thursday night to a crowd in the Meridian Ballroom in SIUE's Morris University Center. Fuerth, who was a national security adviser under President Clinton, spoke about the state of national security in a post-Sept. 11, 2001, world.

NEW MUSEUM

The Telegraph/JOHN BADMAN

Mandy Thomas, 9, of Godfrey, uses a computer Thursday inside the new National Great Rivers Museum, adjacent to the Melvin Price Locks and Dam 26, to learn about watersheds. The long-awaited museum opened to the public Wednesday afternoon, but the grand opening is set for Oct. 15. The museum is open daily from 9 a.m. to 5 p.m. Admission is free.

Deal will preserve Scout camp in Godfrey

Conservation group plans to restore 15 acres at Camp Warren Lewis

By SHAWN OLIVER
The Telegraph

GODFREY — A conservation group plans to restore the lake at Camp Warren Lewis in exchange for a guarantee that the camp will never be commercially developed.

Alley Ringhausen, executive director of the Great Rivers Land Trust, said the agreement with the Boy Scouts of America Trails West Council would have Great Rivers restore about 15 acres of the lake at the camp. The camp is at the end of Boy Scout Lane in Godfrey. Great Rivers would create 15 acres of wetland as part of the project.

In exchange, Trails West Council will give Great Rivers a conservation easement for the whole camp. The Boy Scouts would be able to continue using the camp for Scouting activities, and they would be allowed to erect new structures for Scouting purposes, but the property would not be available for commercial development at any time in the future.

Outdoors

COMMENTARY

Cooperation makes conservation possible

BY JEFF HUDSON
Special to the Post-Dispatch

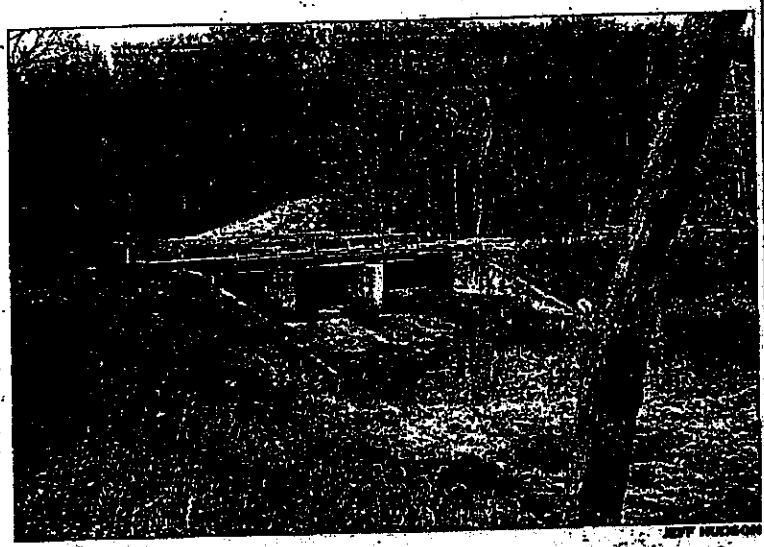
Nature and culture are two powerful forces often at odds with each other. Conservation and environmental groups fight nobly for the preservation of natural, wild places. Culturally, we've developed a consumption that gobbles up natural resources like parasites — growth for the sake of growth.

Working at the impact point between nature and culture and trying to mitigate this adversarial perspective are Alley Ringhausen and the Great Rivers Land Trust. Ringhausen is the executive director of the land trust, a nonprofit organization dedicated to preserving open space and critical wildlife habitat in the area's river corridor. The Great Rivers Land Trust is the only such land trust in the St. Louis region.

One of the land trust's current projects exemplifies the collaborative efforts of typically adversarial groups to the benefit of all. The Piasa Creek Watershed Project requires the cooperation of the Illinois Environmental Protection Agency, the Illinois-American Water Co. and the Great Rivers Land Trust.

The Piasa Creek Watershed drains more than 78,000 acres of tillable, timbered and developed land in three counties of west-central Illinois. The watershed discharges into the Mississippi River about 3 miles north of Alton. Though currently a hot topic in environmental and conservation fields, the idea of planning and managing an entire watershed was fairly innovative when the project began in the mid-90's. The primary concern for the watershed is soil erosion and sediment being discharged into the Mississippi River.

After the flood of '93, the Illinois-American Water was faced with expensive new construction and tighter discharge limitations imposed by the Illinois Environmental Protection Agency. To avoid these expenses and to obtain the needed discharge permit, the water company offered to fund the watershed project, which promised to cut sediment discharge by approximately 6,600 tons a year, twice what the plant would be discharging.



JEFF HUDSON

Students from local schools are helping with the restoration of Camp Warren Levis (above) in Godfrey as part of area conservation efforts.

"Our goal is to reduce sediment, and we'll do it in a number of different ways," Ringhausen said. "We'll use some traditional tools and some innovative tools. And those numbers will be based on USDA standards so that there's some control."

With such cooperation, the water company avoids crippling expense, the watershed project receives needed funding and the public gets a cleaner, healthier river.

The Piasa Creek Watershed Project is only one of the projects administered by the Great Rivers Land Trust. "Our main focus has been protecting property up and down the river," Ringhausen said.

The land trust protects property in a number of ways, including outright purchase, conservation easements and donations of property or easements. The land trust has protected more than 2,000 acres, Ringhausen said.

Much of that property has been donated to organizations such as the Nature Institute or the Department of Natural Resources.

When Ringhausen talks of protecting property, he means protecting it from development. But he is realistic.

"We're not opposed to development," he said. "Everything has its place. Development has its place."

In fact, developed property adjacent to protected property is quite valuable for the very reason that there won't be undesirable development in one's backyard.

A misconception of the land trust and protected land may be that the land gets fenced off and unutilized. Hardly.

Great Rivers Land Trust is working with professors and graduate students at Southern Illinois University Edwardsville on a variety of projects as part of the Piasa Creek Watershed project.

Students from several local school districts are involved in many service learning projects, including the restoration of a lake and natural wetlands at Camp Warren Levis in Godfrey.

In Missouri, the land trust worked with a group called Habitat Alliance, which is focused on the wetlands in St. Charles County, Ringhausen said. The Great Rivers Habitat Alliance evolved from this collaboration.

"Their focus is to get easements, conservation protection on those wetlands across on the floodplain," Ringhausen said.

Ringhausen speaks most proudly of the lessons on cooperation learned from his work. "One of the biggest things," he said, "it's been a big lesson in cooperation."

Ultimately, such cooperation may be what reconciles the clash of nature and culture.

CALENDAR

■ Wednesday, fly fishing class sponsored by the Ozark Fly Fishers and St. Louis County Parks Department at 7:30 p.m. at Queeny Park. The cost is $5. Call 314-416-4373.

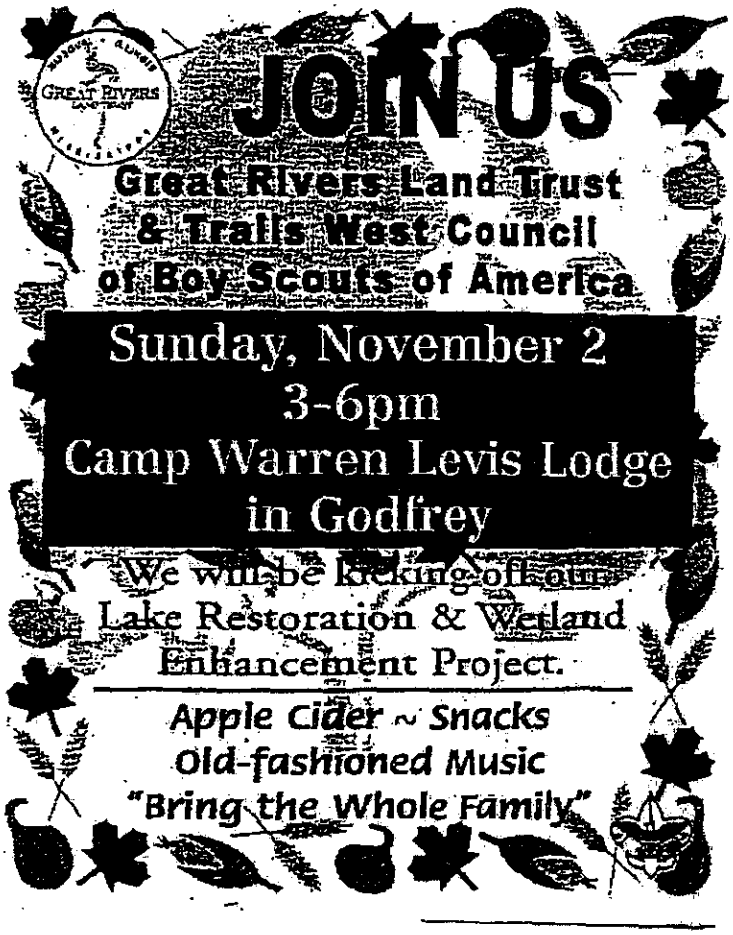
■ Jan. 10-11, Missouri hunter's education course for ages 11 and up at Jay Henges Range and Training Center in High Ridge. The course is mandatory for anyone born on or after Jan. 1, 1967 who wants to purchase a firearm hunting permit. A birth certificate is necessary for ages 11-13. Youths under 16 must be accompanied by an adult. For reservations, call 636-441-4554.

■ Jan. 10-11, a hunter's safety course for ages 11 and up at Green Lantern Park, 506 South Linn in Wentzville. The class will run from 9 a.m. to 4 p.m. The cost is $5. Anyone 12 and under must be accompanied by an adult. A copy of your birth certificate, drivers license or Social Security card must be brought to class. Call 636-332-9236.

■ Jan. 15, Midwest Bass Tournaments Internet Magazine Seminar from 7 to 9 p.m. at the Lodge of Des Peres in West County. Guest speaker is professional bass fisherman Mark Tucker, who will discuss structure fishing at Mark Twain Lake and Lake of the Ozarks. Call 573-860-4317.

■ Jan. 21, Beginning Fly Tying, a four-week class sponsored by the Ozark Fly Fishers and St. Louis County Parks Department. The class will be at 7:30 p.m. at Queeny Park. All tools and materials will be provided. The cost is $35. Call 314-416-4374.

■ Feb. 1-April 30, second annual Lower Rivers Walleye Bass Tournament at Table Rock Lake in Cape Fair is Feb. 1-April 30. Participants are allowed to fish the entire three-month tournament period. Anglers are limited to one entry that may be updated throughout the tournament. Entry fee is $35 for fishermen 15 and older and $15 for 14 and younger. Entry forms and weigh-in station for all fish are at Karl's Cupboard Camp, 8752 West State Highway 76 in Cape Fair. For more information, call Don Wright at 417-538-4795 or Roger Kelley at 417-538-2900.


GREAT RIVERS
JOIN US
Great Rivers Land Trust
& Trails West Council
of Boy Scouts of America
Sunday, November 2
3-6pm
Camp Warren Levis Lodge
in Godfrey
We will be kicking off our
Lake Restoration & Wetland
Enhancement Project.
Apple Cider ~ Snacks
Old-fashioned Music
"Bring the Whole Family"

Thurs 10/30/03
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AREA

Open house Sunday at Camp Warren Levis

Telegraph staff report

GODFREY — The Great Rivers Land Trust is inviting the public to an open house Sunday at Camp Warren Levis, where visitors can learn about the group's plan to restore the camp's lake and other projects.

The open house will run from 3 to 6 p.m. Sunday at the Boy Scout Lodge, said Alan "Alley" Ringhausen, executive director of the Great Rivers Land Trust.

The event is free and will include live music and refreshments. A group of Boy Scouts will perform their flag ceremony about 4:30 p.m., Ringhausen said.

He said there will be some informational displays about the Boy Scout Lake project, as well as more overall information about the Piasa Creek Watershed Project, of which it is a part.

"Neighbors and people who are curious can talk to the staff and the Boy Scouts," Ringhausen said. "People can see the condition of the lake now, and we hope at some point in the future, they can come back and see the finished product."

Great Rivers Land Trust reached an agreement with the Boy Scouts earlier this year to restore about 15 acres of the lake at Camp Warren Levis in exchange for a guarantee that the camp would never be developed commercially. Great Rivers will create 10 acres of wetlands as part of the project.

In exchange, the Trails West Council of the Boy Scouts of America will give Great Rivers a conservation easement for the whole camp. The Boy Scouts will be able to continue using the camp for Scouting activities and will be allowed to erect new structures for Scouting purposes.

To get to Camp Warren Levis, take Illinois Route 3 to Boy Scout Lane. The camp is at the end of the lane, and the exit from Route 3 is marked with a large sign.

For more information about the open house, call Ringhausen at (618) 467-2265.

Land Trust helping Scouts build lake, wetland

In-perpetuity agreement will mean council can never sell land

Telegraph staff report

GODFREY — The Executive Board of Trails West Council last week voted to establish a conservation easement at Camp Warren Levis and to create a lake and wetland area with help of the Great Rivers Land Trust.

On Wednesday, the board authorized Trails West's Lake Development Committee to complete an agreement with the trust, although some details remain to be worked out on the conservation easement and lake engineering documents.

"The affirmative vote by the Council Executive Board means that our Lake Committee and the Great Rivers Land Trust can finalize the language and details necessary to begin restoration of the lake," said Fred Parsons, president of Trails West Council.

When the agreement is completed, the trust will create a 20-acre lake at the old, drained lake site at the camp. The original 40-acre lake was created in 1947 by damming Rocky Fork Creek, which branches off from Piasa Creek. Scouts used the lake for canoeing, fishing, rowing and swimming, but Scout officials had the lake drained in 1989 because of quantities of silt.

In the years that followed, Boy Scouts used Sportsman's Lake in Godfrey for boating and fishing; the camp has a swimming pool that is slated for restoration.

Officials from Trails West and the land trust say the cooperative project will be beneficial to both groups. The trust's plan is to create a wetlands area above the new lake. That area will trap sediment and prevent it from going into the lake, and also will control storm water flow to prevent flash flooding below the lake.

"The creation of the wetland area has many benefits to the ecology of the area, including the filtering of pollutants, wildlife habitat and serving as a settling basin for silt," said Mark Speciale, chairman of the Lake Development Committee.

Once in place, the in-perpetuity agreement will mean the council never can sell the 280 acres of land at Camp Levis.

"This collaboration with the Great Rivers Land Trust fits well with our strategic plan for the council's outdoor education plan, and is consistent with Boy Scout of America's mission of working with local organizations for the benefit of youth and the community," Trails West Scout Executive Don Kinney said.

Council recommends Catholic Charities lease

Amendment to agreement requires one-year notice for termination

By LINDA N. WELLER
The Telegraph

ALTON — Catholic Charities is closer to leasing the city-owned, former Senior Services Plus Inc. building following a recommendation Monday night by the aldermanic Committee of the Whole.

Committee members unanimously recommended the Alton City Council approve an amended lease agreement with the organization. The lease allows Catholic Charities to rent the building, 3512 McArthur Blvd., for $1 per year for 10 years and indemnifies the city against liabilities.

The amendment changes wording that would have allowed the city to terminate the agreement with 90 days' notice to requiring one year's warning.

The committee also recommended unanimously that the city sign agreements:

■ With Great Rivers Land Trust to establish 6.6 acres of wetlands in the area of the proposed Indiana Avenue extension between East Broadway and the Berm Highway (Illinois Route 143). The cost will be $49,278, which the state of Illinois will reimburse, officials said.

■ With Peckham, Guyton, Albers & Viets Inc. for assistance to city officials in seeking an extension of its tax increment financing district from the current 23 years to 35 years. The cost is not to exceed $7,500.

■ With Madison County delinquent tax agent Joseph Meyer to purchase three inner-city Mexico neighborhood lots for a total of $2,275. The committee also recommended that Alton advertise for bids for developers to bid on three city-owned lots on Long Avenue, also in the Mexico area.

The committee also recommended that the city:

■ Establish the Alton Beautification and Clean City Committee.

■ Accept a bid of $29,190 from AEC Fire and Safety of Springfield, Ill., for a "jaws of life" extrication tool for the Alton Fire Department. The bid was the highest of three, with the lowest at $23,525, but the tabulation sheet indicates the lower bids' equipment did not meet specifications. Plans call for the device to be carried on a new rescue truck already on order for the department.

■ Accept the low, responsive bid from William F. Brockman of Hazelwood for various snack concessions for the Park and Recreation Department.

■ Accept the low bid of $190 per month from Brantley Pest Management for pest control services in city buildings; the other bids were $425 and $585 per month.

The resolutions will come before the City Council at its meeting Wednesday night.

After years of planning, road project to begin

By LINDA R. WELLER
The Telegraph

The four-lane road will run east of Alton Center Business Park and eventually have spurs that go off eastward into the old East End industrial area.

ALTON — Work on the long-awaited Indiana Avenue overpass finally should begin this week, with clearing of trees and vegetation to grade the proposed route.

Plans are for excavators from Keller Excavating of Glen Carbon to begin work Tuesday, weather permitting, said Phil Roggio, Alton director of development and housing.

"Everything is done, and the contract has been awarded for Phase I," Roggio said.

Preparations have stretched several years. First came the design, then the approval of the design report by the Illinois Department of Transportation, which had to conduct cultural and environmental studies looking at impact on buildings and the environment. Also involved was negotiation with 15 owners of 14 acres of property to buy or lease land for the street and right of way. Those agreements had to be finalized, and City Council

See PROJECT, Page A7

PROJECT

FROM PAGE A1

approval was necessary.

The environmental tests revealed only minor contamination, with some lead and oil on the site.

Once completed, the .66-mile-long street will run from East Broadway near the Alton Law Enforcement Center and Alton Plaza to the south. The road will connect with a "stub" that dates to the 1960s, which juts to the north from Illinois Route 143 (Berm Highway).

The four-lane road will run east of Alton Center Business Park and eventually have spurs that go off eastward into the old East End industrial area. The project will involve removing trees, which will be replaced, and eliminating some five acres of wetlands.

The U.S. Corps of Army Engineers, however, is requiring the city to establish 6.68 acres of new wetlands in order to obtain a Section 404 permit under the Clean Water Act. To comply, the city has a contract with the Great Rivers Land Trust to create an off-site wetlands on property off West Delmar Avenue in Godfrey at a cost of $49,278.

City officials have worked for years to get the project under way, believing that having an inroad to the former manufacturing area on the city's East End is necessary to spur new development.

Sheppard, Morgan and Schwaab of Alton provided engineering services for the project; Keller won the excavating job with its bid of $2,277,787. Roggio said Keller's bid was 30 percent lower than engineers had estimated.

The first phase involves clearing the site and building three, 40-foot-tall earthen embankments that will support the road's bridge above the wetland area. The embankments must be built gradually, with dirt hauled in, then "rest time" allowed so the soil can drain and settle. More dirt then will be added, and the process repeated.

Because of the time required for the embankment dirt to settle, Roggio said the first phase could take six months to a year. Some negotiations remain with owners of one property concerning relocating Illinois Terminal Railroad tracks that now run along the south side of East Broadway.

Phase 2 will be the actual construction of the road.

The entire project could be completed in 18 months to two years, Roggio said.

The road project may cost about $9 million. Some $4.3 million is coming from the Illinois Commerce Commission and another $4.3 million is from the federal "T-21" Transportation Efficiency Act, money that IDOT dispenses.

The remaining cost is being split between Madison County and the city, the latter which is derived from part of $8.5 million in bonds that Alton sold primarily to cover the city's share of costs to redevelop the former Owens-Illinois Inc. glassworks, now Alton Center Business Park.

DONALD E. SANDIDGE
MAYOR

101 East Third Street
Alton, IL 62002
(618) 463-3500
Fax (618) 463-3525

January 2, 2002

American Academy of Environmental Engineers
130 Holiday Court
Suite 100
Annapolis, MD 21401

Dear American Academy of Environmental Engineers:

Subject: Excellence In Environmental Engineering-Illinois-American Water Company-Alton Water Treatment Facility-Water Treatment Residuals Handling Via Suspended Solids Trading

The City of Alton was pleased to see the partnership between Illinois-American Water Company (IL-AWC), Great Rivers Land Trust (GRLT) and the Illinois Environmental Protection Agency (IEPA) develop into a unique solution to a water treatment residuals handling problem. The new Alton water Treatment Facility is a tremendous new asset for our community.

The suspended solids trading agreement allows the discharge of these water treatment residuals, provides for a net reduction in suspended solids discharge to the Mississippi river and eliminates unsightly lagoons and residuals hauling trucks traveling along the Great River Road---one of the nation's newest scenic byways.

We thoroughly support IL-AWC's entry in the AAEE Excellence In Environmental Engineering competition.

Sincerely,

Donald E. Sandidge
Mayor

ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES

Illinois Waste Management and Research Center

One E. Hazelwood Drive, Champaign, Illinois 61820
(217) 333-8940 Fax (217) 333-8944 TDD (217) 782-9175

WMRC

http://www.wmrc.uiuc.edu

June 26, 2002

Alley Ringhausen
Great Rivers Land Trust
P.O. Box 821
Alton, IL 62002

Dear Mr. Ringhausen,

Congratulations! You have been selected as a semi-finalist for the 16th Annual Governor's Pollution Prevention Awards hosted by the Illinois Waste Management and Research Center (WMRC), a division of the Illinois Department of Natural Resources.

A WMRC technical assistance provider may contact you to arrange a site visit of your facility. Your contact information has also been forwarded to the Illinois Environmental Protection Agency (IEPA) for a review. Once the site visit and the IEPA review are complete, we will notify you whether you have been selected as a finalist.

The Governor's Awards will be held Friday, October 18 in Champaign, Illinois. The event will kick off with a continental breakfast and an Open House at the Waste Management and Research Center. Join us early to tour the WMRC facilities, observe demonstrations, and learn more about the services we have to offer. We will also be transporting you over to University of Illinois' Memorial Stadium, home of the 2001 Big Ten Champions and the 2002 Chicago Bears, to take a behind the scenes look at the renovated facilities and the field made of recycled materials. The awards ceremony and luncheon will take place at 12:30 at Hawthorne Suites in Champaign.

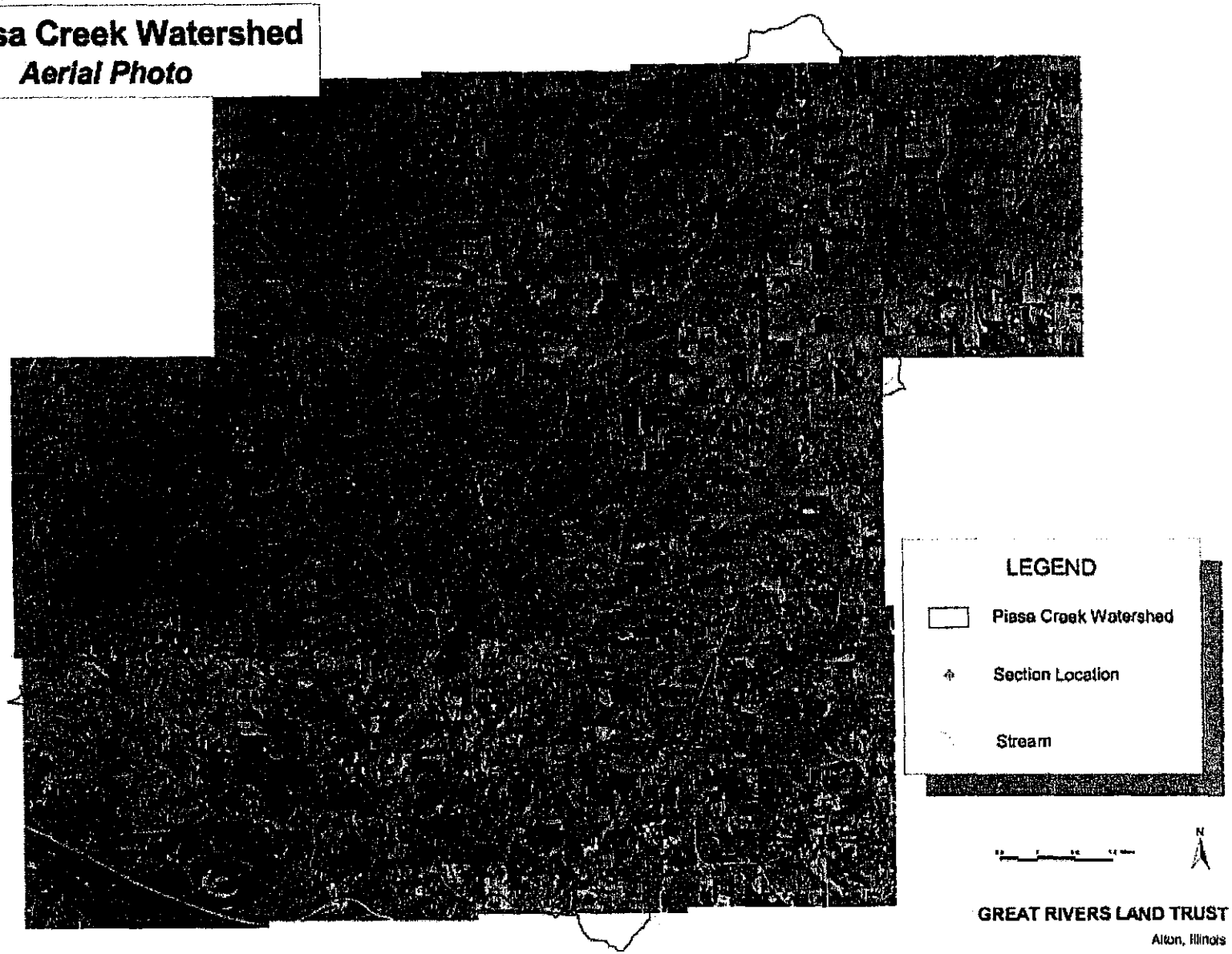
If you have any questions, please feel free to call either Jini Cook (217-244-6553) or Bob Iverson (217-333-8946). We look forward to working with you and hope to see you at the ceremony in October. Good luck in the competition!

Sincerely,

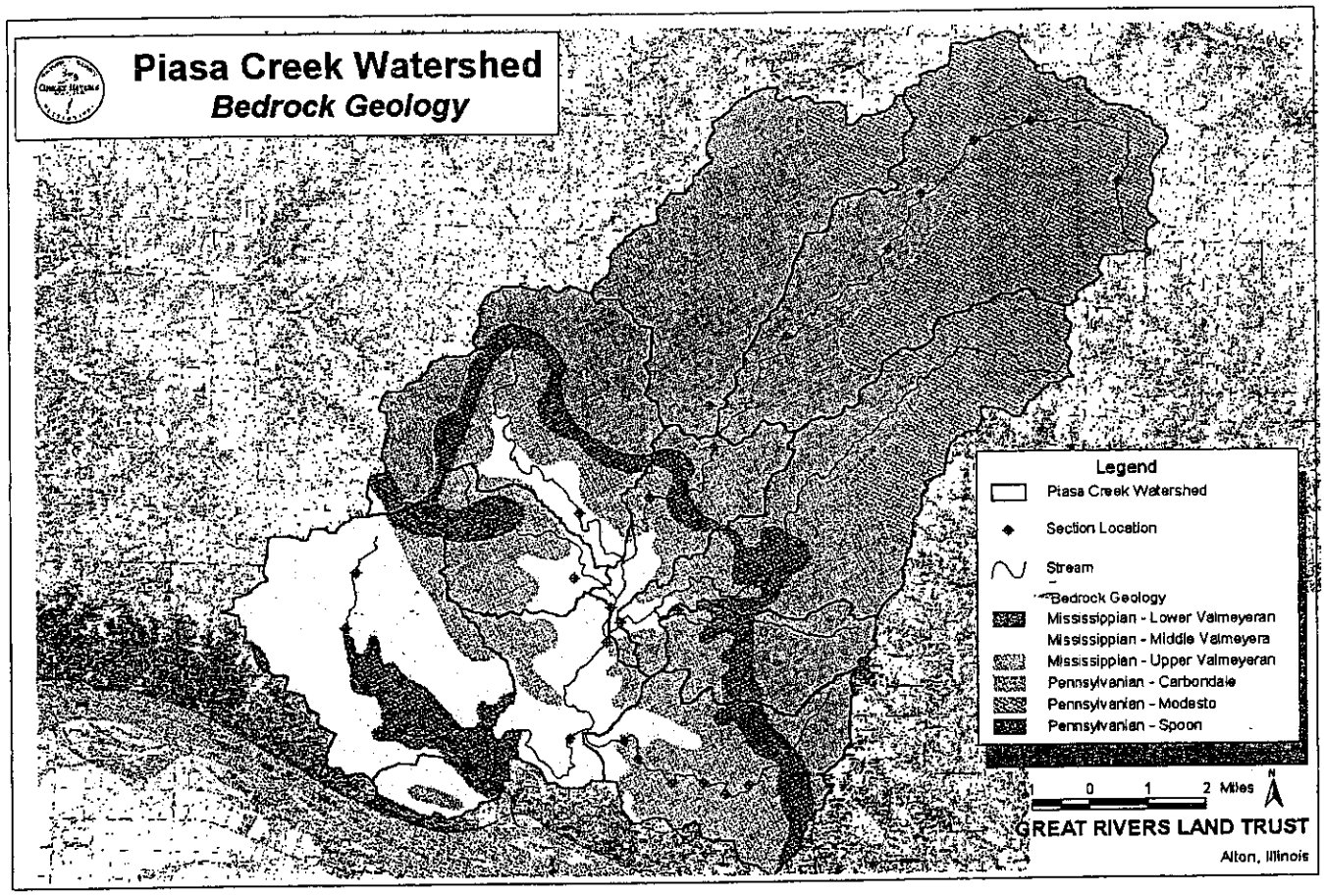
Jini Cook
Information Specialist

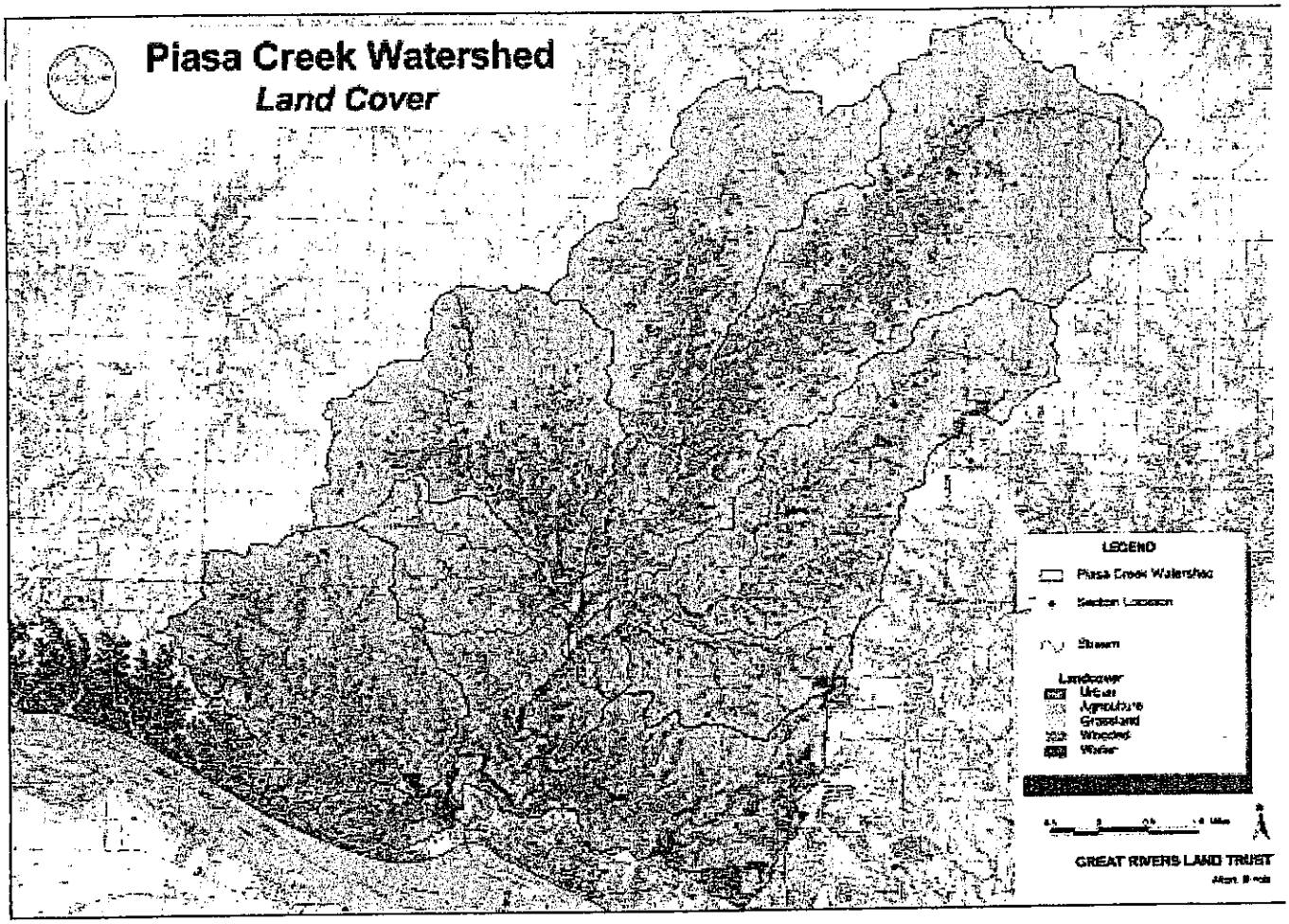
Bob Iverson
Information Program Manager

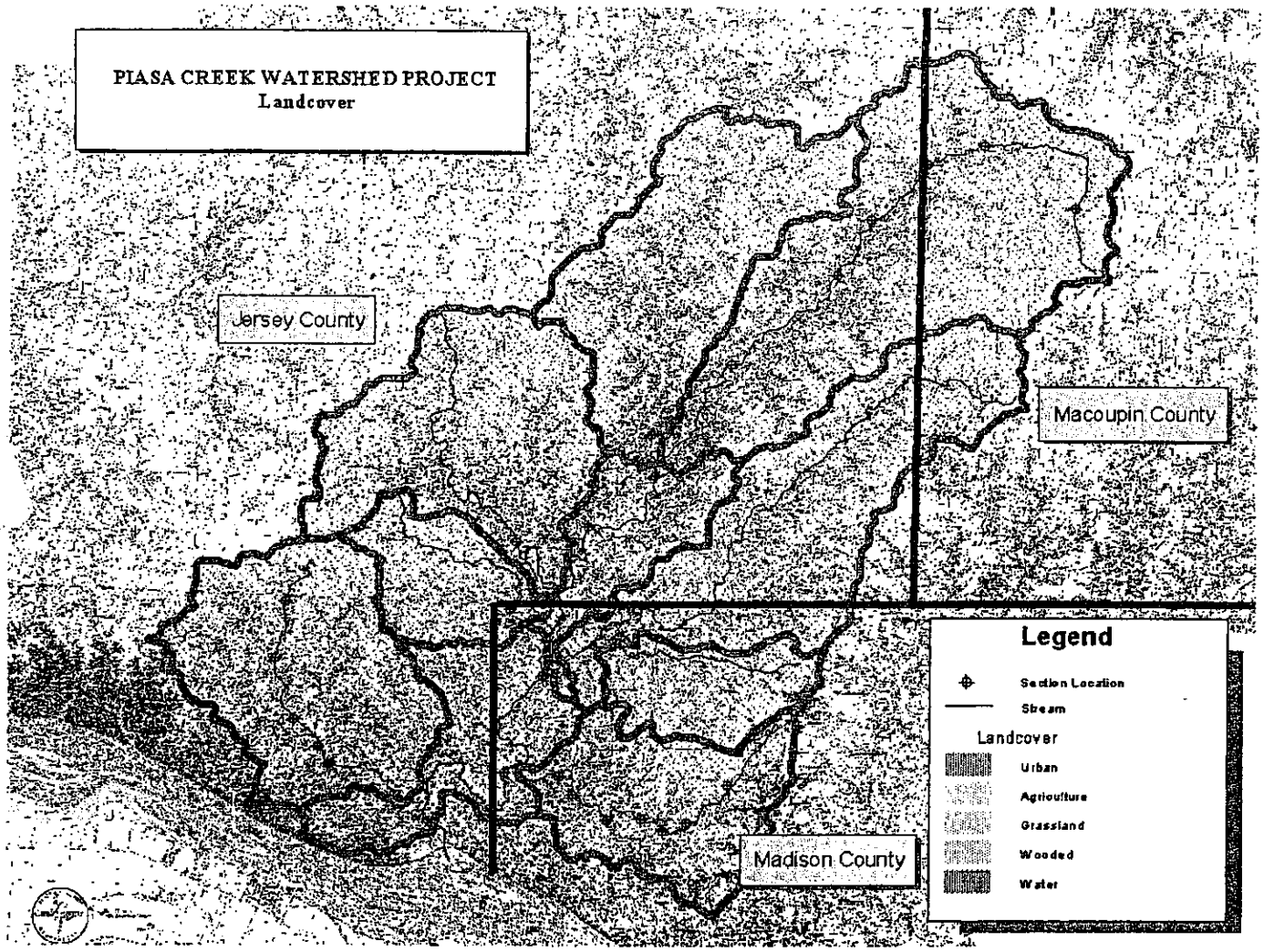
Piasa Creek Watershed
Aerial Photo

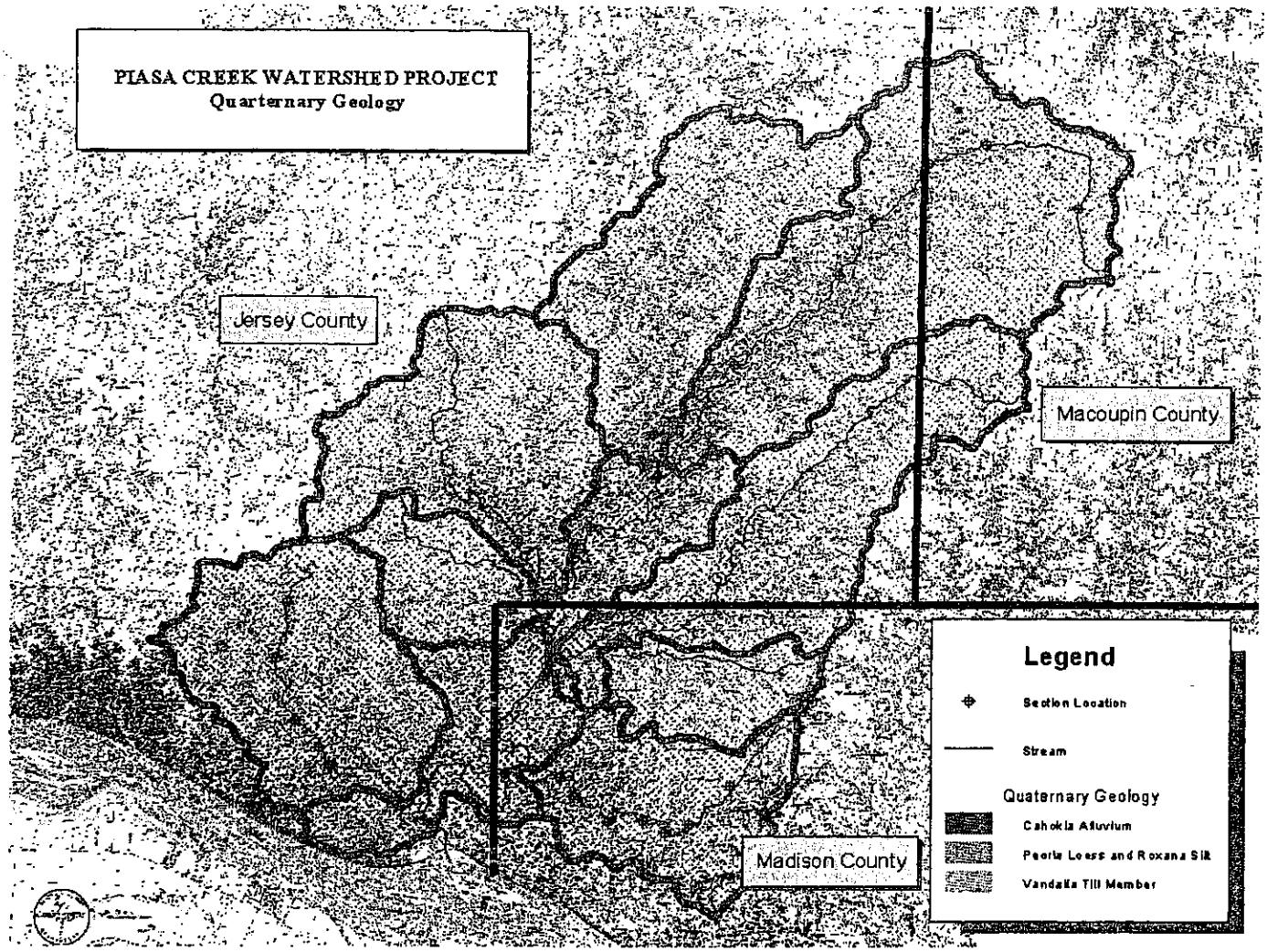


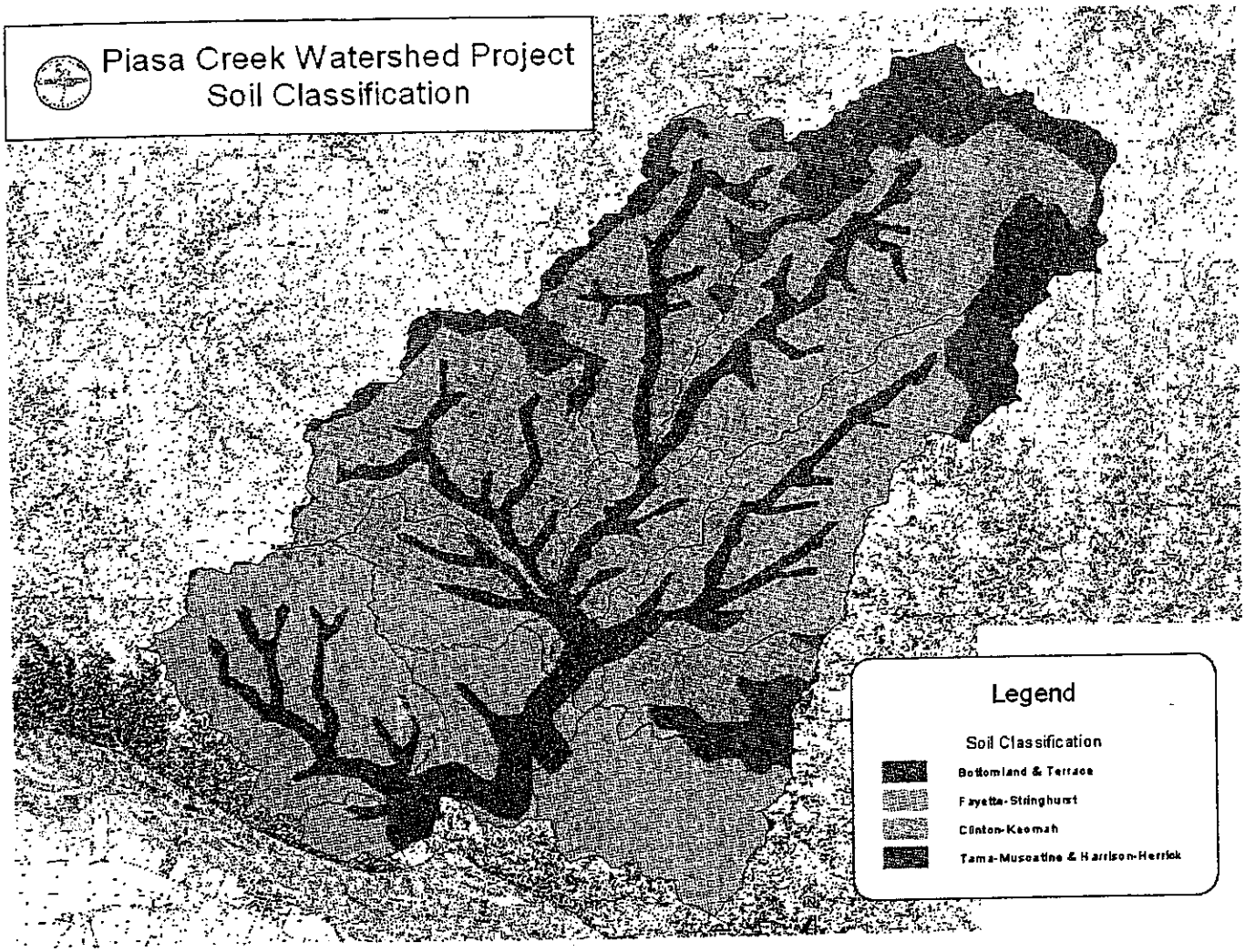
GREAT RIVERS LAND TRUST
Alton, Illinois


Piasa Creek Watershed
Bedrock Geology
Legend
Piasa Creek Watershed
Section Location
Stream
Bedrock Geology
Mississippian - Lower Valmeyeran
Mississippian - Middle Valmeyera
Mississippian - Upper Valmeyeran
Pennsylvanian - Carbondale
Pennsylvanian - Modesto
Pennsylvanian - Spoon
1 0 1 2 Miles
N
GREAT RIVERS LAND TRUST
Alton, Illinois


Piasa Creek Watershed
Land Cover
LEGEND
Piasa Creek Watershed
Stream
Landcover
Urban
Agriculture
Grassland
Wooded
Water
GREAT RIVERS LAND TRUST


PIASA CREEK WATERSHED PROJECT
Landcover
Jersey County
Macoupin County
Madison County
Legend
Section Location
Stream
Landcover
Urban
Agriculture
Grassland
Wooded
Water

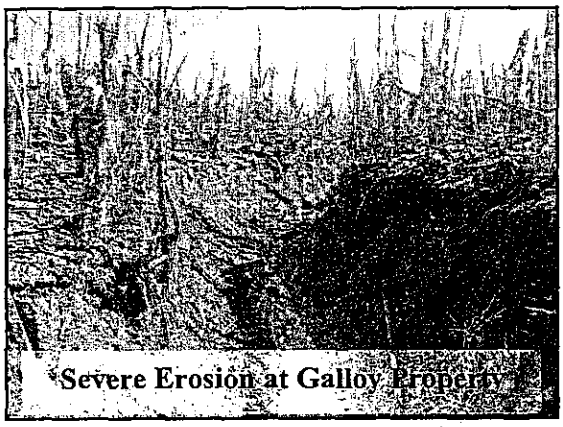

PIASA CREEK WATERSHED PROJECT
Quarternary Geology
Jersey County
Macoupin County
Madison County
Legend
Section Location
Stream
Quaternary Geology
Cahokia Alluvium
Peoria Loess and Roxana Silt
Vandalia Till Member


Piasa Creek Watershed Project
Soil Classification
Legend
Soil Classification
Bottomland & Terrace
Fayette-Stringhurst
Clinton-Keomah
Tama-Muscatine & Harrison-Herrick

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
January 1 - March 31, 2005

The following is a brief summary of activities during the months of January, February, and March in reference to the Piasa Creek Watershed Project (PCWP).

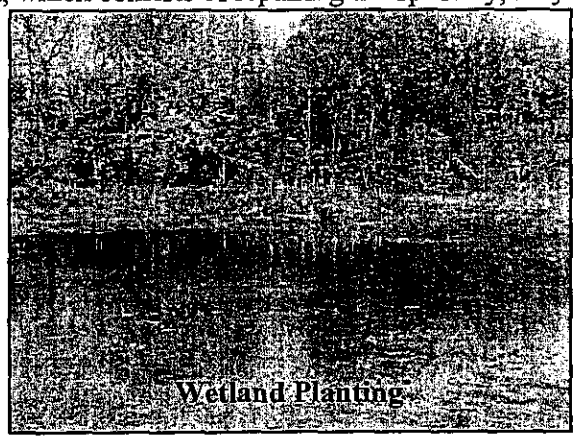
Projects


Severe Erosion at Galloy Property

Projects have been proceeding as planned this spring due to the lack of rain in the area. Great Rivers Land Trust (GRLT) worked on three projects each in their final stages on the following properties: Campion, Croxford, and Sandcamper. The tile has been completed on Croxford and the basins have partially been completed. Sandcamper tile was laid and the dirt work is planned to start in May of 2005, weather permitting. Mike Campion's three basins have been completed and GRLT will close out the project next month. Denny Youngblood's water retention basin was surveyed and we plan to have it completed in the months to come. Alfred Galloy's (Kay Schultz's tenant) property on Phase I was surveyed early this spring. The tile and dirt work are planned to start in May. The first phase of this project will include 18 basins, 1 rock chute and 3 grass waterways with 261 total tons saved annually, costing $16.85 per ton for Piasa Creek Watershed. This project will benefit 53.9 acres, at an estimated cost of $22,000. PCWP's share at 20% is currently estimated at $4,400.

Boy Scout Lake Project

GRLT is waiting to begin Phase II of the Boy Scout Lake Project, which consists of repairing the spillway, levy and restoring the dewatering device. The Illinois Department of Natural Resources (IDNR) has approved the final phase of the project to restore the dam. Engineers at Sheppard, Morgan, and Schwab have completed a breach analysis and hydraulic survey for the final phase of construction. The preliminary brush removal has begun on the levy and the excavation has been planned to begin this summer. The 12-acre wetland planting completed last fall is growing quite well due to the excessive rains in January. This spring, GRLT will plant additional trees again with help from volunteers at the new campground located above the restored lake bed. This area once served as a deposition site for the soil dredged out of the lake last year.


Wetland Planting

Principia Forest Project

GRLT will provide reforestation services to Principia. GRLT has developed a reforestation plan to be implemented over a five-year period with an additional five years of stewardship at the restored forest areas. GRLT would lease acreage targeted for restoration. The fields would be mapped and entered into a GIS program to design a planting schedule that would mirror a natural forest progression along the perimeter of

open spaces. The planting pattern would be in the form of concentric rings starting at the edge of the existing forest and working toward a central ridge. The central ridge could remain an open ridge-top prairie to accommodate access to the property. Bottomland and floodplain fields would be reforested in a similar plan, but would start at the base of the hills and expand to the stream system on the same 5 year planting progression. Tree species will be natives and will be based on historic presence and compatible soil types. Planting density will be based upon U.S. Forest Service planting standards. GRLT will also work closely with Principia instructors, students and staff on projects and research that can be conducted concurrently with the reforestation effort.

Principia would enter into a ten-year lease with GRLT for reforestation on targeted acres identified by Principia. Funding for the proposal would be provided in part by the Piasa Creek Watershed Project. The Piasa Creek Watershed Project is a ten-year initiative aimed at reducing sediment entering the Piasa Creek and its tributaries. The majority of Principia Campus drains into Mill Creek, a major tributary of Piasa Creek. The other source of funding would be provided by the Conservation Reserve Program (CRP). GRLT also has a history of acquiring funding through Trees Forever, the Streambank Stabilization Program, Conservation 2000, and other funding sources for a variety of conservation efforts that could be incorporated as part of the overall reforestation effort. The result is the reforestation of all areas targeted by Principia, at no cost. The entire effort would be a turnkey project in which GRLT would be responsible for all costs associated with planning, insulation and stewardship over a ten-year period. An evaluation of the success of the project would be reviewed by Principia, with an option for GRLT to renew stewardship for an additional ten years.

Future Projects

GRLT is continuing to review and evaluate projects along the Piasa corridor. There are three structural projects currently in the planning phase within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, stream bank protection, grass waterways, and buffer strips. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible future consideration.

Trees Forever Illinois Buffer Initiative

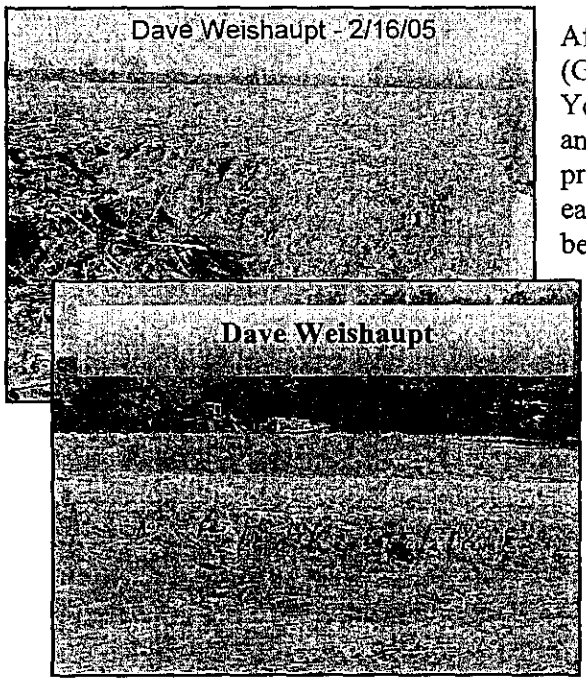
Seeding Wetland at Boy Scout Lake

Previously this year, Trees Forever approved a $2,000 grant to purchase trees and grasses for the wetland area and surrounding embankment of the new Boy Scout Lake located at Camp Warren Levis. The trees were purchased last fall and the seed this spring. GRLT has completed the wetland seeding and tree planting and is currently waiting for RiverBend Contactors to put the final grade on the dirt excavated from the lakebed to seed and plant trees. Another proposal has been submitted that will involve a streambank stabilization project to protect a 40-acre wetland prairie. If approved, the project would start this summer with the assistance of volunteers.

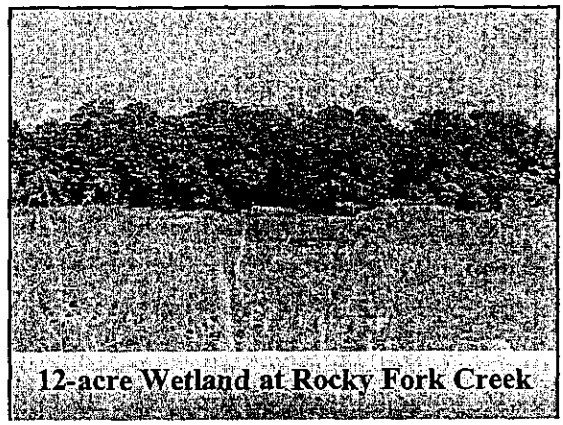
PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
April 1 - June 30, 2005

The following is a brief summary of activities during the months of April, May, and June in reference to the Piasa Creek Watershed Project (PCWP).

Projects



After the wheat was harvested this year, Great Rivers Land Trust (GRLT) proceeded to build a water retention basin on Denny Youngblood's property. This project will save 155 tons of soil annually in the Piasa Creek Watershed. On Alfred Galloy's property, the tile work was completed by the end of May and the earth work will be completed this Fall once the soybeans have been harvested. On Mike Campion's property, the tile and earth work were completed by the beginning of June and the project was closed out by the end of June. The third project, on Dave Weishaupt's property, was completed this Spring. Two dry basins and a grass waterway with an annual 42 tons saved per acre was constructed at this site. This project will be closed out by the end of Summer.


12-acre Wetland at Rocky Fork Creek

Boy Scout Lake Project

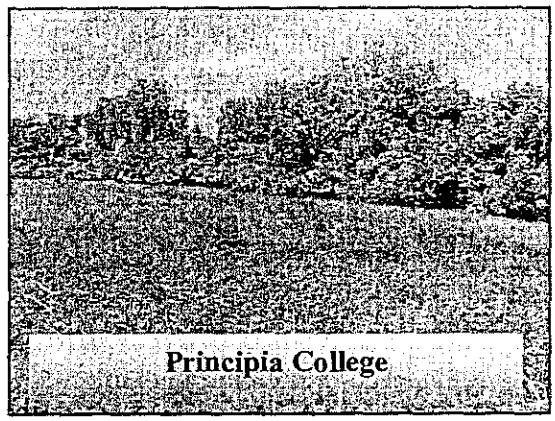
GRLT is waiting for the final approval from the Illinois Department of Natural Resources (IDNR) to hire a contractor to begin Phase II. This Spring, GRLT prepared the seed bed and sowed turf-type fescue throughout the newly modified campground above the Boy Scout Lake. Sixty trees have been planted on the newly constructed berms dividing the campgrounds and along highly eroded areas around the campgrounds. GRLT is pleased with the new growth of native grasses and flowers in our 12-acre wetland at Rocky Fork Creek (located at the entrance of the Boy Scout Lake). GRLT hired Fusion Solutions Inc. to bore out the existing 18" emergency drainpipe from the Boy Scout Lake and slip-lined a 12" sleeve through the pipe to restore the drain and install a 12" gate valve at the bottom of the lake.

Future Projects

GRLT is continuing to review and evaluate projects along the Piasa corridor. There are several structural projects currently in the planning phase within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, stream bank protection, grass waterways, and buffer strips. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible future consideration.

Principia Forest Project

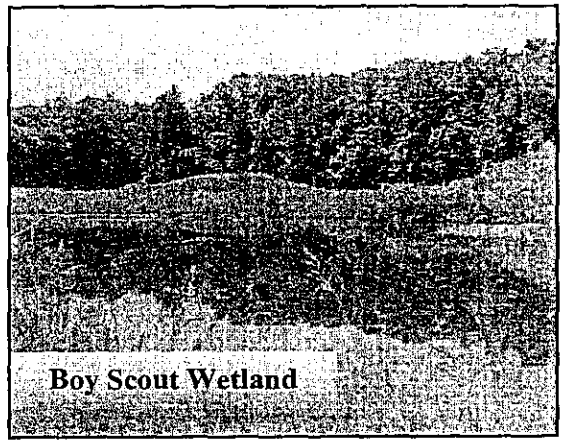
GRLT has proceeded with the reforestation project at Principia College. Survey work was completed for three dry basins that will be constructed this summer by Crutcher Excavating. This Fall, GRLT will sow grass on the newly constructed basins and the remaining 6-10 acre farmland to help control the current erosion problem. GRLT has purchased $2,000 worth of trees for the first year of planting with the help of Trees Forever Illinois Buffer Initiative. These trees will be planted in October or November weather permitting.



Principia College

Trees Forever Illinois Buffer Initiative

Previously this year, Trees Forever approved a $2,000 grant for GRLT to purchase trees for Principia Forest Project due to the great success in years prior. Shown in the picture is an example at Boy Scout Lake located at Camp Warren Levis. The trees were planted and the grass was sowed last Fall and everything is going quite well this year. GRLT has been watering the trees weekly to keep them alive through the ongoing drought.

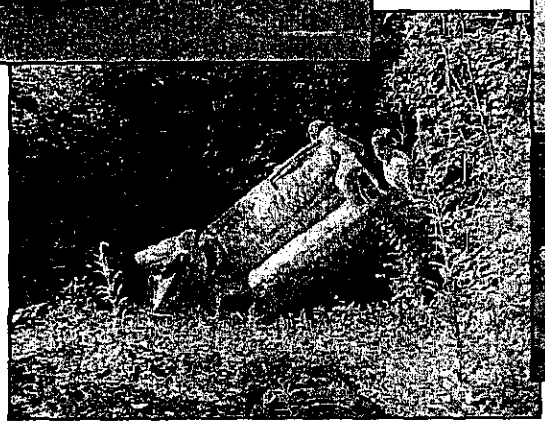


Boy Scout Wetland

Streambank Cleanup And Lakeshore Enhancement

Funds acquired through the Illinois Environmental Protection Agency's Streambank Cleanup and Lakeshore Enhancement (SCALE) allowed a streambank cleanup day along Piasa Creek. The first implemented this year on July 18th students assist on the 2 days from SIU Edwardsville and Alton High School. Programs such as SCALE allows GRLT to help establish strong stewardship values in today's generation by clean up litter along Illinois streams that impacts water quality and wildlife and fish habitats.

Piasa Creek Cleanup Day



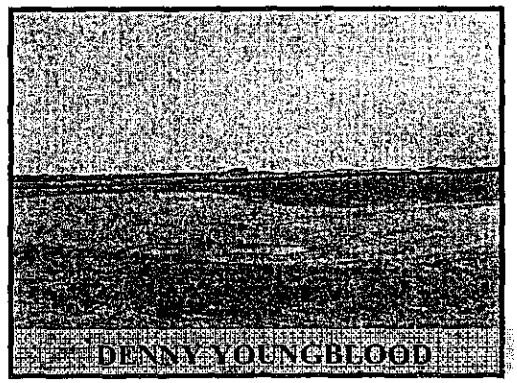
PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
July 1, - September 30, 2005

Illinois American Water

The following is a brief summary of activities during the months of August, September and October reference to the Piasa Creek Watershed Project (PCWP).

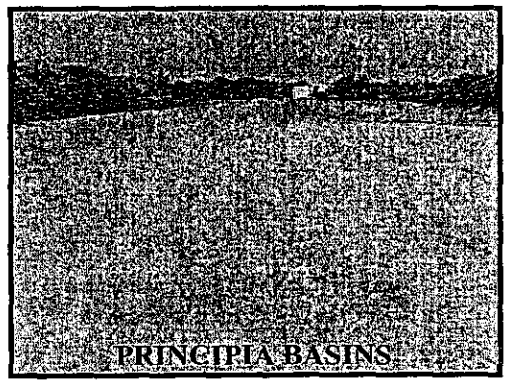
Projects

Great Rivers Land Trust (GRLT) has completed and closed out the following projects this summer: Denny Youngblood's water retention basin, Mike Campion's 3 sediment control basins, Hubert Croxford's 9 sediment control basins, Dave Weishaupt's 2 sediment control basins. The 3 projects will have an annual savings of 483 tons and 87 acres benefited along the Piasa corridor.


DENNY YOUNGBLOOD

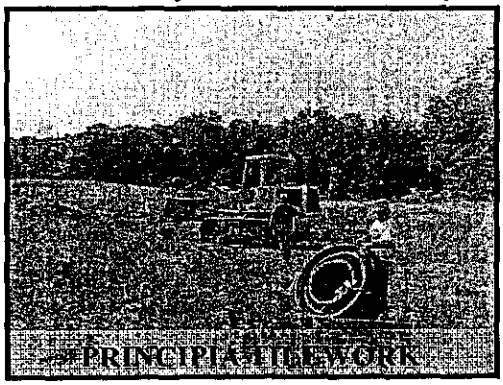
Boy Scout Lake Project

GRLT has received final approval from the Illinois Department of Natural Resources (IDNR) to hire a contractor to begin Phase II. We have posted the bid information and are waiting for approval and grant the project to the appropriate contractor. GRLT began watering the tree regularly located on the new campground adjacent to the lake do to the current drought situation. This Fall GRLT will replace the trees that did not survive through the summer. We have been gathering the debris of rock and sticks left behind from the excavation work from the lakebed to the new campground for the Boy Scouts final approval. Fusion Solutions Inc. completed the following work this summer. Which was to bore out the existing 18" emergency drainpipe from the Boy Scout Lake and slip-lined a 12" sleeve through the pipe to restore the drain and install a 12" gate valve at the bottom of the lake.


PRINCIPIA BASINS

Principia Forest Project

GRLT has completed 4 sediment control basins that were constructed by Cructcher excavating. The basins will save 55 tons of soil annually in the Piasa Creek Watershed. GRLT sprayed the invasive species across the 20 acres that will be sowed this Fall in a Fecus mix. We have order 110 trees to be planted around the perimeter of the existing wood line. The types will consist of native trees like Bur Oak, Pin Oak, Red Oak, Pecan and Walnut that will be planted on October 20 weather permitting .

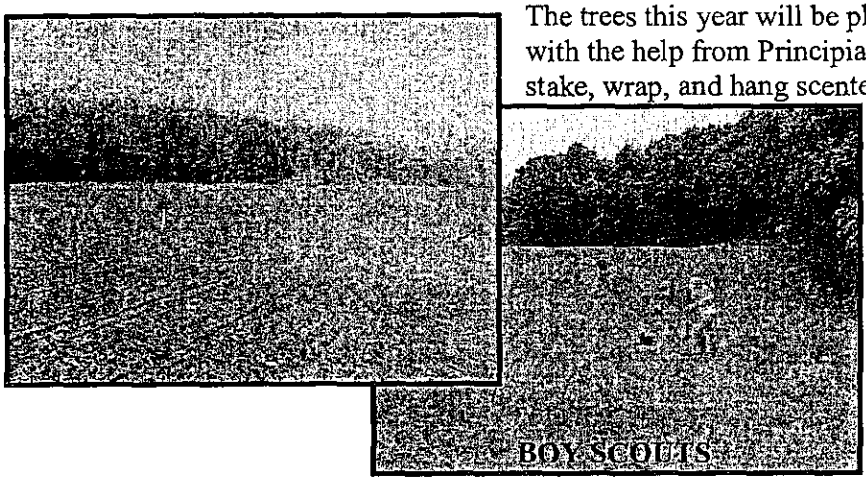

PRINCIPIA TILE WORK

Future Projects

GRLT is continuing to review and evaluate projects along the Piasa corridor. There are several structural projects currently in the planning phase within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, stream bank

protection, grass waterways, and buffer strips. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible future projects.

Trees Forever Illinois Buffer Initiative



The trees this year will be planted October 20 weather permitting with the help from Principia College science classes. They will plant, stake, wrap, and hang scented soap on each tree to repel and protect from the deer. The materials will be purchased with the $2000 grant that we received through Trees Forever Illinois Buffer Initiative. Shown in the pictures is the great success we have had working with Trees Forever over the pervious years.

Wildlife Habitat Incentives Program

Great Rivers applied for WHIP through the United States Department Agriculture (USDA) for 68 acres along Piasa Creek. This program provides financial assistance to help landowners restore high quality habitat that support wildlife. WHIP is part of USDA's 2002 Farm Bill, and WHIP opportunities are open to all Illinois landowners. Through WHIP, the Natural Resources Conservation Service (NRCS) provides technical and financial assistance to restore upland, wetland, riparian, and aquatic habitat areas. Participants enter into agreements to maintain the habitat for 5 to 15 year periods. During this period NRCS technical specialists or an Illinois Department of Natural Resource's (IDNR) Biologist will work one-on-one with you to customize your wildlife habitat development plan. NRCS employs a range of technical specialists who will thoroughly examine the complex and interrelated factors involved in any habitat restoration project. While wildlife habitat is "wild" in many ways, it still needs management and maintenance. This partnership between GRLT and NRCS will not only contribute to this project but also many projects in the future own by GRLT. This will help us mange the land over time to achieve optimum results for wildlife habitat.

GRLT Driving Tour - June 14, 2005

On June14, 2005, GRLT hosted a driving tour of the major projects in the Piasa Creek Watershed Project. The following people from EPA, Illinois American Water and Great Rivers Board were able to see project first hand. The trip began at GRLT office and drove along the sites of various projects that have been implemented or of projects that are in the planning stages. Along the way, Alley Ringhausen explained the projects and the methods we use to construct and solve the common erosion problems throughout Paisa Creek Watershed.

PIASA CREEK WATERSHED PROJECT
QUARTERLY REPORT
October 1, - December 31, 2005

The following is a brief summary of activities during the months of October, November and December reference to the Piasa Creek Watershed Project (PCWP).

Projects

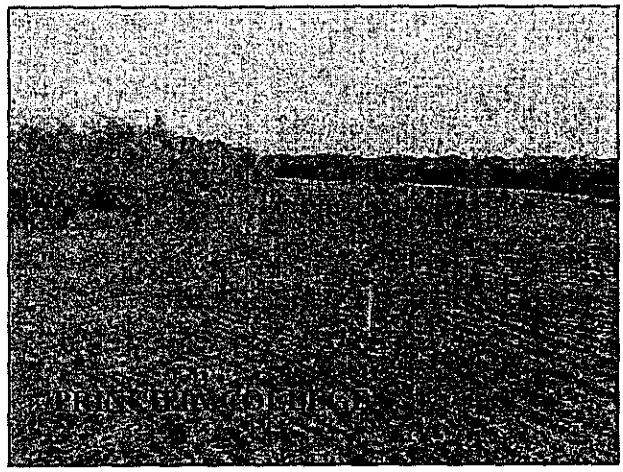
Great Rivers Land Trust (GRLT) will complete the first phase of Alfred Gallay this winter by constructing the 18 sediment and shaping the 3 grass waterways. The tile work was completed last spring before the crops were planted. This project will have annual savings of 261 tons and benefit 53 acres in the Piasa watershed.

Boy Scout Lake Project

After GRLT received final approval from the Illinois Department of Natural Resources (IDNR) we approved the contract with Riverbend Contracting to complete Phase II. Earth work will start this winter with a goal to finish by March 2006, weather permitting. This Fall GRLT replaced 20 trees at the new constructed campground adjacent to the lake that died this summer due to the drought conditions.

Principia Forest Project

GRLT tilled the existing 20 acres and sowed a fescue mix to help control previous erosion problems and to enhance wild life habitat. We planted 110 trees around the perimeter of the existing wood line as part of the five year tree restoration project. The trees were planted with the help of students from Principia College Science class on October 26, 27. The types consist of native trees like Bur Oak, Pin Oak, Red Oak, Pecan and Walnut that were planted. Sediment control basins that were constructed by Cructcher excavating are work fine and the sediment is all ready accumulating in front of the 4 basins.



Grants

Great Rivers Land Trust received $24,000.00 to develop and implement a plan to create a wetland area in association with the restored Boy Scout Lake in Madison County, Illinois. The project will create sediment control, stormwater retention, enhanced habitat for flora and fauna and recreational and educational experiences for the entire community. Great Rivers Land Trust received a second grant of 31,450.00 to build riffle pools on one of six branches of the Piasa Creed. Benefits include reduction of streambank erosion, enhanced fish and wildlife habitat and improved water quality.

Future Projects

GRLT is continuing to review and evaluate projects along the Piasa corridor. There are several structural projects currently in the planning phase within the Piasa Creek Watershed. These structures include dry dams, sediment basins, rock riffles, stream bank protection, grass waterways, and buffer strips. GRLT is continuing to look for property to convert back to natural habitat. Many other structural projects within the Piasa Creek Watershed are currently being evaluated and prioritized for possible future projects.

Trees Forever Illinois Buffer Initiative

Trees Forever hosted its 2005 Annual Celebration on October 19, and 20, in Ames Iowa. With a theme of "Growing Futures," the event was an opportunity to thank the many volunteers, partners, and sponsors that make Trees Forever programs and project possible. That evening 114 people attended the Trees Forever banquet where Great Rivers Land Trust was honor with a plaque for their dedicated work along the Piasa Creek Watershed through the business, education and nonprofit category.

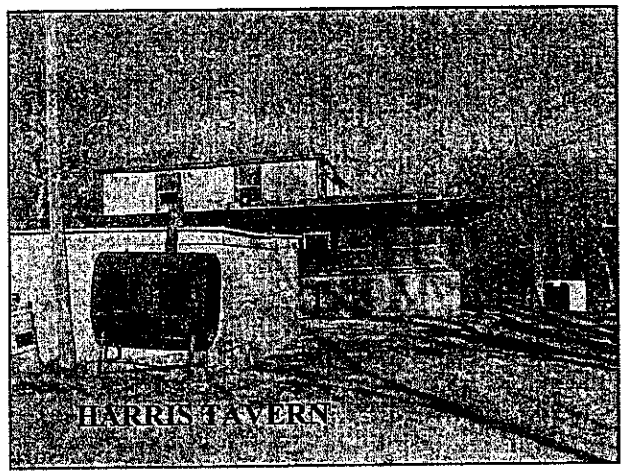

TREE PLANTING

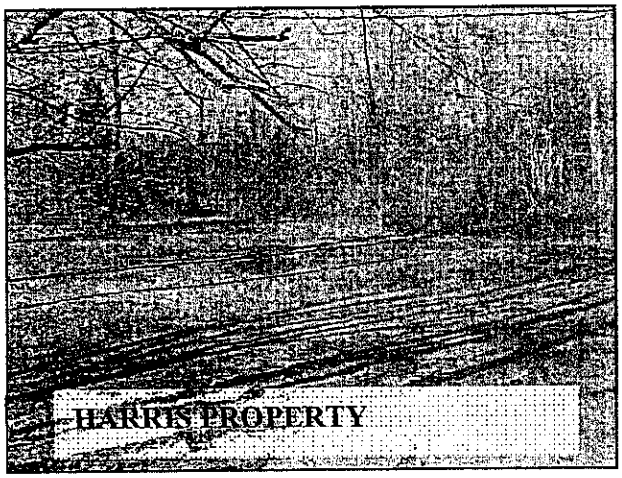
Wildlife Habitat Incentives Program

Great Rivers is working on the first phase of the WHIP program. Working with the community, GRLT, Alton High, and Marquette students planted, staked, flagged and cover the over 200 trees. Projects such as the WHIP program allow GRLT to help establish values in today's generations. The 200 trees, we planted along the Piasa corridor will help restore an existing wetland that GRLT recently purchased. Our next goal is to do a selective cutting on the invasive species that is currently over taken the wetland and restore the area back into a native forest.

Harris Tavern

Great Rivers recently purchased 8 acres along the Piasa Creek Corridor located along the entrance of Piasa Harbor and the Mississippi. Great Rivers goal is to turn the following 8 acres adjacent to the current bike trail into a nature park with kiosk to explain are working efforts along the Piasa Watershed. GRLT is currently removing the existing buildings and cleaning and restoring the grounds to a native prairie, to assist in our goals by reducing erosion, enhanced fish and wildlife habitat and improved water quality.

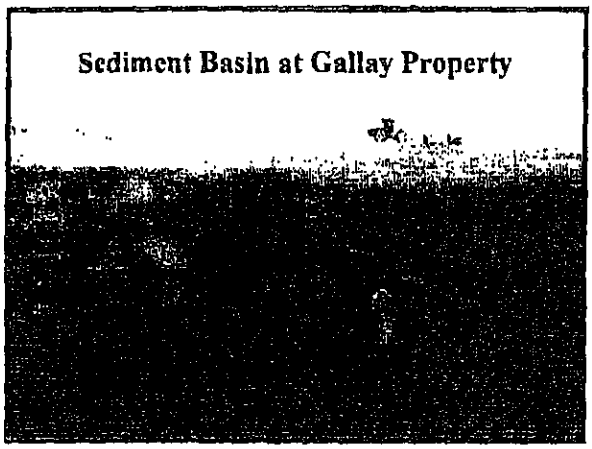

HARRIS TAVERN


HARRIS PROPERTY

Piasa Creek Watershed Project
Quarterly Report
January—March, 2006

Illinois American Water

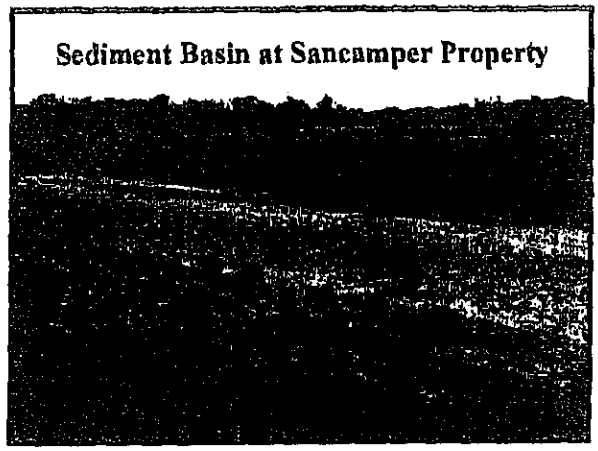
EROSION CONTROL PROJECT CONSTRUCTION



Sediment Basin at Gallay Property

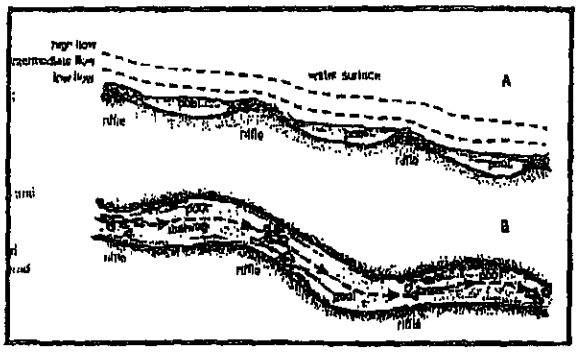
Great Rivers Land Trust (GRLT) has completed the first phase of the project work on the Alfred Gallay property this winter by constructing eighteen sediment basins and shaping three grass waterways. Tile work was completed last year at the site before crops were planted. This process allows the soil to naturally compact and prevent failure of the structures. The project will save 261 tons of soil annually and benefit 53 acres in the Piasa Creek Watershed.

Work has also been completed on the Sancamper farm where a total of six basins have been constructed. Annual soil saving at the Sancamper site is calculated at 61.3 tons per year. Both projects will be added to the list of projects being monitored for erosion control. GRLT is continually evaluating potential projects for participation in the Piasa Creek Project based on the greatest amount of benefit for the lowest capital expenditure.



Sediment Basin at Sancamper Property

CONSERVATION 2000 GRANTS

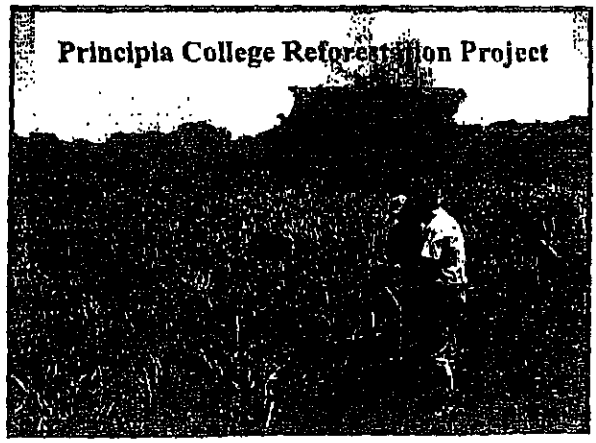


Pool & Riffle Project funded by C2000

GRLT was the recipient of three grants from the Illinois Department of Natural Resources (IDNR) Conservation 2000 program, all of which will be implemented in the Piasa Creek Watershed. The first grant will provide $24,000 of matching funds to complete the wetland basin associated with the Boy Scout Lake project. The second grant will provide $31,000 in matching funds to install a pool and riffle project on the Little Piasa East sub-watershed. This project will control streambank erosion and improve fish habitat. The third grant will provide $12,000 in matching funds for a small land acquisition effort in the riparian corridor of the watershed. Contracts have been signed on all three projects and implementation will begin this summer.

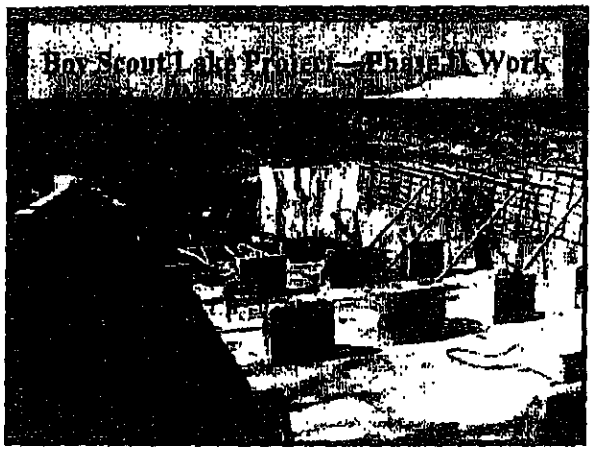
PCWP Quarterly Report: January—March, 2006

TREES FOREVER



Once again, GRLT is the recipient of another Trees Forever grant. GRLT is the only organization in the state of Illinois to receive grant awards through the program for five consecutive years. All five projects are in the Piasa Creek Watershed. The money will be used to expand a land use change effort on the campus of Principia College. As part of a long term lease agreement between GRLT and the college, approximately fifty acres of intense tillage row crop land will be converted to trees and native grasses. The estimated soil saving of such a land use conversion is estimated at eight tons per acre, per year. As part of the long-term agreement, the property will be enrolled in the Conservation Reserve Program (CRP) to provide financial assistance for maintenance and stewardship. Additional matching funding may be provided by the U.S. Fish and Wildlife Service for the initial purchase of trees. In addition to erosion control, the project provides improved wildlife habitat, suppression of invasive species and noxious weeds, and serves as an outdoor classroom for the students of Principia College.

BOY SCOUT LAKE

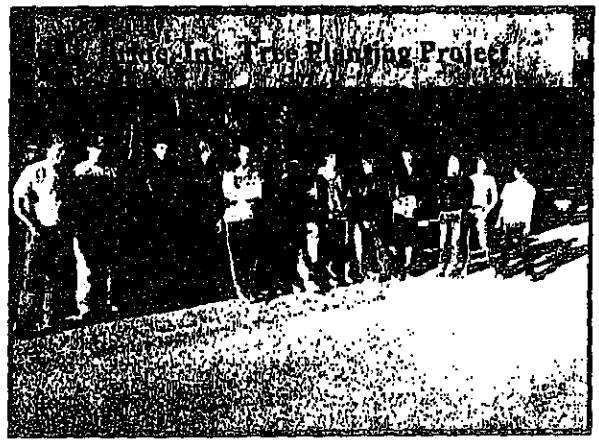


The Boys Scout Lake project at Camp Warren Levis in Godfrey is nearing completion. The contract for phase II of the lake reconstruction effort was awarded late in 2005. The scope of work on phase II includes demolishing the wing walls on the old spillway; removing pitted and scoured concrete; grouting the subsurface; resurfacing the spillway deck including the introduction of energy dissipation piers; installing the valve and draw-down structure; closing the wetland berm; and repairing the breach in the main levy. To date, all of the demolition work has been completed, the majority of the concrete has been poured, and the valve and pipeline has been installed. Once the Department of Natural Resources approves the final design on the drawdown, the contractor will proceed with the final aspects of the project. The lake should begin filling this summer.

PCWP Quarterly Report: January—March, 2006

Wildlife Habitat Incentive Program (WHIP)

GRLT completed the first phase of the WHIP grant on lower Mill Creek, the western sub-watershed of the Piasa Creek. Pride Incorporated, a volunteer group that consists of high school students fulfilling community service hour requirements, assisted in planting, flagging, staking and wrapping over 200 trees on a floodplain property. The goals of the project are to re-introduce nut bearing native species into what has become a monoculture of silver maples, improve wildlife habitat conditions, and restore the hydraulic storage capacity of the wetlands. The final phase of the project will be a Timber Stand Improvement (TSI) effort to cull undesirable trees and open the canopy to promote the growth of native species.



Stewardship and Maintenance of Existing Projects

The winter months are an opportunity to inspect and review existing projects and properties. One of the persistent issues is controlling invasive species and noxious weeds. Controlling these plants allows natives to thrive and improve the function of the various project sites, improves habitat conditions and prevents a minor problem from getting out of control.

Completed Projects

Table 1

Year Completed 2001

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Schef	I	10					$7,740.75	$5,161.00	$0.00	$62.03	$128.69	88	183	183	0		3,088	2,350	
Hansen, Bruce	I	7					$1,654.35	$2,205.80	$3,308.70	$0.00	$128.83	43	128	128	0		2,699	1,055	
Wittman, John		10					$2,402.00	$923.00	$5,909.00	$0.00	$0.00	36	69	69	108		2,502	1,685	
Vorhees, Darrel			1				$7,233.75	$2,412.00	$0.00	$117.20	$797.00	10	68	68	0				
Jungk, Steve	I					1 waterway/ drop box	$2,745.00	$915.00	$0.00	$0.00	$159.13	23	108	108	0				
Lang	I					500' buffer strip	$0.00	$0.00	$0.00	$0.00	$0.00	0	0	0	0				
Summary for 'Year Completed' = 2001 (6 detail records)																			
Sum		27	1				$21,775.85	$11,616.80	$9,217.70	$179.23	$1,213.65	200	556	556	108		**8,289**	5,090	

BSL Tons

Year Completed 2002

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Schafer, Bill & Gary	I					drop box; dual wall pipe; repair structure	$910.00	$910.00	$0.00	$33.95	$138.93	13	54	54	0				
Schultz, Kay		5		1		tile, outlet pipe	$837.50	$837.50	$2,512.50	$46.02	$370.58	11	91	91	0				
Eisler, Bob	I	5				tile; outlet pipes	$2,579.63	$859.87	$0.00	$33.23	$143.31	24	104	104	0		2,006	1,025	

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost; A.L.C.=Tons Saved from Ag Land Converted; BSL Tons = Tons saved from Boy Scout Lake Project

Gibbons, Tim		1			$3,500.00	$6,500.00	$0.00	$0.00	$0.00	134	202	202	0		13,390	2,002
Wittman, Walter	3				$1,087.20	$2,536.80	$0.00	$99.29	$188.55	35	36	36	0		619	820
Newgent, John		1			$3,500.00	$6,404.00	$0.00	$21.28	$31.25	80	117	117	0		9,034	
Schafer, Bill II & Gary	4				$756.10	$756.10	$0.00	$4.96	$37.27	22	55	55	110		1,911	825
Fessler, Joe & Edwin	6		2	tile, outlet pipes	$4,235.18	$1,815.07	$0.00	$30.91	$228.69	18	134	134	0			
Jungk, Steve II	3			tile, outlet pipe	$1,669.31	$556.44	$0.00	$17.55	$152.05	22	122	122	64		1,164	600
Schef II	4				$1,552.50	$1,035.00	$0.00	$22.15	$359.38	7	88	88	29		793	650
Wieland, I John	8		3	waterways	$4,949.44	$1,649.81	$0.00	$26.40	$188.55	35	250	250	0		2,420	1,100
Brighton Storm Water		1		dam construction	$6,263.78	$6,263.78	$0.00	$40.93	$55.79	140	67	67	124		10,244	
Pfeiffer, Paul	14				$4,846.50	$1,615.50	$9,693.00	$248.00	$316.00	51	64	64	0		2,414	2,180
Herring, Don	2				$502.20	$502.20	$1,506.60	$11.87	$31.78	16	24	24	18		2,264	520
Roth, John I	8	1	3		$2,500.00	$4,455.00	$0.00	$0.00	$0.00	5	25	25	11		2,420	0
Bartlett, Eugene		1			$2,500.00	$3,785.00	$0.00	$0.00	$0.00	183	246	246	0		6,614	
Summary for 'Year Completed' = 2002 (16 detail records)																
Sum	62	5	3	6	$42,189.34	$40,482.07	$13,712.10	$636.54	$2,242.13	796	1679	1679	356		55,293	9,722

BSL Tons

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost; A.L.C.=Tons Saved from Ag Land Converted; BSL Tons = Tons saved from Boy Scout Lake Project

Year Completed 2003

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Campion, Mike	I	14	0	0	0		$4,461.38	$1,784.55	$2,676.83	$44.12	$134.39	35	50	50	56		113	2,065	
Andrew, Dale						3 stream barbs; 345' protected; 195 + 75	$1,258.76	$419.58	$6,713.40	$0.00	$0.00	0	450	0	0	450			
Wock, Jack	I	10	0	0	0		$5,352.75	$2,011.10	$3,156.15	$39.84	$288.23	30	132	132	85		153	1,820	
Lang	II					wetland	$0.00	$0.00	$0.00	$0.00	$0.00	7	56	0					56
Roth, John	II	0	0	0	0	7 rock riffles; 450 stone toe	$1,987.50	$662.50	$10,600.00	$0.00	$0.00	0	244	0	0	244	0	0	
Summary for 'Year Completed' = 2003 (5 detail records)																			
Sum		24	0	0	0		$13,060.39	$4,877.73	$23,146.38	$83.96	$422.62	72	932	182	141	694	266	3,885	56

BSL Tons

Year Completed 2004

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Crutcher, Mike							$0.00	$0.00	$0.00	$0.00	$0.00	0	160	0	0				20
Boy Scout Lake	I					lake excavation & enhanced	$0.00	$0.00	$0.00	$0.00	$0.00	2560	1920	0	0				
Eisler, Bob	II	4	0	0	0		$511.40	$511.40	$1,534.20	$18.39	$213.08	12	103	103	36		820	650	
Lurton, Howard	I	2	0	0	0		$406.95	$406.95	$1,220.85	$39.36	$230.71	7	27	27	14		556	400	
Hanold Brothers	I	7	0	0	0		$1,581.00	$1,581.00	$3,601.00	$60.27	$221.01	31	51	51	61		4,544	1,085	

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost; A.L.C.=Tons Saved from Ag Land Converted; BSL Tons = Tons saved from Boy Scout Lake Project

Nowland, Don	I	5	0	0	0		$921.60	$921.60	$2,764.80	$47.99	$323.31	13	63	63	27		1,692	1,315	
Summary for 'Year Completed' = 2004 (6 detail records)																			
Sum		18	0	0	0		$3,420.95	$3,420.95	$9,120.85	$166.01	$988.11	2623	2324	244	138		7,612	3,450	20

BSL Tons 1920

Year Completed 2005

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Lang	III					bottomland prairie	$0.00	$0.00	$0.00	$0.00	$0.00	23	184	0	0				184
Croxford, Hubert	I	9	0	0	0		$3,098.75	$1,239.40	$1,859.10	$32.63	$0.00	29	108	108	81		272,602	1,860	
Youngblood, Denny	I	0	1	0	0		$2,000.00	$3,150.00	$0.00	$33.06	$321.88	16	43	43	112		651,656	0	
Weishaupt, Dave	I	2	0	0	0		$1,592.00	$531.00	$0.00	$37.20	$56.86	28	42	42	0	0	421,948	500	0
Principia College	I	4	0	0	0	50 acres Ag land conversion	$4,096.00	$0.00	$0.00	$60.23	$585.14	50	447	47	21	0	126,329	0	400
Campion, Mike	II	3	0	0	0		$2,352.60	$1,568.40	$0.00	$39.74	$266.23	15	54	54	43		149,600	780	
Summary for 'Year Completed' = 2005 (6 detail records)																			
Sum		18	1	0	0		$13,139.35	$6,488.80	$1,859.10	$202.86	$1,230.11	161	878	294	257	0	1,622,135	3,140	584

BSL Tons 0

Year Completed 2006

	Phase:	DB	SWRB	Terr.	RC	Other Proj.	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C:
Sandcamper Farms	I	6	0	0	0		$0.00	$0.00	$0.00	$101.14	$142.53	0	61	61	0	0	0	0	0
Gallay, Alfred	I	18	0	0	1		$4,400.00	$0.00	$0.00	$84.29	$408.16	0	261	261	0	0	0	0	0

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost; A.L.C.=Tons Saved from Ag Land Converted; BSL Tons = Tons saved from Boy Scout Lake Project

Summary for 'Year Completed' = 2006 (2 detail records)

Sum	24	0	0	1	$4,400.00	$0.00	$0.00	$185.43	$550.69	0	322	322	0	0	0	0	0

BSL Tons 0

Grand Total

Total Project Costs $221,928.36

1920	173	7	3	7	$97,985.88	$66,886.35	$57,056.13	$1,454.03	$6,647.31	3852	6691	3277	1000	694	1,693,595	25,287	660
BSL Tons	DB	SWRB	Terr.	RC	PCWP $	LO $	Gov. $	$ per Ton	$ per Acre	Acres Benefited	Soil Saved (tons)	Gully	Sheet/Rill	Streambank	Storage Cap.	Linear Ft.	A.L.C.

DB=Dry Basin; SWRB=Stormwater Retention Basin; Terr.=Terraces; RC=Rock Chutes; Other Proj.=Other Projects; PCWP $= Piasa Creek Watershed Project' Share of Cost; LO $= Landowner's Share of Cost; Gov $= Governmental Share of Cost; A.L.C.=Tons Saved from Ag Land Converted; BSL Tons = Tons saved from Boy Scout Lake Project

EVALUATION OF RESIDUALS DISCHARGED FROM ILLINOIS-AMERICAN WATER COMPANY'S ALTON WATER TREATMENT PLANT

I. Background

Illinois-American Water Company ("Illinois-American") operates a public water supply treatment facility in Alton, Illinois. This public water supply treatment facility (the "Alton facility") was constructed in 1999 and 2000 to replace the public water supply treatment facility previously located nearby. The new facility, which began operating on December 31, 2000, is authorized by NPDES Permit No. IL0000299 (the "Permit") to discharge clarifier sludge blowdown, Superpulsator blowdown, cleaning waste, and filter backwash into the Mississippi River (the "River") near River Mile 204.[1] The Permit is attached to this Report as Attachment A. The Permit does not contain specific load limits for iron (total) or Total Suspended Solids (TSS), but rather provides that the discharges at outfalls 001 and 002 shall not be subject to the effluent standards for TSS and iron in 35 Ill. Adm. Code 304.124.[2] This exemption was granted by the Illinois Pollution Control Board (IPCB) due to the anticipated reduction of TSS and iron by the Great Rivers Land Trust (GRLT) soil conservation project (the "Project") and Illinois-American's financial support of the Project. To demonstrate the success of the Project and further illustrate the net reduction of TSS and iron entering the Mississippi River through this agreement, Black & Veatch Corporation ("Black & Veatch") was retained to review the Alton facility's monthly NPDES monitoring sample data and the data reported by GRLT to Illinois Environmental Protection Agency (IEPA). Black & Veatch also conducted soil sampling in the areas affected by the Project, and conducted sampling of water discharged from the Alton facility. Black & Veatch then evaluated the volume of iron and TSS discharged to the River from the Alton facility, and compared those amounts to the volume of TSS and iron prevented from entering the River due to the success of the Project.

II. Plant Waste Stream Sampling.

In accordance with the Permit, the staff at the Alton facility collects monthly grab samples of the facility's discharge from outfall 002. This discharge is made up of filter backwash and Superpulsator blowdown, which contains the TSS and iron removed from the water during treatment. Black & Veatch understands that these samples are collected during a filter backwash cycle or during a Superpulsator blowdown cycle. The timing for sample collection is important to this evaluation because the concentrations of TSS and iron in the discharge are higher during a filter backwash cycle and during a Superpulsator blowdown cycle than during normal operations. A summary of the monthly NPDES monitoring results submitted by the Alton facility to IEPA, which is the basis for Black &

[1] The expiration date of the Permit was December 31, 2005. However, Illinois-American filed a timely application for renewal of the Permit on June 22, 2005.
[2] The Alton facility has not utilized outfall 001.

Veatch's calculation of the Alton facility's average yearly discharge of TSS and iron, is attached to this Report as Attachment B.[3]

In addition, Black & Veatch visited the Alton facility on June 20, 2006 and conducted additional sampling of two filter backwash cycles (Filter No. 3 and Filter No. 6) and two Superpulsator blowdown events (Superpulsator No. 2 and Superpulsator No. 4). These Black & Veatch samples, taken at approximately one minute intervals during the filter backwash cycles and at approximately 0.3 minute intervals during the Superpulsator blowdown events, were used to more accurately evaluate the total iron discharged by the Alton facility and to verify the monthly data collected by the Alton facility's staff. A summary of the Black & Veatch sample data collection, sample analysis, and evaluation is attached to this Report as Attachment C.

III. GRLT Soil Conservation Project Sampling.

Over the past six years, GRLT has completed soil conservation projects at 42 sites in the Piasa Creek Watershed, which have greatly reduced soil erosion and corresponding sediment transport to the Mississippi River. Ranging from stormwater detention to stream bank stabilization, these projects prevent erosion and trap eroded sediment before that sediment reaches the River. GRLT has determined that these projects have prevented the erosion and subsequent deposition of approximately 6,691 tons of soil each year. GRLT has also estimated that the Project will reduce sedimentation in the watershed by at least 10,000 tons per year (and possibly by as much as 12,000 to 15,000 tons per year) by the end of the ten-year program in 2010. Since the amount of eroded soil and sediment correlates directly to the amount of materials entering the River, one ton of soil protected from erosion or prevented from deposition typically equates to one ton of suspended solids not present in the River.

Black & Veatch also used GRLT's data regarding tons of soil saved to estimate the net yearly decrease of iron in the River. To determine the amount of iron contained in each ton of soil saved by the Project, Black & Veatch conducted sampling of the different soil types present in the soil conservation project areas. During this sampling, completed on June 21, 2006 and June 22, 2006, Black & Veatch collected 44 soils samples from 15 different project locations, from depths of zero to six inches below ground surface. The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NCRS) has mapped the distribution of soil types in the Piasa Creek Watershed. Four predominant soil associates have been identified in the watershed. The predominant soil associates and their percentages of coverage in the watershed are as follows: Clinton-Keomah Associate (45%), Fayette-Stringhurst Association (23%), Bottomland and Terrace Association (17%), and Tama-Muscatine/Harrison-Herrick Association (15%). (Great Rivers Land Trust, 2004.) Since each project location may contain more than one

[3] Although the Alton facility began operating on December 31, 2000, Illinois-American has indicated that the Alton facility did not begin full operations until February 12, 2001, and that the first monthly grab sample of the Alton facility's discharge was obtained on February 28, 2001. The monthly grab sample data reported for December 2000 and January 2001 was therefore collected from the effluent stream of the old water treatment plant previously located nearby.

type of soil, sampling activities were coordinated to obtain one sample from each soil type and each project type. These samples were then submitted to TEKLAB, Inc., an environmental testing laboratory, for analysis to determine the iron content of the soils in accordance with NELAP accredited testing (SW-846 3050B, 6010B, Metals by ICP). This analysis indicated that the iron content of the soil types ranged from approximately 185 mg/kg-dry to 27,300 mg/kg-dry. A weighted average of the soil types and associated iron content was then considered along with the GRLT soil conservation estimates to determine the total amount of iron in the soils saved by the Project each year, and thus the total amount of iron prevented from entering the Mississippi River. A summary of the Black & Veatch soil sampling and evaluation is attached to this Report as Attachment D.

IV. Analysis of Data Collected Since the Facility Began Operations

Black & Veatch used the data described above to evaluate the volume of TSS and iron discharged to the River each year from the Alton facility, and compared those amounts to the volume of TSS and iron saved by the Project to determine the success of the Project.

A. Total Suspended Solids (TSS).

The Black & Veatch evaluation of the NPDES monthly monitoring results from February 2001 through December 2005 indicates that the TSS in the Alton facility's waste stream has averaged approximately 1,333 tons per year of solids. Listed below is a summary of the yearly estimates of TSS from the Alton facility's monitoring reports:

Year	Average TSS mg/l	Average daily waste flow MGD	Total TSS Tons/yr
2001*	3,931	0.67	3,898
2002	684	0.68	691
2003	831	0.66	868
2004	777	0.53	486
2005	1,133	0.49	721
Average			1,333
*No data was obtained for January 2001 from the new Alton facility.			

Based upon this evaluation of the sampling data, the highest yearly TSS discharge occurred in 2001 when approximately 3,900 tons of TSS was discharged by the Alton facility. The lowest TSS discharge during the reporting period was 486 tons during 2004.

As noted above, GRLT has determined that the Piasa Creek watershed soil conservation projects completed to date have prevented 6,691 tons per year of TSS in the form of soil and sediment from entering the Mississippi River each year through reduced erosion and sedimentation control. Based upon the evaluation of the NPDES sampling data, Illinois American's support of the Project has directly contributed to a net yearly decrease of 5,358 tons of TSS in the Mississippi River — 6,691 tons of TSS are saved by

the Project each year, and Illinois-American's discharge contains an average of only 1,333 tons of TSS each year. This equates to an approximately 5.0 to 1 offset of the TSS discharged by the Alton facility each year.

B. Total Iron

Black & Veatch also evaluated the NPDES monthly monitoring results for iron from February 2001 through December 2005. This evaluation indicated that the iron in the plant waste stream has averaged approximately 21 tons per year. Listed below is a summary of the yearly estimates of iron from the Alton facility's monitoring reports:

Year	Average iron mg/l	Average daily waste flow MGD	Total iron Tons/yr
2001*	60	0.67	54
2002	14	0.68	14
2003	8	0.66	9
2004	17	0.53	11
2005	25	0.49	16
Average			21
*No data was obtained for January 2001 from the new Alton facility.			

Based upon this evaluation of the NPDES sampling data, the highest yearly iron discharge occurred in 2001 when 54 tons of iron was discharged by the Alton facility. The lowest iron discharge during the reporting period was 9 tons during 2003.

In addition, Black & Veatch conducted additional sampling as indicated in the Plant Waste Stream Sampling section of this report. The analysis of the Black & Veatch sampling data collected during filter backwash cycles and Superpulsator blowdown cycles indicates that the total iron discharged by the Alton facility is approximately 4.3 tons (3,906 kg) per year. However, it is important to note that at the time of this sampling activity, the Mississippi River in the vicinity of River Mile 204 contained very low turbidity levels. Black & Veatch therefore compared the turbidity levels in the River at the time of sampling to the average turbidity in the River on other days in 2005, and determined that the turbidity at the time of sampling was approximately one-half of the average turbidity. To reflect the total tons of iron that would be discharged at average turbidity, Black & Veatch adjusted its conclusion regarding the total tons of iron discharged, in proportion to its findings regarding turbidity. Adjusting this value to correspond to the average daily turbidity in 2005 indicates that the total iron discharged by the Alton facility is approximately 9 tons.

By comparison, the Black & Veatch evaluation of the Project and the Black & Veatch soil sampling data indicates that approximately 79 tons (71,264 kg) per year of iron are contained in the soil and sediment that is prevented from entering the Mississippi River each year through reduced erosion and improved sedimentation control. Based upon the evaluation of the NPDES sampling data, Illinois American's support of the

Project has directly contributed to an approximate net yearly decrease of 58 tons of iron in the Mississippi River — 79 tons of iron are saved by the Project each year, and Illinois-American's discharge contains an average of only 21 tons of iron each year. This equates to an approximately 3.8 to 1 offset of the iron discharged by the Alton facility. However, based upon the evaluation of the Black & Veatch sampling data, Illinois American's support of the Project has directly contributed to an approximate net yearly decrease of 70 tons of iron in the Mississippi River — 79 tons of iron are saved by the Project each year, and Illinois-American's discharge contains an average of only 9 tons of iron each year. This equates to an approximately 8.8 to 1 offset of the iron discharged by the Alton facility. In either case, the amount of iron saved by the Project is far greater than the amount in Illinois-American's discharge.

V. Analysis of Data Collected in Recent Years

As indicated by the tables set forth above, the TSS loading and the iron loading in the year 2001 was significantly higher than in later years. For TSS, the total tonnage per year in 2001 was approximately 3,000 tons per year higher than the highest tonnage measured after 2001. For iron, the total tonnage per year in 2001 was approximately 38 tons per year higher than the highest tonnage measured after 2001. Illinois-American has indicated that data reported for 2001 reflects the amount of TSS and iron in the facility's discharge prior to operational optimization within the facility.

The data for 2002 through 2005 reflects consistently lower values than those shown in the first year of operation. In addition, Black & Veatch sampling verifies the accuracy of the data for 2002 through 2005. Consideration of only the data collected for 2002 through 2005 is therefore likely to present a more accurate representation of the tons of TSS and iron discharged by Illinois-American's Alton facility each year.

For 2002 through 2005, the average total tons of TSS discharged by the Alton facility is 691 per year, and the average total tons of iron discharged is 12.5 tons per year. The Project's savings of approximately 6,691 tons of TSS and 79 tons of iron therefore represents an approximately 9.7 to 1 offset of the TSS discharged by the Alton facility each year, and an approximately 6.3 to 1 offset of the iron discharged by the Alton facility each year.

VI. Conclusion

The Alton facility's NPDES Permit No. IL0000299 contains special conditions which were determined by IPCB to provide the greatest protection to the environment of the Mississippi River. One of the key conditions in the Permit requires Illinois-American to support the GRLT soil conservation project. Based upon the sampling and analysis performed by Black & Veatch as described above, this cooperative agreement has resulted in a significant net reduction in both TSS and iron levels in the Mississippi River in the vicinity of the Alton facility's discharge.

As reported by GRLT, the Project has resulted in reduced erosion and improved sediment trapping, which prevent 6,691 tons of soil and sediment from entering the Mississippi River each year. This equates to net reduction of approximately 6,691 tons of suspended solids and 79 tons of total iron the River. By comparison, the Alton facility discharges an average of 1,333 tons of suspended solids and 21 tons of iron each year (based on analysis of the NPDES sample data). This represents a 5.0 to 1 offset in suspended solids and a 3.8 to 1 offset in iron over the discharge from the Alton facility. When only the data collected after the plant's operations stabilized in 2002 is considered, the Alton facility discharges an average of 691 tons of suspended solids and 12.5 tons of iron each year, which represents a 9.7 to 1 offset in suspended solids and a 6.3 to 1 offset in iron over the discharge from the facility.

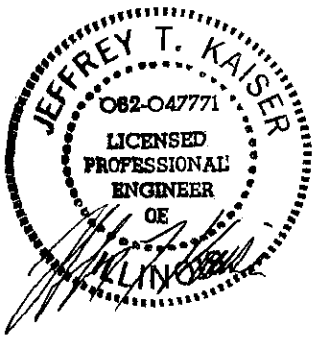
ATTACHMENTS

Attachment A – NPDES Permit No. IL0000299
Attachment B – Illinois-American Monitoring Data / Evaluation
Attachment C – Black & Veatch June 20, 2006 Alton Facility Sampling Data / Evaluation
Attachment D – Black & Veatch Soils Sampling Data / Evaluation

CERTIFICATION

I, Jeffrey T. Kaiser, certify this report was prepared under my supervision by personnel qualified, and regularly engaged in the practice of civil engineering. The statements in this report are true to the best of my knowledge, information and belief.

I work at Black & Veatch Corporation where I hold the position of Project Manager for water and wastewater projects. I have been actively engaged in the field of civil engineering for more than 20 years, and I am registered by the state of Illinois as a Professional Engineer.



Signed _____

Date 10/30/06

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/782-0610

February 15, 2001

Illinois-American Water Company
100 North Water Works Drive
Belleville, Illinois 62263

Re: Illinois-American Water Company
Illinois-American Water Company - Alton District
NPDES Permit No. IL0000299
Modification of NPDES Permit (Without Public Notice)

Gentlemen:

The Illinois Environmental Protection Agency has modified the above referenced NPDES permit as follows:

The expiration date has been changed from December 31, 2001 to December 31, 2005.

Enclosed is a copy of the modified Permit. Because the changes made in the Permit were minor, no formal Public Notice of the modification will be issued.

Should you have questions or comments, please contact Fred Rosenblum of my staff.

Very truly yours,

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:FLR:00082901.dlk

Enclosure: Modified Permit

cc: Collinsville Region
Records Unit
Compliance Assurance Section (with enclosures)
SIMAPC
Missouri

NPDES Permit No. IL0000299

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Modified (NPDES) Permit

Expiration Date: December 31, 2005

Issue Date: January 24, 2001
Effective Date: January 24, 2001
Modification Date: February 15, 2001

Name and Address of Permittee:

Illinois-American Water Company
100 North Water Works Drive
Belleville, Illinois 62263

Facility Name and Address:

Illinois-American Water Company
Alton District
1200-1201 West Broadway
Alton, Illinois 62002

Discharge Number and Name:	Receiving Waters:
001 Clarifier Sludge Blowdown and Cleaning Waste and Filter Backwash	Mississippi River
002 Superpulsator Sludge Blowdown and Cleaning Waste and Filter Backwash	Mississippi River

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:FLR:00082901.dlk

Modification Date:

NPDES Permit No. IL0000299

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
1. From the effective date of this permit until the date of elimination of discharge from outfall 001, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:						
Outfall: 001**						
Flow (MGD)	See Special Condition 3				Monitor When Discharging	Continuous
pH	See Special Condition 4				1/Month	Grab
Total Suspended Solids	See Special Conditions 6 and 11				1/Month	Grab
Iron (total)	See Special Conditions 6 and 11				1/Month	Grab
Total Residual Chlorine*			--	0.05	1/Month	Grab

*See Special Condition 7.
**See Special Conditions 6 and 8.

Modification Date:

NPDES Permit No. IL0000299

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
1. From the date of commencement of discharge from the superpulsator plant at outfall 002 until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:						
Outfall: 002**						
Flow (MGD)	See Special Condition 3				Monitor When Discharging	Continuous
pH	See Special Condition 4				1/Month	Grab
Total Suspended Solids	See Special Conditions 11 and 12				1/Month	Grab
Iron (total)	See Special Conditions 11 and 12				1/Month	Grab
Total Residual Chlorine*			--	0.05	1/Month	Grab

*See Special Condition 7.
**See Special Conditions 11-20.

NPDES Permit No. IL0000299

Special Conditions

SPECIAL CONDITION 1. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 2. The permittee shall record monitoring results on Discharge Monitoring Report forms using one such form for each discharge each month. The completed Discharge Monitoring Report form shall be submitted monthly to IEPA, no later than the 15th of the following month, unless otherwise specified by the Agency, to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 3. Flow shall be reported as a monthly average and daily maximum.

SPECIAL CONDITION 4. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 5. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 6. Pursuant to 35 Ill. Adm. Code 304.206, the discharge at outfall 001 shall not be subject to the effluent standards for Total Suspended Solids and Total Iron in 35 Ill. Adm. Code 304.124.

SPECIAL CONDITION 7. All samples for total residual chlorine shall be analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

SPECIAL CONDITION 8. Discharges from this facility shall not result in sludge or bottom deposits, floating debris, visible oil, grease, plant or algal growth, odor, color, or turbidity of other than natural origin in the waters of the State.

SPECIAL CONDITION 9. In the event the permittee shall require the use of water treatment additives other than those previously approved by this Agency, the permittee must request a modification of this permit in accordance with the Standard Conditions, Attachment H.

SPECIAL CONDITION 10. Construction of treatment facilities which may be necessary to meet the requirements of this permit may not be started until a construction permit has been issued by this Agency.

SPECIAL CONDITION 11. Total suspended solids and iron (total) shall be reported in mg/l as monthly average and daily maximum concentrations.

SPECIAL CONDITION 12. Effluent and Water Quality Standards

a. In accordance with AS 99-6, the discharge at outfall 002 shall not be subject to the effluent standards for Total Suspended Solids and Total Iron at 35 Ill. Adm. Code 304.124 and offensive discharges at 35 Ill. Adm. Code 304.106.

b. In accordance with AS 99-6, the general use water quality standard for offensive discharges at 35 Ill. Adm. Code 302.203 shall not apply to a one-mile stretch of the Mississippi River that receives effluent from the permittee's facility and is immediately downstream from permittee's discharge from outfall 002.

SPECIAL CONDITION 13.

a. Permittee and Great Rivers Land Preservation Association (GRLPA) shall adhere to the "Year 1" provisions of the Funding Agreement between Illinois - American and GRLPA dated October 20, 2000.

b. The 1995 "Piasa Creek Macrosite: a Demonstration of Non-Point Source Pollution Remediation and Water Quality Improvement Plan" ("Piasa Creek Plan") shall be revised to achieve by October 2010 a sustained 2:1 reduction of sediment loading in the Mississippi River when comparing control of the sediment to the Piasa Creek to the discharge of residual solids from permittee's Alton facility.

c. Permittee through the GRLPA shall submit the revised Piasa Creek Plan to the Agency for review and approval prior to implementation.

d. A geomorphic inventory assessment ("GIA") of the Piasa Creek watershed to target sediment reductions shall be conducted in accordance with sediment reduction measurement-related provisions of the Scope of Services provisions of the Agreement. Permittee through the GRLPA shall submit to the Agency for review and approval the proposed GIA workplan, including specific task and target completion dates.

e. Permittee through the GRLPA shall submit quarterly reports to the Agency as described in Special Condition 14a of this permit and shall provide monthly updates of the progress of the GIA to the Agency.

f. Within 24 months of the effective date of this permit, permittee through the GRLPA shall submit to the Agency a written watershed assessment report, including results of the GIA.

g. Within 30 months of the effective date of this permit, permittee through the GRLPA shall submit to the Agency for review and approval a Project implementation plan.

h. Within 36 months of the effective date of this permit, permittee through the GRLPA shall begin significant implementation of the Piasa Creek Plan.

SPECIAL CONDITION 14. Project Implementation, Measurement, and Monitoring

a. Permittee through the GRLPA shall submit to the Agency quarterly progress reports in March, June, September and December of each calendar year detailing the following:

   1. progress in implementing the recommendations of the GIA and establishing the baseline for calculating sediment reductions in the Piasa Creek watershed;

   2. progress in implementing sedimentation reduction measures;

   3. progress in acquiring land and easements and permission to implement anti-erosion and stream bank preservation measures on private land;

   4. progress in working with the Village of Godfrey to amend the Village's stormwater ordinances to further reduce the amount of urban runoff tributary to the Piasa Creek, including submission to the Agency for review any draft storm water ordinance amendments.

b. Permittee through the GRLPA shall submit to the Agency annual reports detailing the reductions achieved by implementation of the sediment reduction measures, describing the sediment load reductions achieved for each measure or practice implemented.

SPECIAL CONDITION 15. Submission of Reports. The reports required in these Special Conditions 13, 14 and 16 shall be submitted to the Agency at the following addresses:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Non-Point Source Management Program
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

NPDES Permit No. IL0000299

Special Conditions

SPECIAL CONDITION 16. 5-Year Assessment - On or before 180 days prior to expiration of this permit, permittee and the GRLPA shall submit to the Agency a comprehensive assessment of the Project and shall meet with the Agency to determine whether the project is meeting expectations and to determine a course of action for the next 5 years of the project. The Agency will make its decision whether to continue the Project for another 5 years under permittee's renewed NPDES permit.

SPECIAL CONDITION 17. Permittee shall promptly notify the Agency of any problems in implementation of the Project or compliance with the terms of this permit.

SPECIAL CONDITION 18. Permittee shall promptly notify the Agency of any action contemplated under Article VIII - Lack of Performance Notice - of the Agreement.

SPECIAL CONDITION 19. Permittee shall promptly notify the Agency of its intention to terminate its relationship with GRLPA under Article IX - Termination of Services - of the Agreement. In the event that permittee terminates its Agreement with GRLPA, the Agency will allow permittee a reasonable period of time to employ another consultant.

SPECIAL CONDITION 20. Upon notice to the Agency, permittee may discontinue the Project prior to achieving the required reduction and apply to the Agency for a modified NPDES permit.

ATTACHMENT H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, Ch. 111 1/2 Ill. Rev. Stat., Sec. 1001-1052 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L. 92-500, as amended, 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) Duty to provide information. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency, upon request, copies of records required to be kept by this permit.

(9) Inspection and entry. The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. This period may be extended by request of the Agency at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) Signatory requirement. All applications, reports or information submitted to the Agency shall be signed and certified.

(a) Application. All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a); and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) Changes of Authorization. If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(12) Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.

(b) Anticipated noncompliance. The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(e) Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

(2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours;

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(f) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(e).

(g) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) Transfer of permits. A permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees; and

(c) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(14) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(15) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:

(a) Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(16) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(1) User charges pursuant to Section 204(b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;

(2) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(3) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(17) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(18) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(19) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(20) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500, nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

(21) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(22) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit shall, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(23) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(24) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(25) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board.

(26) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

Attachment B
Illinois American Water Company's Alton Facility
NPDES Constituents Report for Data Reported February 2001 - December 2005
Based on Monthly Grab Samples. NPDES Permit - IL0000299

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2001	Jan*	-	-	-	-	-	-	-	-	-
2001	Feb	7.2	324	7	0.465	0.823	<0.05	16	0.22	10.06
2001	March	7.3	3750	7	1.067	1.098	<0.05	31	0.97	517.51
2001	April	7.1	20035	323	0.553	1.01	<0.05	30	22.36	1386.75
2001	May	7.4	91	2.8	0.861	1.865	<0.05	31	0.31	10.13
2001	June	7.5	7769	165.6	0.521	1.222	<0.05	30	10.80	506.63
2001	July	7.6	11	0.3	0.563	1.573	<0.05	31	0.02	0.80
2001	Aug	7.3	8740	106.4	1.107	2.875	<0.05	31	15.23	1251.36
2001	Sept	7.6	67	1.5	0.396	0.716	<0.05	30	0.07	3.32
2001	Oct	7.5	2431	46.4	0.668	2.225	<0.05	31	4.01	210.03
2001	Nov	8	9	0.4	0.668	2.225	<0.05	30	0.03	0.75
2001	Dec	8.13	10	0.3	0.449	1.198	<0.05	31	0.02	0.58
Average			3930.6	60.064	0.665273	1.53		322		
							Total Tons per Year		**54.04**	**3897.93**

*No data was obtained for January 2001 from the new Alton facility.

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2002	Jan	8	18	0.2	0.842	1.49	<0.05	31	0.02	1.96
2002	Feb	7.69	0.4	0.04	0.43	1.152	<0.05	28	0.00	0.02
2002	March	8	2.4	0.05	0.386	0.607	<0.05	31	0.00	0.12
2002	April	7.9	2	0.2	0.794	2.295	<0.05	30	0.02	0.20
2002	May	7.31	1024	27.6	0.75	1.918	<0.05	31	2.68	99.33
2002	June	7.86	301	5.8	0.453	1.016	<0.05	30	0.33	17.07
2002	July	7.63	3106	68	0.526	1.134	<0.05	31	4.63	211.31
2002	Aug	7.97	179	3.8	0.655	1.307	<0.05	31	0.32	15.16
2002	Sept	8	66	1.6	0.987	1.968	<0.05	30	0.20	8.15
2002	Oct	8	48	0.8	0.622	1.22	<0.05	31	0.06	3.86
2002	Nov	7.4	2457	49	0.608	1.743	<0.05	30	3.73	186.98
2002	Dec	8.5	1009	12	1.126	2.37	<0.05	31	1.75	146.94
Average			684.4	14.091	0.681583	1.518333		365		
							Total Tons per Year		**13.74**	**691.11**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2003	Jan	8.1	1226	10	0.932	1.63	<0.05	31	1.21	147.79
2003	Feb	8.1	1929	16	1.011	1.337	<0.05	28	1.89	227.83
2003	March	7.9	300	2	0.776	1.671	<0.05	31	0.20	30.11
2003	April	7.7	2061	19	0.433	0.784	<0.05	30	1.03	111.70
2003	May	7.6	565	5	0.584	1.685	<0.05	31	0.38	42.68
2003	June	7.6	15	0	0.509	1.452	<0.05	30	0.00	0.96
2003	July	7.6	176	3	0.418	0.672	<0.05	31	0.16	9.52
2003	Aug	7.8	15	0	0.855	2.094	<0.05	31	0.00	1.66
2003	Sept	7.6	2527	33	0.659	1.217	<0.05	30	2.72	208.44
2003	Oct	7.8	834	9	0.606	1.314	<0.05	31	0.71	65.37
2003	Nov	8	167	2	0.612	1.644	<0.05	30	0.15	12.79
2003	Dec	7.8	154	2	0.464	1.518	<0.05	31	0.12	9.24
Average			830.75	8.4167	0.654917	1.418167		365		
							Total Tons per Year		**8.57**	**868.07**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2004	Jan	7.7	214	27	0.404	0.63	<0.05	31	1.41	11.18
2004	Feb	8.1	97	1	0.793	1.119	<0.05	29	0.10	9.31
2004	March	7.8	6	1	0.346	0.786	<0.05	31	0.04	0.27
2004	April	7.9	154	3	0.833	2.49	<0.05	30	0.31	16.06
2004	May	7.7	112	2	0.649	2.256	<0.05	31	0.17	9.40
2004	June	7.7	597	9	0.449	1.055	<0.05	30	0.51	33.55
2004	July	7.7	7	1	0.614	1.694	<0.05	31	0.08	0.56
2004	Aug	7.69	708	15.47	0.428	0.9	<0.05	31	0.86	39.19
2004	Sept	7.68	12	0.42	0.419	1.173	<0.05	30	0.02	0.63
2004	Oct	7.83	0	0.128	0.44	1.058	<0.05	31	0.01	0.00
2004	Nov	7.52	7400	149	0.394	0.772	<0.05	30	7.35	364.93
2004	Dec	7.76	15	0.34	0.555	1.258	<0.05	31	0.02	1.08
Average			776.83	17.447	0.527	1.265917		366		
							Total Tons per Year		**10.88**	**486.15**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2005	Jan	7.76	82	1.02	0.557	1.395	<0.05	31	0.07	5.91
2005	Feb	7.42	8950	221	0.405	0.87	<0.05	28	10.46	423.45
2005	March	8.02	184	3.85	0.43	1.168	<0.05	31	0.21	10.23
2005	April	7.96	870	21.8	0.555	1.339	<0.05	30	1.51	60.44
2005	May	7.88	35	1.13	0.405	0.804	<0.05	31	0.06	1.83
2005	June	7.65	106	2.06	0.389	0.625	<0.05	30	0.10	5.16
2005	July	7.79	22	1	0.636	1.995	<0.05	31	0.08	1.81
2005	Aug	7.86	1520	25.2	0.51	1.09	<0.05	31	1.66	100.26
2005	Sept	7.85	110	1.52	0.494	1.32	<0.05	30	0.09	6.80
2005	Oct	7.96	1240	18	0.391	0.811	<0.05	31	0.91	62.71
2005	Nov	7.92	55	0.72	0.363	0.6	<0.05	30	0.03	2.50
2005	Dec	7.63	420	6.62	0.73	1.245	<0.05	31	0.63	39.65
Average			1132.8	25.327	0.48875	1.105167		365		
							Total Tons per Year		**15.82**	**720.75**

Attachment C
Alton Water Treatment Plant
Sample Results Evaluation

I. Introduction

The following tables and graphs describe the results of tests on water samples obtained at Illinois-American Water Company's public water supply treatment facility in Alton, Illinois ("the Alton facility") on June 20, 2006. These samples were obtained at several locations throughout the Alton facility and during several operational or maintenance discharges. The results of the tests on these samples indicate the concentration of iron in each sample. These results were used to calculate the amount of iron that enters the Alton facility in the raw water, as well as the amount that is discharged from the facility, on a daily and yearly basis.

II. Total Iron Intake

Table 1 illustrates the results of tests conducted on samples collected at the Alton facility's raw water intake on June 20, 2006. Five samples were taken at one minute intervals. The iron concentrations in each sample (shown in column C) were multiplied by the average rate of inflowing water on that day (column D) to determine the mass of iron entering the facility (columns E and F). The value used for the rate of inflowing water, 11.86 mgd, represents the average intake at the facility on June 20, 2006, which varied from 8.7 to 14 mgd. Based on the samples collected on June 20, 2006, the average mass of iron entering the facility each day is **15.55 kg**.

Table 1: RAW WATER

A	B	C	D		E	F
			Influent Flow			
Sample ID	Time (min)	Iron (mg/L)	mgd	L/day	Iron (mg/day)	Iron (kg/day)
RW-1	1	0.368	11.9	44,894,986	16,521,355	16.52
RW-2	2	0.384	11.9	44,894,986	17,239,675	17.24
RW-3	3	0.317	11.9	44,894,986	14,231,711	14.23
RW-4	4	0.341	11.9	44,894,986	15,309,190	15.31
RW-5	5	0.322	11.9	44,894,986	14,456,186	14.46
					AVERAGE (kg/day):	15.55

III. Total Iron Discharge

A. Superpulsators

The Alton facility is equipped with four Superpulsators in which suspended solids settle from the water during treatment. The Superpulsators undergo a process known as "blowdown," in which accumulated solids are removed from the Superpulsators and discharged back into the river. At the Alton facility, blowdown in each Superpulsator occurs twice an hour. Each blowdown lasts for approximately three minutes. The blowdown process involves opening two drain valves in sequence, each for approximately 90 seconds, which allow solids to be removed from the bottom of the Superpulsator tank along with the water in the Superpulsator tank. Each drain valve removes solids from approximately ½ of the Superpulsator.

Table 2 illustrates the results of tests conducted on the samples collected at the Alton facility during the blowdown process on Superpulsator 2 on June 20, 2006. During the opening of one valve, five

samples were taken at various times in the 90 second period. The iron concentration (shown in column C) is plotted as a function of time in Figure 1. Using Microsoft Excel, a best-fit approximation of the time-iron concentration curve was obtained. To determine the amount of iron discharged during the complete blowdown process, this curve was integrated over the typical valve opening period of 90 seconds, multiplied by the flow rate through the valve (column D), and then doubled to account for the opening of the second valve. This value was then multiplied by the number of times the Superpulsator undergoes the blowdown process each day (48 times) to obtain the total mass of iron discharged daily from Superpulsator 2. This value is **2.89 kg**.

Table 2: SUPERPULSATOR 2

A	B	C	D		E
			Flow		
Sample ID	Time (sec)	Iron (mg/L)	gpm	L/min	Results
CLAR-2-BD-1	18	36.2	250	946.353	
CLAR-2-BD-2	36	12.6	250	946.353	
CLAR-2-BD-3	54	13.4	250	946.353	
CLAR-2-BD-4	72	5.50	250	946.353	TOTAL (kg/day):
CLAR-2-BD-5	90	10.1	250	946.353	2.89

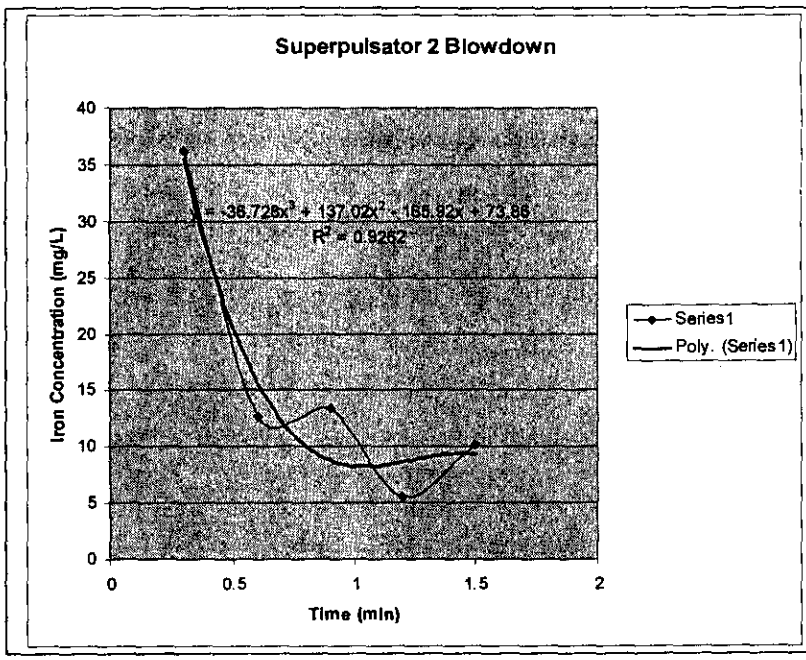


Figure 1. The graph indicates the concentration of iron in the samples obtained from Superpulsator 2 blowdown. To determine the amount of iron discharged during the complete blowdown process, the curve was integrated from 0 to 90 seconds, multiplied by the flow rate, and then doubled to account for the opening of the second valve.

Table 3 illustrates results of tests conducted on samples collected at the Alton facility during the blowdown process on Superpulsator 4 on June 20, 2006. The total mass of iron discharged from Superpulsator 4 each day is **1.41 kg**.

Table 3: SUPERPULSATOR 4					
A	B	C	D		E
Sample ID	Time (sec)	Iron (mg/L)	Flow gpm	Flow L/min	Results
CLAR-4-BD-1	18	8.13	250	946.353	
CLAR-4-BD-2	36	21.0	250	946.353	
CLAR-4-BD-3	54	25.0	250	946.353	
CLAR-4-BD-4	72	8.12	250	946.353	TOTAL (kg/day):
CLAR-4-BD-5	90	11.4	250	946.353	1.41

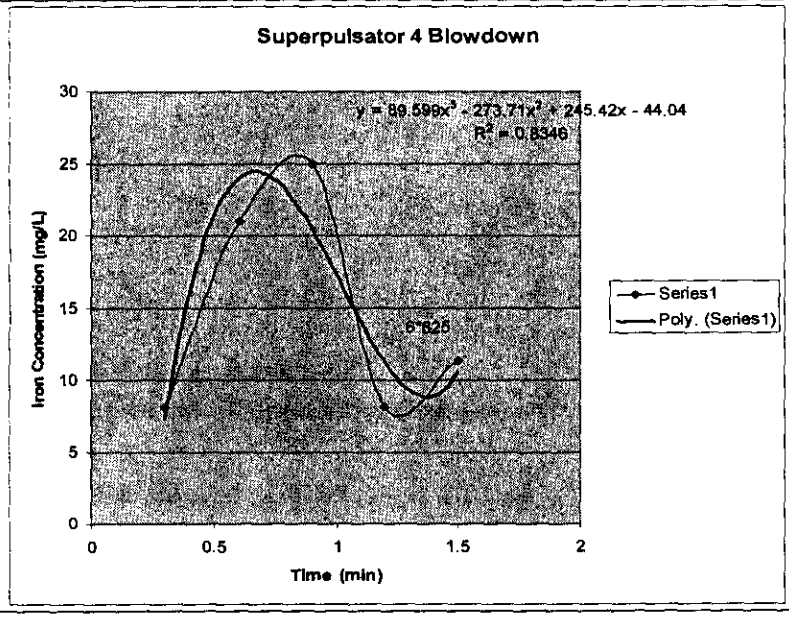


Figure 2. The graph indicates the concentration of iron in the samples obtained from Superpulsator 4 blowdown. To determine the amount of iron discharged during the complete blowdown process, the curve was integrated from 0 to 90 seconds, multiplied by the flow rate, and then doubled to account for the opening of the second valve.

The average total mass of iron discharged from Superpulsators 2 and 4 is 2.15 kg/day. There are four Superpulsators at the Alton facility. To determine the average total daily discharge of iron from the Superpulsators, the average for the total mass of iron discharged from Superpulsators 2 and 4 was multiplied by the total number of Superpulsators at the facility. This value is **8.6 kg**.

B. Filters

The Alton facility is equipped with six filters that remove suspended solids from water as it flows through the filter media. During a backwash cycle, the direction of water flow though the filter is reversed, removing accumulated solids from the filter media and discharging the solids back into the river. This backwash cycle typically occurs at each filter once every three to four days.

Table 4 illustrates the results of tests conducted on the samples collected from filter #6 during the backwash process on June 20, 2006. 24 samples were taken at one minute intervals. The iron concentration (shown in column C) is plotted as a function of time in Figure 3. Using Microsoft Excel, a best-fit approximation of the time-concentration curve was obtained. To determine the total amount of iron discharged during the backwash process, this curve was integrated over the typical backwash period of 24 minutes and multiplied by the flow rates (column D). This value was then divided by the period of time that had elapsed since this filter's last backwash cycle (3.6 days) to obtain the amount of iron discharged from filter #6 each day. This value is **0.3 kg**.

Table 4: FILTER #6					
A	B	C	D		E
			Flow		
Sample ID	Time (min)	Iron (mg/L)	gpm	L/min	Results
FIL-6-BW-1	1	7.53	4500	17,034.35	
FIL-6-BW-2	2	4.94	4500	17,034.35	
FIL-6-BW-3	3	6.71	9500	35,961.41	
FIL-6-BW-4	4	6.26	9500	35,961.41	
FIL-6-BW-5	5	4.07	9500	35,961.41	
FIL-6-BW-6	6	2.48	9500	35,961.41	
FIL-6-BW-7	7	1.77	9500	35,961.41	
FIL-6-BW-8	8	1.16	9500	35,961.41	
FIL-6-BW-9	9	0.813	9500	35,961.41	
FIL-6-BW-10	10	0.551	9500	35,961.41	
FIL-6-BW-11	11	0.246	9500	35,961.41	
FIL-6-BW-12	12	0.166	9500	35,961.41	
FIL-6-BW-13	13	0.134	9500	35,961.41	
FIL-6-BW-14	14	0.0578	9500	35,961.41	
FIL-6-BW-15	15	0.0441	9500	35,961.41	
FIL-6-BW-16	16	0.0624	9500	35,961.41	
FIL-6-BW-17	17	0.0456	9500	35,961.41	
FIL-6-BW-18	18	0.028	9500	35,961.41	
FIL-6-BW-19	19	0.0241	9500	35,961.41	
FIL-6-BW-20	20	0.027	9500	35,961.41	
FIL-6-BW-21	21	0.013	9500	35,961.41	
FIL-6-BW-22	22	0.017	9500	35,961.41	
FIL-6-BW-23	23	0.0272	4500	17,034.35	
FIL-6-BW-24	24	0.0226	4500	17,034.35	TOTAL (kg/day):
					0.3

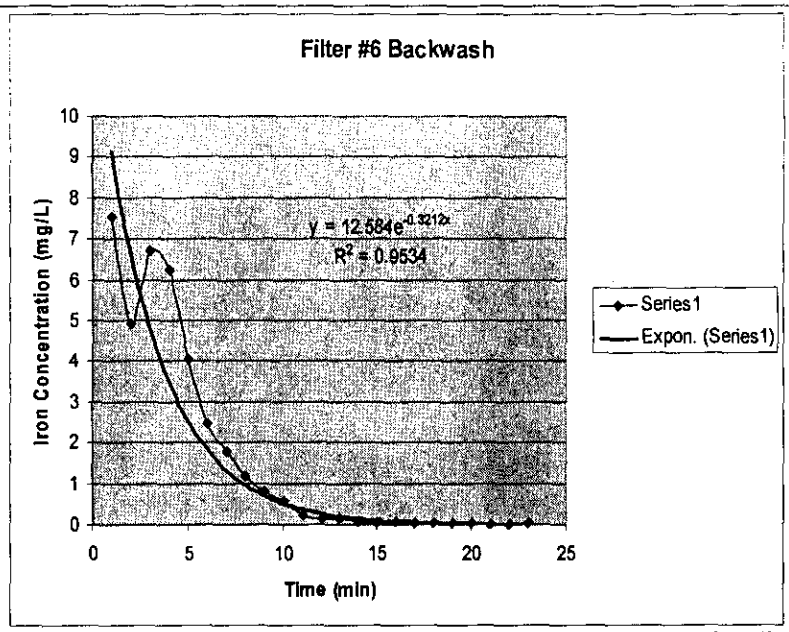


Figure 3. The graph indicates the concentration of iron in the samples obtained from Filter #6 backwash. To determine the amount of iron discharged each backwash event, the curve was integrated from 0 to 24 minutes and multiplied by the flow rate.

Table 5 illustrates the results of tests conducted on the samples collected from filter #3 during the backwash process on June 20, 2006. As with filter #6, 24 samples were taken at one minute intervals. The iron concentration (shown in column C) is plotted as a function of time in Figure 4. Using Microsoft Excel, a best-fit approximation of the time-concentration curve was obtained. To determine the total amount of iron discharged during the backwash process, this curve was integrated over the typical backwash period of 24 minutes and multiplied by the flow rates (column D). This value was then divided by the period of time that had elapsed since this filter's last backwash cycle (3.9 days) to obtain the amount of iron discharged from filter #3 each day. This value is **0.4 kg**.

Table 5: FILTER #3					
A	B	C	D		E
			Flow		
Sample ID	Time (min)	Iron (mg/L)	gpm	L/min	Results
FIL-3-BW-1	1	9.89	4500	17,034.35	
FIL-3-BW-2	2	8.39	4500	17,034.35	
FIL-3-BW-3	3	7.54	9500	35,961.41	
FIL-3-BW-4	4	6.39	9500	35,961.41	
FIL-3-BW-5	5	5.06	9500	35,961.41	
FIL-3-BW-6	6	2.88	9500	35,961.41	
FIL-3-BW-7	7	1.99	9500	35,961.41	
FIL-3-BW-8	8	1.33	9500	35,961.41	
FIL-3-BW-9	9	0.834	9500	35,961.41	
FIL-3-BW-10	10	0.777	9500	35,961.41	
FIL-3-BW-11	11	0.516	9500	35,961.41	
FIL-3-BW-12	12	0.47	9500	35,961.41	
FIL-3-BW-13	13	0.26	9500	35,961.41	
FIL-3-BW-14	14	0.207	9500	35,961.41	
FIL-3-BW-15	15	0.215	9500	35,961.41	
FIL-3-BW-16	16	0.178	9500	35,961.41	
FIL-3-BW-17	17	0.314	9500	35,961.41	
FIL-3-BW-18	18	0.108	9500	35,961.41	
FIL-3-BW-19	19	0.104	9500	35,961.41	
FIL-3-BW-20	20	0.0480	9500	35,961.41	
FIL-3-BW-21	21	0.0660	9500	35,961.41	
FIL-3-BW-22	22	0.0654	9500	35,961.41	
FIL-3-BW-23	23	0.0498	4500	17,034.35	
FIL-3-BW-24	24	0.0507	4500	17,034.35	TOTAL (kg/day):
					0.4

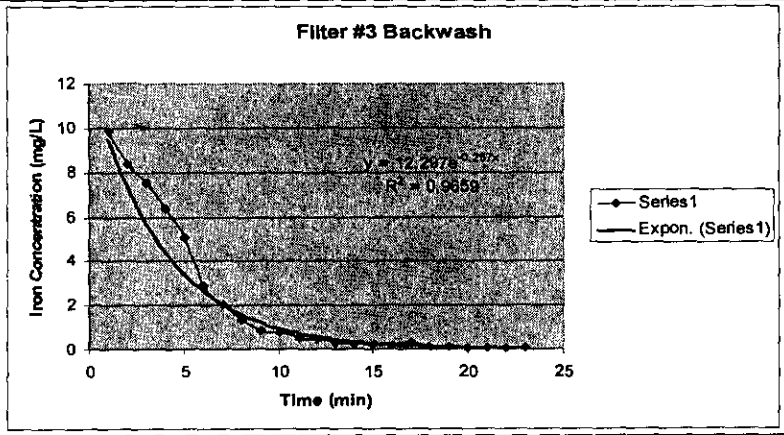


Figure 4. The graph indicates the concentration of iron in the samples obtained from Filter #3 backwash. To determine the amount of iron discharged each backwash event, the curve was integrated from 0 to 24 minutes and multiplied by the flow rate.

The total amount of iron discharged from all six filters at the Alton facility each day was obtained by averaging the amounts of iron discharged from filters #6 and #3, then multiplying by the total number of filters (6). Filter #6 discharges 0.3 kg of iron each day, and filter #3 discharges 0.4 kg of iron each day. The average amount of iron discharged from each filter at the facility each day is therefore 0.35 kg, and the total amount of iron discharged from all six filters each day is **2.1 kg**.

IV. Mass Balance

The values obtained in the calculations above were added to determine that the estimated total daily discharge of iron from the Alton facility on June 20, 2006 was 10.7 kg. Table 6 summarizes these calculations.

Table 6: Incoming and Outgoing Iron at Alton WTP			
Incoming		Outgoing	
A	B	C	D
Raw Water (kg/day):	15.55	Superpulsators (kg/day):	8.6
		Filters (kg/day):	2.1
Yearly (kg):	5676	**Total (kg/day):**	**10.7**
		Yearly (kg):	**3906**

As this Table shows, the amount of iron discharged from the facility each day is much lower than the amount of iron in the facility's intake. This discrepancy most likely results from changing operational conditions at the facility, including changes in the amount of total suspended solids and iron in the raw water as well as the rate of inflowing water at the time the sample was obtained, which can affect the amount of iron in a sample. The suspended solids in the raw water (and the iron contained by those solids) may become trapped or cached in a solids blanket, which can remain suspended in the Superpulsators for several hours. Higher flow rate can expand these solids blankets, which permits the solids to overflow into collection troughs and enter the waste discharge stream. This process is dynamic, so applying a mass balance which assumes a constant dynamic equilibrium cannot provide a precise value for the amount of iron in the facility's discharge. In addition, the variation in these operational conditions cannot be captured precisely by the limited number of samples obtained from the facility. Although significant further investigation would therefore be necessary to determine the precise amount of iron in the facility's effluent on a daily and yearly basis, it is possible, for purposes of this study, to estimate the total amount of iron discharged from the facility by selecting a value between the calculated amount of iron in the facility's discharge (10.7 kg) and the amount of iron in the facility's intake (15.55 kg).

Attachment D
Piasa Creek Watershed Project
Sample Results Evaluation

The following tables illustrate the amount of iron captured by the Piasa Creek Watershed Project (the "Project"), based on 1) the amount of iron contained in soil samples obtained at specific project locations, and 2) estimates for the amount of iron captured at project locations at which no soil samples were obtained. In Table 1, an effort is made to make reasonably precise estimates for the iron concentration at projects that were not sampled. These estimates are based on characteristic iron contents of the different soil types (indicated by the laboratory tests), and on proximity to projects where samples were taken. In Table 2, a single, conservative value (6000 mg/kg-dry) is used as the estimate of iron concentration at projects that were not sampled. At the bottom of each table, a summation of the amount of iron captured by each individual project is provided. The summation represents the total amount of iron captured by the Project. Using these two approaches produces a range of values for the total amount of iron captured. At the low end of this range, the Project captures 71,264 kg of iron each year and, at the high end of this range, the Project captures 87,049 kg of iron each year. For the sake of comparing the total iron captured by the Project to the total iron discharged by Illinois-American Water Company's public water supply treatment facility, the more conservative of these values (71,264 kg) should be used.

Table 1: Total Iron Captured by Projects in the Piasa Creek Watershed

	A	B	C		D	E	F	G	H	I
	Project Name	**Soil Type**	**Soil Saved (tons)**		**Project**	**Sample ID**	**Iron Concentration (mg/kg-dry)**	**Site Average* (mg/kg-dry)**	**Iron Captured (kg)**	**Not Sampled - Similar Site**
1	Andrew, Dale	CK	450	3	Stream Barbs	1-SI-1 1-SI-2	15,900 13,900	14,900	6,083	
2	Bartlett, Eugene	TMHH/ CK	246	1	SW Retention Basin	2-SR-1 2-SR-2	23,900 24,000	23,950	5,345	
3	Boy Scout Lake	FS	1920		Lake Excavation and Enhanced Wetland	3-WL-1 3-WL-2	14,900 11,200	13,050	22,730	
4	Brighton Storm Water Retention Basin	CK	67	1	SW Retention Basin Dam Construction	4-SR-1 4-SR-2	15,000 16,000	15,500	942	
5	Campion, Mike	FS	50	14	Dry Basins	5-DB-1 5-DB-2	25,600 19,800	22,700	1,030	See Note A
	Campion, Mike		54	3	Dry Basins			*20,000*	*980*	

6	Croxford, Hubert	FS	108	9	Dry Basins			*16,000*	*1,568*	See Note B
7	Crutcher, Mike	BT/FS	160		Conversion of Agricultural Land			*9,000*	*1,306*	
8	Eisler, Bob	BT	104	5	Dry Basins	8-DB-1 8-DB-2	18,700 18,000	18,350	1,731	See Note C
					Tile, Outlet Pipes					
	Eisler, Bob		103	4	Dry Basins			*18,000*	*1,682*	
9	Fessler, Joe & Edwin	FS	134	6	Dry Basins	9-DB-1 9-DB-2	14,700 12,700	13,700	2,367	See Note D
				2	Terraces	9-TER-1 9-TER-2	24,900 25,600	25,250		
					Tile, Outlet Pipes					
10	Gallay, Alfred	CK	261	18 1	Dry Basins Rock Chutes			*15,000*	*3,552*	See Note E
11	Gibbons, Tim	CK/TM HH	202	1	SW Retention Basin			*10,000*	*1,833*	See Note F
12	Hanold Brothers	CK	51	7	Dry Basins			*10,000*	*463*	See Note F
13	Hansen, Bruce	TMHH	128	7	Dry Basins			*10,000*	*1,161*	See Note F
14	Herring, Don	TMHH/ CK	24	2	Dry Basins			*10,000*	*218*	See Note F
15	Jungk, Steve	CK	108	1	Waterway / Drop Box	15-WW-1 15-WW-2	20,200 185	10,193	999	
	Jungk, Steve		122	3	Dry Basins	15-DB-1 15-DB-2	16,500 23,800	20,150	2,230	
					Tile, Outlet Pipes					
16	Lang	BT	0		500' Buffer Strip	16-WW-1 16-WW-2	4,960 7,060	6,010	0	See Note G
	Lang		56		Wetland			*9,000*	*457*	
	Lang		184		Bottomland Prairie	16-WL-1 16-WL-2	11,600 12,400	12,000	2,003	
17	Lurton, Howard	FS	27	2	Dry Basins			*15,000*	*367*	See Note H
18	Newgent, John	CK	117	1	SW Retention Basin			*12,000*	*1,274*	See Note I
1	Nowland, Don	CK	63	5	Dry Basins			*12,000*	*686*	See Note J

19										
20	Pfeiffer, Paul	FS	64	14	Dry Basins			*13,000*	*755*	See Note H
21	Principia East Farm	FS	400		Conversion of Agricultural Land			*13,000*	*4,717*	See Note H
21A	Principia College	FS	47	4	Dry Basins			*13,000*	*554*	See Note H
22	Roth, John	CK/BT	25	1	SW Retention Basin	22-SR-1 22-SR-2	20,800 22,500	21,650	329	See Notes K and L
				8	Dry Basins					
				3	Rock Chutes	22-SI-1 22-SI-2	6,210 8,430	7,320		
	Roth, John		244	7	Rock Riffles, 450 stone toe			*14,485*	*3,206*	
23	Sandcamper Farms	FS	61	6	Dry Basins			*13,000*	*719*	See Note H
24	Schafer, Bill & Gary	CK/TM HH	54		Drop Box; Dual Wall Pipe; Repair Structure	24-BOX-1 24-BOX-2	15,900 15,200	15,550	762	
25	Schafer, Bill & Gary	CK/TM HH	55	4	Dry Basins	24-DB-1 24-DB-2	13,700 18,500	16,100	803	
26	Schef	CK/TM HH	183	10	Dry Basins			*10,000*	*1,660*	See Note F
	Schef	CK/TM HH	88	4	Dry Basins			*10,000*	*798*	
27	Schultz, Kay	BT	91	5	Dry Basins			23,800	1,965	
				1	Terraces	27-TER-1 27-TER-2	25,000 22,600			
					Tile, Outlet Pipes					
28	Vorhees, Darrel	CK/BT	68	1	SW Retention Basin			*10,000*	*617*	See Note M
29	Weishaupt, Dave	CK	42	2	Dry Basins			*10,000*	*381*	See Note I
30	Wieland, John	FS/BT	250	8	Dry Basins	30-DB-1 30-DB-2	18,000 24,400	21,200	4,683	

				3	Rock Chutes	30-SI-1 30-SI-2	22,700 22,000	22,350		
					Waterways	30-WW-1 30-WW-2	16,900 19,900	18,400		
31	Wittman, John	BT/CK	69	10	Dry Basins			*15,000*	*939*	See Note J
32	Wittman, Walter	CK	36	3	Dry Basins	32-DB-1 32-DB-2	27,300 23,500	25,400	830	
33	Wock, Jack	TMHH	132	10	Dry Basins	33-DB-1 33-DB-2	16,600 15,700	16,150	1,934	
34	Youngblood, Denny	CK	43	1	SW Retention Basin			*10,000*	*390*	See Note N
		Total:	6691					**TOTAL:**	**87,049**	

NOTES:

* Values are estimated for projects not sampled (estimated values are italicized). Estimates are conservative, based on factors described below.

A Estimate based on nearby sample results and samples of same soil type at projects 3, 9, and 30

B Estimate based on proximity to project 30 and samples from projects 3, 5, 9, and 30

C Estimate based on nearby sample results and samples of same soil type at projects 16, 22, 27, and 30

D Iron Captured is based on an average of the iron concentrations obtained at separate sites.

E Estimate based on samples from projects 4 and 15

F Estimate based on samples from Projects 2, 4, 15, 22

G Estimate for *wetland* based on nearby sample results and samples from projects 22, 27, and 30

H Estimate based on samples from projects 3, 5, 9 and 30

I Estimate based on samples from projects 1, 4, 15, 22, 24, and 25

J Estimate based on close proximity to project 32 and samples from projects 1, 4, 15, 22, 24, and 25

K Iron Captured in retention basin, dry basins, and rock chute based on average iron concentration from samples.

L Estimate for rock riffles based on samples for other projects on same property

M Estimate based on close proximity to projects 2 and 24, and samples from projects 1,4 10, 16, 22, and 27

N Estimate based on close proximity to project 22 and samples from projects 1, 4, 15, 22, 24, and 25

Table 2: Total Iron Captured Using Most Conservative Estimates for Projects Not Sampled

A	B	C	D	E	F	G	H	
	Project Name	Soil Type	Soil Saved (tons)	Project	Sample ID	Iron Concentration (mg/kg-dry)	Site Average* (mg/kg-dry)	Iron Captured (kg)	Not Sampled - Similar Site
1	Andrew, Dale	CK	450	3 Stream Barbs	1-SI-1 1-SI-2	15,900 13,900	14,900	6,083	
2	Bartlett, Eugene	TMHH/ CK	246	1 SW Retention Basin	2-SR-1 2-SR-2	23,900 24,000	23,950	5,345	
3	Boy Scout Lake	FS	1920	Lake Excavation and Enhanced Wetland	3-WL-1 3-WL-2	14,900 11,200	13,050	22,730	
4	Brighton Storm Water Retention Basin	CK	67	1 SW Retention Basin Dam Construction	4-SR-1 4-SR-2	15,000 16,000	15,500	942	
5	Campion, Mike	FS	50	14 Dry Basins	5-DB-1 5-DB-2	25,600 19,800	22,700	1,030	
	Campion, Mike		54	3 Dry Basins			*6,000*	*294*	See Note A
6	Croxford, Hubert	FS	108	9 Dry Basins			*6,000*	*588*	See Note B
7	Crutcher, Mike	BT/FS	160	Conversion of Agricultural Land			*6,000*	*871*	
8	Eisler, Bob	BT	104	5 Dry Basins Tile, Outlet Pipes	8-DB-1 8-DB-2	18,700 18,000	18,350	1,731	
	Eisler, Bob		103	4 Dry Basins			*6,000*	*561*	See Note C
9	Fessler, Joe & Edwin	FS	134	6 Dry Basins 2 Terraces Tile, Outlet Pipes	9-DB-1 9-DB-2 9-TER-1 9-TER-2	14,700 12,700 24,900 25,600	13,700 25,250	2,367	See Note D
10	Gallay, Alfred	CK	261	18 Dry Basins 1 Rock Chutes			*6,000*	*1,421*	See Note E

11	Gibbons, Tim	CK/TM HH	202	1	SW Retention Basin			*6,000*	*1,100*	See Note F
12	Hanold Brothers	CK	51	7	Dry Basins			*6,000*	*278*	See Note F
13	Hansen, Bruce	TMHH	128	7	Dry Basins			*6,000*	*697*	See Note F
14	Herring, Don	TMHH/ CK	24	2	Dry Basins			*6,000*	*131*	See Note F
15	Jungk, Steve	CK	108	1	Waterway / Drop Box	15-WW-1 15-WW-2	20,200 185	10,193	999	
	Jungk, Steve		122	3	Dry Basins Tile, Outlet Pipes	15-DB-1 15-DB-2	16,500 23,800	20,150	2,230	
16	Lang	BT	0		500' Buffer Strip	16-WW-1 16-WW-2	4,960 7,060	6,010	0	
	Lang		56		Wetland			*6,000*	*305*	
	Lang		184		Bottomland Prairie	16-WL-1 16-WL-2	11,600 12,400	12,000	2,003	See Note G
17	Lurton, Howard	FS	27	2	Dry Basins			*6,000*	*147*	See Note H
18	Newgent, John	CK	117	1	SW Retention Basin			*6,000*	*637*	See Note I
19	Nowland, Don	CK	63	5	Dry Basins			*6,000*	*343*	See Note J
20	Pfeiffer, Paul	FS	64	14	Dry Basins			*6,000*	*348*	See Note H
21A	Principia East Farm	FS	400		Conversion of Agricultural Land			*6,000*	*2,177*	See Note H
21	Principia College	FS	47	4	Dry Basins			*6,000*	*256*	See Note H
22	Roth, John	CK/BT		1	SW Retention Basin	22-SR-1 22-SR-2	20,800 22,500	21,650		
			25	8	Dry Basins				329	
				3	Rock Chutes	22-SI-1 22-SI-2	6,210 8,430	7,320		
	Roth, John		244	7	Rock Riffles, 450 stone toe			*6,000*	*1,328*	See Notes K and L

23	Sandcamper Farms	FS	61	6	Dry Basins			*6,000*	*332*	See Note H
24	Schafer, Bill & Gary	CK/TM HH	54		Drop Box; Dual Wall Pipe; Repair Structure	24-BOX-1 24-BOX-2	15,900 15,200	15,550	762	
25	Schafer, Bill & Gary	CK/TM HH	55	4	Dry Basins	24-DB-1 24-DB-2	13,700 18,500	16,100	803	
26	Schef	CK/TM HH	183	10	Dry Basins			*6,000*	*996*	
	Schef	CK/TM HH	88	4	Dry Basins			*6,000*	*479*	See Note F
27	Schultz, Kay	BT	91	5 1	Dry Basins Terraces Tile, Outlet Pipes	27-TER-1 27-TER-2	25,000 22,600	23,800	1,965	
28	Vorhees, Darrel	CK/BT	68	1	SW Retention Basin			*6,000*	*370*	See Note M
29	Weishaupt, Dave	CK	42	2	Dry Basins			*6,000*	*229*	See Note I
30	Wieland, John	FS/BT	250	8 3	Dry Basins Rock Chutes Waterways	30-DB-1 30-DB-2 30-SI-1 30-SI-2 30-WW-1 30-WW-2	18,000 24,400 22,700 22,000 16,900 19,900	21,200 22,350 18,400	4,683	
31	Wittman, John	BT/CK	69	10	Dry Basins			*6,000*	*376*	See Note J
32	Wittman, Walter	CK	36	3	Dry Basins	32-DB-1 32-DB-2	27,300 23,500	25,400	830	
33	Wock, Jack	TMHH	132	10	Dry Basins	33-DB-1 33-DB-2	16,600 15,700	16,150	1,934	
34	Youngblood, Denny	CK	43	1	SW Retention Basin			*6,000*	*234*	See Note N
		Total:	6691					**TOTAL:**	**71,264**	

NOTES:

* Values are estimated for projects not sampled (estimated values are italicized). Estimates are conservative, based on factors described below.

A Estimate based on nearby sample results and samples of same soil type at projects 3, 9, and 30

B Estimate based on proximity to project 30 and samples from projects 3, 5, 9, and 30
C Estimate based on nearby sample results and samples of same soil type at projects 16, 22, 27, and 30
D Iron Captured is based on an average of the iron concentrations obtained at separate sites.
E Estimate based on samples from projects 4 and 15
F Estimate based on samples from Projects 2, 4, 15, 22
G Estimate for *wetland* based on nearby sample results and samples from projects 22, 27, and 30
H Estimate based on samples from projects 3, 5, 9 and 30
I Estimate based on samples from projects 1, 4, 15, 22, 24, and 25
J Estimate based on close proximity to project 32 and samples from projects 1, 4, 15, 22, 24, and 25
K Iron Captured in retention basin, dry basins, and rock chute based on average iron concentration from samples.
L Estimate for rock riffles based on samples for other projects on same property
M Estimate based on close proximity to projects 2 and 24, and samples from projects 1,4 10, 16, 22, and 27
N Estimate based on close proximity to project 22 and samples from projects 1, 4, 15, 22, 24, and 25

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED EXTENSION OF ADJUSTED STANDARD	)	AS 06-_____
APPLICABLE TO ILLINOIS-AMERICAN	)	(Adjusted Standard)
WATER COMPANY'S ALTON PUBLIC WATER	)	
SUPPLY FACILITY DISCHARGE	)	
TO THE MISSISSIPPI RIVER	)	

AFFIDAVIT OF PAUL KECK

I, Paul Keck, after being first duly sworn upon my oath, do depose and say as follows:

1. I work at Illinois-American Water Company ("**Illinois-American**"), where I hold the position of Water Quality Supervisor at Illinois-American's water treatment facility in Alton, Illinois (the "**Alton facility**"). I am providing this affidavit at the request of Brad Hiles, counsel to Illinois-American, but I do so of my own free will. The statements in this affidavit are true to the best of my knowledge, information and belief, and I am providing these statements under oath. I would provide this same information in a hearing before the Illinois Pollution Control Board ("**IPCB**"), if necessary, also under oath and penalty of perjury.

2. The Alton facility was constructed in 1999 and 2000 to replace an older facility located at that site (the "**previous facility**"). The Alton facility first began operating on December 31, 2000. However, the previous facility continued operating at a reduced capacity through February 12, 2001. During this time, the previous facility served the "main service" area, in the southeast area of the distribution system, and the Alton facility served the "high service" area, in the northwest area of the distribution system. On February 12, 2001, the Alton facility took over service to the main service area as well, and the previous facility was removed from service. All of the data reported prior to February 12, 2001 was therefore collected from the previous facility's effluent stream. A chain of custody for the data reported for February 2001 in compliance with the facility's NPDES permit indicates that this data was obtained on February 28, 2001, and was therefore collected from the Alton facility's effluent stream.

3. As Water Quality Supervisor for the facility, I am familiar with the pollution control equipment used by the Alton facility. In addition, I am familiar with the report titled Site-Specific Analysis of Impacts of Potential Alternatives for Handling Public Water Supply Residuals at Proposed Alton, IL Facility, which was prepared by ENSR in March 1999 (the "**Site Specific Impact Study**" or "**SSIS**"). To my knowledge, the SSIS accurately describes the pollution control equipment and other equipment proposed for the Alton facility and, with the exception of several minor changes to the dechlorination process (described below), the Alton facility was constructed as proposed.

ATTACHMENT D

4. The SSIS indicates that the proposed facility would use sulfur dioxide as a dechlorinating agent. The Alton facility actually uses sodium thiosulfate. Because of this change, the SO_2 detector referenced in the SSIS is no longer necessary.

5. The SSIS indicates that the proposed facility would have two dechlorination systems. The Alton facility actually uses one sodium thiosulfate dechlorination system with two feed points that can be used to treat the effluent discharge stream. First, a sodium thiosulfate feed system feeds to a dechlorination basin which receives effluent discharge composed of the Superpulsator blowdown and the filter backwash. The sodium thiosulfate dosage to the dechlorination basin increases during filter backwashes to accommodate the resulting higher flow volume due to the facility's application of Supervisory Control and Data Acquisition (SCADA) programming. In addition, there is an alternative feed point to the filter backwash influent water that is used if the facility decides to run the filters in a biologically active mode. To date, this alternative feed point has not been used.

6. The water treatment process used by Illinois-American at the Alton facility is generally consistent with the technique described in the SSIS. Illinois-American uses chloramination, in which ammonia is applied to raw water just after chlorine treatment in order to form chloramines rather than free chlorine residuals. Ammonia and chlorine are added to the raw water prior to Superpulsator treatments, which results in a Total Residual Chlorine (TRC) level in the Superpulsator units of approximately 1.0 to 1.5 mg/l. Filtration of this water through carbon causes a reduction in chlorine residuals. Chlorine and ammonia are then re-applied to the filtrate to maintain a disinfectant residual in the potable water as it passes on to the clearwell and then to the distribution system; this application raises the level of TRC to the targeted range of 3.0 to 3.5 mg/L in the finished water.

7. Illinois-American's use of coagulants to precipitate out those solids naturally occurring in the river water is also generally consistent with the technique described in the SSIS. With the exception of Illinois-American's use of a coagulant dosage rate of 66 ppm rather than the predicted dosage rate of 40 ppm, Illinois-American's use of coagulants is consistent with the technique described in the SSIS.

8. The nature and quantity of the discharges from the Alton facility are also generally consistent with the proposed discharges described in the SSIS. Effluent discharges from the Alton facility include operational discharges and maintenance discharges. Operational discharges occur regularly (on a daily or weekly basis) during periods when the facility is treating raw water, and include return of intake screen wash, blowdown from the Superpulsators, and filter backwash. Maintenance discharges occur during the semi-annual cleaning of accumulated solids in the clarifier, sedimentation basins, and mixing tanks.

9. The two main operational discharges consist of intermittent Superpulsator blowdown and filter backwash. Approximately 72,000 gallons per day ("gpd") of blowdown are discharged each day from the Superpulsators. In addition, approximately 227,000 gallons of backwash are discharged from the six sand/carbon filters in each filter backwash. There are normally one to three filter backwashes per day, depending on water temperature and turbidity; the daily average for 2005 was 1.6 backwashes per day.

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10. The frequency and duration of blowdowns from the Superpulsator are generally fixed. Blowdown in each Superpulsator now occurs twice per hour. Stated differently, the interval between blowdowns is approximately 30 minutes. However, throughout 2001 and part of 2002, the intervals between blowdowns were much less regular. At times, the interval between blowdowns was as long as 5.5 hours. The facility's Supervisory Control and Data Acquisition (SCADA) data illustrates the various intervals between blowdowns during that period:

2 hours between blowdowns (recorded on 3/9/2001)
2 hours to 4 hours (4/9/2001)
1 hour (5/9/2001)
1 hour (6/9/2001)
20 minutes (7/9/2001)
1 hour (8/9/2001)
2 hours to 4 hours (9/9/2001)
1 hour 30 minutes to 3 hours (10/9/2001)
1 hour 30 minutes to 3 hours (11/9/2001)
3 hours (12/13/2001)
4 hours (1/13/2002)
3 hours (3/20/2002)
3 hours (4/20/2002)
45 minutes (4/22/2002)

In 2003, the interval between blowdowns was consistent at 45 minutes. In 2004 and 2005, blowdowns occurred even more frequently, at 30 minute intervals.

11. Finished water from the clearwell is periodically used to backwash the filters to remove accumulated solids. The duration of the filter backwash process is generally fixed at 25 minutes. Each filter runs approximately 30 to 120 hours between backwashings.

12. The TSS and total iron concentrations in the Superpulsator blowdown are highly variable because they are dictated by raw water turbidity and plant operational conditions. Higher levels of TSS and total iron in the raw water generally correlate with higher levels of TSS and total iron in the facility's discharge. In addition, longer intervals between blowdowns allows solids to build up in the blowdown troughs, so the amounts of TSS and total iron in samples collected from Superpulsator blowdowns after such longer intervals will generally be elevated. Finally, the flow rate of the facility's influent can affect TSS and total iron in the facility's discharge. TSS and iron in the facility's influent can become trapped for several hours in the solids blanket in a Superpulsator, but a higher flow rate can cause these solids blankets to expand and overflow into the collection troughs. Directly following such an overflow, the amount of TSS and iron in the facility's discharge will likely be much higher.

13. Maintenance discharges arise from cleaning accumulated solids from the Superpulsators. These maintenance discharges occur two times per year, and each maintenance discharge lasts approximately four days. Approximately 5,000 gpd of water containing residuals are discharged each day during each four day maintenance activity. The total annual discharge from maintenance activities is therefore approximately 40,000 gallons.

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14. The capacity and output of the facility are generally consistent with the estimates set forth in the SSIS. The Alton facility treats sufficient raw water to make available, on average, 8.5 million gallons per day (MGD) of potable water for the Alton area. The average proportional internal facility demand is 0.49 MGD for the average potable water flow of 8.5 MGD. The combined flow is therefore 8.99 MGD.

15. Although the facility was constructed as proposed (with the exception of the several minor changes described above), operating conditions at the facility differ from those predicted. As a result, the amount of TSS (and therefore the total iron) discharged from the facility differs from that predicted. The original petition submitted by Illinois-American in 1999 predicted that an estimated 3,358 dry tons of solids would be discharged from the Alton facility each year. However, the formula used to calculate the tons of solids discharged relied on predicted values for the concentration of TSS in the new facility's influent, the average daily flow rate for the facility, and the coagulant dosage rate. When the actual values for these measurements is used, the same formula indicates that an average of 1,545 dry tons of solids would be discharged from the facility each year.

16. The original petition's prediction that an estimated 3,358 dry tons of solids would be discharged from the Alton facility each year was based on the assumption that 100% of the TSS in the facility's influent would be discharged in the facility's effluent. This assumption is consistent with facility operations.

17. This prediction also assumed that the turbidity (and thus the concentration of TSS) of the influent of the new Alton facility would be the same as the turbidity of the influent at the previous facility. Page 3-6 of the SSIS indicates that the mean of the annual averages for turbidity in the previous facility's influent for the six year period between January 1990 and December 1995 was 90 NTU. By correlating turbidity to concentration by using a ratio of 1:2 NTU/TSS, the TSS concentration of the influent at the previous facility was determined to be 180 mg/L. However, the turbidity of the new Alton facility's influent is different from the turbidity of the previous facility's influent. The mean of the annual averages for turbidity in the new Alton facility's influent for the five year period from February 2001 to December 2005 was 54 NTU. This turbidity was determined using data collected at the new Alton facility. The Alton facility's standard practice is to test the turbidity of the influent approximately three times each day. By correlating turbidity to concentration using a ratio of 1:2 NTU/TSS, the TSS concentration in the new facility's influent was determined to be 108 mg/L.

18. In addition, this prediction assumed that the daily flow rate for the facility would be 11.2 MGD. However, as noted above, the actual daily flow rate for the facility is 8.99 MGD.

19. The amount of TSS predicted to be discharged from the new facility each year was calculated by multiplying the TSS concentration in the previous facility's influent (180 mg/L) by the predicted daily flow rate for the new facility (11.2 MGD) and by a number of conversion factors used to standardize the units for the values used (mg to tons, days to years, etc.), as follows:

$$\frac{180\text{ mg}}{1\text{ L}} \times \frac{11.2\text{ MG}}{1\text{ day}} \times \frac{3.7854118\text{ L}}{1\text{ gal}} \times \frac{1{,}000{,}000\text{ gal}}{1\text{ MG}} \times \frac{365\text{ days}}{1\text{ year}} \times \frac{1\text{ ton}}{2{,}000\text{ lbs}} \times \frac{1\text{ lbs}}{453{,}592.37\text{ mg}} = \frac{3{,}070\text{ tons}}{1\text{ yr}}$$

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Using this formula, the amount of TSS predicted to be discharged from the new facility each year was approximately 3,070 tons. However, this same formula yields different results if the actual TSS concentration in the new facility's influent (108 mg/L) and the actual daily flow rate for that facility (8.99 MGD) are taken into account. If these actual figures had been used to predict the amount of TSS to be discharged from the new facility, the estimated amount discharged each year would have been calculated as follows:

$$\frac{108\text{ mg}}{1\text{ L}} \times \frac{8.99\text{ MG}}{1\text{ day}} \times \frac{3.7854118\text{ L}}{1\text{ gal}} \times \frac{1{,}000{,}000\text{ gal}}{1\text{ MG}} \times \frac{365\text{ days}}{1\text{ year}} \times \frac{1\text{ ton}}{2{,}000\text{ lbs}} \times \frac{1\text{ lbs}}{453{,}592.37\text{ mg}} = \frac{1{,}479\text{ tons}}{1\text{ yr}}$$

Using this same formula with actual figures thus indicates that the estimated amount discharged each year should be approximately 1,479 tons.

20. The amount of solids discharged from the facility also includes coagulant residuals. Page 6-2 of the SSIS indicated that approximately 580,000 pounds (290 tons) of coagulant residuals would be discharged from the facility each year. This estimate, however, was calculated incorrectly. On August 25, 2006, I spoke with Tom Coughlin, a technical representative at General Chemical, the manufacturer of the Clar+Ion used at the facility. He explained that a 1 mg/L dose (1 ppm) of Clar+Ion 4100 in one million gallons of water would produce 0.61 pounds of solids, and that approximately 8.34 pounds of Clar+Ion 4100 must be added to raise the concentration of Clar+Ion to that level. Based on this information, it appears that approximately .073 pounds of solids are produced by every one pound of Clar+Ion added to the facility's influent. The amount of coagulant residuals discharged from the facility each year therefore should have been calculated as follows:

$$\frac{8.34\text{ lbs Clar+Ion}}{1\text{ ppm / 1 MG/day}} \times \frac{.073\text{ lbs solids}}{1\text{ lb Clar+Ion}} \times 11.2\text{ MG/day} \times 40\text{ ppm} \times \frac{1\text{ ton solids}}{2000\text{ lbs solids}} \times \frac{365\text{ days}}{1\text{ year}} = \frac{50\text{ tons}}{1\text{ year}}$$

If the formula set forth above was used in the original petition, the amount of coagulant residuals predicted to be discharged from the facility would have been approximately 50 tons per year (rather than the 290 tons set forth in the original petition). However, as with tons of TSS, this same formula yields different results if the actual dose of Clar+Ion applied by the new facility (66 ppm) and the actual daily flow rate for that facility (8.99 MGD) are taken into account. If these actual figures had been used to predict the amount of coagulant residuals to be discharged from the new facility, the estimated amount discharged each year would have been calculated as follows:

$$\frac{8.34\text{ lbs Clar+Ion}}{1\text{ ppm / 1 MG/day}} \times \frac{.073\text{ lbs solids}}{1\text{ lb Clar+Ion}} \times 8.99\text{ MG/day} \times 66\text{ ppm} \times \frac{1\text{ ton solids}}{2000\text{ lbs solids}} \times \frac{365\text{ days}}{1\text{ year}} = \frac{66\text{ tons}}{1\text{ year}}$$

Using this same formula with actual figures thus indicates that the estimated amount of coagulant residuals discharged each year should be approximately 66 tons.

21. When the estimated tons of coagulant residuals are taken into account, the total tons of solids estimated to be discharged from the new facility each year is approximately 1,545 tons. This estimate is consistent with the actual tons of solids measured in the Alton facility's effluent. Based on the 59 grab samples collected from the Alton facility between February 2001 through December 2005 and reported to IEPA as required by the facility's NPDES permit,

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approximately 1,333 tons of solids are discharged in the facility's effluent each year. A chart summarizing the data reported to IEPA is attached to this Affidavit as Exhibit 1. Illinois-American's practice is to collect these grab samples on a random day each month during times of discharge from Superpulsator blowdown and filter backwash events. This practice presents a worst case scenario of TSS and total iron in the Alton facility's effluent, as the TSS in Illinois-American's effluent is higher during such events. As Water Quality Supervisor for the facility, I am responsible for monitoring operations at the facility and for ensuring that samples of the facility's effluent are properly obtained and tested in accordance with industry standards. To my knowledge, all samples of the facility's effluent were collected under my supervision and analyzed at Illinois-American's Peoria facility in accordance with industry standards.

22. Even if the daily flow rate of the facility is increased to 16 MGD (the maximum daily flow rate for the facility, *see* SSIS 3-4), the estimated tons of solids discharged from the facility would be below the 3,300 annual dry tons of solids estimated by Illinois-American and the Great Rivers Land Trust when they negotiated their contract in 2000. If the actual TSS concentration of the influent at the new Alton facility and an assumed daily flow rate of 16 MGD (the maximum daily flow rate) are used to predict the amount of TSS to be discharged from the facility, the estimated amount discharged each year would be calculated as follows:

$$\frac{108\text{ mg}}{1\text{ L}} \times \frac{16\text{ MG}}{1\text{ day}} \times \frac{3.7854118\text{ L}}{1\text{ gal}} \times \frac{1{,}000{,}000\text{ gal}}{1\text{ MG}} \times \frac{365\text{ days}}{1\text{ year}} \times \frac{1\text{ ton}}{2{,}000\text{ lbs}} \times \frac{1\text{ lbs}}{453{,}592.37\text{ mg}} = \frac{2{,}632\text{ tons}}{1\text{ yr}}$$

The estimated amount of TSS discharged each year should therefore be approximately 2,632 tons. In addition, the amount of coagulant residuals discharged from the facility each year would be calculated using the actual coagulant application rate (66 ppm) and an assumed daily flow rate of 16 MGD, as follows:

$$\frac{8.34\text{ lbs Clar+Ion}}{1\text{ ppm / 1 MG/day}} \times \frac{.073\text{ lbs solids}}{1\text{ lb Clar+Ion}} \times 16\text{ MG/day} \times 66\text{ ppm} \times \frac{1\text{ ton solids}}{2000\text{ lbs solids}} \times \frac{365\text{ days}}{1\text{ year}} = \frac{117\text{ tons}}{1\text{ year}}$$

The estimated amount of coagulant residuals discharged each year should therefore be approximately 117 tons. When the tons of TSS in the influent and the amount of coagulant residuals are taken into account, the total tons of solids estimated to be discharged from the facility each year is approximately 2,749 tons.

23. Because the Alton facility was constructed as proposed in the Site Specific Impact Study, the evaluation in that Study of the impact of the Alton facility is reliable today.

Further, Affiant sayeth not.

Paul Keck

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State of Illinois,)
) ss
County of Madison)

Subscribed and sworn to before me this 27 day of October, 2006.

Notary Public

My Commission Expires:

12/6/07

[SEAL]

OFFICIAL SEAL
KARMA L FALKENBURY
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES: 12/06/07

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Exhibit 1

Illinois American Water Alton NPDES Constituents Report

2001-2005

Based on monthly grab samples. NPDES Permit - IL0000299

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2001	Jan*	-	-	-	-	-	-	-	-	-
2001	Feb	7.2	324	7	0.465	0.823	<0.05	16	0.22	10.06
2001	March	7.3	3750	7	1.067	1.098	<0.05	31	0.97	517.51
2001	April	7.1	20035	323	0.553	1.01	<0.05	30	22.36	1386.75
2001	May	7.4	91	2.8	0.861	1.865	<0.05	31	0.31	10.13
2001	June	7.5	7769	165.6	0.521	1.222	<0.05	30	10.80	506.63
2001	July	7.6	11	0.3	0.563	1.573	<0.05	31	0.02	0.80
2001	Aug	7.3	8740	106.4	1.107	2.875	<0.05	31	15.23	1251.36
2001	Sept	7.6	67	1.5	0.396	0.716	<0.05	30	0.07	3.32
2001	Oct	7.5	2431	46.4	0.668	2.225	<0.05	31	4.01	210.03
2001	Nov	8	9	0.4	0.668	2.225	<0.05	30	0.03	0.75
2001	Dec	8.13	10	0.3	0.449	1.198	<0.05	31	0.02	0.58
Average			3930.6	60.064	0.665273	1.53		322		
								Total Tons per Year	**54.04**	**3897.93**

*No data was obtained in January 2001 from the new Alton facility.

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month	(Avg Daily) Tons of Solids Per Month
2002	Jan	8	18	0.2	0.842	1.49	<0.05	31	0.02	1.96
2002	Feb	7.69	0.4	0.04	0.43	1.152	<0.05	28	0.00	0.02
2002	March	8	2.4	0.05	0.386	0.607	<0.05	31	0.00	0.12
2002	April	7.9	2	0.2	0.794	2.295	<0.05	30	0.02	0.20
2002	May	7.31	1024	27.6	0.75	1.918	<0.05	31	2.68	99.33
2002	June	7.86	301	5.8	0.453	1.016	<0.05	30	0.33	17.07
2002	July	7.63	3106	68	0.526	1.134	<0.05	31	4.63	211.31
2002	Aug	7.97	179	3.8	0.655	1.307	<0.05	31	0.32	15.16
2002	Sept	8	66	1.6	0.987	1.968	<0.05	30	0.20	8.15
2002	Oct	8	48	0.8	0.622	1.22	<0.05	31	0.06	3.86
2002	Nov	7.4	2457	49	0.608	1.743	<0.05	30	3.73	186.98
2002	Dec	8.5	1009	12	1.126	2.37	<0.05	31	1.75	146.94
Average			684.4	14.091	0.681583	1.518333		365		
								Total Tons per Year	**13.74**	**691.11**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month (Avg Daily)	Tons of Solids Per Month (Avg Daily)
2003	Jan	8.1	1226	10	0.932	1.63	<0.05	31	1.21	147.79
2003	Feb	8.1	1929	16	1.011	1.337	<0.05	28	1.89	227.83
2003	March	7.9	300	2	0.776	1.671	<0.05	31	0.20	30.11
2003	April	7.7	2061	19	0.433	0.784	<0.05	30	1.03	111.70
2003	May	7.6	565	5	0.584	1.685	<0.05	31	0.38	42.68
2003	June	7.6	15	0	0.509	1.452	<0.05	30	0.00	0.96
2003	July	7.6	176	3	0.418	0.672	<0.05	31	0.16	9.52
2003	Aug	7.8	15	0	0.855	2.094	<0.05	31	0.00	1.66
2003	Sept	7.6	2527	33	0.659	1.217	<0.05	30	2.72	208.44
2003	Oct	7.8	834	9	0.606	1.314	<0.05	31	0.71	65.37
2003	Nov	8	167	2	0.612	1.644	<0.05	30	0.15	12.79
2003	Dec	7.8	154	2	0.464	1.518	<0.05	31	0.12	9.24
Average			830.75	8.4167	0.654917	1.418167		365		
								Total Tons per Year	**8.57**	**868.07**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month (Avg Daily)	Tons of Solids Per Month (Avg Daily)
2004	Jan	7.7	214	27	0.404	0.63	<0.05	31	1.41	11.18
2004	Feb	8.1	97	1	0.793	1.119	<0.05	29	0.10	9.31
2004	March	7.8	6	1	0.346	0.786	<0.05	31	0.04	0.27
2004	April	7.9	154	3	0.833	2.49	<0.05	30	0.31	16.06
2004	May	7.7	112	2	0.649	2.256	<0.05	31	0.17	9.40
2004	June	7.7	597	9	0.449	1.055	<0.05	30	0.51	33.55
2004	July	7.7	7	1	0.614	1.694	<0.05	31	0.08	0.56
2004	Aug	7.69	708	15.47	0.428	0.9	<0.05	31	0.86	39.19
2004	Sept	7.68	12	0.42	0.419	1.173	<0.05	30	0.02	0.63
2004	Oct	7.83	0	0.128	0.44	1.058	<0.05	31	0.01	0.00
2004	Nov	7.52	7400	149	0.394	0.772	<0.05	30	7.35	364.93
2004	Dec	7.76	15	0.34	0.555	1.258	<0.05	31	0.02	1.08
Average			776.83	17.447	0.527	1.265917		366		
								Total Tons per Year	**10.88**	**486.15**

Year	Month	pH	TSS mg/l	Iron mg/l	Avg. Daily Flow MG	Max Daily Flow MG	Cl2 mg/l	Days Per Month	Tons of Iron Per Month (Avg Daily)	Tons of Solids Per Month (Avg Daily)
2005	Jan	7.76	82	1.02	0.557	1.395	<0.05	31	0.07	5.91
2005	Feb	7.42	8950	221	0.405	0.87	<0.05	28	10.46	423.45
2005	March	8.02	184	3.85	0.43	1.168	<0.05	31	0.21	10.23
2005	April	7.96	870	21.8	0.555	1.339	<0.05	30	1.51	60.44
2005	May	7.88	35	1.13	0.405	0.804	<0.05	31	0.06	1.83
2005	June	7.65	106	2.06	0.389	0.625	<0.05	30	0.10	5.16
2005	July	7.79	22	1	0.636	1.995	<0.05	31	0.08	1.81
2005	Aug	7.86	1520	25.2	0.51	1.09	<0.05	31	1.66	100.26
2005	Sept	7.85	110	1.52	0.494	1.32	<0.05	30	0.09	6.80
2005	Oct	7.96	1240	18	0.391	0.811	<0.05	31	0.91	62.71
2005	Nov	7.92	55	0.72	0.363	0.6	<0.05	30	0.03	2.50
2005	Dec	7.63	420	6.62	0.73	1.245	<0.05	31	0.63	39.65
Average			1132.8	25.327	0.48875	1.105167		365		
								Total Tons per Year	**15.82**	**720.75**

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED EXTENSION OF ADJUSTED STANDARD	)	AS 06-_____
APPLICABLE TO ILLINOIS-AMERICAN	)	(Adjusted Standard)
WATER COMPANY'S ALTON PUBLIC WATER	)	
SUPPLY FACILITY DISCHARGE	)	
TO THE MISSISSIPPI RIVER	)	

AFFIDAVIT OF HOWARD O. ANDREWS, JR.

I, Howard O. Andrews, Jr., after being first duly sworn upon my oath, do depose and say as follows:

1. I work at Black & Veatch Corporation ("**Black & Veatch**"), where I hold the position of Senior Water Resources Engineer. I am providing this affidavit at the request of Brad Hiles, counsel to Illinois-American Water Company ("**Illinois-American**"), but I do so of my own free will. The statements in this affidavit are true to the best of my knowledge, information and belief, and I am providing these statements under oath. I would provide this same information in a hearing before the Illinois Pollution Control Board ("**IPCB**"), if necessary, also under oath and penalty of perjury.

2. I am familiar with the report titled Site-Specific Analysis of Impacts of Potential Alternatives for Handling Public Water Supply Residuals at Proposed Alton, IL Facility, which was prepared by ENSR in March 1999 (the "**Site Specific Impact Study**" or "**SSIS**"). To my knowledge, the SSIS accurately reflects the conditions present in the Mississippi River (the "**River**") near River Mile 204 at the time that study was prepared.

3. The U.S. Geological Survey (USGS) maintains and monitors several gages in the Mississippi River at which USGS collects water quality data. Tables 4-4 and 4-5 of the Site Specific Impact Study present data which was compiled by USGS from USGS Gaging Station ID No. 05587455, located at Lat. 38 57'04", Long. 90 22'16", at the site commonly known as "Mississippi River Below Grafton." Table 4-4 shows the concentration of Total Suspended Solids (TSS) in the River from March 1989 through September 1994, and Table 4-5 shows the concentration of dissolved iron in the River during that period.

4. To evaluate whether there has been a distinguishable change in the water quality of the Mississippi River near Illinois-American's water treatment facility in Alton, Illinois (the "**Alton facility**" or the "**new Alton facility**") from the water quality of the River at the facility during the period from March 1989 through September 1994, I conducted a statistical analysis of water quality data recorded by the USGS Gaging Station. I compared the data collected between 2000 and 2005 to the 1989–1994 data referenced in the Site Specific Impact Study. The water quality data presented in Tables 4-4 and 4-5 of the Site Specific Impact Study established the base-line conditions for this evaluation. Data for years 2000–2005 was compiled by USGS from

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USGS Gaging Station ID No. 05587455. This data is available online at USGS's National Water Information System Web Interface (http://nwis.waterdata.usgs.gov/usa/nwis/qwdata).

5. Due to the limited number of samples and corresponding data points recorded at USGS station 05587455, I compared the data from years 1989–1994 to the data from years 2000–2005 by using the "Student's t-test," which is typically used to determine whether there is a statistically significant difference between the means of two populations of data sets when the populations are represented by relatively small data sets. The t-test demonstrates that there is no statistically significant difference between the means for TSS concentration in the data sets for years 1989–1994 and years 2000–2005. In other words, the difference between the observed means is not strong enough to conclude that there is an actual, not merely chance, difference between them. The outcome of the t-test for iron concentration is the same. The test demonstrates that the difference between means for iron concentration in the data sets for years 1989–1994 and years 2000–2005 is not strong enough to conclude that there is an actual difference between them. Based on this evaluation of data collected at USGS station 05587455, I have determined that there is has been no distinguishable change in the water quality of the Mississippi River near the new Alton facility since the construction and start-up of that facility.

6. I understand that Illinois-American has submitted a Petition for Extension of its adjusted standard, and that Illinois-American has moved to incorporate by reference the Site Specific Impact Study into evidence in this proceeding. Because I have no reason to believe that the conditions in the River are materially different than the conditions described in the SSIS, I have concluded that the SSIS is reliable now, just as it was in 1999 when originally prepared.

Further, Affiant sayeth not.

Howard O. Andrews, Jr.

State of Missouri,)
) ss
County of Jackson)

Subscribed and sworn to before me this 30 day of October, 2006.

Notary Public

My Commission Expires:

.....

DAWN BUCHANAN
Notary Public - Notary Seal
STATE OF MISSOURI
Jackson County
My Commission Expires: March 3, 2007

[SEAL]

DAWN BUCHANAN NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

ATTACHMENT E

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED EXTENSION OF ADJUSTED STANDARD	)	AS 06-_____
APPLICABLE TO ILLINOIS-AMERICAN	)	(Adjusted Standard)
WATER COMPANY'S ALTON PUBLIC WATER	)	
SUPPLY FACILITY DISCHARGE	)	
TO THE MISSISSIPPI RIVER	)	

ORDER OF THE BOARD (by _____)

The Board hereby finds that extension of the adjusted standard applicable to discharges to the Mississippi River (the "Mississippi") from Illinois-American Water Company's Alton Public Water Supply Facility located near River Mile 204 in Alton, Illinois (the "Alton facility"), which was constructed to replace the previous facility at that site, is justified because the factors relating to Illinois-American Water Company ("Illinois-American") are substantially and significantly different from the factors relied upon by the Board in adopting the regulations of general applicability; the existence of those factors justifies an extension of the adjusted standard; the requested extension will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rules of general applicability; and the extension of the adjusted standard is consistent with any applicable federal law.

The Board hereby adopts the following adjusted standard, pursuant to the authority of Section 28.1 of the Environmental Protection Act:

1. The effluent standard for total suspended solids at 35 Ill. Adm. Code 304.124 will not apply to the effluent discharged from the Alton facility.

2. The effluent standard for total iron at 35 Ill. Adm. Code 304.124 will not apply to the effluent discharged from the Alton facility.

3. The effluent standard for offensive discharges at 35 Ill. Adm. Code 304.106 will not apply to the effluent discharged from the Alton facility.

4. The general use water quality standard for offensive discharges at 35 Ill. Adm. Code 302.203 will not apply to a one mile stretch of the Mississippi which receives effluent from the Alton facility and is immediately downstream from the Alton facility's discharge.

5. No facilities with outfalls or discharges to the Mississippi will benefit from the relief provided in this Order except for the Alton facility.

6. The Board grants the adjusted standard pursuant to the following conditions:

a. Illinois-American will send all of its discharges from its Alton facility only to the Mississippi at River Mile 204. Illinois-American will not send discharges from its Alton facility to tributaries of the Mississippi. Illinois-American will not send discharges from its Alton facility to any other body or water or to land.

b. Illinois-American will comply with the terms of the Consulting and Performance Agreement between Illinois-American and Great Rivers Land Trust (GRLT) throughout the term of that Agreement.

c. No later than sixty (60) days after the adoption of this Order, Illinois-American will enter into a contract for maintenance of the Piasa Creek Watershed Project with GRLT or with such other nonprofit corporation, soil and water conservation district, or other person or entity selected by Illinois-American and approved by the Illinois Environmental Protection Agency, which approval shall not be unreasonably withheld.

d. In the event that the contract for maintenance is terminated by either party or Illinois-American determines that entry into a substitute or additional contract for maintenance is necessary or desirable, Illinois-American shall enter into a contract for maintenance of the Piasa Creek Watershed Project with a person or entity selected by Illinois-American and approved by the Illinois Environmental Protection Agency, which approval shall not be unreasonably withheld.

e. At a minimum, any such contract for maintenance must specify that:

    i. Illinois-American will provide funds needed to ensure that the average offset for the calendar year in question and the four preceding calendar years is not reduced below a 2 to 1 offset for total suspended solids.

    ii. GRLT or such other nonprofit corporation, soil and water conservation district, or other person or entity selected by Illinois-American shall submit to the Agency annual reports detailing the reductions achieved by implementation of the sediment reduction measures and describing the sediment load reductions achieved for each measure or practice implemented.

f. Within ten (10) days of entering into any such contract for maintenance, Illinois-American must provide a copy of the

contract to the appropriate personnel at the Illinois Environmental Protection Agency.

7. This adjusted standard shall be indefinite in nature, and shall expire if any of the following events occur:

   a. The Board determines that the conditions of the Mississippi have changed such that the adjusted standard granted herein is made obsolete or infeasible;

   b. The average offset for the calendar year in question and the four preceding calendar years fails to reach a 2 to 1 offset for total suspended solids.

8. In the event that any of the above events occur, this Adjusted Standard shall expire upon the date that is three years from the occurrence of such event. Expiration of the Adjusted Standard shall be delayed, however, during pendency of a petition for extension, if any, and the Board will consider another extension at that time, if warranted by the petition.

9. Notwithstanding the terms set forth in Sections 6(c) and 6(d), above, Illinois-American shall not be required to enter into a contract for maintenance, and may terminate any then-existing contract for maintenance, if new regulations are promulgated that limit or prohibit Illinois-American's discharges to the Mississippi or otherwise invalidate this adjusted standard.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1998)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this Order. Illinois Supreme Court Rule 335 establishes such filing requirements. *See* 172 Ill. 2d R. 335; *See also* 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, _____, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the ____ day of _____, 20__, by a vote of ____.

_____