

**Holiday Lake Watershed**  
**Improvement Project**  
**6010-005**

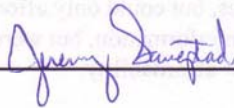
Administered by:  
**Poweshiek County Soil and Water Conservation District**

**Final Project Report**

January 1, 2007 – September 30, 2008

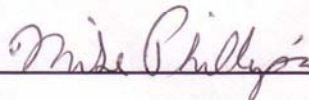
Reporting Individual: Jeremy Saugstad

Preparer's Signature: \_\_\_\_\_



Poweshiek County SWCD Chairperson: Mike Phillips

SWCD Chairperson's Signature: \_\_\_\_\_



**Holiday Lake Watershed Improvement Project WIRB Funds Summary:**

<b>Grant Agreement Budget Line Item With Two Amendments Implemented</b>	<b>Total Funds Approved (\$)</b>	<b>Total Funds Expended (\$)</b>	<b>Available Funds (\$)</b>
Salary and Benefits	29,438	29,504	(80)
Travel and Training	1,187	100	1,087
Supplies	1,500	465	1,035
Information/Education (I&E)	3,000	*391	2,609
Equipment	200	42	158
Water and Sediment Control Basin	8,798	8,800	(2)
Grassed Waterway	0	0	0
Terraces	513	512	1
Pond / Grade Stabilization Structure	9,955	9,545	410
Native Seeding	88	97	(9)
Rain Garden - Residential	6,173	1,548	4,625
Contractual - (to RC&D)	3,595	*2,905	690
<b>Totals</b>	<b>64,447</b>	<b>53,910</b>	<b>10,537</b>
Difference			10,537

**Holiday Lake Watershed Financial Accountability**

For the Travel and Training, Supplies, and Equipment budget items, there were no additional expenses incurred. \* The contractual work done by the Iowa Valley Resource Conservation and Development (RC&D), which included the designing and printing of brochures and literature, was all for Information and Education (I&E). Therefore, when the \$391 of I&E line item is added to the \$2,905 of contractual I&E work that the RC&D had performed, there was a total of about \$3,300 of the Watershed Improvement Review Board (WIRB) funds that were used for Information and Education. In addition, the Holiday Lake Watershed Administrative Spreadsheet summary (see page 6) shows, on line item 6, that the Holiday Lake Owner’s Association contributed over \$3,800 toward the Information and Education of the Holiday Lake Watershed residents.

All ten of the Holiday Lake Watershed agriculture landowners were contacted more than once, and informed about the benefits of each of the practices. All of them said that they already knew about the benefits, but did not implement them, mainly, because of the financial cost of the earthwork. When they were informed about the available cost share incentives, six ag landowners capitalized on the opportunity. Of the four that did not participate with installing conservation practices during the time of this grant: one landowner had all of his acres in the Conservation Reserve Program (CRP), and wanted to leave them that way for at least their current term. The second landowner had all of his acres planted to trees, or seeded to grass, as an operating tree farm. The third landowner had recently put in a pond, and had no other areas to put new practices onto. The fourth landowner was utilizing conservation practices, but did not install any new ones on the Holiday Lake Watershed acres.

The Holiday Lake Owner’s Association was extremely eager to receive funding to assist with their conservation plan. They had plans to install several practices/structures, but could only afford to do a few each year. The individual lot owners had already received backyard conservation information, but were not familiar with rain gardens. The four rain gardens that were installed were simple designs, for affordability.

**Holiday Lake Watershed Improvement Project Funding Source Summary:**

Funding Source	Cash		In-Kind Contributions		Total	
	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)
WIRB	64,447	53,925			64,447	53,910
EQIP	38,705	28,628			38,705	28,628
Poweshiek County SWCD	125	125			125	125
Holiday Lake Owner's Association	17,000	31,432			17,000	31,432
IA Valley RC&D			800	800	800	800
Landowners	22,408	39,559			22,408	39,559
<b>Totals</b>	<b>142,685</b>	<b>153,669</b>	<b>800</b>	<b>800</b>	<b>143,485</b>	<b>154,455</b>

Holiday Lake Watershed Improvement Project Fund contribution: Approved application budget: 45 %  
 ( 53,925 divided by 154,469 = ) **Actual:** 35 %

**Holiday Lake Watershed Project Funding Sources**

**WIRB Contribution:** The original application estimated a total of about \$77,410 of agricultural conservation practices, of which the WIRB approved \$19,354 for cost share. The Holiday Lake Watershed Administrative Spreadsheet summary shows (in line items 8 through 15 and most of the recipient funding source) that there was a total of about \$81,400 of agricultural conservation practices installed, of which \$18,858 was WIRB cost share funds (sum of Line items 8, 10, 12, and 14).

There was no direct need for most of the Travel and Training funds, there was plenty of On-the-Job training, and the local Natural Resources Conservation Service (NRCS) contributed a vehicle and gas for travel to the project coordinator training, and the other relevant training locations. Also, the Rain Garden cost was driven down by simplifying the design, and reducing the size, in order to sell the idea to the Holiday Lake lot-owners. Therefore, in the first amendment to the Holiday Lake Watershed Improvement Project grant (not included in this report), \$3,000 were transferred from both the Travel & Training budget, and the Rain Garden budget. Even with these transfers, there were over \$1,000 unspent in the Travel & Training budget, and over \$4,500 unspent in the Rain Garden budget.

**HLOA Contribution:** The Holiday Lake Owner's Association (HLOA) spent about \$24,000 for dredging. They are striving to put as much money as they can towards proactive conservation practices to keep the sediment out of the lake, while still dredging to remove what has already gotten there. As of March 2006, before this project began, HLOA had installed more than 12 sediment basins, 10 settling basins, and 3 collection ponds (shown on Practice Map, Page 7).

**Landowner and EQIP Contribution:** The watershed landowners paid more than originally anticipated, due to the increased cost of practices. The Environmental Quality Incentive Program (EQIP) pays 50% according to established, historical program rates. The EQIP program rates are updated annually, based upon a statewide average of the previous year, but there was still a difference between the installed rate and the applied EQIP rate. While the Holiday Lake Watershed Administrative Spreadsheet summary shows that EQIP paid about \$29,000 of the \$109,000 of total ag practices, the actual percentage that EQIP paid was usually between 40-45%, because not all of the practices / landowners, were able to utilize the EQIP funds.

**Poweshiek County SWCD:** The Poweshiek County Soil and Water Conservation District (SWCD) paid \$125 towards IOWATER training costs as planned in the original application.

**Holiday Lake Watershed Improvement Project Activities and Practices Summary:**

Practice or Activity	Unit	Approved Application Goal	Accomplishments	Percent Completion
Field Day / Tour	Number	3	2	66
Workshop	Number	0	1	-
Diversions	Number	1	1	100
Water and Sediment Control Basin	Number	15	13	87
Grassed Waterway	Feet	1500	0	0
Terraces	Feet	2000	350	18
Pond / Grade Stabilization Structure	Number	2	2	100
Native Seeding	Acres	1	1	100
Rain Garden - Residential	Number	2	3	150
Disregarding the workshop, 621 divided by 8 = 78%			<b>Average Completed:</b>	<b>78%</b>

Five news articles were submitted to three local newspapers as well as the Holiday Lake Owners Association Newsletter. The articles informed residents of the water quality improvement project and water quality issues. Two of the articles promoted the benefits of a rain garden for lot owners around the lake. This resulted in several inquiries and two watershed lot owners installing four rain gardens. The Holiday Lake Owners Association distributed five newsletters, advertised on their outdoor bulletin board, and also used their web site, to educate the lot owners about lake conservation and water quality. A presentation on Urban Conservation was given during the Holiday Lake Owners Association Spring Meeting, at a Holiday Lake park shelter, with about 50 attendees. A public watershed promotion event was held on June 3, 2008 with a presentation on soil conservation given by the Iowa Learning Farm, to about 30 people. At both events, informational brochures were distributed on urban conservation, rain gardens, bio-swales, lake management, and environmental education. The conservation brochures were printed with help from the IA Valley RC&D.

All eleven landowners in the Holiday Lake watershed have been contacted to determine interest in conservation practices. With all of the agricultural landowners contacted, instead of having another field day, attention was directed to a workshop, while all Information and Education were continued. The Holiday Lake Owners Association hosted the IOWATER training workshop, and updated their water monitoring program by meeting with IA DNR water monitoring staff.

Two of the top three priority basins of the Holiday Lake Owners Association were completed. These were priority basins because of the amount of sediment that was repeatedly cleaned out of silt basins that are located near the lake. The Holiday Lake Owners Association also seeded three areas to Native Grasses and Forbs for a total of about one acre, and completed the dredging of Ford’s Cove. A grade stabilization structure, pond, terrace, and five basins were installed on three farm properties that were identified as high soil loss areas using the sediment delivery calculator. The remaining seven basins were on two farmland areas that were highlighted on the GIS sediment delivery map.

Of the 205 acres of farmland, over 15 acres are enrolled in CRP. Of the remaining, 190 acres, over 80% of the land farmed is on the hilltops, is not too steep, and does not have erosion over .08 tons/acre. Therefore, mainly because of the lay of the land in the watershed, there was not as much interest in waterways as anticipated. Generally the gullies started at, or near, the edges of the fields, where it was too steep to farm. Ten of the basins were installed at the tops of those gullies at the edges of farmed fields. The other three basins were installed across gullies in upland timber areas. Only one terrace was installed, because most of the structures conformed to the gully instead of the irregular contour. With the rolling topography, and large farm equipment, there is far less interest in terraces than was anticipated in the grant application.

## **Holiday Lake Watershed Improvement Project Environmental Accountability**

One of the main goals of the project was to reduce sediment delivery by 50%, or an estimated 75 tons annually. The sediment delivery calculator estimated a sediment delivery reduction of 136 tons/year. The average sediment delivery, prior to constructing the practices, was found to be about 1.42 ton/ac/yr, as estimated with the sediment delivery calculator. On the 111 acres treated, the sediment delivery calculator estimated an overall average 86% reduction in sediment delivery, with the practices installed.

Water monitoring was conducted, at Holiday Lake, throughout the entire duration of the Holiday Lake Watershed project. Each of the five main inlets and the beach area were monitored for water quality according to the IOWATER level one testing standards. The Iowa DNR staff was specifically asked to check the Holiday Lake water quality data before June 24, 2008. During the June 24<sup>th</sup> meeting with IDNR staff and the Holiday Lake Water Quality Committee, the IDNR was asked what the monitoring data showed. They replied that they were going to check the data, and contact the SWCD or Holiday Lake Association if there was anything that was outside the tolerable parameters. They did not contact either party. However, the volunteers that did the monitoring noted that all of the readings taken were within the allowable IOWATER parameters. Also, during the meeting with the IADNR, the water monitoring plan was reviewed, and the outlet of Holiday Lake was added as another location to monitor. The water monitoring will be continued for the next two years, and assessed annually, or sooner, if the need arises.

## **Holiday Lake Watershed Improvement Project Program Accountability**

The other main goal of the project was to initiate an information and education program for landowners, which is discussed in the first paragraph of page four. The Holiday Lake Watershed Information and Education program also tied in with the Walnut Creek Watershed. The Holiday Lake Watershed is within the larger, Walnut Creek Watershed. The two watersheds shared a field day event which allowed the Holiday Lake Watershed landowners to gain a better understanding of their part in the Walnut Creek Watershed. The Holiday Lake residents were eager to show the positive impact that Holiday Lake has on the Walnut Creek Watershed. This helped to enlist volunteers to monitor the output of Holiday Lake, and to help with the monitoring of the Walnut Creek, as a part of the Walnut Creek Watershed water monitoring program.

As part of the I&E program, the agriculture residents, of the Holiday Lake Watershed, were given a courtesy mailing of the Holiday Lake newsletter to see what conservation projects were being conducted in their watershed, and read about conservation information. Three of the ag landowners will continue to receive the newsletter after the close of this project. There was good, open communication established between the Holiday Lake Owner's Association, all of the (other) watershed landowners, and the Poweshiek County Soil and Water Conservation District.

One problem encountered during the project was the effective spread of rain garden information to the lake lot owners, even with the use of the newsletter, and mailings. There were too many residents to go door-to-door to every one. Therefore, some lots located in areas that were highly visible, such as near the main entrances, were targeted. Two-sided, full page, color conservation brochures were delivered to these residences. Also, contractors that were working in the area were given the information about urban conservation, and rain garden cost share as well. This resulted in five more inquiries, and two estimates, but no more rain garden projects. An additional practice was approved when the Holiday Lake Watershed project end date was changed from June to Sept. This practice was a grade stabilization structure project which allowed a formation of a wetland habitat for wildlife in the watershed.



**Holiday Lake Watershed WIRB Administrative Spreadsheet 2007-2008 Summary**

<b>Project Name:</b>	<b>Holiday Lake Watershed</b>
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**Total Funds Expended by Source**

Funding Source	Jan - July 2007	Aug - Dec 2007	Jan - Sept. 2008	Totals	% of Total
WIRB	\$8,643.30	\$13,519.57	\$31,747.48	\$53,910.35	35%
EQIP	\$0.00	\$10,827.00	\$17,801.26	\$28,628.26	19%
HLOA	\$0.00	\$23,508.00	\$7,923.96	\$31,431.96	20%
RC&D	\$0.00	\$0.00	\$800.00	\$800.00	0.52%
SWCD	\$70.00	\$0.00	\$55.00	\$125.00	0.08%
Other	\$0.00	\$0.00	\$0.00	\$0.00	0%
319	\$0.00	\$0.00	\$0.00	\$0.00	0%
WSPF	\$0.00	\$0.00	\$0.00	\$0.00	0%
Matching (Cash)	\$0.00	\$0.00	\$0.00	\$0.00	0%
Matching (In-Kind)	\$0.00	\$0.00	\$0.00	\$0.00	0%
WPF	\$0.00	\$0.00	\$0.00	\$0.00	0%
IFIP	\$0.00	\$0.00	\$0.00	\$0.00	0%
Recipient	\$0.00	\$20,400.75	\$19,158.48	\$39,559.23	26%
<b>Totals</b>	<b>\$8,713.30</b>	<b>\$68,255.32</b>	<b>\$77,486.18</b>	<b>\$154,454.80</b>	<b>100%</b>

**Total Funds Expended by Line Item Category**

Line Item	Jan - July 2007	Aug - Dec 2007	Jan - Sept. 2008	Totals	% of Total
1 - WIRB Salary / Benefits	\$8,536.54	\$6,245.43	\$14,721.93	\$29,503.90	27%
2 - WIRB Travel / Training	\$0.00	\$0.00	\$100.00	\$100.00	0.09%
3 - SWCD IOWATER Training	\$70.00	\$0.00	\$55.00	\$125.00	0.11%
4 - WIRB Supplies	\$64.41	\$2.14	\$398.56	\$465.11	0.42%
5 - WIRB Info / Education	\$0.00	\$0.00	\$390.95	\$390.95	0.35%
6 - HLOA Info / Ed	\$0.00	\$1,168.00	\$2,644.36	\$3,812.36	3.43%
7 - WIRB Equipment	\$42.35	\$0.00	\$0.00	\$42.35	0.04%
8 - WIRB Basins	\$0.00	\$2,680.00	\$6,120.41	\$8,800.41	8%
9 - EQIP Basins	\$0.00	\$3,827.00	\$8,807.26	\$12,634.26	11%
10 - WIRB Waterways	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
11 - EQIP Waterways	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
12 - WIRB Terraces	\$0.00	\$0.00	\$512.33	\$512.33	0.46%
13 - EQIP Terraces	\$0.00	\$0.00	\$719.00	\$719.00	0.65%
14 - WIRB Ponds/GSS	\$0.00	\$4,495.00	\$5,050.24	\$9,545.24	8.58%
15 - EQIP Ponds/GSS	\$0.00	\$7,000.00	\$8,275.00	\$15,275.00	13.73%
16 - WIRB Seeding	\$0.00	\$97.00	\$0.00	\$97.00	0.09%
17 - WIRB Rain Gardens	\$0.00	\$0.00	\$1,548.06	\$1,548.06	1.39%
18 - HLOA Dredging	\$0.00	\$22,340.00	\$1,627.60	\$23,967.60	22%
19 - WIRB Contractual I&E	\$0.00	\$0.00	\$2,905.00	\$2,905.00	2.61%
20 - RC&D In-Kind	\$0.00	\$0.00	\$800.00	\$800.00	0.72%
<b>Totals</b>	<b>\$8,713.30</b>	<b>\$47,854.57</b>	<b>\$54,675.70</b>	<b>\$111,243.57</b>	<b>100%</b>

**Loading Reductions**

Impairment	Jan - July 2007	Aug - Dec 2007	Jan - Sept. 2008	Cummulative Loading Reductions
Sediment	0	24.85	112.1	136.95 tons/year
Nitrogen	0	0	0	0 lbs./year
Phosphorus	0	0	0	0 lbs./year
Other	0	0	0	0 units/year



