

Iowa Watershed Project Status -- One Paragraph Summaries



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Addressing Natural Resource Problems

By Charles Gipp, Director, IDALS Soil Conservation Division

It's a privilege to be a part of soil and water conservation accomplishments in Iowa. I was involved first as a farmer, then as a legislator, and now day in and day out as the Director of the Soil Conservation Division of the Iowa Department of Agriculture and Land Stewardship.

Supporting Iowa's local soil and water conservation districts (there's one in every county—two in Pottawattamie) as they provide local leadership to administer cooperative watershed projects has been a top priority for the Division and IDALS.

We've been involved together in administering more than 200 projects spanning the past 20 years.

Conservation districts apply for funds from IDALS for both technical and financial purposes. Projects may also get funds from the Environmental Protection Agency's 319 water quality program. These funds come through the Iowa Department of Natural Resources (DNR). The DNR may offer other funds, and districts have also often partnered with other agencies and organizations.

Conservation districts set priorities with local citizen input, then rely on IDALS secretaries, conservation technicians and environmental specialists to carry out the projects. Or, in some cases, districts may employ a temporary project coordinator. The projects usually run for 5 to 10 years.

Projects are also assisted by the USDA Natural Resources Conservation Service (NRCS), a federal conservation agency that works very closely with IDALS and conservation districts in natural resource care.

The projects are diverse in some objectives, but all share a common goal of protecting productive land and improving water quality in Iowa's streams and lakes.

For more information, see the IDALS website at www.iowaagriculture.gov



Iowa's watershed projects often have similar problems. Those problems begin when rain falls on unprotected or underprotected agricultural or urban land. Productivity suffers as a result of sheet and rill erosion on hillsides.



As water builds, severe gully erosion not only robs agricultural producers of valuable land, the sediment it creates chokes streams with muddy water that makes its way downstream, where it settles out and prematurely fills lakes and reservoirs. Downslope, sediment can cover crops, fill streets and road ditches, and damage property.



Uncontrolled runoff also carries nutrients meant for growing crops. In combination, sediment and nutrients from runoff are the most common and most serious threats to water quality in Iowa. Rapid runoff, sedimentation and flooding also damage roads, bridges and other infrastructure in Iowa. Watershed projects are addressing these problems across the state of Iowa.



Watershed Projects in Iowa

As of October of 2009, there were 204 watershed projects that had either been completed or were actively being administered by local soil and water conservation districts with assistance from IDALS/DSC.

Key for projects:

Funding Source

- Water Quality Protection Fund
- Watershed Protection Fund
- ▲ EPA Section 319 funds*

*IDALS-DSC provides administrative support and guidance to projects receiving DNR Section 319 funding.

Project Objective

- ❖ Warm water stream protection
- ◆ Cold water stream protection
- ▼ Lake protection
- ★ Ground water protection
- ⊕ Ground and surface water protection
- ◇ Flood reduction
- ◆ Grade stabilization/flood reduction
- ✱ Urban

Status

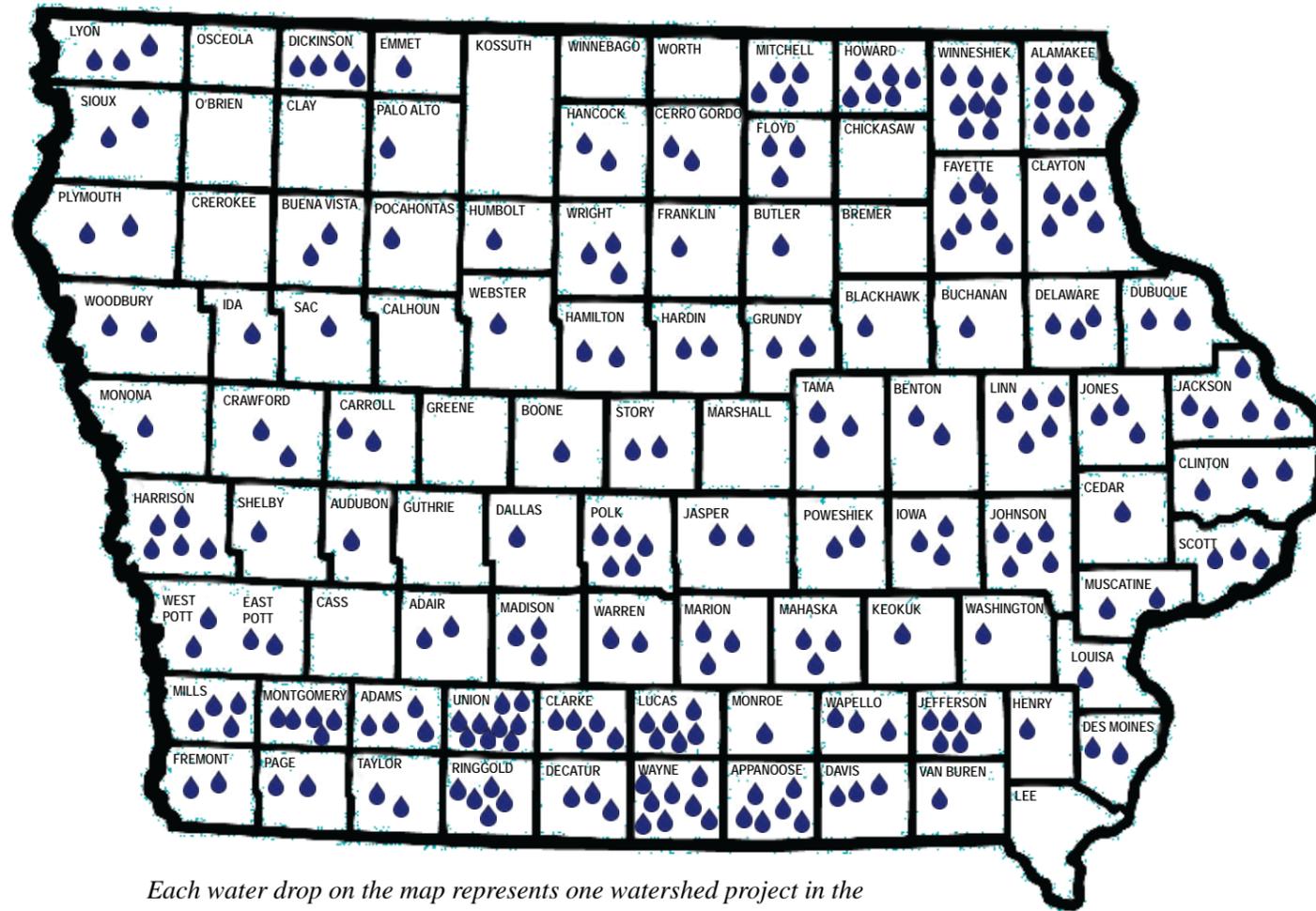
- A Active
- C Completed

Name	SWCD	Fund	Goal	Status	Name	SWCD	Fund	Goal	Status
1 A&T Long Branch	Adams, Taylor	■	❖	C	44 Duck Creek Demo	Scott	● ▲	✱	C
2 Allamakee Sinkhole	Allamakee	●	★	C	45 East Boyer River	Crawford	■	◇	A
3 Anderson Well	Fremont	●	★	C	46 East Fork of Grand	Union	■	❖	A
4 Arbor Lake	Poweshiek	● ■	▼	C	47 East Fork of Grand	Ringgold	● ■	❖	A
5 Badger Creek Lake	Madison	● ■ ▲	▼	A	48 East Fork of Grand	Ringgold	■	❖	C
6 Battle Creek	Ida	● ▲	★	C	49 Elk Creek	Delaware	● ■ ▲	◆	C
7 Bear Creek	Delaware	● ■ ▲	◆	A	50 Elk Creek (Harrison)	Harrison	● ■	❖	A
8 Bear Creek	Winneshiek	● ■ ▲	◆	C	51 Elk River	Clinton	● ■ ▲	❖	C
9 Beeds Lake	Franklin	● ▲	▼	C	52 Ensign Hollow	Clayton	●	◆	C
10 Bigalk Creek Coldwater	Howard	▲	◆	C	53 Ensign Hollow II	Clayton, Fayette	● ■ ▲	◆	C
11 Bigalk Creek WQ	Howard	● ▲	◆	C	54 Fairfield Lakes	Jefferson	●	▼	C
12 Bigalk to Bohemian	Howard	● ▲	★	C	55 Fairfield Stormwater	Jefferson	●	◇	C
13 Big Paint Creek	Allamakee	■	★	C	56 Fairfield Water Supply	Jefferson	●	▼	C
14 Big Wall Lake	Wright	▲	▼	C	57 Farmers Creek	Jackson	● ■ ▲	❖	A
15 Black Hawk Lake	Sac	● ▲	▼	C	58 Floyd Co. Groundwater	Floyd	● ▲	★	C
16 Bloody Run Creek	Dubuque	●	◆	C	59 Floyd Co. ADW	Floyd	●	★	C
17 Bloody Run (Clayton)	Clayton	● ■	◆	C	60 Four Mile Creek	Polk	● ■	❖	A
18 Bob White Lake	Wayne	● ■ ▲	▼	C	61 Four-Mile Creek I	Union	■	▼	C
19 Bonus for Trees	Des Moines	●	⊕	C	62 Four-Mile Creek II	Union	■	▼	C
20 Briggs Woods Lake	Hamilton	●	▼	C	63 Fox River	Appanoose, Davis	■	❖	C
21 Brushy Creek Lake	Webster	● ■ ▲	▼	A	64 Fox River Impaired	Davis, Appanoose	▲	❖	A
22 Buckeye Creek	Wapello	● ■	❖ ◇	A	65 Fox River WQ	Van Buren, Davis, Appanoose	● ■	❖	A
23 Burr Oak/Turtle	Mitchell	● ■ ▲	❖	A	66 Glen Ellen Dam	Woodbury	■	◇	C
24 Camp Creek	Polk	● ■ ▲	❖	A	67 Glovers Creek WPF	Fayette	●	◆	C
25 Carroll Co. Livestock	Carroll	● ▲	⊕	C	68 Glovers Creek Eval	Fayette	●	◆	C
26 Cedar Lake	Madison	● ▲	▼	C	69 Grannis Creek	Fayette	● ■ ▲	◆	C
27 Cedar Rapids Urban	Linn	● ▲	✱	C	70 Green Valley	Union	■	▼	A
28 Centerville Reservoir	Appanoose	■	▼	C	71 Hacklebarney	Montgom., Adams	● ■	▼	C
29 Central Iowa Urban	Polk, Dallas, Madison, Marion, Story, Warren	●	✱	C	72 Hallett's Quarry	Story	▲	▼	C
30 Chinkapin Bluffs	Louisa	● ■	❖ ◇	A	73 Hannen Lake	Benton	▲	▼	A
31 Clear Lake (CLEAR)	Hancock, Cerro Gordo	● ■ ▲	▼	A	74 Hanthorn	Decatur	●	▼	C
32 Clear Lake	Hancock, Cerro G.	●	▼	C	75 Harris Grove #1	Harrison	■	❖	C
33 Coldwater/Pine	Winneshiek	● ■	◆	A	76 Hazelbrush	Carroll	●	⊕	C
34 Competine Creek	Marion	● ■	❖	A	77 Hickory Creek	Allamakee	● ▲	◆	C
35 Coon Creek	Allamakee	● ▲	❖	C	78 Hickory Hills	Tama	■ ▲	▼	C
36 Corydon Lake	Wayne	●	▼	C	79 Highline Project	Union	●	▼	C
37 Corydon Reservoir	Wayne	● ■ ▲	▼	C	80 Hoosier Creek	Linn	● ■	◆	C
38 Crooked Creek	Ringgold	■	❖	C	81 Humboldt Co. ADW	Humboldt	●	★	C
39 Deer Creek/N. Branch	Johnson, Iowa	● ■ ▲	❖	A	82 Humeston Reservoir	Wayne	■	✱	C
40 Des Moines Metro	Polk	● ▲	✱	C	83 Indian Creek Headwtrs	East Pott.	● ■	❖	C
41 Dickinson Co. Urban	Dickinson	●	✱	A	84 Indian Creek Dam	West Pott.	■	◇	C
42 Dry Creek WQ	Linn	●	⊕	C	85 Ingham/High Lake	Emmet	● ▲	▼	C
43 Dry Run	Black Hawk	● ■ ▲	❖	A	86 Iowa Great Lakes Infil.	Dickinson	● ▲	▼	A
					87 Iowa Great Lakes	Dickinson	● ■ ▲	▼	C
					88 Iowa Great Lakes	Dickinson	▲	▼	C

Watershed projects in Iowa (continued)

Name	SWCD	Fund	Goal	Status	Name	SWCD	Fund	Goal	Status
89 Iowa Lake	Iowa	●	▼	C	151 Rathbun On-Road Str.	Wayne	■	▼	C
90 Jefferson County WS	Jefferson	●	▼	C	152 Rock Creek (Clinton)	Clinton	● ■ ▲	▼	C
91 Johnson County Urban	Johnson	● ▲	✱	A	153 Rock Creek	Jasper	● ■ ▲	▼	A
92 Johnson Co. Urban	Johnson	●	✱	C	154 Rock Valley Wellhead	Sioux	● ■ ▲	★	C
93 Jones Co. Urban-Rural	Jones	■	◇	C	155 Schley Park	Harrison	●	▼	C
94 Jordan Creek	East Pott	● ■ ▲	✱	A	156 Silver Creek	Clayton	● ■ ▲	❖	A
95 Keg Creek	Mills	■	❖	C	157 Silver Lake	Palo Alto	● ■ ▲	▼	A
96 Kent Park Lake	Johnson	●	▼	C	158 Slip Bluff	Decatur	■	▼	C
97 Kettle Creek	Wapello	■	❖	A	159 Sny Magill Creek	Clayton	● ▲	◆	C
98 Lake Darling	Washington, Keokuk, Jefferson	● ■ ▲	▼	A	160 Soap Creek (Davis)	Davis	■	❖	C
					161 Soap Creek (Appan.)	Appanoose	■	❖	C
99 Lake Fisher	Davis	● ▲	▼	C	162 South Fork Big Mill	Jackson	●	◆	C
100 Lake Geode	Des Moines, Henry	● ■ ▲	▼	A	163 South Fork Iowa River	Hardin, Hamilton	● ▲	◆	C
101 Lake Hendricks	Howard	● ■ ▲	▼	A	164 South Fork Maquoketa	Buchanan	● ■ ▲	◆	A
102 Lake Icaria	Adams	●	▼	C	165 South Pine	Winneshiek	● ■ ▲	◆	C
103 Lake Keomah	Mahaska	▲	▼	C	166 Southern Iowa Grazing	Clarke	● ▲	❖	C
104 Lake Macbride	Johnson	● ■ ▲	▼	A	167 Spaulinc Project	Union	●	▼	C
105 Lake Pahoja	Lyon	▲	▼	C	168 Spring Branch Creek	Delaware	● ▲	◆	C
106 Lake of Three Fires	Taylor	▲	▼	C	169 Staff/Beaver Creeks	Howard	● ■ ▲	❖	A
107 Lake Wapello	Davis	● ■ ▲	▼	A	170 Storm Lake I	Buena Vista	● ▲	▼	C
108 Lindberg-Kettle Creek	Wapello	■	❖	C	171 Storm Lake	Buena Vista	● ■ ▲	▼	A
109 Littlefield Lake	Audubon	● ■ ▲	▼	A	172 Sugar Creek Corridor	Cedar	■	❖	C
110 Little Mill Creek	Jackson	● ▲	◆	C	173 Tete Des Morts Creek	Jackson	● ■ ▲	▼	A
111 Little Paint Creek	Allamakee	● ▲	◆	C	174 Three Lakes WQ	Adams	● ■ ▲	❖	C
112 Lizard Lake	Pocahontas	● ■	▼	A	175 Three Mile Creek	Adair	●	▼	C
113 Loess Hills Subdivision	Mills	● ■	✱	C	176 Three Mile Creek	Union	●	▼	C
114 Loess Hills Urban	Woodbury, Plym.	● ■ ▲	✱	C	177 Three Mile Lake	Union	■	▼	C
115 Lost Grove Lake	Scott	▲	▼	C	178 Tri-County Rural Water	Floyd, Butler, Mit.	● ▲	★	C
116 Lower Big Sioux	Plymouth, Sioux, Lyon	●	⊕	C	179 Trout Run	Winneshiek	● ▲	◆	C
					180 Twin Springs	Winneshiek	● ■ ▲	◆	C
117 Lucas County Lakes	Lucas	● ▲	▼	C	181 Two Rivers Wetland	Fremont	●	❖	C
118 Lyon County Demo	Lyon	▲	⊕	A	182 Union Grove Lake	Tama	● ■ ▲	▼	A
119 Maquoketa River Demo	Jones	● ■ ▲	◆	C	183 Upper Big Mill Creek	Jackson	● ▲	◆	C
120 Mariposa Lake	Jasper	● ■ ▲	▼	A	184 Upper Catfish Creek	Dubuque	● ▲	◆	A
					185 Upper Iowa River	Winneshiek, Allam., Howard	■	❖	C
121 McCann Creek	Union	●	▼	C	186 Upper Iowa River	Winneshiek, Allam.	▲	⊕	A
122 McCloud Run Coalition	Linn	▲	◆	C	187 Upper Maquoketa	Fayette	● ■ ▲	◆	C
123 Mill Creek	Page	■	❖	C	188 Upper Whitebreast	Clarke & Lucas	● ■ ▲	◆	A
124 Mills Watershed Rehab.	Mills	■	◇	C	189 Viking Lake	Montgomery	● ■ ▲	▼	C
125 Mineral Creek	Jones	● ■	❖	C	190 Walnut Creek	Ringgold	■	❖	A
126 Mink Creek	Fayette	● ■ ▲	❖	A	191 Walnut Creek	Poweshiek	● ■ ▲	❖	A
127 Minnehaha Creek	Grundy	● ▲	✱	C	192 West Fork of Big Creek	Ringgold	■	▼	C
128 Mitchell Co. Aquifer	Mitchell	●	★	C	193 West Lake	Clarke	● ▲	▼	C
129 Mitchell Co. Evaluation	Mitchell	●	★	C	194 West Pott Urban	West Pott	●	✱	A
130 Monona Dam Rehab	Monona	■	◇	C	195 West Tarkio River	Page, Montgomery	● ■	❖	A
131 Muchakinock Creek	Mahaska	● ■ ▲	❖	A	196 White Oak Lake	Mahaska	● ■ ▲	▼	A
132 Mud Creek	Muscatine	■	❖	C	197 Whitebreast Creek	Warren, Clarke, Lucas, Marion	● ■ ▲	▼	C
133 Mule Creek	Mills	■	◇	C	198 Williams Creek	Allamakee	■	◆	C
134 North Thompson River	Adair	● ■	❖	A	199 Williamson Pond	Lucas	▲	▼	A
135 Nutting Creek	Fayette	● ■ ▲	❖	A	200 Willow Lake	Harrison	●	▼	C
136 Otter Creek Lake	Tama	● ■ ▲	▼	C	201 Woolstock/Eagle Creek	Wright	■	❖	C
137 Partners of Scott Co.	Scott	▲	✱	C	202 Wright County	Wright	● ▲	★	C
138 Peas Creek	Boone	● ■	❖	C	203 Yellow River	Winneshiek, Allamakee	● ■	◆	A
139 Pilot Grove Park	Montgomery	●	▼	C	204 YellowSmoke Lake	Crawford	●	▼	C
140 Pilot Grove	Montgomery	● ■	▼	C					
141 Pine Lakes	Hardin, Grundy	▲	▼	C					
142 Pleasant View Park	Harrison	●	▼	C					
143 Polk Co. Urban	Polk	●	✱	A					
144 Prairie Creek	Clinton	● ■ ▲	❖	A					
145 Prairie Rose Lake	Shelby	● ■ ▲	▼	A					
146 Price Creek	Iowa & Benton	● ■ ▲	❖	A					
147 PURE	Linn	● ▲	⊕	C					
148 Rathbun Lake	Wayne, Appanoose, Clarke, Decatur, Lucas, Monroe	● ■ ▲	▼	A					
149 Rathbun Lake CW	Wayne	■	▼	C					
150 Rathbun Livestock	Wayne	■	▼	C					

Watershed projects in Iowa October, 2009



Each water drop on the map represents one watershed project in the county, either active or completed. See listing on pages 4 and 5 to identify active and completed watershed projects in your county.

Abbreviations used in this publication

BMP	Best Management Practice
CNMP	Comprehensive Nutrient Management Program
CRP	Conservation Reserve Program
DNR	Department of Natural Resources
DSC	Division of Soil Conservation
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentive Program
IDALS	Iowa Department of Agriculture and Land Stewardship
ISU	Iowa State University
LID	Low Impact Development
NRCS	Natural Resources Conservation Service
RAGBRAI	Register's Annual Great Bike Ride Across Iowa
RC&D	Resource, Conservation and Development
SWCD	Soil and Water Conservation District
USDA	United States Department of Agriculture
WIRB	Watershed Improvement Review Board



A&T Longbranch Watershed

The A&T Longbranch Watershed Project more than doubled its goals of installing soil-saving practices. Early goals called for installing 9 erosion control structures and about 3 miles of terraces. Landowner contributions of more than \$60,000 and IDALS contributions of about \$187,000 led to installation of 19 erosion control structures and more than 5 miles of terraces. Sheet and rill erosion on cropland and gully erosion in pastures were major problems in the watershed.

Year started: 1999

Lead SWCD: Adams



Allamakee County Sinkhole Project

Sinkholes, depressions in the landscape that funnel runoff waters and contaminants directly into groundwater used for drinking water supplies, had been used as disposal sites for garbage, dead animals, chemical containers, and other harmful contaminants over the years. This project assisted in cleaning out sinkholes in 18 sections of land in Union Prairie and Ludlow townships and in establishing best management practices to limit runoff into sinkholes from adjoining land.

Year started: 1990

Lead SWCD: Allamakee



Anderson Well & Groundwater Water Quality

The purpose of the Anderson Well and Groundwater Quality Project was to protect the wells of the city of Anderson in Fremont County. The engineering office of the Natural Resources Conservation Service drew plans for 2 water and sediment control basins, a grassed waterway, and a 1,850-foot diversion that kept runoff waters in check, away from and out of the private wells within the city. The practices, funded by IDALS, helped reduce erosion and localized flooding.

Year started: 1992

Lead SWCD: Fremont



Arbor Lake Watershed Project

The Arbor Lake Watershed Quality Improvement Project had multiple goals. They included restoring aquatic and terrestrial resources in Arbor Lake, reducing storm water runoff and flooding in the watershed, and enhancing regional water quality. Other goals included enhancing recreation opportunities and improving public awareness. Three wetlands, a rain garden, and a storm sewer interceptor were installed. A storm sewer outlet was stabilized and 4 acres were planted to native and wetland plants.

Year started: 2002

Lead SWCD: Poweshiek



Badger Creek Lake Watershed

Goals of the Badger Creek Lake Watershed Project are to reduce sediment and nutrient (phosphorus) loading to the lake by 70% or 8,887 tons/year and 17,660 pounds/year respectively. A secondary goal is to work with fisheries personnel towards Badger Creek Lake fully supporting the Class B aquatic life uses. About 5 miles of terraces and a grade stabilization structure have been built. A wetland has also been established in the watershed to improve water quality.

Year started: 2006

Lead SWCD: Madison



Battle Creek Watershed Groundwater Protection

This project sought to reduce the high coliform bacteria and nitrate levels in drinking water for the community of Battle Creek. The project developed a resource management database (GIS database tool); evaluated water quality risks using GIS to prioritize risk areas; and assisted producers with whole farm plans as part of a pilot project. It helped to develop an improved grazing system, install 6 septic systems, and plan and carry out 12 nutrient and pest management plans.

Year started: 1996 Lead SWCD: Ida



Bear Creek Watershed Project (Delaware)

Ammoniated manure discharge, fecal coliform bacteria, nitrogen, phosphorous and sediment contributed to fish kills and Bear Creek being listed as a 303d impaired water body in Iowa. The Bear Creek Watershed Project was designed to reach out to landowners to improve livestock waste storage and usage, and decrease sediment loads in the stream. Manure management systems, terraces, no-till farming and grassed waterways are among practices applied.

Year started: 2006 Lead SWCD: Delaware



Bear Creek Watershed Project (Winneshiek)

Miles of trout water in North, Middle and South Bear Creeks are stocked each year with more than 35,000 trout. North Bear now boasts a population of naturally reproducing brown trout. The Bear Creek Watershed Project continues the federal PL-566 watershed project, concentrating on reducing sediment and nutrient influx into the creeks. Practices applied include almost 20 miles of terraces, 28 grade stabilization structures, more than a mile of stream bank protection, and 9 manure management systems.

Year started: 1999 Lead SWCD: Winneshiek



Beeds Lake Water Quality Project

This project sought to reduce sediment deposition and nutrient and pesticide loading in Beeds Lake by 70 percent. Those problems were addressed with 10 miles of terraces, 4,000 acres of nutrient and pest management, 1,870 acres of no-till farming, 80 acres of pasture and hayland management, 100 acres of manure management, and other conservation measures used in the watershed. IDALS contributed more than \$180,000 and landowners added \$65,000 to the project total expenditures of about \$400,000.

Year started: 1994 Lead SWCD: Franklin



Bigalk Creek Coldwater Stream Protection Project

The Bigalk Coldwater Stream Protection Project focused on excluding cattle from the stream. Cattle had been damaging the stream bank and polluting the water as they had constant access. The stream was fenced off and the landowner installed two nose pumps, then trained the cattle to use the off-stream nose pumps for water. There were also stream bank improvements, a hard surface cattle crossing, forestry improvements and pasture management improvements as part of the project.

Year started: 1993 Lead SWCD: Howard



Bigalk Creek Water Quality Project

The goal of the Bigalk Creek Water Quality Project was to protect and improve water quality and enhance the creek for fish, wildlife and recreation use. Stream bank erosion, manure runoff, sheet and rill erosion, gully erosion, and excessive use of nutrients and pesticides were addressed. During the course of the project there was a strong shift to reduced tillage and no-till. This revolutionized the way farmers operated in the Bigalk. Sediment delivery was reduced and 20 different practices were applied.

Year started: 1995 Lead SWCD: Howard



Bigalk to Bohemian Water Quality Project

In the Bigalk to Bohemian Water Quality Project, the goals were to reduce leaching of nutrients and pesticides into ground water and to reduce sediment delivery in streams. Primary problems addressed were livestock access to streams, animal confinement operations that allowed manure runoff from heavy rains, and bacteria in ground water. Management practices applied by landowners included 4 animal waste systems, rotational grazing on 3300 acres, and 5700 acres of no-till farming.

Year started: 1998 Lead SWCD: Howard



Big Paint Creek Watershed Project

The purpose of the Big Paint Creek Watershed Project was to restore the creek to a self-sustaining trout stream. To reduce sediment delivery and other impairments to the stream, more than 7 miles of terraces, 4 sediment control basins, and 2 grade stabilization structures were built. More than a mile of streambanks was stabilized as well, and 6 animal waste management systems were installed. Work was done in such a manner as to preserve archaeological sites of historic value found in the area.

Year started: 2003 Lead SWCD: Allamakee



Big Wall Lake Restoration Project

Common carp stirred up sediment on the shallow, 978-acre Big Wall Lake, making water too muddy for normal plant and animal growth. Big Wall Lake was listed on the 303d impaired list for invasive species. As part of the project, the existing outlet was removed, the lake was completely drawn down, and carp were eliminated. This restored a high quality hemi-marsh habitat with diverse wetland plants and animals, excellent for ducks and other waterfowl; 10,000 waterfowl once again use the lake during migration.

Year started: 2006 Lead SWCD: Wright



Black Hawk Lake Watershed Water Quality Project

An estimated 750,000 people visit Black Hawk Lake each year, but the lake is impaired with high levels of sediment and nutrients. The watershed project has resulted in expenditures of more than \$60,000 by Sac and Carroll County landowners to build more than 26 miles of soil-saving terraces along with nutrient management and other practices. The Iowa Model Farms Demonstration Project, the EPA Clean Lakes Program, and Iowa Publicly Owned Lakes Program contributed more than \$275,000.

Year started: 1986 Lead SWCD: Sac



Bloody Run Creek Watershed Project (Dubuque)

Nutrients from the 37 livestock facilities within this watershed—eleven of the facilities were located within 500 feet of the stream—were severely impacting the quality of water in the coldwater stream and in groundwater aquifers. Numerous partners helped to establish manure storage structures, contour stripcropping, water and sediment control structures, terraces, and other conservation practices in the watershed. Landowners contributed more than \$37,000 and IDALS contributed \$372,000.

Year started: 1990 Lead SWCD: Dubuque



Bloody Run Watershed Project (Clayton)

Local landowners have contributed about a quarter of a million dollars to conserving their land and improving the quality of water in Bloody Run, a coldwater trout stream in northeast Iowa. About a million dollars in state and federal funds have also been used to cut sediment delivery to the stream. Practices installed include more than 40 miles of terraces, 2 miles of grassed waterways, 2 miles of resource protection fencing, manure management, and erosion control structures and tree and grass plantings.

Year started: 2002 Lead SWCD: Clayton



Bob White Lake Water Quality Project

This project sought to restore 50,000 feet of terraces on 360 acres and aided in the construction of 35,000 feet of new terraces on 180 acres of highly erodible land to reduce sediment and agriculture chemicals entering the Lake. The project also offered training and demonstrations on nutrient and pest management practices, and implemented a water quality-monitoring program with residents, landowners, and lake users. Four structures and 2 alternate watering systems also helped improve the water.

Year started: 2000 Lead SWCD: Wayne



Bonus for Trees Project

This project sought to develop and promote a tree planting program to offer permanent protection to sensitive areas, including highly erodible lands. The intent was to increase tree plantings by 35 percent by providing additional financial incentives. IDALS contributed \$7,000 and landowners contributed \$1,800. About 19 acres of trees were planted. Partners included Geode Resource Conservation and Development and the Iowa DNR Forestry Department.

Year started: 1990 Lead SWCD: Des Moines



Briggs Woods Lake Watershed Management Project

The lake at Briggs Woods Park, built in 1968, was filled with algae blooms and submergent plant growth because of sediment and nutrient loading. The lake was losing capacity much earlier than its planned life span. The watershed project installed remedial conservation measures including a sediment catch basin, diversion dike, and wetland restoration. Filter strips and upland buffers were also helpful in reducing the amount of sediment and nutrients reaching the lake.

Year started: 2006 Lead SWCD: Hamilton



Brushy Creek Lake Watershed Project

Filter strips, field borders of grass, wetlands, nutrient management, and grade stabilization structures were among practices applied by landowners to improve water quality in Brushy Creek Lake. An important component was to expand the Miller Marsh Wildlife Area to a 185-acre upland/wetland complex that will work to clean the sediment and nitrates out of the water before it reaches Brushy Creek Lake. This site offers recreation and much needed habitat in northeastern Webster County.

Year started: 2005 Lead SWCD: Webster



Buckeye Creek Water Quality and Flood Reduction Project

Of 79 landowners asked to implement best management practices to improve water quality and reduce flooding along Buckeye Creek, 60 percent were interested. By the end of 2008, landowners had invested \$250,000; total investment was nearly \$1 million, including \$282,000 from IDALS. More than 9 miles of terraces, a number of flood control structures and other measures are helping reach the goal to cut sediment delivery to Buckeye Creek by 54 percent and substantially reduce flooding.

Year started: 2005 Lead SWCD: Wapello



Burr Oak/Turtle Creek Water Quality Project

This watershed project's goal is to improve water quality in these two cold water trout streams to the point that they will support natural reproduction. Some spawning of brown trout has occurred in the Turtle Creek Watershed, after the installation of a septic system, 200 acres of N-split application and 605 feet of streambank stabilization. A critical animal waste structure and pending CRP practices to be installed in Burr Oak Watershed will help move that stream towards the goal of natural trout reproduction.

Year started: 2007 Lead SWCD: Mitchell



Camp Creek Watershed Project

Sediment and nutrient loading and loss of in-stream habitat are being addressed in the Camp Creek Watershed, with more than \$100,000 in landowner contributions and more than a million dollars from IDALS and partners for conservation practices. Practices installed have exceeded project goals in many cases. Improvements include 500 acres of prescribed grazing, 9 grade stabilization structures, 4 pool and riffles, 2400 acres of nutrient management plans, and 75 acres of grassed waterways and conservation buffers.

Year started: 2004 Lead SWCD: Polk



Carroll County Livestock Pollution Abatement

This project sought to improve water quality in the county by developing an integrated approach to manure management that stressed proper collection, storage, and application of livestock manure. The Carroll County Soil and Water Conservation District estimated the manure produced in the county was worth \$5.3 million annually. The project assisted producers in developing 128 manure management plans and building 5 manure management structures that helped apply the manure more effectively to the land.

Year started: 1993 Lead SWCD: Carroll



Cedar Lake, Winterset Water Supply Project

The Cedar Lake Watershed Project was designed to reduce the amount of nitrates, sediment and atrazine reaching Cedar Lake, the water supply for the city of Winterset. Educational programs were implemented to inform livestock producers of needed manure management plans, and to encourage all farmers to implement integrated crop management programs. More than 5 miles of terraces, 15 acres of grassed waterways, a grade stabilization structure, and 10 acres of wetlands were established.

Year started: 2002 Lead SWCD: Madison



Cedar Rapids Area Urban Water Quality Project

This construction site erosion control project sought to reduce sediment pollutant loading from non-point sources associated with land development within and around the metro area. It established demonstration sites throughout the metro area that showcased the use of various urban best management practices as a key way to inform and educate those involved with residential or commercial development, and resulted in erosion and storm water management ordinances and a design standards manual.

Year started: 1994 Lead SWCD: Linn



Centerville— City’s Upper Reservoir Project

A 1988 assessment indicated both city reservoirs used as a water supply were only partially supporting their designated uses. Sediment, nutrient enrichment, and pesticides from ag lands were impairing the water use. Nine partners contributed funds toward shifting land uses and implementing best management practices on highly erodible lands in the upper reservoir watershed. A highlight was the construction of the Fenton Wetland, which filtered water before it entered the city reservoir.

Year started: 1993 Lead SWCD: Appanoose



Central Iowa Urban Water Quality Project

This information and education project was undertaken by soil and water conservation districts in Dallas, Madison, Marion, Polk, Story and Warren Counties to create more awareness of the need for conservation in urban areas. A follow up to an earlier urban conservation project, this project helped communities in the six counties comply with new regulations on storm water management. Interest was high; more than 300 people attended a featured seminar “Conservation Strategies for Growing Communities.”

Year started: 2001 Lead SWCD: Polk



Chinkapin Bluffs Water Quality Improvement and Flood Reduction

Erosion was causing deep gullies in the upper part of the Chinkapin Bluffs Watershed, and flooding in the lower end of the watershed, including regular flooding of the Louisa County Fairgrounds, made the project a priority for the county. To improve water quality and reduce flooding, the project goal is to construct up to 15 water and sediment basins or grade stabilization structures in the watershed. A wetland has been reconstructed in the watershed as well as new water and sediment control basins.

Year started: 2007 Lead SWCD: Louisa



Clear Lake Enhancement and Restoration (CLEAR) Project

Clear Lake is Iowa’s third largest natural lake. Excessive levels of nutrients, sediment, and bacteria have caused the lake to be on the impaired waters list. Storm water improvements in developed areas, prairie and wetland restorations in agricultural areas, and the restoration of Ventura Marsh are all taking place to improve water quality. A \$10 million dredging project began in 2008 to treat in-lake contaminant sources. Numerous partners are contributing more than \$21 million to the overall project.

Year started: 1994 Lead SWCD: Hancock



Clear Lake Nutrient Source Study

The purpose of this two-year project was to study multiple aspects of Clear Lake, its watershed and community to determine water quality related problems and their likely causes, and suggest a list of potential remedial measures. The study was used as a blue print for implementing lake restoration activities. Partnering with IDALS in the Clear Lake Diagnostic and Feasibility Study were DNR, City of Clear Lake, Cerro Gordo County, NRCS, and Iowa State University.

Year started: 1998 Lead SWCD: Hancock



Coldwater/Pine Watershed Protection Project

Problems in the Coldwater and Pine Creek Watersheds included livestock manure and high levels of fecal coliform bacteria in the water, excess nutrients from cropland runoff to Karst features and priority water bodies, sediment loading from tributaries to the Upper Iowa River and over grazed riparian corridors and pastures. A combination of 16 practices were applied, including nutrient management on 2,000 acres, 2 miles of riparian fencing, 7 manure management systems, 90 acres of filter strips, and more.

Year started: 2005 Lead SWCD: Winneshiek



Competine Creek Watershed Project

This watershed project is designed to reduce the amount of sediment, nutrient, acid mine drainage and bacteria entering Competine Creek, and to minimize sediment, nutrients and bacteria that enter Whitebreast Creek and Lake Red Rock. The project will reduce urban peak flow and promote infiltration of storm water runoff. About 20 percent of the land area in the watershed is urban, and 5 percent abandoned mine land. The project is funded at nearly \$1 million, with IDALS contributions of \$300,000.

Year started: 2009 Lead SWCD: Marion



Coon Creek Water Quality Project

Improper handling of livestock manure, sediment in the stream, and the disturbance of stream banks and substrate by livestock were problems in the Coon Creek watershed. During a three-year period starting in 1992, the Allamakee and Winneshiek Conservation Districts assisted landowners in installation of 12 manure management facilities near Coon Creek. Major funding from EPA 319 funds with funding from IDALS, landowners, and other partners helped bring the problems under control.

Year started: 1992 Lead SWCD: Allamakee



Corydon Lake Project

Goals of the Corydon Lake Watershed Project were to reduce sediment and improve water quality by addressing both point and nonpoint sources of pollution. A number of partners and landowners worked together to apply conservation practices, coordinate integrated crop management programs, and establish demonstration sites. About 10 miles of terraces were built and 850 acres of integrated crop management were applied. Landowners, IDALS, and other partners contributed more than \$200,000 to the project.

Year started: 1990 Lead SWCD: Wayne



Corydon Reservoir Water Quality

This project included water quality monitoring as well as applying best management practices in the watershed to reduce sediment, nutrients, and pesticides entering the Corydon Reservoir. The TMDL pilot project in a 1680-acre watershed encouraged 9 producers to practice nutrient and pest management, build 8,000 feet of terraces, build 3,500 feet of fence, and convert about 100 acres of cropland to buffers and pastures and haylands.

Year started: 2001 Lead SWCD: Wayne



Crooked Creek Watershed Project

The Crooked Creek Watershed Project was a small project to help control floods and soil erosion along Crooked Creek, in the East Fork of the Grand River. The project involved building a grade stabilization structure to protect roads, bridges, and cropland and pastureland downstream. The Ringgold County Board of Supervisors as well as the landowner and the Iowa Department of Agriculture and Land Stewardship were involved in the project.

Year started: 1999 Lead SWCD: Ringgold



Deer Creek and North Branch Sub-sheds of Clear Creek

A watershed project in Iowa and Johnson Counties is trying to help Clear Creek live up to the name it was given by early settlers. The project's primary goals are to reduce sediment delivery to the creek by 30 percent and to reduce E. coli levels to meet state standards. Among the practices installed by landowners are grade stabilization structures, water and sediment control basins, grassed waterways, filter strips, no-till farming, and fencing livestock from streams.

Year started: 2006 Lead SWCD: Johnson



Des Moines Metro Area Urban Water Quality Project

This project was begun to reduce sediment and other soil-bound pollutants in streams and lakes in developing areas of the Des Moines area, particularly Easter Lake. The primary goal was to show those involved in the home building industry the proper way to plan, design, install and maintain soil erosion and sediment control Best Management Practices on construction sites. A second goal was to inform the public of the importance of storm water management and erosion control on construction sites.

Year started: 1995 Lead SWCD: Polk



Dickinson County Urban Conservationist Project

The purpose of the Urban Conservationist Project in Dickinson County is to promote urban conservation and educate urban residents throughout Northwest Iowa on the need for and benefits of urban conservation. This includes educating the public on the impact urban and urbanizing areas can have on soil and water quality in the area. Ongoing efforts include establishment and demonstrations of urban practices, and monitoring of water quality.

Year started: 2008 Lead SWCD: Dickinson



Dry Creek Water Quality Protection Project

Both ground and surface water quality were diminished within the Dry Creek Watershed as livestock waste entered surface waters and fecal chloroform bacteria and nitrates entered ground water. Field days were held to demonstrate reduced tillage activities, proper nutrient and post-management strategies, and well plugging and water sampling. ISU Extension, Linn County Health Department and the University of Iowa were among partners working on the watershed project.

Year started: 1989 Lead SWCD: Linn



Dry Run Creek Water Protection Project

Low levels of aquatic life put Dry Run Creek on the state's 303(d) list in 2002. Another impairment—high bacterial levels—was designated in 2008. To meet needs in both a rural and urban watershed, the Dry Run Creek Water Improvement Project is helping apply best management practices on residential, commercial and agricultural land. Storm water and sedimentation are being addressed with infiltration and streambank stabilization practices; grassed waterways are among practices being used on farmlands.

Year started: 2004 Lead SWCD: Black Hawk



Duck Creek Water Quality Demonstration Project

Within two years of the creation of the Duck Creek Watershed project, it was renamed Partners of Scott County Watersheds (PSCW) in order to address all watersheds in the county. The alliance of urban and rural citizens and stakeholders—including city planners, home builders, development authorities, landowners and IDALS—continues to improve water quality and promote and install best management practices in Scott County. More than \$250,000 has been contributed towards reaching project goals.

Year started: 1995 Lead SWCD: Scott



East Boyer River Flood & Erosion Control

After the city of Denison was flooded 3 times in the 1990's, residents repeatedly listed upland watershed treatment as their top choice to reduce flooding. This project assisted in constructing 32 small to medium sized detention dams over a 10-year period to reduce peak flow on the East Boyer River by 15 percent, adding safety to the city's other flood protection projects. Other benefits include gully erosion control, secondary road protection, and new water sources for wildlife, recreation, and livestock.

Year started: 2000 Lead SWCD: Crawford



East Fork of Grand River Project (Union)

The East Fork of Grand River Watershed Project in Union County sought to reduce flooding, control soil erosion and protect water quality in the 9,100-acre watershed. Landowners contributed nearly \$100,000 with significant funding from IDALS as well. More than 5 miles of soil-saving terraces and 9 water and sediment control basins were built as part of the project. Grassed waterways and tile were also part of the project in Union County.

Year started: 2004 Lead SWCD: Union



East Fork of Grand River Watershed Project (Ringgold)

The East Fork of Grand River Watershed Project was initiated to address flooding, soil erosion and water quality issues in a tributary of the Grand River. Almost 30 miles of terraces and 100 small grade stabilization structures were built on uplands in the watershed. Landowners contributed more than \$650,000 towards the cost of building the structures and terraces, while IDALS contributed the remaining \$800,000 of the cost for the project.

Year started: 2001 Lead SWCD: Ringgold



East Fork of Grand River/Unnamed Tributary

Flooding and soil erosion were the primary problems identified in the East Fork of the Grand River, within an unnamed tributary. Two grade stabilization structures were built in the watershed to improve water quality by reducing sedimentation in the tributary and East Fork of Grand River as well as reducing flooding and soil erosion. Landowners contributed about \$5,000 to the structures and the Division of Soil Conservation, Iowa Department of Agriculture and Land Stewardship contributed about \$14,000.

Year started: 2001 Lead SWCD: Ringgold



Elk Creek Area Watershed Project (Delaware)

Elk Creek and three of its tributaries are continuing to support wild trout populations as more sediment and nutrients from surrounding lands are kept out of the water. The Elk Creek Watershed Project has been steadily working at that problem, offering cost sharing and encouraging landowners to apply best management practices on land that drains into the streams. Landowners have shared costs to install terraces, grassed waterways, fencing, nutrient and pest management, no-till farming and other practices.

Year started: 1998 Lead SWCD: Delaware



Elk Creek Watershed Project (Harrison)

Severe flooding along Elk Creek in 1996 and again in 2007 led to organizing the Elk Creek Watershed Project in Harrison County. The 2007 flood caused extensive damage to county roads. As a result, the Elk Creek project is planning to build 8 flood and erosion control structures, 30,000 feet of terraces, and 20 water and sediment control basins. Work in the 5,800-acre watershed began in 2009, when terraces, 2 water and sediment control basins, and 2 flood control structures were built.

Year started: 2008 Lead SWCD: Harrison



Elk River Water Quality Project

Open feedlot runoff and sediment were two primary problems facing people in the Elk River watershed. Goals for the Elk River Water Quality Project were to 1) reduce agriculture waste runoff on livestock operations and 2) reduce sediment delivery within the watershed. Practices applied include 5 sediment basins for ag waste, 2 gutter systems, 10 grade stabilization structures, 24 acres of filter strips, 43 acres of grassed waterways, 4 acres of riparian buffers, and 4 acres of tree planting.

Year started: 2005 Lead SWCD: Clinton



Ensign Hollow Watershed Water Quality Protection

Animal waste management, terraces, forestry improvements and wildlife habitat management practices on uplands have teamed with extensive streambank protection and trout habitat improvements within Ensign Hollow Creek to dramatically improve trout numbers in the cold water stream. Landowners contributed \$26,000 and IDALS added about \$60,000 to the project, which became the basis for the development of a second project, the Ensign Hollow II Watershed Project.

Year started: 1991 Lead SWCD: Clayton



Ensign Hollow II Watershed Project

The Ensign Hollow II Watershed Project builds on an earlier effort completed on the Ensign Creek portion of the watershed in 1994. The project demonstrated how people can voluntarily work together to create water quality improvements. Goals were to reduce sediment delivery to the streams by 33%, reduce the over application of nutrients and pesticides by 25% on half the watershed's cropland acres, and reduce manure runoff by developing utilization plans and by constructing two manure storage structures.

Year started: 1999 Lead SWCD: Clayton



Fairfield Lakes Water Quality Project

Sediment, nutrients, and pesticides from both agriculture and urban lands were loading three lakes near Fairfield that served as sources of water for the city. An underserved group from the Maharishi community was involved in the long range planning for all three lakes. They participated in a project to transplant many native upland and wetland plants to protect them from destruction during the Shoreline Protection process. Terraces and integrated crop management were also used to improve water quality.

Year started: 1998 Lead SWCD: Jefferson



Fairfield Regional Storm Water Management Demonstration Project

Storm water management practices for urbanizing areas are being demonstrated in this project. Practices being demonstrated are those that reduce runoff and downstream flooding, improve water quality, and promote infiltration. Practices implemented include a permeable parking lot and walking trail, 5 wetlands, a pond, 2 infiltration trenches, 2 infiltration cells, a rock chute, 2 rain gardens, and 3 acres of prairie buffers. The area is used for recreation and education.

Year started: 2005 Lead SWCD: Jefferson



Fairfield-Jefferson County Water Supply Project

More than 3 miles of terraces were built in the watershed above Walton Lake, one of three water supply reservoirs for the city of Fairfield at the time. Soil erosion and livestock waste contributed to water quality issues before four landowners built the terraces, a grade stabilization structure, and an animal waste control system. Landowners contributed more than \$20,000 and IDALS funded almost \$100,000 for the improvements in the watershed.

Year started: 1990 Lead SWCD: Jefferson



Farmers Creek Watershed Project

Sediment and nutrients that wash from steep land into Farmers Creek have lowered the quality of water in the creek to a level below state standards set for supporting aquatic life. Since 2005, landowners have invested more than \$200,000, IDALS has contributed more than \$140,000, and more than \$275,000 in partner contributions have been used to improve the land and water. The overall goal is to improve manure management and reduce sediment and nutrient delivery to the creek by 40 percent.

Year started: 2005 Lead SWCD: Jackson



Floyd County Groundwater Protection Project

A project to preserve and improve groundwater quality in the Devonian aquifer offered education and financial incentives to landowners. The project with numerous partners helped landowners close 23 of 69 agricultural drainage wells, 20 sinkholes had “buffer zones” of grass established around them, 15 sinkholes were cleaned of debris, integrated crop management was applied to 11, 274 environmentally sensitive acres of cropland, and 8,756 pesticide containers were collected and recycled.

Year started: 1990 Lead SWCD: Floyd



Floyd County Monitoring ADW Closure Effects

This project monitored and documented groundwater quality changes after three agricultural drainage wells were closed in Floyd County. There had been a lack of data showing response to well closures. Since closure of the ADW’s, water quality has improved in the three-part Devonian aquifer system in Floyd County. Nitrate concentrations have declined, and the concentration of pesticides and number detected have declined in all four bedrock piezometers since the ADW’s were closed.

Year started: 1994 Lead SWCD: Floyd



Four Mile Creek Nonpoint Source Watershed Project (Polk)

The Four Mile Creek watershed is rapidly urbanizing, adding storm water runoff and its accompanying pollutants to the stream, in addition to sediment and nutrients from agricultural lands in the watershed. Primary project goals are to implement best management practices (BMPs) in both urban and rural settings, initiate a stream buffer program, and promote rainscaping practices such as permeable paving that citizens can implement to manage runoff in the watershed.

Year started: 2007 Lead SWCD: Polk



Four Mile Creek NPS Watershed Project I (Union)

The Four Mile Creek Non Point Source Watershed Project sought to prevent flooding, control active gully erosion, protect roads, improve water quality, and increase and improve wildlife habitat. The construction of 4 grade stabilization structures was the primary structural achievement of the project. Local landowners contributed about a third of the cost of building the structures, while the Iowa Department of Agriculture and Land Stewardship contributed two thirds; NRCS offered technical resources.

Year started: 1999 Lead SWCD: Union



Four Mile Creek NPS Watershed Project II (Union)

A follow up project to the first Four Mile Creek Non Point Source Watershed Project, the Four Mile Creek NPS Watershed Project II enabled a considerable amount of upland treatment practices to be applied to the land. Landowners contributed nearly a quarter of a million dollars to build more than 10 miles of terraces, 28 grade stabilization structures, 18 water and sediment control basins, and about 3 acres of grassed waterways in Union and Clarke Counties. IDALS contributed \$445,000.

Year started: 2000 Lead SWCD: Union



Fox River Impaired Waters Treatment Project

The focus of the \$3 million project is to address erosion and livestock contribution associated with ammonia nitrogen levels and other water quality problems in the impaired reach of the Fox River. Targeted impairments addressed were overgrazed pastures, unimpeded livestock access to the stream, cattle loafing in riparian areas, sheet and rill erosion on croplands, and gullies. Concentrated runoff from crop fields is also contributing high levels of phosphorous and nitrates into the Fox River.

Year started: 1999 Lead SWCD: Davis



Fox River Middle Branch Resources Protection (Appanoose-Davis)

This project was implemented to focus on reducing non-point sources of sediment and nutrients. This included stabilizing gullies, reducing sheet and rill erosion, protecting riparian areas, improving grazing land management, installing animal waste systems, implementing nutrient management plans, and implementing new household septic systems and upgrades as demonstration projects throughout the watershed. Fox River projects from Appanoose, Davis, and Van Buren Counties were combined in 2003.

Year started: 2000 Lead SWCD: Appanoose



Fox River Water Quality Project

More than 60 grade stabilization structures and 116 water and sediment control basins have been built in the watershed to control sheet and gully erosion on cropland and overgrazed pastures and to keep sediment out of the river. An active watershed board in five Iowa and Missouri counties is leading the charge to reduce the amount of sediment reaching the Fox River by 8,500 tons annually. Landowners have contributed more than \$800,000, and IDALS more than \$2 million from the Watershed Protection Fund.

Year started: 2003 Lead SWCD: Davis



Glen Ellen Watershed Dam Rehabilitation

The Glen Ellen Watershed Dam Rehabilitation Project reduced the risk of damage to life and property of 4 homeowners below three dams that were built years ago in the Little Sioux Flood Prevention Project. Over the years, changes in land use altered the classification of the dams from hazard class “a” to class “c”, and the dams no longer met safety laws. Funds from IDALS, Woodbury County, and landowners met local 35% funding requirements for federal dam rehabilitation and relocating three houses.

Year started: 2002 Lead SWCD: Woodbury



Glovers Creek Water Protection Fund Project

Glovers Creek, a coldwater trout stream heavily used for recreation, had negative impacts from sediment, livestock access, and livestock waste runoff. Special cost-share incentives encouraged landowners to apply more than 15 miles of terraces and other best management practices. Landowner education was important in this intensively cropped watershed. This watershed project, the first of many in the county, operated in conjunction with the Glovers Creek Water Quality Evaluation Plan.

Year started: 1989 Lead SWCD: Fayette



Glovers Creek Water Quality Evaluation Plan

This project evaluated water quality impacts of carrying out the Glovers Creek Water Protection Fund Project, including impacts of conservation programs implemented by the Fayette SWCD. The goals were to monitor agriculturally influenced parameters, monitor atrazine and alachlor, evaluate rural drinking water wells, and make a benthic invertebrate bio-assessment, with involvement from the University of Iowa Hygienic Laboratory and Institute of Ag Medicine and Occupational Health.

Year started: 1990 Lead SWCD: Fayette



Grannis Creek Watershed Project

Increased sediment was being delivered to Grannis Creek because of changes in cropping practices and expiring CRP contracts that brought more crops on highly erodible lands. The Grannis Creek project applied one mile of terraces, 18 sediment and water control basins, 3 grade stabilization structures, and many other practices. A notable achievement was streambank stabilization and installation of “lunker hides” for trout and a sidewalk that led to them that made Grannis Creek handicap accessible.

Year started: 2002 Lead SWCD: Fayette



Green Valley Watershed Erosion, Flood, and Water Quality Project

The Green Valley Erosion, Flood & Water Quality Project addressed sheet and rill erosion, gully erosion, and the quality of water in Green Valley Lake. The project’s primary goal was to protect Green Valley Lake from sedimentation, primarily from erosion on agricultural lands that feed water to the lake. The Iowa Department of Agriculture and Land Stewardship obligated more than \$200,000 towards building terraces, installing grassed waterways, and using other sediment control practices.

Year started: 2007 Lead SWCD: Union



Hacklebarney Watershed Protection Project

This project, which built upon and added to the original Public Law 566 Hacklebarney Watershed Project, was aimed at reducing sheet and rill erosion, improving water quality in Viking Lake, reducing flooding, and improving water quality in the Nodaway River Basin. Nearly \$2 million was spent to apply more than 24 miles of terraces, 33 grade stabilization structures, 27 water and sediment control basins, 58 acres of riparian forest buffers, and almost 500 acres of filter strips and buffer strips.

Year started: 2001 Lead SWCD: Montgomery



Hallett’s Quarry Lake Watershed Project

The goal of this project was to protect Ada Hayden Park and Lake by reducing sediment and nutrient loading from both rural and urban areas in the watershed. Constant development to the south and west of the park was leading to pollutants entering the lake through storm water sewers. Hallett’s Quarry, an abandoned gravel and sand quarry, was restored by the Story County Conservation Board and the city of Ames and helped treat urban runoff. Nutrient management and grassed waterways were used on farmlands.

Year started: 2003 Lead SWCD: Story



Hannen Lake Watershed Project

The Hannen Lake Watershed Project accelerated the application of Best Management Practices on targeted lands within the watershed to improve and protect water quality. Goals were to reduce sedimentation and phosphorus loading from the small 566-acre watershed by 60 percent. An information and education program for livestock producers and other efforts resulted in 7700 feet of fencing, 3 water and sediment control basins, and 36 acres of pasture seeding, among other accomplishments.

Year started: 2006 Lead SWCD: Benton



Hanthorn Watershed Water Quality Protection

Excessive sedimentation, runoff from a seasonal feedlot, and the risk of chemicals entering Little River Lake in the event of a chemical spill were primary problems in the Hanthorn Watershed Water Quality Protection Project. Three water retention structures were built to reduce pollutants and sedimentation entering the lake. One structure below a farm supply operation was equipped with a shut off valve to contain a chemical spill, in the event of such an emergency.

Year started: 1990 Lead SWCD: Decatur



Harris Grove #1 Watershed Project

Severe gully erosion problems led to the establishment of the Harris Grove #1 Watershed Project in the 9,600-acre Harris Grove watershed south of Logan in Harrison County. Three grade stabilization structures were built on major gullies to control sediment from three different branches of the creek. The three structures created two small ponds and one full flow structure. Each of the structures was built on steep, severely gullied land that was contributing sediment to Harris Grove.

Year started: 2000 Lead SWCD: Harrison



Hazelbrush Watershed Project

The Hazelbrush Watershed Project focused on protecting ground water. Practices applied included plugging 9 abandoned wells, assisting with 4 feedlot manure management facilities, constructing a livestock truck wash facility, arranging a recycling drop off center, and working with landowners to implement 6300 acres of integrated crop management in the watershed. In addition, about 5 miles of terraces were built, 4 farmstead windbreaks were planted, and 10 acres of wildlife habitat were established.

Year started: 1990 Lead SWCD: Carroll



Hickory Creek Water Quality Project

The Hickory Creek Water Quality Project was designed to reduce sediment delivery to the stream by 50 percent, and to reduce the amount of livestock manure reaching the stream by 30 percent. Improvements were made in both Allamakee and Clayton Counties that included nutrient and pest management plans on 1767 acres, 23 acres of tree planting, 715 feet of streambank stabilization, one pond, and an acre of native plant establishment. Priorities were set for best management practices as part of the project.

Year started: 1997 Lead SWCD: Allamakee



Hickory Hills Lake Watershed Project

The Hickory Hills Lake Watershed Project is intended to reduce the amount of sediment and phosphorus entering the lake. The goal is to reduce sediment and phosphorus loading in the lake by 60%. As part of the project, an evaluation will be made of the effectiveness of structures at phosphorus removal. Many agencies banded together for this project and Hawkeye Community College has provided exceptional help in collecting and delivering the samples to be tested.

Year started: 2005 Lead SWCD: Tama



Highline Project

The Highline Project was designed to protect Twelve Mile Lake from sedimentation and nutrient and pesticide runoff. Goals of the project included reducing gully erosion and improving fertility management in the 4,130-acre watershed. A mile of terraces, 4 grade stabilization structures, 3 water and sediment control structures, and an aquatic plant wastewater treatment system were installed as part of the project, along with grassed waterways, conservation buffers, and fencing to keep livestock from water bodies.

Year started: 1996 Lead SWCD: Union



Hoosier Creek Watershed Protection Project

The quality and availability of water, and a lack of public education on water quality issues in a rapidly urbanizing area were problems in Hoosier Creek in southern Linn County and northern Johnson County. Nearly 15 percent of the land in the 14,891-acre watershed is urbanizing land. Practices installed on cropland and in urban areas include streambank protection, critical area seedings, grassed waterways, grade stabilization structures, newly created wetlands, and native landscape plantings.

Year started: 2002 Lead SWCD: Linn



Humboldt County Ag Drainage Well Project

Groundwater pollution was reduced in Humboldt and Webster Counties through the closure of 19 agricultural drainage wells and installation of an alternative drainage outlet. In conjunction with the well closures and alternative outlet work, a wetland mitigation area was created to replace the farmed wetlands that were drained as a result of the project. Humboldt County owns an 80-acre tract in the watershed where some potholes were enhanced to provide wetland mitigation for other wetlands that were drained.

Year started: 2005 Lead SWCD: Humboldt



Humeston Reservoir Rehabilitation Project

The Iowa Department of Agriculture and Land Stewardship assisted the city of Humeston with rehabilitating the spillway of the city's water supply reservoir in this project. The project involved removal and replacement of deteriorated portions of the concrete spillway, patching damaged portions of the spillway, repairing the spillway sub-drain system, sealing joints and cracks in the spillway and seeding land adjacent to the spillway. The city paid about three fourths of the cost of repair.

Year started: 2004 Lead SWCD: Wayne



Indian Creek Headwaters Project

The Indian Creek Headwaters Project sought to reduce sheet, rill and gully erosion, reduce water runoff from livestock feedlots, slow streambank erosion, and reduce nitrogen and phosphorus runoff from agricultural lands. Landowners contributed more than \$75,000 and IDALS contributed more than \$142,000 to construct more than 17 miles of tile outlet terraces, 19 acres of grassed waterways, and 4 grade stabilization structures. In addition, 10 wells were closed to improve water quality.

Year started: 2001 Lead SWCD: East Pottawattamie



Indian Creek Site 2 Dam Rehabilitation Project

Indian Creek Site 2 is a dam constructed by the Natural Resources Conservation Service as part of the Public Law 566 Indian Creek Watershed Project. The dam was built upstream from houses and businesses in the city of Council Bluffs, to protect them from flooding. As more development took place downstream, the dam was reclassified as a high hazard dam, and needed rehabilitation to store floodwaters more safely. IDALS contributed funding to the restoration to upgrade the dam to high hazard safety levels.

Year started: 2004 Lead SWCD: West Pottawattamie



Ingham/High Lake Complex Water Quality Project

The Ingham/High Lake Complex Water Quality Project reduced delivery of sediment, nutrients, pesticides, and animal waste to the lakes by implementing a wide range of best management practices. One important achievement was the 60 percent participation of local residents. Another measure of success was producer enthusiasm, resulting in 70% of the land being treated with a conservation practice. Conservation tillage, filter strips, integrated crop management and well closings were among practices used.

Year started: 1995 Lead SWCD: Emmet



Iowa Great Lakes, Infiltration-Based Storm Water Management

This project created demonstrations of infiltration-based storm water management practices in the Iowa Great Lakes Watershed. These practices infiltrate 1.25 inches of rain from impervious surfaces from urban runoff. The practices installed were pervious paver stone systems, infiltration trench, rain gardens, and a bio-cell system. A water monitoring program started in 2009. These demonstrations helped lead to the acceptance of infiltration based practices and new ordinances requiring these practices.

Year started: 2006 Lead SWCD: Dickinson



Iowa Great Lakes, Low Impact Development

After 9 monthly low impact development seminars were held featuring the nation's top experts in the field, seven communities in the Iowa Great Lakes region are using low impact development practices to manage storm water and improve water in Okoboji and other recreational lakes. The City of Okoboji, one of the communities, was the first in Iowa to have a low impact development ordinance. Now, more than 100 rain gardens or biocells have been installed by residents and businesses to help control runoff.

Year started: 2005 Lead SWCD: Dickinson



Iowa Great Lakes Protection Project

The Iowa Great Lakes Protection Project was undertaken to protect and improve water quality in the Iowa Great Lakes. Goals of the 12-year project included installing practices to reduce phosphorus runoff into the lake, and install permanent conservation practices on watershed lands for long-term lake protection. This project created a water quality ethic in the Iowa Great Lakes area, helped connect watershed owners to the lake, and laid the educational foundation needed for future conservation work.

Year started: 1989 Lead SWCD: Dickinson



Iowa Lake Water Quality Project

A partner contribution enabled this project to be a success. The local Pheasants Forever chapter helped the County Conservation Board acquire 55 critically eroding cropland acres in 1999. The area acquired was located adjacent to the Lake's east property line and was a major sediment contributor. A grade stabilization structure, tile inlet terraces and grassed waterways treated the area. The area is now managed as a wildlife area. Seven other practices were also used by other landowners in the watershed.

Year started: 1998 Lead SWCD: Iowa



Jefferson County Water Supply Reservoirs

The second of three water quality projects treating the watershed of the Fairfield Lakes, the Jefferson County Water Supply Reservoirs project was intended to improve and maintain the water quality of the Jefferson County water supply reservoirs. The city of Fairfield and landowners worked together, combining their funds with IDALS funds to build more than 7 miles of terraces to reduce sediment and associated nutrient and pesticide delivery to the reservoirs.

Year started: 1994 Lead SWCD: Jefferson



Johnson County Urban Water Quality Project

Johnson County had the second fastest population growth in the state, and development in and around major water bodies with few water quality practices implemented. The project is demonstrating best management practices including 4 grade stabilization structures, a wetland, 3 water and sediment control basins, 25 riffle pools, a compost demonstration and 17 acres of vegetative plantings. The city of Solon featured a project with wetlands, prairies and trails. Education efforts included RAGBRAI cyclists.

Year started: 1996 Lead SWCD: Johnson



Johnson County Urban Conservationist Project

Johnson County's Urban Conservationist Project promotes urban conservation and educates urban residents throughout eastern Iowa on the need for and benefits of urban conservation. This includes educating the public on the impact urban and urbanizing areas can have on soil and water quality in the area. Ongoing efforts include establishment and demonstrations of urban practices, monitoring of water quality, and many educational activities.

Year started: 2008 Lead SWCD: Johnson



Jones County Urban-Rural Watersheds Project

This project created an innovative approach to small watershed management in addressing flooding concerns of the rural-urban interface of small communities. Urban flooding, streambank erosion, infrastructure damage and surface water quality were addressed. Using funds from IDALS, the cities of Cascade, Monticello, and Wyoming worked with landowners and developed a new model for flood control and prevention that could be applied to watersheds in small communities statewide.

Year started: 2005 Lead SWCD: Jones



Jordan Creek Watershed Project

The Jordan Creek Watershed Project addressed sheet and rill erosion on croplands, as well as gully erosion. A primary goal was also to modify in-stream weir structures to allow fish passage. IDALS contributed \$700,000 and contributions by landowners and partners brought the project total expenditures to more than \$1 million. Practices installed include 86 miles of terraces, waterways, filter strips, grade stabilization structures, and pasture planting.

Year started: 2005 Lead SWCD: East Pottawattamie



Keg Creek Watershed Project

Flooding issues in Glenwood prompted the Mills County SWCD and three neighboring SWCD's to apply for a Watershed Protection Fund Grant from IDALS. Goals were to reduce runoff and the delivery of sediment and other pollutants into Keg Creek, reduce flooding to the City of Glenwood, stabilize critical stream bank areas to protect road structures, and to increase public awareness. More than 120 miles of terraces, 19 water and sediment control basins, and 3 streambank stabilization projects were installed.

Year started: 1999 Lead SWCD: Mills



Kent Park Lake Renovation & Water Quality Project

Kent Park Lake was filled with sediment and becoming unattractive to users. Johnson County dredged the lake to restore it as phase 1 of the project, then sought assistance to keep new sediment out of the lake as phase 2 of the overall project. Erosion and sediment control practices included 4 sediment control basins in the park, 8 water and sediment control basins on private lands, 5 grade stabilization structures, more than half a mile of grassed waterways, and a livestock watering and fencing system.

Year started: 1989 Lead SWCD: Johnson



Kettle Creek Watershed Project

Eroding gullies in 633 acres of agricultural land and phosphorus runoff from 432 acres of urban land are the primary targets for improvement in the Kettle Creek Watershed Project. A mix of funds is being used to establish best management practices in the watershed. Grade stabilization dams and sediment control basins (9 constructed so far), stream bank erosion control, tree planting, and bio-retention cells are key practices funded through a Watershed Improvement Review Board grant and other sources.

Year started: 2007 Lead SWCD: Wapello



Lake Darling Watershed Project

A watershed project in Washington, Jefferson, and Keokuk Counties is improving water quality and extending the life of Lake Darling. Primary problems in the lake are E. coli bacteria at the beach and sediment being delivered to the lake. Landowners have contributed more than \$400,000 toward erosion and sediment control structures, including nearly 40 miles of terraces, 37 grade control structures, and 66 water and sediment control basins. IDALS and DNR have added about \$1 million more.

Year started: 2000 Lead SWCD: Washington



Lake Fisher Water Quality Project

Cropland terraces and a series of strategically placed erosion control dams have been successful in dramatically reducing the amount of sediment now reaching Lake Fisher, a popular 100-acre recreation lake and water supply for the city of Bloomfield. The practices installed as part of the project treated 900 acres of cropland with more than 2 miles of terraces, water and sediment control basins, ponds and constructed wetlands to cut the amount of sediment reaching the lake by 60 percent.

Year started: 1998 Lead SWCD: Davis



Lake Geode Watershed NPS Project

Sheet and rill erosion and runoff from agricultural land is contributing to bacteria, sedimentation, phosphorus, and pH problems in Lake Geode. While the watershed project was just recently started, landowners in the watershed have been receiving 75% cost share since 1980 to install conservation practices to reduce sedimentation and soil erosion. The cost share funding for this project has come from IDALS public owned lakes funds and DNR lake restoration funds.

Year started: 2007 Lead SWCD: Des Moines



Lake Hendricks Watershed Project

Lake Hendricks is a 54-acre lake surrounded by a 234-acre public park. The project—over a 3-year period—will offer information and education and various management practices to producers in the surrounding upland areas, along with more focused structural practices in the area adjacent to the lake. The goal is to reduce both sediment and nutrient loading. In time, and through continued monitoring, the in-lake nutrient concentrations should decrease or eliminate the impairments.

Year started: 2008 Lead SWCD: Howard



Lake Icaria Water Quality Project

Lake Icaria, a water supply for the City of Corning and associated businesses and industries, is also a primary source for water-based recreation in Southwest Iowa. Sediment, nutrients, and pesticides entering the lake were primary problems. IDALS contributed \$230,000 and landowners contributed \$13,000 to build 31 grade stabilization structures and 9 sediment and water control basins in the watershed to reduce soil erosion and runoff.

Year started: 1990 Lead SWCD: Adams



Lake Keomah Water Quality Project

Excessive sediment was the cause of water quality impairments in Lake Keomah. Nearly 80 percent of the watershed was in cropland or pasture at the time of the project; sediment sources included sheet, rill and gully erosion. The majority of the land in the watershed has good management practices applied. Pre-project gross erosion was estimated at 28,744 tons per year. After best management practices were applied as part of the project, soil loss estimates were 9,997 tons a year, a 65% reduction in erosion.

Year started: 1993 Lead SWCD: Mahaska



Lake Macbride Watershed Project

A wide array of agricultural and urban conservation measures are being used in the Lake Macbride Watershed Project to slow the flow of sediment and nutrients to the lake from agricultural land, urban land, and land being developed. Practices applied include 8 grade stabilization structures, 4 wetlands, a 15-acre compost demonstration, 83 acres of rotational grazing, 11 acres of tree and shrub planting, 800 feet of streambank stabilization, 1200 acres of nutrient management, and a rain garden.

Year started: 2002 Lead SWCD: Johnson



Lake Pahoja Water Quality Project

Lake Pahoja, a 72-acre lake surrounded by a 230-acre park, is a major recreational lake in Lyon County. The Lake Pahoja Water Quality Project goal was to reduce flooding and erosion, and improve water quality in the lake. Practices applied included 8 miles of terraces, 17 wetland structures, a waste management system, and 2 grade stabilization structures. Local landowners also applied 3,146 acres of integrated crop management, 729 acres of no-till farming, and 19 acres of pasture and hayland plantings.

Year started: 1997 Lead SWCD: Lyon



Lake of Three Fires Restoration Watershed Project

The Lake of Three Fires Restoration/Watershed Project identified various sources of non point source pollution throughout the watershed, and implemented practices to control soil erosion and nutrient loading to ensure that the lake can fully meet designated uses. The project practices included construction of 33 grade stabilization structures to protect the 86-acres lake, including structures built on county roads that helped reduce road maintenance costs as well as kept sediment from entering the lake.

Year started: 2004 Lead SWCD: Taylor



Lake Wapello Nonpoint Source Watershed Project

With steep topography and heavily wooded timberland, sheet and rill erosion and down-cutting gullies are primary problems in the Lake Wapello watershed. Project goals include installing 28 water and sediment control basins on state owned land, as well as 150 acres of riparian buffers and planned grazing systems on private land. IDALS and other partners expect to fund more than \$500,000 in conservation practices to be installed in the watershed.

Year started: 2006 Lead SWCD: Davis



Lindberg-Kettle Creek Project

A grade stabilization structure built on agricultural land is the key to sediment reduction and flood prevention in Wildwood City Park in Ottumwa. Called the Kettle Creek-Lindberg site project, the project illustrates how actions in the upper area of a watershed can dramatically affect conditions of the land in lower areas of the watershed. The landowner contributed \$6600 and IDALS contributed \$26,000 to the project, with assistance from USDA/NRCS.

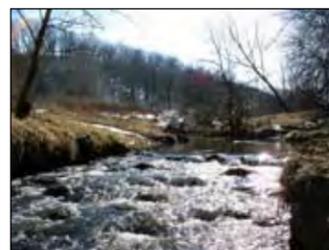
Year started: 2001 Lead SWCD: Wapello



Littlefield Lake Nonpoint Source Watershed Project

Primary water quality problems in Littlefield Lake in Audubon County are algae and turbidity associated with excess nutrient (phosphorous) and sediment loading. The Littlefield lake Nonpoint Source Watershed Project expects to reduce sediment delivery to the lake by 60 percent and reduce phosphorous delivery by 37 percent. Conservation practices that reduce soil erosion and keep sediment and other agricultural runoff from the lake will be used.

Year started: 2008 Lead SWCD: Audubon



Little Mill Creek Water Quality Project

Sediment delivery, livestock waste, and fertilizer and pesticide runoff were problems in Little Mill Creek, a high quality cold water stream that enters into a public use area managed by the Iowa DNR as a "put and grow" trout stream. This stream has exceptional recreational and ecological importance. Practices applied include an ag waste facility, 5 grade stabilization structures, 5 water and sediment control basins, 1500 feet of stream-bank stabilization, and 160 acres of CRP grasses.

Year started: 1999 Lead SWCD: Jackson



Little Paint Creek Watershed Project

Sediment and flooding, as well as damage from livestock, have been impairments to Little Paint Creek in Allamakee County over time. The Little Paint Creek Watershed Project has worked to improve water by installing 5 animal waste management systems, 5 grade stabilization structures, 8 miles of terraces, about 10 miles of fencing as part of improved pasture management, about 100 acres of tree planting, 180 acres of no-till farming, and 160 acres of contouring and strip cropping.

Year started: 1996 Lead SWCD: Allamakee



Lizard Lake Watershed Management Project

Water quality in Lizard Lake is threatened with roughish infestation and cyanobacteria blooms. The unwanted growth is fed by sedimentation from overland flow out of the watershed and tile nutrient inputs from commercial fertilizer application as well as natural decomposition. Conservation practices being used in the project are wetland restorations, wetland easements, filter strips and nutrient management. Dredging the lake isn't feasible; this project offers the best hope for lake quality.

Year started: 2007 Lead SWCD: Pocahontas



Loess Hills Conservation Subdivision Project

A residential housing subdivision near Glenwood in Mills County is demonstrating how land can be developed with a design and incorporate practices that mimic nature's way of storing and absorbing rainfall. The project is using a \$300,000 Watershed Protection Fund grant from IDALS to offset costs of urban conservation practices including grass swales, contour streets without curbs or gutters, native plantings, pervious walking trails, infiltration trenches, and rain gardens.

Year started: 2002 Lead SWCD: Mills



Loess Hills Urban Water Quality Project

The Loess Hills Urban Water Quality Project was undertaken as an educational effort to identify and demonstrate cost-effective methods for reducing storm water runoff, improving soil conservation, and preserving sensitive areas at urban development sites. It has marked storm sewer drains, established demonstration sites in housing areas of urbanizing areas of the Loess Hills, created a water quality education program, and directly involved schools in planting, seeding, and erosion control activities.

Year started: 2000 Lead SWCD: Woodbury



Lost Grove Lake Watershed Project

The Lost Grove Lake Watershed Project, funded by 319 funds with technical support from IDALS, was an effort to improve water quality and reduce sediment runoff and delivery by installing conservation practices in the watershed. The benefit of these efforts was to ensure the future of Lost Grove Lake, a new recreational lake formed by building a dam after more than 20 years of planning. Nutrient and pest management programs as well as structural practices were established to ensure the lake's future.

Year started: 2004 Lead SWCD: Scott



Lower Big Sioux Rapid Watershed Assessment Project

A high level of pathogens (bacteria) in the Big Sioux River, resulting in a Total Maximum Daily Load (TMDL) for bacteria levels, led to this project. The goals were to assess land use, erosion rates, livestock operations, water quality, and producer interest in targeted sub-watersheds. The watersheds of tributaries of the Big Sioux River in Plymouth, Sioux and Lyon Counties were assessed. Subsequent funds from the Pork Producers have resulted in practice application in Plymouth County.

Year started: 2007 Lead SWCD: Plymouth



Lucas County Lakes Water Quality Project

The goal of this project was to educate, encourage and assist producers and landowners in applying best management practices to significantly reduce all identified non-point sources of pollution that impair water quality and threaten the long-term usefulness of the county lakes. Water and sediment control basins were one of the best management practices applied to both highly erodible and non-highly erodible land. IDALS contributed \$473,543 towards practices that reduce sediment delivery to the lakes.

Year started: 1995 Lead SWCD: Lucas



Lyon County Clean Water Demonstration Project

This demonstration project—more specific than many—is designed to study and demonstrate various innovative methods to reduce the flow of effluent from cattle feedlots to creeks and streams that flow into the Big Sioux River. The Big Sioux River is on the impaired rivers list for the state of Iowa. Alternative treatment systems for cattle feedlot runoff applied include 4 solid settling basins for waste treatment and 4 vegetative treatment areas.

Year started: 2007 Lead SWCD: Lyon



Maquoketa River Alliance Information and Demonstration Project

The Maquoketa River Alliance, in cooperation with Limestone Bluffs RC&D, collected and shared watershed and water quality information among residents of 9 counties to initiate activities that resulted in water quality protection and enhancement. The project also promoted the use of existing financial incentive programs to demonstrate best management practices, including streambank stabilization, animal waste management systems, nutrient management programs, riparian area plantings, and wetland restorations.

Year started: 2000 Lead SWCD: Jones



Mariposa Lake Watershed Improvement Project

The Mariposa Lake Watershed Project was initiated to reduce the amount of sediment entering the lake from sheet, rill, and gully erosion in the watershed. Goals of the project are to reduce sediment entering the lake by 75 percent, and phosphorus entering the lake by 80 percent. Early practices applied include about 1,000 feet of shoreline protection and 3 acres of conservation buffers. The Jasper County Conservation Board is one of the partners in the project.

Year started: 2007 Lead SWCD: Jasper



McCann Creek Watershed Project

The McCann Creek Watershed Project's purpose was to protect Twelve Mile Lake from sedimentation and nutrient loading resulting from soil erosion and nutrient runoff from agricultural lands in the watershed. Landowners contributed about half the costs of building more than 2 miles of terraces, 4 water and sediment control basins, and 2 grade stabilization structures. They also established 7 acres of buffers, 16 acres of planned grazing, and fence to keep livestock away from water bodies.

Year started: 1990 Lead SWCD: Union



McLoud Run Coalition Trout Stream Protection Project

Water quality and fish habitat problems were issues that led to the initiation of the McLoud Run Coalition Trout Stream Protection Project. The entire drainage area of McLoud Run is in a developed and urbanizing area in Hiawatha and Cedar Rapids. More than half the drainage area is in residential and public use. Best management practices for urban areas that were applied in the project include rain gardens, streambank stabilization practices, and a variety of other BMPs.

Year started: 2004 Lead SWCD: Linn



Mill Creek Watershed Erosion Control Project

The Mill Creek Watershed Erosion Control Project had a goal of protecting and improving water quality in Mill Creek by reducing the amount of sediment entering the creek. IDALS contributed \$214,682 towards constructing more than 37 miles of terraces in Page County, reducing soil erosion with a resulting reduction in the amount of sediment reaching Mill Creek. Soil erosion reductions also contributed to fewer nutrients entering the creek.

Year started: 1999 Lead SWCD: Page



Mills Watershed Rehabilitation Project

A collapsed tube was jeopardizing U.S. Highway 34 in Mills County before the Mills Watershed Rehabilitation Project was underway. The watershed rehabilitation project replaced the tube using \$61,225 of funds from the Iowa Department of Agriculture and Land Stewardship. The tube was replaced in 2002, and has been functioning well. This project demonstrates the affect watershed funds of the IDALS Division of Soil Conservation can have on infrastructure in Iowa.

Year started: 2002 Lead SWCD: Mills



Mineral Creek Water Quality Project

Significant improvements to the land draining into Mineral Creek are giving mussels a chance to once again thrive. Reduced sediment, less application of nitrogen and phosphorus fertilizers and manure, and stream corridor management are key improvements. Local landowners contributed more than \$227,000; IDALS contributed \$643,000; and DNR contributed \$403,000 in water quality funds. Buffer strips, terraces, water and sediment basins and improved grazing are among the new practices.

Year started: 2001 Lead SWCD: Jones



Mink Creek Watershed Project

The Mink Creek Watershed Project was begun to help reverse the negative trend in water quality and resulting downward trend in angler visits to Mink Creek. One indication of producer interest in conservation is the level of enrollment in the Conservation Reserve Program. More than 800 acres of cropland—10% of cropland acres in the watershed—was enrolled or re-enrolled in the CRP program in the first 5 years of the project. More than a dozen other practices are also being used.

Year started: 2004

Lead SWCD: Fayette



Minnehaha Creek Watershed Demonstration Project

This community-led project achieved its goal of demonstrating best management practices that protect water quality in both rural and urban areas, and developing an appreciation between the two sectors for the roles each play. As a result of local involvement, residents adopted practices rather than merely installing them. Sediment delivery to Minnehaha Creek was reduced by 600 tons/year through the installation of filter strips, riparian buffers, grassed waterways, no-till and streambank stabilization.

Year started: 1998

Lead SWCD: Grundy



Mitchell County Devonian Aquifer Protection Project

This project sought to protect the Devonian Aquifer, Mitchell County's potable water source, from further degradation. Open sinkholes and soils shallow to bedrock above the aquifer allowed surface contaminants such as pesticides, animal wastes, and other nutrients to move quickly to the aquifer. Improvements included installing 16 ag waste systems, cleaning 9 sinkholes, diverting runoff from 4 sinkholes, using crop scouting on 1200 acres, and planting trees on 270 acres.

Year started: 1989

Lead SWCD: Mitchell



Mitchell County Supplemental Evaluation Methods

This project expanded the existing Devonian Aquifer Protection Plan Project to include a more comprehensive groundwater quality evaluation component. It assembled existing well water quality data for the study area and the adjacent control area into a single computer database that provided a comprehensive data analysis for an entire 5 year data set, selected wells for on-going monitoring, and assisted with education and information programs. IDALS contributed \$104,000 to the project.

Year started: 1989

Lead SWCD: Mitchell



Monona Watershed Rehabilitation Project

This project used IDALS funds to assist in the rehabilitation of an existing watershed dam site, Little Sioux Watershed site Lawson 1-1. The watershed site needed to be rehabilitated in order to address gully erosion, sheet and rill erosion, and ephemeral cropland gully erosion. IDALS funds were added to NRCS Watershed Rehabilitation Funds, NRCS Little Sioux Upland Treatment funds, and landowner contributions to build basin terraces, water and sediment control basins, and grassed waterways.

Year started: 2002

Lead SWCD: Monona



Muchakinock Creek Watershed Project

The Muchakinock Creek Watershed Project is improving water quality in Muchakinock Creek, which was included on Iowa's 2002 list of impaired waters due to habitat alterations, and restoring abandoned mine lands. Project partners helped build more than 20 miles of terraces, 3 grade stabilization structures, and 2 water and sediment control basins, as well as encourage landowner use of practices such as conservation tillage. Major funding came from IDALS abandoned mine land funds, landowners, DNR, and NRCS.

Year started: 2005

Lead SWCD: Mahaska



Mud Creek Watershed Project

About 20 different types of conservation practices were used in this project to improve dissolved oxygen concentration and reduce nutrient loading to Mud Creek in identified priority areas. The project succeeded in implementing a water monitoring plan to measure the impact of the best management practices used and track improvement in dissolved oxygen and nutrient load reductions. There were multiple private and public partners in the project.

Year started: 2001

Lead SWCD: Muscatine



Mule Creek Watershed Rehabilitation Project

Flood control structures in Mule Creek, one of the oldest Public Law 566 Watershed Projects in the country, were nearing the end of their useful life when the Mills County Soil and Water Conservation District wanted to assess whether 3 of the dams could be rehabilitated. The dams had filled with sediment, with little or no water surface or flood control utility left. The project survey found that while there was some interest in rehabilitation, there was not enough local interest and funding to proceed.

Year started: 2001

Lead SWCD: Mills



North Thompson River Water Quality Project

Reducing sediment delivery and potential flood damage from the North Thompson River is the goal of this project. Sheet and rill erosion on cropland, gully erosion on pastureland, and deteriorated riparian zones are being addressed. One landowner is leading the way, using no-till farming on all his 3,000 acres of cropland, along with numerous other best management practices. Terraces, waterways, grade structures, and buffers are being used in Madison and Union Counties as well as Adair County.

Year started: 2005

Lead SWCD: Adair



Nutting Creek Watershed Project

The Nutting Creek Watershed is designed to eliminate manure runoff pollution on 40% of priority livestock sites and reduce sediment delivery to Nutting Creek by 30% over the life of the project. The creek has biological impairment of the water quality from elevated levels of fecal coliform and sedimentation. The project, which received its first funding in 2008, also has an information and education component. In addition to Fayette County landowners, Winneshiek County landowners are also involved.

Year started: 2008

Lead SWCD: Fayette



Otter Creek Lake Water Quality Project

This project addressed water quality improvement of Otter Creek Lake. The park surrounding the lake has numerous camp sites available, and expanded as a result of the purchase of land by the Tama County Conservation Board. Among the conservation practices applied to control sedimentation and nutrient loading from the watershed were 6 water and sediment control basins, 2 grade stabilization structures and 15 acres of grassed waterways.

Year started: 1998 Lead SWCD: Tama



Partners of Scott County Watersheds Project

Partners of Scott County Watershed (PSCW) was formed in 2001 in response to flooding and pollution concerns in Scott County streams. PSCW identified the relative health of streams and has educated the community about watersheds through snapshot samplings, conducting creek cleanups, awarding StreamKeeper designations, and offering brochures. PSCW formed its own Board of Directors and holds monthly cabinet and forum meetings. PSCW has fulfilled its top priority, education.

Year started: 2002 Lead SWCD: Scott



Peas Creek Watershed Project

Ledges State Park, a popular recreational area for visitors statewide, has been closed from time to time because of flooding along Peas Creek within the park. Four ponds and 5 basins installed in the Pea's Creek Watershed over the last seven years of the project have decreased runoff, allowing the park to remain open, generate tourism dollars and protect the park's natural resources. The project also implemented an information and education program on flood prevention and urban water quality.

Year started: 2001 Lead SWCD: Boone



Pilot Grove Park

The initial Pilot Grove Park Project consisted mostly of building terraces in the watershed above Pilot Grove Pond, to reduce the amount of sediment entering into Pilot Grove Pond and improve its quality of water. Primary problems in the watershed were gully erosion, sheet and rill erosion, and excessive nutrients entering the water. Among the best management practices still needed after this project were key grade stabilization structures directly above the pond.

Year started: 1991 Lead SWCD: Montgomery



Pilot Grove Restoration Project

The Pilot Grove Restoration Project was designed to reduce the amount of sediment entering Pilot Grove Pond, and to improve the quality of water in the pond. Two important structures built just above the pond in Pilot Grove Park now control sediment, allowing the pond to be rebuilt and enlarged to more than twice its original size. The project also addressed needed fish habitat improvement. The Iowa Department of Agriculture and Land Stewardship shared costs of building the structures.

Year started: 2008 Lead SWCD: Montgomery



Pine Lakes Water Quality Project

This project was designed to reduce sediment and nutrients from entering Pine Creek, Upper Pine Lake, and Lower Pine Lake. The project developed a working relationship with many first-time conservation landowners who have returned for other assistance. Practices applied included 12 miles of grassed waterways, 3 miles of terraces, 4 sediment and water control basins, 8 grade stabilization structures, almost 2 miles of streambank stabilization, and 2 acres of critical area seeding.

Year started: 1993 Lead SWCD: Hardin



Pleasant View Park Lake Improvement Project

The Pleasant View Park Watershed Project was undertaken to provide additional conservation treatment to uplands draining into the existing flood control dam at Pleasant View Park. The structure, initially built by the Soil Conservation Service as part of the Mill Picayune PL566 Watershed Project, protects the city of Dunlap from flooding. This project included 3700 feet of terraces and 2 sediment and water control basins that have reduced the amount of sediment reaching the structure.

Year started: 1995 Lead SWCD: Harrison



Polk County Urban Conservationist Project

The purpose of the Urban Conservationist Project in Polk County is to promote urban conservation and educate urban residents throughout central Iowa on the need for and benefits of urban conservation. This includes educating the public on the impact urban and urbanizing areas can have on soil and water quality in the area. Ongoing efforts include establishment and demonstrations of urban practices, and monitoring of water quality.

Year started: 2008 Lead SWCD: Polk



Prairie Creek Water Quality Project

Sediment and nutrient loading are primary problems in Prairie Creek. Goals of the Prairie Creek Water Quality Project are to reduce sediment delivery to the creek by 30 percent and to reduce the amount of livestock wastes entering the water. Best management practices will be promoted along the stream corridor. In addition to the Division of Soil Conservation of IDALS, the Iowa Department of Natural Resources and the Natural Resources Conservation Service are partners in the project.

Year started: 2008 Lead SWCD: Clinton



Prairie Rose Lake Water Quality Project

Algae problems in Prairie Rose Lake prompted the Prairie Rose Lake Water Quality Project. Goals of the project are to 1) reduce sediment delivery and phosphorous loading to the lake by 60 percent and 2) conduct outreach and education activities to raise awareness of water quality issues and promote participation in the project. Early in the project, more than 10 miles of terraces had been built with funds from IDALS, landowners, and partners.

Year started: 2008 Lead SWCD: Shelby



Price Creek Water Quality Project

Narrow ridges and steep slopes along Price Creek in Iowa and Benton Counties set the natural landscape up for heavy erosion and sediment loads into the creek. The project targets 1500 acres of the most critically eroding areas and seeks to keep livestock out of 50 percent of the Price Creek corridor, as well as reduce nutrient loading and bacteria levels from livestock and human waste. Protecting stream banks in critical areas and using terraces and water and sediment control basins to slow cropland erosion are key practices.

Year started: 2007

Lead SWCD: Iowa



PURE Water Quality Project

At the beginning of the Partners for Urban and Rural Environment (PURE) project, 27 groups and organizations were partnering together in the awareness and the education component. By the end of the project, 39 various groups and organizations participated. The project helped organize and expand local chemical and biological stream monitoring efforts, sending data collected to state agencies, and assisted landowners with installing more than 17 different types of best management practices.

Year started: 1998

Lead SWCD: Linn



Rathbun Lake Special Project

The goal of the Rathbun Lake Special Project is to demonstrate that the targeted application of best management practices on priority land is a cost effective approach to achieve water quality protection in Rathbun Lake. The 6-county project is targeting the delivery of sediment and phosphorus to Rathbun Lake and water bodies in its watershed. More than 125 miles of terraces, about 150 water and sediment basins, 80 grade stabilization structures, and 7 off-stream watering tanks have been installed.

Year started: 2003

Lead SWCD: Wayne



Rathbun Lake Clean Water Project

The Rathbun Lake Clean Water Project was a cooperative effort that involved more than 20 partners and included use of 10 different conservation practices, including on-road structures. The project included assessments of sediment sources, planning and construction of 6 on-road structures, construction of 4 other structures, and development of wetlands and improved grazing systems. Demonstrations were part of the emphasis on building partnerships and public awareness of water quality practices.

Year started: 1997

Lead SWCD: Wayne



Rathbun Lake Livestock Waste Management Project

To improve water quality in Rathbun Lake, this project addressed runoff from areas of livestock concentration and the use of livestock waste. Through 8 livestock waste management demonstration systems in the 6-county area, it demonstrated low cost methods of livestock waste management. Nutrient management training, relocation of feeding areas, and bacterial analyses were primary points of discussion. A number of partners were involved.

Year started: 2001

Lead SWCD: Wayne



Rathbun Lake On-Road Structure Demonstration

Structures or dams built on roads help stop gullies, improve water quality and reduce long-term costs of road maintenance for the counties involved. The Rathbun Lake On-Road Structure Demonstration Project developed curriculum for a training course on planning, design, construction and maintenance of on-road structures, conducted 2 on-road structure training courses, and constructed 4 demonstration on-road structures. Also, 7 tours of the structures were conducted.

Year started: 2000

Lead SWCD: Wayne



Rock Creek Water Quality Project (Clinton)

The goal of the Rock Creek Water Quality Project in Clinton County was to reduce agricultural non-point source pollution to levels that no longer had a detrimental effect on aquatic life. Practices applied included more than 2100 acres of nutrient and pest management, 106 acres of wildlife habitat, 30 acres of grassed waterways, 100 acres of wetland and riparian buffer strips, 158 acres of wetlands development, 4 sediment basins, 106 acres of livestock exclusion, and 8 acres of field windbreaks.

Year started: 2000

Lead SWCD: Clinton



Rock Creek Lake Watershed Improvement Project

Rock Creek Lake, a man-made lake built in 1952 and part of a popular park in Jasper County, had lost 40 percent of its volume by 2001 because of sedimentation. The goal of this project is to reduce sediment and phosphorus delivery to the lake by 80% and 70%, respectively. Practices used include grade stabilization structures, grassed waterways, sediment basins, road right of way structures, fencing for livestock exclusion, alternative livestock watering sources, riparian buffer strips, and cropland filter strips.

Year started: 1999

Lead SWCD: Jasper

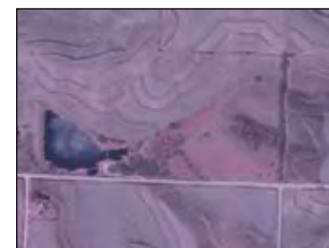


Rock Valley Wellhead Protection Project

The town of Rock Valley gets its drinking water from shallow wells along the Rock River bottom. Water in the shallow wells was consistently above the acceptable level of 10 parts per million nitrate nitrogen. The project's priority practices were wellhead protection (seeding down native grasses on croplands located within 2000 feet of the wells), filter strips and riparian buffers, grassed waterways, animal waste management (one producer moved his feedlot) and fertilizer management in town and countryside.

Year started: 2006

Lead SWCD: Sioux



Schley Park Watershed Project

A 5.8 acre pond, the centerpiece of Schley Park near Persia in Harrison County, was filling with sediment before the Schley Park Watershed Project was initiated. The Harrison County Conservation Board, manager of Schley Park, sought to improve water quality in the pond and reduce sediment with the watershed project. Cooperating with local landowners, 5,275 feet of terraces and 3 sediment and water control basins were built to slow sedimentation in the pond.

Year started: 1990

Lead SWCD: Harrison



Silver Creek Watershed Project

Silver Creek, a warm water stream, is on the 303d list of impaired waters. The Silver Creek Watershed was included in one of Iowa’s initial water quality improvement projects, the Big Spring Demonstration Project. Goals are to promote stream corridor and sinkhole protection along critical areas of the watershed, install buffer practices on an additional 40% of the Silver Creek stream channel, and accelerate installation of conservation practices to reduce sediment delivery to the stream by at least 25%.

Year started: 2007 Lead SWCD: Clayton



Silver Lake Water Quality Project

About 35% of the shoreline of Silver Lake is accessible by the public—many of the 4,000 outdoor enthusiasts who visit the lake yearly are elderly and enjoy quiet fishing along its accessible shoreline. The goal of the project is to reduce algae and turbidity in the lake by improving land use practices within the watershed. Conservation practices applied early in the project include no-till farming, filter strips, wetland restoration, and rock inlet structures. IDALS is a major source of funding at nearly \$200,000.

Year started: 2007 Lead SWCD: Palo Alto



Slip Bluff Water Quality Project

Goals of the Slip Bluff Water Quality Project were to improve water quality in Slip Bluff Lake by reducing siltation and wave erosion. The goal was to reduce siltation into the lake by 80 percent. The project resulted in 8 water detention structures being built along with two sediment and water control basins. Wave erosion was reduced with installation of riprap along the shoreline. The Decatur County Conservation Board, IDALS, landowners, and the NRCS were cooperative partners in the project.

Year started: 2001 Lead SWCD: Decatur



Sny Magill Creek Watershed Protection Project

More than 50 miles of terraces, 60 water and sediment control basins, and 8 grade stabilization structures were installed on land draining into Sny Magill Creek to improve water quality for trout. More than 450 acres of contour buffer strips, a like number of acres of planned grazing systems, 710 acres of improved pasture management, and 750 acres of timber stand improvement also teamed with those practices to keep sediment and excess nutrients from the popular coldwater stream.

Year started: 1991 Lead SWCD: Clayton



Soap Creek Watershed Project (Davis)

Two potentially dangerous bridges along county roads in Davis County were replaced with tubes as part of the Soap Creek Watershed Project. The unsafe bridges could be replaced because the project built 3 structures upstream to provide erosion control, improve water quality, improve road safety, provide downstream flood control for public and private facilities, and improve wildlife habitat. This project saved county funds in future maintenance and also eliminated a potential hazard.

Year started: 2000 Lead SWCD: Davis



Soap Creek Watershed Project (Appanoose)

The Soap Creek Watershed Project was an effort by soil and water conservation districts in Appanoose, Davis, Monroe, and Wapello Counties to determine whether existing flood control structures were filling with sediment more rapidly than expected, and whether landowners were interested in building erosion control structures in gullies to slow that sediment. The finding was that there was accelerated sedimentation; landowner interest led to an application for watershed protection funds in 2009.

Year started: 2006 Lead SWCD: Appanoose



South Fork Iowa River Watershed Demo Project

In an effort to reduce levels of nitrogen, phosphorus, and pesticides in the South Fork of the Iowa River, the South Fork Iowa River Watershed Demonstration Project hired professional service providers to work with local farmers to develop comprehensive nutrient management plans. The plans assisted farmers in analyzing the amount of nutrients and pesticides their crops needed, and then applying that amount. Organic livestock wastes were included in the planning process.

Year started: 1997 Lead SWCD: Hardin



South Fork of Big Mill Creek Water Quality Project

Sediment, livestock waste and excess fertilizer and pesticide use were problems for the high quality cold water stream in Jackson County known as the South Fork of Big Mill. Landowners contributed about \$16,000 and the Iowa Department of Agriculture and Land Stewardship contributed about \$50,000 towards 10 water and sediment control basins, 2 ag waste systems, 10 acres of filter strips, and a sinkhole protection project. The oldest grist mill in Jackson County is located on the stream.

Year started: 1991 Lead SWCD: Jackson



South Fork Maquoketa River Water Quality Project

A primary goal of the South Fork Maquoketa River Watershed Project is to reduce bacteria, sediment and nutrient delivery to the river—and to the highly popular Backbone Lake, which it flows through—by 30 to 40 percent. Among the practices applied are 1,000 acres of no-till farming, 175 acres of wetlands, 400 acres of buffer strips, 900 acres of contouring, 115 acres of filter strips, and 7 acres of tree plantings. The project had reduced sediment loading into the lake by 3,300 tons a year as of March of 2008.

Year started: 2005 Lead SWCD: Buchanan



South Pine Stream Watershed Project

The ecological significance of the South Pine Watershed is that it has the only remnant population of wild brook trout known to exist in Iowa. The existence of brook trout depends on pristine water with temperatures in the upper 40’s and a high aquatic insect forage base. Nutrient management, riparian corridor fencing, manure management, stream-bank stabilization, no-till farming and a number of other best management practices have been implemented by landowners to address sediment and animal waste problems.

Year started: 2001 Lead SWCD: Winneshiek



Southern Iowa Grazing (Warm Water Streams) Project

The Southern Iowa Grazing Project was undertaken to address beef cow impacts on water quality in a dozen southern Iowa counties. Problems addressed included stream bank degradation, organic enrichment, wildlife habitat damage, and sheet and rill erosion. Practices applied included 1,000 acres of planned grazing; more than a mile of stream bank stabilization; 4 grade stabilization structures; 4 alternative water supplies; 11 stream crossings; 5 miles of stream corridor fencing; and improved record keeping.

Year started: 1994 Lead SWCD: Clarke



Spaullinc Water Quality Improvement Project

The Spaullinc Project was undertaken to improve water quality in Twelve Mile Lake by protecting the lake from sedimentation and nutrient runoff. Landowners contributed more than \$200,000 (more than government cost-share contributions) in applying measures to reduce soil erosion and manage nutrients. Practices included more than 4 miles of terraces, 5 grade stabilization structures, 17 water and sediment control basins, a waste storage facility, and 10 acres of grassed waterways.

Year started: 1994 Lead SWCD: Union



Spring Branch Creek Watershed Project

Spring Branch Creek is a popular trout stream for anglers and trout fishermen statewide—beyond that, the coldwater stream supplies water to the state trout hatchery east of Manchester. Seventy percent of the 69 landowners in the Spring Branch Creek Watershed improved their operations. Nutrient and pest management was applied on 6,000 acres, conservation tillage was used on 4,000 acres, a half mile of streambank was stabilized, and livestock were excluded from 20 acres along streams, among the practices.

Year started: 1995 Lead SWCD: Delaware



Staff and Beaver Creeks Watershed Project

Two major project goals are to reduce sediment loading and prevent excess nutrients from reaching Staff and Beaver Creeks, which are tributaries to the Upper Iowa River. Water monitoring by the Upper Iowa River Watershed Association shows Staff Creek and Beaver Creek contribute the greatest amounts of nitrogen to the river of any watershed. A variety of best management practices, including terraces, wetlands, nutrient management, and waterways are being applied to the land.

Year started: 2005 Lead SWCD: Howard



Storm Lake Watershed Project I

The Storm Lake Watershed Project implemented management and structural practices throughout the watershed to maintain a stable protected lake environment. Goals included reducing sediment reaching the lake by 70 percent, urban polluted runoff by 50 percent, and application of commercial nutrients in the watershed by 35 percent. More than 600 middle school students, parents, teachers and volunteers planned and planted an eight-acre area to 1,000 trees and 36 varieties of native grasses, and forbs.

Year started: 1994 Lead SWCD: Buena Vista



Storm Lake Watershed Project II

The second Storm Lake Watershed Project was aimed at reducing sediment and nutrients in Storm Lake, as well as decreasing turbidity in the lake. It included implementing locally funded urban conservation demonstrations, completing a feasibility study of Little Storm Lake, and an educational component. Practices applied include 2 wetlands created, 680 acres of nutrient management, an acre of riparian buffers and 26 acres of pasture buffers, an animal waste storage facility, 14 rain gardens, and 10 bio-retention cells.

Year started: 2004 Lead SWCD: Buena Vista



Sugar Creek Corridor/Watershed Project

Sugar Creek, which once served as an important recreational lake with large fish, is now on the 303d list of impaired water bodies due to organic enrichment, with phosphorous and nitrogen being main pollutants. The watershed's very fertile land yields some of the largest crops in the nation. Landowners are using grid sampling to apply only as much fertilizer as the crop needs, reducing fertilizer usage, as well as installing grassed waterways to reduce soil erosion in the watershed.

Year started: 2003 Lead SWCD: Cedar



Tete Des Morts Creek Watershed Project

Despite having 80 percent of its watershed in grassland and timber, Tete Des Morts Creek has suffered repeated fish kills and is on Iowa's 303(d) list of impaired waters. The project goal is to reduce sediment and nutrient delivery to the stream by 40 percent. Water quality improvement measures to be used include building manure containment structures, excluding livestock from streams, stabilizing streambanks, establishing riparian buffers along streams, and installing grade stabilization structures.

Year started: 2008 Lead SWCD: Jackson



Three Lakes Water Quality Project

The Three Lakes Water Quality Project Area includes Lake Icaria, Lake Binder, and the West Lake Corning City Reservoir watersheds in Adams County. Practices implemented to provide protection to the lakes include but are not limited to 53 grade stabilization structures, 30 miles of terraces, 986 acres of manure management, 721 acres of rotational grazing, 100 acres of pasture planting, and a stream crossing. Additionally, a comprehensive water quality monitoring program has been implemented.

Year started: 1996 Lead SWCD: Adams



Three Mile Creek Watershed Project (Adair)

Nearly half—9,100 of 23,232 acres—of the watershed of Three Mile Lake is in Adair County. The Three Mile Creek Watershed Project of Adair County was implemented to provide technical and financial assistance to landowners and operators in three major areas: cropland nutrient and pesticide management, pasture management, and animal waste management. The goal was for Adair County landowners to do their part to have one of the cleanest lakes with clear water and good fishing in Three Mile Lake.

Year started: 1990 Lead SWCD: Adair



Three Mile Creek Watershed Project (Union)

The Three Mile Creek Watershed Project was designed to protect the water in Three Mile Lake, a new lake in Union County, from excessive nutrients and pesticides. Practices applied through the project include 65 acres of improved grazing systems, 44 acres of pasture planting, 277 acres of woodland management, and 6 acres of conservation buffers. Also developed as part of the project were a waste storage facility, a spring development, and a weed management plot for educational purposes.

Year started: 1990 Lead SWCD: Union



Three Mile Lake Erosion and Water Quality Project

The Three Mile Lake Erosion and Water Quality Project focused on controlling sediment delivery to the lake by helping control actively eroding gullies. Practices installed by landowners included 6 water and sediment control basins, a grade stabilization structure, and an acre of grassed waterways. Landowners contributed one fourth of the cost of the conservation practices. Other partners included the Union County Pheasants Forever and Ducks Unlimited chapters, as well as the Union County Conservation Board.

Year started: 2004 Lead SWCD: Union



Tri-County Rural Water Project

Groundwater contamination, due to both point and non-point sources, was an issue in Floyd, Mitchell and Butler Counties. Great strides were made toward water quality improvement during the Tri-County project. The CRP buffer program was used to install hundreds of acres of filter strips and riparian buffers along streams and around sinkholes. 25 ag drainage wells were eliminated—more than 75% of them in the 3 counties have now been eliminated. 18 manure management systems were applied.

Year started: 1999 Lead SWCD: Floyd



Trout Run Water Quality Protection Project

The watershed provides the source of water for Siewers' Spring, the source of water for the Iowa state fish hatchery, rearing over 100,000 trout on annual basis. Excess manure, ag chemicals, and upland sediments were entering the stream. The project included 16 manure management structures, 2 cattle crossings, 10 nutrient management plans on more than 2,000 acres, 2 livestock watering systems off stream, 21 acres of tree planting, 31 acres of rotational grazing, and 4 grade stabilization structures.

Year started: 1992 Lead SWCD: Winneshiek



Twin Springs Water Quality Project

Twin Springs is one of the most heavily used coldwater streams in Iowa. To improve water for trout fishing and other uses, project purposes were to reduce polluted runoff from barnyards and feedlots, sediment from cropland erosion and from eroding streambanks/gullies, and nutrient/pesticides from cropland runoff. Practices applied included more than 7 miles of terraces, 4 grade stabilization structures, 140 acres of rotation grazing, 250 acres of woodland management, and a half mile of riparian fencing.

Year started: 2003 Lead SWCD: Winneshiek



Two Rivers Wetland Restoration Project I and II

After repeated flooding of farmlands along the Nishnabotna and Missouri Rivers, conservationists sought a way to restore low-lying wetlands and to educate people on the importance of wetlands. The Two Rivers Wetland Restoration Project assisted with the enrollment of farmland susceptible to flooding into wetland restoration programs of the U.S. Department of Agriculture, with significant funding from the Environmental Protection Agency and funding from IDALS and the Fremont Conservation District.

Year started: 1999 Lead SWCD: Fremont



Union Grove Lake NPS Watershed Project

The Union Grove Lake Nonpoint Source Watershed Project was undertaken to address the lake's water quality impairments in order to remove Union Grove Lake from Iowa's list of impaired waters. The impairments included bacteria, pH, algae, sediment, and turbidity. This project is a follow-up to conservation improvements in the Union Grove Watershed from more than 20 years ago that are still functioning well, despite their age. Conservation practices in this project will be installed beginning in Spring of 2009.

Year started: 2008 Lead SWCD: Tama



Upper Big Mill Creek Water Quality Project

Primary problems in Upper Big Mill Creek, one of only 6 cold water streams in Iowa with natural brown trout reproduction, were siltation, nutrients, fertilizers and pesticides entering the creek. The project was implemented to reduce the amount of sediment, livestock waste, and fertilizer and pesticides reaching the creek, and to control water and sediment from pastures and timber acres. Practices applied included spring protection, livestock exclusion, an ag waste facility, streambank stabilization and fish hides.

Year started: 1994 Lead SWCD: Jackson



Upper Catfish Creek Watershed Protection Project

Upper Catfish Creek, one of only 32 streams in Iowa with trout reproducing naturally, is heavily influenced by urban development in the hilly lands of its watershed south of Dubuque. Keeping sediment out of the creek is key to helping trout eggs get needed oxygen to survive. In addition to agricultural conservation practices, urban practices installed by the project include native landscaping, permeable paving, infiltration trenches, rain gardens, septic system controls, and bioswales.

Year started: 2007 Lead SWCD: Dubuque



Upper Iowa River Watershed, Addressing WQ Impairments

This project was one of the first in Iowa to target conservation practices to specific land areas based on GIS analysis. The project targeted areas found to be contributing the most significant sediment and bacteria loading, maximizing water quality improvements from limited funding. With significant funding from IDALS, partners, and landowners, the project built 12 grade stabilization structures, about 18 miles of terraces, 8 sediment basins, and 6 animal waste storage structures in the watershed of the Upper Iowa River.

Year started: 2005 Lead SWCD: Winneshiek



Utilizing FLEVAL in Upper Iowa River Watershed Project

This project is the first of its kind in Iowa to utilize a tool for calculating fecal bacteria loading from feedlots and the corresponding reductions achieved through the implementation of Best Management Practices. It also successfully reduced bacteria loading from small, open feedlots to one of the most recreationally significant rivers in the state. Improvements included development of 10 agricultural waste storage systems, 3 heavy use protection areas, one deep-bedded hoop building, and critical area plantings.

Year started: 2006 Lead SWCD: Winneshiek



Upper Maquoketa River Watershed Project

Goals of the project were to reduce sediment delivery by 40%, reduce the application of nutrients and pesticides by 20% on half the cropland acres, and reduce manure runoff by developing utilization plans on 25% of the cropland acres and installing 10 animal manure structures. About 20 different conservation practices have been installed, including grassed waterways, filter strips, grade control structures, terraces, planting of grasses with CRP, contour and no-till farming, and pasture management.

Year started: 2000 Lead SWCD: Fayette



Upper Whitebreast Creek Water Quality Project

The objective of the Upper Whitebreast Creek Project is to improve water quality and reduce erosion, especially in the portion of White Breast Creek designated as impaired in Iowa's 303(d) List of Impaired Waters and Iowa's 305(b) Water Quality Report. Practices applied include 15 grade stabilization structures, 300 acres of pasture plantings and 500 acres of prescribed grazing, 4 stream crossings, 28 acres of livestock exclusion, and more than a mile of fencing.

Year started: 2008 Lead SWCD: Clarke



Viking Lake Water Quality Project

Viking Lake was on the state list of 303d impaired waters, with excessive algal growth. Primary problems in the Viking Lake watershed were gully erosion, sheet and rill erosion, and nutrient loading in runoff waters. Best management practices applied included 23 grade stabilization structures, a mile of terraces, 11 water and sediment control basins, 2 wetlands, more than 2 miles of fence to keep livestock away from streams, 17 fish habitat structures, 8,000 feet of shoreline stabilization, and a community septic system.

Year started: 2005 Lead SWCD: Montgomery



Walnut Creek Watershed Project (Ringgold)

The Walnut Creek Watershed Project is addressing soil erosion, flooding, and sedimentation in Walnut Creek. Landowner contributions of more than \$150,000 have nearly matched the \$213,000 contributed by the Iowa Department of Agriculture and Land Stewardship to date. With technical assistance from the USDA Natural Resources and IDALS technicians, landowners have built about 6 miles of terraces and 20 grade stabilization structures in the watershed.

Year started: 2005 Lead SWCD: Ringgold



Walnut Creek Watershed Quality Improvement Project

The eastern half of Walnut Creek is listed on the DNR's list of impaired waters as biologically impaired with no identified cause. Preliminary surveys showed landowner support for conservation practices within the Walnut Creek Watershed. In 2007 and 2008, this support was put into action with funds from the Watershed Improvement Review Board to use in the Holiday Lake Watershed, a sub-watershed in the eastern portion of the Walnut Creek Watershed.

Year started: 2008 Lead SWCD: Poweshiek



West Fork of Big Creek Watershed Project

Goals of the West Fork of Big Creek Watershed Project were to reduce gully, sheet and rill erosion in cropland and pasture areas, as well as to reduce sedimentation. Those goals would result in improved water quality downstream. A secondary benefit was reduced flooding along West Fork. Primary practices installed were about 2 miles of soil-saving terraces and 6 grade stabilization structures. Landowners contributed about \$27,000 and IDALS contributed about \$50,000 for resource improvements.

Year started: 2000 Lead SWCD: Ringgold



West Lake Water Quality Protection Project

A specific goal of the West Lake Water Quality Protection Project was to reduce atrazine levels to acceptable levels for safe drinking water in West Lake, a water supply for the city of Osceola. The plan was to apply best management practices that would reduce atrazine and other polluting runoff from fields in the watershed. The project was successful in applying filter strips, riparian buffers, and constructed wetlands in the watershed. Partners included the City of Osceola, NRCS, Clarke SWCD, and Trees Forever.

Year started: 1998 Lead SWCD: Clarke



West Pottawattamie County Urban Conservationist Project

The purpose of the Urban Conservationist Project in Pottawattamie County is to promote urban conservation and educate urban residents throughout Southwest Iowa on the need for and benefits of urban conservation. This includes educating the public on the impact urban and urbanizing areas can have on soil and water quality in the area. Ongoing efforts include establishment and demonstrations of urban practices, and monitoring of water quality.

Year started: 2008 Lead SWCD: West Pottawattamie



West Tarkio River Watershed Project

Farmlands and public infrastructure both benefit from the combination of landowner and public funding of conservation measures in the West Tarkio Watershed Priority Area. More than 113 miles of new terraces, 15 water and sediment control structures, 35 miles of filter strips, no-till farming, contour buffers, wildlife plantings, grassed waterways, and other practices combine to keep farm fields productive and to slow runoff and flooding in the area.

Year started: 2001 Lead SWCD: Page



White Oak Lake Nonpoint Source Watershed Project

White Oak Lake was included on Iowa's 2002 list of impaired waters due to habitat alterations, including excessive sediment that was impairing aquatic life. The White Oak Lake Nonpoint Source Watershed Project was designed to reduce the amount of sediment entering White Oak Lake, improving habitat and water quality. Five grade stabilization structures have been built in the lake's watershed to reduce the amount of sediment reaching the lake.

Year started: 2006

Lead SWCD: Mahaska



Whitebreast Creek Watershed Project

Whitebreast Creek, with a watershed of parts of 4 counties, along with the South River and Middle River watersheds, was estimated to be contributing 4 million tons (55%) of the 7.2 million tons of sediment delivered to Lake Red Rock annually. Overgrazing of pastures, stream bank erosion, and cropland erosion were placing ever-increasing sediment loads into the creek and Whitebreast Bay of Red Rock Lake. The project implemented best management practices, targeting practices above protective structures.

Year started: 2000

Lead SWCD: Warren



Williams Creek Watershed Project

Steep slopes, numerous springs and 177 documented sinkholes are part of the Williams Creek Watershed. Since sinkholes are a known direct access to underground aquifers, the project was intended to filter or divert contaminants from the sinkholes and to significantly reduce sediment, nutrient and animal waste delivery to the creek. Practices applied include an animal waste system, 2 grade stabilization structures, 100 acres of pasture management, nearly 5 miles of terraces, and 2 sediment control basins.

Year started: 2000

Lead SWCD: Allamakee

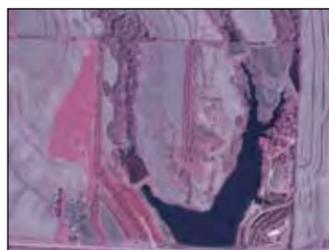


Williamson Pond Watershed Project

Turbidity, suspended sediment, and phosphorus are problems in Williamson Pond in Lucas County. The Williamson Pond Watershed Project proposes to reduce sediment delivery to Williamson Pond by 484 tons per year with the expectation that this will also result in a corresponding reduction in phosphorus delivery. The project was undertaken to implement the water quality requirements outlined in meeting total maximum daily loads (TMDLs).

Year started: 2009

Lead SWCD: Lucas



Willow Lake Project

The Willow Lake Watershed Project was the final of several projects implemented to control gullies and reduce the amount of sediment flowing into Willow Lake. A grade stabilization structure was built in the middle drainage area, just above the 27-acre lake, to control a significant amount of sediment that would otherwise reach the lake. Willow Lake is a popular lake and recreation area in the center of Harrison County managed by the Harrison County Conservation Board.

Year started: 1990

Lead SWCD: Harrison



Woolstock Cemetery Protection & Eagle Creek Bank Stabilization

The Woolstock Cemetery was established in the 1870's on a hill overlooking Eagle Creek in Wright County. Due to flooding over the years, Eagle Creek was undercutting the streambank, causing channel changes that could cause older graves to fall into the water. A new channel was constructed on an adjoining pasture to divert water away from the site while the old channel was being stabilized. The pasture was re-seeded and reestablished according to NRCS specifications.

Year started: 2006

Lead SWCD: Wright



Wright County Water Quality Project

The Wright County Water Quality Project was undertaken to bring agricultural drainage wells into compliance with state continued use permits. Goals included closing wells, initiating a volunteer water monitoring program, and improving nutrient and pest management practices. The project, which included 6 workshops on nutrient management, led to closing 6 wells, implementation of 5,500 acres of nutrient and pest management, 2 septic systems improved, and 28 surface intakes removed.

Year started: 1999

Lead SWCD: Wright



Yellow River Headwaters Watershed Project

The Yellow River Headwaters is the gateway to the largest trout stream in Iowa with roughly 22 miles of trout friendly waters. The Yellow River is heavily utilized for canoeing, kayaking, camping, but is mostly known for its angling opportunities of trout & smallmouth bass. The project, just begun, will work with landowners to install best management practices to reduce sediment delivery and bacteria loading in the stream. Goals include reducing livestock access to the stream by 75 percent.

Year started: 2009

Lead SWCD: Winneshiek



Yellowsmoke Lake Project

The Yellowsmoke Lake Project was undertaken in Crawford County to apply priority conservation practices in strategic locations in an effort to keep Yellowsmoke Lake swimmable and fishable. Excessive sedimentation and algae blooms in the summer influenced the ability to both swim and fish in the lake. Three grade stabilization structures and 2 acres of grassed waterways were applied in the watershed to filter out sediment and nutrients from runoff before it was delivered to the lake.

Year started: 1989

Lead SWCD: Crawford

