

Loess Hills Development and Conservation Authority

712 S. Hwy. 6 & 59
Oakland, Iowa 51560-0189
Phone (712) 482-3029
Fax (712) 482-5590

December 14, 2021

Holly Lyons, Division Director
Legislative Fiscal Services
1007 E Grand Avenue, Ste G01
Des Moines, IA 50319

Dear Ms. Lyons,

This report is being submitted pursuant to Iowa Code Section 161D.8.

The Loess Hills Development & Conservation Authority passes state funds appropriated from the Environment First and General Funds to the Hungry Canyons Alliance and the Loess Hills Alliance. Copies of their reports are enclosed for your review.

The Hungry Canyons Alliance is concerned with stream stabilization projects in 19 western Iowa counties. Stream stabilization projects protect bridges and other infrastructure including roadways, utilities and pipelines. The focus of the Loess Hills Alliance is to protect special natural and cultural resources in the seven counties of deep loess bordering the Missouri River while ensuring the economic viability and private property rights of the region.

If you need further information, please contact myself or Michelle Wodtke Franks at Golden Hills RC&D, 712-482-3029 or michelle@goldenhillsrca.org.

Sincerely,

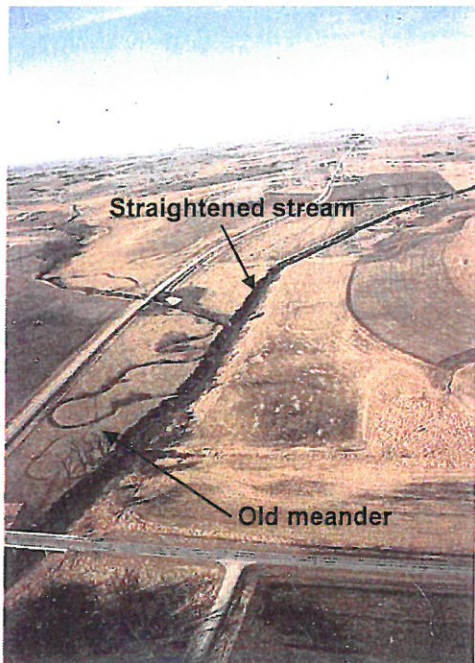
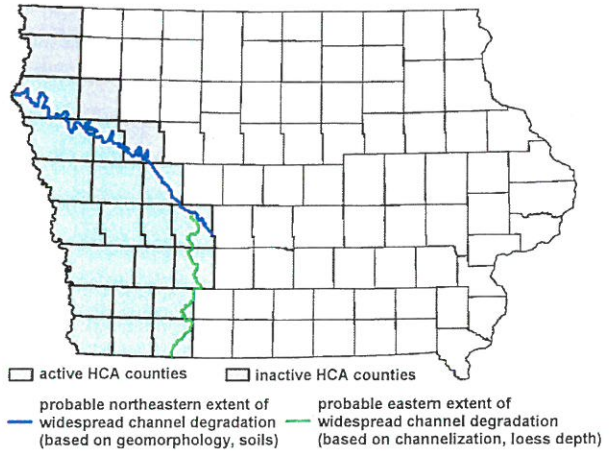
Bernie Bolton
Chairman
Loess Hills Development and Conservation Authority

Enc.

HUNGRY CANYONS ALLIANCE – Dec 2021 Update

The Problem

The Hungry Canyons Alliance (HCA) was formed locally to research and implement solutions to the problem of stream channel erosion and degradation in a 19 county area of the deep loess soils region of western Iowa. Channelization of streams and land use changes during the first half of the 1900's caused stream channels to erode, causing an estimated \$1.1 billion in damages to public and private infrastructure (bridges, culverts, utility lines, etc.), loss of farmland, and increased sediment loads. A 2013 survey of county infrastructure in western Iowa revealed that a total of 415 bridges, culverts, and flumes were still endangered due to stream channel degradation. Golden Hills RC&D in Oakland, Iowa helped to form and currently provides office space and administrative assistance to the HCA.



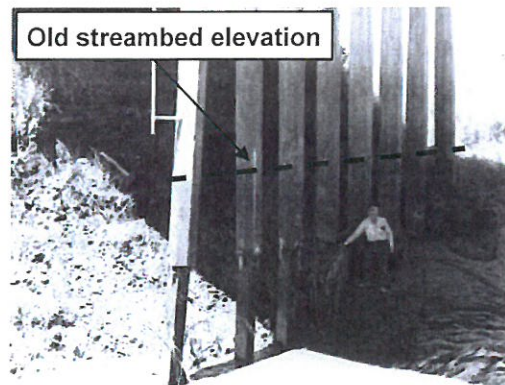
Straightened versus meandering stream. (Walnut Creek, Pottawattamie County).

The Solution

A proven, affordable solution to this problem is to build grade control structures in streams. Grade control structures (GCS) at regular intervals help streams stabilize by changing their longitudinal profile from an erosive steep incline to a stable stair-step pattern. Streambed stabilization is the key to preventing further erosion and protecting infrastructure. GCS design is largely dependent on drainage area. Small drainage areas can often be controlled with reinforced concrete box (RCB) or corrugated metal pipe (CMP) culverts with drop inlets and/or flume outlets. Large drainage areas are often controlled with weirs constructed with steel sheet pile driven into the streambed, with a riprap and concrete grout slope immediately downstream, a loose riprap stilling basin downstream of the weir slope, and loose riprap covered banks. Both RCB/CMP and weir designs allow the stream elevation to drop in a controlled setting, restore lost stream grade, prevent further degradation, and reduce streambed slope upstream. This creates a calm backwater condition where silt can settle out, decreasing sediment loads and turbidity and increasing water quality. Sediment re-deposited upstream then helps support formerly exposed bridge pilings and stabilize eroded streambanks.

The Savings

The HCA provides state and federal money available to the 19 counties through a cost share program for grade control structures (GCS). County governments provide a minimum of 20% match for each GCS. Since 1992, the program has provided \$26.5 million in state and federal appropriations and the technical assistance needed to complete 410 GCS in 19 counties in western Iowa. Another 14 GCS are in progress. These GCS will protect an estimated \$100.1 million in property value. It is estimated that 798.8 acres of land, equivalent to 23.9 million tons of sediment, will be protected from erosion by construction of the 424 GCS. HCA grade control structures, with an average cost of \$66,909,



Bridge endangered by exhumation of pilings.

protect approximately \$236,007 in property per GCS. **For every \$1 invested in HCA grade control structures, on average more than \$4.25 of property value and 0.90 tons of sediment are protected from streambed degradation.** During FY 2021, the HCA completed construction on eleven GCS, and obligated cost share to eleven new projects.

A second HCA program provides funding to landowners where grade control is necessary to stabilize active gully erosion. This program is funded with the interest earned from state appropriations. This program has built 130 structures, and approved another one, with cost share totaling \$892,926.

The HCA has quarterly meetings at which issues concerning stream erosion and streambed stabilization are discussed. Tours show firsthand which aspects of past GCS designs have worked and which haven't while also highlighting new techniques which can be used to enhance future GCS performance. Regular attendees include county engineers and supervisors, NRCS & DNR employees, SWCD commissioners, consultants, contractors, and landowners.

Over 1,500 GCS of all types have been constructed in 19 western Iowa counties by county governments, the HCA, NRCS, NRCS-EWP, SWCD, Iowa DOT, cities, utility (water, gas, telephone, electric, etc.) companies, railroad companies, Army Corps of Engineers, Iowa DNR, and landowners. This is the greatest concentration of GCS anywhere in the world due to the loess soils, highly altered unstable stream system, high drainage density, and high road density. With so many GCS located in one area, western Iowa has been referred to as a "laboratory" for GCS design. And because western Iowa is still experiencing streambed degradation, the HCA is one of the unheralded leaders in innovative GCS research, design, and construction.



Top: 4 foot high sheet pile weir with a 1:20 grouted riprap slope in Crawford County. Bottom: RCB flume with 25 feet of fall in Fremont County.

Matching Federal Funding for Flood Recovery

Heavy precipitation in May 2007 and June 2008, and again in March and June of 2019, resulted in widespread stream channel damage and destroyed county road infrastructure. However, in the investigations that followed, FEMA, NRCS, and county road departments all reported that GCS directly reduced infrastructure and channel damage costs and the number of FEMA program claims, and infrastructure protected by GCS suffered no damage. Although some GCS suffered minor damage, these damages were minimal compared to the potential total loss of infrastructure that could have resulted without the GCS.

Federal NRCS-EWP funding became available after the disaster declarations; so in order to complete as many projects as possible and reduce the counties' burden to 15% match, the HCA provided 10% match (using state cost share) for all EWP projects which provided grade control or were directly associated with existing GCS projects. Between September 2008 and January 2011, **72 GCS projects were completed at a cost of \$12.83 million. The HCA provided \$1.28 million in cost share**, the EWP program \$9.50 million, and the sponsor counties \$2.05 million. **In 2020-2021, 67 GCS projects have been completed, and another one is almost complete, at a total estimated cost of \$10.68 million. The HCA will provide \$1.07 million in cost share**, the EWP program \$8.07 million, and the sponsor counties \$1.55 million.

HCA Research

Completed HCA research projects include design of GCS to provide fish passage, use of scrap tires in GCS, aerial stream video and classification of western Iowa streams, factors controlling knickpoint migration, and the use of directional drilling in small watershed GCS projects. Ongoing research projects include experimenting with new bank stabilization techniques and measuring nutrient loads from eroding streambanks to quantify the impact of channel stabilization projects. Partners in these projects include: NRCS, Iowa DOT Highway Research Board, IIHR-Hydrosience and Engineering at the University of Iowa, Natural Resource Ecology and Management Department at Iowa State University, Civil Engineering Department at Iowa State University, Iowa DNR, US Geological Survey, and US Fish and Wildlife Service.

Hungry Canyons Alliance

I. Project Overview

A. Purpose:

- Focus attention on the problems of, and develop solutions related to, stream channel degradation in the deep loess region of western Iowa.

B. Needs:

- 415 bridges, flumes, and major culverts susceptible to significant damage from stream degradation in 2013 (from correspondence with county engineers).

C. Goals:

- Provide financial and technical assistance to construct grade control structures (GCS) in 19 counties in western Iowa.
- Conduct research and provide demonstration for members.

II. Progress Report (1992-2021)

A. HCA Structures as of 12-13-21:

1. GCS approved:	424
2. GCS completed:	410
3. GCS in progress:	14

B. HCA Costs as of 12-13-21:

1. Total costs:	\$ 28,369,440
2. Total HCA cost share spent:	\$ 19,975,112
3. Total HCA cost share obligated:	\$ 508,797
4. Cost share per structure:	\$ 48,311
5. Counties share of total cost spent:	\$ 7,318,855
6. Counties share of total cost obligated:	\$ 127,200

C. HCA Benefits as of 12-13-21:

1. Total property protected:	\$100,067,210
2. Property protected per structure:	\$ 236,007

For every \$1 invested in Hungry Canyons Alliance grade control structures (GCS), an average of more than \$4.25 in property value and 0.90 tons of sediment are protected.

Match for EWP Program:

Occasionally, western Iowa counties will be declared eligible for federal disaster assistance due to severe rains which cause flooding and stream channel damage, endangering or destroying county infrastructure. The NRCS-EWP program will provide cost share for new GCS and repairs to existing GCS. In order to complete as many EWP projects as possible while the federal money is available to western Iowa, the HCA will provide 10% of the match, reducing the counties match to 15%, for any EWP projects which provided grade control or were directly associated with existing GCS projects. In FY10, the state appropriated \$100,000 to the HCA specifically for this purpose.

D. EWP Structures and Costs as of 12-13-21:

1. GCS completed:	143
2. GCS in progress:	1
3. Total costs spent	\$ 23,574,302
4. Total HCA cost share spent:	\$ 2,357,894
5. Total HCA cost share obligated:	\$ 24,817
6. Total NRCS cost share spent:	\$ 17,612,477
7. Total counties share spent:	\$ 3,603,932

III. Funding Summary (1992-2021)

A. Total Appropriations:

1. Federal:	\$ 11,944,394
2. State:	\$ 14,601,334
3. Total:	\$ 26,545,728
4. County share:	\$ 9,361,781

B. Funds Needed:

Total needed to reach goal of protecting 182 bridges, flumes, and major culverts: \$10.01 million

- Annual appropriations of \$0.9 million (\$0.5 million in state funds, \$0.4 million in federal funds) for 11.2 more years (assuming no disastrous floods)

IV. Accomplishments of the Past Year

- A. Approved cost share for eleven county GCS and one small GCS for landowners.
- B. Completed construction of 68 EWP projects and 11 county GCS.
- C. Held three successful quarterly meetings.
- D. Continued technical assistance to the NRCS and local sponsors for EWP projects damaged in the 2019 spring and summer flooding.
- E. Continued inventory of scanned PL-566, PL-534, pilot, and RC&D watershed structure documents through an agreement with the NRCS.
- F. Gave free advice to numerous landowners, cities, county conservation boards, and county road departments on cost-effective methods of streambank stabilization.
- G. Helped organize the Partnership for River Restoration and Science in the Upper Midwest's (PRRSUM) February 2021 Upper Midwest Stream Restoration Symposium (UMSRS) held virtually.
- H. Continued serving as a vocal stakeholder in the ongoing process to setup an in-lieu fee program to deal with compensatory mitigation requirements in Iowa stemming from changes in the way the Rock Island USACE office interprets federal rules. Coupled with the creation of the new Iowa Stream Mitigation Method (ISMM), a tool designed to help standardize mitigation decisions during the USACE permit process, permits requiring mitigation have increased. This has put the USACE in direct conflict with other federal and state programs aimed at flood control and conservation.
- I. Continued a research project led by Iowa State University to measure nutrient loads from eroding streambanks in western Iowa with the goal to make a case for funding stream bed and bank stabilization due to the current emphasis on the state's nutrient reduction strategy.

V. Strategy for the Coming Year

- A. Continue to protect infrastructure and prevent soil loss by providing state cost share to county governments and private landowners for streambed erosion control projects.
- B. Continue providing education to students and the public about the fragility of loess soils and river channel stability and processes.
- C. Continue cooperation with Iowa DNR Fisheries Division and US Fish and Wildlife Service to modify existing grade control structures to allow fish migration.
- D. Continue work with the NRCS to inventory PL-566, PL-534, pilot, and RC&D watershed structure documents statewide.
- E. Begin work with Iowa DNR River Programs Team to identify stream reaches in western Iowa that would be good for recreation and avoid those with hazardous grade control structures.
- F. Continue monitoring and building bored headcut basins in the Loess Hills in conjunction with the USDA-NRCS and IDALS. Despite being experimental, the bored headcut basin design was recognized in 2015 by the NRCS as an approved, viable, cost-effective method of controlling deep gully headcuts with small drainage areas in the Loess Hills.
- G. Continue to provide technical assistance for bank stabilization projects.

Hungry Canyons Projects in Progress as of 12-13-21

County Grade Control Projects - Uses State Funds

Project #	County (or sponsor)	Stream	Total Cost	HCA Share	Sponsor Share
18-1	Guthrie	Lone Grove Crk.	\$ 140,000.00	\$ 112,000.00	\$ 28,000.00
18-2	Guthrie	Lone Grove Crk.	\$ 120,000.00	\$ 96,000.00	\$ 24,000.00
18-3	Guthrie	Lone Grove Crk.	\$ 60,000.00	\$ 48,000.00	\$ 12,000.00
21-1	Crawford	Beaver Crk. Trib.	\$ 45,000.00	\$ 36,000.00	\$ 9,000.00
21-2	Plymouth	Floyd R. Trib.	\$ 11,466.50	\$ 9,173.20	\$ 2,293.30
21-3	Plymouth	Indian Crk. Trib.	\$ 9,931.00	\$ 7,944.80	\$ 1,986.20
21-4	Adams	Kemp Crk. Trib.	\$ 30,477.75	\$ 24,382.20	\$ 6,095.55
21-5	Adams	Mid. Nodaway R. Trib.	\$ 22,245.50	\$ 17,796.40	\$ 4,449.10
21-6	Adams	E. Nodaway R. Trib.	\$ 21,756.68	\$ 17,405.34	\$ 4,351.34
21-7	Montgomery	Lit. Tarkio Crk.	\$ 38,049.00	\$ 30,439.20	\$ 7,609.80
21-8	Crawford	Boyer R. Trib.	\$ 31,000.00	\$ 24,800.00	\$ 6,200.00
21-9	Plymouth	W. Fk. Lit. Sioux R. Trib.	\$ 9,638.00	\$ 7,710.00	\$ 1,928.00
21-10	Plymouth	Westfield Crk. Trib.	\$ 8,870.00	\$ 7,096.00	\$ 1,774.00
21-11	Woodbury	Lit. Sioux R. Trib.	\$ 87,562.64	\$ 70,050.00	\$ 17,512.64
Total			\$ 635,997.07	\$ 508,797.14	\$ 127,199.93

Stream Profile Surveys - Uses State Funds

Project #	County (or sponsor)	Stream	Total Cost	HCA Share	Sponsor Share
SPS-18-1	Guthrie	Lone Grove Crk.	\$ 10,000.00	\$ 8,000.00	\$ 2,000.00
Total			\$ 10,000.00	\$ 8,000.00	\$ 2,000.00

EWP Agreements 2019-2020 - Uses State Funds

DSR Number	County / Site Name	Total Cost	HCA Cost	Sponsor Cost	NRCS (Federal) Cost
19-03-19-5026-093	Mills 1	\$ 248,175	\$ 24,817.50	\$ 37,226.25	\$ 186,131.25
		\$ 248,175.00	\$ 24,817.50	\$ 37,226.25	\$ 186,131.25

Small Structure Projects - Uses Interest Funds

Project #	County	Name	Location	Total Cost	HCA Share	Landowner + Government Share
21-155	Fremont	Lee & Lucas Dinklage	Camp Crk. Trib.	\$ 49,100.00	\$ 8,500.00	\$ 40,600.00
Totals				\$ 49,100.00	\$ 8,500.00	\$ 40,600.00

Total obligated: \$ 550,114.64

Hungry Canyons Alliance
Approved FY2022 Budget
July 1, 2021 to June 30, 2022

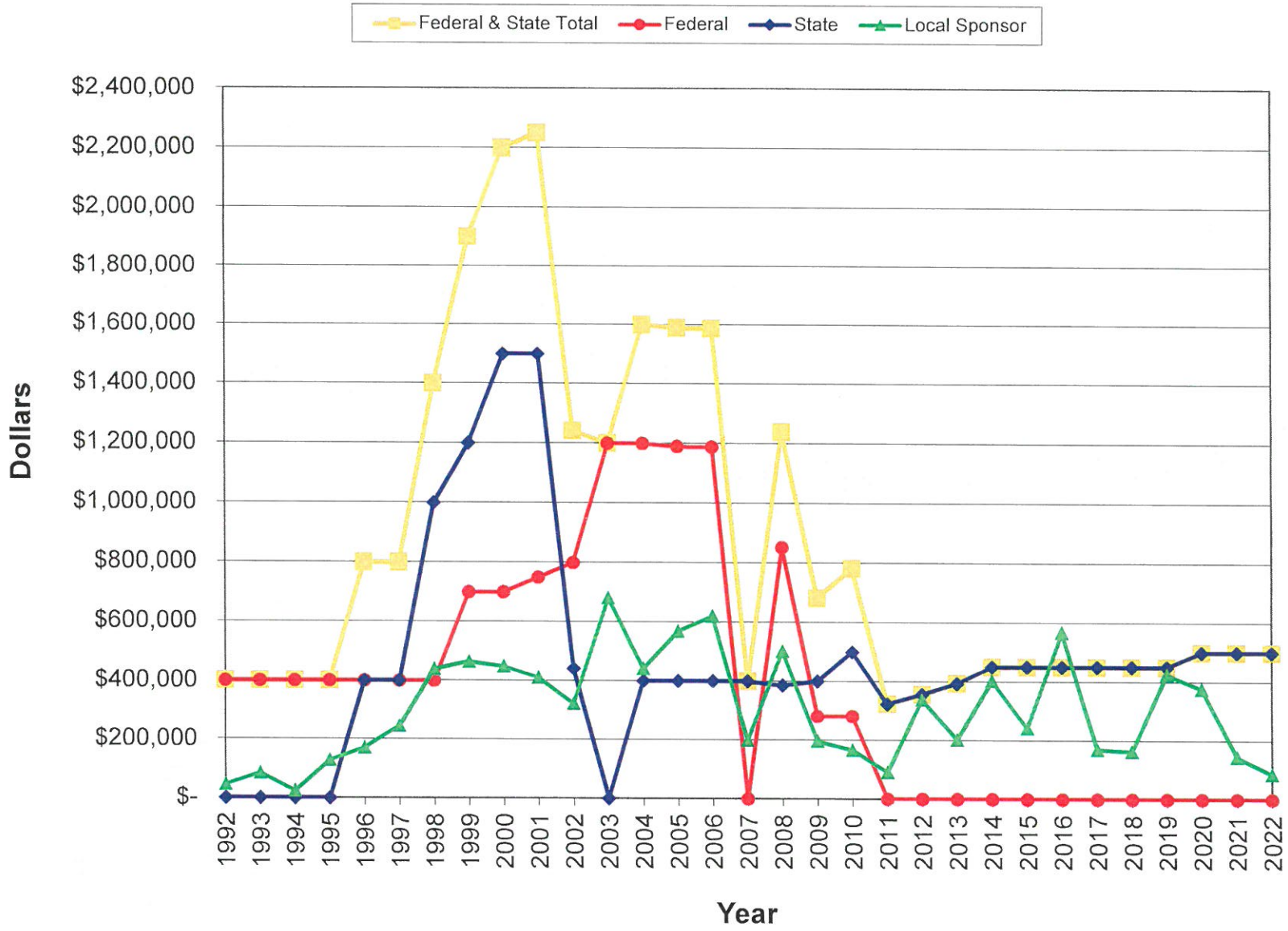
I. Available or expected funds		State	Interest	County	Contract	Federal
A. New appropriations		\$ 500,000				\$ -
B. Unobligated state appropriations (pre-FY22)	(6/30/21)	\$ 409,823			Contract income will be reimbursed to salary	
C. Unobligated interest	(6/30/21)		\$ 74,537			
D. Differed salary already paid to GH	(6/30/21)			\$ (1,154)		
E. Unobligated county fees & interest	(6/30/21)			\$ 39,205		
F. County dues received for FY22	(6/30/21)			\$ 27,000		
G. County dues expected for FY22	(6/30/21)			\$ 58,500		
H. WMA-HUD project expected for FY22	(6/30/21)				\$ 200	
I. PL-534/566 project expected for FY22	(6/30/21)				\$ 33,752	
Total available funds		\$ 909,823	\$ 74,537	\$ 123,551	\$ 33,952	\$ -

II. Expenses from state and federal appropriations						
A. Available for projects						
1. HCA county structures (estimated)		\$ 618,389				\$ -
2. EWP county structures (estimated)		\$ 209,434				\$ -
B. HCA administration						
1. LHDCA administrative expenses from state appropriations (1.75%)		\$ 8,750				
2. GHRC&D administrative expenses (office space, bookkeeper, vehicle, utilities etc.) (5% of FY2021 approp., but not < \$35,000)		\$ -		\$ 35,000		
3. Staff (salary, benefits)		\$ 41,250	\$ 10,000	\$ 38,000	\$ 33,952	
4. Operational reserve (6-month 1/2 time)			\$ 40,000	\$ 20,000		
C. Research and education						
1. Research, education, & development (GIS, special projects, stream table, other)		\$ -				
2. Stage-discharge / crest-stage gages		\$ -				
3. Aerial video reconnaissance - misc.		\$ -				
4. Aerial video development		\$ -				
5. Bank erosion & nutrients research project		\$ -				
6. Road signs		\$ -				
7. Stream profile surveys		\$ 15,000				
8. Experimental bored headcut basins		\$ 17,000				
9. Experimental scrap tire structures		\$ -				
III. Expenses from interest fund						
A. Available for projects						
1. HCA small structures			\$ 17,000			
IV. Expenses from county fees						
A. Administration						
1. Insurance				\$ 700		
2. Supplies/equipment (computer, camera, cell phone, etc.)				\$ 1,700		
3. Postage				\$ 200		
4. Office / field assistants				\$ -		
5. Meeting expenses & travel				\$ 2,500		
6. Conferences/training				\$ 1,200		
7. Subscriptions, books, media				\$ 100		
8. Miscellaneous (cards, awards, etc.)				\$ 100		
9. HCA shirts				\$ 250		
10. Services (web page, maps, etc.)				\$ -		
B. Lobbying						
1. State lobbyist				\$ 7,500		
2. Lobbying trips (DC trip, Des Moines trip)				\$ -		
Subtotal of expenses (no county structures)		\$ 82,000	\$ 67,000	\$ 107,250	\$ 33,952	\$ -
Total budgeted expenses		\$ 909,823	\$ 67,000	\$ 107,250	\$ 33,952	\$ -

potential interest earned by FY23: \$ 4,922

\$ 12,458 \$ 16,632

Hungry Canyons Alliance Funding



The Loess Hills Alliance 2021 Annual Report



Our Mission

The Loess Hills Alliance strives to protect special natural and cultural resources while ensuring the economic viability and private property rights of the region through the creation of a common vision for Iowa's Loess Hills.

A region where ...

- The unique land formation, culture, and history of the hills are conserved for future generations
- Areas of special interest are protected from development, soil mining, soil erosion and other visually disruptive activities
- Awareness and educational opportunities are promoted about the unique nature of the region
- Vegetation is managed to encourage native plant and wildlife communities, such as prairie, savanna and oak woodlands
- Regional recreational opportunities and tourism attractions exist and public areas are expanded
- References and resources are available to landowners interested in protecting features on their land
- Local businesses and rural communities are supported



Executive Summary

As with many agencies and governmental activities, the COVID-19 pandemic altered operating procedures of the Loess Hills Alliance (LHA) in the 2021 fiscal year. From July through January, committee meetings were largely conducted via ZOOM and other electronic media. Once we reached 2021, with access to vaccines and the partial re-opening of society we resumed in-person meetings, while retaining ZOOM as an alternative meeting attendance access option. Yet with all the difficulties that COVID presented, we continued to function effectively through our 3 working committees, with their activities included within this report.

In November 2020, the "Friends Loess Hills State Forest" group, which the LHA helped establish in 2018 split from us to become free standing after having achieved IRS 501c3 status. This group continues and supports our mission within the central loess hills landform area.

The Executive Committee voted to contribute funding for the annual Loess Hills Prairie Seminar, held each year the first week of June in Monona County. As a special grant, the Executive Committee allocated \$15,000 for Loess Hills educational exhibits, some portable, at the planned Willow Lake Nature Center (Harrison County Conservation Board).

FY21-22 State Budget: The state funding of \$40,000.00 for the Loess Hills Alliance was approved for FY21-22, the same as in FY20-21. For the coming year the Executive Committee approved funding allocations for committee work (at the same levels as last year) as follows:

Stewardship - \$7,000.00

Protection - \$7,000.00

Economic Development - \$7,000.00

Executive - \$15,000.00

Note that allowable administrative fees from the State (10%) is \$4,000.00, totaling the allocations of the \$40,000 appropriation.

In March the following Executive Committee members were elected by the Board of Directors for the current year:

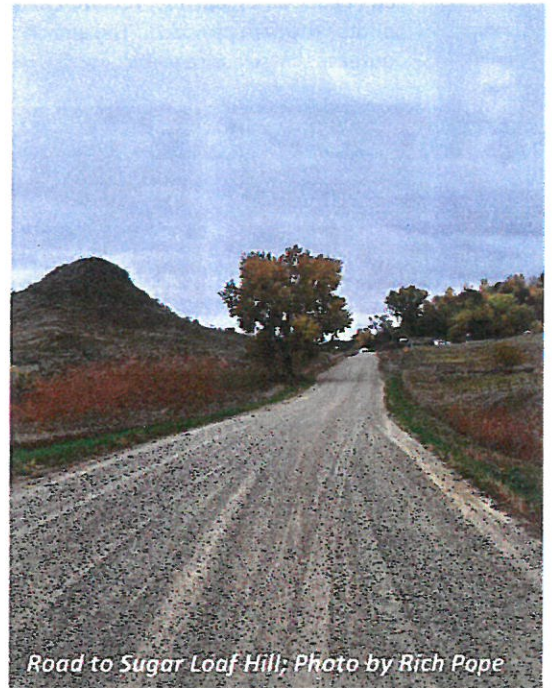
Chair - Rich Pope (Woodbury)

Vice-Chair - Dawn Snyder (Woodbury)

Secretary - Nick Beeck (Plymouth)

Treasurer - Renea Anderson (Western Iowa Tourism Region)

At-Large - Robert Benton (Fremont), Patty McCall (Monona), Graham McGaffin (The Nature Conservancy)



Road to Sugar Loaf Hill; Photo by Rich Pope



Economic Development Activities

The Economic Development Committee worked this year to meet the goals set forth in our mission. It is our endeavor to enhance the economy of the Loess Hills region by:

- Providing assistance and being a resource for small businesses and community attractions as decided by committee members.
- Increasing visitor traffic at recreation facilities, events and area attractions.
- Offering education and technical assistance to business and government agencies.

The committee consists of representatives from economic development, conservation, recreation, convention and visitors bureaus, elected officials on local and federal levels, and small businesses and tourist attractions. The committee meets quarterly at a central location.

ADVERTISING

The committee places a high priority on advertising the Loess Hills and promoting businesses and attractions. Advertising was placed in numerous publications that allow information about the Loess Hills to reach into other states as well as here in Iowa.

We continue to have a presence on mycountyparks.com through the Loess Hills counties that have participated with that website. We also continued our regular advertising in the Sioux City Visitors Guide, the Council Bluffs Visitors Guide, and Our Iowa.

WEBSITE AD: VISITWESTERNIOWA.COM

Thousands of website impressions were reached on the Western Iowa Travel Region's website. They also continue to fulfill requests for individual information as well as Welcome Centers for the Loess Hills and the counties included. Many calls were fielded this year about what attractions and businesses were open, what campgrounds were available, etc. Contact with attractions, area tourism directors and County Conservation Boards was crucial as information was fluid and changed quickly.

WITR also continues to share and post information on events and attractions on their Facebook page. They have thousands of likes and post events that they receive advance notice of as well as any photos they are provided. The activity on their website far outpaces the website traffic.

IOWA TRAVEL GUIDE

An ad was placed in both issues of the Iowa Travel Guide showing the cover of the Loess Hills Visitors Guide. One was released in the Spring and another in the Fall. This was a new marketing strategy to try to entice more visitors to the State.

GUIDEBOOK

The committee continues to place and distribute the Loess Hills Scenic Byway Guidebook. They are distributed to welcome centers throughout the state and to area attractions and visitors centers as well. The Loess Hills guidebook was given at the Clay County Fair where 18 cases were distributed. The Loess Hills Guidebook has been recognized by industry leaders as one of the gold standards for guidebooks.

FULFILLMENT

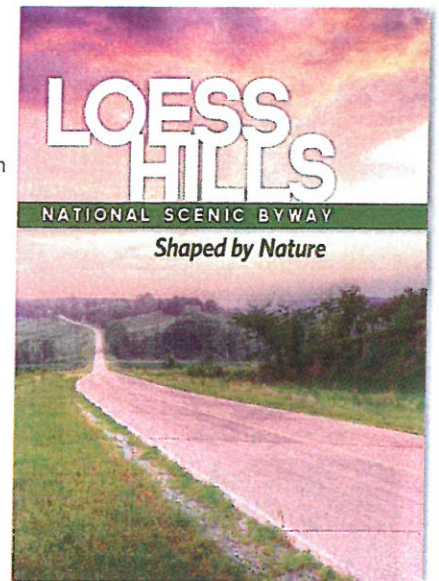
The Western Iowa Tourism Region (WITR) receives and fulfills requests for information about the Loess Hills and the Alliance. For the Fiscal Year running July 2020-June 2021 fulfillment pieces mailed on behalf of the Alliance were in high demand once again. During COVID people were looking for things to do and explore while not being in a group setting and driving and touring the Loess Hills was part of their adventures. The Loess Hills has visitors from all 50 states and the District of Columbia as well as at least 19 foreign countries. The seven Loess Hills Counties also took part in the T-Bone Trail. This was a partner between the Iowa Gallivant, the WITR and the Iowa Beef Council. The blog hits totaled over 845,000 with another 318,000 watching the videos made of each County and their attractions. Each year thousands of Loess Hills Visitors Guides are placed with additional information about attractions, byway info and the three brochures for Birding, RVing and Motorcycling being included as well. There is a direct effect on requests for Loess Hills information that can be seen in conjunction with the advertising that is placed. As soon as an ad comes out the inquiry requests rise. People are also asked where they heard about the Loess Hills. Their responses help drive the advertising strategy.

BROCHURES

The brochures featuring birding, motorcycling and RVing are in demand and are placed in welcome centers, area attractions, and businesses. Several printings have been necessary to keep up with the demand. Another reprinting is being planned.

TRUCK WRAP

A 53 foot semi-truck is traveling around Iowa showcasing the Loess Hills. This is a partnership with the Iowa Tourism Office and the trucks are part of the Iowa Alcohol Beverages Division (ABD).



2021 Committee Activities

Protection Activities

The Protection Committee expended \$4,000 in 2021 for vegetation management on the Armstrong property in Harrison County.

The Armstrong property is located near the northern border of Harrison County, adjacent to the Loess Hills State Forest. The 160-acre parcel is located a half mile south of the Loess Hills Scenic Byway and within the Little Sioux Special Landscape Area. The property has high quality remnant prairie (approx. 60 acres) and is buffered on two sides by State Forest. Species identified on the property include Slender Ladies-Tresses, Large flowered Beardtongue, Leadplant, Skeletonweed, Big Bluestem, Dotted Blazing Star, Indian Grass, Sideoats Grama, Pale Purple Coneflower, Whorled Milkweed, Stiff Goldenrod, and Green Milkweed. Approximately 42 acres of the property are covered by deciduous trees or shrubs that have encroached into the prairie; species include Ash, Red Elm, Siberian Elm, Cottonwood, and Dogwood. Remarkably, Eastern Red Cedars on the property have not spread far out of their normal range.

Funding from the Loess Hills Alliance supported INHF's contract work with Conservation Corps Iowa (CCI) to remove invasive deciduous trees and shrubs. Restoration work has begun on the Armstrong property and is expected to continue through fall of 2022. LHA Protection Committee funding is being leveraged 3:1 by the Iowa Natural Heritage Foundation.



*Armstrong property, Harrison County;
Photo by Graham McGaffin*



*2021 Hitchcock BioBlitz;
Photo by Amy Campagna*

Stewardship Activities

In early 2021, the Committee issued a request for proposals for stewardship projects. Sufficient funds were available to support the three proposals received; they were successfully completed in spring and summer. These include:

Loess Hills Fire Partners – Funds supported the Loess Hills Cooperative Burn Week, held annually (postponed in 2020), which took place April 26-30th. The event was based out of Broken Kettle Grasslands and included controlled burns in Plymouth, Woodbury, and Monona counties. A total of 109 people from 48 agencies/organizations, volunteers, and volunteer fire departments participated from 3 countries, 10 states, and 16 counties within Iowa. Nearly 1,800 acres of public and private land were burned over 21 different burn units. The event offered important hands-on training opportunities for all skill and experience levels.

Harrison County Conservation Board – These funds supported a seasonal natural areas staff member to help with land management on county conservation board properties. The seasonal employee helped with invasive species removal, trail maintenance and installation, and other stewardship activities.

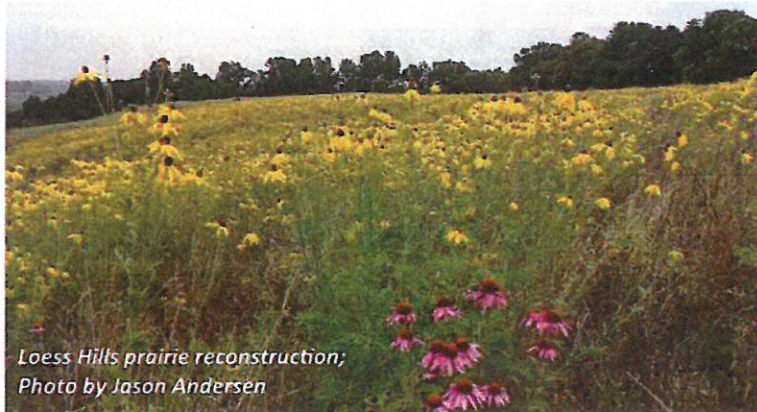
Pottawattamie Conservation – Funds supported the Hitchcock Nature Center BioBlitz, a 24-hour event cataloguing organisms within the 1,281-acre park. A BioBlitz is a gathering of scientists, land managers, educators, and members of the community, working together to locate and identify as many different species as possible in a 24-hour period. The resulting data provide a snapshot of the biological community in a given area, and is conducted there every 10 years. Approximately 30 scientific experts participated, identifying 712 species (not including the expected herpetology data) over eight taxonomic groups. Among these, there were eight new county records of bryophytes. This year's event was the second-ever at Hitchcock, and will be used to measure the outcomes of land stewardship activities on flora, fauna, and other organisms.

Additionally, the Stewardship Committee continued to financially support the private lands biologist position employed by Pheasants Forever, Inc. and Quail Forever. Jason Andersen, Farm Bill Wildlife Biologist, works with farmers and landowners to promote, establish, and manage wildlife habitat in Harrison, Pottawattamie, and Shelby Counties. In fiscal year

2021, Jason worked on over 25 conservation projects in the Loess Hills, including 4 projects that positively affected 43 acres of remnant prairie. He also delivered 18 outreach events for Loess Hills landowners, covering topics including prairie management, invasive species control, and use of prescribed burns. Support for this position is a partnership between the Loess Hills Alliance, Pheasants Forever, the USDA Natural Resources Conservation Service, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Soil and Water Conservation Districts, and other local partners.



*Loess Hills Cooperative Burn Week;
Photo by Lance Brisbois*



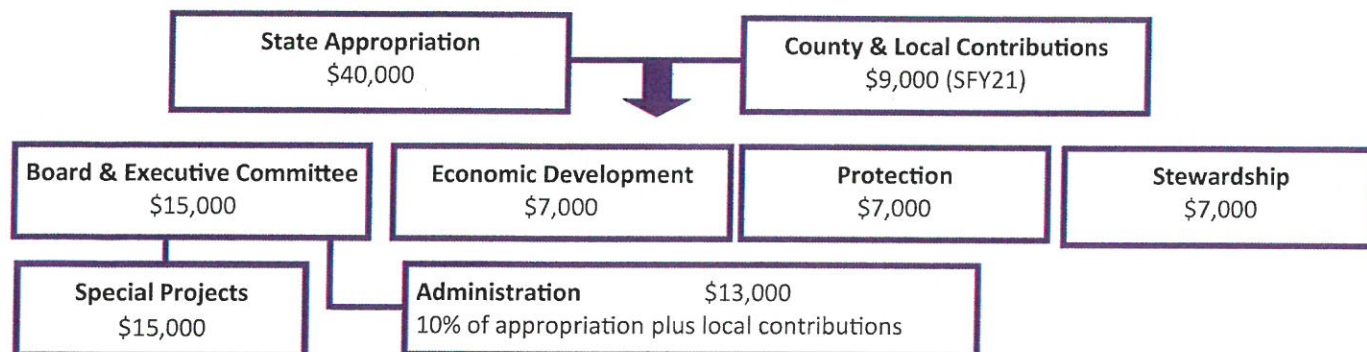
*Loess Hills prairie reconstruction;
Photo by Jason Andersen*

Executive Committee Summary

The Loess Hills Alliance Executive Committee provides leadership to the Board of Directors and ensures that funds appropriated through state funding are leveraged with other sources and used wisely. The most successful use of those funds has included partnering with other organizations, farmers and private land owners to leverage the dollars for the best possible, mutually beneficial outcome within the Loess Hills.

In 2017, the State appropriation to the Loess Hills Alliance was significantly decreased from an historical annual award of \$150,000 to \$40,000. This decrease has significantly impacted the collective ability to support our three objective areas of stewardship, protection and economic development for the region.

The 2021 funds were distributed as follows:



The Loess Hills Alliance has matched state appropriated funds for projects at rates from 3:1 to 35:1. Since SFY2013, the Alliance has supported and leveraged more than \$3 million in projects and resources toward the Loess Hills Region.

Executive Committee

Rich Pope, Chair (Woodbury)
Dawn Snyder, Vice Chair (Woodbury)

Nick Beeck, Secretary (Plymouth)
Renea Anderson, Treasurer (WITR)
Patty McCall, At Large (Monona)

Graham McGaffin, At Large (TNC)
Robert Benton, At Large (Fremont)

2021 Board of Directors

Plymouth County

Nick Beeck
John Meis
Gary Horton

Monona County

Patty McCall
Bo Fox
Alan Dale

Pottawattamie County

Scott Belt
Jeff Franco
Mark Shoemaker

Fremont County

Robert Benton
Dustin Sheldon
Mike Fox

Woodbury County

Dawn Snyder
Rocky Dewitt
Rich Pope

Harrison County

Scott Pape
John Straight
Linda Herman

Mills County

Lonnie Mayberry
Carol Vinton

Loess Hills Development & Conservation Authority Appointees

Brett Bengard, Iowa Division of Soil Conservation
Renea Anderson, Western Iowa Tourism Region (WITR)
Graham McGaffin, The Nature Conservancy (TNC)
Jeff Seago, Iowa Department of Natural Resources

Whitney Reimers, Iowa Bankers Association
Lance Brisbois, Golden Hills RC&D
Brent McCall, Iowa Realtors Association