

# CAMP STEWARDSHIP PLAN



March 9, 2022

*“Conservation means development as much as it does protection. I recognize the right and duty of this generation to develop and use the natural resources of our land, but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us....Moreover, I believe that the natural resources must be used for the benefit of all our people, and not monopolized for the benefit of the few....Of all the questions which can come before this nation, short of the actual preservation of its existence in a great war, there is none which compares in importance with the great central task of leaving this land even a better land for our descendants than it is for us, and training them into a better race to inhabit the land and pass it on. Conservation is a great moral issue, for it involves the patriotic duty of insuring the safety and continuance of the nation.”*

- Theodore Roosevelt, speech at Osawatomie, Kansas, August 31, 1910

The following guidelines and format were based upon the Boy Scouts of America’s Council Conservation Committee Guidebook (430-022, 2011 Printing), Longs Peak Council Conservation Committee publication and the Blue Ridge Mountains Council Conservation Plan (both located within the Conservation Committee Guidebook), and the Broad Creek Memorial Scout Reservation Forest Stewardship Plan (Baltimore Area Council, 2010 printing).

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## CAMP STEWARDSHIP PLAN

**For:**

### **Quivira Scout Ranch (QSR)**

1781 Road 19, Sedan, KS 67361

Location:

on Road 19 between Quivira Road and Road 18

Kansas Grid: 32S 11E: 21, 22, 23, 26, 27, 28

Watershed: Verdigris 110701

In:

Chautauqua County

On:

<b>Acres</b>	<b>Notes</b>
1065	Main Pioneer Camp and Program Area
648	Indian Springs area and western edge of Pioneer Camp
358	Warehouse, Ranger's house, and Bradshaw Area
444	Contains northeast portion of Hell's Hollow
142	Dam and spillway area of lake
457	Murray Gill Lake
<b>3114</b>	<b>Total</b>

Prepared by:

Beverly J. Klaus, M.S.

Conservation Subcommittee Chair

**NOTE TO READER**

This Camp Stewardship Plan has been designed to meet the Boy Scouts of America guidelines for the Council Conservation Committee.

This Camp Stewardship Plan is a “living” document, designed to be frequently consulted when determining management activities, and changed or updated as needed to conform to changing resource conditions and landowner objectives. This Camp stewardship Plan has been reviewed and endorsed by the Quivira Council’s Properties Committee and Executive Board.

Beverly J. Klaus Chairman – Council Subcommittee	Date
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Warren McCoskey Chairman – Properties Committee	Date
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Paul King Ranger – QSR	Date
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Brian Nastase Scout Executive – Quivira Council, BSA	Date
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**ACKNOWLEDGEMENTS**

This document represents the collaborative efforts of several volunteers under the direction of the Quivira Council, BSA, Conservation Subcommittee. The Conservation Subcommittee would like to acknowledge the following for their efforts in preparing the plan.

- |  |               |                                      |
|--|---------------|--------------------------------------|
| Beverly Klaus                                  | Vicki Cikanek | (KDWP) – deer survey                 |
| Paul King – QSR Camp Ranger                    | Seth Lundgren | (KDWP) – fish survey                 |
| Leland Russell, PhD (Wichita State University) | Zach Cordes   | (KDWP) – small mammal survey         |
| Dexter Mardis (Wichita State University)       | ?             | <b>(KDWP) – Christmas bird count</b> |

## THE COUNCIL CONSERVATION SUBCOMMITTEE

Conservation is “the wise use of natural resources – minerals, soil, plants and animals – so that these resources will continue to serve the greatest number of people, to the fullest advantage.”

Scouts and Scouters are cautioned “that before any project is undertaken...all possible outcomes should be predicted, as far as possible, so that the project will produce the greatest good for the greatest number of people.”

### MISSION STATEMENT

The Council Conservation Subcommittee provides the council with all available expertise regarding matters of ecology, conservation, and resource management so as to guide policy making and operational decisions regarding the management of the councils’ natural and cultural resources, promotion of conservation-related training, and advancement of conservation programs.

### PURPOSE OF THE COMMITTEE

The Council Conservation Subcommittee (CCSc) is charged with the promotion and implementation of environmental conservation and educational efforts within the council. The CCSc should continuously monitor activities at the camp to ensure that the policies and procedures set forth in the plan are followed. The committee operates as a sub-committee of the Council Properties Committee.

The Council Conservation Subcommittee is also responsible for recommending the reduction of hazardous conditions present on Scout property resulting from such natural conditions as hazardous trees, steep slopes, swift water, unstable surfaces, insect and arthropod hazards, venomous reptiles and amphibians, dangerous mammals, troublesome plants, water-borne parasites, severe weather conditions, and high water/flash flood warnings.

### TERMS OF COMMITTEE MEMBERSHIP

The Conservation Subcommittee Chair is appointed by the Council Properties Committee Chair, and serves a term of one calendar year. Members at large may be appointed by the Council Conservation Committee Chair on an annual basis.

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## LANDOWNER'S OBJECTIVES

As indicated by two previous QSR Conservation Management Plans, the prior emphasis was to restore the land to as near a pristine condition as possible (pristine being defined as pre-colonial settlement of the land). This pristine condition consisted of prairie / savannah / woodlands / and woody stream courses and ravines. This prairie / savannah environment was impacted by fire suppression along with cattle overgrazing.

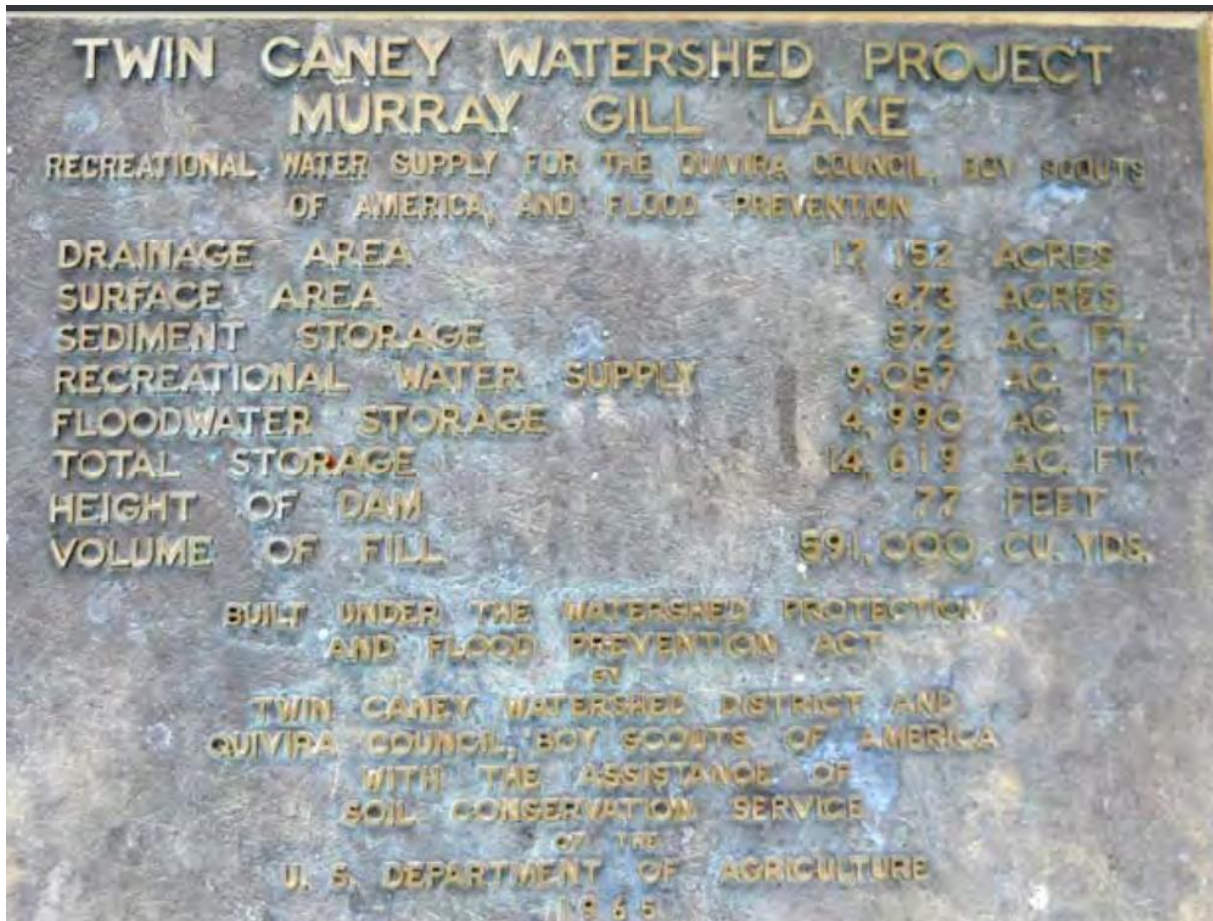
The current primary objective of the Camp Stewardship plan for the Quivira Scout Ranch of the Quivira Council, BSA, is to conserve, protect and enhance the woodland, prairie and water resources of the property and to provide a facility and resources for the Boy Scouts to conduct their Scout camping and associated recreational programs. As a conservation and educational organization, we desire to apply an integrated-use management approach that protects endangered and threatened species, unique natural communities, fish and wildlife habitats, woodland health, soil and water conservation, watershed protection, management of invasive exotic species of plants and animals, and cultural heritage.

The desired future outcome for this property is a conserved and preserved healthy woodland, savannah, prairie and aquatic habitats, capable of providing for all the above-mentioned resource objectives in a sustainable fashion.

## OVERVIEW

Quivira Scout Ranch is located in Lafayette Township, Chautauqua County, in the ecosystem known as Cross Timbers. This ecosystem is described as a transition zone from eastern forests to western prairies. The landscape is a mix of woodland, savannah, and grasslands with ephemeral streams in ravines draining into the lake. The elevation of the property ranges from 840 feet to 1034 feet, with the highest point located along the north fence line to the east of the camp road. The landscape in Chautauqua County is dominated by cattle grazing, agriculture, and fragmented post oak / black jack oak / hickory woodlands. The dominant agriculture uses in the landscape include beef cattle ranching, and row crops consisting primarily of grains, oilseeds, dry beans, and dry peas.

Seven contiguous parcels of largely unimproved land that created QSR were acquired by Quivira Council, BSA from 1960 through 1974. In 1965, a dam was constructed on North Caney Creek by the Twin Caney Watershed District and Quivira Council, creating a 475-acre reservoir named Murray Gill Lake, with a drainage area of 17, 152 acres. The lake is completely contained within the 3000+-acre Quivira Scout Ranch.



Project Plaque for Murray Gill Lake dam



Bridge over Murray Gill Lake

## BRIDGE OVER MURRAY GILL LAKE

Overview: Pony truss bridge over North Caney Creek, 7.0 mi. north and 1.0 mi. west of Sedan

History: Built 1909 in Wichita. Replaced 1963. Moved to this site in 1965.

Design: Three polygonal Warren pony trusses

Dimensions:

Length of largest span: 69.9 ft.

Total length: 211.9 ft.

Deck width: 19.3 ft.

Also called: Greiffenstein Bridge

Name: LOCAL R.6-5.1 over STREAM

Purpose: Carries highway over waterway

Average daily traffic (as of 2013): 10

Route classification: Local (Rural).

Owner: County Highway Agency

Historic significance: Bridge is not eligible for the National Register of Historic Places

Main spans material: Steel

Deck type: Concrete Cast-in-Place

Inventory numbers:

KS 000100941606801 (Kansas local bridge number on the National Bridge Inventory)

BH 17551 (Bridgehunter.com ID)

Inspection report (as of October 2017):

Overall condition:	Poor
Superstructure condition rating:	Poor (4 out of 9)
Substructure condition rating:	Satisfactory (6 out of 9)
Deck condition rating:	Satisfactory (6 out of 9)
Sufficiency rating:	36.9 (out of 100)
Status:	Posted for load [P]

Structural appraisal: Meets minimum tolerable limits to be left in place as is

Deck geometry appraisal: Meets minimum tolerable limits to be left in place as is

Water adequacy appraisal: Better than present minimum criteria

Roadway alignment appraisal: Equal to present desirable criteria

Channel protection: Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in a stable condition.

Scour condition: Countermeasures have been installed to mitigate an existing problem with scour.

Recommended work: Replacement of bridge or other structure because of substandard load carrying capacity or substantial bridge roadway geometry.

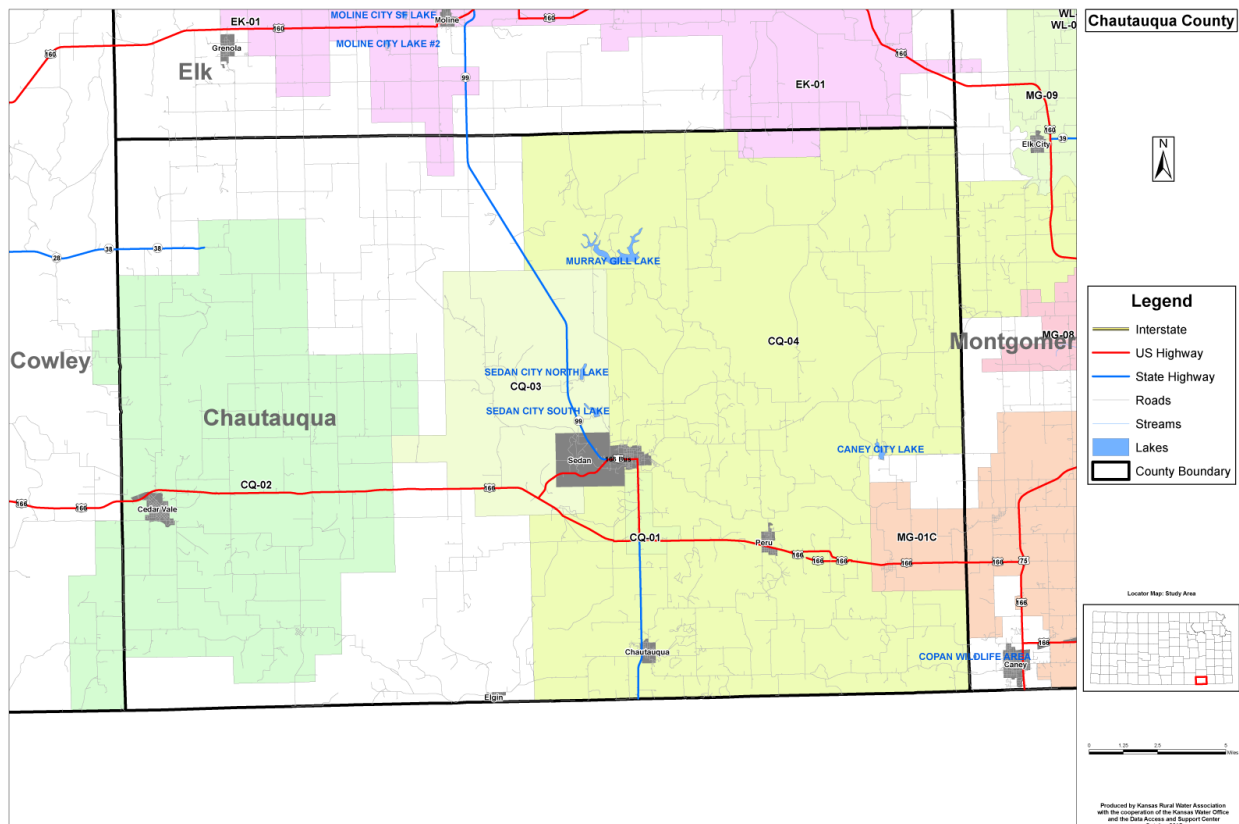
Estimated cost of work: \$630,000 (as of 2017)

## MUNICIPAL WATER

Chautauqua RWD 4 was established in 2007 for Sedan and Eastern Chautauqua County. The project involves 280 miles of pipeline. The district’s water source is Public Wholesale Water Supply District 20 (PWWSD 20), which treats water from Quivira Boy Scout Lake (Murray Gill Lake).

PWWSD 20 also supplies water for CQ RWD 1, RWD 2, RWD 3, Elk RWD 1, and cities of Sedan, Peru, Chautauqua, Cedar Vale, Moline, and Grenola.

Pioneer Camp purchases water from PWWSD 20; Indian Springs purchases water from CQ RWD 4; Ranger house and Bradshaw purchase water from CQ RWD 3.



## THREATS TO FOREST HEALTH

Threats to woodland, grassland and water health continue to exist on the property. These threats will be described in detail throughout this plan. Threats include but are not limited to the following:

- Unexpected wildland fire outside of the recommended prescribed fire regime
- White-tailed deer overabundance continues to threaten the forest health, impedes natural generation of native trees, shrubs and forbs, and promotes the growth of exotic invasive plants
- Exotic invasive plants, including Johnson grass and Sericea lespedeza and others continue to spread throughout the property and pose a treat to the natural woodland / grassland condition and reduce recreational potential
- Expansion of obnoxious species, such as Eastern red cedar, when abundant will decrease wildlife diversity and recreational potential
- Soil erosion and soil compaction on this fragile landscape caused by improper trail / road construction and maintenance camp wide, inadvertent “shortcuts” created by campers, and lack of structured camp sites within Camp Pioneer
- Lack of sanitation capacity during high volume usage
- Potential lead seepage into waterways from shooting sports
- Presence of and introduction of invasive species into Murray Gill Lake
- Contamination of Murray Gill Lake from inadvertent fuel spills from recreational boaters

## METHODOLOGY

The Quivira Scout Ranch property was delineated into unique sections and mapped as Management Units. Each Management Unit was then inventoried and data relative to the unit was collected; including overstory and understory species composition, recreational use and potential, invasive plant and animal threats, soil condition, land management history, natural and cultural heritage value and other important qualitative observations. Recommendations were prepared for each management unit consistent with the plan objectives, first conforming to rare, threatened and endangered species requirements; major threats to forest health; and opportunities and needs to enhance the woodland / grassland / water health.

BSA Merit Badges that promote conservation, environmental and nature studies were identified and recommended for education opportunities on camp.

Cultural and historic structures were identified from previously published materials.



**AERIAL PHOTOS**



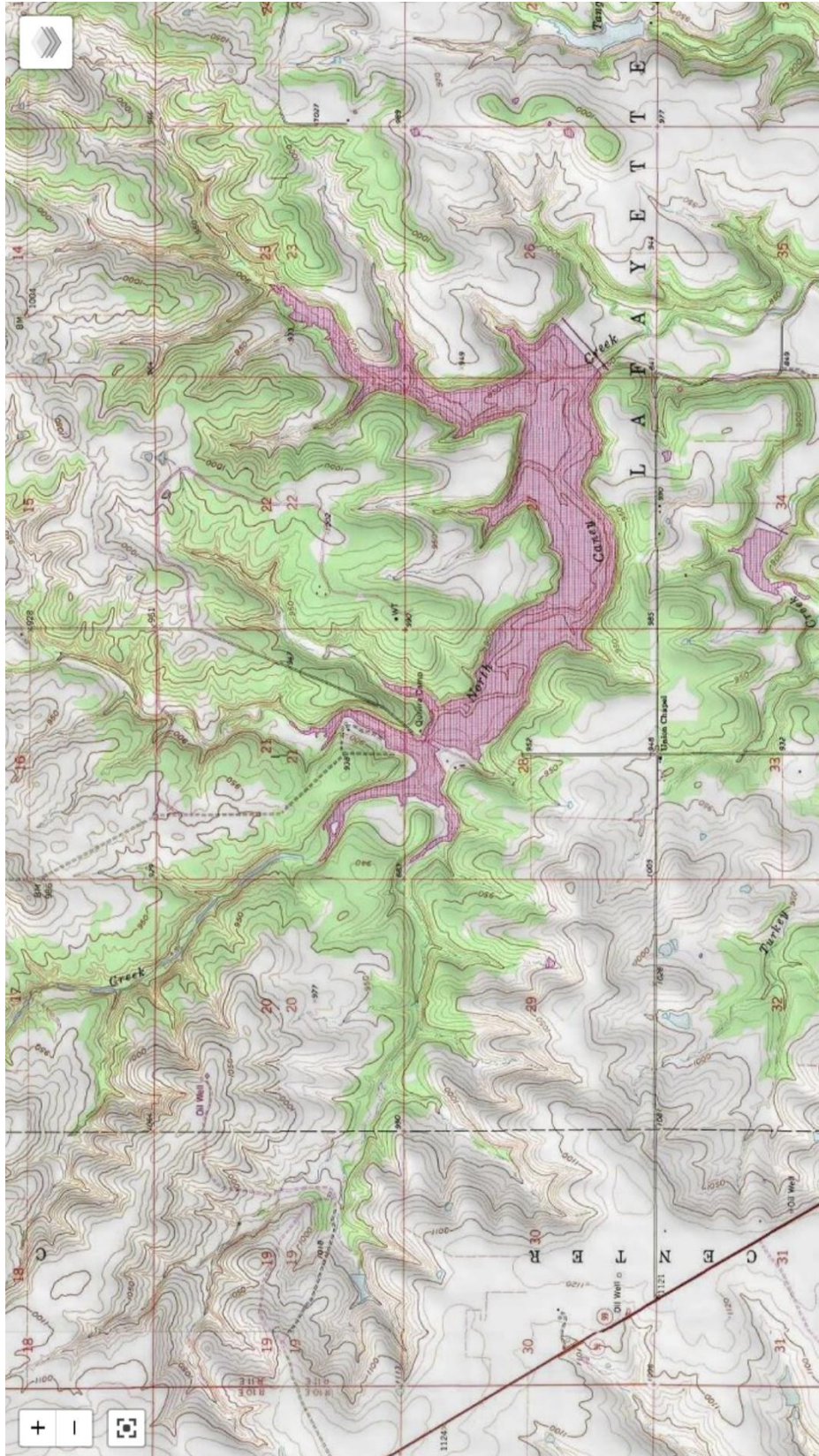
Quivira Scout Ranch Outlined in Black



Lake depth map for Murray Gill Lake

0 250 500 Meters

TOPOGRAPHIC MAP





## QSR STEWARDSHIP SUBSECTION OVERVIEW

### I. ECOSYSTEM AND NATURAL RESOURCES

The *Ecosystem and Natural Resources* subsection is designed to provide guidance in the management of the terrestrial and aquatic ecosystems present at Quivira Scout Ranch, Sedan, Kansas. Conservation projects will be identified that promote the ecosystem management objectives.

This subsection also highlights those plant and animal species of special concern (endangered, rare, invasive, etc.) and those that present specific hazards.

### II. HIKING TRAILS

The *Hiking Trails* subsection highlights the current existing trails on camp property, and to provide guidance in the development and maintenance of trails to mitigate the environmental impact on the landscape. This will also include identification of misused trails that need repair and/or rerouting; and identification of unauthorized trails that need implementation of exclusion measures.

### III. CONSERVATION/ENVIRONMENTAL/NATURE EDUCATION PROGRAM AND ADVANCEMENT

The *Conservation Education Program* subsection focuses on activities, advancement, awards, community and camp service and training that promote conservation goals. It will serve as a guide for Scouts and Scouters who desire to incorporate conservation as an integral part of their individual and unit program. The Scouting program includes numerous advancement requirements that relate to conservation, environment, and nature study.

This section will also address training opportunities for Merit Badge Counselor, Leave No Trace, Chainsaw Operator, and Hazard Tree Analysis and Maintenance.

### IV. CULTURAL HERITAGE

The *Cultural Heritage* subsection is designed to provide guidance in the management of the historical and cultural structures present at Quivira Scout Ranch.

### V. REVENUE OPPORTUNITIES

The *Revenue Opportunities* subsection is designed to identify potential revenue sources for Quivira Council using Quivira Scout Ranch resources. These revenues will be used to offset the operation of the camp property, as well as provide for camperships to scouts in need.

### VI. LEAVE NO TRACE AND GENERAL USE OF CAMP FACILITIES

The *Leave No Trace and General Use* subsection will discuss policies regarding Leave No Trace, Outdoor Ethics, Tread Lightly!, consumptive uses (hunting, fishing, gathering wild edibles or other vegetation, etc.) as well as the use of trails, camps, back country areas, and other ranch uses.

**PROPERTY WIDE RECOMMENDATIONS**

## I. ECOSYSTEM AND NATURAL RESOURCES

QUIVIRA SCOUT RANCH  
Resource Inventory

**Monitor for erosion – trails, campsites, campfire rings, chapel**

### CONSERVATION PROJECTS

**See CCC guide pg 19**

#### Natural Areas

**Natural areas are areas of ecological, geological, or topographical significance and possess such features as unique plant communities, streamside forest areas, wetlands, or habitat for animal species of special concern that necessitate protection to ensure sustainability. As a general rule, these areas shall be maintained in a state of “wilderness” – free from consumptive management. Harvesting timber and high impact recreation, including use of campfires, ATVs, etc. should be prevented in Natural Areas. Lesser impact activities including hiking on designated trails, primitive camping, nature studies, boating, etc. shall be the normal and prescribed use. It is recognized that consumptive/high impact management may be required to maintain the natural heritage values, such as removal or treatment of invasive exotic plants or animals, wildfire suppression, and hunting, as prescribed by qualified natural resource professionals in concurrence with the Quivira Council.**

**South – currently overgrazed; spring burned every year**

**Tick control – fungicide (Connecticut study); add in leaders guide, posters, efforts of control**

OUTPOSTS and Ledge camps

Bridge over gulley at aquatics

roads

## GOALS AND OBJECTIVES

### Management Objectives

- Recommendations for sustainable, scientific, and ethical ecosystem management that promote ecosystem health while minimizing impacts from exotic and invasive species of plants and animals. All resource management and resource harvesting practices should be performed under the direction of qualified resource management professionals.
- Guidelines for the camp that are enforced to maintain compliance with applicable forestry-related laws, regulations, and best management practices.
- Recommendations for minimizing disturbances within riparian areas, wetlands, and other ecologically sensitive areas.
- Recommendations to ensure that chemical pesticides are applied in accordance with EPA-approved labels and that they are applied only when necessary to meet objectives.
- Identification of the primary sources of ecosystem degradation (e.g. air pollution, water pollution, soil erosion, noise, exotic and feral organisms, pest organisms, aesthetic degradation, wildfire, resource extraction, human use, and community concerns) and recommendations of measures to eliminate or mitigate them.

### Management Policies

STEWARDSHIP PLAN SCHEDULE

Hazard Tree Assessment and Maintenance .....

TASK GROUPS

- FORESTRY AND FIRE MANAGEMENT GROUP: Responsible for inventorying, recommending the management and supervision of the use of the forest resources present on council properties. Also responsible for developing a fire management plan for those properties.
- HAZARD TREE GROUP: Responsible for periodically identifying and recommending measures to mitigate or eliminate hazard trees and other potential natural hazards to human use on council properties.
- REAL ESTATE GROUP: Responsible for recommending measures to maintain proper relationships with the landowners adjoining council property and for recommending real estate actions regarding council properties.
- SPECIAL PROJECTS GROUP: Responsible for handling any special conservation-oriented projects or activities sponsored by the conservation committee or the council.
- SOILS AND GEOLOGY GROUP: Responsible for monitoring and managing soil resources present on council properties and managing existing geologic resources.
- WILDLIFE AND FISHERIES GROUP: Responsible for identifying and recommending management of the wildlife and fisheries resources present on council properties.
- CAMPSITE MANGEMENT GROUP: Responsible for recommending the management of campsites present on council properties.

TRAINING PROGRAMS - See the Education Program subsection

Hazard Tree Analysis and Maintenance  
 Chainsaw Operator Certification  
 Trail Development and Maintenance

## MANAGEMENT APPROACH

### Management Zones

<b>A</b>	<b>Indian Springs</b>	<b>E</b>	<b>Ranger's House</b>
<b>B</b>	North Central	<b>F</b>	Pioneer and Program
<b>C</b>	North East	<b>G</b>	South
<b>D</b>	Bradshaw	<b>H</b>	Lake, Shoreline and Dam

### Baseline Reference

Analysis of Existing Conditions and Baseline Reference  
Resource Monitoring Programs

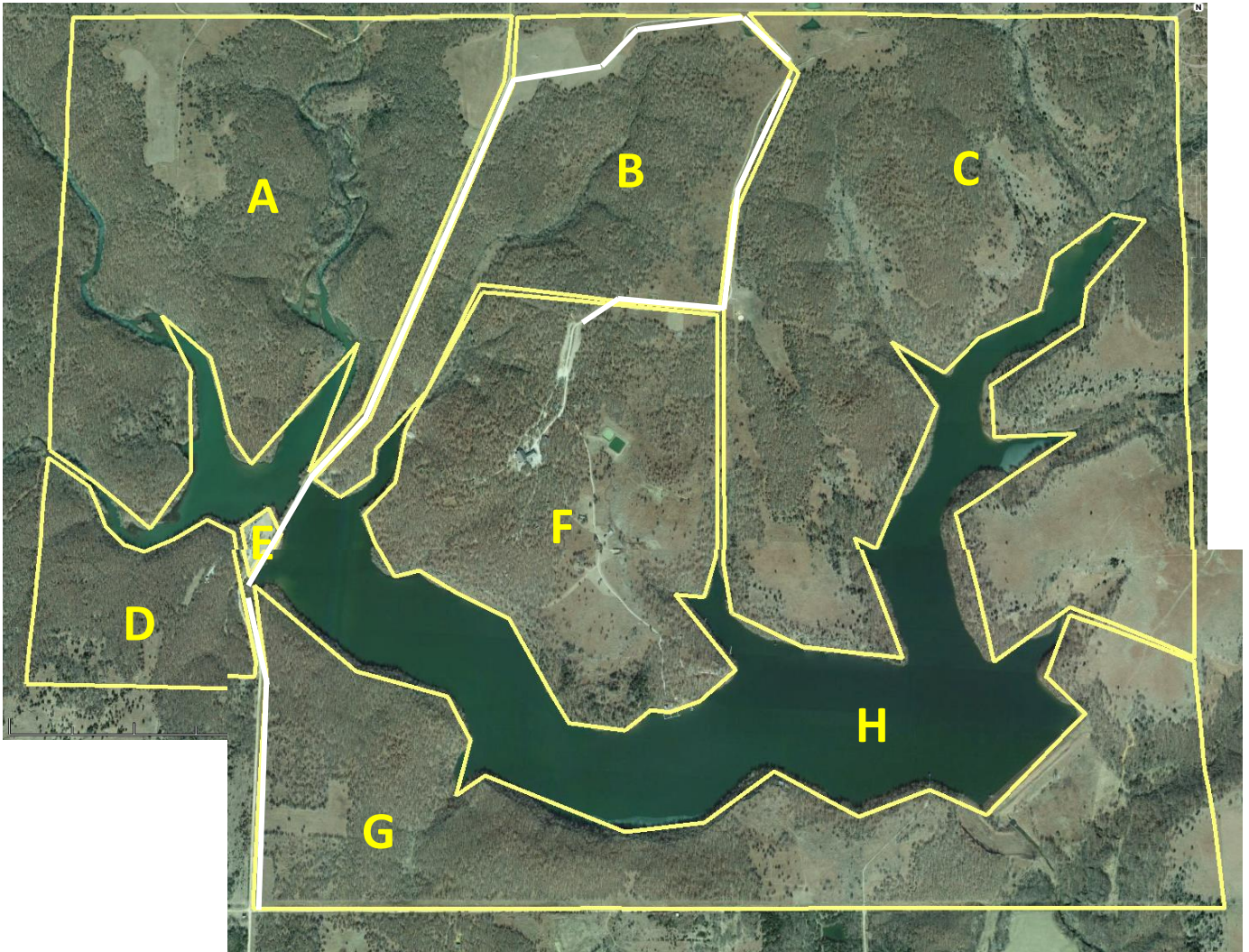
## MANAGEMENT AND RESTORATION OF HEALTHY ECOSYSTEMS

Causes of Environmental Degradation

Threshold of Concern

Measures to Reduce Environmental Degradation

Management Zone Map



- |          |                       |          |                         |
|----------|-----------------------|----------|-------------------------|
| <b>A</b> | <b>Indian Springs</b> | <b>E</b> | <b>Ranger's House</b>   |
| <b>B</b> | North Central         | <b>F</b> | Pioneer and Program     |
| <b>C</b> | North East            | <b>G</b> | South                   |
| <b>D</b> | Bradshaw              | <b>H</b> | Lake, Shoreline and Dam |



Management Zones

A	Indian Springs	E	Ranger's House
	Backcountry way-point		Ranger house and structures
	Woodland		Warehouse
	Grassland		Picnic shelter and other structures
	Access road		Lawn, parking, drive
B	North Central	F	Pioneer and Program
	Woodland		
	Ponds		
	Camp road		
C	North East	G	South
	Woodland		Woodland
	Grassland		Climbing wall
	Horse corral and pasture		OA Campfire trail and ring
D	Bradshaw	H	Lake, Shoreline and Dam
	Bradshaw building		Lake and tributaries
	Parking, access road		Shoreline
	Woodland		West boat dock, fishing pier
	Grassland		Bridge base
			Dam

## Monitoring Guidelines

### Resource Inventory (by management group)

Include all known resources, including rare, threatened, and endangered species of plants and animals, and recommendations to protect these species and associated habitats.

### Conservation Needs and Projects

Wild Fire Management Plan

Pest Plans

Feral and Exotic Organism Plans

Pollution Abatement Plans

Soils Plan (Soil erosion and drainage)

Best Conservation Practices

Wildlife/Plans of Special Interest Management Plan

Trail Plan

Campsite Plan

Backcountry way-point Plan

Aesthetic Improvement Plans

Road Plan



## II. HIKING TRAILS

### STEWARDSHIP APPROACH

#### Baseline Reference

#### CURRENT EXSISTING HIKING TRAILS

Blue Line Trail, Wolf Trail, Clark Walker (Blue) Trail, Centre Trail, Power Line Trail, Border Patrol Hike Trail

#### Analysis of Existing Conditions and Baseline Reference

(include Camp Pioneer areas of concern: program road, shortcut, unauthorized shortcut, fishing dock, aquatics, council campfire ring approach – road and trail)

### STEWARDSHIP PLAN SCHEDULE

STEWARDSHIP PLAN SCHEDULE	
Action Item	Date
Establish Task Group .....	completed
Assessment of current conditions (backcountry and within Camp Pioneer)	
Mapping and Development	
Construction	
Development of Map Publications	
Promotion	

### TASK GROUPS

- TRAIL MANAGEMENT GROUP: Responsible for development, maintenance, and promotion of use of trails present on council properties.

**DEVELOPMENT and MAINTENANCE RECOMMENDATIONS**

AMC's Complete Guide to Trail Building and Maintenance // 5<sup>th</sup> Edition

Best Management Practices for Erosion Control During Trail Maintenance and Construction.

Philmont Scout Ranch Conservation Department Philmont Conservation Field Manual

**Quivira Scout Ranch Hiking Trails – currently unpublished, being written**

### III. CONSERVATION/ENVIRONMENTAL/NATURE EDUCATION PROGRAM AND ADVANCEMENT

The CCSc should provide:

- Conservation education materials
- Conservation contacts that can provide expert advice
- Guidance on conservation and environmental education
- Conservation projects for the completion of nature merit badges
- Conservation service projects for advancement requirement that are rank appropriate
- Nature library

#### STEWARDSHIP APPROACH

##### Baseline Reference

The following are current recommendations for a successful Conservation/Environmental/Nature Education Program:

1. There should be, ideally, at least one counselor per conservation/environmental/nature related merit badge within the Council.
2. There should be at least one Leave No Trace (LNT) Master Educator and five Trainers (one per district) within the Council. LNT should be promoted at District Roundtables, and training conducted as needed.
3. There should be at least one Chainsaw Operator Trainer for the Council, or a contact through a chainsaw dealer willing to provide training for adult volunteers.
4. There should be at least one certified Hazard Tree professional for the Council, or a contact through the Kansas Forest Service.
5. Merit Badge Program boxes for each nature related merit badge should contain a lesson plan, merit badge book, and materials necessary to teach that merit badge. These boxes are to be stored in the Nature Building, onsite at Quivira Scout Ranch. They are to be kept in an orderly and organized condition. Any needs or replacement parts should be conveyed, in a timely manner, by the Nature Area Summer Camp Director to the CCSc through the Camp Director.
6. Summer camp Nature Area staff will attend training regarding that year's summer camp merit badge offering.
7. The Summer Camp Nature Program and Conservation Awards are to be promoted at District Roundtables each fall.

##### Analysis of Existing Conditions and Baseline Reference

1. Merit Badge Counselors are approved yearly by the Council Office.
2. There are currently no known Leave No Trace Master Educators or Trainers.
3. There are currently three S-212 Wildland Fire Chainsaws trained persons within the Council.
4. The above three persons are trained to assess tree hazards.
5. Merit Badge Program boxes are currently being assembled for 2022 Summer Camp, with boxes being completed by May. Additional boxes will be assembled in Fall 2022 and Winter 2023.
6. The Summer Camp Nature Area staff will be trained during staff development week prior to summer camp.
7. The Summer Camp Nature Program and Conservation Awards are not currently being promoted. Display materials will be constructed during the summer of 2022.

**STEWARDSHIP PLAN SCHEDULE**

Action Item	Date
Establish Task / Focus Groups .....	<b>TBD</b>
Conduct Training Programs	
Merit Badge Counselor .....	Per council Calendar
Leave No Trace .....	Per LNT website
Chainsaw Operator for volunteers .....	As needed or requested
Hazard Tree Analysis and Maintenance .....	As needed
Conservation Projects	
Identify age / rank appropriate conservation projects .....	<b>TBD</b>
(Refer to the Ecosystem and Natural Resources subsection)	
Summer Camp Support	
Update lesson plans; assemble merit badge program boxes .....	Yearly, Feb – Apr
Assess materials need .....	Yearly, Apr
Camp staff – Nature counselors training .....	Staff development week
Camp staff – Leave No Trace Training .....	Staff development week
Promotion of Conservation Awards and Summer Camp Nature Program	
Develop promotion materials .....	By Sept 2022
Present at District Roundtables .....	Yearly, during the fall

**TASK or FOCUS GROUPS**

The following **TASK or FOCUS GROUPS** should be considered to facilitate promoting and overseeing the Conservation Education Program and Advancements:

- **SUMMER CAMP PROGRAM GROUP:** Responsible for supporting the council’s summer camp program, particularly its nature and environmental activities.
- **CONSERVATION AWARDS GROUP:** Responsible for promoting and managing the council’s conservation awards program.
- **LEAVE NO TRACE / OUTDOOR ETHICS GROUP:** Responsible for promoting outdoor ethics and Leave No Trace within the council.

**TRAINING PROGRAMS TO SUPPORT CONSERVATION**

**Merit Badge Counselor Training**

This training is provided through the Council Office.  
See the Council Calendar on the Quivira Council website.

**Leave No Trace Training**

For more information on Leave No Trace training, visit [www.LNT.org](http://www.LNT.org) or the following:

- Master Educator Courses – <https://lnt.org/learn/master-educator-courses>
- Trainer Courses – <https://lnt.org/learn/trainer-courses>
- Awareness Workshops – <https://lnt.org/learn/awareness-workshop>
- Find a course – <https://lnt.org/learn/courses>

**Chainsaw Operator for volunteers**

This training is provided by the camp Ranger as needed, or as requested.

**Hazard Tree Analysis and Maintenance**

Because of the condition of the trees on the camp property, this training should be of high priority. For an overview of Tree Hazard Awareness Training, you may watch this video:

<https://www.youtube.com/watch?v=LZ5yMrPjYBk>

**CONSERVATION SUPPORT FOR SUMMER CAMP PROGRAM**

Camp staff assigned to teach nature, environmental, and conservation merit badges or other programs must be thoroughly prepared to teach their assignments effectively. This may require the CCSc to work with the camp director and the nature director to assist in pre-camp preparation of the staff to teach in their assigned areas. The CCSc might prepare camp staff lesson plans for teaching assignments to ensure appropriate instruction during camp.

**SUMMER CAMP MERIT BADGES**

- **Provide Yearly:** Eagle Required Merit Badges
  - Environmental Science
  - OR - Sustainability
  
- **Provide Yearly:**
  - Nature
  - Fishing
  
- **Provide One Merit Badge Yearly, on a 4 Year Rotation**
  - Bird Study
  - Insect Study
  - Mammal Study
  - Reptile and Amphibian Study
  
- **Provide One Merit Badge Yearly, on a 2 Year Rotation**
  - Fish and Wildlife Management
  - Soil and Water Conservation
  
- **Other merit badges that are Environment related or is conducive to QSR setting**
  - Archaeology
  - Geology
  - Forestry
  
- **Other Environment related merit badges that can be connected to conservation of resources**

Astronomy	Landscape Architecture	Public Health
Energy	Nuclear Science	Pulp and Paper
Fly-fishing	Oceanography	Weather
Gardening	Plant Science	



## CONSERVATION SUPPORT FOR RANK ADVANCEMENT TO FIRST CLASS

Individuals both within and outside of Scouting should be identified who are capable of providing support for training in those conservation requirements for First Class Scouts and below. This could include direct instruction and counseling, or providing guidance to unit leaders as required. Specific requirements relating to conservation are as follows:

### **Tenderfoot Requirements:**

- Describe common poisonous or hazardous plants; identify any that grow in your local area or campsite location. Tell how to treat for exposure to them.

### **Second Class Requirements:**

- Explain the principles of Leave No Trace and tell how you practiced them on a campout or outing.
- Identify or show evidence of at least 10 kinds of wild animals (such as birds, mammals, reptiles, fish, or mollusks) found in your local area or camping location. You may show evidence by tracks, signs, or photographs you have taken.

### **First Class Requirements:**

- Explain each of the principles of Tread Lightly! and tell how you practiced them on a campout or outing.
- Identify or show evidence of at least 10 kinds of native plants found in your local area or campsite location. You may show evidence by identifying fallen leaves or fallen fruit that you find in the field, or as part of a collection you have made, or by photographs you have taken.
- Investigate an environmental issue affecting your community.

In addition, any required service projects might have a focus in the area of conservation, nature, or natural resources.

### **Beyond First Class:**

Contact the Quivira Council Scout Office for a list of approved merit badge counselors.

## PROMOTION OF CONSERVATION AWARDS

### BSA Distinguished Conservation Service Award Program

The BSA Distinguished Conservation Service Award is the BSA’s highest conservation award available. Developed to encourage learning by the participants and to increase public awareness about natural resource conservation through sound stewardship.

### World Conservation Award

The World Conservation Award provides an opportunity for individual Cub Scouts, Scouts BSA, Venturers, and Sea Scouts to think globally and act locally to preserve and improve our environment. This program is designed to help youth members gain awareness that all nations are closely related through natural resources and that we are interdependent with our world environment.



### Conservation Good Turn Award

The Conservation Good Turn is an opportunity for Cub Scout packs, Scouts BSA troops, Venturing crews, and Sea Scout ships to join with conservation or environmental organizations (federal, state, local, or private) to carry out a Conservation Good Turn in their home communities.



### National Outdoor Badge–Conservation

When a Scout excels in outdoor participation, there are awards to show for it! This program, conceived by the BSA’s National Camping Task Force, includes a series of six badges designed to recognize a Scouts BSA, Sea Scout, or Venturer who has exemplary knowledge and experience in performing high-level outdoor activities.



The segments represent six areas of emphasis: camping, aquatics, hiking, riding, adventure, and conservation, with rigorous requirements to earn each segment.

A gold device may be earned for each additional 25 hours of conservation work. A silver device is earned for each additional 100 hours of conservation work (for example, the first silver device is earned at 125 total hours of conservation work).

### Keep America Beautiful Hometown USA Award

The Hometown USA Award is a joint program between Keep America Beautiful Inc. and the Boy Scouts of America. It is designed to give recognition to the outstanding efforts of Scouts in their communities in regard to citizenship and environmental improvement.



### Cub Scout Outdoor Activity Award

Attend Cub Scout day camp or Cub Scout/Webelos Scout resident camp and complete various requirements for each Cub Scout rank, including completing a certain number of outdoor activities. Among the options for a Cub Scout Outdoor Activity Award activity is this one: Complete a nature/conservation project in your area. This project should involve improving, beautifying, or supporting natural habitats. Discuss how this project helped you to respect nature.



**National Park Service Scout Ranger Program**

The Scout Ranger program invites Scouts of all ages to participate in educational and/or volunteer service projects at national park sites to spark their awareness of the national parks and to provide Scouts with the opportunity to explore the national parks and learn more about protecting our natural and cultural resources. Scouts are awarded certificates and/or patches for participating in the program.

**BSA SAFE Service Project Resources**

Before your next service project, please take a look at these two updated risk assessment tools to maintain a SAFE Scouting experience. The SAFE Service Project Planning Checklist and simplified SAFE Project Tool Use Guidelines are located in the appendix to the Guide to Safe Scouting.

**LEAVE NO TRACE AND OUTDOOR ETHICS**

(<https://www.scouting.org/outdoor-programs/leave-no-trace/>)

**Leave No Trace Awareness**

Instilling values in young people and preparing them to make moral and ethical choices throughout their lifetime is the mission of the Boy Scouts of America. Leave No Trace helps reinforce that mission, and reminds us to respect the rights of other users of the outdoors as well as future generations. Appreciation for our natural environment and a knowledge of the interrelationships of nature bolster our respect and reverence toward the environment and nature.

Leave No Trace is an awareness and an attitude rather than a set of rules. It applies in your backyard or local park as much as in the backcountry. We should all practice Leave No Trace in our thinking and actions—wherever we go. We learn Leave No Trace by sharing the principles and then discovering how they can be applied. Leave No Trace instills an awareness that spurs questions like “What can we do to reduce our impact on the environment and on the experiences of other visitors?” Use your judgment and experience to tailor camping and hiking practices to the environment where the outing will occur.

**Outdoor Ethics**

Help protect the backcountry by remembering that while you are there, you are a visitor. Leave everything just as you found it. Hiking and camping without a trace are signs of an expert outdoorsman, and of a Scout or Scouter who cares for the environment. Travel lightly on the land.

**Leave No Trace Training**

The Boy Scouts of America is committed to implementing Leave No Trace at all levels of the program. Through a cooperative agreement with the Leave No Trace Center for Outdoor Ethics, the BSA is actively placing Master Educators in every council and Trainers in every district. See the Leave No Trace website for training options: <https://Int.org/get-involved/training-courses/>

## IV. CULTURAL HERITAGE

Cultural Heritage Areas are areas of cultural, historical, or archeological significance that require protection to maintain their existence or significance. These areas should be maintained to ensure their preservation for the enjoyment of future generations. Recreational or resource management activities shall be implemented in such a way to ensure the preservation of these sites in perpetuity. Every effort should be taken to avoid changing or modifying the original parts.

- Historical and archeological resources are those that reflect man’s past use of the area.
- Aesthetic/philosophic resources include landscape beauty (scenic views), the naturalness of the surroundings, and the availability of adventure opportunities and solitude.
- Other man-made resources include contemporary structures, roads, power lines, and other such “improvements” located on the property

Rich in tradition, this land provided homesteads, farms and ranches for many pioneers, as the federal government encouraged settlement beginning in the 1870's after moving the Osage Indians to the Osage Reservation in the Oklahoma Territory. Many remnants of the old settlements remain today. On or immediately next to our Scout Ranch is evidence of at least 12 homesteads, two schools, the town of Centre, two cemeteries and a grindstone factory.

‘The community where the Quivira Scout Ranch now exists was once known as Center, Kansas. The 1870 Kansas State Polk Gazetteer listed Center, Kansas as: “A little inland hamlet in Chautauqua County, located on the North Caney Creek about 20 miles north of Sedan where it receives daily mail by rural route.”

- Kenneth S. Van Haverbeke

The Ranch: The Beginnings of the Quivira Scout Ranch in the Black Jack Territory

## STEWARDSHIP APPROACH

### Baseline Reference and Analysis for Homestead Locations

#### 1. Causes of Degradation

Stone was the most durable material for early buildings in Kansas

(<https://www.kshs.org/kansapedia/housing-in-kansas-history/15143>).

But nature is a powerful, unrelenting force that can overwhelm the oldest and sturdiest buildings. Several structures and rock walls have withstood the pressures of nature, while other structures are barely visible and rock walls are collapsing. Structures closer to Scout activity, such as the Woodworth Place near Aquatics fair worse than more isolated locations, as in The Forty located in Indian Springs. Though isolation does not guarantee preservation.

#### 2. Threshold of Concern

Currently no threshold has been established.

#### 3. Measures to Reduce Degradation

- a. Digging in or collecting artifacts from archaeological sites, or gathering parts of historical buildings is prohibited.
- b. Further research into preservation methods should be considered.
- c. Periodically monitor the condition of the ruins.

**Baseline Reference and Analysis for Other Man-Made Resources**

1. Totem Poles
 

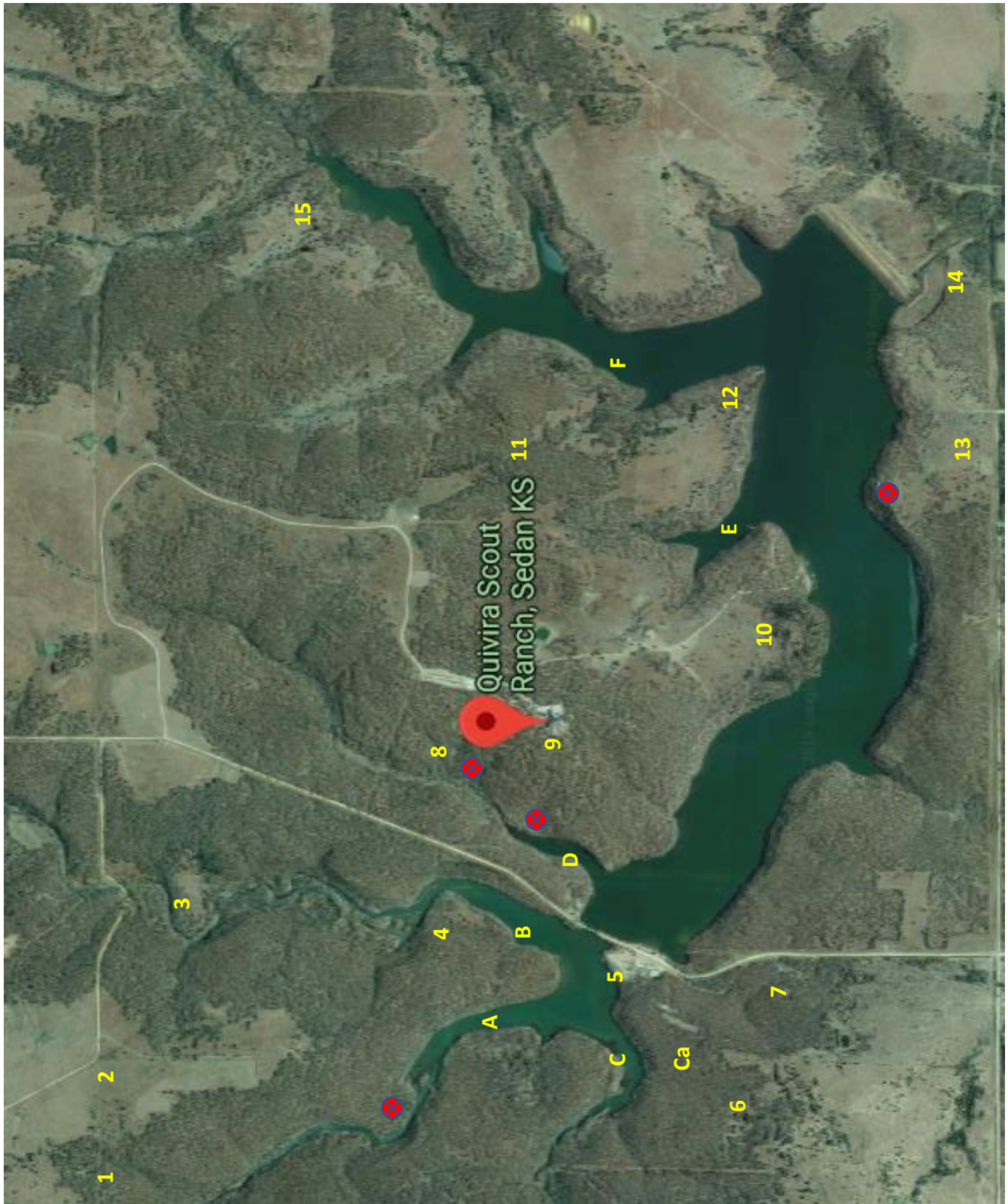
Master woodcarver Jim Schmitz has carved 3 totem poles and one soaring eagle structure for a trail entrance. All carvings should be monitored periodically for degradation of structure and of paint. The structures should be repainted as necessary.
2. Campfire Rings (There are 4 campfire rings located on the property)
  - a. The Council Campfire Ring: This is the main campfire ring.
    - i. To maintain the area for recreational use, tall grass in the area needs to be mowed periodically.
    - ii. Wooden benches need to be monitored for deterioration.
    - iii. Gravel footing needs to be refreshed as needed.
  - b. OA Campfire Ring: This is used occasionally for OA ceremonies.
    - i. Tall grass in the area will need to be mowed when needed.
    - ii. Rock falls will need to be monitored and removed, if needed.
    - iii. Gravel footing needs to be refreshed as needed.
  - c. Old OA Campfire Ring: This ring is seldom used.
    - i. Mow as needed, monitor seating for deterioration, refresh footing as needed.
  - d. Indian Springs Campfire Ring: This ring is not used.
    - i. The current condition is unknown.
3. Chapel
  - a. This area is used for chapel services during campouts and summer camps.
  - b. Current condition is satisfactory; monitor periodically for deterioration.

<b>STEWARDSHIP PLAN SCHEDULE</b>	
<b>Action Item</b>	<b>Date</b>
Establish Task Group .....	TBD
<b>Historical Ruins</b>	
Establish Threshold of Concern .....	TBD
Further research into preservation methods .....	TBD
Digging in or collecting artifacts is prohibited .....	Perpetually
Monitor the condition of the ruins .....	Periodically
<b>Other Structures</b>	
Monitor the condition of carved totems and repaint as necessary .....	Ongoing
Mow around campfire rings .....	As needed
Monitor seating at campfire rings for deterioration .....	Periodically
Refresh gravel footing around campfire rings .....	As needed
Monitor for rock falls at OA Ring .....	Periodically
At Chapel area, mow, monitor structure deteriorations .....	Periodically

**TASK GROUPS**

- **CULTURAL HERITAGES GROUP:** Responsible for inventorying, recommending management and interpretation of cultural heritage resources located on council properties. These include archeological, historic, and other man-made resources.

HISTORICAL SITES MAP



**Homesteads and Ruins**

- 1 C. Barnett Place; hand dug well ..... The well was used by the school children
- 2 Old Plymouth School ..... Remains of the collapsed stone walls can still be seen
- 3 Z. Cunningham: Center (Centre) City . Several building foundations of the homestead site still remain
- 4 The Forty ..... Foundations, stone cellar, creamery and small farm buildings on these forty acres of land are what remains of an early home
- 5 Candee Place ..... The Ranger’s house sits on this property now
- 6 Cooper Place ..... Remnants of rock fences can be seen
- 7 Wintermute Place .....
- 8 Grindstone Factory ..... Remains of the factory and foundation of a house can still be seen north of the creek bed arm of the present-day Rattlesnake Cove
- 9 Pioneer Cemetery ..... Established in the mid-1860’s; there are reportedly 10 graves (of 35) still remaining
- 10 Charles Woodworth Place ..... Rock fences still stand today
- 11 Shockey Farm ..... Rock fences still stand today
- 12 Bro. Woodworth ..... Most of the property was flooded when the dam was constructed
- 13 Barr Place ..... Fallen remains, foundation, cellar and a stone fence can still be seen. The land was cleared for farming and still remains treeless
- 14 Union School ..... Foundation can still be seen
- 15 Clark Walker Place ..... Is characterized by ragged cliffs and a deep canyon with a stream

(All of the above structure remains need to be verified)

**Tributaries**

- A Coyote Bay
- B Echo Bay
- C Whiskey Bay; Ca: Whiskey Den
- D Rattlesnake Cove
- E Wildcat Cove
- F Hell’s Hollow Bay

 **Campfire Rings**

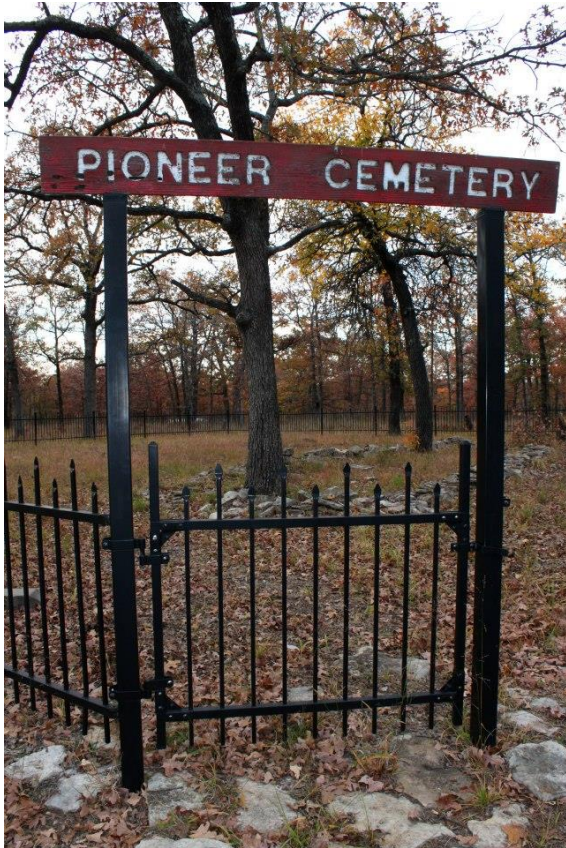
Sources:

Blackjack Trail Guide, 35<sup>th</sup> Anniversary Edition. 2004. Quivira Council, BSA, Wichita, KS.

Harstine J, Copeland J, Bryson R, Burress C. Kansas Trails Council Map – Topographic Map of Sections 21, 22, 27 & 28, T-32-S, R-11-E, Chautauqua County, Kansas. 1997. Quivira Council, BSA, Wichita, KS.

Van Haverbeke KS. 1994. The Ranch: The Beginnings of the Quivira Scout Ranch in the Black Jack Territory – Revied Edition. Quivira Council, BSA, Wichita, KS.

### Historical Photos



Entrance to Pioneer Cemetery



Several of the remains of The Forty



Rock Fence at Shockey Farm



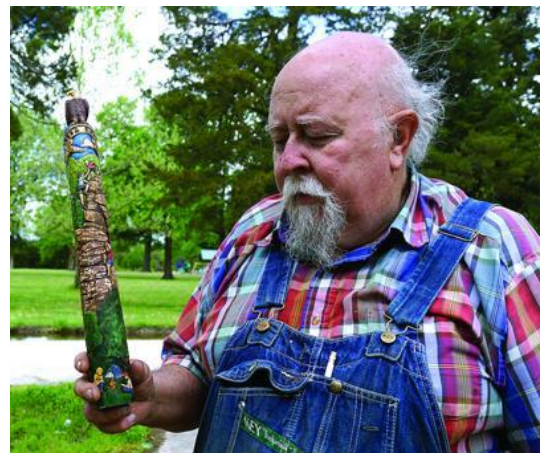
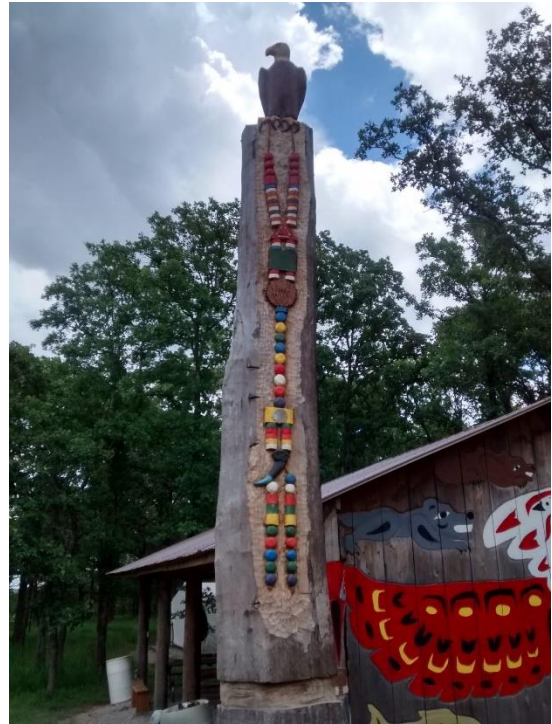
**Totem Poles** (totem pole by Ranger’s house not pictured)



Left: Totem pole located at flag mall

Right: Totem Pole located at Tribe Area

Below left:  
The Soaring Eagle at entrance to Campfire Ring trail



Lower Right: Jim Schmitz displays the model he created for the 2017 National Scout Jamboree. Schmitz carved a portion of the totem prior to the jamboree. At the jamboree, scouts then had the opportunity to help Schmitz complete the carving. The totem was then erected on site at the Summit Bechtel Family National Scout Reserve in West Virginia.

## Chapel



Entrance sign to Chapel Area



Chapel Area

## Campfire Rings (4)

(OA Campfire Ring, Old OA Campfire Ring, and Indian Springs Campfire Ring are not shown)



Aerial view of Council Campfire Ring



View of Council campfire Ring from across Rattlesnake Cove

## OTHER CONTEMPORARY STRUCTURES

These structures will be monitored for condition and needed repairs by the Properties Committee during pre-camp and post-camp inspections:

Ranger house; warehouses; boat dock; fishing pier  
Bradshaw

Camp administration building / medical lodge

Stange building

TSB / dining hall / kitchen / showers building

Staff platforms; shower house

Chaplain's cabin; commissioner's tent platforms; tool shed

Archery building; pavilion; range flagpole; net supports

Shotgun building; pavilion; range flagpole

Rifle building; pavilion; range flagpole

Nature building; fishing pier

Aquatics Tower; swimming / boating dock; block wall

Pavilions (2) along program road

Storage CONEX boxes along program road

Campsite shower / pit toilet facilities; information kiosks

Rock wall at Camp Pioneer parking lot

Road 99 signage (rock structure)

Road 19 signage at Quivira Road; at Ranger's Station; at Camp Pioneer Road

Entry Gates to Pioneer (2), Indian Springs, and south of lake

Propane storage tanks

Old water tower and fencing

The Tribe of Quivira will monitor and maintain their structures in the Tribe of Quivira area (located to the west of the TSB).

## V. REVENUE OPPORTUNITIES

### STEWARDSHIP APPROACH

#### Baseline Reference and Analysis of Existing Conditions

1. Hunting
2. Fishing
3. Ranching
4. Haying
5. Timber Harvest; non-timber opportunities
6. Resource Extraction
7. Solar Power Sale-Back

<b>STEWARDSHIP PLAN SCHEDULE</b>	
<b>Action Item</b>	<b>Date</b>
Establish Task Group .....	TBD
Hunting	
Fishing	
Ranching	
Haying	
Timber Harvest	
Resource Extraction	

	Solar Power Sale-Back	

**TASK GROUPS**

- **HUNTING GROUP:** Responsible for promotion and coordination of January antlerless season harvest to obtain the Stewardship Plan objectives (refer to Ecosystem subsection).
- **RANCHING GROUP:** Responsible for best ranching practices (stocking rates, pasture rotations, valuation) as per current standards and research.
- **NON-TIMBER FOREST PRODUCTS GROUP:** Responsible for identifying potential non-timber forest products that are already present or are possible on council properties and to manage their development.

## VI. LEAVE NO TRACE AND GENERAL USE OF CAMP FACILITIES

All council programs and activities should adhere to the Leave No Trace guidelines, the BSA Wilderness Use Policy, and the Outdoor Code.

### LEAVE NO TRACE (<https://lnt.org/>)

Our public lands and many of our local council cap program areas, camp sites, trails, and backcountry areas show signs of destruction caused by overuse, inappropriate use, and carelessness. Many Scout camping areas have become compacted, contaminated, and littered with campfire remains.

Leave No Trace is a national educational effort consisting of seven principles dedicated to enhancing our outdoor ethics by increasing our awareness of the impacts that we produce while enjoying the outdoors.

The seven principles of Leave No Trace are:

1. Plan ahead and prepare
2. Travel and camp on durable surfaces
3. Dispose of waste properly
4. Leave what you find
5. Minimize campfire impacts
6. Respect wildlife
7. Be considerate of other visitors

### TREAD LIGHTLY! (<https://treadlightly.org/>)

Tread Lightly! Inc. is a national nonprofit organization dedicated to protecting outdoor recreational access and opportunities through education and stewardship. The principles of Tread Lightly! incorporate an ethical standard for the use of motorized and mechanized recreational vehicles and equipment on the land and water.

The principles of Tread Lightly! are:

- T** – Travel and recreate with minimum impact. Don't create new routes or expand existing trails.
- R** – Respect the environment and the rights of others.
- E** – Educate yourself, plan, and prepare before you go.
- A** – Avoid sensitive areas. Allow for future use of the outdoors; leave it better than you found it.  
Avoid the spread of noxious weeds by washing your gear after every trip.
- D** – Discover the rewards of responsible recreation. Do your part.

### OUTDOOR ETHICS

The Outdoor Code: As an American, I will do my best to be clean in my outdoor manners, be careful with fire, be considerate in the outdoors, and be conservation-minded.

## Physical Structures on Camp Property

Actions speak louder than words. The camp property should be a showcase for wise conservation practices. The buildings and properties at camp should reflect the conservation of resources theme. Several recommendations are as follows:

- Clustering properly designed buildings together will make the camp seem larger than if they are spread out all over the property.
- Select appropriate paint colors. Browns, tans and greens have a tendency to blend into the landscape for a more subtle look.
- No matter how careful we are, the use of our facilities places stress on the environment. Rotation or rehabilitation of campsites and trails should be considered. Refer to the Ecosystem and Natural Resources subsection for campsite recommendations, and Hiking Trails subsection for trail recommendations.
- If exterior lighting is used, full cutoff light fixtures reduce light pollution and can save energy by focusing the light where you want it.



## Campers

- Keep noise to a minimum, especially at night.
- Pick up trash, even that left by previous visitors.
- Don't build a fire except in cleared fire sties and with the Camp Ranger's permission. It's best to use backpacking stoves. Fires must be completely out before you leave the area.
- Don't leave behind any trace of your visit.
- Be sure to notify the Camp Ranger when leaving the property.

**CONSUMPTIVE USES**

hunting, fishing, gathering wild edibles or other vegetation, handling or gathering animal species

**TRAIL USE****CAMP USE****BACK COUNTRY WAY-POINTS (OUTPOSTS)**

(Pick up trash, even that left by previous visitors. Don't build a fire except in cleared fire sites and with permission. It's best to use a backpacking stove. Fires must be completely out before you leave the area. Don't leave behind any trace of your visit.)

**LAKE USE****CULTURAL RESOURCES / HISTORIC SITES**

You may not dig in or collect artifacts from archaeological sites, or gather parts of historic buildings without the property owner's permission.

**PRINTED MATERIAL AVAILABLE REGARDING QUIVIRA SCOUT RANCH**

Van Haverbeke KS. 1994. *The Ranch: The Beginnings of the Quivira Scout Ranch in the Black Jack Territory* (revised edition). Quivira Council, Wichita, KS.

Quivira Council, Boy Scouts of America. 2004. *Blackjack Trail Guide* (35<sup>th</sup> Anniversary Printing).

The ***Guide to the Natural and Cultural Resources of Quivira Scout Ranch*** (publication – pamphlet) is designed for Scouts, Scouters, and other users of the Ranch to identify the forms of vegetation, wildlife and other natural resources and the cultural resources present. In addition to identifying the resources present on the Ranch and where they can be found, it will highlight those of special concern (endangered, rare, etc.) and those that present specific hazards



## APPENDICES

### QSR SPECIES LIST (indicate management zone location)

#### Endangered, Threatened, In Need of Conservation

Plants

Animals (American burying beetle)

#### Invasive, Obnoxious

Plants (Johnson grass, Sericea lespedeza, eastern red cedars, field bindweed, thistle)

Animals (carp, ticks)

#### Inventories

Plants

Ferns

Grasses

Forbs

Shrubs / Vines

Conifers

Deciduous Trees

Animals (indicate venomous / poisonous; furbearing, game)

Insects and myriapods (centipede, velvet ant)

Arachnids (brown recluse, black widow, ticks)

Mollusks

Annelids

Crustaceans

Fish

Amphibians (salamanders, frogs)

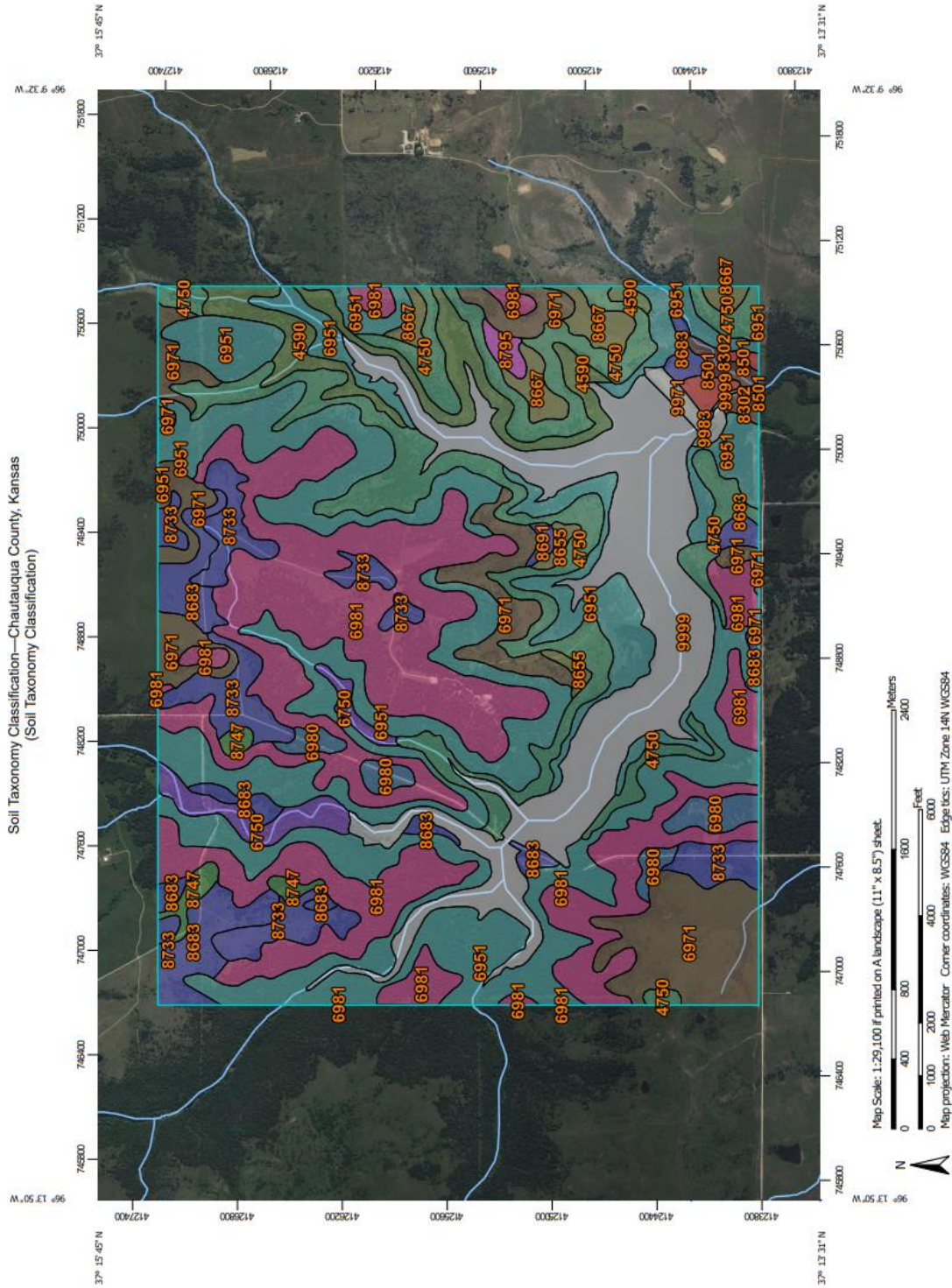
Reptiles (snakes, turtles)

Birds (quail, turkey, eagle, waterfowl)

Mammals (mice, armadillo, opossum, deer, beaver, bats)

# SOIL MAPS, SOIL SERIES DESCRIPTIONS

## Soil Taxonomy Classification



### Soil Taxonomy Classification

Main Soil Complexes				
Symbol	Unit Name	% Slopes	% Of Area	Description
4750	Sogn silty clay loam	0 – 10	10.9	
6951	Niotaze-Darnell complex	6 – 35	26.3	
6971	Steedman stony clay loam	8 – 20	8.5	
6981	Stephenville-Darnell fine sandy loams	1 – 6	21.6	
9999	Water		12.7	

Other Soil Complexes			
Symbol	Unit Name	Symbol	Unit Name
4590	Clime-Sogn complex, 3 to 20% slopes	8683	Dennis silt loam, 3 to 7% slopes
6750	Cleora fine sandy loam, occasionally flooded	8691	Dennis silty clay loam, 3 to 7% slopes, eroded
6980	Stephenville fine sandy loam, 1 to 3% slopes	8733	Eram silty clay loam, 1 to 3% slopes
8302	Verdigris silt loam, 0 to 1% slopes, occasionally flooded	8747	Eram-Collinsville complex, 1 to 5% slopes
8501	Mason silt loam, 0 to 1% slopes, rarely flooded	8795	Lula silt loam, 0 to 1% slopes
8655	Clareson silty clay loam, 0 to 3% slopes	9971	Arents, earthen dam
8667	Clareson-Sogn complex, 1 to 3% slopes	9983	Gravel pits and quarries

The Sogn series consists of shallow and very shallow, somewhat excessively drained, soils that formed in residuum weathered from limestone. Sogn soils are on hillslopes on uplands in Bluestem Hills, MLRA 76. Slopes range from 0 to 45 percent. Mean annual precipitation is about 840 millimeters (33 inches), and mean annual temperature is about 13 degrees C (55 degrees F) at the type location. Typical pedon: rangeland

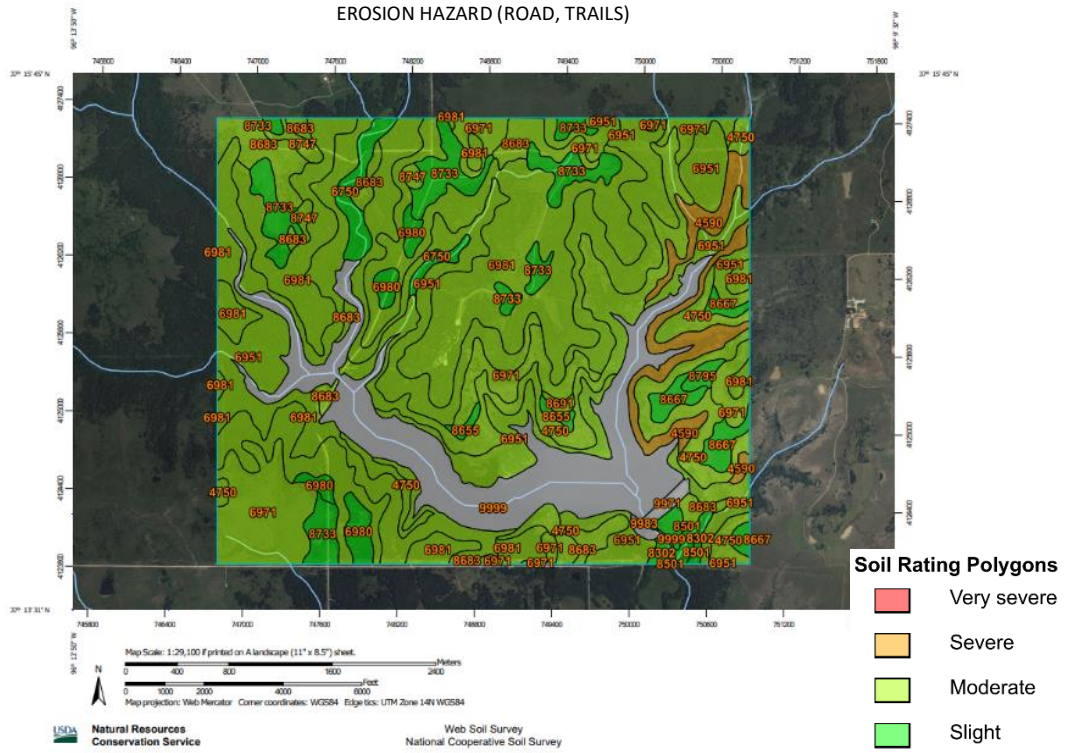
The Niotaze series consists of moderately deep, somewhat poorly drained, slowly permeable soils that formed in residuum from weathered shale and colluvium from sandstone of Pennsylvanian age. These gently sloping to steep soils are on hillslopes of hills and cuestas in the Northern Cross Timbers (MLRA 84A). Slope ranges from 3 to 45 percent. At the type location the mean annual temperature is 15 degrees C (59 degrees F), and mean annual precipitation is 1067 mm (42 in). Typical pedon: under hardwoods

The Darnell series consists of shallow, well drained to somewhat excessively drained soils formed in material weathered from sandstone of Permian age. These soils are on summits and shoulders of low hills in the Cross Timbers (MLRA 84A). Slopes range from 1 to 45 percent. Mean, annual air temperature is about 16 degrees C (61 degrees F), and mean annual precipitation is about 813 mm (32 in). Typical pedon: oak forest

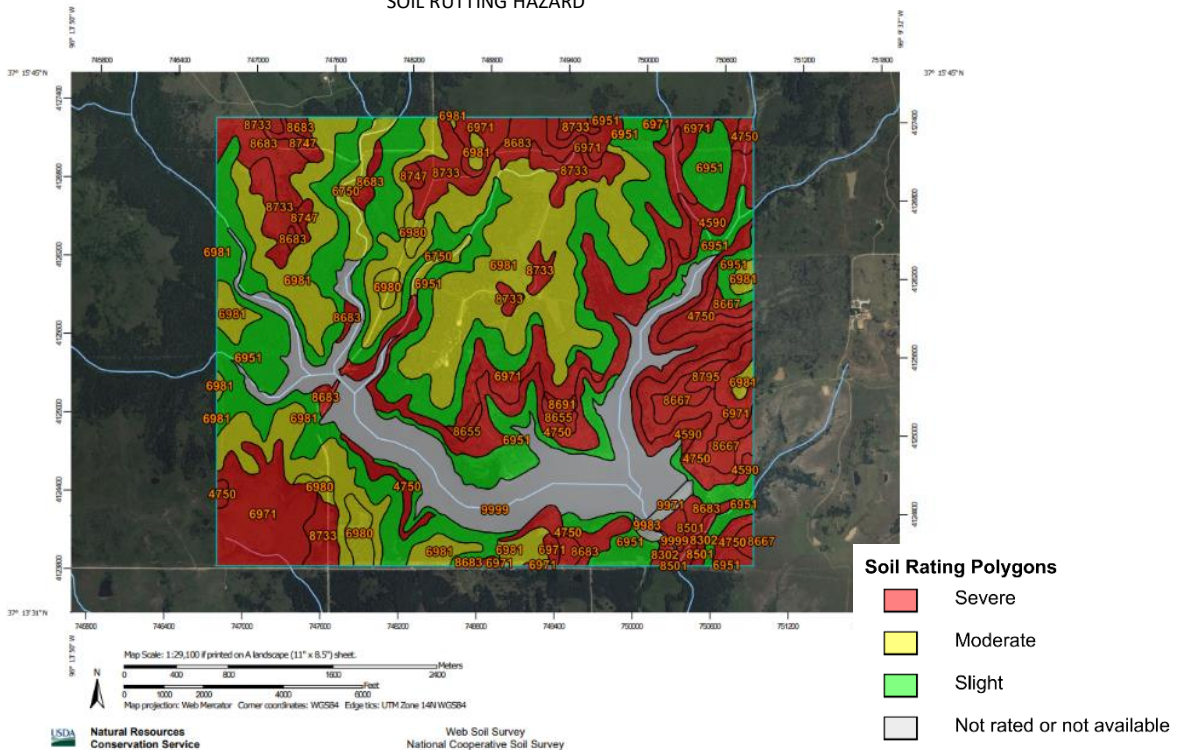
The Steedman series consists of moderately deep, well drained or moderately well drained, slowly permeable soils that formed in material weathered from shale containing thin strata of sandstone of Pennsylvanian age. These soils are on nearly level to gently sloping ridge tops and gently sloping to steep side slopes of prairie uplands. Slopes range from 0 to 30 percent. Mean annual precipitation is 38 inches. Mean annual temperature is 62 degrees F. Typical pedon: rangeland

The Stephenville series consists of moderately deep, well drained, soils formed in material weathered from sandstone of Permian age. These soils are on very gently sloping to moderately steep side slopes of hills in the North Cross Timbers (MLRA 84A). Slopes range from 1 to 25 percent. Mean annual precipitation is about 810 mm (32 inches). Mean annual air temperature is about 16 degrees C (61 degrees F). Typical pedon: Bermuda grass pasture

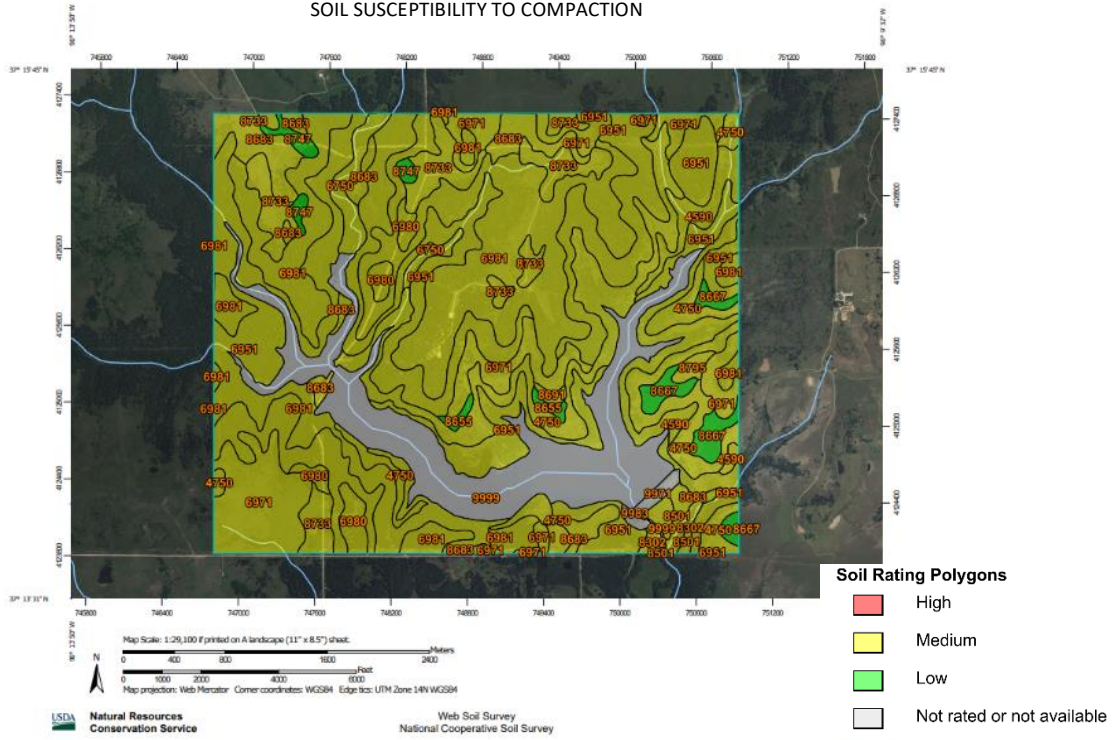
EROSION HAZARD (ROAD, TRAILS)



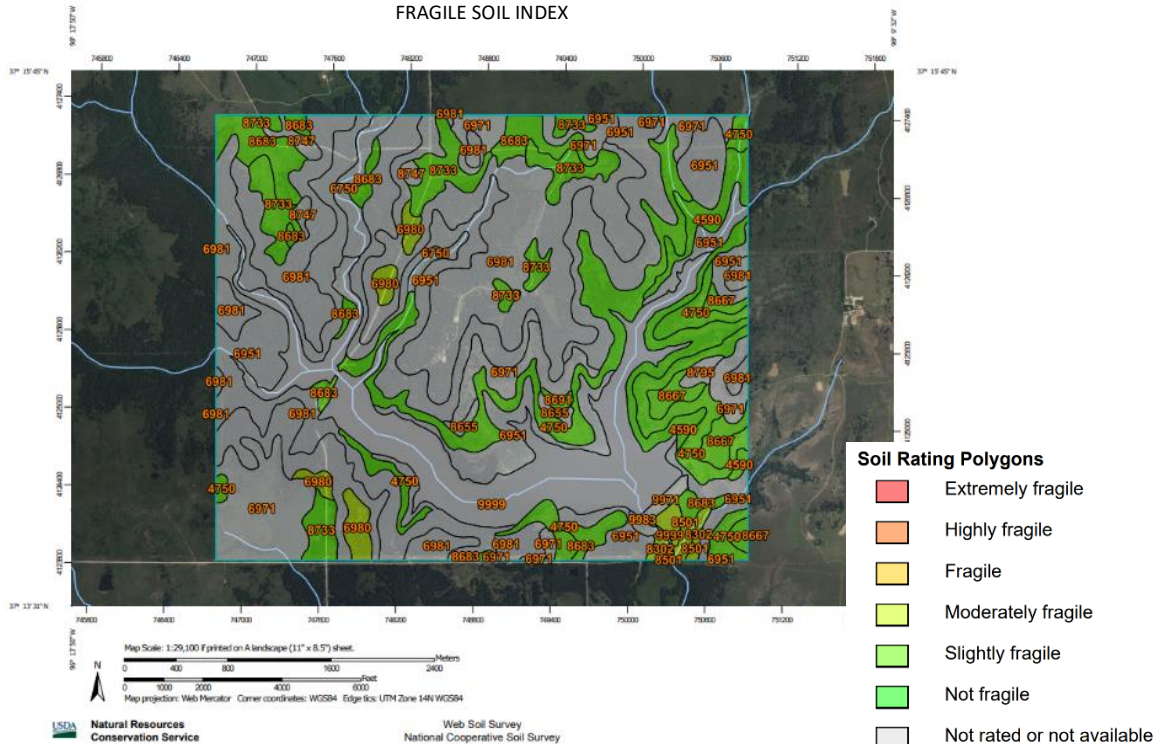
SOIL RUTTING HAZARD



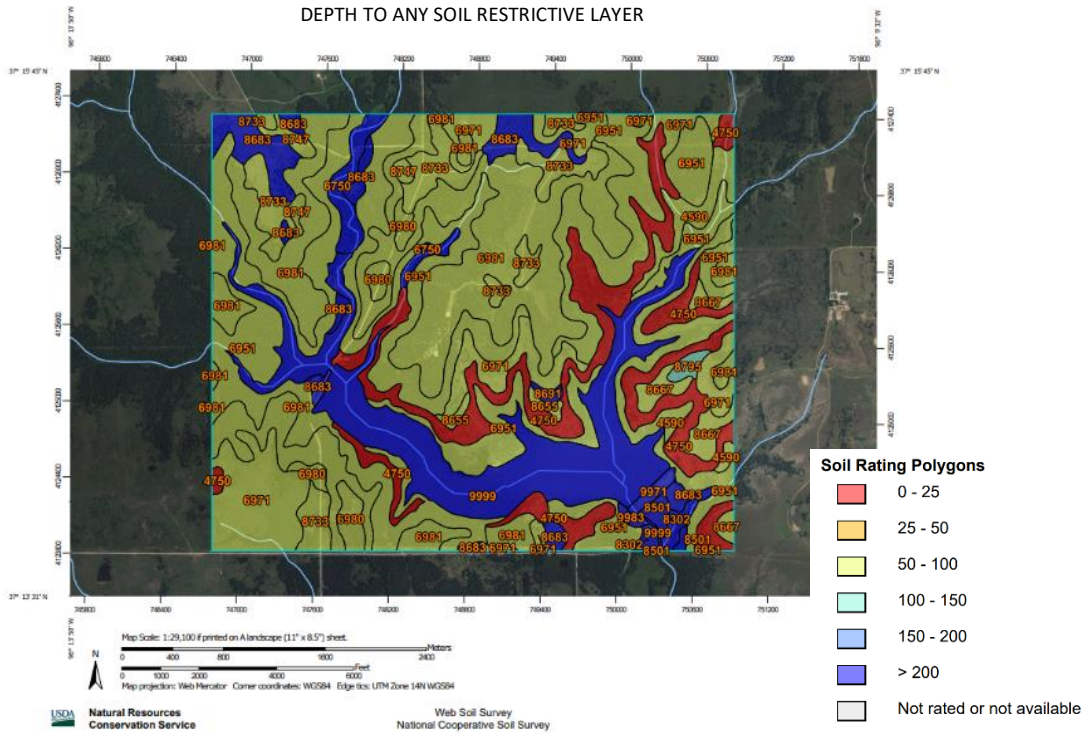
SOIL SUSCEPTIBILITY TO COMPACTION



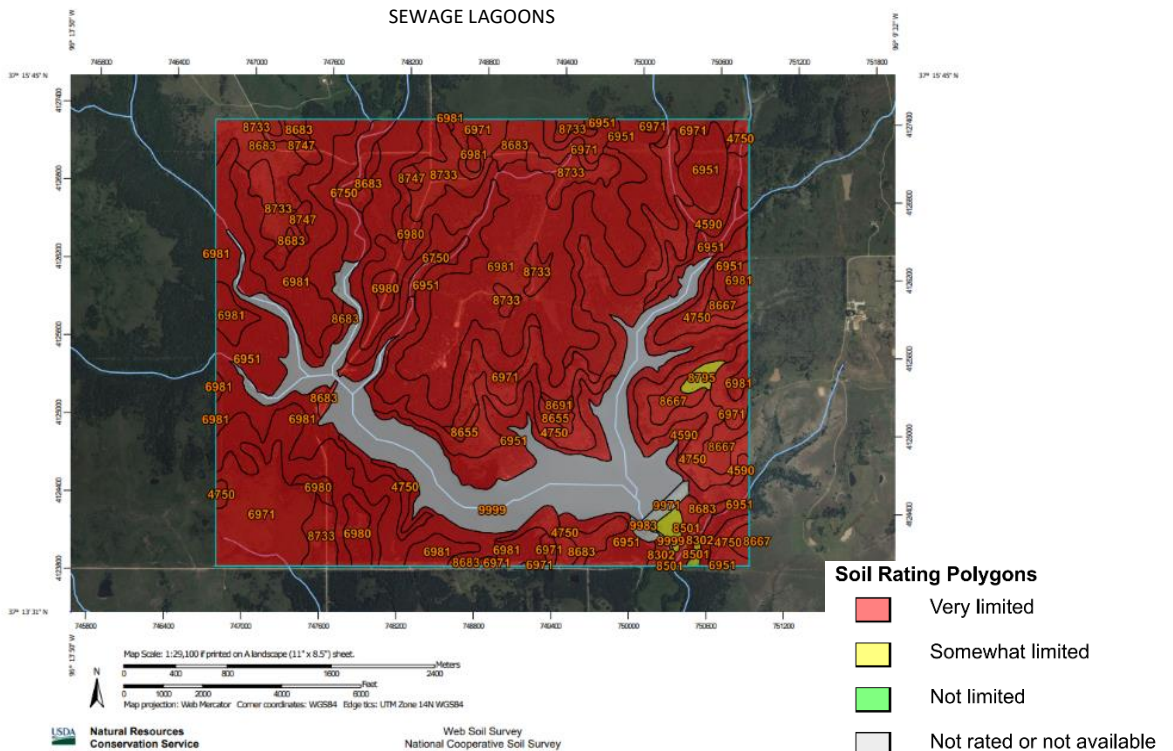
FRAGILE SOIL INDEX



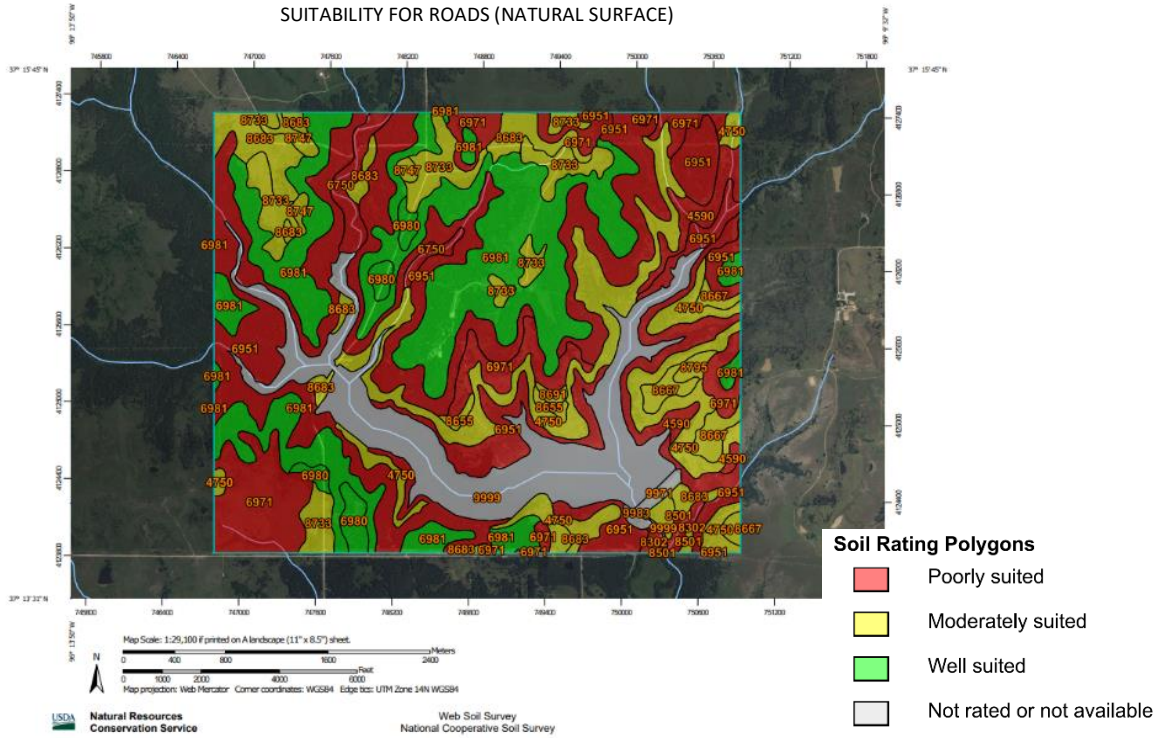
DEPTH TO ANY SOIL RESTRICTIVE LAYER



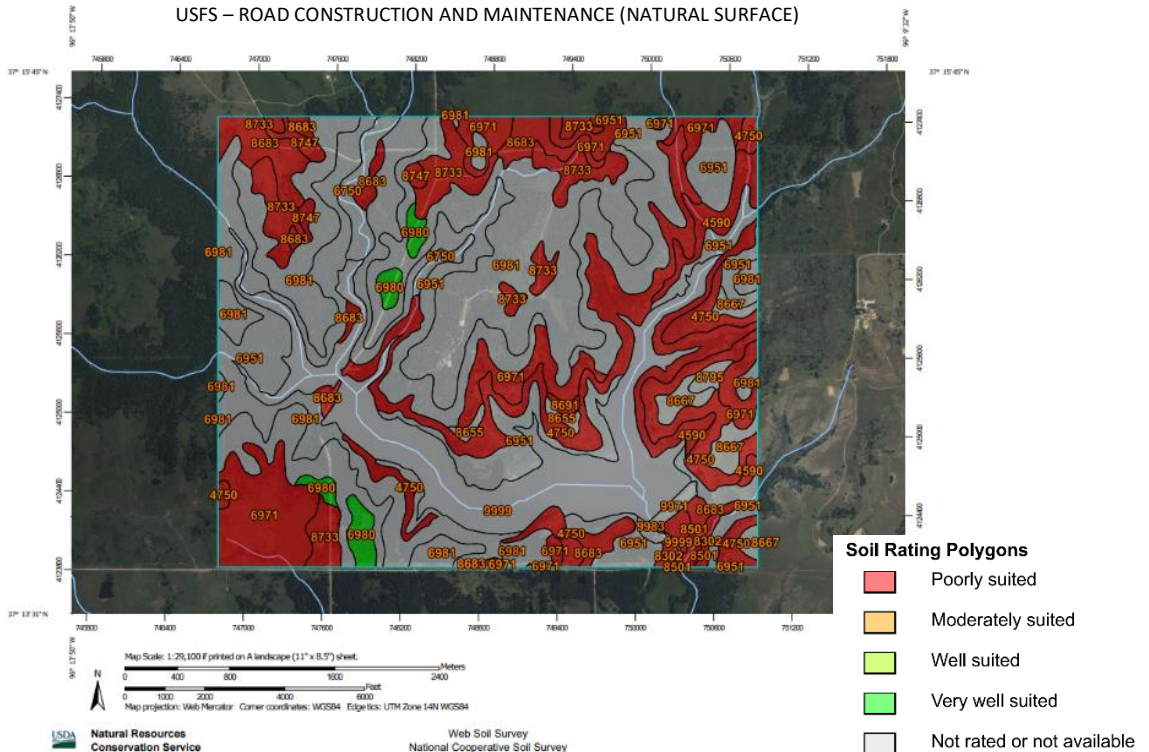
SEWAGE LAGOONS



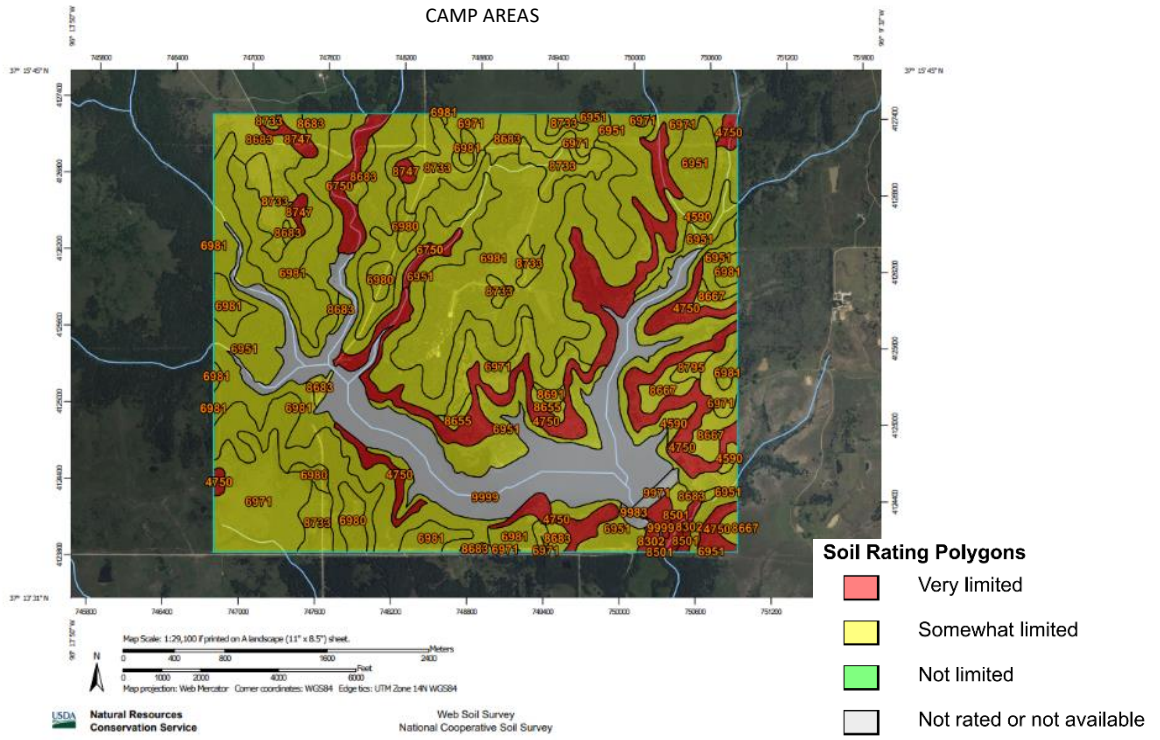
SUITABILITY FOR ROADS (NATURAL SURFACE)



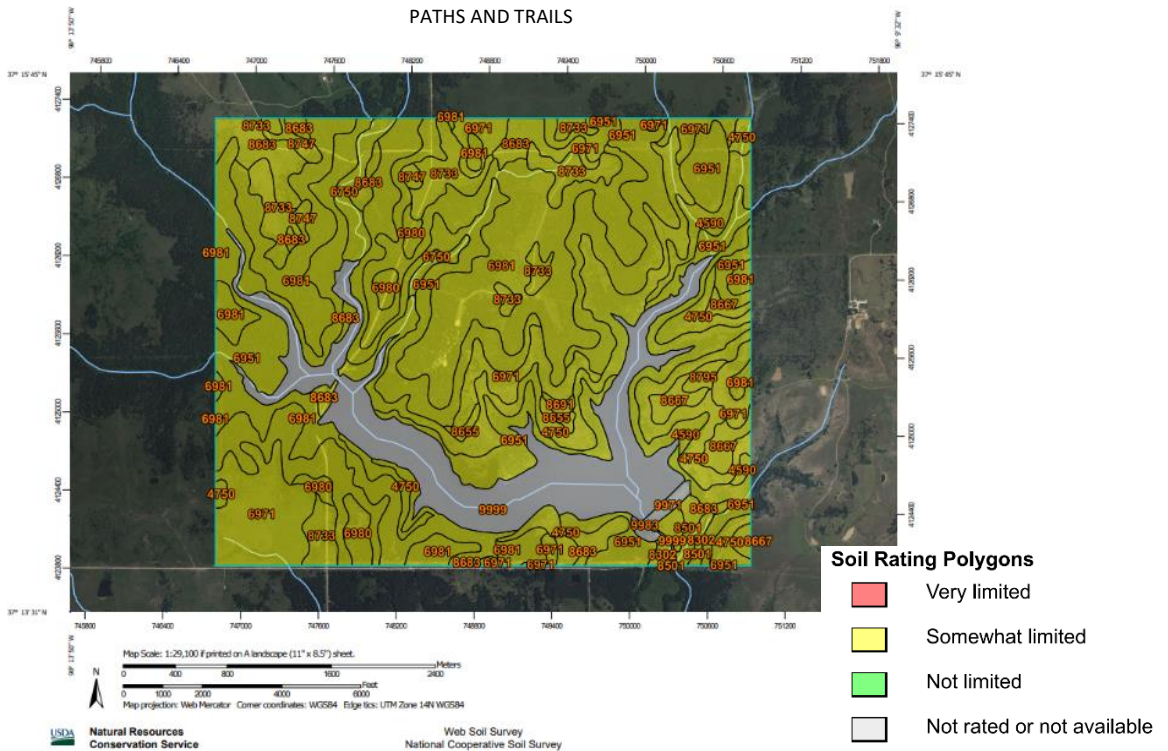
USFS – ROAD CONSTRUCTION AND MAINTENANCE (NATURAL SURFACE)



CAMP AREAS



PATHS AND TRAILS





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<https://bridgehunter.com/ks/chautauqua/100941606801/>

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Jakubauskas, M., J. deNoyelles, E. Martinko. 2013. Bathymetric and Sediment Survey of Boy Scout Lake, Chautauqua County, Kansas. Applied Science and Technology for Reservoir Assessment Program. Report 2013-02.

Leave No Trace. @ Copyright Leave No Trace, 2021. Registered 501(c)(3). EIN: 84-1303335.  
<https://lnt.org>

Quivira Council, Boy Scouts of America. 2004. Blackjack Trail Guide (35<sup>th</sup> Anniversary Printing).

United States Department of Agriculture, Natural Resources Conservation Services, Web Soil Survey (Accessed March 2022).  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

Van Haverbeke KS. 1994. The Ranch: The Beginnings of the Quivira Scout Ranch in the Black Jack Territory (revised edition). Quivira Council, Wichita, KS.

[www.preservationnation.org/about-us/regional-offices](http://www.preservationnation.org/about-us/regional-offices)

## CONSRVATION RESOURCES

Advisory Council on Historic Preservation: [www.achp.gov](http://www.achp.gov)

Bureau of Land Management: [www.blm.gov](http://www.blm.gov)

National Park Service: [www.nps.gov](http://www.nps.gov)

Natural Resources Conservation Service (NRCS): [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

Kansas NRCS offices: [www.nrcs.usda.gov/wps/portal/nrcs/site/ks/home/](http://www.nrcs.usda.gov/wps/portal/nrcs/site/ks/home/)

USDA Forest Service: [www.fws.gov](http://www.fws.gov)

U.S. Geological Survey: [www.usgs.gov](http://www.usgs.gov)

Kansas Department of Wildlife and Parks: <https://ksoutdoors.com/>

Nature Conservancy: [www.nature.org/en-us/](http://www.nature.org/en-us/)

Society of American Foresters: [www.eforester.org/](http://www.eforester.org/)