

# 2019

## NATURAL RESOURCE CONSERVATION MANAGEMENT FIVE YEAR IMPLEMENTATION PLAN

for

### CAMP GEIGER

## PONY EXPRESS COUNCIL BSA

As mandated by

The National Executive Board

Boy Scouts of America

“The effect of Camp Geiger on its environment”

Revised by:

Roger Denton	Camp Geiger Ecologist / Conservation Director
Harold Kerns	Natural Resource Manager
Jeff Powelson	Missouri Department of Conservation
Private Land Conservationist	
Kyle Reno	Private Land Services Regional Supervisor
Dave Carlisle	Buchanan County Conservation Agent
Michele Holland	Andrew County Conservation Agent
Lonnie Messbarger	Resource Forester



### Introduction

This conservation Plan for Camp Geiger BSA is prepared to improve the environs of the scout camp through careful planning, impact prevention, impact friendly policies, and environmental reclamation.

The plan is comprised of several sections.

1. Natural resource conservation management plan.
2. Resource identification plan.
3. Environmental Project.
  - a. Summer Camp projects
  - b. Year round projects
4. Administrative information.

Unless we understand all of these elements of the plan, the plan will not accomplish what it should.

The plan is accomplished through publication, presentation, and participation.

The current edition of this plan is made available on the Camp Geiger website for all to read. The plan is presented and discussed with troop leaders on the day of their arrival and camp. All leaders are encouraged to engage their troops in projects provided within the plan. We know that scouts who invest in the condition of the camp will be more responsible with this facility. Projects can be performed year round as well as during camp.

The plan is amended at least annually through meetings and discussion including the nature staff, conservation director, the camp professional ranger, and conservation professionals. Comments about this plan are welcome.

## PRIORITY OUTLINE

Erosion Problems, trails and roads	Continual program for new areas of disturbance.
Long-range plan	See the CCIP. NCAP
2 additional campsites	Development has occurred.
Improve wildlife habitat	Ongoing conservation projects
Volunteer organizational labor force	
Plant id signs/interpretive signs	
Windbreaks	
Trespassing ATV/motocross	Continue to develop safe barriers.
Stream team	
COPE Course Management	
Forestry Plan for South Tract	Work on a directional plan for development of the south tract property
Timber production Hazard tree id/removal	
Forestry thinning/TSI	
Post Harvest Survey	
Sugar Maple Control	
Pond	Use forestry and camp staff to continually monitor and correct any problems

Fisheries for Pond development	

## SUMMARY

### General Information

Camp Geiger affords an excellent opportunity for scouts to enjoy nature at its best. Preserving the environment and natural resources of the camp are a top priority for the camp and every effort should be made to enhance those resources. Camp Geiger will continue to be a place where memories can be made and an understanding of nature can be garnered if care is taken to respect, honor and manage the land and the resources found throughout the camp.

Camp Geiger is the Boy Scout Camp of the Pony Express Council Located in the southwest corner of Andrew County, Jefferson Township, T58N/R35W. The camp is composed of approximately 400 acres of mostly wooded, very hilly land along the Missouri River just north of St. Joseph, Missouri. The camp includes no acreage suitable for traditional field crops, but does contain several acres of grassland.

The soil throughout the camp is very well drained Loess type soil with very little clay. The land is classified as highly erosive, primarily due to the steep slopes (up to 35%) making up the camp. Because the soil is so well drained, it is very difficult if not impossible to hold water in any sort of impoundments without the use of manmade devices, such as pond liners.

### SOIL EROSION

The dense forest areas of the camp provide very good to excellent control of erosion for the largest areas of the camp. The grasslands of the camp also provide excellent erosion control in those areas where the grass has been established for some years. In areas of new construction or where for one reason or another, the grass has been destroyed the soil is very subject to erosion. Trail ways which campers use extensively through the five camping sessions each summer are also very subject to erosion and require annual maintenance. Water movement over these pathways need to be minimized to reduce the current erosion problems; small water bars, layer of wood chips or other suitable material should be used to help combat the erosion problems.

Most of the campsites have an adequate cover of cool season grasses such as fescue, bluegrass, or brome grass. Areas of high traffic will need annual maintenance and upkeep. Tall Fescue and Bermuda grass are both hardy grasses and can withstand high impact zones. Combining a legume (red or white clover, bird's foot trefoil) to provide additional nitrogen might also be helpful in obtaining vigorous growth and maintaining an adequate stand. Erosion is occurring on the front side of some of the camping platforms. This high impact zone needs to be addressed year round. Multiple methods are being tried to reduce the soil erosion at these spots. One control method might be to use geotextile mats that are used at cattle waters to prevent soil from becoming compacted and erosive. These mats are made of rubber and can be buried at surface

level; this would spread the high impact area from the entrance of the tent to a larger surface area.

Establishing adequate stands of grass in any area where the ground has been leveled, dug or bared for any reason should be a top priority. Because of the steep slopes and Loess type soils, found in all areas of the camp, it is necessary to provide some kind of cover or mulch to reduce erosion until the grass has been established and can provide enough cover to slow water runoff. Grass netting or burlap can be very effective in establishing a stand of grass in a highly erosive area. Covering the area with good quality, weed seed free wheat straw can also provide an excellent cover until the grass is well established.

To control erosion of pathways where it will not be possible to protect the soil with a forage cover, artificial cover for the paths on the steepest slope should be provide. Wood chips from the local utility companies can provide an economical and effective way to halt further erosion. Another method for trail and road erosion is to use water bars. Water bar/deflectors are a low cost, low maintenance method to deflect surface water from a roadway. Where possible, trail ways should not run straight up and down the slope. Any new trails should be designed by using a switchback approach across the slope. Water bars should be placed along new and any existing trails. The water bars will help remove water from the trails at multiple stages, not allowing water to run the entire length of the trails. Wood chips and geo-textile mats may be place on those paths which are on the steepest most traveled paths.

Erosion on Entrance to Camp Pueblo and Apache



A top priority of the erosion control program for the camp should be the area immediately north of the dining hall. Severe erosion has already occurred despite over seeding and the use of netting. To prevent further erosion, a diversion ditch should be placed along the brim of the drop-off to deter water from running down the ditches already present in the extremely steep slope. Drainage tile could be placed in one or two of the deeper ditches to remove the standing water from behind the diversion ditch at the top of the hill. This would prevent additional ditches from being created by letting the water run down the slope on either end of the diversion ditch. If possible, the ditches should be leveled or at least have small check dams placed across the hill to slow the speed of the water run-off. The slope would once again be seeded and covered with straw or additional netting. Since the slope is so steep and will not be mowed or spayed to control weeds, ground cover vegetation such as warm season grasses and wildflower or on north/northeast aspects orchard grass and red clover could be planted and would provide a good cover and would continue to thicken over time.

The Missouri Department of Conservation has offered to use their heavy equipment to help restructure soil erosion problems. This in-kind labor would be used as a typical State Cost share practice. The use of MDC's labor and equipment should be available throughout the next couple of years with prior approval and scheduling through local MDC Private Land Services. Possible sites for MDC cooperation may include the road entrance to Pueblo Camp Site, Rifle Range Trail, and the road to the COPE Coarse.

The entrance to Camp Pueblo and Apache (pictured above) has been restructured to control the water erosion problems. The completion date for this project was May 25, 2003. The Camp will need to keep a close eye on this project to prevent any rill erosion from occurring until the vegetation is established. As erosion problems arise, they should be attended to. The scouts at summer camp could be a valuable tool in completing this work. In addition to this project, the soil under the wood rail fence above the new Dry Hole Structure needs additional cutouts. These cutouts will allow water to drain directly off the road and down the existing vegetation and not travel entire length of road before dumping onto new dirt work. This will be very important in keeping this project from severe erosion.

## FOREST CONSERVATION

Camp Geiger is made up of a mature forest area with a vast array of trees and foliage. The forested areas provide good erosion protection for a large portion of the camp. The wooded areas also provide an excellent camp atmosphere for campers as well as shade and some windbreak effects.

In most areas trees should be allowed to grow and reforest the areas. Some areas such as the parade grounds and the campsites need to be kept free of trees and brush. In other areas managed tree growth might be desirable, to establish windbreaks or erosion control.

Because of possible hazards to scouts, thorn producing trees such as black locust and honey locust should be controlled. Seedling thorn trees should be controlled by cutting and spraying the stump with an approved herbicide. Thorn trees and branches should be removed from campsite areas to minimize scouts stepping on thorns or being gouged by a thorn. This will not result in a lack of trees, as there are many beneficial varieties to replenish old growth which had died and is decaying.

To enhance the tree population of the camp some consideration should be given to planting more hardwoods such as walnut, oaks, and some evergreens, which can be managed for timber production, wildlife habitat, wind breaks or reforestation. Hardwoods planted this year would return valuable harvestable trees in approximately forty years. If walnuts were planted nuts could be harvested after about fifteen years.

Forested areas of the camp give Camp Geiger a unique and desirable atmosphere for a scout camp. Care should be taken to manage the trees and forage found throughout the camp. Forest management should concentrate on maintaining the mature forest of the camp and wildlife diversity throughout the property, and insure that campers throughout the twenty-first century have the same opportunity to enjoy this valuable asset of nature.

The newly acquired south tract will be inventoried and management requirements will be given upon request by the MDC resource forester. The MDC Resource Forester will also update the existing Forestry Stewardship Plan and re-evaluate past logging and timber cutting for future forestry management considerations.

Forestry interpretational signage can be erected throughout the camp. Trees can and other vegetation can be permanently identified (MDC providing signage) and marked for educational means. Trees can be marked along trails and roads, and even around campsites. This type of education can be used all year long.

A windbreak will be planted to protect the Sioux campsite. The windbreak should consist of a variety of tree species, i.e., White Pine, Eastern Red Cedar, Norway spruce, and a few Jack and Red Pines. Providing a variety of species will prove to be a good choice, in chance that one species develops a disease and dies, you won't lose the entire windbreak at once. If the grass and weeds are maintained around the windbreak planting, the stand will mature at a much faster rate. MDC will provide technical assistance when needed. A tree planting along the Eastern boundary just southeast of the repealing tower can possible provide a future income for the camp. Depending on the soil type of the area, trees that produce nuts may be planted for annual collection and sold to the MDC nursery. Some tree species may be planted for future harvest also.

## WILDLIFE CONSERVATION

Camp Geiger enjoys several different species of wildlife which include Bobwhite quail, White Tailed-deer, Eastern wild turkeys, raccoon, fox, coyotes, squirrels, rabbits and many more non-game species. The camp's proximity to the Missouri River, heavily wooded areas, and grassland are responsible for the presence of many of these animals.



To encourage the presence of wildlife in camp, food plots could be established according to guidelines outline in the Missouri Conservation Department's manual "Wildlife Management for Missouri Landowner's". These of course should be established in the non-populated areas of camp.

The camp has a small area of prairie grass, which is located on the north end of the property toward the shotgun range. The Warm season grasses are a unique part of Northwest Missouri's Loess Hill native prairie. This grass habitat may contain some rare and unusual native plant compositions. Management of this area for upland prairie would greatly enhance the wildlife habitat along with increasing the plant species diversity. The area could be managed through the Federal Wildlife Habitat Incentive Program (WHIP) which would allow incentive payments for completion of habitat projects. This habitat improvement would allow for an extensive educational program for future scouts. The prairie grass's provide excellent cover for wildlife and is located in a portion of the camp, which would be conducive to wildlife habitat management. While the warm season prairie grass grows rapidly during the summer, when the camping activity is greatest, it can present a possible fire hazard during the late fall and early spring when the stems are very dry and extremely flammable. Fire lines should be

maintained on an annual basis. This management strategy could be included in the WHIP plan.



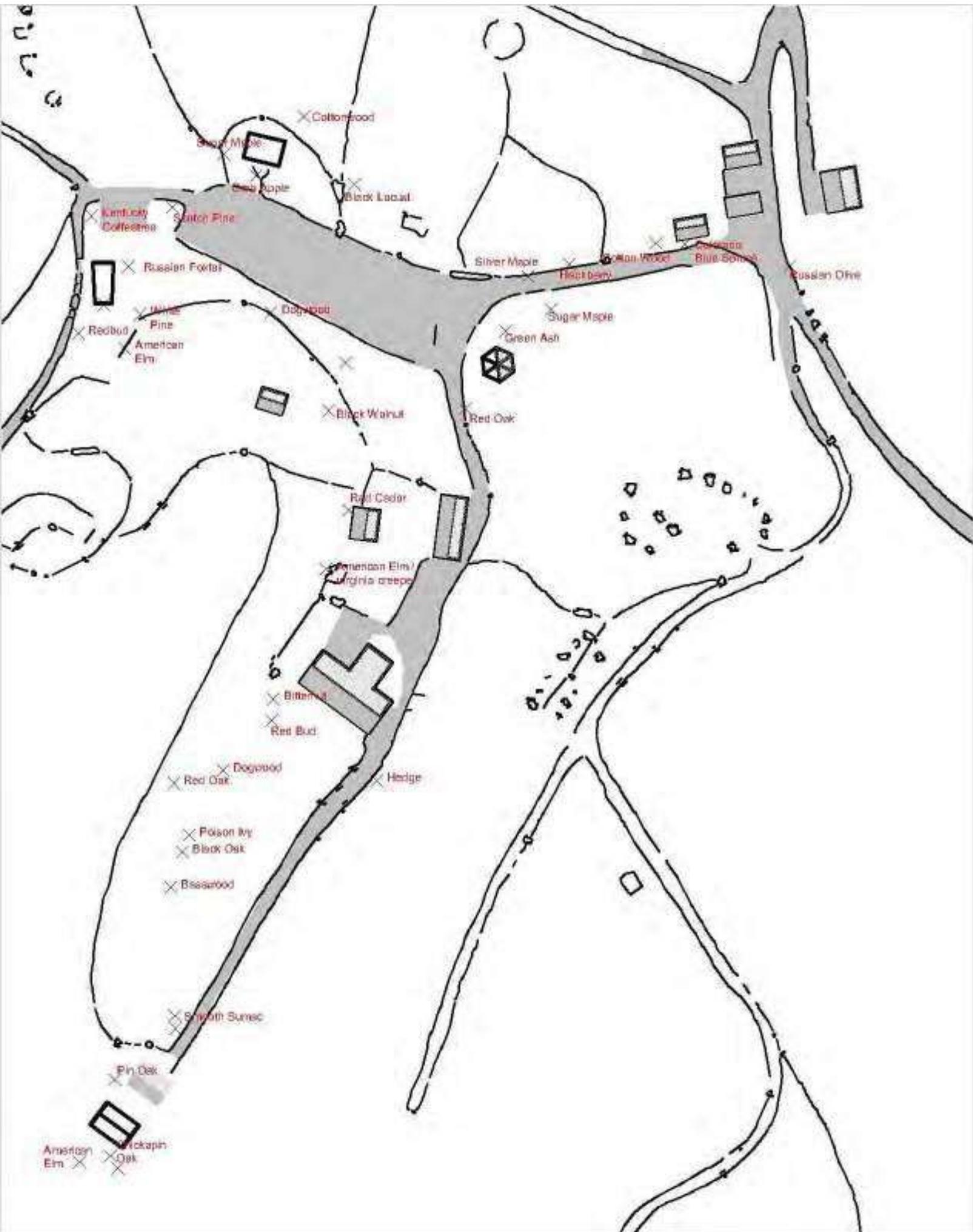
Native plant landscaping could also be conducted throughout the property. This can be another means of plant diversity and education. With each landscape project interpretation signs (provided by MDC) can be erected with appropriated information. This type of education can be used in a classroom form or just incidentally.

To prevent any unnecessary trespassing from neighboring hunters or ATVs, the entire property boundary should be posted with NO TRESPASSING signs and with PURPLE PAINT. Trespassing has been a problem for several years, so communication with the local Law Enforcement (Andrew County Sheriff) would be highly recommended. The best way to send out any message on NO TRESPASSING is to prosecute when one is apprehended. Wildlife is an important part of the camping experience and should be encouraged through proper management.

Camp Geiger can provide many opportunities for future merit badges of many kinds. Throughout this Conservation Plan, projects can be developed as needed. The goal of this plan was to provide some Natural Resource technical assistance to managing a unique part of Missouri's Resource in such a manor that can be changed to fit the need. This document was written with the thinking of a "Living Document" and should be updated when information and updated technology allows.

For any questions on this Plan, please contact the Private Land Conservationist for Andrew County.

Missouri Department of Conservationist  
Jeff Powelson  
Private Land Conservationist  
Andrew and Buchanan Counties  
3915 Oakland Ave  
St. Joseph, MO 64506  
816-364-3662 ext 122



# **Fishery Management Plan**

**For**

**Lake Richardson**

**Camp Geiger – Pony Express Council  
The Boy Scouts of America**

**November 10, 2006**

Prepared by

Harold Kerns

Fisheries Regional Supervisor  
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## **GOAL**

To protect and enhance the existing aquatic resource and provide quality, sustainable fishing opportunities that are compatible with the other intended uses of Lake Richardson.

# INTRODUCTION

**Plan Purpose:** This document serves as an informational, coordination, and guidance tool to the Pony Express Council of The Boy Scouts of America for the fisheries management of Lake Richardson, Andrew County, Missouri.

## **Background Information:**

Size: 2 acres (See attachment 1)

Drainage Area: 13 acres (6.5:1 watershed ratio)

Lake construction completed: Early 2004 (Dedicated: June 5, 2004)

Lake and surrounding area owned by: The Boy Scouts of America (BSA), Pony Express Council

Location: BSA Camp Geiger, Andrew County, NE ¼ Sec. 19, T. 58N, R. 35W

Maximum Depth: 17.7 feet (measured June 2006), lake 2-3 feet below spillway pipe

## **HISTORICAL PERSPECTIVE**

### **Pre-impoundment**

A deeply incised ephemeral stream valley located on the east side of Camp Geiger was dammed. Most of the soils located on the Camp Geiger are loess, extremely deep soils formed by wind blown deposition. Since no permanent water was present on the Camp, there was a need to develop a waterfront area to allow for various aquatic oriented merit badges (i.e. fishing, canoeing, rowing, etc.), aquatic activities, and other training to take place.

The watershed ratio, amount of land area draining into the lake, is 6.5 to 1. This watershed ratio is quite low with an optimal watershed ratio for a multiple use lake in the 10-15 to 1 range. A low watershed ratio (like at Lake Richardson) can result in chronically low water levels, especially during prolonged drought periods. If water levels aren't maintained at adequate levels, then diversion of additional watershed area into Lake Richardson may need to be a future consideration.

Lake construction was completed in early 2004.

### **Post-impoundment**

Several significant rainfall events occurred during the summer of 2004 (including the night of the lake's dedication – June 5, 2004) filling the new lake to sufficient depth to allow for fish stocking by Missouri Department of Conservation (MDC) to begin in September 2004 (bluegill and channel catfish), May 2005 (fathead minnows), and June 2005 (largemouth bass). The lake was stocked at the normal

(100%) stocking rate of 100 channel catfish, 100 largemouth bass, and 500 bluegill per surface acre.

## **STATUS AND OPPORTUNITIES**

### **Fish Population**

The fish population was sampled by MDC fisheries biologists using an electrofishing boat on June 5, 2006. Largemouth bass were captured in the 11–13 inch size range (Attachment 5), indicating excellent growth for one year old fish (stocked in June 2005 as young of the year).

Bluegill exhibited a bimodal distribution (Attachment 5) with the initial stocked fish (Fall 2004) in the 6-7 inch size range and numerous bluegill in the 1-4 inch size range. This distribution indicates some limited reproduction probably occurred in 2005 and reproduction had already begun by early June 2006 (as expected). The bluegill growth rate would also be considered excellent (but expected for a newly impounded lake).

Channel catfish were not sampled during this survey. This outcome is normal, since channel catfish do not respond well to this type of electrofishing survey.

The lake should be opened to fishing in 2007, but there should be strictly adhered to guidelines for the harvest of fish (See recommendations section) to reduce the possibility of overharvest of the fish population. Given the anticipated high usage of this aquatic resource, the likelihood of removing too many fish (especially largemouth bass) is great. Maintenance of a high quality fish population is possible (even with the high level of public use of Camp Geiger), if harvest restriction guidelines are followed.

In addition to the recommended harvest restrictions, it is extremely important to not allow any additional fish stockings into the lake except those approved by a MDC fisheries biologist. Certain fish species, if introduced into the lake, can be very detrimental to the existing fish population and can result in an overall undesirable fish population in the lake (defeating much of the purpose for the lake).

### **Aquatic Habitat**

Pony Express Council BSA owns the entire watershed for this lake. A soil conservation plan has been written for the entire Camp and is currently being implemented. The erosion rate within the watershed should decrease as permanent vegetative cover is established. There will be an ongoing need into the foreseeable future to implement soil erosion practices in the watershed of Lake Richardson to maintain good water quality and prolong the life of the lake.

Hard cover in the form of submerged brush piles and hinge-cut trees will enhance the ability of lake users to catch fish and should increase the lake's overall

productivity. MDC fisheries biologists can provide direction on conservation projects targeting the improvement of fish cover in the lake.

Although aquatic vegetation is an integral part of managing a healthy lake ecosystem, it is important to not allow the establishment of undesirable aquatic plant species or allow aquatic plant levels progress to nuisance levels. Before introducing any aquatic plant species to Lake Richardson check with local MDC fisheries biologists to confirm appropriateness of the species in question. There are a number of aquatic plant species available locally for water gardens that are not suitable for establishment in area lakes and can be labor-intensive and costly to control once established. MDC could provide (free of charge) several aquatic plant species to provide shoreline erosion protection, aquatic life enhancement (cover, food source, etc.), and aesthetics. Recommended species for this planting are: fragrant water lily, southern blue flag, pickerel weed, and square-stem spike rush. For more information and illustrations of each of these species see Attachments 2 & 3.

## RECOMMENDATIONS

### Watershed

1. **Continue implementation of soil conservation plan** for Camp Geiger as it relates to the watershed of Lake Richardson. By fully implementing the existing soil erosion plan, good water quality (especially clarity) should be enhanced and result in lengthening of the useful life of the lake.
2. Since the watershed ratio of Lake Richardson is low (6.5:1), an **examination of the possibility of diverting additional watershed acres into the lake** is warranted.

### Fish Population

3. **Recommended fishing regulations** for Lake Richardson to maintain a quality fishery are:
  - **Catch and release fishing only** on Lake Richardson, follow all proper catch and release guidelines (Attachment 4)
  - **No harvest of any fish from Lake Richardson**, unless part of a bona fide class or training that requires the cleaning and/or preparing for cooking of a fish. Further, it is recommended that each member of the class not harvest a fish, instead one or two harvested fish be used as demonstration for the entire

class. **The harvest of any fish from Lake Richardson requires a special permit provided by the Camp Ranger.**

- **Pole and line fishing only**, which includes cane poles, spin fishing, and fly-fishing; but excludes setlines (bank lines, trotlines, jug lines, etc.) and archery fishing methods.
  - **No more than one pole may be used by each angler.**
  - **Use of artificial baits and barbless hooks is recommended, but not required.** These are techniques that minimize fish mortality due to “deep hooking”. Many of your users will want to be able to use live bait and not make their hooks barbless, so it is best to not require these items at this time.
4. **No stocking of fish** into Lake Richardson except as approved by MDC fisheries biologist.

### **Aquatic Habitat**

5. **Develop an aquatic habitat enhancement plan** to maintain a quality aquatic environment for fish and other aquatic life. This plan should include placement of submerged brush piles (or other structures), hinge cut trees, and desirable aquatic plant establishment.



## **Southern Blue Flag**

Native iris

Provides shoreline erosion protection

Attractive blue flowers in spring

Never develops to nuisance numbers

## **Pickerel Weed**



Provides shoreline erosion protection  
Attractive blue flowers most of summer  
Never develops to nuisance numbers





### **Square-stem Spike Rush**

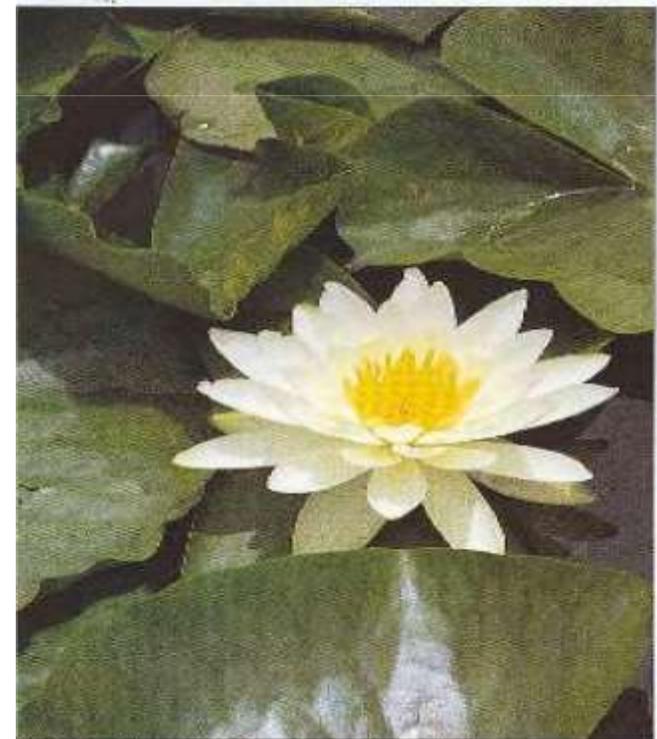
Reduces bank and shoreline erosion  
Good wildlife food  
Easily controlled

### **Fragrant Water Lily**



Provides overhead fish cover, especially for bluegill  
Reduces wave action erosion  
Flowers white (or pink) from June –October  
Plants spread slowly, thus easily controlled

Attachment 3



**Missouri Department of Conservation**

**Tips for Handling and Releasing Fish**

1. Fish that you don't intend to keep or fish that are smaller than the legal length limit should be released immediately and gently.
2. Avoid handling fish excessively. The mucus covering the fish's body should be protected because it prevents infection.
3. Hold fish firmly. A fish dropped on the ground or in a boat has a poor chance for recovery.
4. Grasp large-mouthed fishes by the lower jaw with thumb and forefinger; smaller fishes with your hand around the mid-section, wetting hands first. Fish with teeth may be handled by grasping them across the gill covers.
5. Never put your fingers in the gills or eye sockets.
6. Every angler should carry a hook disgorger or needlenose pliers. Back the hooks out if possible.
7. Never pull a hook from the fish's throat or stomach. It is better to cut the line. Many hooks will rust away.
8. Use hooks with barbs squeezed shut (barbless) if you intend to release all fish or if you like additional challenge.



**FISH POPULATION SURVEY**  
Missouri Department of Conservation

CAMP GEIGER  
Date 5 June 2006

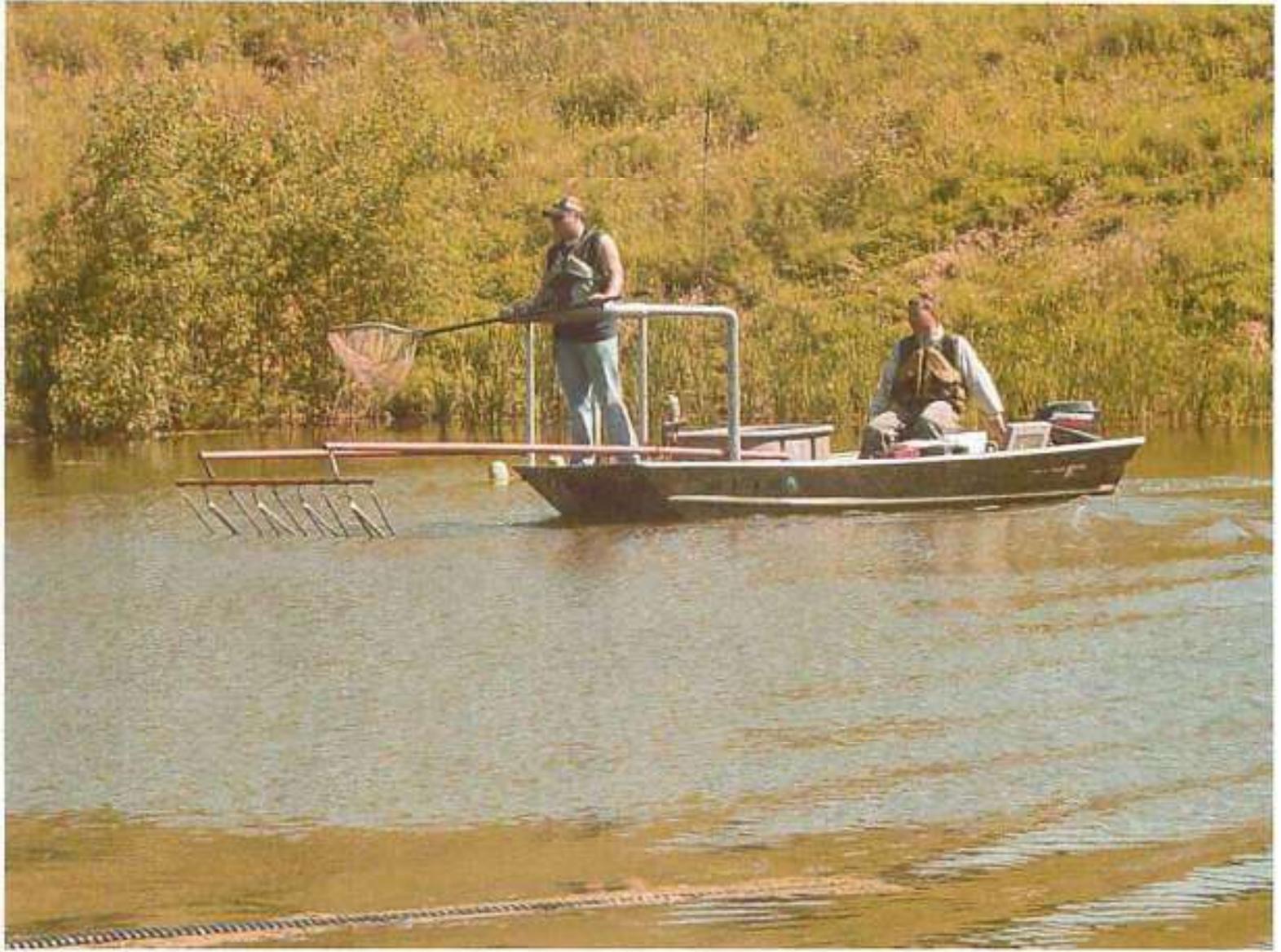
County ANDREW Lake LAKE RICHARDSON  
 Gear type ELECTRO. No. Hauls/Time \_\_\_\_\_ Amps \_\_\_\_\_ Volts \_\_\_\_\_ Acres 2  
 Surface Temp \_\_\_\_\_ Turbidity 6' Secchi O<sub>2</sub> \_\_\_\_\_ Cond \_\_\_\_\_ Max Depth 17.7'

Length (inches)	LMB	Length Frequency	Condition of fish population
1.0-1.4			LMB stocked in June 2005
1.5-1.9			
2.0-2.4			
2.5-2.9			
3.0-3.4			
3.5-3.9			
4.0-4.4			
4.5-4.9			
5.0-5.4			
5.5-5.9			
6.0-6.4			BLG stocked in Sept 2006
6.5-6.9			
7.0-7.4			
7.5-7.9			
8.0-8.4			
8.5-8.9			
9.0-9.4			
9.5-9.9			
10.0-10.4			
10.5-10.9			
11.0-11.4			
11.5-11.9			
12.0-12.4			
12.5-12.9			
13.0-13.4			
13.5-13.9			
14.0-14.4			
14.5-14.9			
15.0-15.4			
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23.0-23.4			
23.5-23.9			
24.0-24.4			
24.5-24.9			
25.0-25.4			
25.5-25.9			
26.0-26.4			
26.5-26.9			

Management Recommendations:

incidental catch:

Sign. of Biologist \_\_\_\_\_ Sign. of Owner/Rep. \_\_\_\_\_





## **POSITION DESCRIPTION**

**TITLE: Ecology/  
Conservation Director**

**REPORTS TO: Program Director**

**REQUIREMENTS:** The Ecology/Conservation Director must be at least 18 years old; be currently National Camp School certified in Ecology/Conservation or have training in conducting an outdoor ecology education program; be registered with BSA.

**RESPONSIBILITIES:** The Ecology/Conservation Director coordinates ecology and conservation programs at summer camp; coordinates conservation projects for camp; works with state and federal agencies that can provide additional program support for camp.

### **SPECIFIC DUTIES:**

- Obtain camp conservation plan and coordinates conservation projects with units
- Know conservation aspects of the camp area
- Coordinates overall conservation program in camp
- Help units interpret conservation advancement requirements
- File final inventory of conservation equipment
- Assist units to plan year-round conservation program

## POSITION DESCRIPTION

### CONSERVATION DIRECTOR

REPORTS TO: Program Director

REQUIREMENTS: The Conservation Director must be at least 18 years old and be registered with the BSA. Must be current with National Camp School Certification in Ecology/Conservation or have training in conducting an outdoor ecology education program.

RESPONSIBILITIES: The Conservation Director coordinates ecology and conservation programs at summer camp; coordinates conservation projects for camp; works with State and Federal agencies that can provide additional program support for camp.

SPECIFIC DUTIES:

1. Know Conservation Aspects of the Camp Area
2. Coordinate Overall Conservation Program in Camp
3. Obtain Camp Conservation Plan and Coordinate Conservation Project With Units
4. Help Units Interpret Conservation Advancement Requirements
5. Assist Units to Plan Year-Round Conservation Programs
6. File Final Inventory of Conservation Equipment

## POSITION DESCRIPTION

### **PROGRAM STAFF MEMBER**

**REPORTS TO:** Area Director

**REQUIREMENTS:** The Program Staff Member must be at least 14 years old and be registered with the BSA and exemplify the ideals of Scouting. Must possess personal physical fitness, the ability to get along with others, a technical knowledge for the job, demonstrate an ability to work as a team member and have previous experience as a camper.

**RESPONSIBILITIES:** The Program Staff Member will Maintain the Overall Camp Program and Individual Programs as Established by the Camp Director, Program Director and Area Director.

COMPLETED 7/03



A NEW STORMWATER DETENTION DAM HAS BEEN CONSTRUCTED TO PROTECT EROSION ON THE CAMP ROAD TO THE OLDER CAMPSITES. IT HAS ALREADY BEEN SEEDED AND IS STARTING TO GROW. STRAW MUST BE LOOSLY PLACE OVER THE GRASS TO AID IN MOISTURE RETENTION AND TO BREAK THE EFFECTS OF RAIN. 10 TO 12 BALES OF STRAW SHOULD BE SUFFICIENT. DO NOT PLACE STRAW TOO THICK. PLACE THE STRAW ONLY OVER DISTURBED SOIL.

COMPLETE 7/03

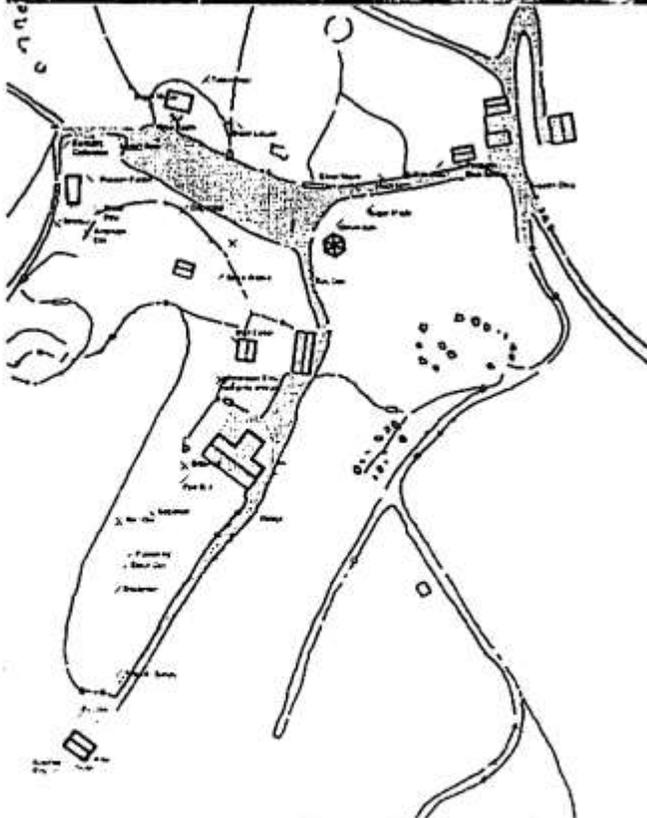


A RUT IS FORMING FROM EXCESS DRAINAGE TO THE DETENTION POND. USING DIRT FROM UNDER THE RAIL FENCE, FILL THE RUT. BREAK UP THE SOIL BEFORE PLACING SO THAT IT CAN BE RAKED SMOOTH. SEED AND MULCH THE NEW SOIL. PLACE STRAW BAILS AS SHOWN ABOVE TO BREAK THE VELOCITY OF THE WATER. TAKE EXTRA CARE TO NOT DISTURB GROUND WHERE NEW GRASS IS ESTABLISHING.

COMPLETED - 6/04



DEVELOPE A CRUSHED ROCK  
BEAM THAT WILL KEEP DRAINAGE  
FROM RUNNING DOWN THE ROAD  
UNTILL VEGETATION IS ESTABLISHED  
IT NEED NOT BE FANCY,  
SHOULD BE BIG ENOUGH TO CONTRN  
WATER, SMALL ENOUGH TO  
DRIVE OVER. SEE THE  
RANGER TO GET THE ROCK.

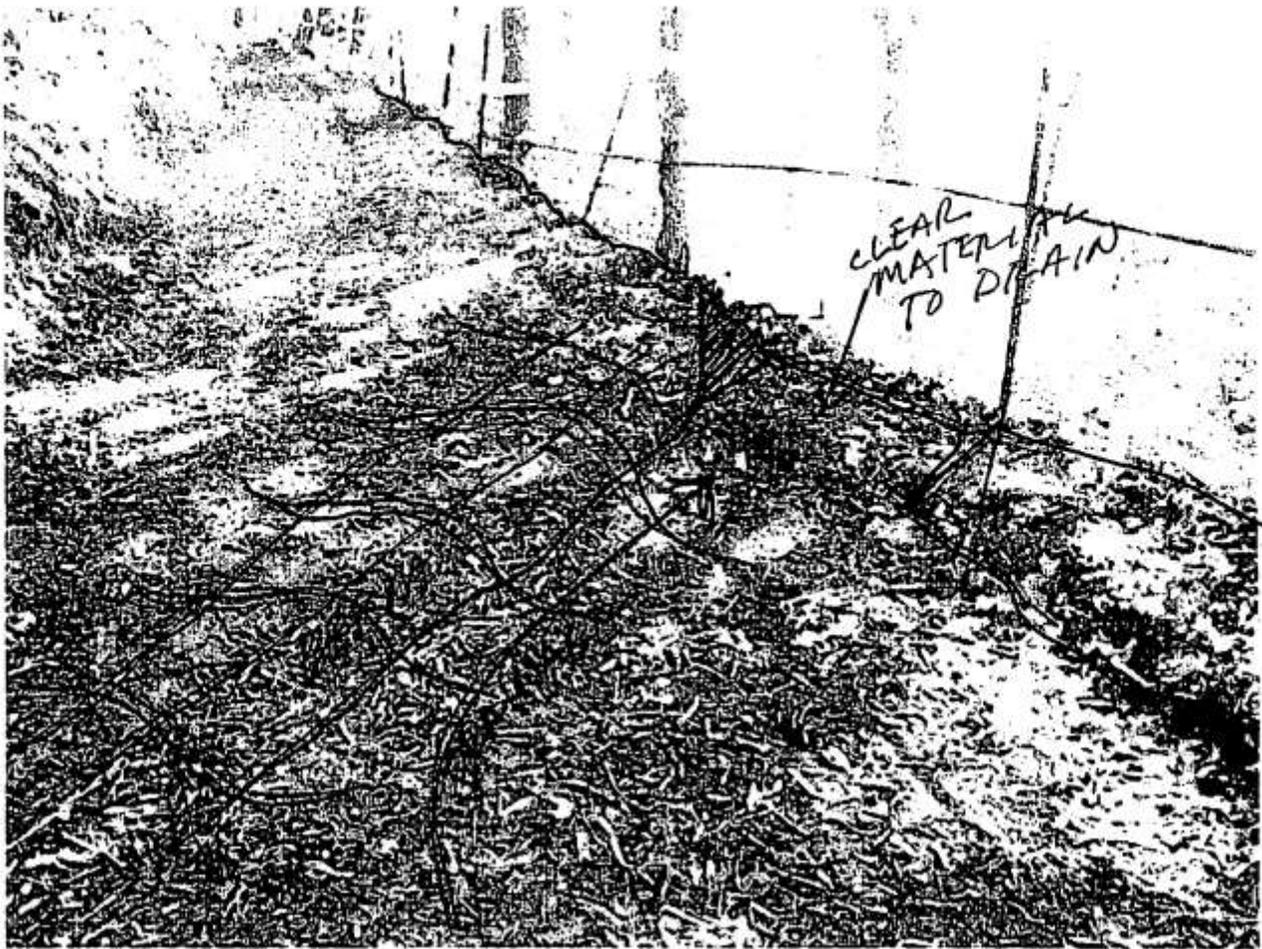


The trail to the rifle range was recently graded and is very muddy. The trail ruts easily when wet. That increases erosion. The water has no way to leave the surface other than to continue down the road.

Excess material should be removed from the side of the road to allow moisture to drain away. The excess material removed should be used to create a water diverter (terrace) to the downhill side of the path.

Wood chips should be spread on the finished grade to shed water from the surface.

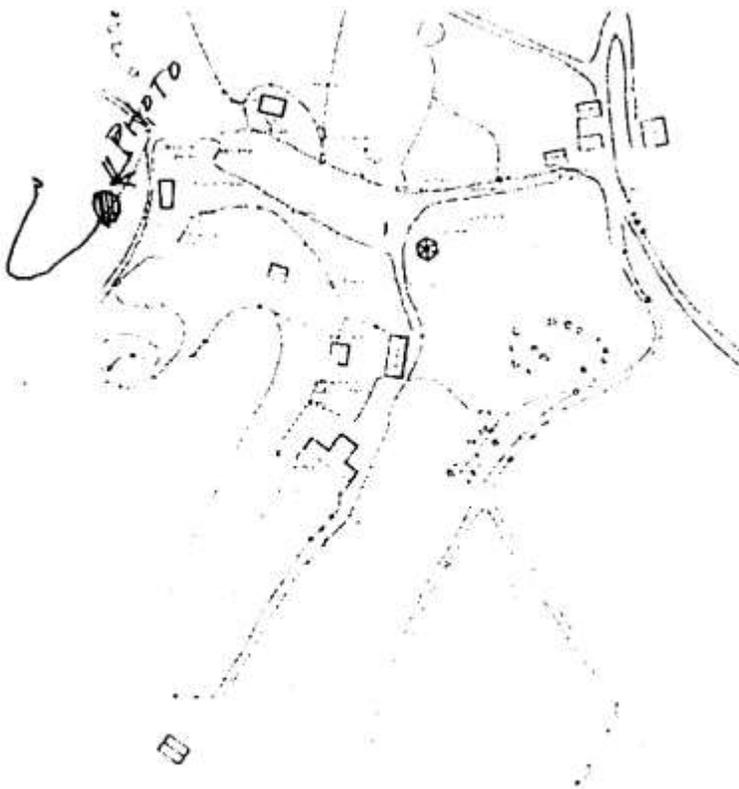
These chips should be available from the camp ranger.



The trail to the rifle range was recently graded and is very muddy. The trail ruts easily when wet. That increases erosion. Wood chips have been spread on the road to allow the surface to shed some of the moisture.

The wood chips should be raked away, the excess material should be removed to allow moisture to drain off of the path, and the excess material should be used to create a water diverter (terrace) to the downhill side of the path.

Replace wood chips when finished.



STARTED 6/04 - NOT YET COMPLETED

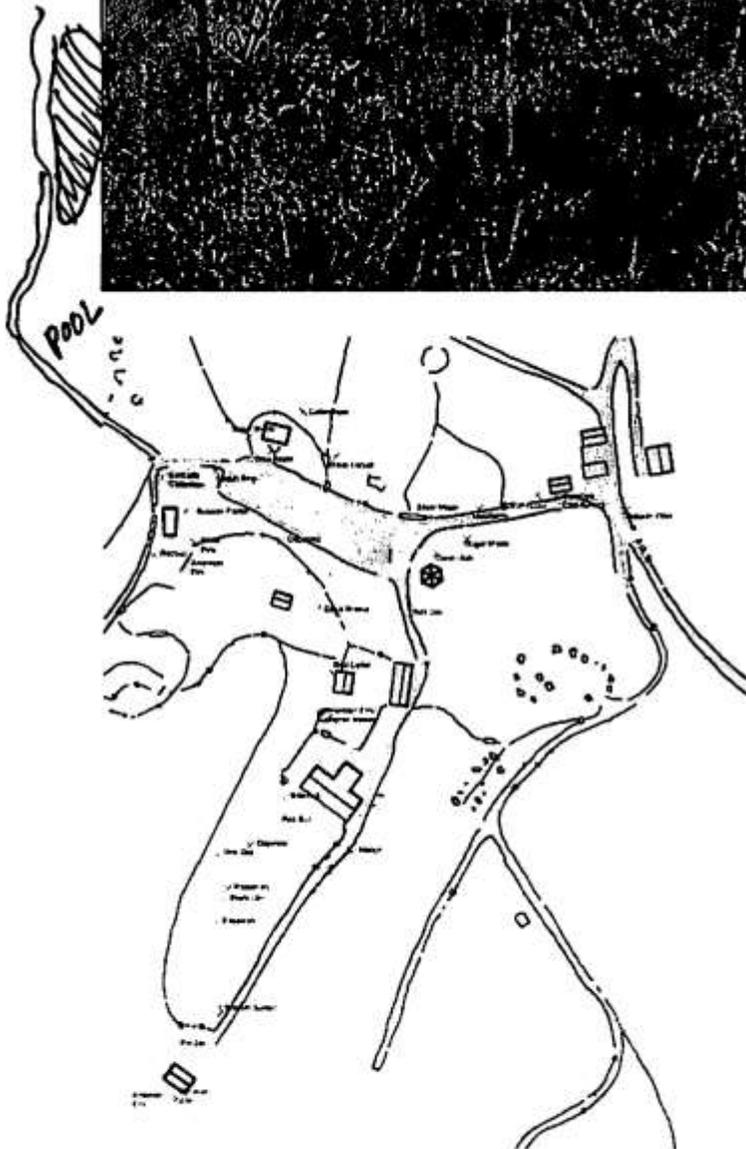


PHOTO  
SHED  
POOL



This hillside was originally a native prairie. The woody vegetative encroachments should be cut and large stumps treated to prevent future growth.

SEE 2006



This hillside was originally native prairie grasses. The woody vegetative encroachments should be cut and large stumps treated with a broadleaf herbicide to prevent future growth. Cut material as low to the ground as possible. Remove all material which has been cut. At least pull to the road. Remove only to the thick stands of hardwood trees.



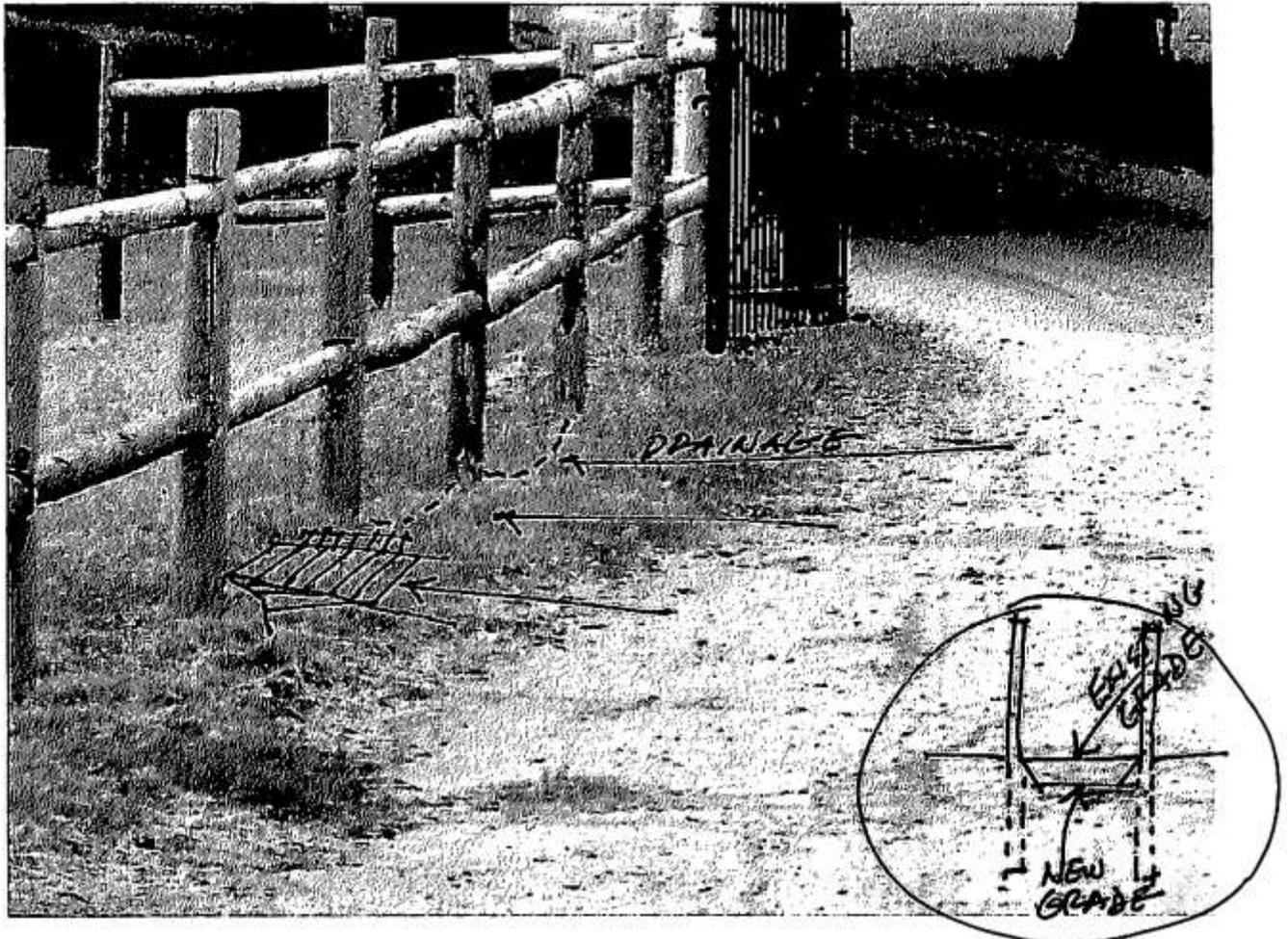
PHOTO  
CUT OUT

CUT OUT  
WOODY  
ENCROACHMENTS.



This hillside was originally native prairie grasses. The woody vegetative encroachments should be cut and large stumps treated with a broadleaf herbicide to prevent future growth. Cut material as low to the ground as possible. Remove all material which has been cut. At least pull to the road. Remove only to the thick stands of hardwood trees.

# ENV SCIENCE PROJECT 6-7/04 FINISH IN 05



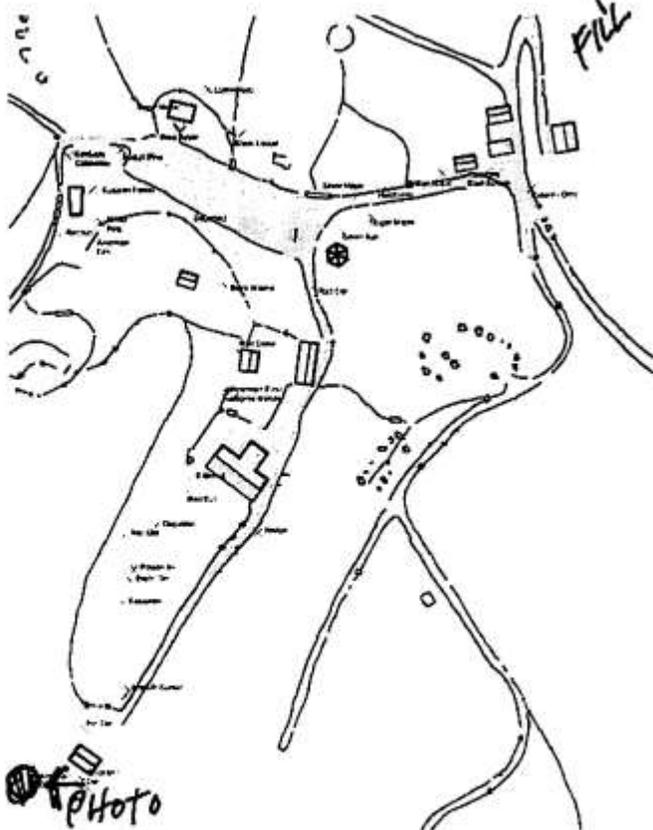
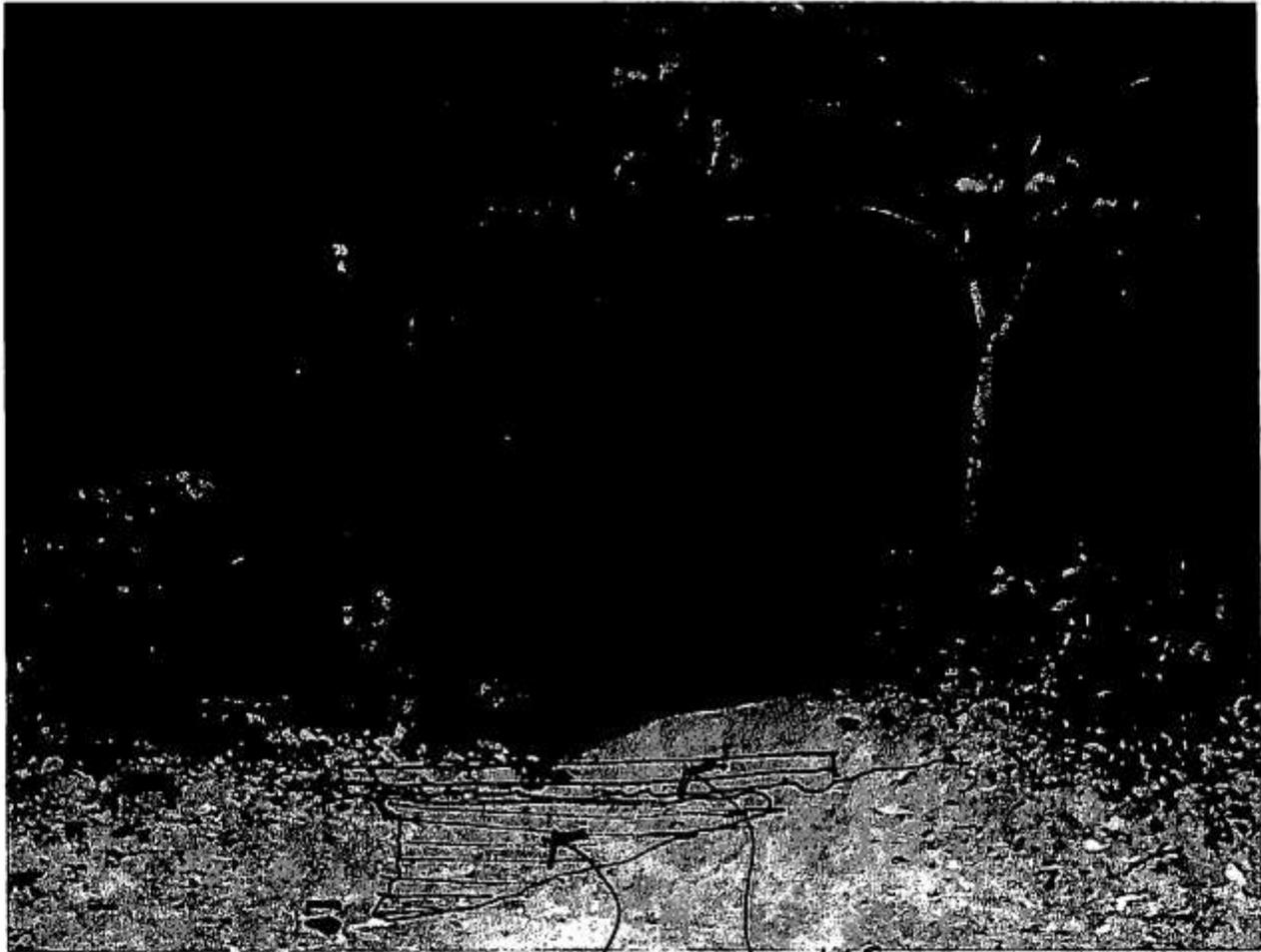
A NEW DETENTION POND HAS BEEN CONSTRUCTED BELOW THE MAIN ENTRY DRIVE ACROSS FROM THE RANGERS HOUSE. THE PAVED DRIVE SHOULD DRAIN TO THAT DETENTION POND, BUT EARTH DEPOSITES BENEATH THE FENCE PREVENT THAT FROM HAPPENING. USING SHOVELS, PICKS, AND RAKES, DIG OUT MATERIAL FROM BETWEEN FENCE POSTS TO ALLOW DRAINAGE TO THE DETENTION BASIN. LOOSEN THE SOIL, RAKE SMOOTH, AND RESEED THE AREA DISTURBED. MULCH IF AVAILABLE. START ONLY THE AREAS YOU WILL BE ABLE TO COMPLETE. START AT THE WEST END. PLACE EXCESS DIRT IN THE RUTS AT THE EAST END OF THE FENCE.

OK



The head of the nature trail directly south of the Nature Lodge is beginning to show signs of drainage erosion. Precautions need to be taken to assure that drainage is diverted from the trail. This can be done most easily by installing some form of device to change the course of the water. Something like a RR tie would be an easy diversion if it were buried at the head of the trail and then dirt should be filled in on the north side to help the water find a new course.

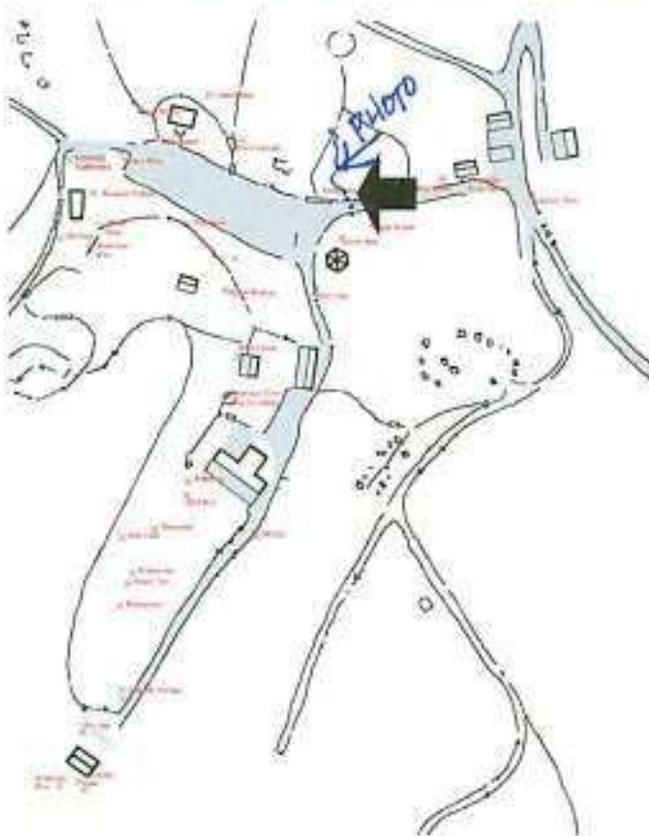
DONE 05



RR TIE

There is an old trail created by scouts southwest of the Nature Lodge. This area is very steep and washes badly with each rain. Precautions need to be taken to assure that drainage is diverted from the trail. Attempts have been made to reseed the area, but all have been less than successful.

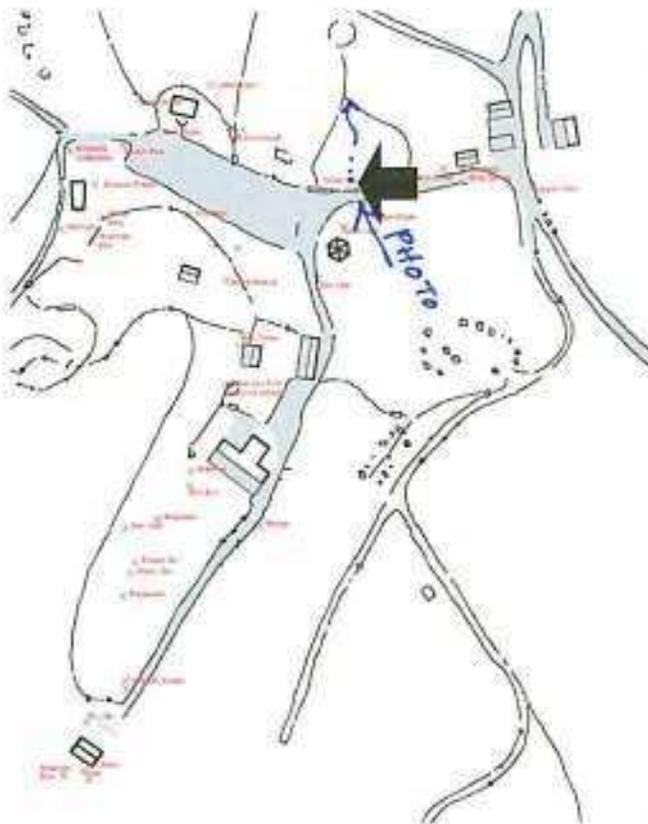
This can be done most easily by installing some form of device to change the course of the water. Something like a RR tie would be an easy diversion if it were buried at the head of the trail and then dirt should be filled in on the northeast side to help the water find a new course.



The Geiger parking lot drains during heavy rains to this area just north of the handicraft pavilion. Smaller rains are handled by an inlet and drainage tube in the parking lot to the west. The drainage is washing out a drainage ditch that will continue to grow unless repaired.

Place some stationary fill in the ditch and tie it to the undisturbed soil. Either short pieces of railroad ties or large rock may be use for stationary fill. Using shovels and picks, embed the items so that they will slow drainage and retain water

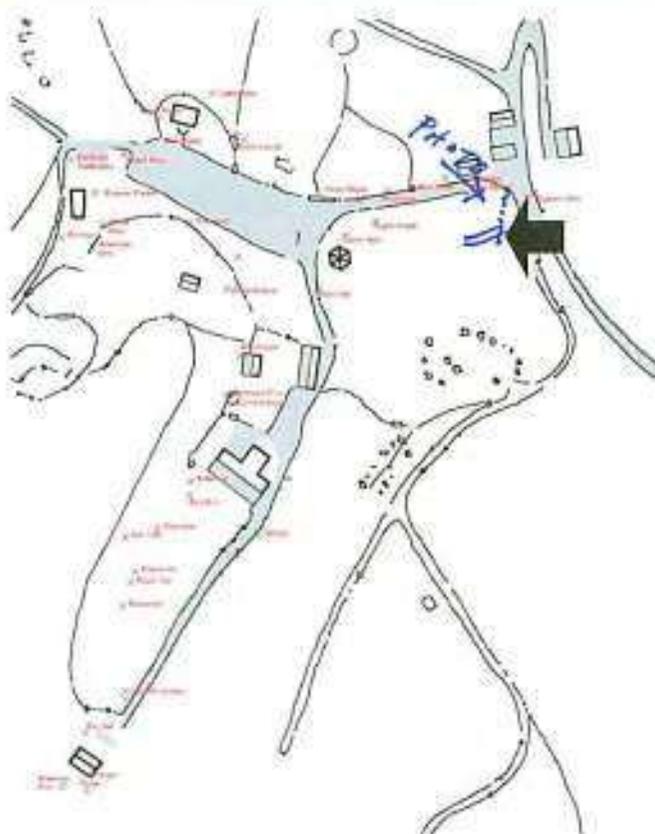
Start only the areas you will be able to complete.



The Geiger parking lot drains during heavy rains to this area just north of the handicraft pavilion. Smaller rains are handled by an inlet and drainage tube in the parking lot to the west. The drainage is washing out a drainage ditch that will continue to grow unless repaired.

Place some stationary fill in the ditch and tie it to the undisturbed soil. Either short pieces of railroad ties or large rock may be use for stationary fill. Using shovels and picks, embed the items so that they will slow drainage and retain water

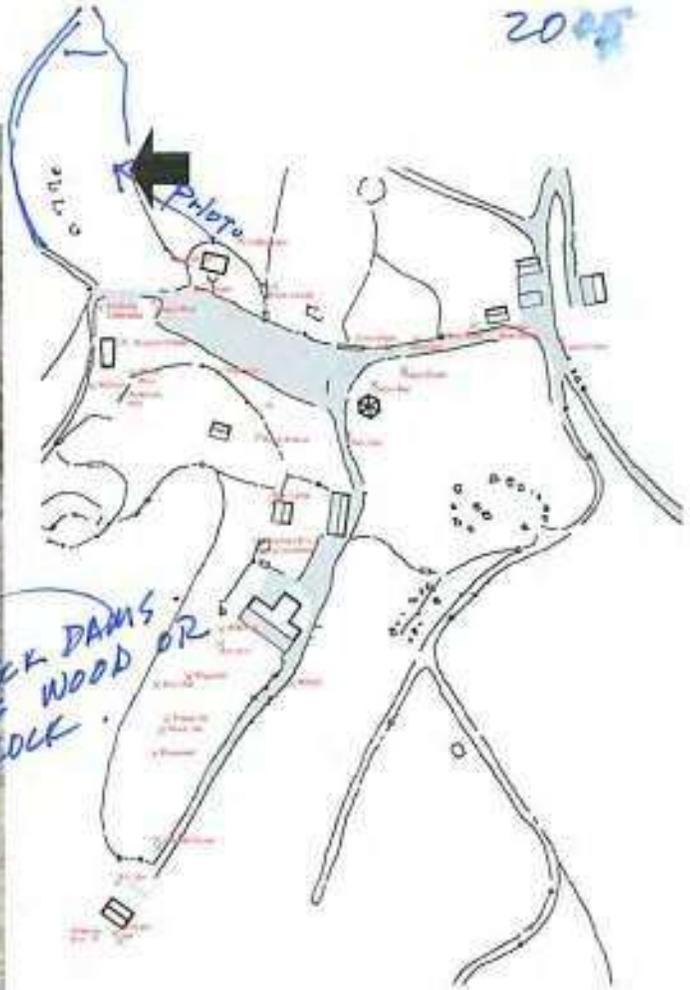
Start only the areas you will be able to complete.



The stromwater detention area was created a year ago to protect the adjacent roadway from erosion. The hay bales were used as check dams to slow drainage.

Remove the hay and either spread sparcelly in the areas not fully revegetated or haul off to refuse.

Remove any nonorganic matter for proper disposal. Grade the distrubed area with shovels and garden rakes. Seed only if needed.

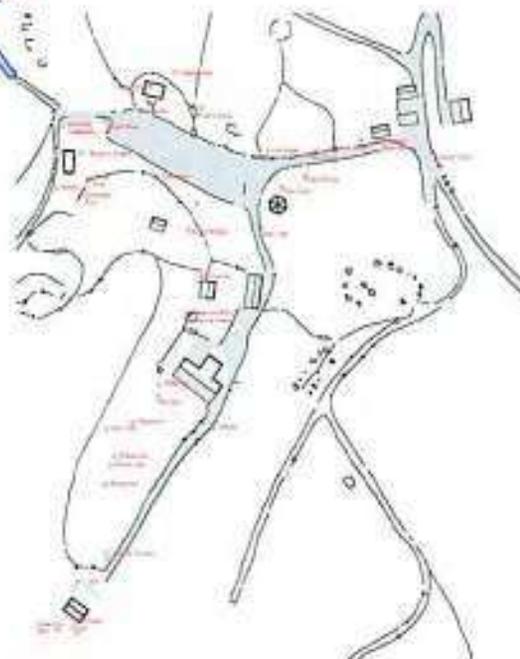


There is a trail cut between the swimming pool ridge and the scoutcraft valley that has begun to erode because of the steep grade. The drainage is washing out a ditch that will continue to grow unless repaired.

Check dams should be created to slow and divert the water. Either short pieces of railroad ties or large rock may be use for stationary fill. Using shovels and picks, embed the items so that they will slow drainage and retain water

Start only the areas you will be able to complete.

The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.



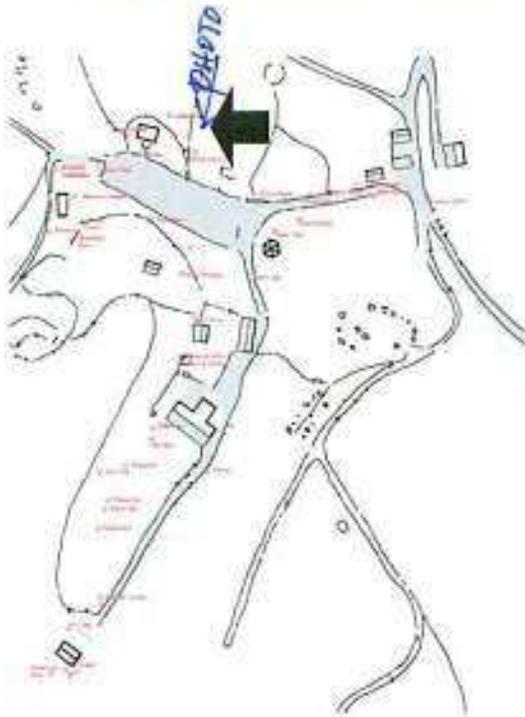
This hillside was originally native prairie grasses. The woody vegetative encroachments should be cut and large stumps treated with a broadleaf herbicide to prevent future growth.

Cut material as low to the ground as possible. Remove all material which has been cut. At least pull to the road. The cut material previously cut and left on the banks should be drug to the top of the hill where they can be hauled off.

Remove only to the thick stands of hardwood trees.

Start only the areas you will be able to complete.

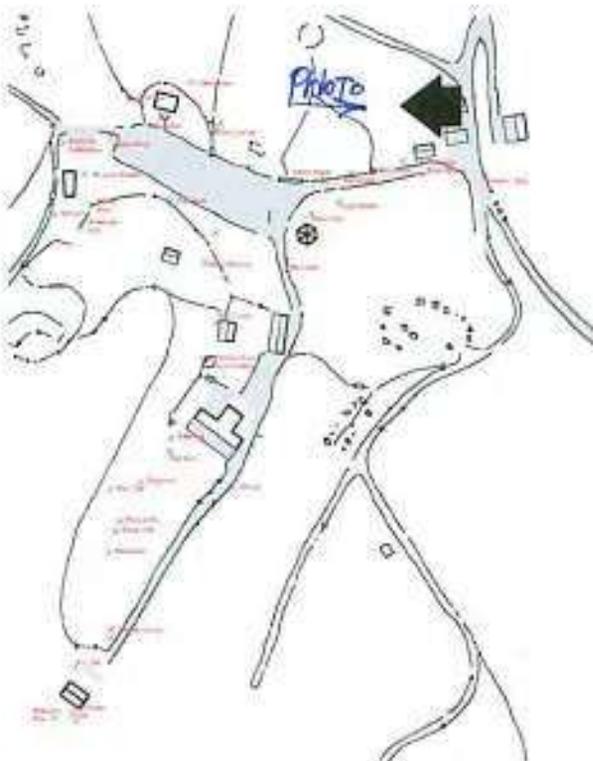
The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.



This hillside just south of Tapper Valley has a wooded area that has not been cleaned out for a long time. That covering of dead and decaying material presents a fire hazard and stops new vegetation growth that will help prevent erosion.

The dead and flammable material should be cleared out. The large hardwoods should be identified and competing plant material should be cut. Rake the ground where it is possible.

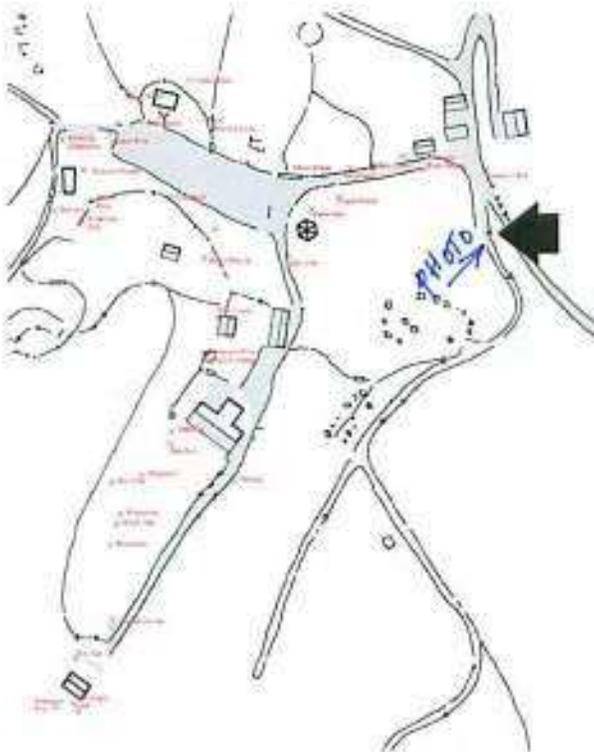
The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.



This hillside just east of Tapper Valley and west of the Noisy Crow Trading Post has a wooded area that has not been cleaned out for a long time. That covering of dead and decaying material presents a fire hazard and stops new vegetation growth that will help prevent erosion.

The dead and flammable material should be cleared out. The large hardwoods should be identified and competing plant material should be cut. Rake the ground where it is possible.

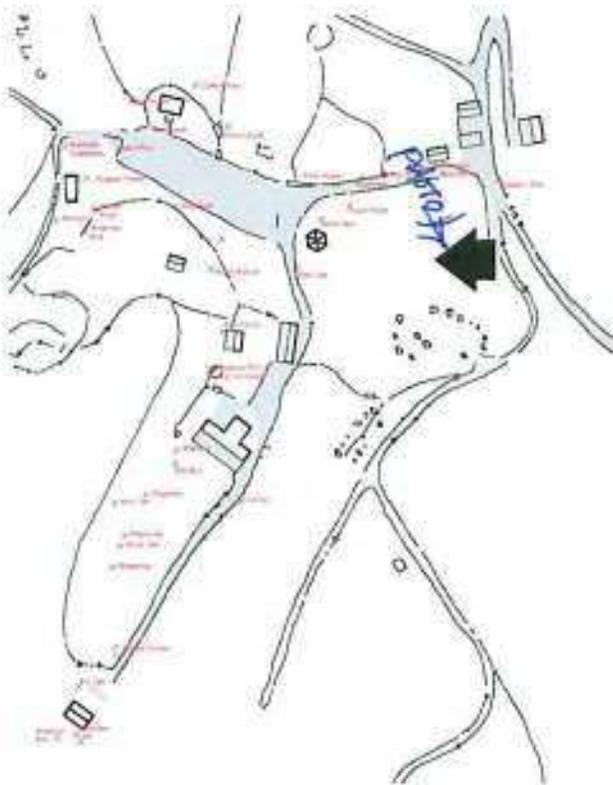
The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.



This hillside just west of the main entry drive shown on the plan to the left has a wooded area that has not been cleaned out for a long time. That covering of dead and decaying material presents a fire hazard and stops new vegetation growth that will help prevent erosion.

The dead and flammable material should be cleared out. The large hardwoods should be identified and competing plant material should be cut. Rake the ground where it is possible.

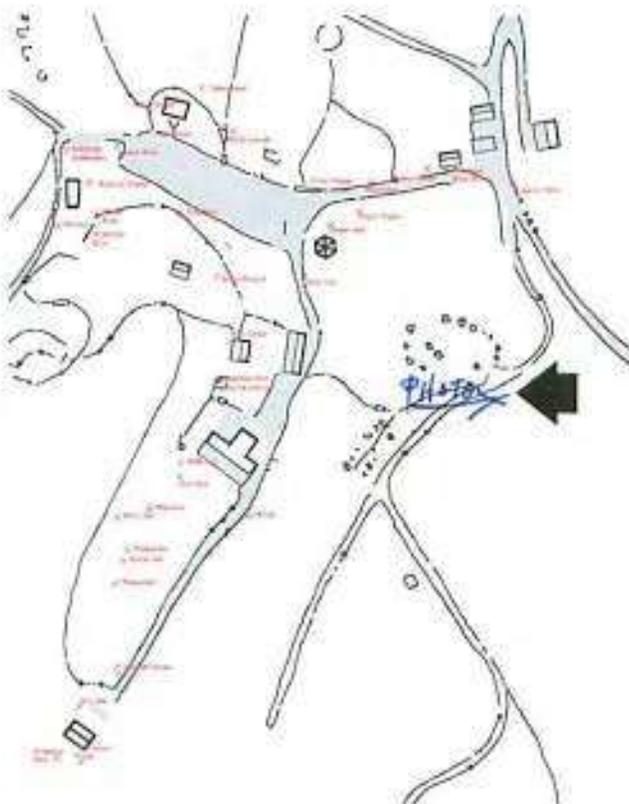
The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.



This hillside between Pueblo Village and the new erosion check dam has a wooded area that has not been cleaned out for a long time. That covering of dead and decaying material presents a fire hazard and stops new vegetation growth that will help prevent erosion.

Collect trash and dispose of properly. The dead and flammable material should be cleared out. The large hardwoods should be identified and competing plant material should be cut. Rake the ground where it is possible.

The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.

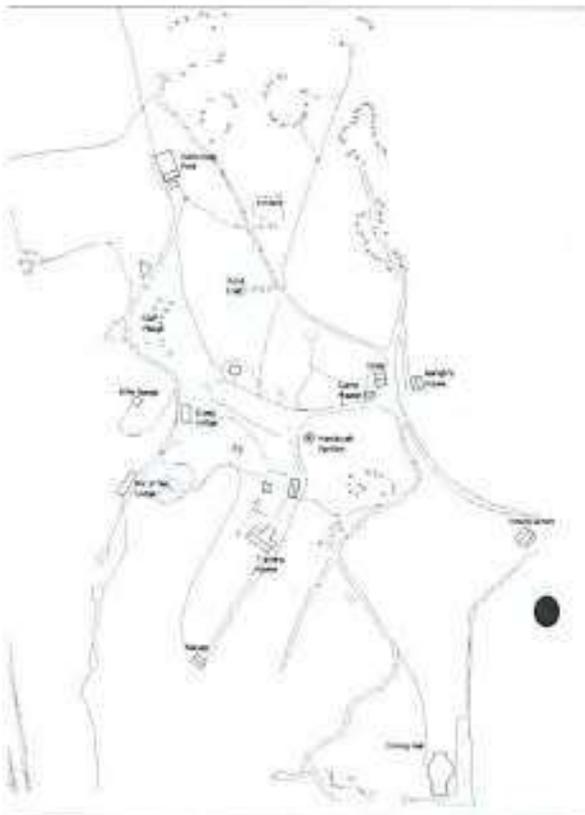


This hillside just east of the road to "south camp" has a wooded area that has not been cleaned out for a long time. That covering of dead and decaying material presents a fire hazard and stops new vegetation growth that will help prevent erosion.

The dead and flammable material should be cleared out. The large hardwoods should be identified and competing plant material should be cut. Rake the ground where it is possible. Specific habitat may be preserved for wildlife.

The necessary tools and materials may be obtained from the quartermaster and the camp ranger. Be certain to line up materials and tools well before you plan to perform the work.

## 2006 Conservation Project - A

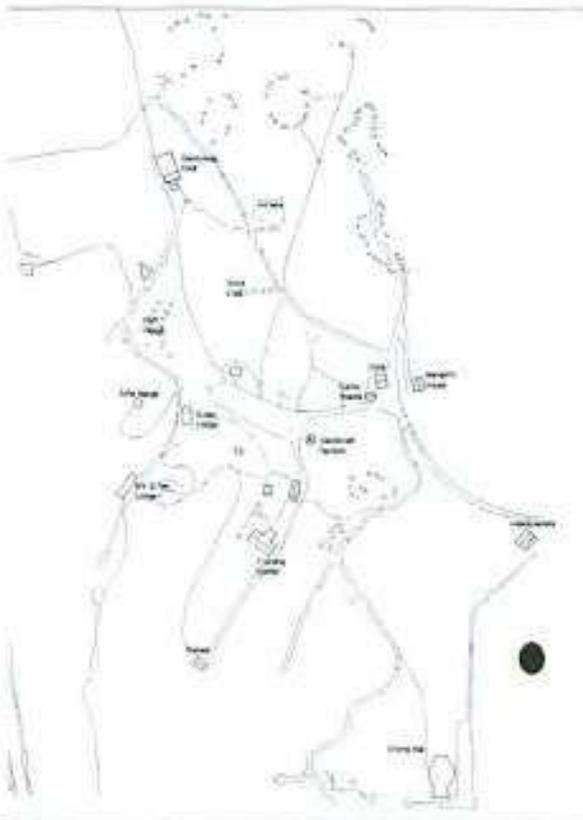


**The Problem** – A new road has been built to Richardson Lake. A drainage tube has been installed at a bend midway down the road. The Tube has been installed, but the ground has not been finished and reseeded. The drainage is washing out a drainage ditch that will continue to grow unless repaired.

**The Solution** – Shovel and rake the ground to smooth out to desired grade so that all ground will drain. Consider placing a few large rocks in the drainage ditch to slow draining water and reduce scouring. Seed the area. Drag the new seed to create some cover for the seed. Cover the area with straw or mulch if available.

**Materials** – Rake / Shovel / Gras seed / Mulch / Large Landscape Rocks

## 2006 Conservation Project - B



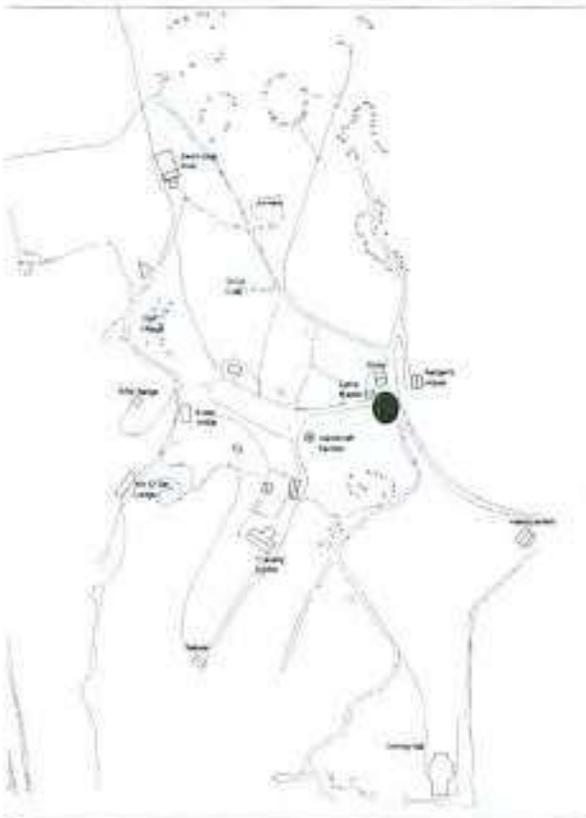
**The Problem** – New utilities have been install to the new facilities at Richardson Lake. The utilities have been burried to minimize the visual impact on the camp. The Utilities have been installed, but the ground has not been finished and reseeded. If left unrepaired, the area not only looks bad, but provides a location for erosion that will create ditches and fill in the lake.

**The Solution** – Shovel and rake the ground to smooth out to desired grade so that all ground will drain. Leave the original ditch location a little higher to allow for settling. Seed the area. Drag the new seed to create some cover for the seed. Cover the area withstraw or mulch if available.

**Materials** – Rake / Shovel / Gras seed / Mulch

DONE 6/25/06

## 2006 Conservation Project - C



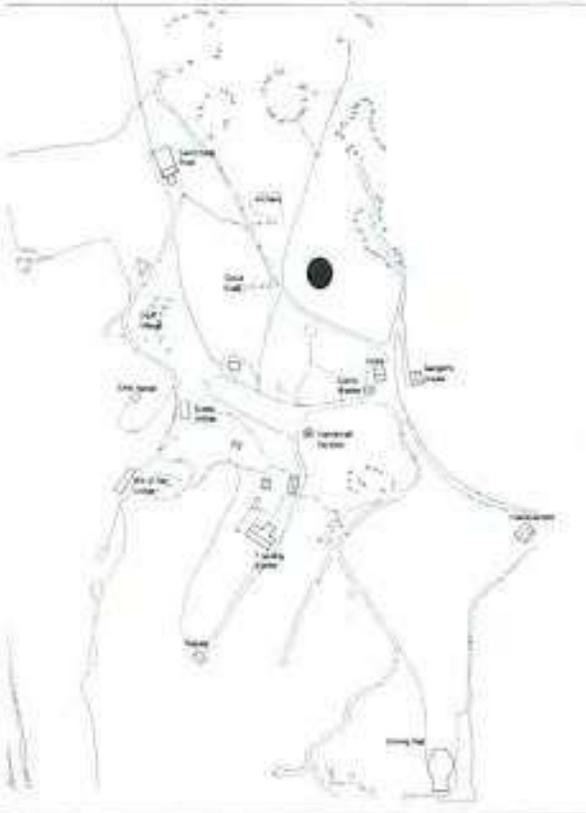
**The Problem** – Water from the drive and parking area adjacent to the trading post cannot get to the containment basin. The deposited earth along the edge of the drive forces the water to continue east until it washes down the road and creates new drainage problems.

**The Solution** – You need to allow the drainage into the containment basin. Dig a shallow swail where the bale of straw sets. Smooth out the ground so that the area will drain well. Seed the area. Create some cover for the seed either by dragging or by sprinkling some fine soil over the area. Cover the area with straw or mulch if available.

**Materials** – Rake / Shovel / Gras seed / Mulch

PROGRESS 7/1/06

## 2006 Conservation Project - D

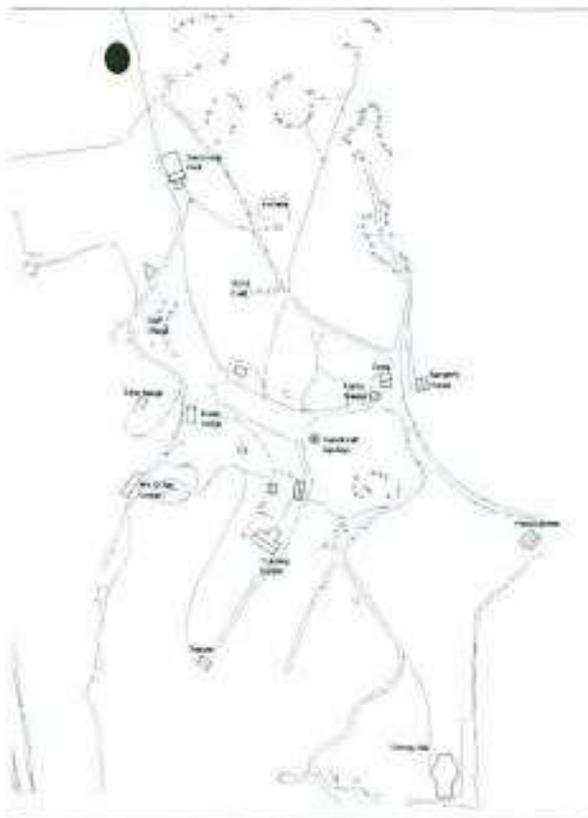


**The Problem** – Undesirable undergrowth has taken control of this wooded area just south of the tapping fire. It harbors undesirable vegetation and animals in a high use area.

**The Solution** – Clear undesirable vegetation. Remove dead wood and trash. Rake and clean the ground. Treat all stumps with broadleaf control.

**Materials** – Saws / Hatchets / Lawn and Garden Rake / Shovel

## 2006 Conservation Project - E



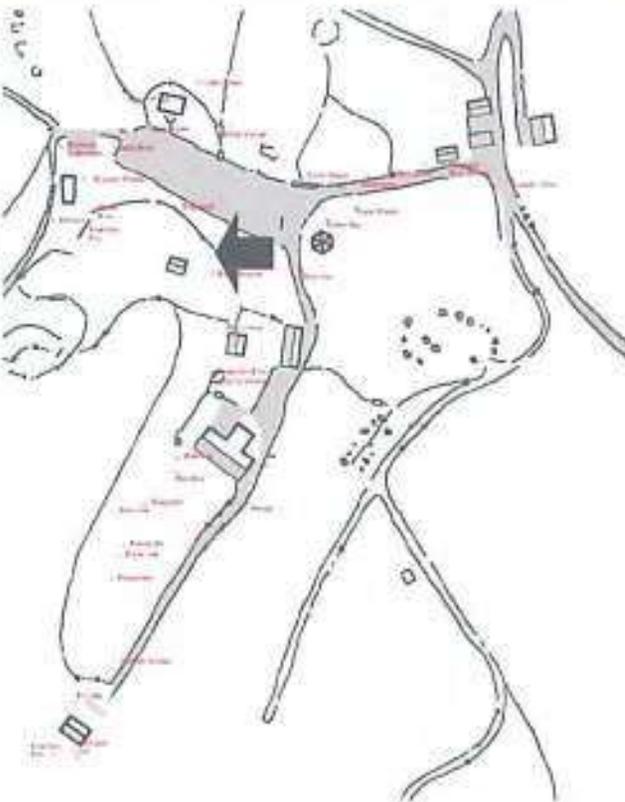
**The Problem** – The ridge is an area of Loess Prairie that was being invaded by transitional species of plants. Other scouting groups have worked to cut many of those transitional plants, but have not removed them so that the prairie grasses can flourish.

**The Solution** – The plants need to be brought to the road on the top of the ridge so that they can be easily transported to a burn pile. That can be done in any manner you consider easiest as long as it is not damaging to the surrounding grass areas.

**Materials** – Dependent upon solution



## 2008-A Conservation Project



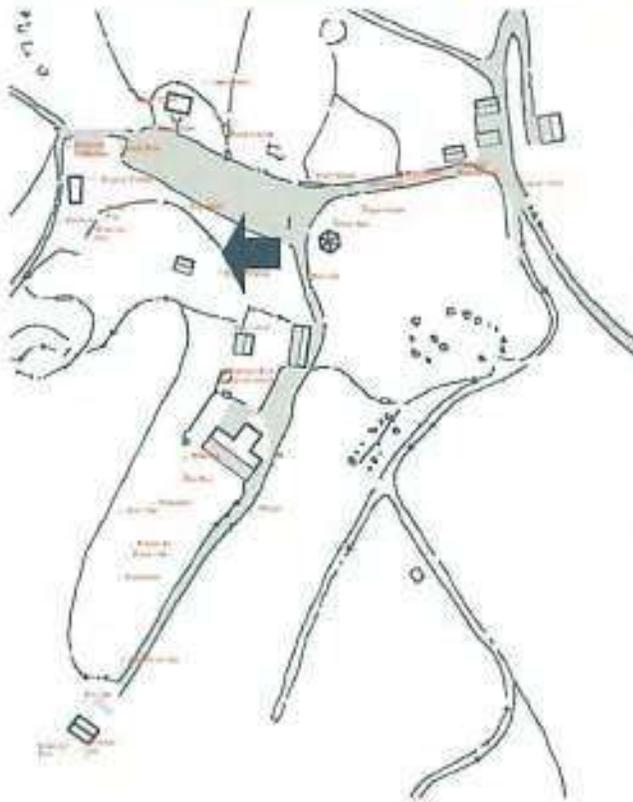
The nature lodge was completed just in time for the 2007 camping season but the surrounding site has never been properly prepared and healed. Several projects should be performed.

Trim the undesirable voluntary tree growth (suckers) from around the specimen plants. Dispose of the waste material in an appropriate location so that it does not become groundwaste in the nearby woodlands.

Start only the areas you will be able to complete.

You will be able to get necessary tools from the maintenance director at camp.

## 2008-B Conservation Project

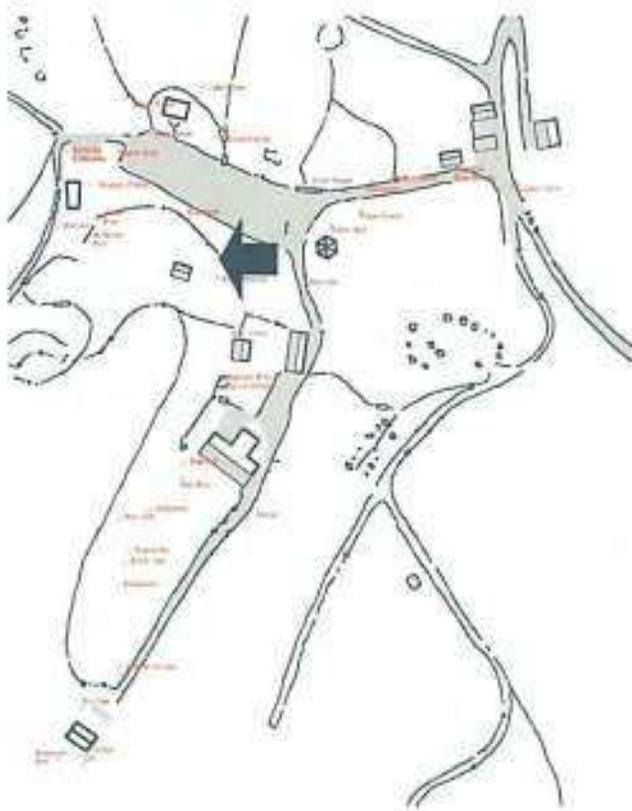


The nature lodge was completed just in time for the 2007 camping season but the surrounding site has never been properly prepared and healed. Water from the lodge is diverted away from the buildings and into the adjacent woodlands to the south. The drainage way needs to be properly vegetated and the rundown to the woodlands should have stones placed to create diffusion, slow the drainage and reduce erosion from the water.

You will be able to get necessary tools from the maintenance director at camp.



## 2008-C Conservation Project

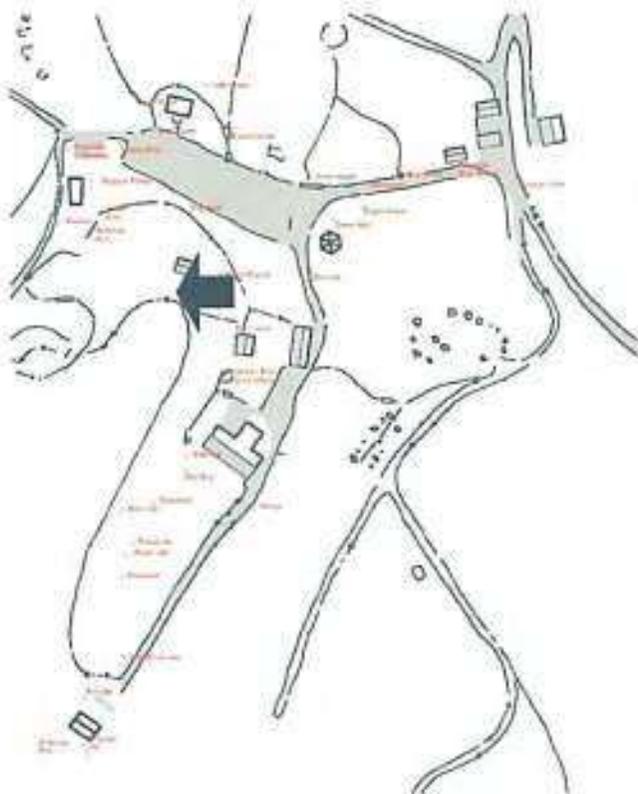


The nature lodge was completed just in time for the 2007 camping season but the surrounding site has never been properly prepared and healed. The area adjacent to the building should be seeded and protected from pedestrian traffic. The area is showing some establishment from last year, but lightly overseeding could prove beneficial.

Fence off the newly seeded area to stop scouts from walking on the new seed. Water daily.

You will be able to get necessary tools from the maintenance director at camp.

## 2008-D Conservation Project

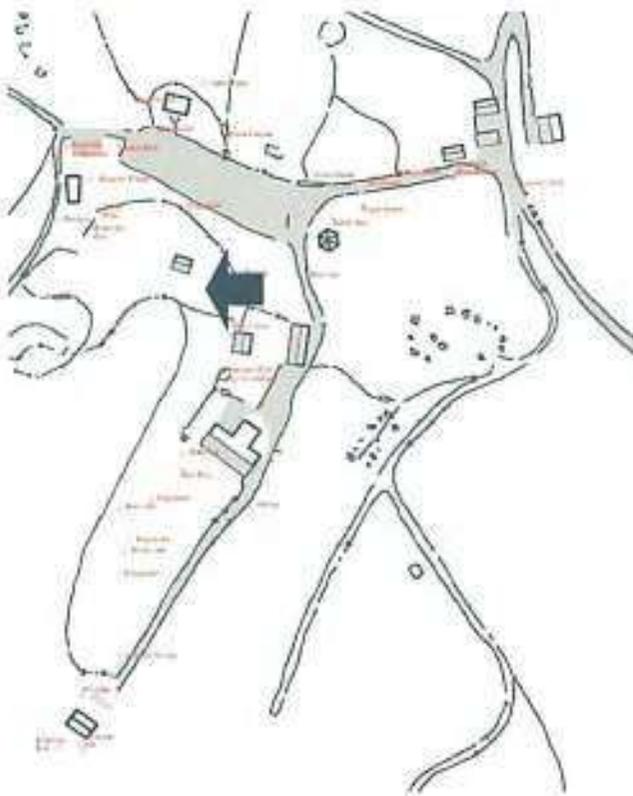


The nature lodge was completed just in time for the 2007 camping season but the surrounding site has never been properly prepared and healed. Much of the wood trimmed for the construction of the lodge was tossed into the surrounding woodland.

Carefully remove dead underbrush within 100 feet of the nature lodge to allow undergrowth space to establish.

You will be able to get necessary tools from the maintenance director at camp.

## 2008-E Conservation Project



A series of checkdams that act as a stairway to the nature trail were constructed during the 2007 camping season. The improvement was beneficial but could be better constructed.

Reconstruct the checkdams using old railroad ties or heavy timber lumber. Each stair should be separated at least 8 inches vertically and 18 inches horizontally from the next stair.

Place large stones on either side of each step to reduce erosion and flow around the structure.

You will be able to get necessary tools from the maintenance director at camp.

# GeoCache Sites

# Camp Geiger

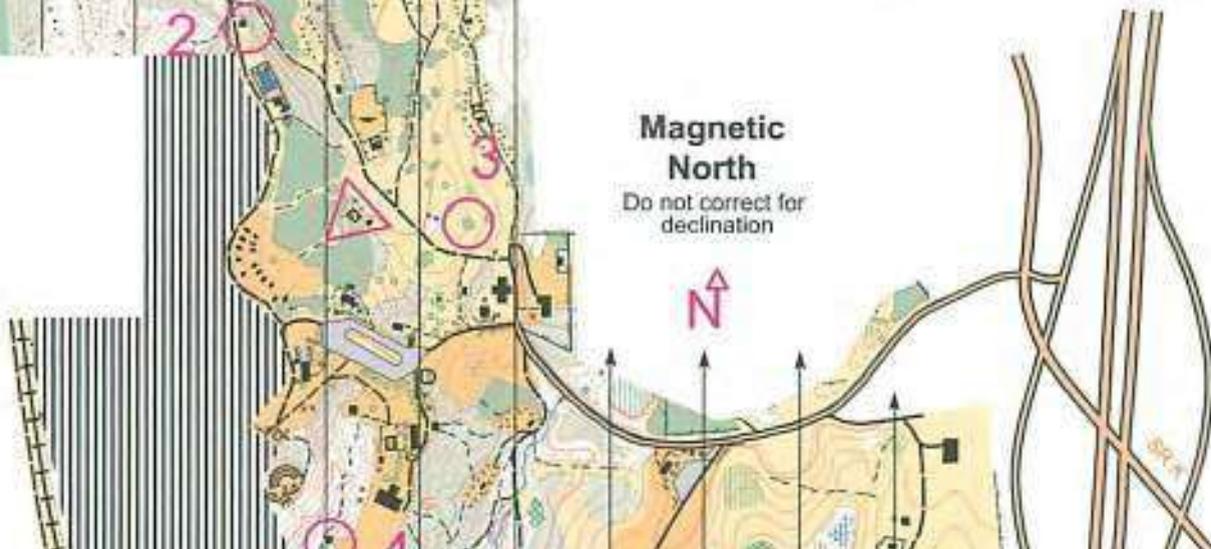


Boy Scouts of America  
Pony Express Council  
9525 County Road 388  
St. Joseph, Missouri 64505

Possession of this map does not imply right of access to the property.



**Magnetic  
North**  
Do not correct for  
declination



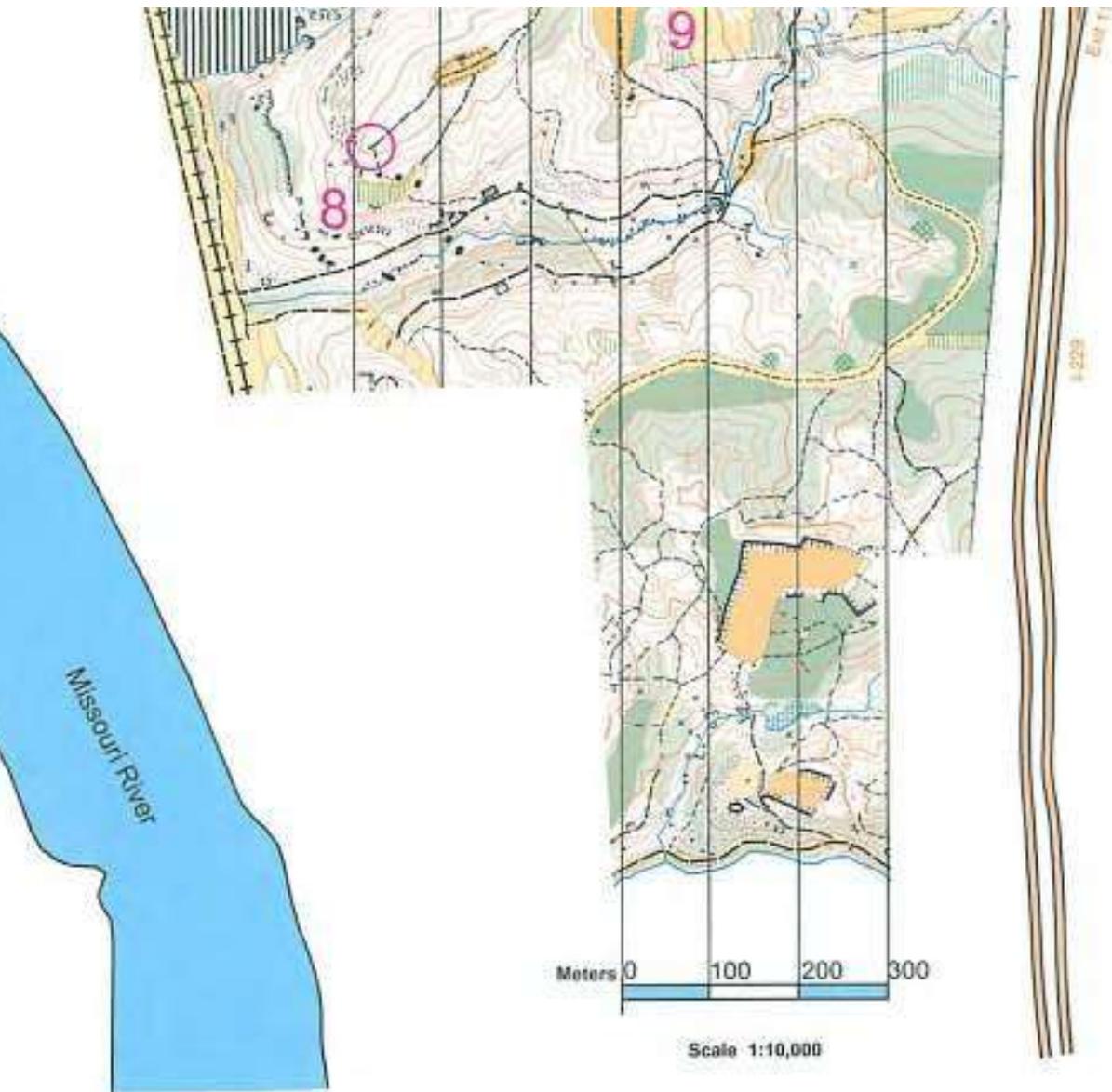
#### Map History

Base Map:  
[www.terraserver.com](http://www.terraserver.com)  
USGS Topographic Map, 1jul1978  
Aerial Photos, Andrew County, 2004

Field Checking and Cartography:  
David Fox, apr1999  
Kevin Shipley, Steven Brown,  
Michael Insko, Matthew Insko,  
sep2002 - apr 2004  
Major field upgrade:  
Fema Shtempler, mar2005

Computer Mapping Program:  
OCAD 8, Hans Steinegger  
Baar, Switzerland

Mapping and TRIM Course Design:  
The Possum Trot Orienteering Club



- Earth bank (tags downhill)
- Erosion gully, small gully
- Swimming pool
- Minor water channel
- Special water feature
- Open land, wooded land
- Individual tree
- Railway
- Major road, minor road
- Road, vehicle track
- Footpath, small footpath
- Fence, ruined fence
- Building, small building, ruin
- Man-made feature, chapel
- Crossable pipeline
- Uncrossable pipeline
- Permanent out of bounds

## 2010 Plan

John Clawson and Roger Denton met on April 8, 2010 to tour the Geiger property to review changes to the land and discuss potential projects to mitigate any current problems. There were a number of projects discussed. Most were related to the development of new capital improvements. Some were old problems that have not been properly addressed in the past. Potential projects are listed below. They have not been given priority.

### 1. New trail from the trading post to headquarters and the dining hall.

This trail has been referred to as “Boy Helper Trail” largely due to the financial responsibility taken by Mike Parnell to assure the development of this trail. Camp Geiger has long had a problem with scouts walking on the vehicle road from the trading post to headquarters. It is also a primary route to the dining hall. The current vehicle road was developed long before there were any facilities on the eastern ridge. The road has the flattest, shortest route between the two ridges.



This makes it a very popular route for the scouts. It has long been a desire of the council to develop another trail that will discourage scouts from using the road. It is our hope that the new trail will be an acceptable alternative. The new trail development will create drainage and vegetation issues that must be addressed.

### 2. ADA seating for the tapping Ceremony.

The Americans with Disabilities Act of 1990 requires reasonable accommodations to make all facilities accessible to the handicapped. Camp Geiger has always taken steps to accommodate. Currently they use an “all terrain” vehicle to drive inaccessible individuals to a viewing area. That process is distracting to all those who are trying to enjoy the ceremony. This project would eliminate the need haul people around by providing a viewing platform near existing accessible parking.



The project area is northwest of the trading post. Last year the Landscape Architecture merit badge class worked on a project that was constructing a CMU (concrete masonry unit) seating wall. The project progressed well but was never completed. The wall needs to be completed three blocks high. This will provide accessible seating to individuals who are not wheelchair bound.



Additionally, the area immediately northwest of that wall should be contoured and surfaced to make it accessible to Wheelchair bound individuals. This project should eliminate the need for a drive over the bank. That drive over the bank is currently the cause for erosion. This will also clean up and landscape an existing storm water detention area.

### **3. Storm water detention area southwest of the trading post.**

The storm water detention area southwest of the trading post was installed immediately after the development of the trading post. The earthen damn has since served as the eastern access route to the trading post. The remaining detention pond has largely been ignored. The area needs to be cleaned up, provided with an area for sedimentation and slow release, and reseeded. This project will provide conservation and beautify one of Camp Geiger's most popular features.



### **4. Parking Lot Drainage improvements.**

The old Camp Geiger Parking lot, which is now used primarily on Wednesday, Thursday, and Friday evenings creates substantial runoff. Many improvements have been performed to remedy the problems created, but over time we neglect to maintain those improvements and erosion results. Additionally, we exacerbate the problem with additional unrelated but contributing projects.



The catch basins, which were previously created, need to be uncovered and protected from damage. The drainage pipeline from those basins needs to be routed to avoid damage and the ditches need to be improved to avoid further erosion. Additionally, the wooded area to the north of the parking lot should be cleaned up a storm water detention area may be created to minimize down stream damage from runoff.



### **5. Improvements to the entry trail to the Council Ring.**

Since the development of the new Council Ring in 2008, the entry trail has been the source and victim of water damage. The trail was cut through a wooded thicket bound down hill. It collects water from the west end of the parking lot discussed in the previous project. Last year there was an attempt to control the drainage with terraces and with small inlets and buried pipe. The improvements do not appear sufficient to control the problem. There has been discussion about expanding the improvements to clear more of the adjacent woods. This area needs to be carefully studied to determine the best course of action.



### **6. Trail to Flying Eagle.**

In 2009 the construction of new restrooms began on the site of the old Flying Eagle pavilion. Those restrooms will serve the new council ring. There was not a trail leading from the council ring to the restrooms. The creation of that new trail on the hillside will be a challenge to assure that new erosion problem are not created.



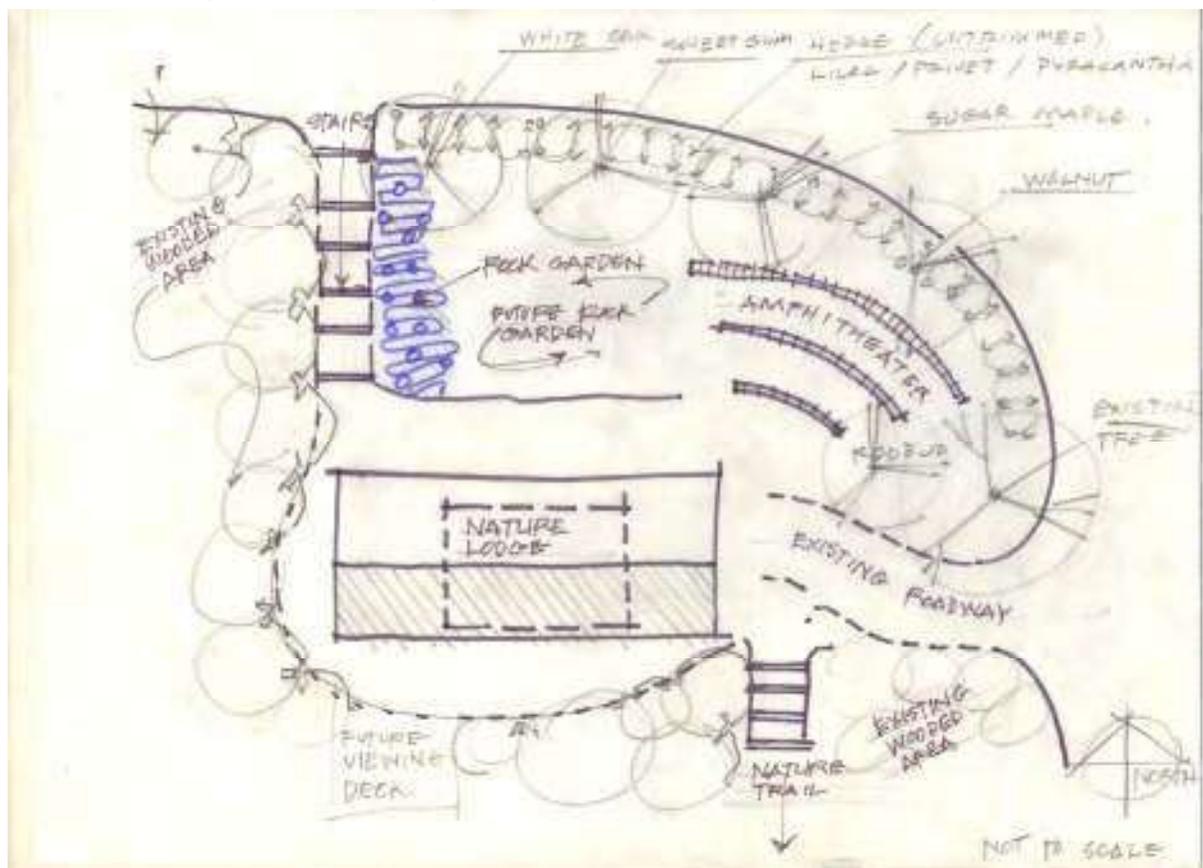
### **7. Vegetation of the COPE Course.**

A new cope course was constructed to make room for the new shooting range. That copy course caused a number of soils areas to be disturbed and should be quickly reseeded to minimize soil erosion.



## 8. Nature Lodge Improvements.

Conservation improvements at the new nature lodge have been approved by the facilities committee on 4/21/2010 and will become primary projects of the Geiger nature staff. A plan of those improvements is shown below.



## 2011 Plan

John Clawson and Roger Denton met during staff training on April 16, 2011, toured the Geiger property, and reviewed conservation needs. Many of the conservation needs still relate to capital improvement projects from the current year or new developments from previous years.

Often the needs arise from poor environmental planning when preparing for capital improvements. We discussed ways to better avoid environmental damage through administrative preparation. Drainage is always a force to be dealt with.

Potential projects are listed below. They have not been given priority.

**1. New trail from the trading post to headquarters and the dining hall. This is the continuation of a 2010 project.**

This trail began development over a year ago and was part of the 2010 conservation plan. It will continue through the development process in the years to come. Only the western end of the trail adjacent to the entry road has been fully developed. The remainder of the trail seems to be searching for direction. There will be a continued need for development and repairs for the trail for several years to come.



**2. Storm water detention area southwest of the trading post. This is the continuation of a 2010 project.**

The storm water detention area southwest of the trading post was installed immediately after the development of the trading post. The earthen dam has since served as the eastern access route to the trading post. The remaining detention pond has largely been ignored. The area needs to be cleaned up, provided with an area for sedimentation and slow release, and reseeded. This project will provide conservation and beautify one of Camp Geiger's most popular features.



**3. Parking Lot Drainage improvements. This is the continuation of a 2010 project**

The old Camp Geiger Parking lot, which is now used primarily on Wednesday, Thursday, and Friday evenings creates substantial runoff. Many improvements have been performed to remedy the problems created, but over time we neglect to maintain those improvements and erosion results. Additionally, we exacerbate the problem with additional unrelated but contributing projects.

The catch basins in the parking lot have been improved and protected. The drainage pipeline from those basins still needs to be rerouted to avoid damage and the ditches need to be improved to avoid further erosion.

It is suggested that a small detention area be created in the trail to the old restrooms. A 6 inch tube should be buried from that detention area to the bottom of the valley to stop the erosion on the northern slope of taper valley.

Additionally, the wooded area to the north of the parking lot should be cleaned up a storm water detention area may be created to minimize down stream damage from runoff.



- 4. Improvements to the entry trail to the Council Ring. Most of this work has been completed but there is still a small problem near the top of the trail to correct.**

Since the development of the new Council Ring in 2008, the entry trail has been the source and victim of water damage. The trail was cut through a wooded thicket bound down hill. It collects water from the west end of the parking lot discussed in the previous project.

The drainage originating from the top of the trail needs to be diverted to the north side of the trail to stop the drainage from continuing down the trail.



#### **5. Repairs around the new drainage tube at Pueblo.**

Tubes were installed to handle drainage that collects from a very old camp trail. The collection ends of the tubes must be repaired to avoid further damage.



**6. Drainage repairs to gullies developing in the turf banks of the new shooting sports area.**

The past year Camp Geiger has been working to develop a new shooting sports area. It is just nearing completion and all indicators are that it will be in full use for the 2011 season. Much of the landscaping has been roughed in but there will be associated problems due to the extreme slopes in and adjacent to the range.

That development includes the development of the new lodge and associated drives.

The areas that will be mowed should be redirected to established vegetation only after the new turf is well established. Then the area of erosion should be diverted and eroded area should be filled and seeded to assure healing. This method may only be successful on slopes of 3:1 (33%) or less.

On steeper areas and areas that will not be mowed it would be better to gather limestone rip rap of 20 pounds or greater and hand place in the gullies to defuse the flow of water. The stones will also have a calming effect on the flow of water.

The conservation director can identify the areas

for each type of repair

7.

**Vegetation of the COPE Course.**

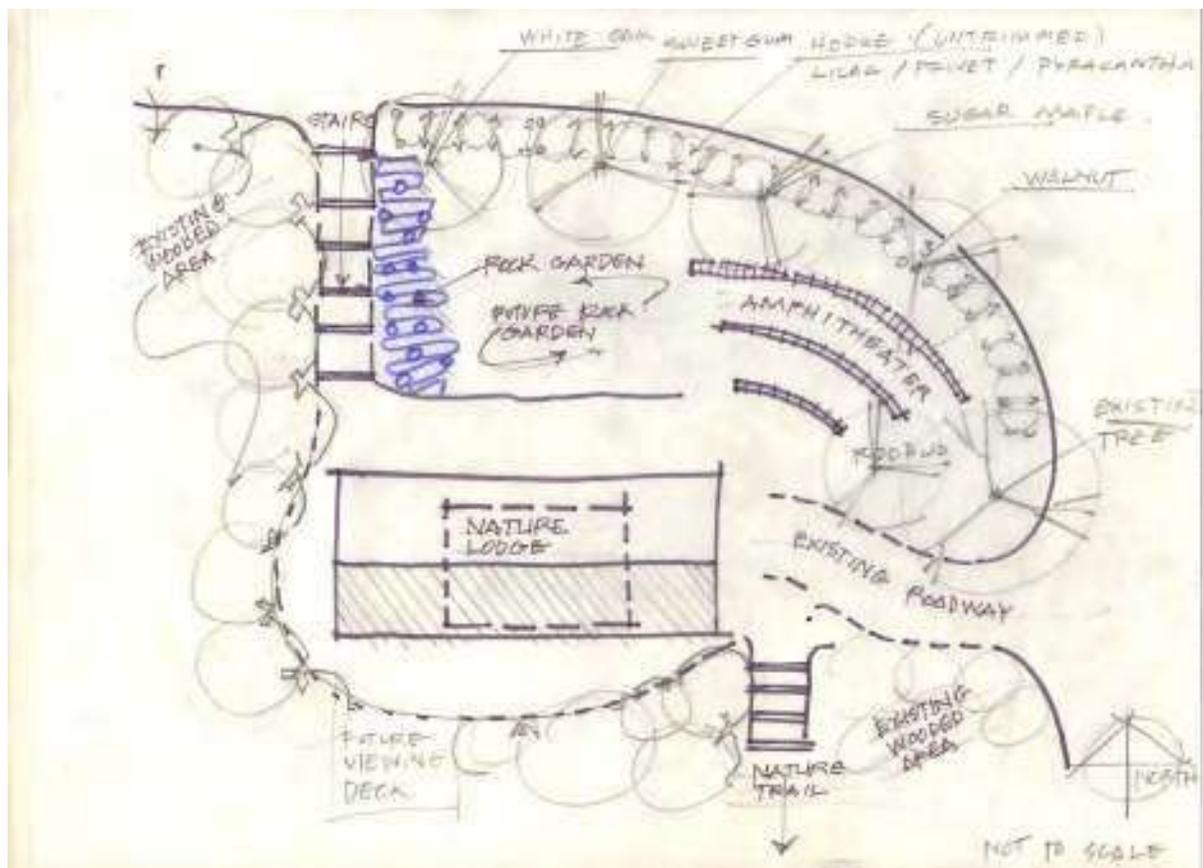


A new cope course was constructed just over a year ago to make room for the new shooting range. That copy course caused a number of areas to be disturbed and should be quickly reseeded to minimize soil erosion. Most of the problems were repaired in the past year, but recent improvements continue to require additional needs for conservation repairs. This issue will take a couple of years to fully repair.



**8. Nature Lodge Improvements. These projects will continue to be developed as scout conservation projects over the next several years.**

Conservation improvements at the new nature lodge have been approved by the facilities committee on 4/21/2010 and will become primary projects of the Geiger nature staff. A plan of those improvements is shown below.



## 2012 Plan

Roger Denton

John Clawson and Roger Denton met on February 8, 2012 to tour the Geiger property to review changes to the land and discuss potential projects to mitigate any current problems. There were a number of projects discussed. Most were related to the development of new campsite improvements. Some were old problems that have not been properly addressed in the past. Potential projects are listed below. They have not been given priority.

### 1. Road improvements to campsite improvements.

in demand and the facilities committee is working to accommodate a reasonable growth. Two areas which are seen as deficient to handle additional scouts are campsites and dining. Several of the campsites are to be improved but the access to them is insufficient for equipment and crews to complete work. The roads are cut and being improved but will require much additional care to assure that the land is properly healed and that drainage problems are addressed to minimize unintended consequences. These projects are still in progress and will require additional review as camping season approaches.



The camp has been growing

## **2. Kickapoo Campsite Improvements.**

In order to more safely locate troops to away from weather dangers, the facility committee began work to enlarge the old Kickapoo campsite. Those improvements are currently underway and will be in use for the 2012 season. The improvements will



also require additional planning and development to assure that the development is properly revegetated.

## **3. Short Arrow Campsite Improvements.**

Short arrow campsite is in the process of being rebuilt. New roads to the area have been constructed and will also require healing. Old roads are being abandoned must be correctly returned to nature. The campsite is still under construction



and the specific nature of conservation needs is not yet know but a plan will be necessary to assure final project success.

## **4. Buffalo Bill Cody Campsite Improvements.**

Buffalo Bill Cody was a campsite in an older plan of Camp Geiger that has long been abandoned. With the need for additional scout housing the campsite is in the process of being rebuilt. New roads to the area have been constructed and will also require healing. The campsite is still under construction and the specific nature of conservation needs is not yet known but a plan will be necessary to assure final project success.



##### **5. Improvements to the entry Road to the Old Council Ring.**

Since the development of the new Council Ring in 2008, the new council ring has been allowed to deteriorate. Plans for that old council ring are under consideration and will soon be finalized. One of the plans for preservation is to acquire waste rubble and apply it to the steep slope just south of the staging area.



The rubble should be in chunk large enough to assure they will not be adversely eroded during the occurrence of any normal frequency storm.

In order to accommodate the placement of rubble, the old trail to the council ring is being reshaped to allow use by trucks. That road will require improvement and finish work to reduce unintended results. The exact nature of those improvements will be better known as the summer progresses.

### **2014 Plan**

Roger Denton

John Clawson and Roger Denton met on April 2, 2014 to tour the Geiger property to review changes to the land and discuss potential projects to mitigate any current problems. There were a number of projects discussed.

## **1. Erosion southeast of the shooting range.**

In the past few years the council has expanded the shooting sports area to accommodate many more participants. In order to create enough level areas for the shooting ranges, many new embankments were created. Most have been adequately corrected but some will still require more work. This area southeast of the rifle range has substantially healed over but still requires a little extra work.

Rubble fill will help defuse drainage in the area. That rubble can be found nearby in the limestone hills.



## **2. Trail from the Administration / Health Lodge to the Silver Eagle Trail.**

Last year the Adult Foxman program began working on a trail from the front entry to the Health lodge to the Silver Eagle Trail. The purpose of the trail is to keep campers from walking on the camp roads. Many questions and suggestions have been received about the trail. The design of the trail is to continue toward a clearing and then double back to tie into the Silver Eagle Trail. The Silver Eagle Trail may need a drainage tube but that will be located north of where the trails unite.



### **3. Trail Improvements North out of the Running Horse Council Ring.**

Many changes have been created since the creation of the Running Horse Council Ring. The area is now be used as a staging area for troops at Wednesday night campfire but is also being considered as an area for troop departure to separate troops from the visitors for a smoother transition after family visits. The area needs aesthetic improvements as well as clearing and creation of a drainage detention pond just to the west of the trail.



#### **4. Native Grass area just East of the Dining Hall.**

The area just east of the Dining Hall has recently been planted in native grasses. Several areas of camp have been established with native grasses but all require additional prairie management techniques including controlled annual burns. Grasses are well established but the area needs to be cleaned up and undesirable vegetation must be eliminated. Some special plantings of

noninvasive species may be added in select areas to enhance wildlife food and cover.

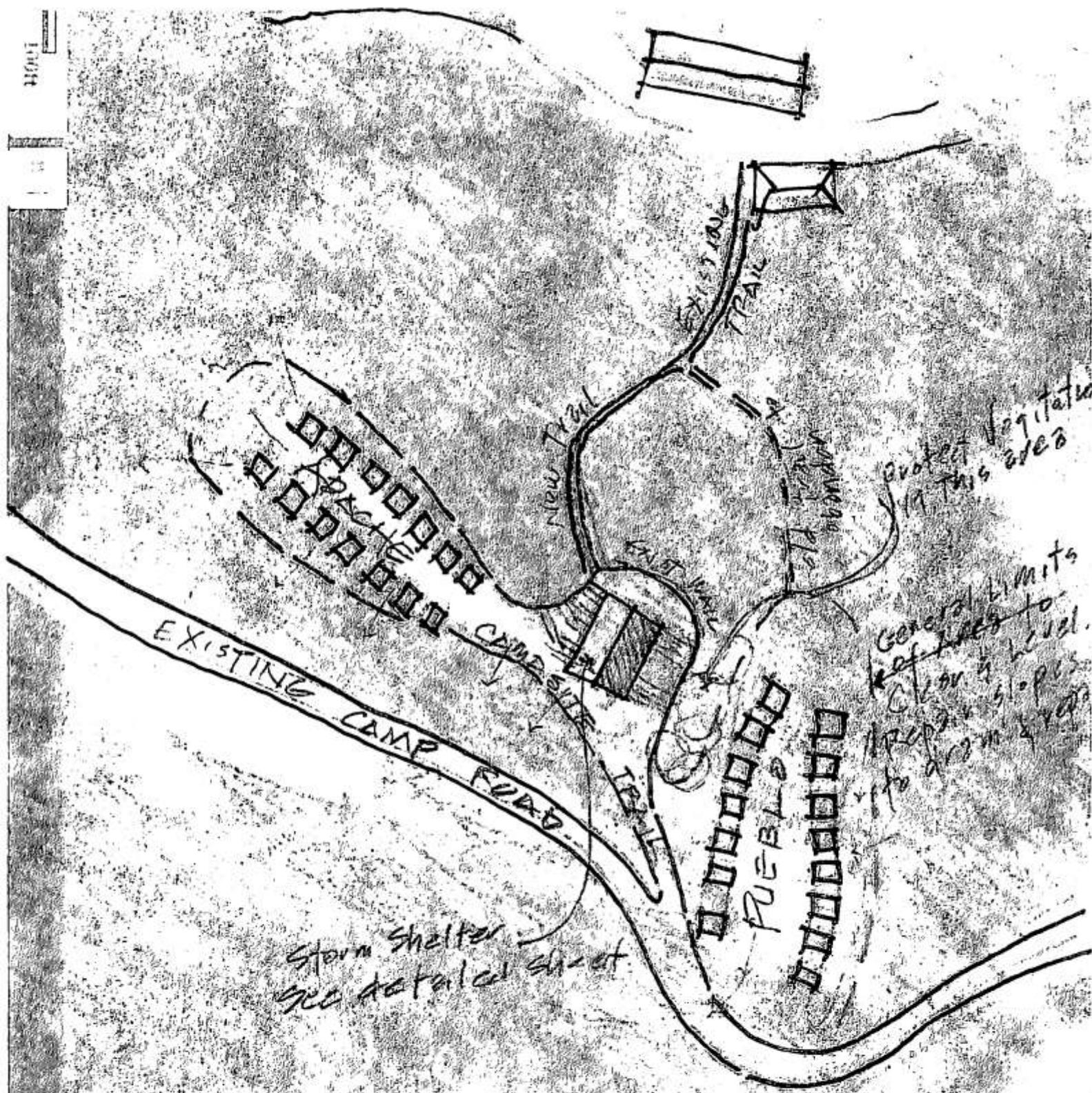


### 5: Upper Silver Eagle Trail

The upper end of the Silver Eagle Trail was never properly completed. The route for the upper portion of the trail is shown below and should be completed to finalize the project.







Storm Shelter  
see detailed sheet

Protect Vegetation  
in this area

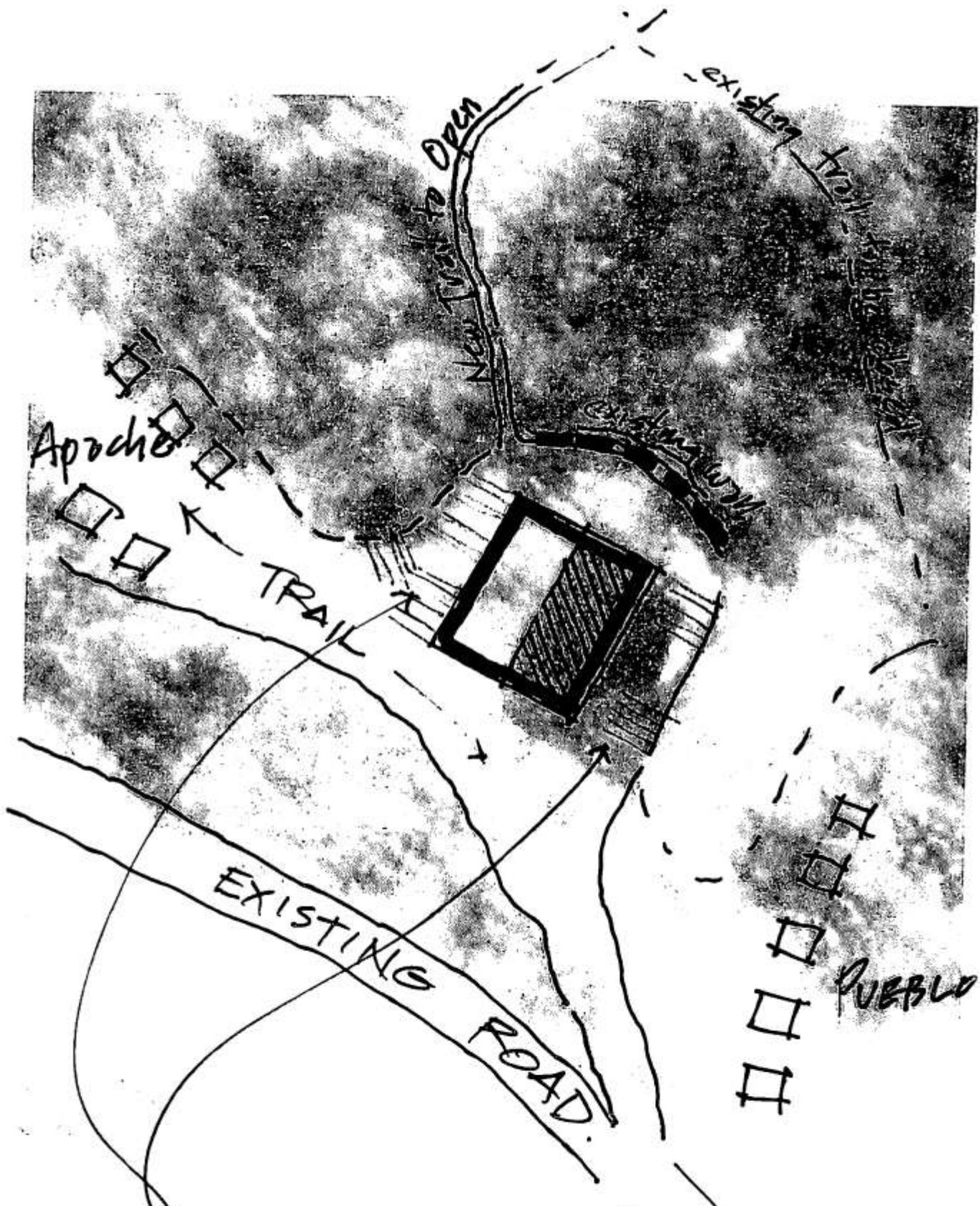
General limits  
keep trees to  
clear of level.  
prep slopes  
to drain & rep

Reset Tent Platforms generally  
as shown. Adjust to fit terrain.  
Grade sites for positive drainage

# APACHE / FUEBLO PLAN

Campsite Reconstruction

12/15/17



Stairs / erosion control  
 to be laid out on-site  
**PUEBLO STORM SHELTER**  
 Conservation Project Plan 12/15/17

## 2019 Plan

Roger Denton

### 1. Continue with the vegetative control on and around Lake Richardson.

In recent years the vegetation on the east side of Lake Richardson has grown out of control reaching the water. This provides undesirable change that starts a modification in the character of the lake. It is the desire of Camp Geiger to stop this transition so that the lake may remain recreational for program. Areas of the bank have now been cleared. Continued progress and maintenance of repaired areas should be considered.



The vegetation removal may be accomplished by many participants. The process can be done with many different means. Chainsaws for those properly trained and qualified. Clippers and loppers are appropriate for those younger. It is essential that the project be accomplished as quickly as possible. Substantial amounts of poison ivy will require extra care in working with the vegetation.

The potential use of goats for clearing the area should be explored and evaluated.

Vegetation on the lake has also become an issue with lily pads and cattails. The camp should consider a program of chemical control of the lily pads to reduce the invasion to the lakes ecosystem.

The vegetation removal may be accomplished by many participants. The process can be done with many different means. Chainsaws for those properly trained and qualified. Clippers and loppers for those younger. It is not essential that the project be accomplished quickly.

Tools for the task can either be acquired from the quartermaster or may be provided by the ranger.

Safety should be considered and appropriate cautions should be used. Participant should also be aware of the existence of poison ivy. Take care during and immediately after and work on the area.

