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Forestry Camp at the Crossroads: Future Scenarios for Environmental Learning at an Historic University Site

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Forestry Camp at the Crossroads:
Future scenarios for environmental learning at an historic university site
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Future scenarios for environmental learning  
at an historic university site

Utah State University,  
Department of Environment and Society

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Cover Photo:  “Utah State Agricultural College Forestry Camp, 1936.” Utah State University Libraries, Special Collections and Archives, USU Historical Photo-board Collection, photo no. USU-A0976a. (Digital Pub. Date, 2003)

# TABLE OF CONTENTS

**Forward** i  
**Executive Summary** ii  
**CHAPTER I: HISTORY AND LAND USE**

- Introduction 1  
- Land use history 1  
- History of use by Utah State University 2  
- Impacts from grazing 7  
- Impacts from recreation 7  
- Watershed impacts 8  
- Future alternatives 9  
- Alternative 1: Terminate lease 9  
- Alternative 2: Status quo 10  
- Alternative 3: Low-level improvement 10  
- Alternative 4: High-level improvement 11  
- Alternative 5: Overhaul and upgrade 11  
- Preferred Alternative 12  

**CHAPTER II: FACILITIES AND DESIGN**

- Introduction 13  
- Utah State University Summer Camp 13  
- Background of the facilities 14  
- Physical and social components 14  
- Current use 14  
- Historical register 14  
- Important considerations for changes in facilities 15  
- Alternatives for facilities use, renovation, and construction 16  
- Overview 16  
- Summary of five alternatives 16  
- Detail of alternatives 18  
- Alternative 1: Demolition and restoration 18  
- Alternative 2: As is use 18  
- Alternative 3: Season extension 19  
- Alternative 4: New mess hall 22  
- Alternative 5: Integrated sustainable design 24  
- Preferred alternative 28  

**CHAPTER III: PROGRAMS AND CLIENTELE**

- Introduction 29  
- A brief overview of the issues 29  
- Experiential, environmental, and placed-based education 30  
- Clientele & potential partners 31  
- Explanation of clientele selection 32  
- Specific clientele and program ideas 32  
- Program alternatives 33  
- A Brief Summary of the Alternatives 33  
- Alternative 1: Tear the buildings out and restore the land 34  
- Alternative 2: Do nothing-keep camp the same 34  
- Alternative 3: Rebuild mess hall, increase use for self-facilitated programming 35  
- Alternative 4: Rebuild the mess hall, improve other facilities, extend season of
use, hire part-time coordinator

Alternative 5: Rebuild mess hall, improve other facilities, year-round use, on-site full-time staff
Survey methods and findings
General public survey results
Utah State University faculty and staff survey results
Recommended alternative

CHAPTER IV: ADMINISTRATION AND BUDGET

Introduction
Sources of funding
University funding
USU facilities maintenance
Institute for Outdoor Recreation and Tourism (IORT)
Program funds
Rental funds
Insurance funds
Possibilities for external funding
Collaboration
Partners
Clients
Advertisement
Case Studies
Possible survey of students and community support and interest
Similar Facilities
Concerns
Budget Cuts
Liability Concerns
Safety Plan
Alternative Plans
Alternative 1: Restoration of the site to natural conditions
Alternative 2: Small-scale seasonal administration
Alternative 3: Year round small-scale administration
Alternative 4: Facility administered by one full time manager and interns
Alternative 5: Large Scale Management
Preferred Administration
Preferred mission statement
Simple Strategic Plan
Budget

References

Appendix A: Aerial Photo and Site Map of Logan Canyon Learning Center
Appendix B: US Forest Service Operating Plan (Draft)
Appendix C: Alternative Energy Installation: Sources and Costs
Appendix D: Text of Four Surveys Administered
Appendix E: Similar Residential Facilities Case Studies
Appendix F: Flow charts for Administrative Alternatives 2-5
Appendix G: Sample balance sheet from McCall Outdoor Science School
FORWARD

This report was derived from a Utah State University (USU), Department of Environment and Society (ENVS) senior class project for “Collaborative Problem Solving for Environment and Natural Resources” (ENVS 5000), Spring 2009. As a “capstone” class in ENVS, the objective of the course is to prepare graduates of the department for future career and research experiences using practical (read “real world”) applications. Thus, student groups are given a natural resources “problem” to address over the course of a single semester. The class is designed to be integrative in nature; blending technical skills from a variety of NR disciplines with communication, organization, research, critical thinking, and social abilities.

The overall problem for this semester was to address future scenarios for USU’s Forestry Camp – a historic field-based instructional center located some 30 miles east of the university in north Utah’s scenic Logan Canyon. Formerly, this site was used as a mandatory “summer camp” experience and training for all seniors in USU’s College of Natural Resources. Along the way, the camp has served many roles, but its primary charge eventually became a summer practicum for the college’s forestry students. Over the most recent decade, or so, declines in forestry enrollment, as well as departmental consolidations and budget constraints have forced administrators to examine other options, including termination of the USDA Forest Service permit to operate the site, for Forestry Camp. With this in mind, four problem areas were preselected by the instructor, Dr. Paul C. Rogers, to form the basis for group assignments: Land Management and History, Facilities and Design, Programs, Programs and Clientele, and Camp Administration and Budget. After completion of the semester, Dr. Rogers compiled and edited the work from the four student groups into the report presented here. The purpose of this report is to act as a permanent comprehensive record of past activities and future choices for the Forestry Camp at this critical juncture in its history.
Executive Summary

Utah State University’s Forestry Camp has been in use, in one form or another, by the College of Natural Resources for over 70 years. In the spring of 2009, the Department of Environment and Society’s “Collaborative Problem-Solving for the Environment and Natural Resources” (ENVS 5000) class took on the challenge of charting future options for this historic facility. The following highlights constitute the principle conclusions reached in this report:

- It was assumed that the basic mission of the Forestry Camp would need to be changed if this facility were to be successfully run by USU in the future. Accordingly, students felt that “Logan Canyon Learning Center” (LCLC) was a more fitting moniker.

- An overarching theme emerged in selection of “Preferred Alternatives” between all groups: each group chose a middling alternative in a continuum from scrapping the Forestry Camp to a maximum funding, programmatic, and facilities option.

- Elements from options not selected as “preferred” by the authors may be useful and instructional in future decision-making efforts.

- Appendices included here contain useful ancillary information such as case studies, options for facilities design, alternative energy generation, organizational charts, budgets, and other innovative materials.

- This report contains in-depth documentation of historical practices and land use activities in and around Forestry Camp (Chapter I). Concerning land management, we believe that a moderate build-up of programs will not deleteriously affect adjacent US Forest Service lands or programs.

- The facilities recommended (Chapter II) are a cooking facilities within current buildings, a pavilion, and improved insulation and heating in existing buildings. Suggestions are provided for low cost alternative energy sources (Appendix C).

- Evidence of local community interest in an environmental learning center was garnered through a series of preliminary surveys. Among the general public and USU faculty interest was very high (Chapter III), but cost and lack of current services were limiting factors.

- All administrative scenarios, including abandoning the site, have significant costs. We recommend hiring a part-time manager, operating (initially) on a modest budget, and cautiously building programs prior to increasing facilities dramatically (Chapter IV).
CHAPTER I: HISTORY AND LAND USE

Dell Transtrum, Garth Nelson, Shane McArthur, Derek Trauntvein, Erik Andrus

Introduction

The purpose of this report is to evaluate the need to continue administering the former USU Forestry Field station and provide new alternatives for the future use of the site. It is also the intent of this report to show the history of land use in the area surrounding the station and how the future alternatives could affect natural resource management in the area administered by the U.S. Forest Service. This report will also outline the past use by the University at this site and significant events that occurred. This group has also provided the recommended alternative given the possible impacts that all alternatives could have and taken into consideration the interest to continue using the existing facilities.

Land use history

The Utah State University (USU) Forestry Summer Camp (FSC) has a long and prestigious history. For almost 70 years the camp has produced highly trained forestry students for direct supply to the industry and government agencies. With an increasing focus by the public on natural resources it is curious as to why the camp has failed to function in recent years. This short history gives a short natural history and description of how it functioned successfully for many years and what sparked the near extinction of the camp. The site, which is part of the Wasatch-Cache National Forest, is now known as the Utah State University Forestry Field Station. This facility was previously known as the Tony Grove Summer Camp; Civilian Conservation Corps (CCC) Camp; Tony Grove Ranger Training School; and the Tony Grove Convalescent Camp.

The Forestry Camp is located just east of Highway 89 approximately 30 miles northeast of the Wasatch-Cache National Forest Ranger Station in Logan, Utah. The site, which is on National Forest Service property, is situated at 41° 52' latitude and 111° 22' longitude. The property is adjacent to the Logan River in the southwest quarter of Section 12, Township 13 North, Range 3 East.

In order to understand the main objectives and goals of operating a working Forestry Field Station, it is important to understand the land it will be situated on. This particular area is located on National Forest Land in Logan Canyon. Being on public property, there are certain things that must be addressed to assure the feasibility and longevity of this undertaking. A look into the history of the area, as well as the present day use can help us determine how to use this land in a way that is sustainable to the public, the institution, and the land itself.

A brief history of Logan canyon from around one hundred to fifty years ago to present shows an area rich in heritage. Logan Canyon itself has two main factors in determining its formation. The first was Glaciers. In 12,000 B.C. Glaciers recede. The other main Ecological factor for the area was the Receding of Lake Bonneville. In 8000 B.C. Lake Bonneville disappears. These two Factors provide us of a basic understanding of what the area and terrain as
well as the soils will likely be like. Most of the soils in the area directly surrounding the Forestry Camp are classified as “Upland Gravelly Loam” (NRCS 2009).

The first documentation of European exploration of the area was by a trapper named John Freemont in 1843. As people began to move into the Cache Valley and surrounding areas the canyon began to see more use. The first cattle grazing began in Logan Canyon in 1873. A road was completed through Logan Canyon to Garden City UT in 1877 and used as a toll road. The Amazon Gold and Silver mine was established in Logan Canyon in 1892, this brought a large increase in the amount of activity and use. In 1898, the last known wild elk was killed in Logan Canyon, although they have since been reintroduced. In 1905, the local mountains including area around Forestry Camp were incorporated into the Logan Forest Reserve, mostly in reaction to severe overgrazing in the later 19th century. Shortly after 1905, the Logan Forest Reserve was renamed the Cache National Forest. In the 1930’s the CCC constructed many of the campgrounds and facilities still in use today. In 1939 the highway was kept open year round for the first time since it was constructed. Because of its beauty and many attractions, the Logan Canyon highway was dedicated as a national scenic byway in 1989 (Ballard et al., 1994).

History of use by Utah State University

The department of Forestry and Range Management was established at USU in 1928 and the next year the department started FSC summer camp to train forestry students during the summer of 1929. Meanwhile the great depression hit and the CCC built the camp on the USFS in 1930, in Logan Canyon which provided barracks and facilities for workers that were working on New Deal Projects in the Bear River Range. In 1936 the barracks and mess hall were no longer being used by the CCC and USU quickly took advantage of the facilities to use for the FSC; this area was ideal for forestry students as the newly acquired 2,560 acre experimental forest is located only forty-five minutes walking distance away (Turner 1957). A special use permit was issued to USU in the spring of 1936 by the USFS. However, the buildings had not been well maintained and the barracks were torn down and burned in 1937. In cooperation with the USFS the university built new buildings of which the USFS provided most of the funding for the new construction which included a new dormitory and administration buildings. The new schedule for FSC in 1936 required students to attend the camp for 10 weeks. The USFS was eager to support the FSC because of the need for well trained foresters on many ranger districts. In these early years the USFS also used the camp to train young forestry professionals. This was not only seen as a valuable training ground, but a reliable locale for recruitment of professionals.

The 1937 Utah Juniper (The CNR Yearbook) reports how proud the university was to have a new and rejuvenated FSC and facilities. It was boasted that the camp not only had great access to the new school forest but also near “two operating sawmills where the process of manufacture can be observed from tree to the finished board, a range research pasture in operation, and adjacent areas of intensive grazing where range reconnaissance problems could be studied” (McLaughlin 1937).

The camp was suspended during World War II and resumed in 1946 with a new interest in the field of forestry to provide for a booming nation. A website entitled (Corpsfunds.com) gives an incentive of the use of the Forestry Camp area and facilities during the WWII era. “The War Department obtained a Use Permit for five acres of property from the U.S. Department of Agriculture, Forest Service on August 6, 1943. The property, which was formerly used as a
Forest Service Ranger training facility by Utah State University, was acquired for the purpose of establishing a convalescent camp for wounded soldiers from Bushnell Hospital, Brigham City, Utah.

The improvements on the property in August 1943 included six buildings consisting of a dormitory, an administration building, a mess hall, two barracks buildings, and a laundry building. These buildings were constructed by the Civilian Conservation Corps and were in good to fair condition at the time of acquisition.

On November 1, 1945, the War Department declared the property excess, relinquishing possession of it to the U.S. Department of Agriculture, Forest Service and the Utah State Agricultural College. The property was redelivered to the Forest Service and the College on November 12, 1945. However, according to a Warning Notice the property was not classified as surplus until June 30, 1946.

The largest enrollment ever was seen in 1949 of 105 students (Figure 1.1), though this may be disputed because photos show 113 in 1970. Since 1946 all college of natural resource departments participated in the summer camp. Part of the success of the camp can be attributed to Theodore “Doc” Daniels who was in charge of the camp and forestry, and Dr. Raymond Moore who also taught for many years at the FSC. Doc Daniels served as the camp boss from 1944 well into the 1990’s providing a well rounded and complete curriculum as well as much needed enthusiasm for forest resources (Figure 1.2). From 1949 to 1954 geology students from Yale and Mississippi shared use of the camp and special provisions were made to accommodate the more than 100 students that attended these years (Figs. 1.3 & 1.4). The newer mess hall was constructed in 1957 and plans were made for other facilities that were never built on the site (Turner 1957; Appendix A).

Figure 1.1: Record of attendance from 1947 to 1996 according to photo record in BNR 268.
In 1961 the Fisheries and wildlife students were no longer required to attend FSC which caused a subsequent drop in attendance. The 1970’s saw a new age of environmental awareness and 1972 brought the first women to the camp and the camp program was reduced to six weeks. When fisheries and wildlife were excluded from attending the camp in 1962 the degree program that required attendance was Forestry and Range Science; less than one week of training about Range Management was included as the focus remained on Forestry.

**Figure 1.2:** The Boulder on top of Benchmark hill commemorates years of service and learning

The FSC remained unchanged until 1998 when the mess hall burned down. In the summer of 1998 an Army Surplus tent was used as a mess hall, but this facility was not sufficient so the college bought a mobile home trailer to use as a mess hall and class room; however, due to heavy snow loads collapsed in 2000. Along with the burden of losing the mess hall the College of Natural Resources was reorganized; Forestry, Range, and Wildlife departments merged to become the Department of Wildland Resources. This not only reduced emphasis on individual majors and associated hands-on training, but also limited the amount of funding available to the FSC. At the college began changing its’ paradigms about the education needed for foresters and interest and support declined for the FSC. Due to lower enrollments and low interest keeping the FSC running it had soon became economically unfeasible (Busby, 2009). The change in the attitudes and requirements of the faculty has been further spurred to focus on research rather than teaching as research provides more money for the university.

In the mid 1980’s the Forest Service also underwent a paradigm shift. This shift was caused by a national movement to start protecting forests and stop logging endangered forests. The previous paradigm focused on management and providing forest resources through the best
scientific practices. The focus soon turned to planning for the future and the immediate need for foresters on each forest district dropped.

**Figure 1.3:** Mess Hall circa late 1940s (photo courtesy USU Historical Photo archives).

With an emphasis on publishing papers and performing research faculty members do not have the necessary time to support and teach at a full time summer camp. For this reason the Forestry Summer Camp ceased to function as it had and new ideas and developments will need to be in place for the facilities to be maintained and used (Holechek, 2009). Use of the camp today remains sporadic, though facilities (aside from the lack of a camp kitchen) are in generally good condition (Figure 1.5; Appendix A).
Figure 1.4: USU Forestry Field Station 1936

Figure 1.5: USU Forestry Field Station 2009
Impacts from Grazing

For years, Logan Canyon has been a place where ranchers and farmers have free grazed their livestock during the summer months. It was a mixture of cattle, sheep, and horses. Free grazing had gone on for more than 30 years before people started to record the impacts to the land. Sheep grazed the forage that was not grazed by cattle and horses. With this combination of cattle, sheep, horses, and wildlife using the limited amount of forage, it resulted in overgrazing problems and loss to native wildlife. Much of the land had been deteriorated due to overgrazing. In 1903, a professor named William Peterson from Utah State University was mapping glacial geology in Logan Canyon. He was rather familiar with the area so he took little food for his horses thinking that he would be able to graze them at the tops of each canyon. After his first night, he was astonished to see that even the high areas and areas that were generally thought to be inaccessible had been overgrazed. These free grazed animals and wildlife had gone to every location possible and transformed the area that was once a grass filled area to dirt and unnatural bare spots. (Ballard et al., 1994). That same year, the Logan Forest Reserve was formed to limit the number of livestock that could be grazing. This reserve had very little impact and the problem of overgrazing continued in the 1930’s until the Taylor Grazing Act was signed in 1934, by President Franklin D. Roosevelt.

The intent of this act was to stop or prevent soil deterioration and overgrazing, and to improve land quality. This act would reduce the number of animals on the range and try to repair was has been lost over the past years. Many of the native animals such as the bighorn sheep had to find other locations to forage because of the domestic sheep had displaced them. Predators such as wolves and grizzly bears had been shot and killed to protect sheep and cattle herds. Grazing has been reduced significantly from the early 1900’s to present day. The impacts are not as severe or damaging to the environment as they were in the past. It is not considered perfect and nothing needs to be changed because in the public’s eye there is still a lot of work to be done.

The Logan Canyon Learning Center is currently not grazed by domesticated animals and will have very little impact if any at all. The surrounding allotments near LCLC are sheep allotments. These grazing permits/ leases are held during the summer months.

Impacts from Recreation

Recreation is an activity that amuses or stimulates oneself and is a form of enjoyment and adventure. There are times that people abuse the activity and create impacts to the land and make matters worse for other recreationists. For example, if someone off roads on a motorized vehicle, it causes damage to the land in many different ways. At times officials will close the area due to abuse and prevent others from using the land. Actions like these need to be taken care of to preserve, the land for future generations. These problems need to be examined and solutions must be found to better suit the need of the public. In order to correct a problem, research needs to be done on that specific area and adjustments need to be enforced. By adjusting the problem and having the research on that area, hopefully; the data and results will work out for the best.
Logan Canyon is an area where people will travel to recreate, whether it is a sporting activity or just to be outdoors. For this reason areas have been set aside for certain activities. For example, during the winter months at the LCLC, the area is non-motorized. This helps reduce motorized impacts and lets other recreationists enjoy the area for other activities such as cross country skiing or snow shoeing. Another impact that the Forest Service is concerned about is a stream nearby that contains Bonneville Cutthroat. In order to reduce the impacts that we as humans create, settings are set aside to allow appropriate places to recreate. This is known as the Recreation Opportunity Spectrum (ROS) where recreationists can recreate in their own specific setting. This helps minimize impacts to the land in many different ways. For example, the more pristine parts of the forest will have a setting that has very little impact to the area in hopes to preserve it for future usage.

Most recreation near LCLC happens right off the main highway. During the summer and fall months it is used as a camping area where fishing, hiking, and, hunting is done. Recreation at the LCLC has very minimal impacts due to the lack of use.

Watershed Impacts

The Forestry School is located in the Little Bear Creek sub-watershed within Logan Canyon which is a small perennial stream feeding the Logan River. Little Bear Creek is inhabited by a few trout species most notably the Bonneville Cutthroat Trout (*Oncorhynchus clarki utah*; Figure 1.6). The Logan River and many of its tributaries are considered pristine fisheries for Bonneville Cutthroat trout (BCT; Budy & Vinson, 2009). The Forestry School site at the closest point is within a few hundred yards of the creek. Little Bear Creek is also the water source for the Forestry School.

*Figure 1.6: Mature Bonneville cutthroat trout (*Oncorhynchus clarki utah*).*

The BCT is a very ecologically sensitive species and was proposed to be listed under the Endangered Species Act in 1980 (Converse & Mizzi, 1999). Currently a Conservation Agreement is in place between the State of Utah and the U.S. Fish and Wildlife Service to work towards keeping the BCT from being listed, and promotes habitat and population growth (Lentsch *et al.*, 2000). Future uses and developments at the Forestry School must be done in
accordance with the BCT Conservation Agreement, which includes less stream fragmentation by road construction and water developments, which are two of the main reasons for the loss of BCT (Lentsch et al., 2000). These two developments have already had their impact at the Forestry School; however, future uses and construction could lead to further negative stream impacts.

BCT generally spawn from late spring to early summer (Lentsch et al., 2000). Any construction or activities near the stream and riparian area should be limited as not to disturb the spawning fish. Special care needs to be given to prevent decreased water flows and sedimentation at this time.

Many of the alternatives proposed require rebuilding the mess hall and making the facility usable year round. The water system is currently not adequate to meet these needs. Development to improve the water supply system must not lead to stream degradation or a large reduction in water flows. The greatest need for the current water system is an in-line chlorination unit. This upgrade should have no impact on Little Bear Creek or its riparian area. Little Bear Creek will provide great opportunities to educate about BCT, water quality, and riparian areas. Increased use of the facility will also lead to disturbance in the watershed. Programs will involve using the land and trails to learn about the natural history and environment of the area. These trails should maintain a minimum distance from the stream. People can trample the stream bank as readily as livestock or wildlife. Trampled stream banks and trails near the stream promote sediment being carried to the water and a decrease in BCT habitat. This process may also have an adverse effect on the Forestry Schools own supply of drinking water.

Future Alternatives

The land at Logan Canyon Learning Center has been affected in various ways over the past 100 years by facilities construction and by different land users. Future impacts on the land depend on the goals of Utah State University, which may include keeping their current facilities, tearing facilities down, improving facilities, or expanding facilities. Each goal or plan will have a different impact on the land and will require Forest Service approval. The following are alternatives the university can take, the effects these alternatives will have on the land, and what land management methods the university will need to take to achieve their goal.

Alternative 1: Terminate the Forest Service Lease, relieving USU of responsibilities at Forestry Camp.

Pros

- The university would no longer have to waste time and resources at the site. Micheal Butkus, a caretaker at the LCLC explained that the university is paying $2800 a year to maintain the site.
Costs of terminating the permit. Section V. of Terms and Conditions of the Forest Service Special Use Permit says the university is responsible for removing the facilities at the site as well as restoring the land back to its original state.

- In order to remove the facilities the bridge will have to be supported to allow for heavy construction vehicles, reinforcing this structure could potentially affect the Logan River Watershed.

**Alternative 2:** Status quo: Keep the current permit and facilities.

**Pros**
- Virtually no costs or changes associated with land management issues as long as the university stays within permit requirements.

**Cons**
- The facilities are old and lack a mess hall, which makes it difficult to prepare and serve food for larger groups of people. It is important to note, again, that it costs $2800 to maintain the current facilities.

**Alternative 3:** Improve facilities, build a pavilion, up-grade water system, and re-permit to extend season or allow for possible year-round use.

**Pros**
- Provides a shelter and place to serve food.
- NEPA/Environmental Assessment would need to be done in order to build a pavilion, and upgrade the water system. According to Ron Vance of the Forest Service, he indicates that if the NEPA/Environmental Assessment takes over 50 hours the university is responsible for paying for it. This is seen as a pro because it costs the university nothing and if will help insure that the impacts are worth the cost.
- Special Land Use Permit would need to be changed to allow for upgrades, to allow for extended season or year round use, and to allow more people on the land. The USFS is willing to work with the university and negotiate changes to the permit. This would take land impacts into consideration and find the best solution.

**Cons**
- Bridge would need to be reinforced to allow for heavy construction vehicles. Also, if permit is changed for extended use, a new bridge would be needed to carry the weight of the snow plows during winter use.
- Possible watershed impacts due to the construction of the new facility, septic system, and bridge.
Alternative 4: Greatly improve the facilities, construct a new “green” mess hall, upgrade water system, add year round use, and add more parking.

Pros
- NEPA/Environmental Assessment would need to be done to construct mess hall, upgrade water system, and add parking. This again is seen as a benefit because it takes into account future considerations for land use permit.
- New bridge would be necessary to allow construction vehicles and snowplow access. Allows for extended use and more educational opportunities.

Cons
- More people will affect the land and surrounding area. Special Land Use Permit would need to change to be able to accommodate more people.
- Watershed worries
  - Imperviousness from parking/buildings might affect stream quality and the endangered Bonneville Cut Throat Trout.
    - Possible solutions would be to have grass swells/ bio-rentention or gravel pave in parking areas and around impervious surfaces to collect water.
  - New septic system, which could lead to underground water pollution.

Alternative 5: Significantly improve facilities: construct new green building or tear down all facilities and rebuild, more parking, year-round, upgraded water system, full-time staff, and adding alternative energy sources such as geothermal, wind, and solar.

Pros
- NEPA/Environmental Assessment would be necessary for construction of new building, water system upgrade, bridge, additional parking, and alternative energy sources, including geothermal and wind.
- Special Land Use Permit would need to be changed to allow for upgrades, extended season or year-round use, more people on the land, and more overnight use.

Cons
- Watershed worries
  - Impervious conditions from parking lot might affect stream quality and the endangered Bonneville Cut Throat Trout.
    - Possible solutions would be to have grass swells/ bio-retention areas around impervious surfaces to collect water.
  - New septic system

(All alternatives will have minimal to no adverse affects on current recreation, or grazing uses)
Preferred Alternative

The preferred alternative would be a mix of options three and four. Appendix B describes this option in the format of a US Forest Service Operating Plan. For the Logan Canyon Learning Center to move forward, cooking facilities are needed to accommodate more people. At the moment, facilities only offer a classroom and overnight accommodations (this could be a reason why the facility is underutilized). If people are going to stay for extended periods, or at least for the night, there needs to be facilities for feeding people. Building a mess hall is desired, but, due to a lack of funds, a pavilion would work, and in the future the university could build a mess hall. There are concerns over building a new structure, upgrading the water system, and adding more parking. These all create concerns regarding the watershed and the possibility of negatively impacting it. A NEPA/Environmental Assessment would need to be done in order to approve land impacts and to justify the possible pollution caused by such upgrades. The USFS is willing to work with the university and help negotiate changes to the Special Land Use Permit at the LCLC.
CHAPTER II:
FACILITIES AND DESIGN

Aaron Chadwick, Dennen Frazier, Sara Hunt, Kevin Mitchell, Clint Wirick

Introduction

_Utah State University Forestry Summer Camp_

Utah State University (USU) owns some buildings that reside on 5 acres of Wasatch-Cache National Forest Service Land in Logan Canyon, Utah. This area has been known as the USU College of Natural Resources Forestry Summer Camp and is located 30 miles east of the Utah State University in Logan Canyon, Utah (Figure 2.1). It has been proposed that the Forestry Summer Camp be renamed the Logan Canyon Learning Center (LCLC). It lies east of Highway 89 on the Wasatch-Cache National Forest (Figure 2.1). USU has had a permit with the Forest Service to use these buildings for educational purposes. Since the 1930s, the area has been used as a summer camp to train students from USU seeking natural resource degrees. During the last decade, use of the LCLC has declined significantly (Sharik _et al._, 1998). USU recently renewed the permit with the Forest Service. This report, as part of a larger feasibility study, will focus on the LCLC facilities.

**Figure 2.1** Proximity of Logan Canyon Learning Center to Logan City.
Background of the LCLC Facilities

The LCLC has a rich history dating back to the 1930s. The first buildings were constructed in 1937 and completed in 1954; this included a dormitory, mess hall, and administration building. At this time, only the dormitory and administrative building remain due to loss of the mess hall in 1998 because of a fire (Figure 2.2). Further details on the history of these facilities are presented in Chapter I.

Physical and social components

Current Use

The camp is currently used, although minimally, by small school groups doing their required environmental instruction using Stokes Nature Center instructors. The USU HAM radio club uses the facilities for training, and the ENVS department uses the camp for their departmental retreat. Apart from these activities, the LCLC is unused most of the time.

Historical Register

The LCLC has a rich history that predates the construction of the current buildings. The site was used as a camp by the Civilian Conservation Corp in the early 1930s and later became known as the Tony Grove Ranger School. In 1936, USU established the School of Forestry and held its first 10 week forestry camp in the fall of 1936. The administration building and the dormitory were built the following year and still stand today. A mess hall/classroom was built in 1954 but was lost to a fire caused by a faulty water heater in 1998. The buildings have been well maintained throughout their history and very little remodeling has been done.

In order to be eligible, a building must be at least 50 years old, retain its architectural integrity, and be of local, state-wide, or national significance. The categories for significance are: association with important events, association with significant persons, architectural significance, or archeological significance (Jensen, 2009). The administration building and dormitory on the site meet the requirements to be eligible for listing.

There are both monetary and non-monetary advantages to listing a building. The monetary advantages include the possibility of securing grants and loans and state or federal tax credits for rehabilitating a building. Non-monetary advantages include recognition (with an optional official plaque that could be placed on the building), building code leniency, local zoning variance, rehabilitation advice, and increased property value (Jensen, 2009).

For these reasons it is proposed that the original LCLC structures be placed on the Historical Register to record and recognize their contribution to USU and the community’s heritage.
Important Considerations for Changes in Facilities

The facilities are usable in their current condition; however, they are only adequate for low levels of use during the summer months. In order to expand the possibilities available at the LCLC some basic considerations need to be taken into account, including the construction of cooking facilities and interaction with other recreational users. Limitations are posed by the current electricity supply, parking, water system, and the Forest Service Special Use Permit. In addition, none of the buildings are adequate for winter use in their current state. Any future construction must be mindful of Little Bear Creek on the north end of the property which provides important habitat for the Bonneville Cutthroat Trout. Future renovations should also consider the unique historical qualities of the LCLC.

Figure 2.2  Map of Facilities in Current Condition
Alternatives for facilities use, renovation, and construction

Overview

Five alternatives for future actions regarding the facilities of the LCLC are presented in Table 2.1. The first alternative stands alone because if this alternative is chosen the LCLC will not be developed and the land will be returned to its natural state. The following alternatives describe possible courses of action to develop the area and increase use over time. Alternatives 2 to 5 build on each other, increasing in level of intervention and overall cost, as well as the number of new possibilities created by the proposed changes. These alternatives can be viewed as five distinct possibilities, or they can all be taken together as one long-term proposal with five different phases to be implemented over the course of many years.

Summary of five alternatives

#1 Demolition and Restoration involves removing all existing structures, restoring the land to its natural state, and discontinuing use of the Forest Service use permit.

#2 As is use proposes using the existing facilities as they are. Everything at the camp is currently functional and up to code.

#3 Season Extension involves renovating existing buildings for extended season use and installing cooking facilities in one of the existing buildings. This alternative addresses the most pressing limitations of the facilities in the most cost and time effective manner.

#4 Construct New Mess Hall installs a showcase “green” building for year-round use. This alternative could be an addition to the other previous alternatives, or it can be considered as an independent alternative as the new building will provide cooking facilities and sleeping space usable through the winter.

#5 Integrated Sustainable Design integrates all of the earlier alternatives into a sustainable year-round campus with residential personnel. This is how we would design the facilities for the LCLC with no funding or administrative limitations.
<table>
<thead>
<tr>
<th>Alternative/Phase</th>
<th>Renovation/Modification of Facilities</th>
<th>New Construction</th>
<th>Change in Use</th>
<th>Limitations/Considerations/Qualifications</th>
<th>Estimated Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remove all existing facilities and return area to natural condition</td>
<td>Removal of two buildings, shed, and cement pad</td>
<td>Return to USFS, only dispersed recreational use</td>
<td>Loss of historically valued buildings and potential learning center development</td>
<td>$200,000-$400,000</td>
</tr>
<tr>
<td>2</td>
<td>None</td>
<td>None</td>
<td>Increase in summer use**</td>
<td>No cooking facilities, Maximum number of overnight users- 30, Limited electricity, Cold temperatures inhibit use</td>
<td>Minimal</td>
</tr>
<tr>
<td>3</td>
<td>Kitchen Facilities in existing buildings, Chlorinator in water system, Winterization of existing facilities, Creation of classroom space</td>
<td>Outdoor pavilion, Entrance sign, nature trail</td>
<td>Use earlier in spring and later into fall, increase overnight use and summer use</td>
<td>Maximum number of overnight users increased to 50-60</td>
<td>$200,000-$300,000</td>
</tr>
<tr>
<td>4</td>
<td>Winterization of existing facilities, Creation of classroom space, Kitchen facilities in one of existing buildings, chlorinonator in water system</td>
<td>Green Design Mess Hall/Dormitory/Laboratory, Entrance sign, Nature Trail, Outdoor Pavilion</td>
<td>Increased day and overnight use, year round. Will require renegotiation of permit.</td>
<td>120 Maximum overnight users, which may create problems with parking</td>
<td>$500,000-$2,000,000</td>
</tr>
<tr>
<td>5</td>
<td>Winterization of existing facilities, Creation of classroom space, Kitchen facilities in one of existing buildings, chlorinonator in water system</td>
<td>2 Cabins, Functioning Alternative Energy Display, Additional Educational Displays, Green Design Mess Hall/Dormitory/Laboratory, Entrance sign, Nature Trail, Outdoor Pavilion</td>
<td>2-4 Residential Personnel, Increased day and overnight use, year round. Will require renegotiation of permit.</td>
<td>Programs would need to fill the facilities year round in order to make this feasible, and some money would have to be generated by the Logan Canyon Learning Center itself</td>
<td>$2,000,000-$3,000,000</td>
</tr>
</tbody>
</table>

*2-4 can be viewed as individual alternatives or phases of one large proposal to be completed over time

**Bold signifies construction, renovation or modification of use that is new in this alternative/phase
Detail of alternatives

**Alternative 1:** Demolition and Restoration

This alternative would bring an end to USU involvement on the Forestry Camp site. All existing structures would be removed, and the area would be restored to its natural condition as stipulated in the Forest Service Special Use Permit. Demolition and restoration are costly procedures. Remaining insurance money would likely cover the costs, but would be entirely used by this project. Based on other similar demolition projects, estimated cost of removing the existing structures could range from $200,000 to $400,000. Due to the extensive cost and the loss of opportunities that this alternative would incur, this is not a recommended course of action.

**Overview:**
- Total Estimated Cost: $200,000 - $400,000
- Modification of Existing Buildings: Demolition and removal of dormitory and administration buildings, concrete pad basketball court, generator shed, and all other remaining structures
- Bridge: Reinforcement required for passage of heavy equipment

**Alternative 2:** As is Use

This alternative proposes using the facilities as they are. This could be a first year scenario with possible growth in subsequent years. This option requires the fewest inputs because it makes use of what already exists at the site. USU Facilities ensures the buildings are well maintained and in compliance with county and state building codes. The camp goes through regular inspections for fire safety, health, and other facilities requirements (pers. Comm. Michael Butkus, Feb 2009).

In its current state, the camp could accommodate 50-60 overnight visitors according to the number of beds available, although this number is limited to 30 by the manual water chlorination system. Because there is no formal mess hall in which to cook and store food, users need to bring their own food, storage, and cooking equipment. Cooking could be done outdoors on either grills that are brought up or on a fire using open flames. Another option is to prepare food off site and bring it in. Some events have opted to use catering.

**Limitations**

In addition to the lack of cooking facilities discussed above, electricity is also a limitation at the LCLC. Currently all electricity comes from 2 generators fueled by propane that are stored in a generator shed to the east of the administration and dormitory buildings. When electricity is needed these generators have to be running and fuel must be provided for them.

The Forest Service Special Use Permit limits how and when the LCLC can be used. It designates that the site is to be used strictly for educational purposes and only during the summer season. The permit could be renegotiated to change these limitations.
As the facilities are set up now there is no formal parking area. With an increase in number of users more parking space would have to be created or other options would have to be explored.

The water system is functional for the current use and set up of the LCLC. Water is spring fed to the buildings through a pipe with a chlorinating box approximately a mile up the canyon to the east that requires the regular addition of chlorine tablets. This system can accommodate the current number of overnight users, which is well under 30 (pers. comm. Michael Butkus, March 24, 2009). This system requires an individual to hike up the canyon to the spring box at least 2 days before an expected group is to come to the camp and add 5 chlorinating tablets. The tablets last about a week. After a week more tablets need to be dropped in the spring box. If there are a lot of groups attending the camp this requires frequent hiking back and forth.

Overview:
-Total Estimated Cost: Minimal
-Modification of Existing Buildings: Use the dormitory and administration building as they are
-Additional Building Projects: None
-Parking: In the pullout along I-89, in front of dormitory building, and on the cement pad of the basketball court

Alternative 3: Season Extension

This alternative suggests modifications to the existing buildings that would allow for an extended season and increased use of the LCLC. It addresses the installation of kitchen facilities, water issues of purification and sewage output, as well as improved insulation and additional heating options. The only construction work proposed outside of renovations to existing buildings is an outdoor pavilion and a low-impact nature trail. The nature trail is part of an overall expansion of the educational elements of the site through the use of interpretive signs and displays and the expansion of classroom space. In all modifications close attention will be paid to using the most sustainable materials available and maintaining the historical characteristics of the structures.

Limitations Addressed and New Installations

Kitchen Facilities—New kitchen facilities could come in the form of a protected outdoor pavilion with cooking grill, a minimal indoor installation of a portable cook stove and simple propane refrigerator, or a more extensive, permanent indoor cooking facility. Construction of an outdoor pavilion would be less expensive than the installation of an indoor kitchen. The proposed pavilion would measure roughly 40 x 20 feet and consist of a covered concrete slab with picnic tables, chairs, and a large grill. After contacting local concrete and construction crews, construction time is estimated at little over a week and cost estimates range from $6,000 to $7,500 (Garner Construction, personal communication, March 4, 2009).
A minimal indoor kitchen facility could be very cost effective and avoid the disadvantages of an outdoor facility. For example, a large portable stove could be installed along with a simple propane refrigerator. There is space in the dormitory building that could potentially be used for this type of installation. This option would be even less expensive than a pavilion. According to prices found on www.sears.com, cost estimates range around $1,500 to $2,000. If this option is implemented, it is important to remain in compliance with safety codes.

A more extensive, permanent indoor kitchen would cost significantly more and be more time consuming to construct, but it would bring many additional benefits. The installation of a commercial oven, large refrigerator/freezer, and three basin commercial sink would add great flexibility to the type of meals that could be prepared. Indoor facilities would be advantageous during cold seasons or in the case of inclement weather. After speaking with Garner Construction of Logan, cost estimates were predicted to be $75,000 to $100,000 (personal communication, March 4, 2009).

Lastly, if none of the above options seem adequate, more than one option could be combined. For example, the outdoor pavilion could be combined with the installation of a minimal indoor kitchen facility for use in the case of inclement weather.

**Spring Box**—The current spring box chlorination system limits the number of users. Michael Butkus suggested that the best alternative would be an inline chlorinator placed after the pressure release pipe to add chlorine at a more constant and consistent rate (personal communication, February 24, 2009). The chlorinator may require a power source. Effective models using a combination of battery and solar power are available for approximately $700 (GE-Autotrol Well Pro, n.d.).

**Sewage Outputs**—The most sustainable sewage systems reduce the amount of waste or water pollution that needs to be treated or maintained (Adler, 2002, p. 15). Waterless toilets and compost toilets are fairly popular options (Table 2.2). Considering that the LCLC won't receive high amounts of use even with a slightly extended season as outlined by this alternative, neither option seems highly feasible. Waterless toilets/urinals would provide an environmentally friendly option for a cheaper price tag than the compost toilets but they are a better option mostly in new buildings, not for renovation.
Table 2.2  Pros and Cons of Waterless Toilets and Compost Toilets

<table>
<thead>
<tr>
<th>Type</th>
<th>Pros</th>
<th>Cons</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterless Toilets</td>
<td>-Reduced water consumption</td>
<td>-Costs may not be compensated since the Forestry Camp doesn’t pay for its water (Facilitiesnet, 2008)</td>
<td>-Approx. $400/unit, does not include installation (Sancor Industries Ltd, 2009)</td>
</tr>
<tr>
<td></td>
<td>-No water piping connected to unit meaning cheaper installation and maintenance costs (Facilitiesnet, 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compost Toilets</td>
<td>-Aerobically decomposes waste and turns it into compost (Steinfeld, 1997)</td>
<td>-Temperature, moisture, and aeration need to be heavily controlled</td>
<td>-Approx. $3000/unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Requires high amounts of maintenance (Steinfeld, 1997)</td>
<td></td>
</tr>
</tbody>
</table>

Insulation—New insulation is a must as energy costs are much lower in buildings with good insulation. Since the LCLC will try to pride itself on green/sustainable building techniques, cellulose is likely the best choice for wall insulation. This is especially the case since price is nearly identical for both fiberglass and cellulose insulation. Double pane windows are also a good, feasible idea to help reduce energy costs. In Table 2.3 the insulating values of windows can be seen along with the values of other added insulation.

Table 2.3  Insulation Types with Pros and Cons discussed in terms of R-Value*

<table>
<thead>
<tr>
<th>Type</th>
<th>Pros</th>
<th>Cons</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglass</td>
<td>Very Common</td>
<td>Made with phenol formaldehyde binder, which requires pollution control measures</td>
<td>Approx. $0.07 per inch thick sq. ft. (Superseal Construction Products Ltd., 2003)</td>
</tr>
<tr>
<td>Comes in batts, loose-fill, and rigid board.</td>
<td>At least 20% recycled material</td>
<td>Glass fibers are carcinogenic if inhaled</td>
<td></td>
</tr>
<tr>
<td>R = 2.2-4.0/inch</td>
<td>(Adler, 2002, p. 34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose</td>
<td>80% post consumer recycled paper</td>
<td>Potential irritant if not installed and sealed properly</td>
<td>Approx. $0.07 per inch thick sq. ft. (Superseal Construction Products Ltd., 2003)</td>
</tr>
<tr>
<td>Comes in loose-fill or wet spray</td>
<td>1/8th the energy to produce compared to fiberglass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R = 3.7/inch</td>
<td>(Adler, 2002, p. 34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulating Windows</td>
<td>Provides more insulation than current windows at the Forestry Camp</td>
<td>If a seal breaks, windows can fog up and get dirty</td>
<td>$300-$700 per window (CostHelper, 2009)</td>
</tr>
<tr>
<td>Using double or triple-pane, a layer of air between each pane provides insulation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Higher R-value indicates better insulating ability

Heating—Currently the LCLC is mostly heated by a propane-fueled furnace. There is also an existing wood stove in the upper floor of the dormitory. One alternative option is ground source heating; however, this type of system needs to be tied to a grid in order to
be efficient and feasible. Detail on ground source heating is presented in Appendix C.

*Educational Opportunities*—With the renovations to the LCLC facilities, adding more educational opportunities may be a good idea. To inform other users that the LCLC is in use and designate the campus as an area unique from the surrounding land, an entrance sign will be installed next to or over the road as it approaches the camp from the northwest.

A short trail with interpretive signs designed to inform other recreational users as well as new LCLC visitors about the unique historical and environmental characteristics of the area will be installed around the perimeter of the LCLC. Signs will include information about important native plant and animal species (specifically aspen stands, sagebrush habitat, and the Bonneville cutthroat trout), the geological history of Logan Canyon, the history of the Forest Service activity in Logan Canyon, the history of the original CCC buildings, and the story of the LCLC from beginning to present. We can also remove all but one of the bunks in the administration building to add a classroom for a better teaching environment. The classroom would have desks as well as a few interactive interpretive displays similar to those presented as the Stokes Nature Center. This is a more feasible option if the building is to be used for children. These are all feasible options, although they may not be able to be added all at once. The cost of a good interpretive sign can run anywhere from $200 up to $1000. Those displayed outdoors tend to be more expensive due to weatherproofing materials. The classroom would require the greatest financial investment and therefore may be the least feasible.

**Overview:**
- Total estimated cost: $200,000 - $300,000
- Modification Existing Buildings: Renovation of dormitory and administrative building, including the installation of cooking facilities, insulation, and additional heating
- Additional building projects: Pavilion, nature trail
- Parking: In the pullout along I-89, in front of dormitory building, and on the cement pad of the basketball court

*Alternative 4: Construct New Mess Hall*

The fourth alternative considers constructing a new, four-season mess hall, showcasing green design and including classroom/laboratory space and additional sleeping area. This alternative could be implemented in addition to the renovation of the existing buildings, or as an independent alternative to provide all the necessary facilities for a group visiting in the winter. The new mess hall should remain in keeping with the historical nature of the site, paying homage to the existing architecture and setting while also making use of modern green design technology. An energy efficient design could help reduce the need for generators while also providing excellent teaching opportunities. Some design features suggested are passive heating, day lighting, high r-value insulation, solar panels, and an updated septic system. Considerations include access issues, selection of a construction site, and building design.
New Installations and Remaining Limitations

Passive Heating—The new mess hall would be located to the north of the two existing buildings where the old mess hall was previously located. The building will be two stories high to expand possible window space and will be situated with an east-west orientation, leaving the long side of the building facing south. Large, south-facing windows with a low U-value (heat loss coefficient) will allow winter sunlight to warm the inside while minimizing heat loss. The use of overhanging eaves above windows allows low-angle winter sunlight to enter the house, while blocking high-angle summer sun and keeping the building cooler. Thermal storage mass in the form of adobe or concrete slab floors, and/or masonry walls will absorb the heat of the sun during the winter and radiate that heat back into the mess hall living space throughout the day. In some parts of the building sunspaces or Trombe walls may also be incorporated (Minke, 2006; Rael, 2009).

Table 2.4 Straw Bale versus insulating concrete forms

<table>
<thead>
<tr>
<th>Construction Method</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straw Bale</td>
<td>wall thickness provides excellent insulation</td>
<td>susceptibility to moisture</td>
</tr>
<tr>
<td></td>
<td>local and renewable resource</td>
<td>added cost to seal/plaster walls</td>
</tr>
<tr>
<td></td>
<td>low cost for straw ($2.00 to $4.00/bale)</td>
<td>larger walls increase the foundation size, which increases the cost</td>
</tr>
<tr>
<td></td>
<td>resistant to fire (when properly sealed)</td>
<td></td>
</tr>
<tr>
<td>Insulating Concrete Forms (ICF)</td>
<td>quick and easy to use</td>
<td>no space in walls for electrical, plumbing, etc.</td>
</tr>
<tr>
<td></td>
<td>excellent thermal mass and insulator</td>
<td>uses non-renewable resources</td>
</tr>
<tr>
<td></td>
<td>no gaps in the walls</td>
<td>costs 5-10% more than traditional wood construction</td>
</tr>
<tr>
<td></td>
<td>resistant to fire and mold</td>
<td></td>
</tr>
<tr>
<td></td>
<td>keeps out noise</td>
<td></td>
</tr>
<tr>
<td></td>
<td>extremely durable</td>
<td></td>
</tr>
</tbody>
</table>

Photovoltaic Solar Panels—The south-facing orientation will make the building an excellent site to install photovoltaic (PV) solar panels. As has been mentioned, the LCLC is off-grid and electricity comes from propane generators. A 5 kW PV system with a battery bank would adequately provide for a computer, an energy efficient refrigerator and dishwasher, and lighting for all the buildings (Kemp, 2005). The generators would be used only during cloudy periods and emergencies. For more information on solar panel installations see Appendix C.

Construction Methods—The building could be built using either insulated concrete forms (ICF) or straw bale construction. Straw bale construction is a building method that uses
straw bales as insulation, structural support, or both (Stone, 2003). ICF are foam forms filled with concrete and reinforced bars to create structural walls. Once the concrete has dried, the forms stay in place as insulation (Partnership for Advancing Technology in Housing, 2007). The pros and cons of each method are outlined in Table 3. Due to the rugged area in which the LCLC is located, the durability, low-maintenance, and resistance to mold and fire of the ICF construction method, it is the most practical choice for the FSC.

**Winter Access**—Winter access is not allowed under the current agreement with the Forest Service, whose policy is to close several of their roads in the winter, usually October 15 to May 15. If the LCLC were allowed winter access, the road leading to the facilities would need to be cleared in the winter so vehicles could park (Michael Butkus, personal communication, January 27, 2009). Currently, the only possible winter parking is either on the shoulder of the highway, which ranges from narrow to non-existent (depending on snow conditions), or about a half mile north of the LCLC at the Tony Grove turnoff. One possible solution would be to make an agreement with the Utah Department of Transportation (UDOT) to plow the road. The existing bridge could not support a fully loaded UDOT snow plow, which can weigh 72,000 lbs when fully loaded (Sterling Trucks, n.d.). In the past, temporary braces were used to support the bridge when construction equipment needed to access the camp. A new bridge capable of supporting both snow plows and construction equipment could be built for around $200,000, according to Colby Goodliffe, an engineer with USU Facilities (personal communication, March 18, 2009). This cost includes the removal of the old bridge.

**Overview:**
- Total estimated cost: $500,000- $2,000,000
- Modification of Existing Buildings: Renovation of dormitory and administrative building, including the installation of cooking facilities, insulation, and additional heating. All renovations in keeping with historical characteristics of buildings*
- Additional building projects: New mess hall showcasing green design, new bridge, photovoltaic solar panels, pavilion*, nature trail*
- Parking: In the pullout along I-89, in front of dormitory building, and on the cement pad of the basketball court, consider use of shuttles

*These additions are part of previous alternatives. If this alternative is chosen as a starting point, they should be included as new construction. If alternatives are implemented as phases in one large project, these additions will be constructed in an earlier phase.

**Alternative 5: Integrated Sustainable Design**

This alternative builds on previous alternatives to create a campus designed for year-round use. The campus will be extensive enough to simultaneously accommodate two different groups of up to 40 people per group overnight and larger groups during the day. The campus is designed to integrate with the surrounding environment, but also to be a contained unit obvious to other recreationists using the area. Outdoor interpretive
displays around and through the camp will be designed to inform and welcome other people recreating in the area. In the proposed changes, an emphasis on green design strategies is made while also taking account of the history of the facilities. The existing buildings will be renovated as described in Alternative 3 to extend their season of use. The new mess hall described in Alternative 4 is also an important component of this alternative. Additional construction of two small cabins to house resident staff is included in this proposal, along with the addition of a functional and extensive alternative energy display.

Discussion of new Installations and Limitations

Small Residential Cabins and Outhouse—The installation of two new cabins and an additional compost toilet outhouse would provide housing for 2-4 resident students for the combined purpose of research/internship and facilities maintenance. These additional facilities could also be used as an educational display of alternative construction materials, green architectural design, and the environmental issues surrounding waste management. The compost toilet outhouse will be located to the south of the cabins to keep waste away from Little Bear Creek located north of the facilities. The actual design plan for these buildings could come from a design contest held at USU among engineering and architecture students with the winning prize being the opportunity to have their design constructed at the LCLC. Winning designs would incorporate aspects such as local/recycled construction materials, passive heating and cooling, natural lighting, and an understanding and incorporation of the spirit of the place and the mission of the LCLC, while staying within a budget of $10,000 (Elizabeth & Adams, 2005; Minke, 2006; Rael, 2005; McLennan, 2009).

Alternative Energy Installation—The energy at the camp will come almost entirely from a PV solar panel installation; however, a small wind turbine installed to supplement energy and form part of the display is proposed. The solar panels will be a fixed installation facing south, with panels installed on top of the existing buildings and/or around the generator shed to make use of wiring already installed. There is great potential for solar energy on this site as the central area around the generator shed is clear of trees and the topography is generally open (Real Goods Solar, n.d.; Small wind turbines for homes, businesses, and off-grid, n.d.; Utah Geological Survey, 2008). A small wind generator could also be located near the generator shed. Although this area is not ideal for a wind based energy system, a small wind turbine that will generate energy from winds under 10mph could provide a backup energy source in cloudy conditions. Due to the complementary nature of the energy sources, hybrid systems often include wind generators along with solar panels (Real Goods Solar, n.d.; Southwest windpower: Renewable energy made simple, n.d.; Utah Geological Survey, 2008). Additionally a small, affordable wind generator of the type that could easily be installed at a private home would be a useful educational tool. Heating for new building construction will be mostly passive solar. More information on the topic of alternative energy systems appropriate for the LCLC can be found in Appendix C.
Signs and Interpretive Displays—For the installation of the alternative energy display, alternative construction materials/green design display, and the educational display on the history of the site, as well as the entrance sign and nature trail described in Alternative #3, total cost will likely be between $20,000 - $50,000 (Environmental Finance Center, n.d.). These installations can be incorporated over time so as not to incur the total cost all at once.

The solar panels, wind generator, and back-up propane generators, along with the passive heating and energy efficient design of the buildings will all be incorporated into an educational display on renewable energy sources and electricity usage. This will include information gathered on weather patterns and LCLC energy usage along with electricity generated by the solar panels and wind turbine.

The small, low-budget cabins designed by USU students, along with the high-tech mess hall and the renovated original buildings will all be incorporated into an educational display on environmentally friendly building design and architecture. The display will highlight the impact and ease of small adjustments to typical designs as well as educate about new ideas and technologies available.

An educational display on the history of the LCLC will be the only display located entirely indoors and will tell the story of the site, along with the evolution of the surrounding communities and the land management agencies involved. This display will line the walls of the dormitory and administration buildings and will make use of historical photos, maps, and anecdotes from people who attended the camp in the past.

Bridge, Plowing, and Parking—The details of winter access will have to be discussed with the Utah Department of Transportation, and it is likely that winter plowing will sometimes be an issue. The bridge will have to be reinforced for entrance of heavy vehicles and may need to be replaced to ensure future accessibility. This is discussed in more detail in Alternative #4.

Funding—This alternative is cost intensive, but there are an abundance of alternative funding sources available for environmental projects involving education and especially alternative energy. See the “Costs” section of Appendix C.

Forest Service Use Permit—The use permit will have to be renegotiated with the Forest Service in order to use the LCLC year-round and increase the number of users.

Overview:
- Total Estimated Cost: $2,000,000 – $3,000,000
- Modification of Existing Buildings: Renovation of dormitory and administrative building, including the installation of cooking facilities, insulation, and additional heating. All renovations in keeping with historical characteristics of buildings*
- Additional building projects: two new small cabins, interpretive displays around and throughout campus, showcase and expansion of alternative energy, mess hall showcasing green design*, new bridge*, photovoltaic solar panels*, pavilion*, nature trail*
- Parking: In the pullout along I-89, in front of dormitory building, and on the cement pad of the basketball court, consider use of shuttles Map: For location of proposed facilities see Figure 2.3.
*These additions are part of previous alternatives. If this alternative is chosen as a starting point, they should be included as new construction. If alternatives are implemented as phases in one large project, these additions will be constructed in an earlier phase.

**Figure 2.3** Map of Facilities with all Proposed Additions
Preferred alternative

Alternative 3: Season Extension

In light of the details discussed in previous sections, it is recommended that the LCLC begin by developing the facilities as described in Alternative 3. This includes installation of cooking facilities, an outdoor pavilion, improved insulation and heating in existing buildings, and the expansion of classroom space and educational displays.

Completing these additions would expand the facilities enough to meet the basic needs of visitors, while staying within the available $300,000. The season of use would be extended further into spring and fall, staying within the season specified by the Forest Service Special Use Permit. The maximum number of overnight users would be increased by addressing the limitations of the water chlorination system. The only new building construction would be the outdoor pavilion.

Alternative 3 is recommended because it immediately addresses the most important limitations of the current facilities in a timely and cost effective manner. All improvements could be completed within a single summer, and the opportunities created by these improvements could greatly expand use of the LCLC. Beginning with this alternative would allow the LCLC to stay within the available budget while still expanding and looking toward the future. This recommendation is made as a starting point only. As use of the LCLC expands, more funds can be generated to develop the facilities more fully, eventually completing the improvements described in Alternatives 4 and 5.
CHAPTER III:
PROGRAMS AND CLIENTELE

Jessica Allen, Jade Jensen, Jared Smith, Kara Purser-Thompson, Ashley Walker Workman

Introduction

The first USU Forestry Camp was held in the fall of 1936 (Sharik, 2009). The camp and landscape around it has since touched the lives of many USU students. By the end of the 1990s, enrollment had greatly declined at the LCLC (Sharik, 2009). Today, the site is rarely used and forestry camp sessions are nonexistent. Years of neglect and disuse have led to the disrepair of the facilities. USU and the College of Natural Resources (CNR) are beginning to question once again how to utilize the site.

For the remainder of this report we will call the former USU Forestry Camp site the Logan Canyon Learning Center (LCLC). Many programming possibilities exist and are compatible with, if not dependent on, LCLC. With remarkable scenic, educational, and scientific value, we view the site as having greater potential than past uses have allowed. We hope to build on the great tradition of the Forestry Camp and enrich the lives and education of USU students as well as surrounding communities. Our group proposes that USU should retain its permit for operating the LCLC and we further propose that programs be developed and the list of possible clientele expanded.

A brief overview of the issues

In order to use the LCLC once again many obstacles must be overcome and many issues addressed. A fire burned down the Turner Mess Hall on April 21, 1998 (Sharik et al., 1998), leaving the LCLC without a place in which to prepare and serve food. Many programs rely on these amenities, so building new or modifying existing facilities will be necessary. Many of the other buildings are also outdated or in some cases even dilapidated and will need to be improved or rebuilt in order to accommodate many program and clientele groups.

Many issues are entangled in the current use permit USU has with the Forest Service. The permit limits the dates the camp can be used as well as the number of visitor-days and overnight users allowed. It also limits how the site can be utilized. Commercial use, for example, is prohibited. These restrictions greatly inhibit the types of programs that can take place at the LCLC, limiting the types of users.

Accessibility is another issue of the LCLC. Winter use may not be possible due to the large amounts of snow in the area and the lands may also be critical winter range for wildlife. Also, due to constrained resources, no one is available to maintain the facilities and keep the access road clear of snow. Limited parking and a deteriorating bridge restrict the number and type of vehicles that can access the site. If programs were to expand, increased parking and an improved bridge would be necessary.
Finally, there is the issue of how to staff the LCLC. Would there be an on-site staff, part-time or full-time, and how many would be staffed? How would the staffing be funded? Would a part-time director be enough? The answers to these questions largely depend on the volume of programs as well as the diversity of them.

**Experiential, environmental, and place-based education**

USU has an opportunity to promote environmental education at the LCLC which will encourage stewardship, a sense of place, and a citizenry focused on action. Managers are presented with unique challenges at the center. Its distance from Logan coupled with the difficulties of teaching in the out-of-doors will make organizing learning experiences more taxing. Successful programming will have to be flexible, creative, and above all, inclusive. Through experiential, environmental, and place-based education opportunities we hope to take one more step towards a healthy and sustainable community.

Experiential education relies on learning through experiences provided by exposure to diverse and dynamic settings. The natural setting of the LCLC provides a great platform to not only witness natural systems and processes firsthand, but to participate in them as well. Students of all ages and disciplines can benefit from the experiences unique to the LCLC. Dresner and Gill (1994) have identified several areas in which students benefit from similar camps. The LCLC can provide experiences to participants that will not only further their understanding of the environment, but will also benefit many aspects of their lives. The camps provide both physical and emotional challenges, and students develop confidence through a greater sense of their strengths and weaknesses (Hanson, 1977). Participating in outdoor activities requires the development and use of life-skills such as planning and self-reliance. The completion of camp duties can also improve feelings of accomplishment and self-worth (Dresner and Gill, 1994). Students involved in camp experiences can create a more positive self-image for themselves.

Another opportunity that the LCLC would provide is environmental education (EE) training to educators. Teachers may recognize the importance of EE but feel they lack the knowledge and skills to conduct it meaningfully. They may also be unaware of the opportunities that are easily accessible and full of benefit, such as nearby parks or natural areas. Creating long-lasting solutions to environmental problems involves a paradigmatic shift and will require the active participation of educators throughout the community. Environmental/experiential education shouldn’t stop once students or teachers leave the grounds; to maximize benefits, the lessons learned should continue in numerous and diverse settings.

Deborah Simmons (1998) carried out research to evaluate teachers’ perception of certain settings while conducting EE. She found that teachers, though enthusiastic, were somewhat uncomfortable with teaching in natural settings. Simmons also discovered that teachers’ perceptions of suitable settings in which to conduct EE might be limiting. The LCLC could provide valuable instruction to educators on the proper techniques and planning methods that accompany an outdoor learning experience. Risk management is a critical consideration when conducting EE and the proper knowledge could help put educators more at ease. Also, the out-of-doors can be a dynamic and difficult environment in which to teach. Proper planning and teaching methods are beneficial to teachers and address this issue.

Simmons found that teachers were highly enthusiastic and considered the deep woods to be a great setting in which to conduct EE. This is a great asset for the LCLC, as its setting
already seems to carry credibility among teachers. It further represents great opportunity for the LCLC to assist educators in selecting alternate, more accessible areas in which to conduct EE. Natural urban areas, which educators regarded with less enthusiasm than other settings, might be a neglected but important setting for EE. These neglected areas could further reinforce the mission of the LCLC by fostering a sense of place and a reconnection with nature.

The percentage of those dwelling in urban areas is increasing and only intensifies our need to rekindle our relationship with nature and develop a more active citizenry. Urban dwellers feel an increased sense of anonymity and disconnect from the natural world. Those that have engaged in camp programs not only sought to change their own behavior as a result of their experience, but wanted to inspire change in others as well (Dresner and Gill, 1994). Using the principles of place-based education we can reinforce that connection of people to place. Place-based education is an emerging teaching concept attempting to close the gap between school and community. It draws into the classroom local culture, politics, and environment. By encouraging place-based education with a focus on local issues, LCLC could lead the way in developing a more active citizenry.

Gregory A. Smith (2007) discusses the importance of this method of education and why traditional teaching has often been at odds with environmental education. Smith states, “The opportunity to participate in learning activities that focus on real-world problem-solving can impart to children a sense of their own agency and collective capacity to alter their neighborhoods or communities for the better.” Smith argues that schools are often dealing with too much regulation and structure to implement such programs. However, the LCLC could strive to be a model for teachers, students, and administrators to recognize the value in place-based education.

**Clientele & Potential Partners**

In an effort to avoid narrowing the scope of the LCLC we considered any group or individual that would utilize the facilities and programs. Partners have also been identified that could bring groups and programs to the LCLC in exchange for the use of the facilities. Partnerships are going to be vital to the success of the LCLC and will be highlighted by the Administrative Group.

Potential clientele consists primarily of local groups and organizations. We identified two main categories: traditionally targeted experiential/environmental education groups, and non-traditional. The traditional group includes k-12th graders, generally within public schools and home schools. The general public is also a traditional group to target within a community for outdoor educational experiences. We have identified other Forestry Camps as potential traditional clients as well as beneficial partners. Non-traditional clientele will consist of the colleges at USU, not to be limited to the CNR. To encourage deeper learning and a healthier community we want to encourage use by the College of Business, College of Education, and the many programs, groups, and clubs associated with USU.
Explanation of clientele selection

*CNR Recent Use*—The CNR has previously used the Forestry Camp facility as a retreat location for individuals new to the college. The retreat incorporated team building and leadership activities in effort to stimulate network and cooperation among new students. The facility was used overnight during these events, and the likelihood of similar CNR retreats can be expected based on past use.

*Location*—Due to LCLC’s proximity, Cache Valley schools are a clear choice as a target user group. As described earlier, place-based education can be very beneficial to a community, and school groups are more likely to participate in programs or use facilities that are nearby and easily accessed. For example USU’s Edith Bowen Lab School has traveled as far as Jackson, Wyoming in an effort to incorporate EE into their curriculum. The LCLC could be an economic solution for local schools to foster awareness of the local landscapes and ecosystems in which they reside.

*Interest*—Groups that have shown interest in using the LCLC facilities and/or programs include: the College of Business, the College of Education, other colleges such Engineering or HASS, and the general public. Depending on the amenities of the facility, it could host an array of events that would serve the community in experiential education. Aside from LCLC programs, the facility could be utilized for seminars, student teaching, family reunions or weddings for the general public, special interest topics, and so on. Even if education is not a group’s objective, the setting itself can allow for a beneficial outdoor experience.

*Diversity*—A diverse array of clientele could give the LCLC the vitality it needs to sustain its operations in Logan Canyon. If we cater only to groups focused on EE, we would miss the opportunity to expose others within the community to outdoor education. Regardless of the mission, getting people out-of-doors will allow for opportunities of incidental learning. For example the mission of Connections at USU is to integrate incoming students with the community. The LCLC is an excellent location not only for team building and leadership exercises, but also a great place to expose newcomers to the beauty and tranquility of Northern Utah.

*Specific Clientele/ Program Ideas*

*Forestry Camp Exchange*—We propose a Forestry Camp Exchange program as an effort to regionalize our efforts and provide a support network for the LCLC staff; comparable to a foreign student exchange. For example, students from New Mexico Forestry Camp
would be able to attend the LCLC, and vice versa, to facilitate student engagement in new environments, be presented with new learning opportunities, and have a chance to explore a new culture of thought, transportation being the only additional cost. Students could raise money at their local campus to help fund the trip.

**Stokes Nature Center Network**—Stokes Nature Center (SNC) is seen as more of a partner to the LCLC, as they already have a well-defined clientele base. Because of the proximity of SNC to the LCLC, and because they both have similar goals based in outdoor/experimental education, it makes sense for them to work together. SNC already holds programs for the community in Logan Canyon. The LCLC would provide a desirable location to hold these events, especially since it has the added benefit of overnight amenities. Additionally, it would bring more groups to the area that may be interested in using the facility.

**Mobile Outreach Programming**—Many teachers and their classes may not be able to make the trip up to the LCLC. Funds and or scheduling conflicts may restrict the ability for them to take a field trip to the LCLC. In order to reach such classrooms, the LCLC could have a mobile outreach student. It would include a few staff members bringing nature into the classroom and giving lessons on site at different schools.

**Program alternatives**

**A Brief Summary of the Alternatives**

1. Tear out the buildings and restore the land
2. Do nothing-keep camp the same
3. Rebuild mess hall, increase use for self-facilitated programming
4. Rebuild the mess hall, improve other facilities, extend season of use, hire part-time coordinator
5. Rebuild mess hall, improve other facilities, year-round use, on-site full-time staff

There are multiple programming possibilities for each of the following alternatives. In order to minimize redundancy we have categorized the program possibilities and assigned them a corresponding letter (Table 3.1). The letters correspond to those used within each alternative.
Table 3.1: Program matrix for Alternatives 1-5

<table>
<thead>
<tr>
<th>Program</th>
<th>Program Type</th>
<th>Duration</th>
<th>Program Examples</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Environmental Education</td>
<td>Half Day/ Full Day</td>
<td>-Nature walks&lt;br&gt;-Outdoor safety&lt;br&gt;-Plant/ wildlife identification&lt;br&gt;-Educational seminars</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td>B</td>
<td>Environmental Education</td>
<td>Multiple Day/ Week or longer</td>
<td>-Forestry camp&lt;br&gt;-Extended natural resource education stays&lt;br&gt;-Science expeditions, university research</td>
<td>2, 3, 4, 5</td>
</tr>
<tr>
<td>C</td>
<td>Commercial</td>
<td>Half Day/ Full Day</td>
<td>-Weddings&lt;br&gt;-Church, community, private rentals&lt;br&gt;-Ropes course&lt;br&gt;-Business leadership workshops/ retreats</td>
<td>4, 5</td>
</tr>
<tr>
<td>D</td>
<td>Commercial</td>
<td>Multiple Day/ Week or longer</td>
<td>-Wedding parties&lt;br&gt;-Family reunions&lt;br&gt;-Business leadership retreats/ camps&lt;br&gt;-Special interest retreats (yoga, youth, wellness, advocacy)</td>
<td>5</td>
</tr>
</tbody>
</table>

Alternative 1: Tear the buildings out and restore the land

Programs: None
Possible Group Sizes: N/A
Clientele: N/A
Season: N/A
Cost: $70,000-$400,000
Change in Permit: The permit becomes obsolete
Restrictions: High initial cost with no future benefits to Utah State University
Other: Loss of a unique education opportunity

Alternative 2: Do nothing-keep camp the same

Programs: Options A and B Programming facilitated by groups using it
Program Duration: day and overnight use
Possible Group Sizes: up to 25 people per night use, up to 60 nights per season. Up to 50 people day use only
Personnel Needed: Professor Michael Butkus-paid by Institute of Outdoor Recreation
Clientele: Small random groups-some USU groups, used by SNC occasionally, Cache Search and Rescue, Edith Bowen Lab School
Season: May 1st – Nov 1st, usually only accessible after June 1st
Cost:  Same as current costs
- $2800 for maintenance per year from University
- Charge groups about $200 a night to cover maintenance costs

Change in Permit:  None

Restrictions:
- No designated position
- All responsibility falls on Professor Michael Butkus
- Have no funds for improvements/ expansion/ no money for extras

Other:
- No funding sustainability
- Lack of maintenance of buildings and programs
- Lacks diversity in opportunities
- Lost opportunity to USU students and Cache Valley community

Alternative 3:  Rebuild mess hall, increase use for self-facilitated programming

Programs:  Options A and B, Self-facilitated
Program Duration:  Day and Overnight use/ Expanded Overnight use with improved facilities
Possible Group Sizes:  up to 25 people per night use, up to 60 nights per season. Up to 50 people day use only
Clientele:  Expand to include
- Self-facilitated groups (eg. SNC, Retreats, Connections, etc.)
- Local groups
  - Stokes Nature Center
Season:  Limited to summer- May 1st – Nov 1st, usually only accessible after June 1st
Cost:
- $2800 for maintenance per year from University
- Cost for building remodel/ upgrades
- Additional marketing and advertising costs
Income:
- Charge groups about $200 a night to cover maintenance costs
- Increased money coming from user fees
Change in Permit:  None
Restrictions:
- No designated director position
- All responsibility falls on Professor Michael Butkus
- Have no funds for additional improvements/ expansion
Other:
- More user fee sustainability

Alternative 4:  Rebuild the mess hall, improve other facilities, extend season of use, hire part-time coordinator
Programs: Options A, B, and C programming. Add commercial uses such as renting out for weddings, church groups, retreats/other

Outreach: mobile programs

Possible Group Sizes: Larger day use capacity due to improved parking and facilities, overnight use remains the same

Clientele:
- Local
- Expansion into regional operation
- Forestry Camp Exchange

Cost:
- Expansion costs
  - Parking lot
  - Winterization of facilities
  - Installation of septic tank
- Higher maintenance costs
- Increase in number of required personnel

Income:
- Charge groups about $20 a night per person to cover maintenance and payroll
- Increased income from user fees

Season: Year-round/extended

Change in Permit: Permit will need to be reassessed
- Year-round or extended season of use
- Allow for commercial programs

Restrictions:
- Funding for improvements
- The Forest Service will agree that commercial use is compatible with the area

Other:
- Have a Scheduling/Program Coordinator as a part-time position based at USU

Alternative 5: Rebuild mess hall, improve other facilities, year-round use, on-site full-time staff

Programs: Options A, B, C and D Self-run and some facilitated by Forestry Camp staff.

Outreach: mobile programs, wildlife expeditions

Possible Group Sizes: Facilities to accommodate groups of 150-200 people for both day and night use

Clientele:
- Local and expanded regional operation
- Possible nation-wide audience
- Expand Forestry Camp Exchange Program (National)

Season: Year-round

Cost:
- New building construction
- Significant building improvements
- Increased number of required full-time staff
• Increased maintenance for facilities (and greater use)

Income:
• Charge groups about $40 a night per person to cover maintenance and payroll
• Increase income from user fees

Change in Permit: Permit will need to be reassessed
• Year-round or extended season of use
• Allow for commercial use
• Allow for development of surrounding area

Restrictions:
• Staffing
• Funding
• Forest Service is final authority on development of the area

Other:
• Full-time staff
• Will possibly require resident staff

Survey methods and findings

To gain information on interest and ideas for possible programs at the LCLC, we designed audience focused surveys for four different populations (Appendix D). The survey populations we focused on were the general community in Logan, k-12 educators in Cache Valley, faculty and staff at Utah State University, and other forestry camps or nature centers. We designed a short survey consisting of no more than 10 questions for each group. The general community, k-12 educators, and USU faculty and staff surveys were intended to measure the interest levels and what program genres would be preferred. The surveys also contained questions on the maximum cost people would be willing to pay and reasons for using or not using outdoor learning programs. General facility requirements and at least one open ended question for individual ideas or suggestions completed the surveys.

We obtained a list of k-12 educators through Jack Greene, science teacher at Cache High School, and SNC. The Utah State University faculty and staff survey was sent to staff assistants and department heads throughout Utah State, with instructions to forward to any interested parties. We individually conducted face to face surveys for the general public, randomly selecting homes within Logan City. All surveys except the general public were located on the internet survey program Surveymonkey©, and sent to participants through email (surveys found in Appendix D).

As with any survey, there are validity concerns to take into consideration. The small sample size and a very short response time resulted in a low response rate, especially in the k-12 educator and other forestry camp groups. Lack of incentives and legitimacy concerns may have also contributed to low response rates. We also experienced researcher error for the face to face surveys. We didn’t solidify our explanations before we conducted the surveys, so the research was not uniform. Our data would be more valid if we had the time, money, and labor to devote to more extensive research.

General public survey results
The general public survey shows a possible correlation between previous experiences in outdoor learning and present interest levels. Respondents with previous experiences had a higher interest level than those without previous experience. Overall, there is a very high interest for outdoor learning programs as seen in Figure 3.1. The main reasons respondents do not participate in programs is due to high costs and lack of availability as seen in Figure 3.2. Opening the LCLC with more programs would provide a variety of small, low cost, opportunities to the public. According to these surveys, there is a high desire for outdoor learning opportunities but lack of actual programs.

![Figure 3.1: Degree of public interest in relation to previous outdoor experience.](image)

Interestingly, all the possible programs listed were chosen as high interest. There is a higher demand for outdoor recreation related programs; however this result is not significant as seen in Figure 3.3.

![Figure 3.2: Reasons why general public do not currently participate in outdoor learning programs.](image)
Utah State University faculty and staff survey results

According to the Utah State results there is a very high interest in outdoor learning programs. The results indicate that interest is overall higher, than for the general public which has more diversity in interest levels (Figure 3.4). The high interest among both group participants shows a high desire for programs locally in and nearer to the valley. As long as the programs are well advertised and cost efficient, we believe there would be a high use from many diverse clientele groups. Advertising within the community was a concern brought up in many open ended questions from the public survey. According to our data, there appears to be a high interest in outdoor learning programs.
The Utah State respondents also placed small groups, especially groups less than fifteen people, as their intended group size (Figure 3.5). This small group size already fits under the current Forest Service permit. Although not as desirable in terms of collecting money from use fees; it is a plausible option given present restrictions.

Figure 3.5: USU preference on group size for USU LCLC use

According to the responses from USU faculty and staff, there is a high demand for retreats at the LCLC. Having music performances and concerts at the LCLC was one suggestion that was written in on many surveys. Contrary to the general public, the USU responses seem to favor retreats and biology/ ecology focused education (Figure 3.6). This is expected given the differences between the groups. The variety in interest provides us with the opportunity to develop different types of programs, which will result in a more sustainable operation that will have a larger impact in the community and university.

Figure 3.6: USU faculty use preference for USUFC
There was some confusion over willingness to pay, and some respondents were unsure how to answer. Most assumed it was per person, but were unsure about duration. The question was intended to determine the highest possible cost respondents would pay for any outdoor experience. However, due to confusion over the question the data received may not be representative. The data in Figure 3.7 shows a high percentage of people are willing to pay no more than forty dollars for an outdoor experience in Logan Canyon. Interestingly, there is a portion of USU members that are willing to pay over sixty dollars.

Figure 3.7: Willingness to pay USU compared to General Public

Recommended alternative

The LCLC transformation needs to take place one small step at a time in order for it to be manageable and affordable. We believe the most feasible and immediately practical alternative would be a hybrid of Alternative 3 and Alternative 4.

The mess hall should be rebuilt and the current buildings should be improved. This will greatly expand the programming opportunities for USU students as well as other schools and organizations in the community. Insurance money received for the former mess hall can be utilized to make the mess hall reconstruction a possibility. Also, resources at the university such as engineering students and landscape design students could be recruited to help keep costs low. This could also provide an opportunity for those students to engage in a challenging real-world problem. The rebuilding and new design of the mess hall and other facilities could also become a green design learning center for later visitors.

The community indicated a high interest in utilizing a nature/learning center in Logan Canyon. Most of the feedback from interest surveys showed that most groups would be fewer than 30 people; a small and manageable size. Currently, the LCLC is able to accommodate groups of this size. Improving the existing facilities and offering more services and accommodations will not only be economically feasible, but will further entice a greater number of diverse clientele.
Hiring a part-time coordinator is also a good idea. This position would require little funding and full-time staff would not be required on location. Much of the funding for such a position could be provided by user fees from groups utilizing the LCLC. Many of the programs would take place on site, but would be facilitated by people that the groups bring in. The SNC has enthusiastically agreed to partner with the LCLC and can either facilitate their own programs or engage the services of another individual or group. Not only would this reduce expenses, but would also build up the list of potential clientele. The part-time coordinator would be able to advertise and campaign for a wider range of clientele and ensure proper facilities maintenance and upkeep.

The camp would still be used primarily in the summer and fall. This would not require a change in the permit. However, in order to generate funding, increase revenue, and attract a more diverse user-group, we recommend the permit be altered to allow small-scale commercial use.

In conclusion we believe that the LCLC has great potential and should continue to be utilized as an asset to the community and Utah State University. Environmental and experiential education opportunities are incredibly valuable and the LCLC is a site that can provide those opportunities.
CHAPTER IV:
ADMINISTRATION AND BUDGET

Patrick Giles, Ashley Loertscher, Jarrett Nez, Nick Oldham

Introduction

The issues surrounding the administration of the Logan Canyon Learning Center (LCLC) are complex and diverse. The past administration of the camp does not include any written structure or goals. Administration of the camp will need to be organized from scratch. Vocal support for maintaining the facility is heard throughout the College of Natural Resources and the University, but this support is still tentative in nature. Over the past ten years, the LCLC facility has run under very little administration. Michael Butkus has been a part time administrator of the camp. His duties have involved maintaining the water supply, purchasing supplies for the camp, renting the facility to users, and other administration tasks. The work he does in administering the LCLC is currently paid for by the Institute for Outdoor Recreation and Tourism. As of now there is no formal administration plan (Michael Butkus, Pers. Comm.). For a flow chart of the current administration of the LCLC see Figure 4.1.

Figure 4.1:

Current Administration Flow Chart

Utah State University

College of Natural Resources

Department of Environment and Society

Institute of Outdoor Recreation and Tourism

Manager of Forestry Camp
Sources of Funding

Table 4.1:

<table>
<thead>
<tr>
<th>Source</th>
<th>Funds</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Funding</td>
<td>USU General fund gives $2,800.00 a year.</td>
<td>This fund is used to purchase items for the camp.</td>
</tr>
<tr>
<td>Institute for Outdoor Recreation &amp; Tourism</td>
<td>The past few years the forestry camp has been getting funds to compensate faculty.</td>
<td>This Institute is going stop funding the camp. At least for this year.</td>
</tr>
<tr>
<td>Program Money</td>
<td>Partners that use the camp can make a prophet from holding a program at the camp.</td>
<td>Fundraising, Fees, etc.</td>
</tr>
<tr>
<td>Rental Money</td>
<td>The money made from renting out the camp can be used for whatever they choose.</td>
<td>To rent out the camp it costs USU affiliated groups is $50 a day and $150 per night. The cost for non affiliated groups is $100 a day and $200 a night</td>
</tr>
</tbody>
</table>
| Insurance Money                        | The total to date of the insurance money is $361,609.51.  
The interest since 1998 has increased $70,724.09 | The interested on the account compounds in June of every year. |

University Funding

The LCLC receives an annual amount of $2800 to cover the operating costs of the camp. These funds come from the USU general fund and are currently administered by Michael Butkus. These funds can be used to purchase essential items including propane, chlorine, toilet paper, and furniture. This general fund money may not be used to compensate faculty or personnel for their time (Michael Butkus, Pers. Comm.).

USU Facilities Maintenance

A yearly upkeep and maintenance of the camp is performed by the USU Facilities Department. This includes pest control, winterize the facilities, and repair building damage. In heavy snowfall years, this cost has reached $7500 which is covered by the USU Facilities budget. Improvements and other tasks that fall outside of the normal maintenance can still be
carried out by the USU Facilities Department, but the LCLC will need to pay for it. Any plans for improvements need to be run through USU Facilities (Michael Butkus, Pers. Comm.).

Institute for Outdoor Recreation and Tourism (IORT)

For the past few years, the funding to compensate faculty who administrate the facility has come from the Institute for Outdoor Recreation and Tourism. This institute will not continue to provide money to support the administration of the LCLC in its current state. In the future, administration costs will have to be borne by the camp itself (Michael Butkus, Pers. Comm.).

Program Funds

Future LCLC programs run with LCLC administration partners have the capability to bring in their own funds through fees paid for use of the facility. These capabilities include program fees or even external grants and donations. A portion of this money will need to support the physical needs of the program as well as the administrative costs of the event. The extra funds will be able to be used at the program’s discretion.

Rental Funds

Money generated from renting the camp out to partnering groups can be used at the camp’s discretion; therefore, bear the costs of administration and/or staffing. Currently, any extra funds generated by the camp have been placed in a savings account, now totaling around $900. The facility is currently rented out at a rate of $50 per day of day use and $150 per day of overnight use for USU-affiliated groups. The rate for non-USU groups is $100 per day of day use and $200 per day of overnight use. The rental agreement also provides a clause to have groups pay if the facilities need cleaning after. These rates may need adjustment if the camp changes its facilities or staffing (Michael Butkus, Pers. Comm.). It is very likely that with upgraded facilities and more demand for the LCLC these rentals of the facility would increase significantly. This would need to be done by the director of the LCLC or other personnel a position to do so.

Insurance Funds

Judy Monson is the administrator of the insurance funds given to the Utah State University Forest Camp when the mess hall burned down in 1998. The total amount given at that time totaled $391,271.66. Since 1998, the interest generated on the account is $70,724.09. After costs of demolition of the mess hall and a temporary building, the fund currently totals $361,609.51. The interest on the account is compounded in June of every year (Judy Monson, Pers. Comm.).
Possibilities for External Funding

More kids in the woods—“More Kids in the Woods” is a Forest Service program that aims to get kids into the outdoors more often. The program concentrates on kids having fun, being active, and learning new things about the outdoors and the natural environment. The Forest Service and partners committed $1.5 million to get children out of the house and into nature. The LCLC may be able to partner with the Forest Service to achieve the goals of this program. The goals of the LCLC may match well with the goals of this program making it a good candidate for the funding. This is a good opportunity to seek external funding to pay for some of the programming of the LCLC (United States Forest Service, 2007).

Stokes Nature Center—Holly Strand, the Director of Stokes Nature Center (SNC), has various ways to participate in joint fund raising. Stokes Nature Center relies on fund raising through generous individuals and businesses to keep quality programming available in the surrounding community (Pers. Comm.). There are a variety of ways for companies to get involved including SNC Education Program Sponsorship, SNC Corporate Membership, General Support/Endowment Building, and SNC Event Sponsorship. Some of the SNC Corporate members are: Bio-Resources Inc.; Bio-West Inc.; Cache Valley Learning Center; Campbell Scientific; Furhiman's Framing and Fine Art; USU Community Credit Union; Wells Fargo, South Main Branch; Bridgerland Audubon Society; and Stokes Field Expeditions and Logan Optical (SNC, 2008).

There are various ways to fund the LCLC that may be utilized. There may be more independent foundations or grant sources that may be available to the LCLC. Future managers of the LCLC will be responsible for continuously researching and finding new sources of grants and other funding.
Collaboration

Partners

Table 4.2 presents an overview of potential partners for the Logan Canyon Learning Center.

Table 4.2:

<table>
<thead>
<tr>
<th>Possible Partner</th>
<th>Contacted and Expressed Interest</th>
<th>Possible Partnership Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>USU Education Department</td>
<td>Yes</td>
<td>• Access to local schools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide interns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interest in activities year round</td>
</tr>
<tr>
<td>Forest Service</td>
<td>Yes</td>
<td>• Forest Service programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Training of future Forest Service professionals</td>
</tr>
<tr>
<td>Stokes Nature Center</td>
<td>Yes</td>
<td>• Use of the facility for residential environmental education programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Access to many community organizations</td>
</tr>
<tr>
<td>Utah Conservation Corps</td>
<td>Yes</td>
<td>• Intern placement at LCLC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Involvement in projects at LCLC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Training programs at LCLC</td>
</tr>
<tr>
<td>Outdoor Recreation Center</td>
<td>Yes</td>
<td>• Outdoor recreation classes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Access to trails</td>
</tr>
<tr>
<td>Western Aspen Alliance</td>
<td>Yes</td>
<td>• Programs or events at LCLC</td>
</tr>
<tr>
<td>Other Colleges</td>
<td>No</td>
<td>• Multi-disciplinary programs and events</td>
</tr>
<tr>
<td>Administration of Utah State University</td>
<td>No</td>
<td>• University Support and Funding</td>
</tr>
</tbody>
</table>
**USU College of Education and Human Services** — The College of Education and Human Services has expressed strong interest in partnering with the LCLC; there is a great deal of support for environmental education in this college. An environmental education center could benefit the College of Education greatly to better train pre-service and in-service teachers in environmental education. The college offers strong partnerships with local schools and faculty support for environmental education. They have the ability to push agenda and seek external funding. They also could provide interns for the center to help staff it. This would benefit both the LCLC and the College of Education. The College of Education is most interested in programs that take place during the school year, although they could still utilize the facility during the summer (Dorward).

**Forest Service** — As the LCLC is on Forest Service land, the Forest Service is an important partner to recognize. Most of the proposed directions for the LCLC will require a change in the special use permit. This will require a good working relationship with the Forest Service as well as a willingness to make changes from the side of the Forest Service. Changing the special use permit is a realistic goal if we establish and keep a good working relationship with the Forest Service on this project.

**Stokes Nature Center** — Stokes Nature Center is located one mile up beautiful Logan Canyon on the Logan River trail. This center is a 3,000 square-foot lodge on U.S. Forest Service lands and operates under a lease agreement with the U.S. Forest Service. Stokes Nature Center is a hands-on outdoor education center that is open to children and adults (SNC, 2008). SNC has a good working relationship with Utah State University already and have shown strong interest in being a partner of the LCLC. This strong support comes through administering staff, helping with a joint fund raising effort, if needed, and helping with educating the community through environmental education. SNC has a long list of corporate clientele that may be a potential list of partners for the LCLC as well (Holly Strand, Pers. Comm.).

**Utah Conservation Corps (UCC)** — The UCC is a program associated with AmeriCorps. Those involved with the UCC either work in crew doing restoration projects or as individual placements with non-profit groups. UCC would be very interested in building a partnership with the LCLC. They see that there are great possibilities for utilizing the camp for several one week training programs in the summer months. In addition to this, they see an opportunity of placing an individual in a position if the LCLC becomes a non-profit environmental education center. They wish to be part of any future discussion of this project (Kate Stephens, Pers. Comm.).

**Outdoor Recreation Center (ORC)** — The ORC is highly interested in potentially partnering with the University’s LCLC. There are trails that people use for ATVs and mountain biking, that start right at the LCLC. They also teach winter classes such as avalanche safety, and back country skiing, which could be taught at the LCLC (Paul Bowman, Pers. Comm.).
Western Aspen Alliance—Western Aspen Alliance has expressed interest in using the facility. The Western Aspen Alliance may wish to be a contributor or to hold programmed events of its own in the future such as annual retreats for their steering committees or science advisory panel (Paul Rogers, Pers. Comm.).

Other Colleges—Other colleges, like the College of Business, at Utah State University main campus have expressed interest in partnering with the LCLC. Several of these interested parties have been contacted but have not replied.

Administration of Utah State University—Key partners and supporters need to be found in the upper administration of Utah State University. These partners would be integral to securing future budgets, campus support, and broader venues that the College of Natural Resources would not have access to. This was not addressed specifically by due to lack of time but this would have to be addressed by any future managers of the LCLC.

Clients

To define the difference between partners and clientele, this section is dedicated to a short discussion of current clientele and possible clientele that have rented the facility in the recent past. (For more information about possible clientele refer to the Programs and Clientele group paper). Current recent users have included the following groups. Edith Bowen Elementary has used the facility in the recent past and is a likely client for the future. They have used the facility with programs offered through Stokes Nature Center. The Cache Search and Rescue has used the facility for retreats and training. College departments have also used the facilities for retreats and training activities.

Advertisement

Advertising to attract possible partners and clientele it will be an important component of a new operating plan. A website would provide a useful marketing tool that would invite a broad range of clientele to use the facility. Advertisement also includes actively pursuing interests in the community to draw these programs and users to this facility. Working through partners, the camp manager could reach a broad range of potential users.

Many schools in the region are experiencing budget cuts that are affecting their traditional programming. Many of these have been traveling to the Teton Science School or other schools similar to this. Due to budget restraints, traveling that distance may not be possible in the future because of the high costs involved. An upstart facility such as the LCLC which would be much closer in proximity may benefit by providing similar programs singly or through partners.
Case Studies

These are the factors that may influence the choice of alternatives for the LCLC.

*Possible survey of students and community support and interest*

A survey to find a need and an interest in the student population should be completed. A survey should also be conducted throughout the community to discover the actual demand for the facility. These surveys may influence the organization of the camp.

*Similar Facilities*

In order to get a better idea about viable administration alternatives and plans for the LCLC, we researched a few residential facilities under other Universities and Colleges (Table 4.3). These may be useful case studies to look at in the future as plans for the LCLC are developed (further detail on select programs provided in Appendix E).

**Table 4.3:** Summary of research on facilities that may be similar to the future LCLC.

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>University</th>
<th>Programs</th>
<th>Funding</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kino Bay Center for Cultural and Ecological Studies</td>
<td>Prescott College</td>
<td>Various programs run by teachers at the College.</td>
<td>College Funding, numerous private donations</td>
<td>Director and Co-Director</td>
</tr>
<tr>
<td>Emporia State University Natural Areas</td>
<td>Emporia State University</td>
<td>Various programs run by teachers at the College. Some programs run from within.</td>
<td>Variable funding primarily from the state. Some funding from private donors.</td>
<td>Director, graduate students, and undergraduate assistants</td>
</tr>
<tr>
<td>McCall Field Campus</td>
<td>University of Idaho</td>
<td>McCall Outdoor Science School Programs. Residential learning.</td>
<td>University of Idaho funding, Palouse-Clearwater Environmental Institute, fees, grants, and private donations.</td>
<td>Seven full-time staff with about 8 seasonal workers. Sixteen AmeriCorps graduate students.</td>
</tr>
<tr>
<td>Treehaven</td>
<td>University of Wisconsin-Stevens Point</td>
<td>University Courses, workshops, seminars, school and youth programs, internal programs</td>
<td>University Funding and private donations.</td>
<td>Eight full time employees, twenty affiliated staff,</td>
</tr>
<tr>
<td>University of Mississippi Field Station</td>
<td>University of Mississippi</td>
<td>Research, university courses, youth programs</td>
<td>University funding, private donations, National Science Foundation</td>
<td>Five full-time staff</td>
</tr>
<tr>
<td>R. S. Friedman Field Station</td>
<td>Suffolk University</td>
<td>Intensive courses, research, various outside programs</td>
<td>University funding, program fees, private donations.</td>
<td>Ten full-time staff</td>
</tr>
</tbody>
</table>
Concerns

Budget cuts

As USU is facing budget cuts for the foreseeable future, investing in the LCLC may not be in the best interest of the University. Given this economic uncertainty, responsible and sustainable investments are crucial to a state organization that receives funding from the public. The LCLC needs to pay for itself, and any developments should be made cautiously as use requires. The LCLC is unlikely to receive further funding from the University in the short term.

Liability Concerns

All buildings built on the site are on Forest Service land, but are owned by the University. If the facility is ever relocated or torn down the University will responsible for the costs. The Forest Service has expressed that they plan on continuing the special use permit for the foreseeable future. If the permit is ever denied, or if the University decides to dissolve the facility then the University will lose a substantial amount of money as outlined in Alternative One of this paper.

Safety Plan

Current plan—Safety is currently the responsibility of the individuals and groups using the facility. As there is no cellular phone coverage at the location of the LCLC, emergency communication is provided in the form of a short wave radio on site that connects to either the Rich County Sheriff’s Office or the Cache County Sheriff’s Office. Depending on external conditions connections are usually to the Rich County Sheriff’s Office and then transferred to the Cache County Sheriff’s Office. This radio is tested every few years and has not been used in an emergency situation recently (Michael Butkus, Pers. Comm.).

Recommendations for Future—As more groups use the facility, a satellite phone or other more direct and user-friendly device should be installed to provide a quicker, more reliable, and safer system to respond to emergency situations. Creating a more direct safety plan in the future could reduce liability concerns and encourage a more diverse range of partners and clientele.
Alternative Plans

Alternative 1--Restoration of the site to natural conditions

One of the many alternatives that are evident is if the Forest Service decided to pull out of the LCLC is to relocate or just do away with it as a whole. The cost estimate of demolition and removing the debris to a dump site was taken off the website “Building Demolition Contractors.” The lower end of the cost estimate of $65,000 was determined for demolition without the cost mileage and cleaning up. The upper end estimate of $400,000 had everything from demolition to restoration efforts taken into account (Building Demolition Contractors, 2008). The calculation was done with a square footage taken from one of the handouts and lectures. The total square footage for buildings was 9000+square feet. Other square footage added were other cement/concrete poured such as the basketball court. The past cleanup cost from the mess hall and trailer summed up to be $54,849.04. This cost was without demolition. The costs of this restoration would be borne by the insurance funds. This would mean that the future uses of the insurance money would be limited.

Pros

• The University will save the $2,800 dollars budgeted to the LCLC as well as any money used to maintain the facility.
• There would be fewer hazards to the trout habitat in the nearby stream.
• There would be a lower visual impact on the scenic highway.

Cons

• It would be highly expensive to demolish it and would possibly deplete the insurance money.
• USU would lose the opportunity for hands-on learning experiences which LCLC has provided for decades.
• Miss out on any future opportunities associated with the facility.

Alternative 2--Small-scale seasonal administration

One part time manager—The LCLC could be administered as a rental facility with partners and clients running programs at the site. There are many different organizations that have expressed interest in becoming involved with the LCLC either on a partnership level or on a client level. These interests, combined with the appropriate facilities, could lead to a number of programs that use the facility but that do not require further personnel support. This manager could be employed by the University in other roles as well.
Job Titles, Duties, Source of Pay—The LCLC manager would manage advertisement for the camp, budget and finances, monitor conditions of facilities, and organize programs and scheduling.

Funds will be administered by the manager and put to responsible use. A goal of the manager is to provide the funding to pay for the position through rentals and programming. A possibility to pay for the manager’s salary could also be tying a part of a college faculty member’s job description to running the LCLC. This would aid in the lack of funds from the Institute for Outdoor Recreation. The manager will seek outside sources of funding that might include grants, contributions, and new partnerships.

As use of the Learning Center facilities increases and as the facilities themselves age, the manager will be responsible for organizing the maintenance of the facilities through USU Facilities Department. The manager will see that prudent facilities are built to support the camp as it grows. The schedule and programming of the facility is the key component of this administration’s responsibilities. The manager will work with partners and clients to meet their needs.

In three years, the programming of the LCLC should be able to fully pay the cost of the part time manager. Budgets for the LCLC will be balanced; the cost of operating the LCLC above the amount provided by the USU General Fund will be met by the LCLC itself.

Such a light staff of the facility would be unlikely to accommodate professional training at the level as it has in much of the history of the facility. There may be a degree of training from the various programs that rent the facility but not to the extent that was done when it was administered as a forestry camp.

Pros

- Little additional risk to what is currently present.
- Easily adapted into a more complex administrative system.
- Light management could be augmented by interns to ease strains of growth or the strains of starting.
- The LCLC remains very adaptable for different groups.

Cons

- The LCLC does not train new professionals in contrast to its conception and long time history.
- Slower growth, likely to not be a leading facility in a short time frame.

For a sample flow chart of this administration for Alternatives 2 & 3 see Appendix F.

Alternative 3--Year round small-scale administration

This alternative is very similar to Alternative 2 in that it would be run as a rental facility by one part time manager. The difference would be that it would be run as a full-year rental facility. This would increase the capacity of the LCLC and may allow for additional growth of the facility. This administration would require a year round part-time manager as opposed to a
seasonal position. Many of the possible partner organizations expressed interest in using the facility in the winter season.

**Pros**
- Easily adaptable
- Management could be augmented by interns or more positions
- Adaptable to growth and could lead to faster growth than a seasonal facility

**Cons**
- Would require more updated facilities and a change in the special use permit.

Alternative 4--Facility administered by one full time manager and interns

**Job titles, duties, source of pay**—The one full time manager would be responsible for the programs and employees. This manager’s salary will come from the revenue of the programs run at the LCLC as well as external funding raised for the LCLC. He or she would be in charge of managing finances, scheduling the facility, advertisement, and running a website for the LCLC. These duties could be delegated to the intern(s) as well.

One or more part-time interns would be employed. Utah Conservation Corp puts interns in individual placements at various non-profit organizations throughout the state. They have expressed an interest in placing an intern at the LCLC if it becomes some sort of environmental education center (Kate Stephens, Pers. Comm.). The College of Education has also expressed a desire to place interns in an environmental education setting for graduate students as well as undergraduate students. (Dorward, Pers. Comm.) The College of Natural Resources can place interns at the LCLC as well to benefit the students within the college.

**Types of Programs**—This administration type would be able to accommodate both programs with external clientele running programs as well as programs run by the LCLC personnel.

**Pros**
- This alternative would offer benefits to the students at USU through internships that will offer exceptional learning experiences that they take with them to their future careers.
- Internships also offer the benefit of low actual cost to the University and LCLC while still being able to have a well staffed facility.
- This would create room for growth as the facility begins to have more programs, more interns, and more full time staff.

**Cons**
- It would put a great responsibility on the full time manager to organize interns and programs.
- Longer time frame to realize.
• The facility would require fairly constant revenues and likely a year round facility.

For a sample flow chart of this administration see Appendix F.

Alternative 5--Large Scale Management

In the future use of the LCLC there may be options for expanding it into a larger scale program. This would be years in the future, after the LCLC starts having large and regular revenues. The organization of the administration would develop as the LCLC grows. The following are suggestions for a possible scenario of the growth for the LCLC.

*Job titles, duties, source of pay*—An executive director would be in charge of the main functions of the LCLC. His or her salary would be paid for out of revenues from the programs run through the LCLC.

An events coordinator would be hired to organize the programs at the facility. An events staff would be hired as need arises under this position. Volunteers would also be utilized to hold programs. His or her salary would be paid for out of revenues from the programs run through the LCLC.

A finance director would be the main individual in charge of managing the finances of the facility. His or her salary would be paid for out of revenues from the programs run through the LCLC.

A marketing coordinator would market the facility to external clientele and future possible users. His or her salary would be self-supported from the revenue of the programs provided at the LCLC.

Interns would help with whatever needs to be done. This would contribute significantly to their education. Their salaries would be paid for by various means discussed in the “Facility run by one full time manager and interns” section above.

*Types of programs*—This type of administration would be most conducive to a full scale environmental education facility. Depending on the growth it could be similar to Teton Science Schools or a nature center. These are decisions that will probably be made as the facility grows.

*Pros*
• Very conducive to the mission statement of the LCLC
• Fulfill a community need
• Provide excellent opportunities
• A good image added to the University

*Cons*
• Extended time frame
• Requires large revenue
• Existing facilities may not be adequate

For a sample flow chart of this administration see Appendix F.
Preferred Administration

Proposed Mission Statement:

The mission of the LCLC is to provide opportunities through experiential environmental education and research that foster connections to place, stewardship of the land, and sustainable practices.

The LCLC location within the College of Natural Resources should be evaluated to generate as much interest as possible. A suggestion has been made by Michael Butkus to move the oversight of the LCLC from the ENVS department to the Dean’s Office in the College of Natural Resources. The pros and cons of any administration plan should be carefully weighed and documented. This was outside our scope of research, but needs to be addressed before changes are made.

The recommended administration consists of the small scale management as outlined in the second alternative. The manager would direct the LCLC to provide the programs and facilities based on the expressed needs of the community and the LCLC's partners. The administration should grow from this small scale administration into an administration with a full time director with interns from partnering organizations. This transition will take place as demand for the facility grows and warrants this change. Until the LCLC starts to generate enough money to sustain itself the salary of the manager will be paid from the LCLC's savings and the insurance funds. The second alternative is good starting point for the LCLC because it allows for time to build working relationships with the Forest Service and potential partners. It is important to grow from current realities while striving to work toward the future. Striving for growth is the best alternative as the current level of usage of the facility is not sustainable and alternative 1 would be a loss of money and the progress of the past.

This look for growth starting from alternative 2 also fits into the alternatives preferred by the other groups in this project. Time is needed to reach the goals by the other groups and this time should be utilized working from a smaller administration alternative, but looking for growth. Alternative 2 is the starting point and needs to grow with the growth of the other aspects of the LCLC.

In times of economic distress or times with lower demand for an environmental learning center the facility, growing thus, would also be able to drop down a level of administration. This would ensure that following a layoff at the LCLC the facility wouldn't discontinue but would be able to continue in a less complex state until they are able to grow once again.

Sample Strategic Plan

The Strategic Plan is an outline for future goals of the LCLC. The plan is a way of seeing progress being made. The plan objectives will be a goal that management will try to reach from 3 to 5 years that will increase the quality of education, stewardship, staff and center professionalism and partnership involvement.
First Years Actions
- Get the LCLC running for environmental education.
- Find quality staff to run and maintain LCLC.
- Have the LCLC financially run itself.

3 to 5 Year Objectives
- Strengthen staff capacity to educate all ages.
- Identify future financial support through cooperate membership.
- Develop and implement environmental education program for K-12 grades.
- Develop seasonal programs.
- Promote and design programs for students to re-visit the LCLC in subsequent years.
- Develop grants for long term financial constraints.
- Establish a permanent staff.
- Improve interior and exterior buildings for overnight residents.
- Design and construct a new mess hall.
- Develop and implement transportation methods to and from LCLC.
- Increase the LCLC’s funding by 10 to 20 percent per year.
- Develop and implement a marketing program for the LCLC through websites.
- Develop an internship program through other colleges in USU.
- Improve the membership of the LCLC from 5 to 10 percent per year.
- Develop a Board of Trustees to decide the Camp’s future.

Adapted from Stokes Nature Center Plan (2008).

Budget

For a copy of a budget plan from McCall Field Campus see the Appendix G. The budget is an itemized summary of probable expenses and income for any given year for the LCLC. This is a good tool to help LCLC prioritize its spending and manage its incoming and outgoing money.
References


Butkus, M. 2009. Senior Lecturer, Outdoor Recreation. Interviewed February 13, 2009


Jensen, W. 2009. Assistant Professor, Emporia State University. Email Interview. February 3, 2009


Malechek, John 2009. Former Professor and instructor at FSC, Interviewed February, 2009

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Trails tales and USU Special Reserves online picture collection. Available at: http://digital.lib.usu.edu/cdm4/results.php?CISOOP1=any&CISOFIELD1=CISOSEARCHALL&CISOROOT=/USU_Photos&CISOBOX1=forestry


Appendix A: Aerial Photo and Site Map of Logan Canyon Learning Center
Map showing original CCC barracks and newer buildings (Physical Facilities Survey USU building board 1982)
Appendix B: US Forest Service Operating Plan (Draft)

Operating Plan for 2009

The operating plan must be revised and turned into the Forest Service by April 1st annually.

- Number of People: will be determined by the schedule. The schedule needs to be submitted to the Forest Service with the Operating Plan. Under current use only limited, small groups are able to use the facility. USU will use the Forestry School at least 10 days in 2009.
- Safety Procedures: Evacuation routes will be presented to all visitors on arrival, including a designated meeting area. The designated meeting area is near the bridge across the Logan River by the highway. Visitors will be informed of potential hazards and conflicts with wildlife, such as moose. Adequate first aid kits will be available on site and large groups (over 25) will be accompanied by an EMT.
- Water will be tested in accordance with the Bear River Health Department to meet quality standards. At this time unsure about water rights.
- Maintenance of facilities: USU will be responsible for maintenance of all facilities at the forestry camp. USU will keep the facilities in good working order. The Forest Service will not be responsible for any structure failure or maintenance issues associated with the buildings, water systems, fire suppression systems, or grounds directly related to Forestry Camp. The Forest Service will maintain the road from the pavement at Logan Canyon to the Forestry Camp and keep it up in a manner that it is easily traveled.
- Activities that involve other locales, especially nearby forested systems.
- People using the facility will pack out all garbage.
- Facility patrons won’t interfere with other recreational activities (ATV riders and campers).
- University will report all fees collected to use the area by any university and non-university visitors to the USFS.
- USU will provide a definite plan of use for the next 10 years by April, 1 2010.
Appendix C: Alternative Energy Installation: Sources and Costs

**SOURCES:**

**Ground Source Heat Pumps**

Much additional information pertaining specifically to Utah can be found at the Utah Geological Survey webpage on Geothermal Resources (http://geology.utah.gov/emp/geothermal/index.htm).

*Recommended sources to purchase equipment:*

**Sound Geothermal Corporation** – Source for ground source heat pump system installed in Utah House in Kaysville. Cary Smith, President, 3962 E. Alpine Valley Circle, Sandy, UT 84094. Phone: 801-942-6100, Voice 801-942-6127 Fax. E-mail: www.soundgt.com

*Estimated price for installation*

In a case study presented at the 2006 Utah Workshop on Ground-Source Heat Pumps and Geothermal Use (http://geology.utah.gov/emp/geothermal/ugwg/workshop0306/index.htm) an estimate was given of $10.50 per square foot of building to be heated. This estimate comes from the presentation given by Cary Smith from Ground Source Geothermal.

**Photovoltaic (PV) Solar Panels**

*Recommended sources to purchase equipment:*

**Atkinson Electronics Inc.–** Source for solar panel meters used by Utah House in Kaysville. Gaylen V. Atkinson, 14 W. Vine Street, Murray, Utah 84107 Phone: 801 261-3600 Ext. 7950 email gaylen@atkinsonel.com www.atkinsonelaboratories.com


**Heliotronics: Educational Monitoring & Tracking Installation–** Source for educational weather monitoring system along with software for tracking energy generated from solar panels www.heliotronics.com

*Estimated price for installation*

Gross system cost estimate (before any rebates) for 5kW installation from Real Solar Goods (www.realgoodssolar.com) is $37,500. Due to location of the Forestry Camp and incomplete knowledge of actual energy use and needs a higher estimate of approximately $50,000 is recommended.

**Wind Generators**

*Recommended sources for possible equipment purchase:*

**Bergey Wind Power**

**Small Wind Turbines for Homes, Businesses, Off-Grid–** A wide variety of wind turbines available at many locations http://www.bergey.com/

**Southwest Windpower**

**Renewable Energy Made Simple–** Offers installation and useful information on installation of hybrid power systems http://www.windenergy.com/applications/remote_homes.htm

*Estimated price for installation*

From an example given by a private installation done in southern Utah (http://www.solarhaven.org/WindGenerator.htm) total cost of equipment and installation can be
approximated $1500. Again, a slightly higher estimate, possibly $2000, may be more accurate due to the location and unique nature of the Forestry Camp.

**Whisper Battery Charging System with Wind-Solar Hybrid**

www.windenergy.com

**COSTS:**

- Utah allows for a tax credit of 10% of the cost of the installation of a renewable energy technologies up to $50,000. See *Utah Incentives for Renewable Energy* at [http://geology.utah.gov/sep/incentives/incentives.htm#retaxcred](http://geology.utah.gov/sep/incentives/incentives.htm#retaxcred) or contact:
  Elise Brown  
  State Energy Program  
  1594 West North Temple, Suite 3110  
  PO Box 146100  
  Salt Lake City, UT 84114  
  Phone: (801) 537-3365  
  Fax: (801) 538-4795  
  E-Mail: elisebrown@utah.gov

- An additional 30% can be deducted for federal tax credit.

- The StEPP Foundation (Strategic Environmental Project Pipeline) is a nonprofit that has funding available for projects around the country similar to the alternative energy installations at USU Forestry Camp ([www.steppfoundation.org](http://www.steppfoundation.org)).

- The Environmental Finance Center of University of Maryland is a university-based center that helps environmentally progressive projects get funding. There is a wealth of information on alternative funding sources at their website: [http://www.efc.umd.edu/](http://www.efc.umd.edu/).
Appendix D: Text of Four Surveys Administered

1. Learning Centers/Camps Survey
Learning Center / Camp Survey; Due by 3/16/09
This survey conducted by Programs and Clientele group members in a Utah State University class seeking input on utilization of existing facilities.
Members: Ashley Walker, Jade Jensen, Jared Smith, Jessica Allen, and Kara Thompson.
Questions should be directed to USUForestryCamp@gmail.com

1. What seasons did your center run?
   a. Spring
   b. Summer
   c. Fall
   d. Winter

2. What was the duration of your starting programs?
   a. Half-day
   b. Full-day
   c. Overnight/ weekend
   d. Week or longer

3. What was the average group size?
   a. <15
   b. 16-30
   c. 31-45
   d. 46-60
   e. >60

4. How was your camp staffed?
   a. Volunteers
   b. Paid Staff
   c. Both
   d. Please specify ____________________________

5. Please rate community support for you center. Level of Support:
   None Low Medium High Very High

6. What did your facilities include? (all that apply)
   a. Indoor classroom
   b. Food preparation area
   c. Sleeping area
   d. Restrooms
   e. Transportation to location
   f. Other (Please Specify) ____________________________

7. What were your main sources of funding?
   a. Community donations
   b. Commercial use
   c. Government aid or grants
   d. Partners
   e. Use fees
   f. Other (Please Specify) ____________________________

8. Are you interested in activities up the Logan Canyon area?
   a. Yes
   b. No

9. What were any significant problems or successes you experienced?

10. What is any additional information you would like to give us?

   ____________________________
2. Educator Survey

Educator Survey; Due by 3/16/09
This survey conducted by Programs and Clientele group members in a Utah State University class seeking input on utilization of existing facilities.
Members: Ashley Walker, Jade Jensen, Jared Smith, Jessica Allen, and Kara Thompson.
Questions should be directed to USUForestryCamp@gmail.com

1. Have you used or currently use outdoor or nature learning programs?
   a. Yes
   b. No
2. What type of program was used? (Check all that apply)
   a. General plant/ Wildlife/ ecology information (Structured)
   b. Hands on exploration (non structured)
   c. Survival/ Safety/ first aid training
   d. Outdoor recreation
   e. Other (Please Specify)_____________________________________
3. Was the program effective?
   a. Yes
   b. No
4. Was the program enjoyable?
   a. Yes
   b. No
5. Will you use an outdoor or nature based learning program again?
   a. Yes
   b. No
6. What are your reasons for use of these programs?
   a. Unique learning
   b. Increased interest
   c. Supports creativity
   d. Other (please specify)_____________________________________
7. What are your reasons for not using these programs?
   a. Cost
   b. Not effective for teaching needed materials
   c. Availability
   d. Lack of student interest
   e. Other (please specify)_____________________________________
8. Please rank your interest in using outdoor/Nature based learning Programs. Level of Interest:
   None  Low  Medium  High  Very High
9. What are your specific facility needs? (Check all that apply)
   a. Indoor classroom
   b. Food preparation area
   c. Sleeping area
   d. Restrooms
   e. Transportation to location
   f. Other (please specify)_____________________________________
10. What are any other interests, ideas, or requirements you have for new programs?
   _____________________________________________________________________
3. USU Faculty and Staff Survey

USU Educator Survey; Due by 3/16/09
This survey conducted by Programs and Clientele group members in a Utah State University class seeking input on utilization of existing facilities.
Members: Ashley Walker, Jade Jensen, Jared Smith, Jessica Allen, and Kara Thompson.
Questions should be directed to USUForestryCamp@gmail.com

1. Please rank your interest in using the USU forestry camp. Please rank your interest in using the USU forestry camp:
   None  Low  Medium  High  Very High
2. What type of activities are you interested in? (Check all that apply)
   a. Retreats
   b. Research
   c. Biology/ Ecology education
   d. First aid/ Outdoor safety
   e. Other (Please specify) _________________________________
3. What facilities would you require? (Check all that apply)
   a. Indoor classroom
   b. Sleeping area
   c. Restrooms
   d. Transportation to location
   e. Other (Please Specify)_________________________________
4. What would you be willing to pay per person for an outdoor learning experience?  Prices will vary depending on duration- higher price for longer stays.
   a. $0-$20
   b. $21-$40
   c. $41-$60
   d. >$60
5. What group Size would you be using?
   a. <15
   b. 16-30
   c. 31-45
   d. 46-60
   e. >60
What are any interests or ideas for new programs that you may have?
4. Public Survey

USU Public Survey; Due by 3/16/09
This survey conducted by Programs and Clientele group members in a Utah State University class seeking input on utilization of existing facilities.
Members: Ashley Walker, Jade Jensen, Jared Smith, Jessica Allen, and Kara Thompson.
Questions should be directed to USUForestryCamp@gmail.com

1. Have you or someone you know participated in an outdoor learning program? Y/N
2. What is your interest in participating in an outdoor learning program?
   None 1 2 3 4 5 Very High
3. Why would you not participate in an outdoor learning program? (circle all that apply)
   a. Cost
   b. Availability
   c. Don’t think there is a benefit
   d. Not enough variety in programs
   e. ______________________
4. What type of program would you like to participate in? (circle all that apply)
   a. General plant/wildlife/ ecology information (structured)
   b. Hands on exploration (non structured)
   c. Survival/ safety/ first aid training
   d. Outdoor recreation
   e. Overnight or weekend stay
   f. ______________________
5. What facilities would you require? (circle all that apply)
   a. indoor classroom
   b. sleeping area
   c. restrooms
   d. transportation to location
   e. ______________________
6. What would you be willing to pay for an outdoor learning experience?
   a. $0-$20
   b. $21-$40
   c. $41-$60
   d. > $60
7. Do you have any interests or ideas for new programs?
   ____________________________________________________________
   ____________________________________________________________
8. Please list any other specific needs or requirements you have.
Appendix E: Similar Residential Facilities Case Studies

Each these facilities are excellent models of outdoor education programs associated with universities. While each one has different constraints associated with it they adapt to their own situation. USU would be wise to look at the organization of these and other field campuses as it develops plans for the future of the USU Forestry Field Station.

Prescott College Kino Bay Center for Cultural and Ecological Studies

Prescott College is a small liberal arts college dedicated to environmental protection, social justice and experiential education. The Kino Bay center is a means for reaching some of their goals. It is a remote field station that provides hands on experience to students in a wide variety of areas—from ecology and the environment to cultural studies and writing. It is run by a director and co-director. Teachers come in and run their own programs in the center. They obtain funding not only from their college but also from numerous private donations and organizations (Prescott College, 2009).

Emporia State University Natural Areas

This field station is partly owned by Kansas State and partly by the university. They have a variable budget that controls operating expenses. The funding comes primarily from the state with some coming from private donors. Funding has been going down in the current economy. They don’t have any major funding (William Jensen, Pers. Comm.). The Director is paid as part of his faculty time. They utilize graduate and undergraduate assistants. A committee of six faculty members advises them (Emporia State University, 2005).

McCall Field Campus

The McCall Field Campus is home of MOSS (McCall Outdoor Science School) and is a model of growth as it has grown to nearly a $1 million operation from next to nothing in the last eight years. The McCall Outdoor Science School is operated through a partnership between the University of Idaho’s College of Natural Resources and the Palouse-Clearwater Environmental Institute (PCEI). The McCall Field Campus is a residential learning center that promotes education, research, and outreach (U of I CNR, 2009). Most of the program revenue comes through the University of Idaho. Some of the staff and all the graduate students are hired through PCEI. PCEI bills the University of Idaho for some of these costs, while others are covered by grants they already have. The campus has a mixed revenue stream of fees and grants/donations. About 80% of their revenue comes through fees paid by program participants. 20% is from various grants, with a $700k AmeriCorps grant that comes through PCEI. McCall Field Campus does not get funding from the University of Idaho or PCEI, with the exception of the University’s full time employees, who also work for the Field Campus. The Field Campus has a full time staff of about 7 people, with 8 part-time/seasonal and 16 graduate students funded through AmeriCorps. McCall Field Campus gets budget reports every month, which are used to make mid-stream spending adjustments, but many costs are fixed (i.e. utilities, salaries) so they tend to look at things over longer periods (Hollenhorst Steve, Pers. Comm.).
Appendix F: Flow charts for Administrative Alternatives 2-5

Alternative 2 and 3 Flow Chart

Alternative 4 Flow Chart
Alternative 5 Flow Chart

Utah State University
  College of Natural Resources
  College of Education
    Executive Director of LCLC
      Events Coordinator
        Events Staff and Volunteers
      Finance Director
      Marketing Coordinator
        Education Interns
    Utah Conservation Corps
      UCC Interns
  Partnering Organizations

Preferred Administration

Utah State University
  College of Natural Resources
  College of Education
    Director of LCLC
      Education Interns
    Utah Conservation Corps
      UCC Interns
  Partnering Organizations
### Appendix G: Sample balance sheet* from McCall Outdoor Science School

#### Facilities Projects

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
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<tbody>
<tr>
<td>Heaters</td>
<td>5000</td>
</tr>
<tr>
<td>Past Electrical</td>
<td>7000</td>
</tr>
<tr>
<td>Bathhouse</td>
<td>25000</td>
</tr>
<tr>
<td>Bunks</td>
<td>3000</td>
</tr>
<tr>
<td>Lake Yurt Stove</td>
<td>700</td>
</tr>
<tr>
<td>Emergency Fund</td>
<td>5000</td>
</tr>
<tr>
<td>30% cushion</td>
<td>13710</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>59410</td>
</tr>
<tr>
<td>w/o bathouse</td>
<td>34410</td>
</tr>
</tbody>
</table>

#### Payroll Budget

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative SAL</td>
<td>$43,644.45</td>
</tr>
<tr>
<td>Admin IH</td>
<td>$63,033.00</td>
</tr>
<tr>
<td>Facility</td>
<td>$28,000.00</td>
</tr>
<tr>
<td>K12 Program</td>
<td>$2,800.00</td>
</tr>
<tr>
<td>Graduate Program</td>
<td>$4,848.00</td>
</tr>
<tr>
<td>Kitchen</td>
<td>$79,602.27</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>$2,912.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$224,839.72</strong></td>
</tr>
</tbody>
</table>

#### Grants/Gifts

<table>
<thead>
<tr>
<th>Source</th>
<th>Received</th>
<th>Ask</th>
<th>$ Received?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGA</td>
<td>30,000</td>
<td>30,000.00</td>
<td>some?</td>
</tr>
<tr>
<td>BLM</td>
<td>10,000</td>
<td>10,000.00</td>
<td>no</td>
</tr>
<tr>
<td>Clara Bleak Gift</td>
<td>2,500</td>
<td>25,000.00</td>
<td>yes</td>
</tr>
<tr>
<td>Walmart</td>
<td>10,000</td>
<td>10,000.00</td>
<td>yes</td>
</tr>
<tr>
<td>FEMA</td>
<td></td>
<td>341,365.00</td>
<td></td>
</tr>
<tr>
<td>EPSCoR</td>
<td>138,190</td>
<td>138,190.00</td>
<td>$38,190</td>
</tr>
<tr>
<td>Bonneville</td>
<td></td>
<td>10,000.00</td>
<td>denied</td>
</tr>
<tr>
<td>Toyota</td>
<td></td>
<td>150,000.00</td>
<td>denied</td>
</tr>
<tr>
<td>Monsanto</td>
<td></td>
<td>9,000.00</td>
<td></td>
</tr>
<tr>
<td>Leuthold</td>
<td>10,000</td>
<td>15,000.00</td>
<td>no</td>
</tr>
<tr>
<td>Charlotte Martin</td>
<td></td>
<td>25,000.00</td>
<td>denied</td>
</tr>
<tr>
<td>Idaho Community Foundation</td>
<td>4,769.00</td>
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<td></td>
</tr>
<tr>
<td>NewBelgium Brewing</td>
<td>3,000</td>
<td>3,000.00</td>
<td>yes</td>
</tr>
<tr>
<td>NASA</td>
<td></td>
<td>150,000.00</td>
<td></td>
</tr>
<tr>
<td>Whittenburger</td>
<td>5,000</td>
<td>10,000.00</td>
<td>no</td>
</tr>
<tr>
<td>Shelton</td>
<td>2,500</td>
<td>4,000.00</td>
<td>no</td>
</tr>
<tr>
<td>IDEQ</td>
<td>1,000</td>
<td>1,000.00</td>
<td>no</td>
</tr>
<tr>
<td>Kongsgaard-Goldman</td>
<td></td>
<td>15,000.00</td>
<td>denied</td>
</tr>
<tr>
<td></td>
<td><strong>$212,190</strong></td>
<td><strong>$554,365</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total Expenses = $402,059.00
Total Revenue = $427,245.00
Balance = $25,186.00 (Without Grants and Gifts)

*Adapted from McCall Field Camp, (Hollenhorst Steve, Pers. Comm.).