Green Canyon Recreation Management Plant

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Recreation Management Plan
for
Green Canyon

Utah State University
College of Natural Resources
RR 4400 - Recreation Management Planning
Spring Semester 1999
Green Canyon
Recreation Management Plan

Prepared by students from RR 4400 class taught by Dale Blahna:
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Acknowledgements

We would like to recognize the following people whose efforts helped to make this project possible, and let them know that their time and help was greatly appreciated: CNR professors, Mark Everson, John Shaw, Forest Service Personnel (particularly Ron Vance and Evelyn Sibbernsen), Key Stakeholders, and Green Canyon visitors.
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I. Description of Green Canyon, Current Management, and Social Conditions
Introduction

The purpose of this plan is to look at the way Green Canyon is currently being managed and make recommendations for management based on our findings. Prior to this document, a Landscape Assessment was conducted on Green Canyon. This plan incorporates that assessment but focuses on the recreation management of the canyon. We will discuss history, current management, social conditions, purpose and need, as well as methods we used to go about gathering information. The focus is to identify key issues and concerns within the canyon. Management recommendations will be made based on the issues and concerns identified.

A. Description of Green Canyon

1. Geographical and Physical Conditions:

   Green Canyon is located in the foothills of the Bear River Range north of Logan, Utah (see figure 1). It is within the boundaries of the Wasatch Cache National Forest, and is surrounded largely by the Mt. Naomi Wilderness Area (established in 1984). Green Canyon ranges from 4800 feet to 7400 feet in elevation with canyon walls facing north and south. The first snow usually comes in late September and stays until April.

   The vegetation types range with elevation. The Assessment tells us that it starts at the mouth of the canyon with sagebrush and various grasses, including Dyer’s woad a noxious weed. The over story begins as juniper and canyon maple. As elevation increases, the overstory becomes Douglas fir, sub-alpine fir, and on the dryer slopes, mountain mahogany.

   There is an abundance of different wildlife species that use or are in the vicinity of Green Canyon. The south facing slopes are critical winter range for elk and mule deer. In The Assessment we see that the canyon is inhabited by a number of bird species, mammals, insects, and is considered potential habitat for several sensitive plant and animal species; spotted sat, North American lynx, wolverine, boreal owl, northern goshawk, Logan buckwheat, and Smith violet.

   There are two separate canyons within Green Canyon. The canyon forking off to the south is Green Canyon; the canyon forking to the north is Water Canyon. Water Canyon contains fresh water springs that occur in the early summer at higher elevations. These springs are used as North Logan’s primary watershed.

   At the mouth of the Canyon is a fairly small dirt parking lot. There is a road, which follows the floor of the canyon from the parking lot to the campground. A gate has been constructed at the beginning of the road near the parking lot. This allows forest service personnel to open the canyon to motorized use in the summer months, but closed it to motorized vehicles in the winter. This road winds up about a half mile, all along this there are about 32 primitive dispersed camping areas.
Winter recreation in Green Canyon includes cross-country skiing, snowshoeing, and hiking. Summer uses include mountain biking, horse riding, hiking, picnicking, camping, hunting, wildlife viewing, dog walking, motorcycling, and 4-wheeling.

2. Historical Information:

Human inhabitants have occupied Green Canyon and the surrounding valley for as long as 10,000 years. From The Assessment we find that the first Native Americans, a group known as the Fremont Culture, came to the area between 700-2,000 years ago. By 1300 AD this culture had gone, and the Shoshone Indians came to inhabit the area. Their primary diet was fish, nuts, and berries, but they hunted elk and buffalo as well. Up Green Canyon there is an Indian cave that was believe to have been inhabited by Shoshone at one point in time.

Early Mormon pioneers came to Cache Valley in 1859. The canyon played an important role in early settlement. It was used for irrigation water, timber, and rock, building material, and grazing. Red Rock Quarry Canyon is one such site that has some historical significance to the city of Logan. The sandstone extracted from this quarry was used in the construction of the Logan temple in 1877, and the tabernacle in 1865. Red quartzite was also extracted and used as the foundation of "Old Main", the first building at Utah State Agricultural College in 1889.

The Early settlers of Cache Valley exploited the area heavily for mining, grazing, timber, harvesting, and water development to help create their communities. The Assessment tells us that their activities had serious environmental consequences as a result of overgrazing and vegetation removal. These events led to the creation of a Federal Forest Reserve in 1906 (part of the U.S. Forest Service today). A permit system was established for hunting, grazing, and timber harvesting in an effort to use these resources more wisely. North Logan's watershed has been located in the canyon for 65 years and is still being used as a primary water source. Today the major uses of Green Canyon are water, recreation, and light grazing of sheep in the summer months.
Green Canyon Watershed

Figure 1
B. Current Management Conditions in Green Canyon

The Logan Ranger District of the Wasatch-Cache National Forest is currently over the management of the Green Canyon area. As part of this management, they have been providing minimal services for several years, including occasional surveillance, road closure in the winter, and minor maintenance. There are minimal facilities to maintain in the canyon (picnic tables, gates, signs, a parking lot, and two outhouses), and the only restrictions involve the use of off-road vehicles when the road is gated, which is from late fall to spring. Snowmobiling and paintballing are prohibited in the canyon as well.

Under the National Forest Recreation Opportunity Spectrum (ROS) for classifying recreation settings, Green Canyon falls under the category of Roaded Natural. The ROS offers a framework for understanding relationships between users and the environment and their interactions. The Roaded Natural classification means that the area (Green Canyon) is predominantly natural appearing with evidences of the sights and sounds of humans, hence the lack of permanent structures in the canyon, but active management is allowed. Use by recreationists is usually low to moderate, but evidence of other users in the area is prevalent. Opportunities for both motorized and non-motorized forms of recreation are allowed in Green Canyon, which is concurrent with this classification. The Mt. Naomi Wilderness surrounds the canyon and is classified as primitive.

According to the Assessment, the Visual Quality Objectives (VQO), which is another form of land management classification by the Forest Service, for Green Canyon fall under the partial retention guidelines. This means that the management goals of the area must fit well with the landscape. A small portion of the Mt. Naomi Wilderness is protected by preservation, which generally means "no touch wilderness."

Permits to use the area for recreational purposes are not necessary, nor is there a fee attached to the use. The canyon is becoming increasingly popular with hikers, mountain bikers, horsemen, campers, cross-country skiers, sightseers, naturalists, off-road vehicle users, and as an access to the Mt. Naomi Wilderness. As a result of the increased use of the canyon and the growing population of Cache Valley, the Logan Ranger District is currently involved in making some decisions in reference to the management of the area. (Refer to the Assessment for population projections for Cache County.)

Recently, North Logan City has made a proposal to the Logan Ranger District to construct permanent campground facilities and a group use area (designated fire pits, picnic tables, restrooms/pit toilets, pavilions, etc.), and to construct an access trail into Green Canyon. This development would take place at the mouth of the canyon. No permanent campground facilities exist currently, although fire rings and campsites are noticeable. There are also two outhouses located in the canyon, although by the looks of them they appear to be unavailable for public use. A scoping letter was sent out to citizens in Cache Valley describing the possible future plans in detail, and responses were received. The document also stated that North Logan City would not only have the responsibility of making these improvements to the area, but also be in charge of the daily operations and maintenance of the site using city funds. These funds may be acquired through different methods, some of which could include user fees, donations, or grants.
It is still undecided what scale of development, if any, will take place in the canyon. Right now, an environmental assessment for the project is being conducted.

Even though the Forest Service manages Green Canyon, North Logan City has the water rights to the area. This tends to create management conflicts since the citizens and city officials of North Logan are concerned about water quality. Adjustments to the current management might assist in alleviating some of the problems that exist between the Forest Service and the community.

As previously mentioned, one of the ways the Logan Ranger District is currently managing the use in the canyon is by closing the road during the winter and early spring. A gate is closed and locked at the start of the dirt road up the canyon, and a sign is posted indicating that no snowmobiles or vehicles are allowed passed the gate. In the summer and fall when the gate is open, off-road vehicles are allowed to use the main road, but they are restricted from use of any other trails or roads, although this is not strictly enforced.

While no permits are necessary for recreational purposes, there is a livestock-grazing permit for Green Canyon, which is part of the Cottonwood Sheep Allotment. For the past few years, sheep have been put on the allotment early (around mid-June) via Green Canyon for the purpose of controlling Dyer’s weed, a noxious weed. The band consists of about 1120 sheep, which move up through the canyon and come off via Blind Hollow or Tony Grove. Specific information about the permit holder was not available, therefore some pertinent information was unattainable. However, no comments or complaints involving sheep grazing were mentioned in the process of surveying users and talking to key informants about the major issues and concerns in relation to Green Canyon.

C. Social Conditions in Green Canyon

According to the Assessment, Cache County’s average annual growth rate for the 1990s is about 2.2%. As a result of the continued growth and development of Cache Valley, Green Canyon is becoming increasingly popular as a recreation site. A variety of activities take place in the canyon. Such activities include camping, horse riding, picnicking, hunting, motorcycling, 4-wheeling, running/jogging, dog walking, cross-country skiing, and paintballing, even though this activity is illegal. Information obtained from a survey we conducted during the month of March indicates what uses are most prevalent in the canyon. From the data collected, the top three uses of the area are hiking (83.3%), mountain biking (65.3%), and wildlife viewing (47.3%).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiking</td>
<td>83.3%</td>
</tr>
<tr>
<td>Mountain biking</td>
<td>65.3%</td>
</tr>
<tr>
<td>Wildlife viewing</td>
<td>47.3%</td>
</tr>
<tr>
<td>Camping</td>
<td>44.0%</td>
</tr>
<tr>
<td>Picnicking</td>
<td>34.0%</td>
</tr>
<tr>
<td>Paintballing</td>
<td>6.7%</td>
</tr>
<tr>
<td>4-wheeling</td>
<td>6.0%</td>
</tr>
<tr>
<td>Hunting</td>
<td>4.7%</td>
</tr>
<tr>
<td>Horse riding</td>
<td>4.0%</td>
</tr>
<tr>
<td>Motorcycling</td>
<td>3.3%</td>
</tr>
<tr>
<td>Firewood collecting</td>
<td>1.3%</td>
</tr>
<tr>
<td>Sheep grazing</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1.8%</td>
</tr>
</tbody>
</table>
In relation to the numbers of people that use the canyon, from the survey we conducted it is evident that use is increasing, and the majority of the use comes from Cache Valley residents (91.4%). Of those surveyed, 92.8% marked that they had used Green Canyon before. It is interesting to note that most of the visitors frequently use the canyon or seldom use the canyon as the most responses were either 5 or less and over 25 times. Over half of the survey respondents had used Green Canyon 10 or more times in the past.

<table>
<thead>
<tr>
<th># times</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>29.8</td>
</tr>
<tr>
<td>6-10</td>
<td>18.5</td>
</tr>
<tr>
<td>11-15</td>
<td>7.2</td>
</tr>
<tr>
<td>16-20</td>
<td>8.9</td>
</tr>
<tr>
<td>21-25</td>
<td>8</td>
</tr>
<tr>
<td>&gt;25</td>
<td>27.3</td>
</tr>
</tbody>
</table>

Although there was a lot of repeat visitors to the area, the majority of them (59.6%) only traveled less than 2 miles up the canyon in a typical visit at the time the survey was conducted. This indicates that the canyon is used for short day trips.

<table>
<thead>
<tr>
<th>Miles</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2.0</td>
<td>59.6</td>
</tr>
<tr>
<td>2.1-4.0</td>
<td>22.8</td>
</tr>
<tr>
<td>4.1-6.0</td>
<td>8.8</td>
</tr>
<tr>
<td>&gt;6.0</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Also, our survey indicates that the group sizes tend to be small. The majority of the users are traveling by themselves or with one other person.

<table>
<thead>
<tr>
<th># people</th>
<th>Valid %</th>
<th># people</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32.7</td>
<td>7</td>
<td>1.3</td>
</tr>
<tr>
<td>2</td>
<td>37.9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>15.0</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>4</td>
<td>7.8</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>2.0</td>
<td>11</td>
<td>.7</td>
</tr>
<tr>
<td>6</td>
<td>.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The age of users in Green Canyon seems to be dominated by college-aged students and people between 20 to 30 years old.

<table>
<thead>
<tr>
<th>Age</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>13.7</td>
</tr>
<tr>
<td>21-30</td>
<td>46.5</td>
</tr>
<tr>
<td>31-40</td>
<td>15.5</td>
</tr>
<tr>
<td>41-50</td>
<td>16.9</td>
</tr>
<tr>
<td>&gt;50</td>
<td>7.7</td>
</tr>
</tbody>
</table>
And finally, it is also interesting to note that close to half (45%) of the recreationists who visit Green Canyon take their dogs with them.

The data obtained from the survey in regards to current social conditions in Green Canyon implies that there are some management issues and concerns that currently need to be dealt with. Out of those who were knowledgeable about problems in Green Canyon, 75% and greater marked that vandalism, litter, misuse by motor vehicles, degradation of wildlife habitat, and loss of vegetation and erosion are major or minor concerns. Also, 74% indicated that conflicts between motorized and non-motorized users are a major or minor problem. Most of these issues and concerns will be addressed through greater explanation and detail in the appropriate section (issues and concerns identified), and through possible management suggestions. (For a complete summary of survey data see Appendix B.)
II. Purpose and Need for a Management Plan
A. Purpose

The purpose of this document is to create a plan that will allow for the management of Green Canyon so as to address and mitigate such recreation use problems as exist in Green Canyon. It is our hope that the Forest Service will be able to use the information, suggestions, and recommendations that we have compiled in this plan to facilitate their management of the canyon in the future.

On a broader note, our goal is to see that recreation opportunities in Green Canyon continue to operate in such a way that will preserve the canyon for future use. As such, the recommendations discussed in this plan will provide guidelines for management of the canyon that embodies preservation and multiple use of this valuable resource.

B. Need

The awareness of a need for a recreation plan initially came from the Forest Service. They had not had the time, manpower, nor money to do much for this landscape in the past and viewed this class project as a prime opportunity to gather information and ideas on the area while participating in and supporting a scholastic program. Due to their limited resources, they had no user data on Green Canyon; thus we determined that one of our primary goals would be to conduct a survey and gather much needed data. Please refer to the 'methods' section for a full description of the survey and other methods utilized in collecting recreation data.

From the survey and data gathered from the Forest Service and various other key contacts, it was determined that major problems do indeed exist in Green Canyon, thus necessitating the need of a management plan to deal with such problems. Problems identified in the scoping process that require a need for management include issues such as facility development, motorized vs. non-motorized users, and encroachment by private development. Concerns identified include littering, impacts from dogs, paintball vandalism, motor vehicle impact on vegetation and soils, and a need for enforcement. Most issues that were identified in the Assessment were recreation oriented, further showing that this is a recreation area, with recreation problems that need to be addressed.

There is an obvious need for a recreation management plan in this area in order to preserve the nature of the canyon. There is likely to be considerable growth in Logan, and Cache valley in general, in upcoming years. The current population of Cache valley is 92,477, with a projected increase of 43% (to 132,047) by the year 2020. In light of this Cache County growth, it is reasonable to assume that the use of Green Canyon will only increase as well, further necessitating the need for a recreation plan. Without such a plan, it is plausible to believe that the canyon will continue to degrade both biologically and socially until Green Canyon is no longer a desirable place to recreate by traditional recreationists.
III. Methods
Introduction

Since Green Canyon primarily attracts visitors from nearby communities in Cache Valley, we essentially solicited information from user groups living in these areas. Our team worked cooperatively with the Green Canyon Landscape Assessment team, who provided us with data on the biological, physical, and social components of this landscape. Along with their assessment results, three sources of additional information were collected: scoping letters about the proposed campground development, key stakeholder interviews, and a vehicle count and visitor intercept survey.

A. Scoping Letters

The first step in this process involved the investigation of scoping responses to a 1997 proposal to improve campground facilities in Green Canyon. This proposal outlined the construction of a walk-in campground, located 3/4 mile within the U. S. Forest Service boundary. Suggested enhancements included: group camping areas, individual campsites, picnic tables, restrooms, amphitheater, pavilion, and full utilities. Operated under a special-use permit, the campground would be improved, operated, maintained, and financed by North Logan City, while the Forest Service would retain ownership of the land. Fourteen scoping responses were provided to us and reviewed. Most respondents were from Logan and North Logan City and included concerned citizens, park and zoning officials, a wildlife biologist, a college professor, an environmental advocate, and a member of local fishing club.

B. Key Stakeholder Interviews

The next step in this process involved interviewing important stakeholders; these are key user groups and professionals with first-hand knowledge of recreation use in Green Canyon. A total of 24 interviews were conducted, primarily by telephone, with hikers, mountain bicyclists, cross-country skiers, equestrians, sporting good store owners, Forest Service employees, a state wildlife biologist, a North Logan City council member, and numerous others. (See Appendix C for a list and description of all interviewed stakeholders).

Most interviews occurred during February, 1999, and followed a similar protocol. First the interviewer identified themselves, stated the reason for the study, and then asked if the stakeholders would answer some questions regarding public use and recreation in Green Canyon. If the individual agreed, these informants were then asked for their name, major use or interest in the canyon, and if they were affiliated with a community or outdoor recreation organization. Following these questions, informants were asked to identify major issues or problems experienced in the canyon, and if they could offer any suggestions, preferences, or ideas for future management of the area. At the end of the interview, the stakeholders were asked to recommend other key stakeholders to contact. While most recreation user groups were represented, limited information was acquired from hunters, OHV users, and joggers.
C. Vehicle Count and Visitor Intercept Survey

The final step of data collection included a vehicle count and visitor intercept survey conducted at the Green Canyon trailhead (or locked gate), from March 7 through March 30, 1999. Both weekends and weekdays were sampled from 18-individual time periods. Each sample period included a 4-hour time slot from either 8 AM-12 PM or 12 PM-4 PM.

Both vehicle attributes and visitor information was gathered. Vehicle attributes (or state and county information) were collected from vehicle-license plates to identify where vehicles and drivers were coming from. Visitor-survey information was acquired with a pencil and paper survey as recreationists entered or exited the canyon trailhead. A total of 154 surveys were completed, and there was a 100% response rate as no one declined to complete the survey.

The survey asked participants for their place of residence, group size, sex, age, distance traveled, and activities participated in. These participants also identified if they used Green Canyon before, and if so, how many times in the past year. If they participated in summer recreation, the types of summer activities were marked off by the respondent from a list of various recreation activities.

The next section of survey asked visitors to evaluate a list of current problems in Green Canyon, and mark if they were a "major problem", "minor problem", or "not a problem." If the participant was not familiar with a particular issue, they were directed to respond "don't know" and move on to the next question. On page two of the survey, additional questions investigated a recreationist's willingness to pay a small user fee to maintain canyon resources; what kind of facilities they preferred; whether they supported sheep grazing in the canyon; whether the presence of dogs in Green Canyon was a problem; and what type of recreation setting they preferred (i.e. modern facilities, preservation of canyon naturalness, or somewhere in-between). A final open-ended question asked visitors to provide their recommendations for future management in Green Canyon. (Please refer to Appendix A for a copy of a blank survey and Appendix B for survey results.)
IV. Recreation Issues and Concerns Identified
Introduction

The purpose of this section is to identify in detail the issues and concerns that we have chosen to address in the scope of this recreation plan. The explanation of each issue will include all relevant information that we have gathered from scoping, survey results, and the Green Canyon assessment. The issues that we will address are: 1) the issue of a natural vs. developed recreation area, 2) the issue of conflict between motorized and non-motorized users, 3) issue of residential development vs the preservation of trails and wildlife habitat. The concerns that we will address are: 1) impacts from dogs, 2) littering, 3) paintballing, and 4) motor vehicle impact on vegetation and soils.

A. Issues Identified

1. Issue of how much facility development should occur:

Green Canyon currently offers recreationists a primarily "natural" setting only minutes away from local residential neighborhoods. Some recreationists would like to see more modern facilities developed in Green Canyon, such as group camping sites, picnic tables, gaming areas, a pavilion, amphitheater, and full utilities. Others however, believe these improvements would significantly alter the character of this canyon, which is nearly encircled by the Mt. Naomi Wilderness Area. They believe the canyon should remain a natural setting with only minor improvements added, such as the presence of educational signs, picnic tables, and fire pits. Yet others feel that no development at all should occur.

Two questions on our survey addressed this issue concerning facility development. The first question simply asked what types of facilities visitors would like to see in Green Canyon. As can be seen from the breakdown below, the items Green Canyon visitors would like to see the most are educational signs. Interestingly, almost a full one-third of the people would like to see no facility development in Green Canyon. Minor improvements such as picnic tables, fire pits, and pit toilets all had positive response values of 24.1% or more. These results, in comparison to the results of items resulting in a higher level of facility development, would seem to indicate that the majority of Green Canyon visitors are not in favor of widespread, highly visual, use-promoting facility development.

| Educational signs about flora, fauna and history | 33.1 |
| None | 31.7 |
| Picnic tables | 31.7 |
| Fire pits | 29.7 |
| Pit toilets | 24.1 |
| Directional/Informational signs | 24.1 |
| Restrooms with flush toilets and water | 15.9 |
| Group and individual camp sites | 15.2 |
| Individual camp sites only | 14.5 |
| Bigger parking area | 5.5 |
| Amphitheater | 5.5 |
| Pavilion for group use | 4.8 |
| Water and electric utilities | 4.1 |
The second question asked about the type of setting (i.e., facilities or naturalness) visitors prioritized for Green Canyon. The results indicate an overwhelming desire that naturalness, not facility development, should be the priority in Green Canyon.

Preserving the natural character should always be the priority. 50.3%
Balance facilities and naturalness, but if a choice must be made, favor naturalness. 45.6%
Balance facilities and naturalness, but if a choice must be made, favor facilities. 4.1%
Providing modern facilities should always be the priority. 0.0%

Another question on the survey asked for recommendations regarding the future management of Green Canyon. This was an open response question with no choices listed. In regards to this issue, it is important to note that there were 29 responses (nearly 20%) that had the theme of keeping the canyon in a natural state.

Objective:
- To provide for a level of facility development such that the natural character of the canyon is preserved, thus protecting area resources and meeting the needs of its visitors.
Feelings about the management of Green Canyon

- Preserve natural character
- Balance - favor naturalness
- Balance - favor facilities
- Provide facilities

Facilities people would like to see

<table>
<thead>
<tr>
<th>Facility</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational signs (flora, fauna)</td>
<td>33.1%</td>
</tr>
<tr>
<td>None</td>
<td>31.7%</td>
</tr>
<tr>
<td>Picnic tables</td>
<td>31.7%</td>
</tr>
<tr>
<td>Fire pits</td>
<td>29.7%</td>
</tr>
<tr>
<td>Pit toilets</td>
<td>24.1%</td>
</tr>
<tr>
<td>Directional/Info signs</td>
<td>24.1%</td>
</tr>
<tr>
<td>Restrooms w/ flush toilets</td>
<td>15.9%</td>
</tr>
<tr>
<td>Group and individual campsites</td>
<td>15.2%</td>
</tr>
<tr>
<td>Individual campsites only</td>
<td>14.5%</td>
</tr>
<tr>
<td>Bigger parking area</td>
<td>5.5%</td>
</tr>
<tr>
<td>Amphitheater</td>
<td>5.5%</td>
</tr>
<tr>
<td>Pavilion for group use</td>
<td>4.8%</td>
</tr>
<tr>
<td>Water and electric utilities</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

Figure 2
2. Issue of conflict between motorized and non-motorized users:

Green Canyon attracts a diversity of visitors throughout the year. Some recreationists like to drive their trucks, ATV’s, motorcycles, and other vehicles for sport in the canyon. Many non-motorized recreationists, on the other hand, believe the presence of motorized vehicles conflicts with their recreational activity. For example, motorized vehicles occasionally create dangerous encounters with other recreationists traveling on the common recreation road/trail. Motor vehicles also degrade sensitive plants and soils when they are taken off-road in the canyon, thus impacting the natural scenery that many people have come to enjoy. The Assessment also concludes that this action leads to the increased spread of noxious weeds. Another concern dealing with motorized use involves uncertainty about the Mt. Naomi wilderness boundary surrounding Green Canyon. When motorized users violate this boundary, it can alter the overall satisfaction of those recreationists seeking a wilderness experience. And finally, the noise from revving engines is incompatible with the expectations of non-motorized recreationists who visit the canyon in search of greater solitude. Other users in Green Canyon see no major problem with the existence of both motorized and non-motorized recreationists, as long as vehicles are driven with care and remain on the established roads.

From the survey that we conducted, out of the people who answered yes to the question in regards to using Green Canyon for summer recreation, only 6% said they have used Green Canyon in the summer for 4-wheeling, and 3.3% said they have used the canyon for motorcycling in the summer (see Appendix B for complete survey results). Out of these same users surveyed, 74% said that they feel that conflict between motorized and non-motorized users is a major or minor problem in Green Canyon.

Many of the concerns from the non-motorized users deal with the following perceptions: 1) people on ATVs drive too fast in the canyon, creating a safety problem, 2) they use the road when it is closed to motorized users during the late fall/winter/spring months, and 3) they go off trail and destroy vegetation, contributing to erosion in the canyon. Out of the management suggestions we received from both contacting key informants and surveying canyon users, 7 people suggested limiting motorized vehicles in the canyon and 14 people said that motorized use in the canyon should be banned altogether.

As far as the viewpoint of motorized users in area goes, from talking with key contacts we have gathered that people seeking an off-road experience usually pursue areas where they can ride for longer periods and further distances than Green Canyon offers (the canyon road is approximately 4 miles). Also, from what we observed and heard from key stakeholders, it seems that the majority of the motorized use within the canyon comes from North Logan teenagers and/or college aged students who are looking for somewhere to ride for a few hours after school.

Objectives:
- Reduce conflicts between motorized and non-motorized users in Green Canyon
- Increase safety of recreation activities
- Prevent further erosion and damage to soil and vegetation
Conflict Between Motorized and Non-Motorized Users of Green Canyon

Figure 3

- Not a Problem
- Minor Problem
- Major Problem
3. Issue of encroachment from private development:

According to state estimates, North Logan is one of the fastest growing communities in Cache County. For example, in 1980, North Logan's population was 2,181 and only ten years later nearly doubled to 4,176. The current estimated population of 5,669 is once again expected to double by 2020. Property owners adjacent to Green Canyon recognize this trend, and some plan to subdivide their land. Others simply want to a place to retire along the foothills. Many local recreationists, however, view residential development as a threat to their recreation enjoyment, particularly in accessing National Forest lands such as Green Canyon. These individuals see their traditional informal trails into the canyon being eliminated as new housing fills in more of the undeveloped landscape.

In our visitor survey, 83% of visitors hike, 65% mountain bike, and 4% horseback ride in Green Canyon during the summer. Many of these recreationists travel to Green Canyon by way of trails. Therefore, the loss of recreation trails into the canyon is significant. Instead of a nice leisurely stroll or bicycle ride into the canyon, these recreationists would be forced to jump into car and drive for 5 minutes around all the new residential development just to enter the canyon. Also, as community planners point out, once an existing trail is lost to development, it is very difficult to reestablish a new one. Homeowners simply do not like the establishment of a new trail adjacent to their property due to their concerns for privacy. The result is a less pedestrian-friendly community and one with fewer linkages to outdoor recreation sites on the Cache National Forest.

Controversy also exists between where and how residential development should occur in North Logan. Some landowners want to develop large residential lots on or near the foothills. They say that prime agricultural land at lower elevations is the land to protect and less productive holdings along the foothills should be developed. Others disagree and say foothill development harms rural character and reduces critical wildlife habitat. They also say that foothill development encroaches upon the Mt. Naomi Wilderness boundary and puts households in greater danger of wildfire. Some far-sighted individuals believe compromises can be reached by designing the North Logan community with cluster-type residential development. Under this scenario, smaller lots are developed on the most buildable lower lands and sensitive or critical lands along the foothills, such as those containing trails and wildlife habitat are protected.

According to our survey, the protection of "naturalness" is very important to recreationists in Green Canyon. 95% of respondents approve of protecting Green Canyon naturalness or prioritizing canyon naturalness over the presence of recreation facilities. 47% of survey respondents also participate in wildlife viewing in the canyon, and 75% believe the loss of wildlife habitat is a major or minor problem. Any residential development in North Logan City, particularly along foothill lands adjacent to Green Canyon, should incorporate these community values into their long-term planning of local neighborhoods. The Forest Service and the State Division of Wildlife, which also manages land holdings near Green Canyon, should support the community in planning for these local needs to ensure that residents continue to experience opportunities for trail recreation and wildlife viewing.
Objectives:
- Use cluster-type residential development
- Preserve existing recreational trails
- Protect wildlife habitat

B. Concerns Identified

1. Impacts from dogs:

From our survey we found that Green Canyon is a prime stop for dog walking; 45% of our visitors had dogs with them. Some residents are concerned that these dogs may have a negative impact on the local water supply. Since Green Canyon is home to North Logan’s primary water supply, there is a concern that the fecal remains of dogs will have some effect on sanitary quality of the water. Other problems with dogs include personal harassment, wildlife harassment, and noise. With increased use of the canyon comes an increased number of dogs. When users were asked how they felt about the presence of dogs in the canyon the response was as follows.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Like</td>
<td>69.1%</td>
</tr>
<tr>
<td>Dislike</td>
<td>10.1%</td>
</tr>
<tr>
<td>No opinion</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

If dislike, why?
- Fecal remains in trail 76.0%
- Personal Harassment 40.0%
- Wildlife harassment 20.0%
- Noise 12.0%

Objective:
- Reduce the impacts of dogs near the watershed area and keep the trails free of fecal remains.

2. Littering:

With increasing misuse of the area littering is becoming a large problem. Out of all the people surveyed, 94.3% saw littering as either a major or minor problem; only 5.6% saw it as not a problem at all.

Objective:
- Reduce the amount of littering in the canyon.

3. Paintballing:

The use of the canyon for paintballing has, in recent years, become a major or minor concern for most users of Green Canyon. Not only is paintballing in the canyon illegal, it also leaves marks on the mountainside and trail signs. They litter the ground with their
capsules, and cause conflicts with other users. 71.1% of those surveyed saw paintballing as either a major or minor problem. One large conflict was found to be between horse users and people shooting paintballs, 74.7% saw this conflict as either major or minor. 6.7% of the users surveyed, however marked that in the summer months they come to use the canyon primarily for paintballing.

Objective:
• Put a stop to paintballing in the Green Canyon.

4. Motor vehicle impact on vegetation and soils:

The impacts of spring and fall recreation and motor vehicle use can significantly degrade plants and soils during wet conditions. During these sensitive times, the canyon is open to motor vehicles; many of these users like to go off road, the result being damage to the upcoming vegetation as well as erosion. Motorized vehicles contributing to the loss of vegetation and erosion is a problem that 75.6% of our users deemed a major or minor problem. Misuse in general of motorized vehicles in the canyon was seen by 79.5% of users to be a major or minor problem.

Objective:
• Reduce the impacts of motorized vehicles on vegetation and soils.
Couch found off the side of the road less than 1 mile up Green Canyon.

Motorized vehicles have eroded this section of the creek bed.

Rock face peppered with paintballs located in one of the first dispersed campsites.

Figure 4
V. Management Recommendations
Introduction

The following section contains management suggestions designed to address the previously identified issues and concerns of primary importance in Green Canyon. We have made an effort to develop recommendations with the overall management philosophy of preserving the existing natural character of Green Canyon. We believe that the success of these recommendations hinges on the creation of partnerships with concerned publics and government organizations. We have also tried to develop recommendations that are as cost efficient as possible and believe that the scope of our suggestions will be more cost effective than the proposed campsite facility currently proposed for this area.

A. Enforcement

With a lack of enforcement and routine maintenance, misuse of the area has become a serious problem. We feel that more frequent enforcement of Green Canyon would address major concerns such as illegal and irresponsible motorized vehicle use, littering, and paintballing. It could also address minor concerns like vandalism, parties in the canyon, people living in the canyon, and control of large groups. Forms of enforcement include Adopt-a-canyon, volunteer patrols, increased law enforcement presence, and the possibility of a canyon host.

- **Adopt-a-canyon** - Such a program is an excellent way of providing for more enforcement. There is great potential here for a collaborative type process where the Forest Service could work with concerned Green Canyon visitors and North Logan City to implement such a system. There is already an informal group of people known as the "Friends of Green Canyon" who perform a yearly canyon cleanup. This group would be an excellent starting point for the Forest Service to begin forming partnerships. The purpose of this program would be to keep the canyon clean and repair minor damages from age, weather, and vandalism. There is also great potential to work with Boy Scouts on such projects.

- **Volunteer patrols** - This is an idea that has proven successful for the managers of Antelope Island. They formed a volunteer mountain bike patrol, which provides for an official presence in the park. These patrollers have no official enforcement capacity, but do have the number of the ranger who can issue citations. While such a patrol may not sound effective, we believe that the presence of these people alone can act as a deterrent to depreciative behaviors. The primarily serve to monitor conditions, talk to people, and perform light trail maintenance. Such a system could work very well in Green Canyon.

- **Increased presence of law enforcement** - It should be recognized that the presence of "real" law enforcement personnel is a must in Green Canyon. There is also potential here for collaboration between the North Park Sheriffs office and the Logan Ranger District. It is important to note that the NLC Sheriffs office has already expressed interest to us for such a partnership. Increased patrols should focus during after dark hours when volunteer patrols would not be wise. This is also the time of day when enforcers are most likely to contact rowdy parties and find people who are living in the canyon.
• **Canyon host** - The possibility of a canyon host could also be considered. We don't know if the use of green canyon justifies the presence of full-time hosts. However, the Forest Service has used volunteers in such conditions. A canyon host would be optimal since they would be there 24 hours a day. They would be able to provide an official presence at the canyon, which would reduce depreciative behaviors.

**B. Light Facility Development**

Given the fact that the phrase 'facility development' seems to be an anathema to Green Canyon visitors, our primary management philosophy is to leave Green Canyon in the relatively natural state that currently exists there. In concurrence with this philosophy, we have designed facilities so that use is concentrated in the lower mile of the canyon. Nearly one-third of Green Canyon visitors would like to see no facility development; however, overall responses indicate that people do desire some light facility development. Furthermore, in light of the fact that 92.8% of survey respondents have visited Green Canyon before, we believe that a high level of development in the canyon would result in displacement of these traditional users. In order to meet the desires of as many of the respondents as possible, we recommend that there be two areas of light development.

The first area will be where the current gate exists across the mouth of Green Canyon. This is the main entrance to the canyon, thus the best location for informative signs. This area will contain a sign board with various informative signs regarding some of the concerns that currently exist in Green Canyon. The sign board should include historical signs, trail etiquette signs, map of area (trails, campsites, wilderness boundary), etc... Also contained in this area will be a minimum of two trashcans as well as a doggie station with poop bags. (Please refer to the section of this document detailing recommendations to mitigate concerns for a complete description of the purpose and need of these items at the canyon entrance.) Within this section of the canyon should also be contained at least one pit toilet. As was previously stated, almost one-third of survey respondents would like to see pit toilets. We feel that pit toilets are a good compromise between no development and more modern development, which in this case would be restrooms with flush toilets and water. The pit toilet at this location would be for summer use, but the primary purpose of placing a toilet at this location is so that winter recreationists have some type of restroom facility. A toilet is needed at this location year round to deal with the impromptu use of the back side of the small North Logan City water building located in the parking area.

The second area of development will be across from the picnic area that is approximately a half-mile to a mile from the gate. We recommend that any and all facility development be kept close to the mouth of the canyon due to the fact that almost 60% of survey respondents only travel approximately 2.0 miles on their Green Canyon excursions. In order to allow these people access to the naturalness that they seek, it is necessary to design the area such that it leaves the majority of these two miles unimpaired by high levels of facility development. Respondents have indicated that they do not desire a level of development that a campground would encompass. As such, we believe that it would be a reasonable compromise to develop a few of the dispersed campsites alone. No linkage system (aside from the existing road) between sites is necessary, simply add a picnic table and a fire pit to several areas in the lower portion of the canyon. This
allows those people looking for the natural beauty of Green Canyon the majority of the upper portion of the canyon, while keeping those who desire such camping and picnicking amenities as tables, fire pits, and restrooms in the lower portion of the canyon. We do believe that fire pits are a must in the dispersed sites that are chosen for this small level of slight development. Currently, several of the dispersed sites have very unsightly, large, overly used fire pits, other sites have more than one fire pit for the site, which is unnecessary and only leads to more impact. As such, the pits installed should be the typical concrete/rock Forest Service issue, raised profile type fire pits. Our goal with the slight development of a few of these lower sites is to concentrate camping in these sites in order to keep the other developed sites further up the canyon from further degradation.

We also believe that one of the largest dispersed campsites across from the picnic area should be developed on a slightly larger scale. Currently, aside from the dispersed campsites, there is very little parking for those people who want to use the picnic area. So we believe that one of these sites should be slightly expanded and graveled so as to allow parking for 5 or 6 cars. This site would serve as a focus location for summer visitors wishing to utilize the picnic area, which is directly across from it. This is also an optimum location for a summer interpretive/information sign and trash cans. The pit toilets that currently exist against the South side of the canyon in the picnic area should also be relocated to this position. These toilets are back in the bushes where they can be (and have been) vandalized. The relocation of these toilets to a more visible area directly off of the road may reduce the level of vandalism that currently exists there.

The picnic area itself also needs to be improved. The picnic tables that currently exist there are old, very weathered, and vandalized. We believe that rejuvenation of these picnic tables would provide a great opportunity for scouts to do a service project. The fire pits in the picnic area are also in need of improvement. They are currently at ground level where they quickly become filled with debris. The profile of these pits should be raised and all fire pits in the area should be cleaned out on a regular basis so as to discourage the use/creation of other informal fire pits. In general, we highly recommend that the area and its facilities be kept in good condition. It is important to remember Garrett Hardin’s warning in his famous essay The Tragedy of the Commons when he says "the morality of an act is a function of the state of the system at the time it was performed".
Canyon Entrance

Suggestions:

- Restrooms
- Dog Station
- Informational Sign
- Trash Cans

Figure 5
Picnic Area Development

- Improved Picnic/Dispersed Camp Facilities
- Restrooms
- Interpretive Sign

Green Canyon Watershed

![Map of Green Canyon Watershed](image)

Figure 6
C. Monitor Motorized Access

Due to the responses that we received from contacting local people with an invested interest in the management of Green Canyon, and from the information we obtained from surveying users to the area, we feel that motorized access to the canyon should continue to be allowed. Along with leaving the canyon open to motorized users, we feel that education and monitoring would be necessary and helpful in detecting whether or not conditions were remaining the same or worsening. This includes posting educational signs at Green Canyon that explains safety rules for motorized users as well as gives them suggestions about alternative areas at which they can recreate. Monitoring of the situation could be done with future surveys which would inquire about the level of conflict felt between the two groups. Also, the amount of erosion and loss of vegetation caused by motorized users would need to be monitored considering 75.6% of the users surveyed felt that this was a major or minor problem in Green Canyon. Misuse by motorized vehicles would also need to be noted since 79.5% of recreationists in the canyon were concerned about this.

If education and monitoring efforts fail to work, we propose closing Green Canyon to motorized use year-round. This action would change the Forest Service ROS classification to semi-primitive non-motorized. As a result of this, there would likely be some motorized users that would be displaced by this restriction. We feel that it would important for the Forest Service to inform these users of alternative recreation areas they can go to ride their vehicles. In addition to this, it would also be helpful to make a note of the closure and the reasons why this action was deemed necessary on the signboard next to the closed gate to the canyon so as to alleviate any misperceptions. It is also important to realize that a closure of Green Canyon to motorized use would not be detrimental to many OHV users. The canyon is not ideal for a typical off-road experience because of its limited distance (approximately 4 miles), and the fact that there is not an opportunity to travel on trails other than the main road.

D. Cluster-type Residential Development

By using cluster-type residential development, North Logan residents could balance landowners' intentions to develop their land with the community's need to preserve recreation trails and wildlife habitat. On a typical cluster-type residential site, one half of the property is developed for housing while the remaining land is set aside as open space. (See diagram below.) In this case, North Logan landowners develop smaller lots on the more buildable lower portions of their property, while the remaining sensitive foothill areas are protected for trail-oriented recreation and wildlife habitat. The result is a close-nit, rural-looking community with abundant opportunities for outdoor recreation and wildlife viewing.

Not only do recreationists benefit from this design scenario, but other community groups do as well. Developers like the idea for construction costs are less. Given that neighborhood infrastructure (i.e. sewer, water, streets, curb, and lighting) is concentrated, development costs are lower. This means greater profits for the developer and lower maintenance costs for the city. Homeowners like the design for they overlook rural open space and real estate values appreciate faster. Neighborhoods are often friendlier, for people can interact more freely both within the community and along recreation trails. Furthermore, the cost of providing community open space
is internalized in the development process; therefore, no bond measures needed to provide the community with linear parks and recreation.

There are also important gains for government agencies. The Forest Service benefits, for development is located further from the wilderness boundary and homes are in less danger of fire. Another advantage, the community's trail-recreation policies more closely match the Forest Service's own. Instead of traveling by motor vehicle, which could increase recreational impacts in the canyon, more people would arrive by foot, mountain bicycle, or horseback.

The State Division of Wildlife benefits for residential neighborhoods are buffered from critical winter range; therefore, wildlife conflict is reduced on residential properties during winter. Also, important travel corridors are preserved for wildlife along the foothills so that big game and other animals can easily access different parts of the Cache National Forest and Mt. Naomi wilderness. The result is a successful wildland-urban interface in which both wildlife and people prosper.

These changes require a rewriting of the North Logan City ordinance concerning new residential development. Through stakeholder interviews, we determined that landowners were initially skeptical of this new cluster-type residential development, but many are now convinced by the proposal's impressive benefits. The Forest Service and State Division of Wildlife could encourage North Logan in implementing these changes by cooperatively planning local recreation trails and the protection of wildlife habitat. By working together, these public agencies and the people of North Logan could protect important public resources that will benefit both today's generation and those in the future.
Cluster-type Residential Development
E. Recommendations for Concerns

There are several things that we believe should be done to mitigate the concerns that we have addressed in this recreation plan. For litter, we believe that the best method for helping to control this problem would be the presence of trash cans, or in the least, a small dumpster. We feel that the presence of some type of trash receptacle alone would encourage an attitude of ownership that would then facilitate a cleaner environment.

Another problem is the tremendous amount of canine feces that is present in the area. To help with this problem, we recommend that dog poop bags be provided at the signboard. Bags of waste could be deposited into the trash receptacle(s).

Vehicular impact on vegetation and soils will be prevented by the permanent closure of the gate, which we recommended to address the issue of conflict between motorized and non-motorized users.

Paintballing is another problem of major concern in Green Canyon. The previously discussed recommendation of enforcement will help to address this problem. On top of increased enforcement/monitoring, we also recommend that North Logan City and the Forest Service try and work with the local shop that deals in paintball supplies to try and identify and advertise some areas where paintballing is allowed, in concert with advertising Green Canyon’s ‘off limits’ status.

We also recommend the addition of signs addressing these concerns and problems to the signboard. Such signs would serve to educate people about the problems that exist in Green Canyon and what they can do to facilitate the improvement of these problems. Such signs should address leave no trace ethics, proper dog use courtesy/ethics, substitute areas for off-roading, and substitute areas for paintballing.
VI. Suggestions for Future Research
A. Monitor Dispersed Campsites

There are currently 23 dispersed sites in Green Canyon that need to be put under some type of monitoring system. It should provide a reliable baseline for subsequent monitoring so that certain trends can be identified. Campsites should be monitored for increasing bare ground, vegetation loss, erosion, tree damage, root exposure, cleanliness, social trails, fire rings, as well as any new campsites identified. If these problems become more abundant and prove to have impact on the biological and aesthetic value of the site, then possible closure of some of the sites should be considered. Sites to consider closing would be those that are more dispersed, farther from the main road, those within 100 feet of water, or especially those with a combination of these factors. Use should be concentrated in the lower sites near the mouth of the canyon that are already heavily impacted. To encourage use to these camp spots some facilities and hardening of the site such as tables and permanent fire rings could be put in to encourage use. Sites further up the canyon need to have less use giving them time to heal. If people continue to use these sites heavily then they need to be shut down. Another option would be "rest-rotation" action. This would provide a rotation between which sites were opened and closed allowing sites to periodically recover.

B. Survey Summer/Winter Visitors

Our survey was conducted mainly during the month of March. This time frame turned out to not have specific winter or summer use. We missed winter recreationists due to the fact that the closest patch of snow was two miles from the trailhead. A strictly winter use survey would get the cross-country skiers and snowshoers. Likewise in the summer we missed recreationists that don't use the canyon until the gate at the mouth of the canyon is open. These are mainly the motor vehicle users, campers, picnickers, and those using the canyon for large gatherings. By getting all these different groups of people it would offer more diverse and well rounded opinions. All types of users would be able to offer their input and possibly different issues and concerns could arise. As with the March survey include visitor characteristics and perceptions as well as social and physical resource problems. The survey should be repeated every five years and perceptions of problems such as paintballing, littering, motor vehicle impact, and dog impacts should be decreased.

C. Monitor Future Conflicts Between Motorized and Non-Motorized

Monitoring future conflicts between motorized and non-motorized use is going to be useful in resolving one of the largest conflicts in Green Canyon. It is important to observe and monitor if the interpretive signs and educational programs targeted at resolving this conflict are working. Perhaps surveys could be conducted periodically to see if the problem is being remedied or getting worse. If the problem persists or does become worse, possible closure of the canyon to motorized vehicles needs to be strongly considered.

D. Monitor Motor Vehicle Impact on Soil and Vegetation

Motor vehicles impose stress of considerable magnitude on the ground flora and soils. In the canyon there are many places where motor vehicles have gone off the designated roads.
leaving impacts and scars on the soil. Vehicles rip up vegetation, they lead to problems with soil erosion, soil compaction, and loss of organic matter. Monitoring these effects of motorized vehicles must be assessed periodically. If the interpretive signs and other methods used to stop this proves to be unsuccessful, then possible closure of the canyon to motorized vehicles should be considered.

E. Survey Motorized Vehicle Users

Our recommendation is for more research to be done regarding motorized users. Our recommendation against a year round road closure is based largely on survey responses from very few off-roaders. We believe this recommendation is supportable in regards to the data we have; however, it is not likely that off-roaders are highly represented in our survey. As such, there is a further need to contact off-road enthusiasts to see how they would react to a full year road closure. This survey should look at the uniqueness of the Green Canyon off road vehicle experience. Given the short length of trips and confined nature of the Canyon, it is likely that OHV driving is a secondary activity. It seems that most users take OHV to get to a specific spot to go camping, picnicking, to hiking.
Appendix A – Example of Vehicle Count and Visitor Intercept Survey
<table>
<thead>
<tr>
<th>Number of dogs</th>
<th>Number of vehicles</th>
<th>License #, County</th>
<th>Surveys distributed</th>
<th>Surveys returned</th>
<th># people in party</th>
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**Green Canyon Visitor Survey**

1. Place of residence (city, state) ________________________________

2. How many people are in your group? ______

3. Are you: Male [ ]    Female [ ]    Age ______

4. How far do you plan to travel today? ____________________________

5. What activities are you participating in? _________________________

6. Have you used Green Canyon before?  [ ] No  [ ] Yes – How many times in the last year? ______

7. Do you use Green Canyon in the summer?  [ ] No  [ ] Yes

   If yes, what for? (please check all that apply)
   
   □ Mountain biking    □ Wildlife viewing
   □ Horse riding        □ Motorcycling
   □ Hiking             □ 4-wheeling
   □ Picnicking         □ Paintballing
   □ Camping            □ Sheep grazing
   □ Hunting            □ Firewood collection
   □ Other; please explain ____________________________

8. Based on your experience, to what extent do you feel each of the following is *currently* a problem in Green Canyon? If you are not familiar with summer use, please check ‘don’t know’ and go on to the next listed item.

   - Vandalism
   - Littering
   - Parties in the canyon
   - People living in the canyon
   - Misuse by motorized vehicles
   - North Logan water quality
   - Degradation of wildlife habitat
   - Loss of vegetation and erosion
   - Uncertainty about the wilderness boundary
   - Increase of users
   - Noxious weeds
   - Rowdy behavior
   - Paintballing
   - Large groups in summer
   - Conflicts between users:
     - Mountain bikers and hikers
     - Mountain bikers and horse users
     - Motorized and non-motorized users
     - Horse users and people shooting paintballs
     - Experienced and beginner cross-country skiers

   other; please explain ____________________________

39
9. If the money would be used to maintain Green Canyon, would you be willing to pay a small fee for the following:

Yes  No
☐ ☐ Winter access fee
☐ ☐ Summer access fee
☐ ☐ Camping fee
☐ ☐ General access
☐ ☐ I do not like the idea of paying any fees

10. What facilities would you like to see in Green Canyon?

☐ Pit toilets
☐ Restrooms with flush toilets and water
☐ Picnic tables
☐ Pavilion for group use
☐ Bigger parking area
☐ Group and individual campsites
☐ None

☐ Individual campsites only
☐ Amphitheater
☐ Water and electric utilities
☐ Fire pits
☐ Educational signs about flora, fauna, and history
☐ Directional/informational signs

☐ Other; please explain ____________________________

11. Do you support grazing sheep in Green Canyon as a form of controlling noxious weeds and summer fire hazard?

No opinion ☐ Yes ☐ No ☐

12. How do you feel about the presence of dogs in the canyon?

No opinion ☐ Like ☐ Dislike ☐

If dislike, why?

☐ Noise
☐ Fecal remains in trail
☐ Wildlife harassment
☐ Personal harassment
☐ Other; please explain ________________________

13. Which of the following statements most meets your feelings about management of Green Canyon?

☐ Providing modern facilities should always be the priority.
☐ Preserving the natural character should always be the priority.
☐ Balance facilities and naturalness, but if a choice must be made, favor facilities.
☐ Balance facilities and naturalness, but if a choice must be made, favor naturalness.

14. What recommendations do you have for the future management of Green Canyon?
Appendix B – Survey Results
Summary Statistics for Green Canyon
Survey Data

**Observation data**
- Parking lot data: n = 140
- Returned surveys: n = 156
- Sampling units (in 4 hr intervals): 18
- Visitors with Cache County L.P.: 72.8%
- Visitors with dog(s): 45%

**Statistics based on question answers**

**Place of residence (city, state)**
- Cache Valley: 91.4%
- From Utah: 98.7%

**How many people are in your group?**
- Mean: 2.3
- Median: 2.0
- Mode: 2.0

<table>
<thead>
<tr>
<th># people</th>
<th>Valid %</th>
<th># people</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32.7</td>
<td>7</td>
<td>1.3</td>
</tr>
<tr>
<td>2</td>
<td>37.9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>15.0</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>4</td>
<td>7.8</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>2.0</td>
<td>11</td>
<td>.7</td>
</tr>
<tr>
<td>6</td>
<td>.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Are you male or female?**
- Male: 55.8%
- Female: 44.2%

**Age**
- Mean: 31
- Median: 27
- Mode: 21

<table>
<thead>
<tr>
<th>Age</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>13.7</td>
</tr>
<tr>
<td>21-30</td>
<td>46.5</td>
</tr>
<tr>
<td>31-40</td>
<td>15.5</td>
</tr>
<tr>
<td>41-50</td>
<td>16.9</td>
</tr>
<tr>
<td>&gt;50</td>
<td>7.7</td>
</tr>
</tbody>
</table>
How far do you plan to travel today?

<table>
<thead>
<tr>
<th>Miles</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2.0</td>
<td>59.6</td>
</tr>
<tr>
<td>2.1-4.0</td>
<td>22.8</td>
</tr>
<tr>
<td>4.1-6.0</td>
<td>8.8</td>
</tr>
<tr>
<td>&gt;6.0</td>
<td>8.7</td>
</tr>
</tbody>
</table>

What activities are you participating in?

- Hiking: 59.1%
- Mountain biking: 18.8%
- Dog walking: 11.7%
- Cross country skiing: 5.1%
- Running/Jogging: 4.5%
- Other: 17.9%

Have you used Green Canyon Before?

- Yes: 92.8%
- No: 7.2%

Number of times used in the last year

Out of 124 respondents:

<table>
<thead>
<tr>
<th># times</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>29.8</td>
</tr>
<tr>
<td>6-10</td>
<td>18.5</td>
</tr>
<tr>
<td>11-15</td>
<td>7.2</td>
</tr>
<tr>
<td>16-20</td>
<td>8.9</td>
</tr>
<tr>
<td>21-25</td>
<td>8</td>
</tr>
<tr>
<td>&gt;25</td>
<td>27.3</td>
</tr>
</tbody>
</table>
Do you use Green Canyon in the summer?

- No 4.6%
- Yes 94.7%

If yes, what for? (check all that apply)

- Hiking 83.3%
- Mountain biking 65.3%
- Wildlife viewing 47.3%
- Camping 44%
- Picnicking 34%
- Paintballing 6.7%
- 4-wheeling 6%
- Hunting 4.7%
- Horse riding 4.0%
- Motorcycling 3.3%
- Firewood collecting 1.3%
- Sheep grazing 0%
- Other 18%

Based on your experience, to what extent do you feel each is currently a problem in Green Canyon?

<table>
<thead>
<tr>
<th>Problems</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not a problem</td>
</tr>
<tr>
<td>Vandalism</td>
<td>13.2</td>
</tr>
<tr>
<td>Littering</td>
<td>5.6</td>
</tr>
<tr>
<td>Parties</td>
<td>34.4</td>
</tr>
<tr>
<td>People living there</td>
<td>67.7</td>
</tr>
<tr>
<td>Misuse by motor vehicles</td>
<td>20.5</td>
</tr>
<tr>
<td>North Logan water quality</td>
<td>61.9</td>
</tr>
<tr>
<td>Degradation of wildlife habitat</td>
<td>25.0</td>
</tr>
<tr>
<td>Loss of vegetation and erosion</td>
<td>24.4</td>
</tr>
<tr>
<td>Uncertainty about wilderness boundary</td>
<td>39.8</td>
</tr>
<tr>
<td>Increase of users</td>
<td>35.7</td>
</tr>
<tr>
<td>Noxious weeds</td>
<td>47.6</td>
</tr>
<tr>
<td>Rowdy behavior</td>
<td>41.5</td>
</tr>
<tr>
<td>Paintballing</td>
<td>28.8</td>
</tr>
<tr>
<td>Large groups in the summer</td>
<td>48.5</td>
</tr>
</tbody>
</table>

Conflicts

<table>
<thead>
<tr>
<th>Conflicts</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain bikers and hikers</td>
<td>72.0</td>
</tr>
<tr>
<td>Mountain bikers and horse users</td>
<td>70.6</td>
</tr>
<tr>
<td>Motorized and non-motorized users</td>
<td>26.0</td>
</tr>
<tr>
<td>Horse users and people shooting paintballs</td>
<td>25.3</td>
</tr>
<tr>
<td>Experienced and beginner cross-country skiers</td>
<td>88.2</td>
</tr>
</tbody>
</table>
If the money would be used to maintain Green Canyon, would you be willing to pay a small fee for the following?

<table>
<thead>
<tr>
<th>Facility</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter access fee</td>
<td>51.8%</td>
<td>48.2%</td>
</tr>
<tr>
<td>Summer access fee</td>
<td>55.9%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Camping fee</td>
<td>67.0%</td>
<td>33.0%</td>
</tr>
<tr>
<td>General access</td>
<td>39.4%</td>
<td>59.6%</td>
</tr>
</tbody>
</table>

What facilities would you like to see in Green Canyon?

<table>
<thead>
<tr>
<th>Facility</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational signs about flora, fauna and history</td>
<td>33.1</td>
</tr>
<tr>
<td>None</td>
<td>31.7</td>
</tr>
<tr>
<td>Picnic tables</td>
<td>31.7</td>
</tr>
<tr>
<td>Fire pits</td>
<td>29.7</td>
</tr>
<tr>
<td>Pit toilets</td>
<td>24.1</td>
</tr>
<tr>
<td>Directional/Informational signs</td>
<td>24.1</td>
</tr>
<tr>
<td>Restrooms with flush toilets and water</td>
<td>15.9</td>
</tr>
<tr>
<td>Group and individual camp sites</td>
<td>15.2</td>
</tr>
<tr>
<td>Individual camp sites only</td>
<td>14.5</td>
</tr>
<tr>
<td>Bigger parking area</td>
<td>5.5</td>
</tr>
<tr>
<td>Amphitheater</td>
<td>5.5</td>
</tr>
<tr>
<td>Pavilion for group use</td>
<td>4.8</td>
</tr>
<tr>
<td>Water and electric utilities</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Do you support grazing sheep in Green Canyon as a form of controlling noxious weeds and summer fire hazard?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34%</td>
</tr>
<tr>
<td>No</td>
<td>33.3%</td>
</tr>
<tr>
<td>No opinion</td>
<td>32.7%</td>
</tr>
</tbody>
</table>

How do you feel about the presence of dogs in the canyon?

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like</td>
<td>69.1%</td>
</tr>
<tr>
<td>Dislike</td>
<td>10.1%</td>
</tr>
<tr>
<td>No opinion</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

If dislike, why? (Mark all that apply.)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal remains in trail</td>
<td>76.0%</td>
</tr>
<tr>
<td>Personal harassment</td>
<td>40.0%</td>
</tr>
<tr>
<td>Wildlife harassment</td>
<td>20.0%</td>
</tr>
<tr>
<td>Noise</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

Which of the following statements most meets your feelings about management of Green Canyon?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preserving the natural character should always be the priority.</td>
<td>50.3%</td>
</tr>
<tr>
<td>Balance facilities and naturalness, but if a choice must be made, favor naturalness.</td>
<td>45.6%</td>
</tr>
<tr>
<td>Balance facilities and naturalness, but if a choice must be made, favor facilities.</td>
<td>4.1%</td>
</tr>
<tr>
<td>Providing modern facilities should always be the priority.</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Appendix C - List and Description of Key Stakeholder Responses
Key contacts, date contacted, interest group, and their issues and concerns:

1. Ron Vance and Evelyn Sibbernson – 2/9/99 – forest service
   Discussed the project in general. Also talked about data acquisition.
   **Key issues from a manager’s perspective:**
   - Litter and vandalism
   - OHV problems -- Vehicles driving all over and not staying in designated areas
   - Snowmobilers breaking lock on fence to get through
   - Parties in the canyon
   - Possible conflicts between cross-country skiers and other users in the winter
   - Students living in the canyon

2. North Logan Mayor – 2/10/99
   Expressed interest in our project. Asked us to talk to Gordon Younker and then talk to him if we had any further questions.

   He hasn’t spent much time up Green Canyon. Primarily just wanted to keep access open to horse people. Directed me towards Marie Isaacson.

   She is a member of the backcountry horsemen’s league, which participates in search and rescue, as well as fire support, activities.
   **Key concerns:**
   - Grass can become a major fire hazard in the summer
   - Parking situation is not good
   - Wants toilets
   - Bikers and hikers need to be made aware of proper etiquette
   - Would like a picnic area where people can go and not have to worry about paying fees

5. Dr. Kennedy – professor at USU – 2/17/99
   Primary contacted in the hopes of getting some names of key stakeholders. He has recreated up there for many years.
   **Key concerns:**
   - Wants to minimize motor use. However, he said that problem was mostly solved with the addition of the gate at the mouth of the canyon.
   - Also strongly suggested we contact the proper authorities of North Logan City concerning water access, sanitation, etc...

6. Chief Bob Degasser – 2/17/99 – North Logan City Sheriff’s office and head of the “Horse Posse”
   He did not have much to say about Green Canyon from a horsemen’s perspective because he had not spent much time in the area. However, he did send a letter to the forest
service concerning the place of law enforcement in Green Canyon should the campground be put in.

7. **Bryan Dixon** – Audubon Society -- is willing to be contacted again. He has conducted a study on the landscape, uses the area as a recreationist, and for bird-watching.

**Key concerns:**
- People and ORVs go off the paths trampling vegetation and making more side trails.
- Grazing contaminates the water. When the animals graze, they use the bathroom in the streams.
- ORVs in the spring time damage the new spring grasses, ruin the upcoming vegetation, and damage the soil.

**Management directions:**
- Educate users on the impacts they have on the land.
- Keep cattle away from the major water supplies, keep cattle off all together.
- Ban ORV use.

8. **Jerry Brunner** – Forest Service, Logan District

**Key concerns:**
- Sanitation problem with dogs.
- Parking lot problems.
- Shooting problems in the summer.
- On North slope, motorcyclists go up into wilderness area from the Forest Service land.
- ATVs may want use of the roads again since new action is being taken; like to challenge their vehicles on the frozen roads in the spring and fall.
- Historic areas up the canyon – quarry for rock to build Logan temple, building foundation, fossil area
- Water Canyon is main source of water for N. Logan. Increase in the number of users to the area (especially at lower end of canyon) could mean a decrease in the water quality.
- OHV enforcement problem – they like to go off-roads which causes damage to the soil and vegetation.
- Increased conflicts if group use area goes in between OHVs, hikers, group users, and dispersed campers.
- Sheep grazing might be a concern if group area is put in – need to know when grazing will happen so that adjustments can be made.
- People causing fires because of increased use due to campground.
- Possible goshawk habitat?
- Conflict between more and less experienced skiers at lower end because of speed from coming down the track.
- Possibility of canyon flooding (natural disasters) – how much $ are willing to spend?
Management directions:
• Canyon host – facility for information to users and someone to keep an eye on things to help reduce misuse.
• Move parking lot from where it is now.
• Put in restrooms.
• Implement a reservation system.
• Create a loop trail for cross country skiers to reduce conflicts.

9. Scott Datwyler – owner of Trailhead and cross country skier in Green Canyon
Key concerns:
• Dogs on trail cause sanitation problem.
• If parking lot is put in there could be a loss in the distance you can ski now.
• More potential for abuse with group use facility.
• 200 users for campground is too many!
• Increase of users may result in loss of groomed ski trails.

Management directions:
• Have users pay money or make donations in order to insure that cross country ski trails are groomed.
• No motorized vehicles past the campground.
• Thinks that group use area is a good idea but would rather see a day use than a campsite for overnight use.

• Proposed development will alter the characteristics of the area
• Concerned that North Logan will impose regulations or have exclusive ownership
• Developed recreation will impact related wilderness values
• Incorrect location for such a large scale of development
• Increase in visitors will have a negative impact on wildlife in the area
• Current recreationists of Green Canyon seeking less crowded areas will be displaced
• Development could harm groundwater/water supply

11. City Council Meeting – presentation by Gordon Younker about Green Canyon about what to do next as far as North Logan is concerned.
Things discussed:
• Group use area to accommodate 100 rather than 200 people.
• Not in their interest to pursue group use as primary use
• No reservations for use of the area – first come first serve basis (pursuing the area for primarily group use will force Forest Service to put area on reservation system; increased use might occur as a result of spillover from group use areas in Logan Canyon).
• Don’t want to track more people into area because of the proximity to wilderness area.
• Display of community pride to have nicer facilities at Green Canyon – need to take care of their watershed.
• City dollars into someone else’s land is not desirable.
• Opportunity for local community to have a partnership with the federal government.
• Entrance to canyon should be moved up the canyon and away from reservoir for sanitation reasons.
• Agreed for Forest Service to proceed with their Environmental Assessment of Green Canyon.

12. Dennis Austin - 2/8/99 - Area Wildlife Biologist

Key concerns:

- The Division of Wildlife plans to sell valuable land between Green Canyon and Logan Canyon to provide additional funds for the agency. However, this land is important winter range for big game animals and other wildlife. The land also has the potential to provide important trail linkages for recreationists. Without the preservation of the foothill area, winter range and trail access will be lost.
- Along with the preservation of habitat, a deer fence and maintenance road is needed to keep deer and elk off residential landscapes.

Suggestions:

- He suggested picking up a copy of the North Logan City Plan and the Richmond City Plan for examples of wildlife planning recommendations.


Key concerns:

- The planning commission proposes a protection area along the base of the mountains to access Green Canyon. This open space not only protects winter range, it may eventually become part of the Bonneville Shoreline Trail.
- The development of private lands adjacent to Green Canyon might use cluster housing development, where more sensitive lands are preserved as open space and developable land is constructed at a higher density. The benefits include a better return for investors and the protection of critical open space lands.
- More pride and upkeep will occur in Green Canyon if local citizens have permission to monitor and regulate campground improvements. Without more local control, the community is hesitant to invest money in new facilities.

14. Don Younker - 2/20/99 - North Logan resident & local historian

Key concerns:

- Lots of vandalism in Green Canyon: shooting of firearms, litter, burning and carving on picnic tables, destruction of signs, chopping down trees, etc.
- Great opportunities to interpret historical sites, but not without greater monitoring or surveillance. Signage in the past was destroyed by vandals.
Management directions:

- Culinary water concerns could be remedied by moving parking and campground facilities farther up the canyon, near the old flour mill foundation.
- He believes that the depreciative behavior would disappear with more local control: patrolled by local police, camp host presence, initiating a small fee for over-night camping, local volunteers to maintain site and facilities.
- Believes Beaver Mnt. is a good example of special use permit. The Forest Service recreation manager, Fred Huston, helped establish this partnership.
- By not paving road and constructing simpler improvements, Green Canyon’s facilities would serve the public and not become a major attraction.

15. Paul Vaslet - 2/19/99 - manager of Sunrise Cyclery
Key concerns and suggestions:

- During peak summer months, there are some unsafe encounters between vehicles and bicycles on the primitive road up Green Canyon. Separating a bicycle path away from the jeep road may potentially solve this problem. A separate trail is already available on the lower 1/3 of the canyon.
- He thinks providing some designated campsites and picnic facilities will reduce the impacts of informal camping farther up the canyon.
- More regulation would limit damage and disturbance caused by beer parties.
- Some cyclists are uncertain of the location of the wilderness boundary. Most turn back at the "top gate," two miles before the actual boundary. Signage at the trailhead might inform recreationists of actual boundary.
- Currently not much conflict between summer non-motorized recreationists: mountain bikers, equestrians, hikers, dog walkers, etc.

16. Scott Datwyler - 2/19/99 - owner Trailhead
Key concerns:

- Green Canyon only allows for single-track ("skating") cross-country skiing.
- Winter hikers/snowshoers crush/damage skiing trail.
- Winter hikers with dogs do not clean up after their pets. This situation creates very unpleasant experience for skiers.

17. Mont Likriney - 2/19/99 - local scout master
Key concerns:

- Scouts use Green Canyon in winter months for winter camping.
- He supports limited improvements in canyon, such as restrooms and water facilities. Paving of the road is unneeded.
- He does not support use fees for camping.

18. Jack Green – Wilderness Ranger
Key concerns:

- ORVs causing noise for those seeking the solitude of the Mt. Naomi
Wilderness.
- Green Canyon is very close to wilderness.
- Parties in the canyon.
- Building of campground may increase ORV use.
- North Logan City watershed would be more contaminated with increased use.
- Elk use canyon as occasional winter range. Moose are also present.

Management directions:
- Gate the road after the first half-mile (about to the campground).
- Close the road off to all motorized vehicles except maintenance vehicles.
- No ORV use.
- If ORV use, keep it well controlled. (He thinks they are doing a pretty good job of controlling them now and that there is not a lot of ORV use in the area.)

Key concerns:
- With more visitors to Green Canyon, there is the potential for a loss of vegetation and greater damage to trees.
- The area near the Boy Scout/Indian Cave is potentially dangerous, due to lose shale rock. Some scouts have been injured there in the past.
- Kids rolling rocks from steep slopes into campground area could potentially harm individuals.
- Motor vehicles should remain on the road while driving up the canyon. There are some who attempt to climb the as well as garbage disposal or pick up.
- During the summer, the vegetation in the canyon dries up and is a potential fire hazard.
- Without the preservation of the foothill area, winter range and trail access will be lost.

20. Gary Bird - 4/15/99 - local ATV user
Key concerns:
- Has never been riding in Green Canyon before because he likes to go on longer rides (frequently recreates at Franklin Basin and Hardware Ranch)
- He doesn’t belong to a riding group himself, but has friends that belong to groups – said he has never heard of them going to Green Canyon to ride ATVs

Management directions:
- Most motorized vehicle users like to go fast, which could create a safety problem
- Proximity to wilderness area is an issue
- Says no matter what the rules are there are always going to be some people who want to go off-road or up a hill to test themselves.
Contacts concerning Green Canyon issues and concerns according to their interest

Forest Service:
Ron Vance
Evelyn Sibbernson
Jerry Brunner

Equestrians:
Clinton Groll
Marie Isaacson
Chief Bob Degasser
Nolan Cribs

North Logan City Officials:
North Logan Mayor
Gordon Younker (City Councilman)
Chief Bob Degasser (Policeman)

Wildlife:
Dennis Austin (Area Wildlife Biologist)
Bryan Dixon (Audubon Society)

Cross-country skiers:
Scott Datwyler (owner of Trailhead)

Mountain bikers:
Paul Vaslet (manager of Sunrise Cyclery)

Group activity use:
Mont Likriney (local scout master)
Nolan Cribs (use for father-daughter/son outing)

Wilderness:
Jack Green

Local resident:
Don Younker

USU professors:
Dr. Kennedy
Dr. Brunson

Motorized-vehicle users:
Gary Bird
Appendix D – Recommendations From Key Informants and Survey Responses
Management Directions Suggested by Contacts

• Separating trails – different trails for different activities (one for motorized use and one for other uses).
• Do not pave the roads. Keep the area primitive.
• Move the parking lot.
• Expand the parking lot so it fits more vehicles.
• Instigate more regulations to prevent depreciative behaviors.
• Put in new restrooms.
• Educate users of the area – put in signs (main trailhead sign, smaller signs at historic sites)
• Ban motorized use altogether.
• Implement a fee program for overnight use of the area to fund the maintenance of the facilities.
• Use volunteers to help clean up the canyon – scout groups, etc.
• Make simple improvements; avoid major development such as an amphitheater.
• Keep the trail for cross-country skiers groomed. Those who want the trail groomed can make donations at different locations throughout town or pay a fee.
• Use grazing to keep fire hazard low.
• Canyon host – facility for getting information to users and someone to keep an eye on things to help reduce misuse.
• Implement a reservation system.
• Create a loop trail for cross-country skiers in order to reduce conflicts between the more experienced and beginner skiers.
• Group use area is a good idea but would rather have developed day use than overnight use in Green Canyon.
• Keep cattle away from the major water sources or just keep cattle off altogether.
• No motorized vehicles allowed past the campground or day use facilities.
• Fees for cross country skiing (to keep trails groomed).
• Local citizens join partnership with Forest Service in the upkeep and control of area.
• Interpret historical sites.
• Separate trails for mountain bikes to increase safety.
• Build new facilities (restrooms, picnic tables, pavilion, etc.)
**Summary of responses to ‘recommendations’ question**

<table>
<thead>
<tr>
<th>Response</th>
<th># of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep Green Canyon natural</td>
<td>29</td>
</tr>
<tr>
<td>No motorized vehicles</td>
<td>12</td>
</tr>
<tr>
<td>Limit facility development</td>
<td>9</td>
</tr>
<tr>
<td>Limit motorized vehicles</td>
<td>7</td>
</tr>
<tr>
<td>Some type of monitoring/enforcement</td>
<td>6</td>
</tr>
<tr>
<td>of problems</td>
<td></td>
</tr>
<tr>
<td>no more paintballers</td>
<td>5</td>
</tr>
<tr>
<td>dog poop bags</td>
<td>4</td>
</tr>
<tr>
<td>trash cans</td>
<td>2</td>
</tr>
<tr>
<td>more running water</td>
<td>2</td>
</tr>
<tr>
<td>keep snowmobilers out</td>
<td>2</td>
</tr>
<tr>
<td>keep open to public</td>
<td>2</td>
</tr>
<tr>
<td>keep it clean</td>
<td>2</td>
</tr>
<tr>
<td>road improvement</td>
<td>2</td>
</tr>
<tr>
<td>control of firearm use</td>
<td>2</td>
</tr>
<tr>
<td>eliminate dispersed camping</td>
<td>1</td>
</tr>
<tr>
<td>groom x-country ski trails</td>
<td>1</td>
</tr>
<tr>
<td>think in a larger perspective</td>
<td>1</td>
</tr>
<tr>
<td>more prescribed fire</td>
<td>1</td>
</tr>
<tr>
<td>divide motorized and non-motorized</td>
<td></td>
</tr>
<tr>
<td>users by day or season</td>
<td>1</td>
</tr>
<tr>
<td>better signs regarding rules</td>
<td>1</td>
</tr>
<tr>
<td>restrictions on use according to group</td>
<td></td>
</tr>
<tr>
<td>size, A.T.V., long term camping</td>
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</tr>
<tr>
<td>make it more accessible</td>
<td>1</td>
</tr>
<tr>
<td>open gate earlier</td>
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</tr>
<tr>
<td>adopt a canyon program</td>
<td>1</td>
</tr>
<tr>
<td>more non-motorized trails</td>
<td>1</td>
</tr>
<tr>
<td>separate uses – i.e. more jogging trails</td>
<td>1</td>
</tr>
<tr>
<td>no hunting</td>
<td>1</td>
</tr>
</tbody>
</table>