

North Campus Plan

University of Alaska Fairbanks
2004



North Campus Plan
UNIVERSITY OF ALASKA FAIRBANKS
Fairbanks, Alaska

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Table of Contents

Chapter 1—Executive Summary	9
Chapter 2—Introduction	13
Chapter 3—The Planning Process	22
Chapter 4—Resource Assessment	30
Chapter 5—A Vision for North Campus	41
Chapter 6—Major Actions	47
References.....	79
Appendix A—Troth Yeddha Placenames.....	81
Appendix B—Master Planning Committee Recommendation.....	82
Appendix C—Historic Ballaine Lake Research Site.....	83
Appendix D—Letter to Researchers and Accompanying Map.....	84
Appendix E—Special Management Areas	85
Appendix F—Public Meeting Posters.....	86
Appendix G—Results from North Campus Subcommittee Public Meetings	92
Appendix H—Current Uses and Users of North Campus	107
Appendix I—Soil Characteristics of North Campus.....	112
Appendix J—North Campus Manager Position Description.....	114
Appendix K—Permit Application	115
Appendix L—Current Trail Standards.....	118
Appendix M—Draft Trail Guidelines	119
Appendix N—Proposed Trail Connections from Main Campus to North Campus	122



Smith Lake

Chapter 1—Executive Summary

The Master Planning Committee (MPC), with support from its North Campus Subcommittee (NCS), recommends the following management plan for the UAF North Campus. This plan furthers the goal identified in the UAF Campus Master Plan (CMP) to:

“Protect the integrity of the North Campus for education, research and recreation, including maintaining and promoting the UAF trail system as a significant campus and community asset.”

The focus of this plan is on the generally undeveloped UAF land north of the main UAF campus. This land includes many research and education sites as well as the UAF trail system. The purpose of the plan is to provide guidance for use of the North Campus (NC). In developing it, the NCS gathered extensive data about historical and contemporary usage and anticipated needs for the area. It held numerous public meetings and several open forums to solicit input. This broad public process led to the conclusion that protecting the biological and physical integrity, as well as the natural assets, of NC is paramount. This is consistent with the CMP. Three value statements were developed for the North Campus.

- **Value Statement 1:** Preserve the biological and physical integrity, as well as the natural assets, of North Campus.
- **Value Statement 2:** Ensure year round, compatible access and use for research, education, and recreation
- **Value Statement 3:** Promote the North Campus as a multi-use resource for UAF and greater Fairbanks communities

Within these broad guidelines, the MPC recommends that the NC be managed for multiple use involving research, education, and recreation. All currently allowed uses shall be permitted to continue, while new or significantly modified activities shall be subject to review and approval. All uses of the NC shall be reviewed periodically to ensure their consistency with this plan over time.

The key to managing this area for multiple uses is to provide guidelines for different uses of the NC that will keep the effects of each within acceptable limits. For example, while recreational use of the UAF trail system provides important health and psychological benefits to university students, staff, and faculty, unlimited growth of these activities will diminish other values of the area realized by the university such as those accruing from education and research.

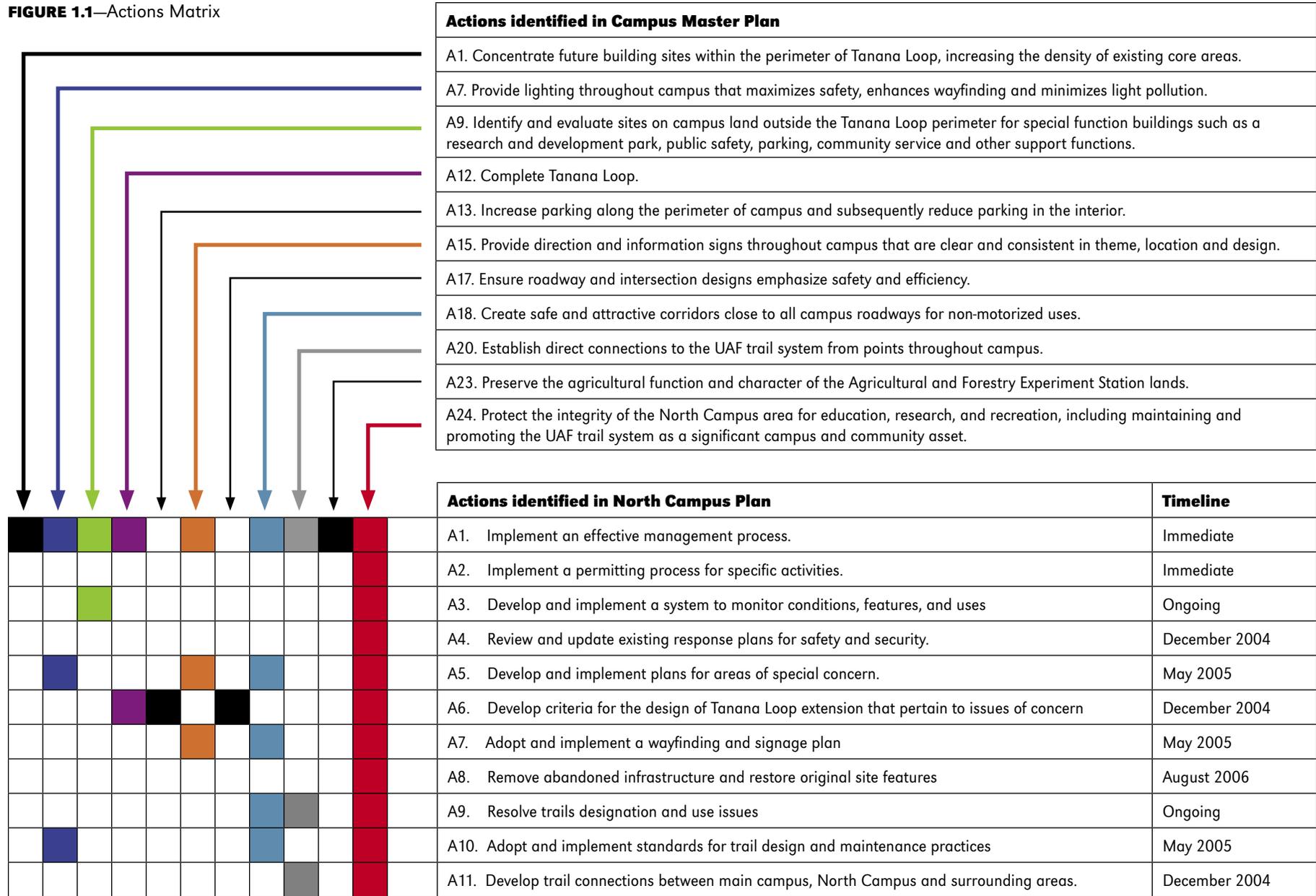
It is of paramount importance that a management structure for the NC be implemented which provides clear authority to ensure the limits defined as acceptable are not exceeded. Key to this is creation of a North Campus manager (NCM) position. The NCM will be the first point of contact for all uses of the area. Adoption of this plan will require communication and coordination among users of the NC to convey the process through which the guidelines were developed, their rationale, and their benefits to the various users.

Summary of Recommended Actions:

The plan lays out 11 recommended actions, as well as accompanying guidelines and implementation steps. The actions are based on the CMP and their relationship to it.

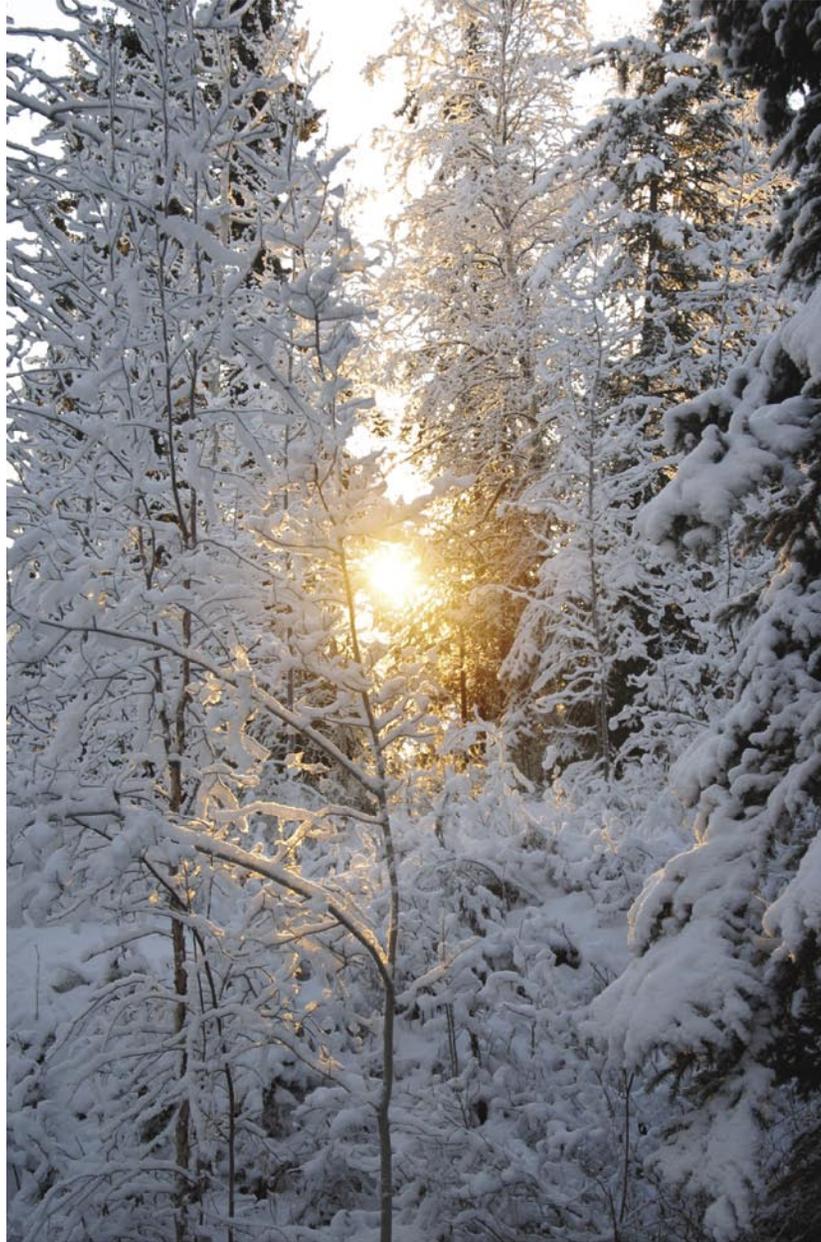
- A1. Implement an effective management process
- A2. Implement a permitting process for specific activities.
- A3. Develop and implement a system to monitor conditions, features, and uses
- A4. Review and update existing plans for safety and security
- A5. Develop and implement plans for areas of special concern.
- A6. Develop criteria for the design of Tanana Loop extension that pertain to issues of concern
- A7. Adopt and implement a wayfinding and signage plan
- A8. Remove abandoned infrastructure and restore original site features
- A9. Resolve trails designation and use issues
- A10. Adopt and implement standards for trail design and maintenance practices
- A11. Develop a trail system plan to facilitate connections between main campus, North Campus, and surrounding areas.

FIGURE 1.1—Actions Matrix



Late December sun shines through
the trees on the North Campus.

UAF PHOTO BY TODD PARIS



Chapter 2—Introduction

The North Campus area of the University of Alaska Fairbanks (UAF) is a unique and valuable resource for the university. The NC consists of approximately 1,100 acres of largely forested land on the north-to-northwest side of campus. The area provides valuable research, education, and recreation opportunities for UAF faculty, staff and students, visiting educators and scientists, and community members.

North Campus lands have a long history of use that precedes the establishment of UAF. The land now occupied by UAF—including North Campus—is known to Tanana Athabascan people as *Troth Yeddha* (“wild potato hill”). Athabascan names for prominent UAF and NC features are documented in Alaska Native Language Center archives (see Appendix A). The NC includes the original research lands dedicated to the Agricultural Experiment Station that was established in 1906. It includes historic recreation trails, and an incredible diversity of natural habitats for class field trips and scientific research. Users of these lands represent diverse groups, from K-12 and university students to scientists studying cold soils, wetlands ecology and more. The area includes a rifle range, long-term biological and geophysical research sites, a popular local fishing spot, and multiple-use trails that are used year-round for university and community educational programs, research and recreation.

The UAF Campus Master Plan from 1991 (UAF 1991; hereinafter referred to CMP 1991) recognized the value of campus lakes, bogs, arboretum, taiga, and fields for research and classes. “It shall be a matter of policy to protect and encourage use of campus lands for research wherever possible.” Protected North Campus lands included the Institute of Arctic Biology Biological Reserve, bird and wildlife observation stations around Smith Lake, the Boreal Arboretum and permafrost monitoring sites (UAF 1991, p. 49). The MPC also stressed the value of NC trails and included recommendations for their preservation and enhancement. (*ibid.*, pp. 71-72). The plan highlighted the necessity for creating a balance between maintaining the natural state of the NC and allowing human use. Planners recommended that all future uses be reviewed by the MPC or a designated subcommittee to ensure that the use is consistent with the survival of the essential qualities of this resource (*ibid.*, p. 50).

UAF's current Campus Master Plan (UAF 2002; hereinafter referred to as CMP) was approved by the Chancellor and the Board of Regents in 2002 (see www.uaf.edu/mastplan/). Chancellor Lind, at the recommendation of the MPC, established the North Campus Subcommittee to develop a plan specifically for the North Campus, acknowledging this area as one of UAF's "jewels in the crown" (see Appendix B). The CMP states that "it is critical that current uses continue and that only minimal development associated with outdoor teaching, research and recreation be permitted. The...North Campus Subcommittee of the Master Planning Committee will guide future planning efforts for this area." (UAF 2002, p. 8-17). The MPC directed the Subcommittee to develop a plan that would:

1. identify the multiple uses and users of the North Campus
2. review the draft UAF Skarland Trail System Management Plan, make suggested changes and incorporate its recommendations, as appropriate, into the land use plan
3. identify all appropriate uses and locations for education, research and recreation.
4. maintain the long-term integrity of research sites and facilities on the North Campus, and
5. establish a review process for all proposed actions on North Campus lands. (ibid., p. 9-20, 21)

On April 7, 2004, the NCS submitted the draft North Campus Plan to the MPC for consideration. In July 2004, the MPC submitted the final plan to the Chancellor for review, comment and approval. On July 21, 2004, the plan was approved.

Definition of the North Campus

The North Campus is defined as the area north-to-northwest of UAF's main campus and bounded by Miller Hill Road on the west, Yankovich Road on the north (south of the private property boundary when applicable), Ballaine Road and Farmers Loop Road on the east, and on the south by the main campus and the Agricultural and Forestry Experiment Station Experiment Farm (see Figure 2.1 and 2.2).



FIGURE 2.1—Map of North Campus Boundaries

— Approximate boundary of North Campus area

— Approximate boundary of Arboretum

— Approximate boundary of Biological Reserve

FIGURE 2.2—Map of North Campus Major Features



Approximate boundary of North Campus area

* College International Geophysical Observatory

** Alaska SAR facility antenna

UAF Campus Master Plan Guidelines Related to North Campus

UAF's Campus Master Plan provides guidelines for planning and development on the Fairbanks campus as well as a process for implementing the plan. As part of that overall effort, the Chancellor appointed an eight-member standing subcommittee focusing on the North Campus. The NCS hired Dr. Peter Fix, Assistant Professor of Natural Resources Management, to coordinate the planning process. The subcommittee was charged with developing a draft master plan consistent with the goals and action statements of the CMP. These goals are:

1. Create an efficient and attractive campus environment conducive to learning
2. Improve community access to the UAF campus
3. Make vehicle circulation and parking simple and direct
4. Promote safe and efficient travel throughout campus for pedestrians and non-motorized uses
5. Highlight natural assets of campus and the unique northern environment

Specific action statements of the CMP of relevance to the NC are listed below. Although some action statements do not directly address NC lands directly (such as completing Tanana Loop), they may nevertheless be relevant to future planning and management.

- A7. Provide lighting throughout campus that maximizes safety, enhances wayfinding and minimizes light pollution.
- A9. Identify and evaluate sites on campus land outside the Tanana Loop perimeter for special function buildings such as a research and development park, public safety, parking, community service and other support functions.
- A12. Complete Tanana Loop.
- A13. Increase parking along the perimeter of campus and subsequently reduce parking in the interior.
- A15. Provide direction and information signs throughout campus that are clear and consistent in theme, location and design.
- A17. Ensure roadway and intersection designs emphasize safety and efficiency.
- A18. Create safe and attractive corridors close to all campus roadways for non-motorized uses.
- A20. Establish direct connections to the UAF trail system from points throughout campus.



The Elysian sculpture is framed by fall leaves on an early September morning.

UAF PHOTO BY TODD PARIS



North Campus trails in autumn.

- A23. Preserve the agricultural function and character of the Agricultural and Forestry Experiment Station lands.
- A24. Protect the integrity of the North Campus for education, research, and recreation, including maintaining and promoting the UAF trail system as a significant campus and community asset.

Moreover, additional narrative in the CMP speaks to the assets and values of importance in planning and managing NC lands:

An extensive system of trails, used widely by the campus and Fairbanks communities, winds through the land north and west of the built campus. The trails and the land that they occupy are a prized resource of the campus. The draft UAF Skarland Trail System Management Plan (Todd 2000) should be taken into account by the newly formed North Campus subcommittee as part of a comprehensive campus master plan upon its completion and approval by the Master Planning Committee and the Chancellor. (UAF 2002, p. 5-11)

Significant portions of the remaining campus property are designated for outdoor research, education and/or recreation. Specifically, this includes the North Campus area, the Agricultural and Forestry Experiment Station and the Fairbanks Experimental Farm Fields. Remaining areas that are outside of the Tanana Loop perimeter need to be formally evaluated as to suitability for building sites. (ibid., p. 8-4)

The open space between the museum and the Natural Sciences Facility offers an ideal place for a centralized entry into the trail system from the built campus, with a second ski hut located there to mark the entry. The ski hut could potentially be coupled with an aurorium, viewing deck, and other features. Other opportunities should be sought to tie campus pathways to the trail system. Clear trail markers and directional signage throughout campus should announce the trail system, making it more visible and accessible. (ibid., p. 8-5)

With advice from the North Campus subcommittee, develop trails in the core campus areas that connect Lower Campus, West Ridge and the North Campus

Trail system. Develop informational signs to foster use and appreciation of trail systems. (ibid., p. 9-5)

The North Campus Subcommittee will work closely with trails groups and UAF Facilities Services to ensure that maintenance and improvement of trails continues in an effort to continually enhance this important community asset. The North Campus subcommittee will have primary responsibility for review and comment on proposed trails projects. (ibid., p. 9-21)

Explore opportunities with the Fairbanks North Star Borough to link borough trails (non-motorized uses only) with the Skarland Trail System. (ibid., p. 9-21)

A Timeline of North Campus History

This list highlights key dates, actions, and events relevant to North Campus. This list is not meant to be exhaustive but to reflect major actions that have contemporary significance. Additional information about the history of UAF can be found in Cole (1994) and about the North Campus itself in Parrish (1998), Fesler (2001), and Holloway (2004).

Prehistory—Tanana Athabascan people traditionally used and occupied the area where UAF is now located. The campus site was called Troth Yeddha?—‘wild potato hill’ (see Appendix A).

1904—Citizens of Fairbanks petition the US Government to establish an experiment station in Fairbanks

1906—On March 22, 1906, land surveyed by C.C. Georgeson in 1905 was reserved and set apart for the use of the U.S. Department of Agriculture for the purposes of an agricultural experiment station. This land included most, but not all (1393.97 acres), of sections 6, 31, 1, and 36.

1908—First land cleared in North campus area for agricultural experimentation (Potato Field)

- 1911**—Roads constructed into the North Campus for access to agricultural lands; land cleared near Smith Lake for agricultural experimentation, now the T-Field; longest continuously cultivated land in Alaska
- 1915**—On March 4, 1915, sections 6, 31, 1 and 36 were granted to the Territory of Alaska as the site of an agricultural college and school of mines except for any land in these sections previously claimed under the Homestead Act or other laws. Land not abandoned by the Department of Agriculture could continue to be used for an experiment station.
- 1917**—On May 3, 1917, the legislature of the Territory of Alaska established the Alaska Agricultural College and School of Mines (AAC&SM).
- 1923**—On October 25, 1923, a contract between the Department of Agriculture and Board of Trustees, AAC&SM, split the land grant sections allowing the experiment station to expand to the entire sections of 1 and 36; the easterly sections 6 and 31 were abandoned by the Department of Agriculture to be used as the AAC&SM. Signed by President Coolidge.
- 1929**—On Feb 23, 1929 (Federal Register) Benefits of the Hatch Act and Smith-Lever act extended to the Territory of Alaska (this basically provided for a partnership of funding between the territory and the federal government for funding of the experiment station and all other benefits of those acts), but it wasn't until 1931 when money was finally appropriated.
- 1931**—On February 23, 1931, funds were appropriated to extend benefits of the Hatch Act and Smith-Lever Act provided that all lands, buildings, etc. now used by the Department of Agriculture experiment stations be turned over to the AAC&SM.
- 1932**—Construction of the first major recreational trail, Skarland, begins
- 1946**—On May 22, 1946, the Assistant Secretary of Agriculture turned over all experiment station lands to the University of Alaska.
- 1950**—Ballaine Lake Research Area established by UAF Geophysical Institute (see Appendix C)
- 1950**—On May 19, 1950, the Board of Regents created the Smith Lake “park,” with a 100-yard buffer zone surrounding it
- Mid 1950s through early 1960s**—9-mile, 12-mile, and Miller Hill trails established; first Equinox Marathon held using trails
- 1964**—Exotic Tree Plantation contract (15 years) between USDA Forest Service and UAF; currently maintained by School of Natural Resources and Agricultural Sciences



Buildings in the Ballaine Lake Research Area from 1957 to 1962.

PHOTO COURTESY OF GEOPHYSICAL INSTITUTE OPERATIONS

- 1967**—47 acres fenced into the Biological Research Reserve by Institute of Arctic Biology for research activities
- 1968**—UA Board of Regents created the University of Alaska Arboretum on approximately 300 acres of North Campus
- 1980**—Memorandum of Understanding between UAF and Fairbanks North Star Borough to preserve and protect historic trails and connections with other non-campus trails
- 1981**—Alaska Department of Fish and Game helps establish rifle range
- 1994**—Synthetic Aperture Radar Antenna (SAR) construction agreement between UAF and NASA
- 1997**—On Sept 24, 1997 20-year agreement between US Geological Survey and UAF for College International Geophysical Observatory (CIGO);
- 2001**—Lease with USGS was terminated and College International Geophysical Observatory (CIGO) operation was transferred to UAF.

Chapter 3—The Planning Process

The NCS loosely adopted a planning framework known as Experience Based Management (EBM) (Manfredo 2002). EBM follows a general planning framework, but modifies it to focus on the needs of the users. The EBM planning framework emphasizes understanding the needs of the users, in this case people involved in research, education, and recreation activities. After these needs are understood, a system is developed to best allocate available resources to meet the needs of the users. A critical component of the EBM process is the development of a monitoring plan to ensure the goals of the allocation system are met. The monitoring plan provides the basis for criteria to judge both acceptable and unacceptable conditions and appropriate management strategies for each.

Determination of Desired Vision

The desired vision for the NC was developed by examining existing literature and other information about the area, surveys of UAF faculty, staff, and students regarding their NC use, meetings with key individuals, and meetings of the NCS.

Inventory of Existing Information

Fesler (2001) completed a history of the North Campus under the direction of Dr. Richard Boone, Associate Professor of Biology and Wildlife. This document provided a detailed history of the NC, including land use agreements pertaining to it and interviews with individuals from the UAF and Fairbanks community who played a role in the history of the area. The study was critical for a comprehensive understanding of the diverse uses of the NC, and especially the history of research use. This report was used to develop a preliminary list of research, education, and recreational activities in the area. As part of this process, taped interviews with key individuals relevant to the NC were archived in the Oral History section of the UAF Rasmuson Library.

Previous work on the North Campus provided guidance for the development of this plan. One such document was the UAF Skarland Trail System Management Plan (Todd 2000),

which provided information on trail use from a community survey and public meetings, trail system expansion recommendations, trail system management and signage guidelines, and zoning recommendations. For example, the plan called for completion of the Midnight Express loop, a signage plan, continued maintenance on ski trails, enacting a “ski only” designation on ski trails, providing adequate trails for walking in the winter, developing a commuter trail from West Ridge to Yankovich Road and designating the ski trails in the Arboretum as ungroomed. While the Skarland Trail System Management Plan was never officially adopted by UAF, the NCS was directed to review the plan and incorporate its suggestions as appropriate. The information provided in the draft plan formed the basis for many of the trail recommendations put forth in the current planning effort.

Other relevant documents include a North Campus management plan apparently dated 1988, but with authors unknown, and a study by Ottenheimer (1988). The latter study contained the following statement, “While apparently in past years conditions were such that, in effect, anyone could (and did) do anything they wanted here. . . it has become somewhere between highly desirable and essential that some coordinated planning be done.” These documents evaluated the condition of the trails, and other characteristics of the area, such as wildlife corridors, water resources, and soils. Several recommendations were made, many of which still stand, although with different levels of allowed impact. Examining the current conditions of the trail system, it also appears that some of the recommendations of these plans were not followed. Many of the recommendations were quite specific, such as no further widening of the narrow trails (defined as less than ten feet) with a corresponding map of the trails that met this definition. Thus, it would appear that lack of specificity was not the issue. More plausibly, the recommendations were not adhered to because there was no management plan to monitor the conditions on the North Campus.

Research-related Interviews

In May 2002, Dr. Patricia Holloway, Associate Professor of Plant, Animal and Soil Sciences, conducted a survey of individuals with UAF email addresses. A request for information on past and present uses of the North Campus was sent to all current student, staff, faculty and administrative email accounts (@uaf.edu). Units with special addresses (i.e. @gi.alaska.edu, @ddc.uaf.edu) were not directly accessed because address lists were not available. This effort provided a wealth of information on the diversity of uses that occur on the NC and its importance to research, education, and recreation. The May 2002 email survey pro-

TABLE 3.1—Institutional Home of Researchers with North Campus Research Projects

Institute/Department	n
Geophysical Institute	6
Institute of Arctic Biology	13
School of Natural Resources & Agric. Sciences	6
International Arctic Research Center	2
Other	6

vided an initial list of research, and efforts were made to contact individuals not included in the initial survey that were known to be conducting research in the NC. Additions to this list of uses continue to be made based on public meetings, additional historic research and personal interviews. The goal is to develop the most comprehensive list as possible of all research, education, and recreation activities. This work resulted in a preliminary list of 33 individuals or entities, across several institutes/departments, conducting research on North Campus (see Table 3.1).

The information obtained for research sites varied in detail. Personal contact was made with those researchers for which more detail was needed. Some were contacted in person, while fourteen individuals were sent a letter and map soliciting information on their research in the North Campus. A template of the letter and an accompanying map are found in Appendix D.

Identification of Issues

From June 2002 through early spring 2003, the NCS met with groups representing different activities and uses (e.g., research, running, skiing,) and administrative areas (e.g., safety, campus maintenance, road construction) to assess their interests and responsibilities on the NC and to identify potential conflicts. The meetings provided valuable information from which to assess current uses and determine how the NC may meet the needs of the users. Key issues relating to research, education, and recreation identified through these meetings are presented below:

Research:

- Vandalism and intentional or unintentional destruction of research equipment and plots
- Disturbance of research plots by other researchers, recreational users, UAF and community school classes, and the public
- Access to research plots
- Environmental manipulations that were conducted as part of past research (so current research is not biased)
- Number and size of structures for research (e.g., satellite dishes, towers)
- Access to utilities



Research area in North Campus.

- Environmental and visual impacts from research (e.g., clearings, roads, flagging, fencing, structures, vehicles in the area)
- Removal of equipment and site restoration after completion of research project
- Liability to UAF resulting from user injured by research equipment

Education:

- Access to the NC from main campus, including safe access by bus
- Impact of large groups on ski trail grooming and ground cover/vegetation
- Expansion of the West Ridge infrastructure as it drives the necessary circulation and parking.
- Disturbance of class laboratory research areas by other users (e.g., protecting areas used for classes)
- Environmental disturbance by large groups
- Removal of instructional equipment, materials, and site restoration following class use

Recreation:

- Trampling of groomed ski trails by walkers and dogs
- Trail access for walkers and walkers with dogs in winter
- Ensuring multiple use trails remain on the North Campus
- Multi-use commuter corridors for travel to core campus
- Trail lighting for commuting and skiing
- Access to the North Campus from many areas on campus, particularly Lower Campus, and the surrounding area
- Access to the North Campus, and specifically Smith Lake, from Sheep Creek Road
- Environmental effects of trail construction
- Environmental effects of recreation use
- Trail width
- Trail surface (including flattening and improvements in wet areas)
- Appropriateness of special events, such as the Equinox Marathon, UAF cross country running races, and Nordic ski races
- Liability to UAF resulting from recreation users getting injured
- Liability to UAF resulting from volunteers conducting trail maintenance and improvements



Power lines and Alaska SAR antenna in North Campus area.



Lights along ski trail.



Impact from trail use in the North Campus area.



Public access to North Campus and Ballaine Lake.

Special Management Areas

Importantly, the North Campus incorporates six specific parcels of land that are currently subject to special management restrictions or guidelines. Each has its own history and special management characteristics (Appendix E). The areas are:

- 1) UAF Arboretum
- 2) UAF Biological Reserve
- 3) Smith Lake
- 4) College International Geophysical Observatory (CIGO)
- 5) UAF Rifle Range
- 6) Ballaine Lake

Issues of concern include:

- Conflicts with Arboretum policies and management (Wood, 1967)
- Biological Reserve concerns over security and trespass, as well as Tanana Loop extension impact on research
- The Fairbanks Experimental Farm and Georgeson Botanical Garden are not located on North Campus but are adjacent to the area; use within the North Campus area that impacts these areas should be taken into account. Management plans are being developed for both entities; the NCS and MPC should have input into the plans.
- The College International Geophysical Observatory (CIGO) has specific management requirements that could impact uses on NC (Townsend, 1985).
- Infrasonic receiving sites
- Smith Lake Wildlife Preserve
- Rifle range use and maintenance
- Ballaine Lake multiple use management by UAF, Alaska Department of Transportation and Alaska Department of Fish and Game
- Student interest in re-opening the campground on the West Ridge area of North Campus



Use restrictions on winter trail.

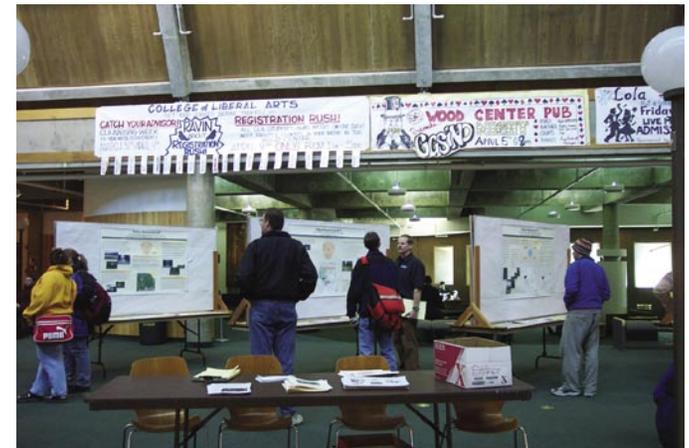
General:

- A parking area along Sheep Creek Rd. or Miller Hill Rd. to allow access to Smith Lake.
- The area of private property along the north side of the North Campus may require special considerations
- Expansion of main campus into North Campus such as road improvements, trails, parking lots, buildings
- Trails maintenance, management, signage, erosion, width
- Potential conflicts between Regent’s policy creating a Smith Lake Preserve and trails construction in that area
- Dogs on campus and UAF, Fairbanks North Star Borough policies
- North Campus accessibility, ADA compliance

Spring 2003 Public Meetings

Because the issues listed above reflected the views of specific organizations and individuals, the NCS also sought input from a broader cross section of stakeholders through a series of public meetings held in spring 2003. Three meetings were held on April 5-7, 2003 at the UAF Wood Center, the Noel Wien Library of the Fairbanks North Star Borough, and the UAF Geophysical Institute to gather information relating to the issues identified by the NCS. Seven 4’ x 6’ posters displaying this information were developed for the public meetings. Four of the posters related to value statements that were developed for the NC, and three related to specific issues of concern in the NC (see Appendix F).

Attendees were encouraged to write comments on the posters with Post-it™ notes or give verbal comments to subcommittee members present. In addition, surveys with questions regarding the issues were passed out to those in attendance. The surveys could be returned by campus mail for those not able to complete it during the meeting. In addition, printouts of the posters were available to take with the survey. Surveys, and the printouts of the posters, were also distributed to those not able to attend the public meetings but who were known to have a strong interest in the North Campus.



North Campus public meeting at UAF Wood Center, April 5, 2003

TABLE 3.2—Category of Written Comments

Category	Count	Percent
Trails	175	23.9 ^a
Ski	74	10.1
Research	50	6.8
Trees	36	4.9
Access	33	4.5
Walkers	29	4.0
Dogs	28	3.8
Parking	28	3.8
Lights	24	3.3
Vehicles	21	2.9
Smith Lake	19	2.6
Loop Road	15	2.0

a. % is of the 733 categories. See Appendix G for all comments.

Results of Public Involvement Meetings

An eight-page, self-administered survey and printouts of the posters were distributed to those attending the meetings. The survey consisted of 40 questions with a Likert Scale response format; i.e., a response scale ranging from strongly agree to strongly disagree or highly acceptable to highly unacceptable. The Likert Scale response format allows for systematic tabulation of results and comparisons across questions (see Appendix G).

The survey had several subcomponents. The first section of the survey presented hypothetical scenarios with a series of questions regarding each hypothetical scenario. The next sections included a series of specific questions about walking on ski trails, issues revolving around permafrost, maintenance acceptability of different ski trail allocations, the T-Field Road and lighting ski trails.

It is important to note that those who completed the survey were self-selected. The sampling frame consisted of only those who attended the meeting or obtained a copy of the survey outside the meetings. Therefore, while the surveys may be representative of those who attended the meetings, statements generalizing these results back to the broader population of UAF faculty, staff and students or the Fairbanks community cannot be made.

There were 338 comments written on the Post-it notes and attached to the posters at one of the meeting locations, written on the survey posters and returned to the committee, or written on the survey and returned to a committee member. The 338 written comments could be placed in 733 categories with different topic areas (i.e., some comments could be placed in more than one topic area). Comments related to trails made up the largest category (24% of comments) followed by comments related to skiing, research, trees, access, walkers, dogs, parking and lights (see Table 3.2).

Analyses of the survey data included:

- Frequency analysis of survey responses, and
- Cluster analysis of survey responses.

A few key results are as follows:

- There was a high level of support for placing woodchips along trails.

- Approximately 90% of respondents to the survey found it unacceptable to allow unlimited wheeled motorized access in the winter.
- Of several scenarios of ski trail changes, keeping the trail system at the status quo had the highest level of support.
- Of potential segments of trails to add lights, the unlit portion of the T-Field road was cited most often.

Using a technique called cluster analysis, the respondents to the survey were placed into groups based on similarity in response patterns across questions. Based on a subset of questions selected regarding certain issues, three groups emerged from the cluster analysis: a group that seemed to focus on recreation (44% of respondents) a group that was supportive of research and was favorable toward recreation issues (44% of respondents), and a group that was favorable toward walking (especially in winter) and allowing dogs on trails in winter (12% of respondents).

Key management implications from the meetings are as follows:

- Those attending the meetings expressed a desire for a range of activities to take place in the North Campus; no one activity dominated the opinions expressed.
- In general, restrictions on use were not favored.
- In contrast, specific restrictions to ensure that uses were compatible with the value of protecting the natural integrity of the North Campus were acceptable.

The input gathered at the meetings suggests a balanced approach to the management of the NC that preserves many of the uses of the area. The full report from the meetings is found in Appendix G.



Looking east across the T-field.

UAF PHOTO BY TODD PARIS

Chapter 4—Resource Assessment

Resources—Current Conditions

Physical features and areas of current use were inventoried, measured and entered into a Geographical Information Systems (GIS) database. The GIS database allows for an inventory of current features, provides a tool for examination of relationships between physical features, and can be updated as physical features of the North Campus change.

Current use

The current uses of the North Campus fall into three main categories: 1) Research, 2) Education, and 3) Recreation. Compatibility of these uses is situational. See Appendix H for a detailed list of current uses, users and their needs.

Research: The North Campus has a rich history of ecological and geophysical research because of easy access from campus and its breadth of ecological, hydrological, and soil conditions. Research taking place on the North Campus has been funded in support by both state and federal agencies. Currently, over half of the dollars in Alaska’s economy accruing from research and development are attributable to UAF (Dorman, n.d.). Some of this funding is directly related to research taking place on the North Campus. The area is used by faculty level investigators from across the UA system and for graduate student research. There are over 20 current identified research projects on the North Campus, and historically the area has been used for over 107 projects including theses and dissertations. Its potential for research, therefore, also depends on maintaining its current balance between trail access and relatively undeveloped conditions.

Education: UAF faculty use the North Campus for demonstrations and field activities associated with classes. Classes include, among others, art, biology, cross country skiing, military science, and natural resources management. There are two factors that make NC well suited for UAF courses: first, the unique resources found



11-meter ASF antenna.

UAF PHOTO BY ANDREW JOHNSON

there; and second, the location, which allows students to gain easy access to these resources within the constraints of their class schedule.

Recreation: The diversity of environment—lake, forest, fen and field—and the trail system, provide opportunities for community outreach programs on the North Campus. Recreation in the NC has a long history. The proximity to campus makes it an ideal location for UAF faculty, staff, and students to engage in recreation activities while on breaks during the workday. The recreational opportunities provided on the NC provide valuable stress relief, opportunities for introspection, and physical fitness. The proximity to campus is especially critical in the winter months. The NC also provides training for the UAF Nordic ski and running teams, as well as community firearms courses.

There are several common themes among these uses:

- Proximity to campus is critical for all uses and users.
- All uses rely on the trail system.
- All uses have a vested interest in maintaining the biological and physical integrity, as well as the natural assets, of the area (see Figure 4.1).

Concentration of current uses

The concentration of current uses was also assessed, with GIS used to inventory their locations. In some cases the GIS coordinates were entered based on a description of the area provided by the respective user; in other instances the physical feature (e.g., trail, research plot) was recorded using Global Positioning Satellites (GPS). A description of the current concentrations, and maps displaying the concentration, follow.

Research

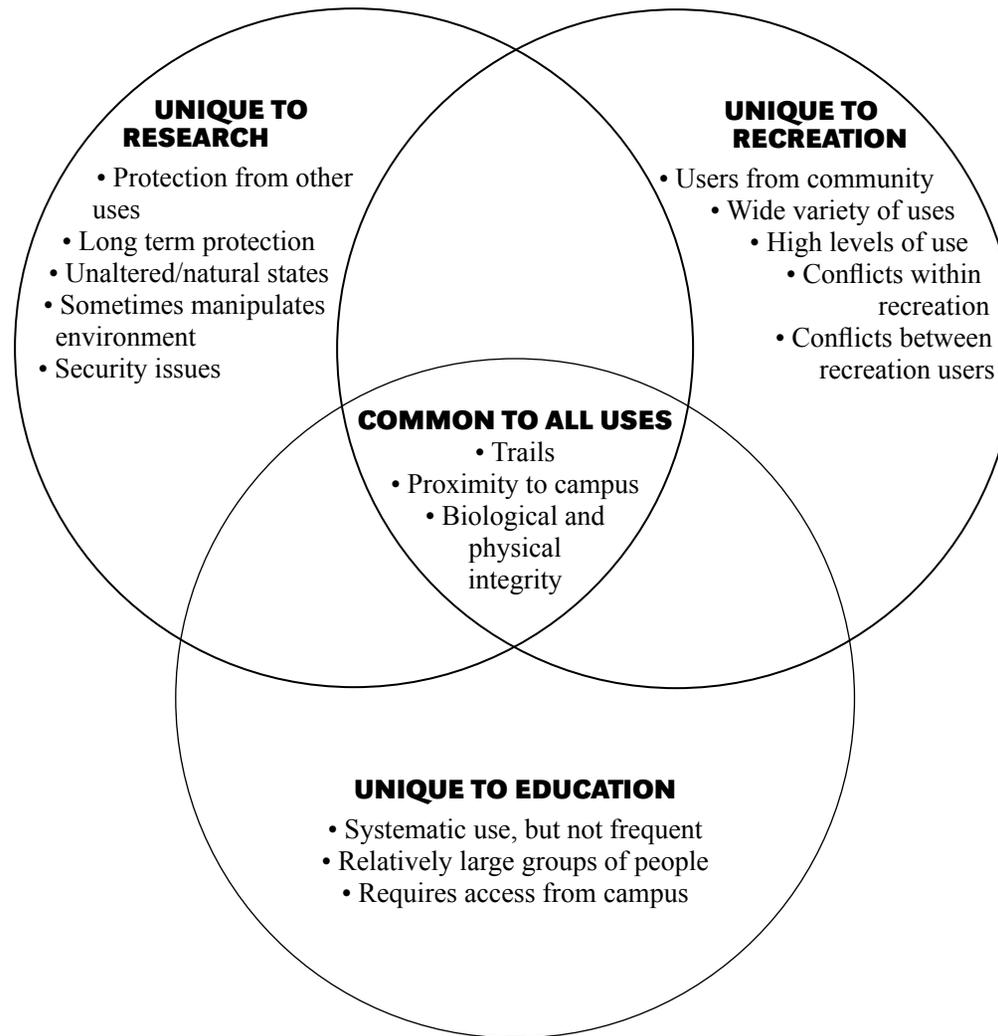
Inventorying current research was viewed as a critical task for the NCS. A GIS database has been developed to inventory and track current research and facilitates future research. The database containing this inventory will be made available to researchers as needed. Research information contained in the database includes the following:



Above: A runner and a bicyclist enjoy the trails.
Below: A research plot on North Campus.



FIGURE 4.1—Relationship among uses of North Campus.



- Location of the research area
- The shape of the research site
- Buffer area identified by researcher
- The type of research taking place
- Activities that pose threats to the research
- The timeframe, historic and future, of the research
- The principal investigator (PI) and their contact information

Research support information includes:

- Contour lines
- Arboretum boundaries, vegetation classification, multi-band aerial image circa 1978, aerial image circa 1948
- Location of trails, including informal trails
- Areas used for education
- Visual bands aerial image, circa 2002

There are over twenty identified research projects currently operating in the area, including studies of soil temperature, forest growth, micro-meteorology, moss growth, forest litter decomposition, infra-sound, permafrost, and wildlife. While more details of these studies are contained in the research database, the specific place is not identified for confidentiality reasons. Although research occurs throughout the NC, there is a heavier research concentration in the Arboretum, the T-Field and Potato Field, and the Smith Lake area.

FIGURE 4.2—Reported areas used for research on North Campus

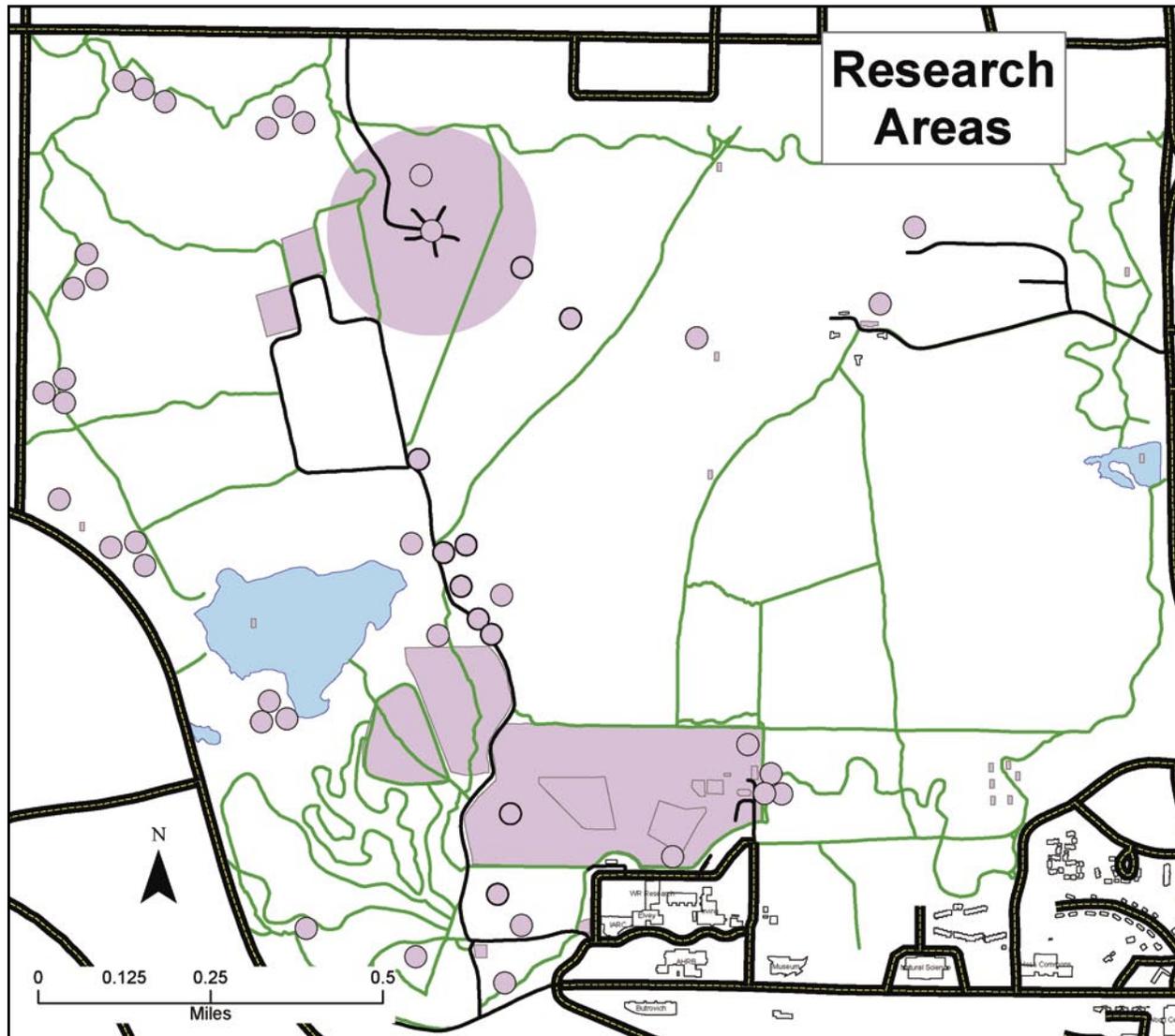
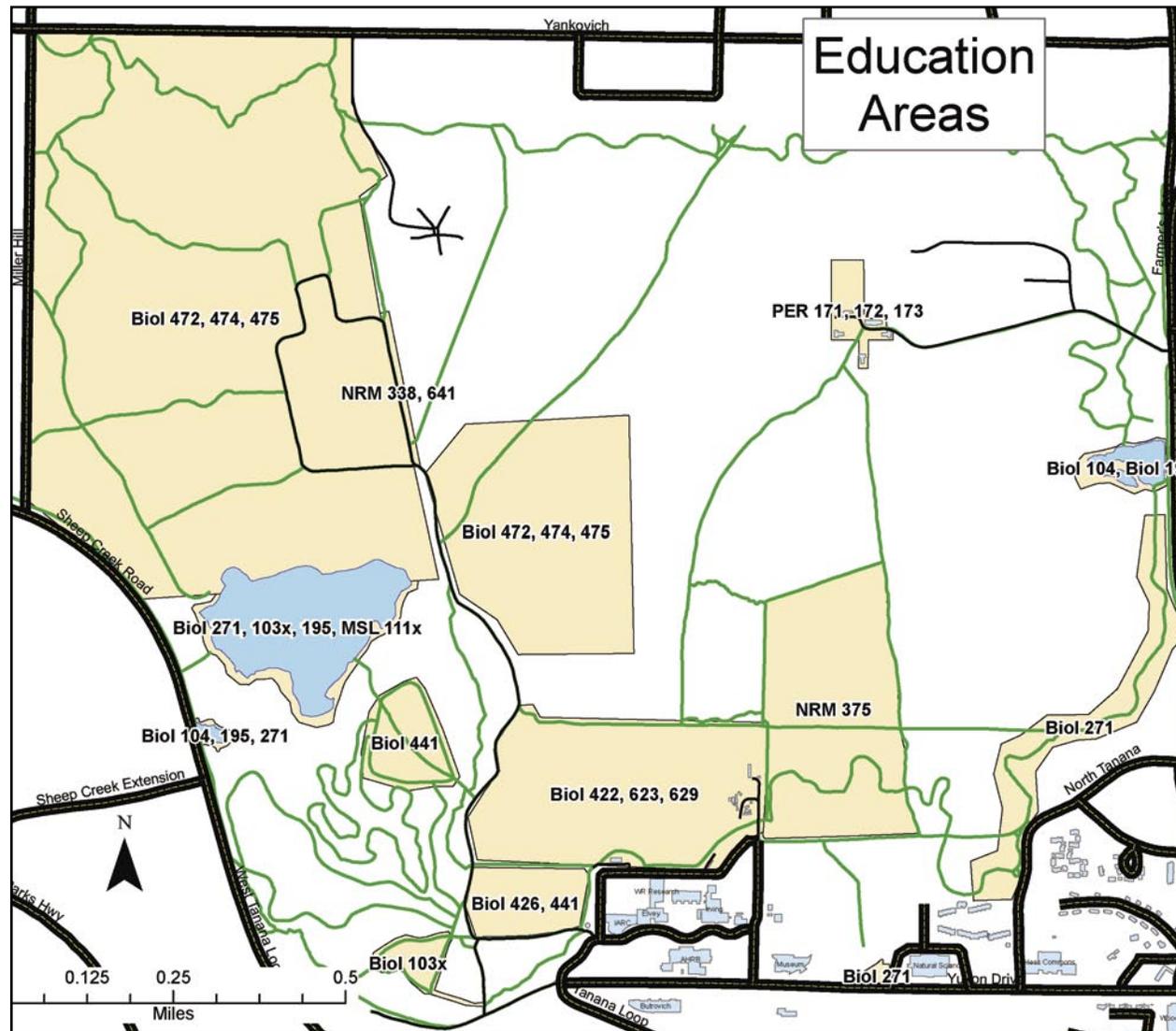


FIGURE 4.3—Reported areas used for UAF classes

Education areas identified through an email survey conducted spring 2002 by Holloway and follow-up by Hay, fall 2003.



Education

Educational uses, including UAF course work as well as non-credit, school district, or community-based activities, occur on a regular basis throughout NC. The majority of the education uses, fan out from the West Ridge area towards the Arboretum and Smith Lake; however, Ballaine Lake area receives significant use as well.

Roads and Utilities on North Campus

There are 3.8 miles of roads on North Campus, which are authorized for “any non-motorized use and authorized vehicles,” and constructed to varying Department of Transportation standards. In addition, there are several areas on North Campus where power transmission lines exist.

FIGURE 4.4—Roads and Utilities on North Campus

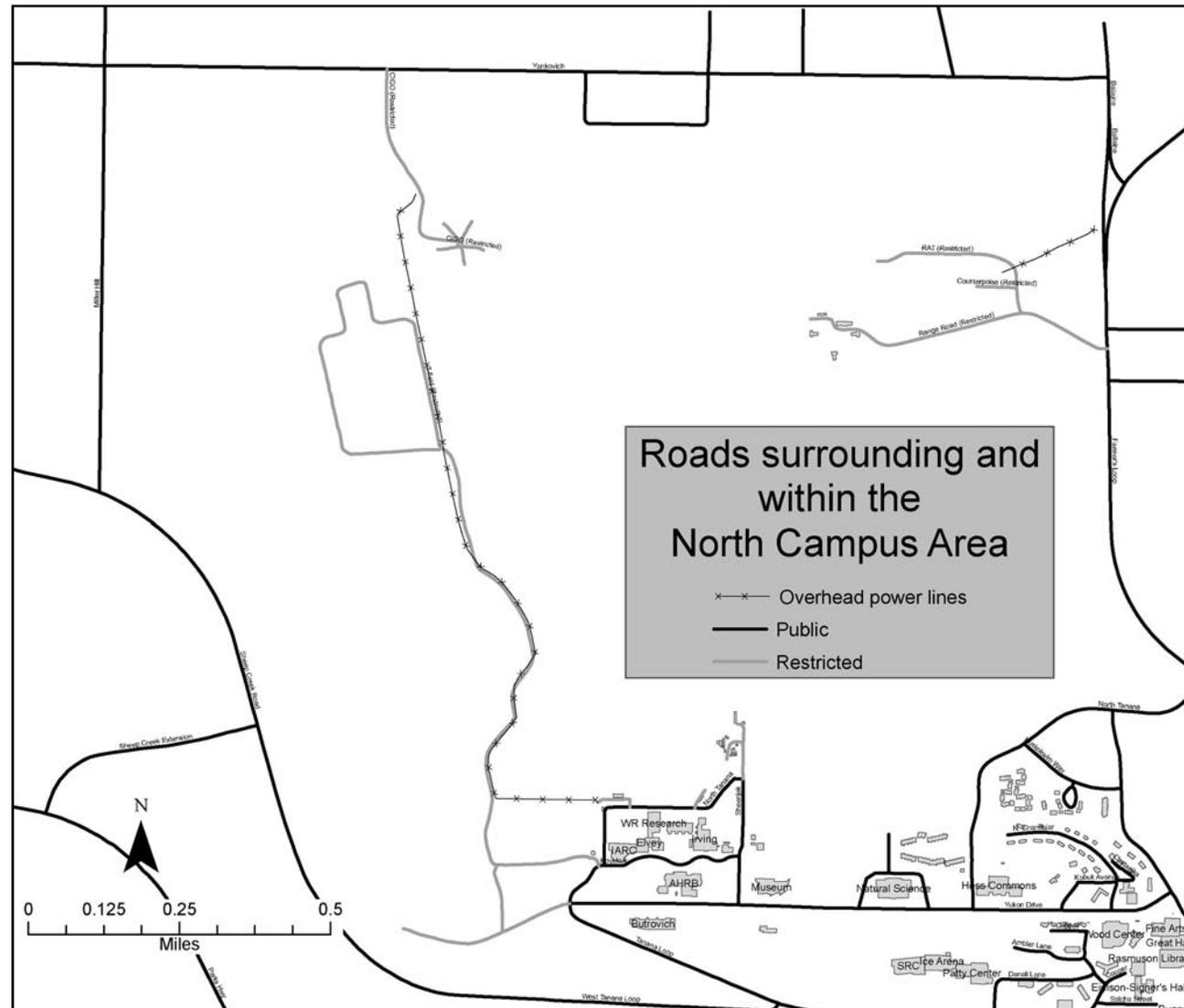
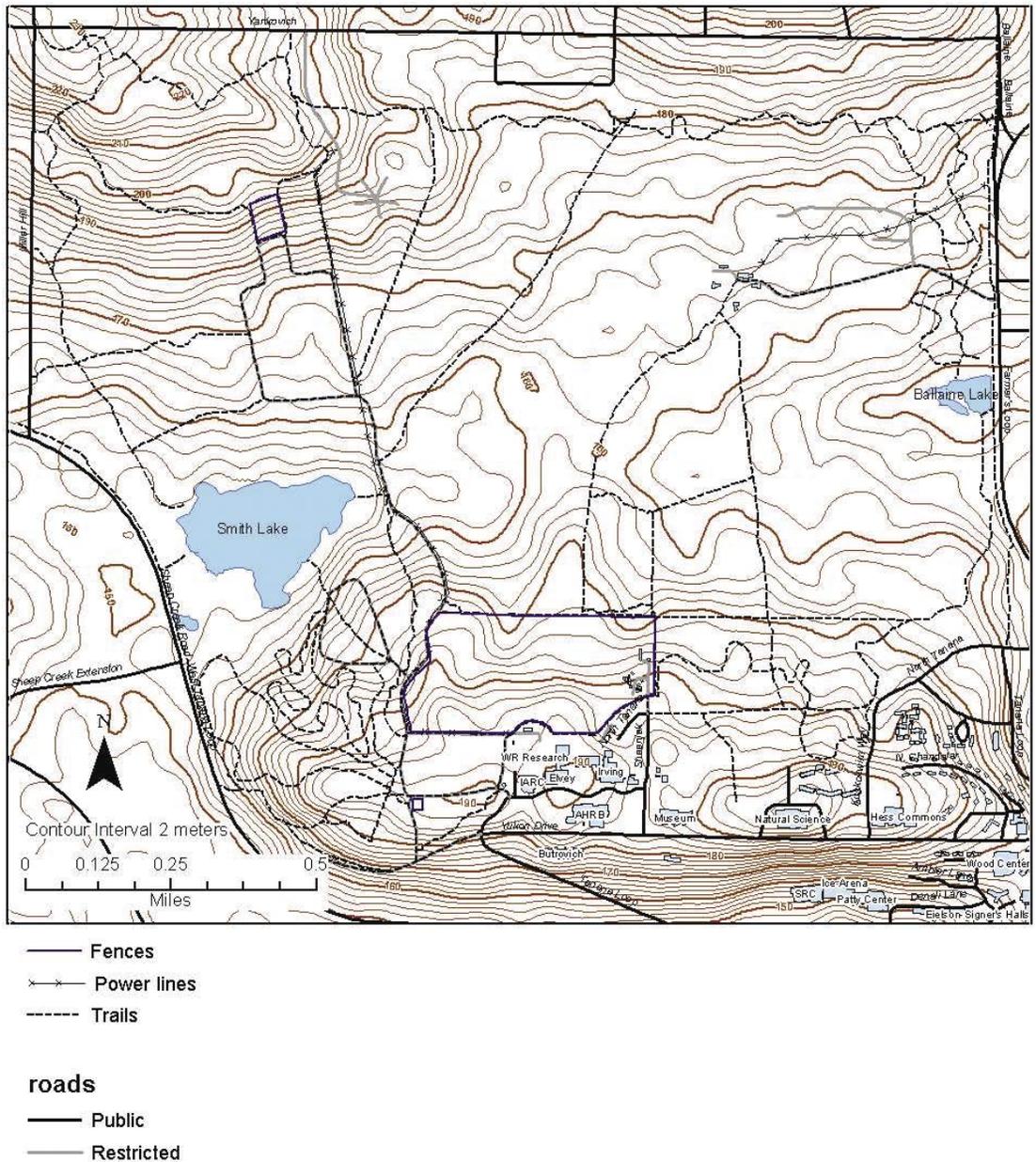


FIGURE 4.5—Topographical Map of North Campus



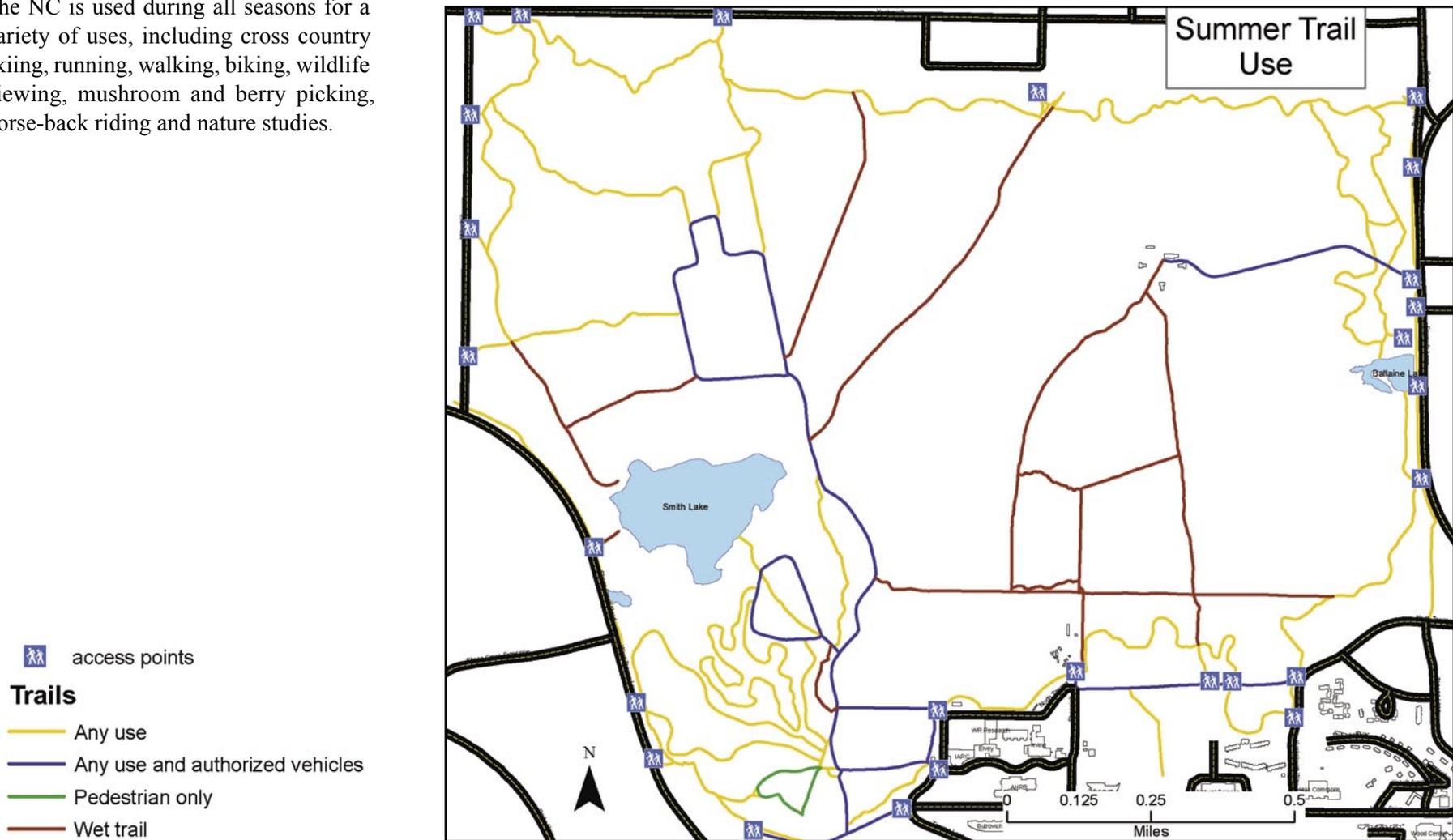
Topography and Soil Conditions on North Campus

The topography of NC includes a broad east-west bottom land between Smith Lake (west side) and Ballaine Lake (east side), with a northerly aspect slope that declines to the bottom land from the main campus and a southerly aspect slope that leads up to the north border (maximum elevation of 250 m) along Yankovich Road. No slopes in NC are as steep as those on the main campus south of Yukon Drive. Significant portions of the low-lying land between Smith and Ballaine Lakes are often wet and virtually impassable in spring and summer and sometimes until freeze-up in fall. Soils are classified as Minto, Fairbanks, and Goldstream silt loams (USDA Soil Conservation Service and Alaska Agricultural Experiment Station 1963). Frost-action susceptibility, engineering properties, and other characteristics for each soil type are provided in Appendix I. The Natural Resource Conservation Service is in the process of updating and digitizing the Fairbanks Soil Survey. When that is completed it will be included in the GIS database. There are no reliable maps showing current wetland areas and permafrost coverage for the NC.

Recreation

The NC is used during all seasons for a variety of uses, including cross country skiing, running, walking, biking, wildlife viewing, mushroom and berry picking, horse-back riding and nature studies.

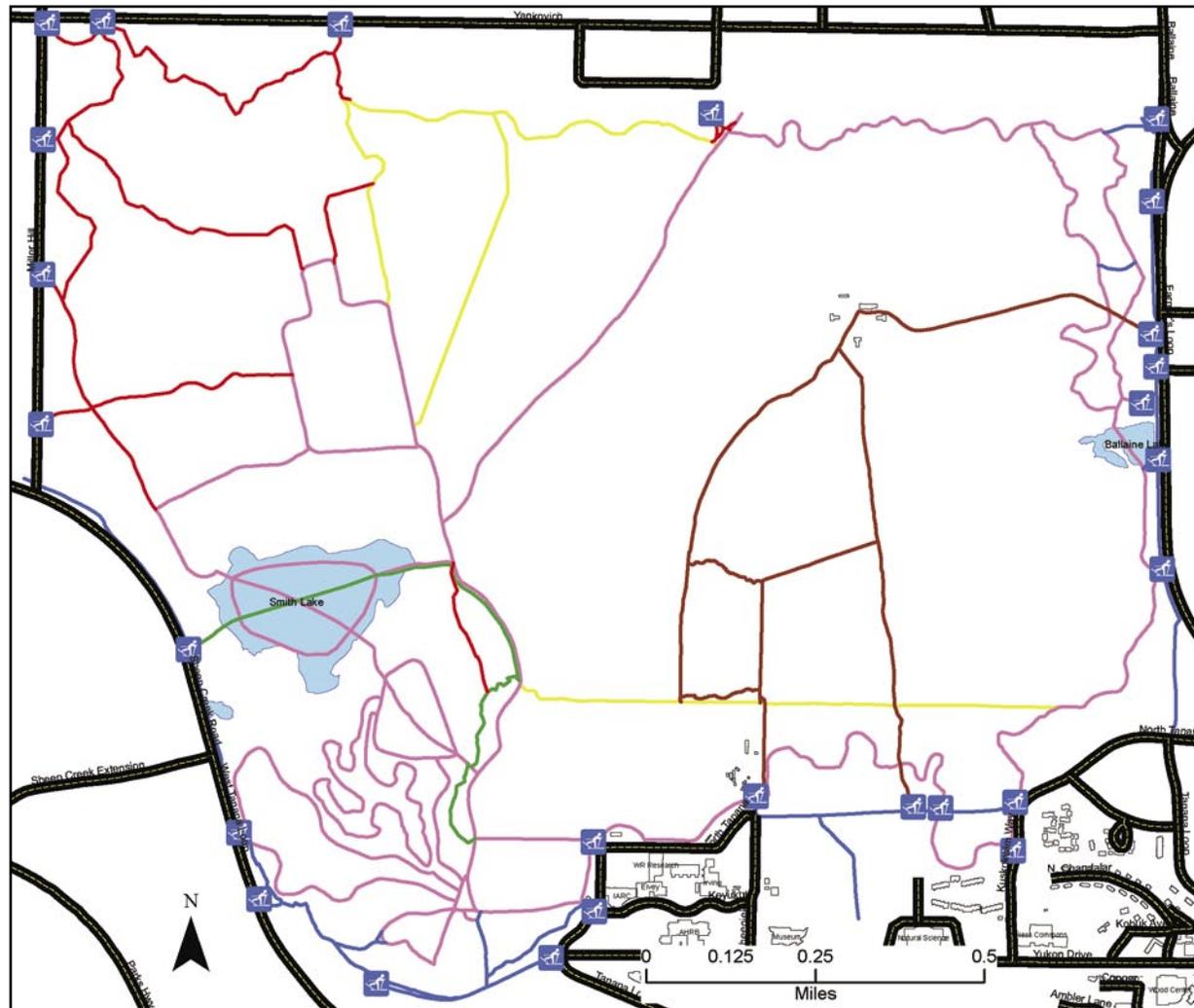
FIGURE 4.6—Map of summer trail use.



Summer trail use classifications are based on the Skarland Trails Management Plan (Todd 2000), and maps drawn by Dixon Jones, Rasmuson Library, UAF, and the UAF Trails Club Map. The locations of the trails were updated in 2003. By showing this map, the MPC is not endorsing all of the trails shown on the map, or any other trails that may exist in the North Campus Area, as official UAF trails.

“Any use and authorized vehicles” refers to roads.

FIGURE 4.7—Winter trail use



Although recreation takes place throughout the NC, there is a heavy concentration of winter recreation use in the southwest corner of the NC, along the T-Field road and around the T-Field. This area has a high concentration of trails, and all of the lighted trails are in this area. The Ballaine Lake area also has a high concentration of summer use from fishing.

-  access points
- Trails**
-  groomed, classic
-  groomed, skate and classic
-  groomed, walk
-  ungroomed, classic
-  ungroomed, dog
-  ungroomed, multi

Special management areas

There are several areas within the NC, which have their own management structures:

- The Arboretum including the Exotic Tree Plantation, T-Field and Potato Field, is under the management of the director of the Agriculture and Forestry Experiment Station (AFES).
- The UAF Biological Reserve is under the management of the director of Institute of Arctic Biology (IAB).
- The CIGO site is under the management of the Geophysical Institute. It is likely the CIGO site will remain in operation indefinitely.
- Smith Lake was designated as a “park” by the Board of Regents in 1950. The action specifically prohibited tree cutting within 100 yards of the lakeshore.

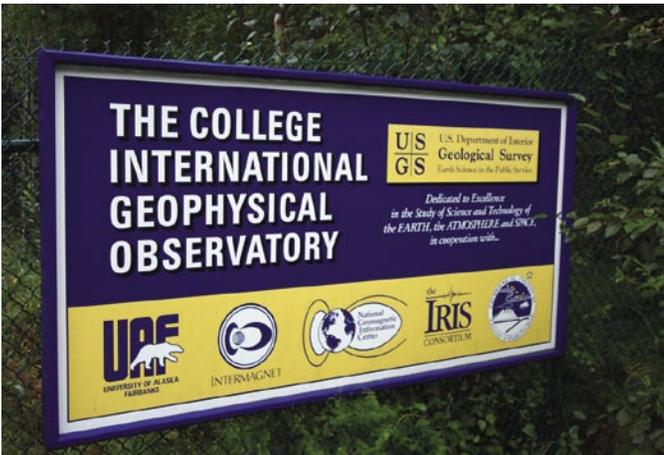
The NCS proposes that the special management areas mentioned above adhere to the guidelines set forth in this plan for the North Campus. More stringent guidelines can be adopted, but with respect to infrastructure or changes to the environment, the guidelines in this plan must be followed.

The management of the areas listed below, although not actually located within the NC boundaries, should be considered by the NCS because:

- the UAF Experimental Farm and Georgeson Botanical Garden border the NC, receive high visitation in the summer, and encourage use of the North Campus trails. Future management plans of either entity that would increase or change use in the NC should be considered by the NCS.
- the UA Museum of the North, attracts high visitation to the University, and hence influences use of the NC. Museum plans that may result in increased use of the NC should also be considered.
- the proposed open space east of the museum that will highlight Alaska Native heritage and art, if implemented, will be integrated with the NC by connecting trail systems. Use and management direction of the open space will influence the NC, so management plans will also be considered by the NCS.



Smith Lake.



The sign at entrance to CIGO site.

Chapter 5—A Vision for North Campus

The North Campus Subcommittee met throughout fall 2002 and spring 2003 to develop a vision for the North Campus. The first step in this process was to define the mission for the North Campus. It also identified opportunities and strategies to gather public input.

Defining the Mission of the North Campus

UAF’s Master Planning Committee directed the North Campus Subcommittee to develop a plan to:

“Protect the integrity of the North Campus for education, research and recreation, including maintaining and promoting the UAF trail system as a significant campus and community asset.”

The subcommittee subsequently defined their mission, developed value statements for the North Campus, and outlined steps for implementation.

Value statements

The Subcommittee established three value statements for the North Campus to reflect their interpretation of the Master plan’s directive for the North Campus Subcommittee and their vision of North Campus. The value statements formed the foundation of the North Campus plan.

- **Value Statement 1:** Preserve the biological and physical integrity, as well as the natural assets, of North Campus.
- **Value Statement 2:** Ensure year round, compatible access for research, education, and recreation.
- **Value Statement 3:** Promote the North Campus as a multi-use resource for the UAF and greater Fairbanks community.



Associate Professor Doug Schamel inspects a sample from Ballaine Lake during a field trip with his Natural History of Alaska class: from left to right, elementary education majors Mariah Sakeagak, Germaine Bartman, Phillip Wyman and Traci Beckham.

UAF PHOTO BY TODD PARIS

With respect to value statement 1, the NCS recognizes the North Campus has been subject to a variety of manipulations throughout its history and many structures and trails exist in the area that do not constitute a “natural state.” However, the value statement is intended to guide future management of the area in a manner that maintains existing conditions and prevents soil erosion.

Planning Goals

Following the interviews with users, and based on the directive from the MPC and mission of UAF, the NCS developed a list of goals that would guide the development of the North Campus Master Plan:

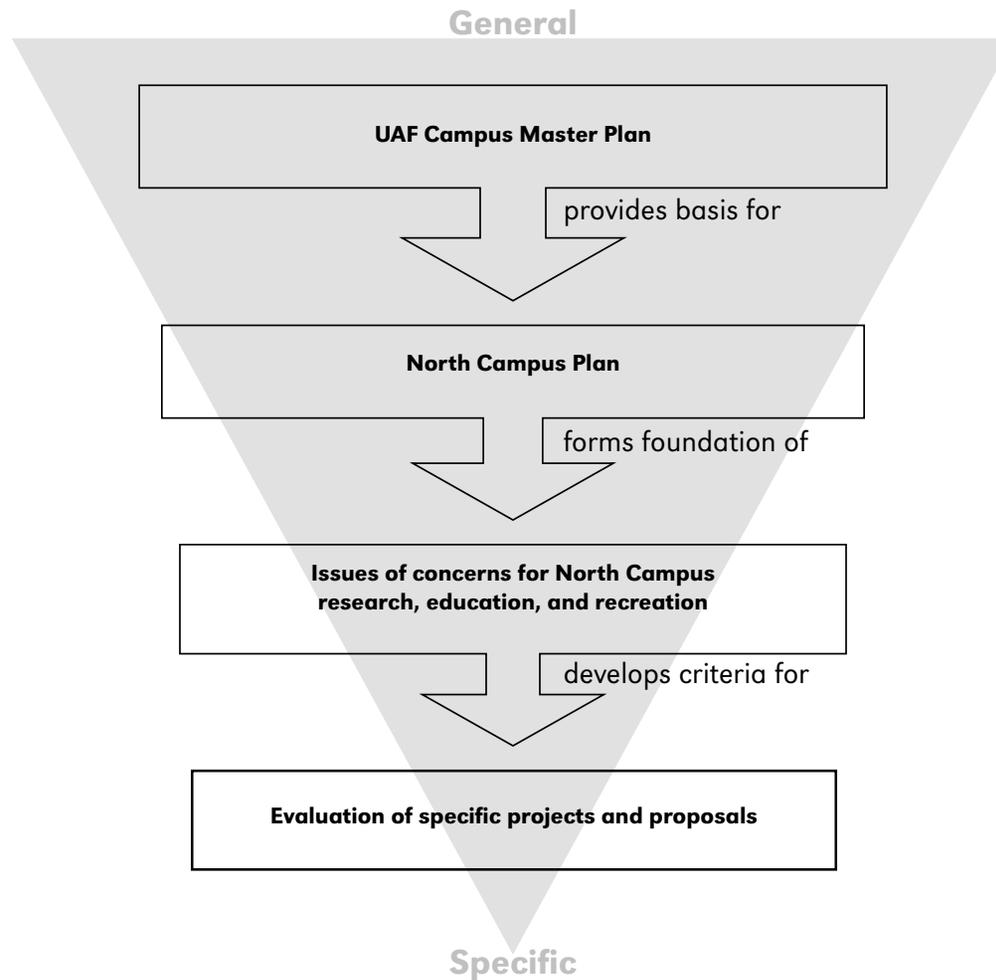
1. The NCS will take a balanced approach in which all uses—research, education, and recreation—are equally important.
2. All current, allowed uses will be permitted in the future, with expansions in use subject to examination.
3. All current, allowed uses fulfill the mission of UAF.
4. The management plan will emphasize current and potential future issues identified by stakeholders and the planning committee.
5. The management plan will provide guidelines for current uses. The management plan will also provide recommendations for future expansions in use with a ten-to-twenty year timeframe.
6. Certain areas of the North Campus may be more appropriate for specific uses, and the designation of areas for a particular use will be considered.

Recommendation for the North Campus

Currently the North Campus functions as a multiple use area for research, education, and recreation.

Based on the mandate from the MPC, the mission and value statements of the NCS, previous North Campus studies, feedback from different stakeholders, and the March 2003 public involvement meetings, the NCS recommends that the NC continue to be managed for multiple use. The action items in Figure 5.1 focus on balancing needs of different users within the constraints of the mission and values of the NC.

FIGURE 5.1—Relationship between NC Value Statements and Evaluation of Specific Projects and Proposals



The recommendations listed below are not intended to form a specific work plan, because such an approach would render the plan obsolete once the tasks have been completed. Rather, the recommendations listed below provide guidelines that can be used by the NCS to evaluate proposals for projects and use as they are received by giving meaning and specific definition to the value statements of the NC. The meaning and definition of the values statements can be thought of as issues of concern. In other words, a value statement such as “preserve the biological and physical integrity of the North Campus,” could be defined in terms of removal of vegetative cover, ruts on trails, melting of permafrost, trail width, trail surface (see Table 5.1, pp. 43-44). Thus as a project is proposed, whether it be research, education, or recreation, it can be evaluated against the issues of concern as developed by the plan to ensure the management decision is consistent with the mission and values of the North Campus.

TABLE 3—Issues of Concern for Activities Taking Place on the North Campus

Value statement 1: Preserve the biological and physical integrity, as well as the natural assets, of North Campus

Erosion, defined by:

- Removal of vegetation
- Water on trail
- Ruts in trails
- Ground void of cover/soil exposed
- Disturbance of permafrost
- Persistently muddy areas

Trail Width, defined by:

- Instances of trail braiding
- Average width of trail, trunk to trunk
- Tree removal

Visual Impact, defined by:

- Vegetative screening along trails
- Proximity to roads

Infrastructure, defined by:

- Buildings
- Power lines
- Towers, satellite dishes

Impacts to Environment, defined by:

- Removal of trees / plants, etc
- Introduction of non-indigenous items to environment
- Collection of specimens

Value statement 2: Ensure year round, compatible access and use for research, education, and recreation

Adequate Parking, defined by:

- Direct access to trailheads
- Areas where no UAF parking permit required
- Minimize crossing of roads

Exclosures, defined by:

- Fences
- Buffer zones

Opportunity for research, defined by:

- Protection of projects from disturbance by other users
- Information available on physical features of North Campus
- Means available to access research projects in winter months

Permitting process for activities in North Campus, defined by:

- % of projects in database
- Ease of permit process/number of North Campus users applying for permits
- Accessibility of information available to those conducting research

Access by School Groups, defined by:

- Bus parking
- Minimal road crossings
- Areas remain open

Viable trail system remain, defined by:

- Continuous loop around perimeter
- Lights for night use (winter)
- Walkers accommodated in winter

Signage along trails, defined by:

- Signs w/ map of trail system at all trailheads
- Signs w/ map of trail system at junctions
- Contact information for North Campus manager

Value Statement 3: Promote the North Campus as a multi-use resource for the UAF and greater Fairbanks community

Provide access for community members, defined by:

- Trails remain open to community use
- Compatible events continue to be allowed
- Proactive involvement of community

Allow community to provide input into management, defined by:

- Process for public comment
- Information available on who to contact for special use permission
- Responsiveness to public input

Chapter 6—Major Actions

Major Actions for North Campus

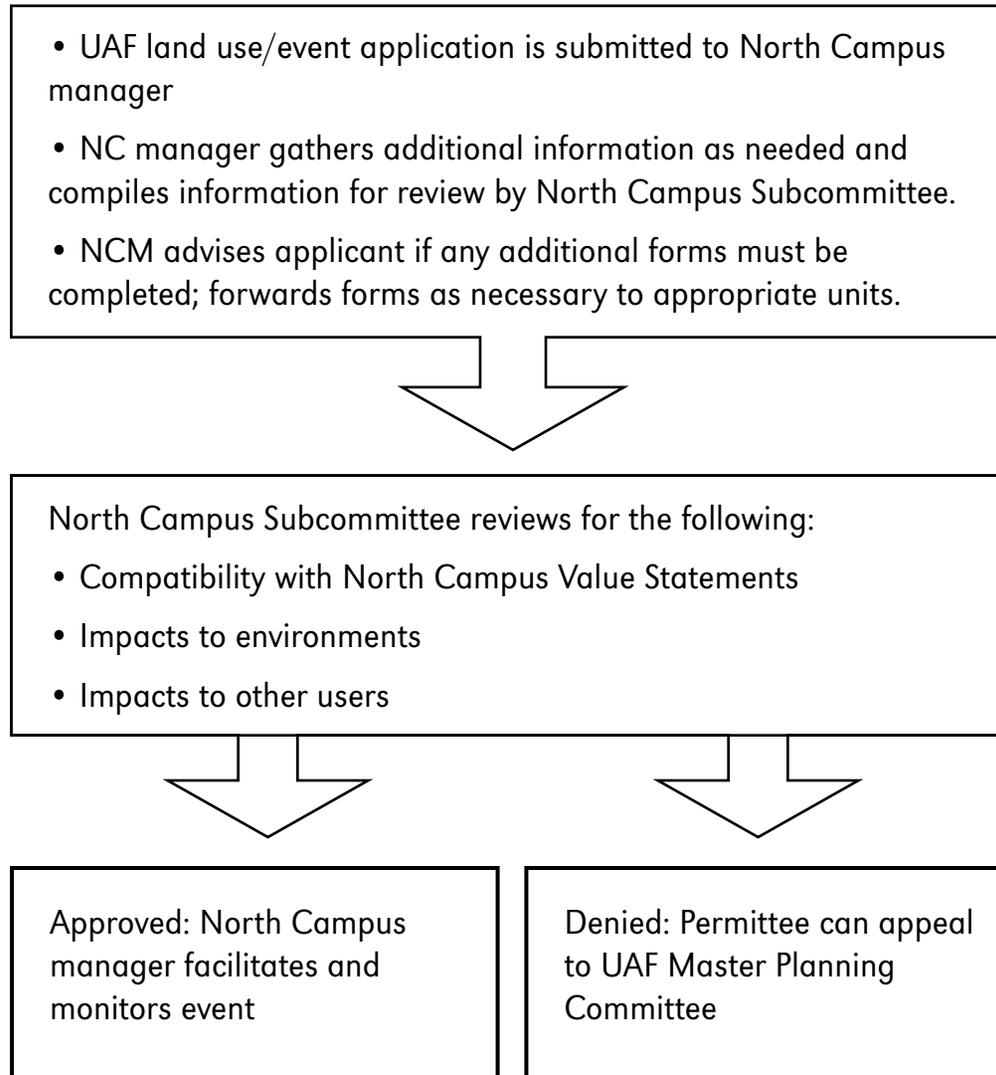
The following actions provide specific direction for meeting the broad management goals of the plan. Each action is described in this section, and a Guidelines and Implementation section follows.

Actions	Completion date
A1. Implement an effective management process.	Immediate
A2. Implement a permitting process for specific activities.	Immediate
A3. Develop and implement a system to monitor conditions, features, and uses	Ongoing
A4. Review and update existing plans for safety and security.	December 2004
A5. Develop and implement plans for areas of special concern.	May 2005
A6. Develop criteria for the design of Tanana Loop extension that pertain to issues of concern	December 2004
A7. Adopt and implement a wayfinding and signage plan	May 2005
A8. Remove abandoned infrastructure and restore original site features	August 2006
A9. Resolve trails designation and use issues	August 2005
A10. Adopt and implement standards for trail design and maintenance practices	May 2005
A11. Develop trail connections between main campus, North Campus, and surrounding areas	December 2004

A1. Action: Implement an effective management process.

The highest priority for the North Campus Plan is to establish a management process for the area to ensure that the vision, goals, and objectives of this plan and the UAF Campus Master Plan are achieved over time. This process must be flexible, responsive, and efficient

FIGURE 6.1—North Campus Permit Application Process



while at the same time protecting university interests and providing for approved research, education, and recreation activities.

The catalyst for this process is a North Campus manager (NCM) position. Funding should be secured to hire a manager as a year-round staff employee who is the first point of contact for those wishing to use the area. An equally critical element of an effective management process for North Campus is the North Campus Subcommittee (NCS). It will continue as a standing MPC subcommittee to assist the MPC in fulfilling the goals of the UAF Campus Master Plan.

A2. Action: Implement a permitting process for specific activities.

A permit must be obtained for activities that meet certain criteria prior to using the lands on the North Campus. The plan distinguishes between passive (e.g., individual or small-group recreation, most educational activities) and active uses (e.g., organized research, large-group activities, and commercial uses). Passive uses generally do not require a permit, although faculty should notify the NCM about class use of the area. The permitting process is intended to provide better data on research, education, and recreational events that take place in the area. Additionally, it will provide better monitoring and protection of research areas and projects.

A3. Action: Maintain and update the database on existing conditions, features and uses.

The database is a reflection of existing conditions, features and uses of the North Campus. It is a management tool that must be continually updated and should reflect both short—and long-term changes. An example of a short-term change in use that will have to be updated regularly is current research. There are also long-term projects that would enhance the usefulness of the GIS database. Examples of such projects include continued trail mapping, soil survey data, and a vegetation classification. This type of information will be of considerable value to all users.

A4. Action: Review and update existing plans for safety and security

All campus emergency plans should be reviewed by the UAF Fire and Police Departments, the Environmental Health and Safety Office, and Facilities Services to determine appropriate actions specific to North Campus. NCS will provide information on NC resources to facilitate this review. Items of particular concern will include fire response, routes for best access for rescue purposes, and possible hazardous materials locations.

A5. Action: Develop and implement plans for areas of special concern.

Five areas of special concern on North Campus have been identified: the former West Ridge Campground site, the Rifle Range, Smith Lake, Ballaine Lake, and the Arboretum. The specific concerns and suggested remedies pertaining to these areas appear in the Guidelines and Implementation chapter. The NCS will develop individual plans that solve problems associated with each of the areas.

A6. Action: Develop criteria for the design of Tanana Loop extension that pertain to issues of concern.

The CMP identifies the completion of Tanana Loop as a major action that is directly related to three of the five goals in the plan. The successful design of this roadway requires that many issues of concern be identified, verified, and prioritized for solution, including those related to the North Campus. Many issues were identified by the North Campus Subcommittee in the course of their work. However, these issues must be considered within the broad context of development of the campus as a whole and the increasing pressures of growth on West Ridge.

A7. Action: Adopt and implement a wayfinding and signage plan.

A wayfinding and signage plan (W/S) will guide and inform users of the North Campus, including current location, permitted uses, access, and general information. A comprehensive W/S system that provides needed information to the diverse users of the North Campus is needed.

A8. Action: Remove abandoned infrastructure and restore original site features.

As part of the permitting process, specific plans for removing infrastructure at the close of a project or activity will be required. Reclamation will also be required in order to stabilize and return an affected area to its original state.

Abandoned infrastructure (equipment, materials, fences, etc.) from past projects that currently remains in the NC but is no longer used shall be removed, as it poses a safety hazard and detracts from the esthetic value of the NC. The NCM will be responsible for documenting abandoned infrastructure, contacting responsible units, and making arrangements for removal. Responsible units will bear the costs.

- At all NCA entry points, signs will be posted with North Campus Manager contact information, and notification of research permit and group use requirements.
- Access points will be limited in order to control access and funnel users through trailheads with adequate information.
- “Confidence” markers will be installed along trails, and at all trail junctions directional signs with maps and use restrictions will be posted.
- The signs will be in compliance with UAF sign guidelines.
- All naming activities (trails, ski huts, etc.) must follow UA Board of Regents Policy P05.12.08—Naming and Use of Campus Facilities.

A9. Action: Resolve trails designation and use issues.

The UAF Campus Master Plan directs the North Campus Subcommittee to develop a plan that promotes the UAF trail system as a valuable campus and community asset. The trail system, although an important component of research and education, primarily serves the recreational interests of the UAF community and provides recreational diversity for the Fairbanks area. However, the trail system and its uses must be compatible with the other uses that occur on the North Campus and the value statements of the North Campus.

The majority of the North Campus trails have confirmed uses, locations, and designations. The remainder of existing trails, both formal and informal, requires clear resolution regarding approved uses, locations and designations, as some may be unsuitable.



Abandoned infrastructure on North Campus.



Typical summer trail conditions.



Typical winter trail conditions.

A10. Action: Adopt and implement trail design and maintenance standards and practices.

The UAF Master Plan calls for the promotion of the UAF trail system as a significant campus and community asset. To realize this goal, there must be trail design and maintenance standards that support the trail system and allow for future use while meeting the criteria set forth by the North Campus value statements.

A11. Action: Develop trail connections between main campus, North Campus, and surrounding areas.

Consistent with planning efforts and directives put forth in the Campus Master Plan, the Circulation and Parking Plan, and the Campus Landscape and Outdoor Art Plan, the NCS supports the development of trails that connect the main campus to the North Campus trail system, as well as to surrounding trails in the FNS Borough. These connections would be consistent with the value statements of the North Campus.

Guidelines and Implementation

This section of the plan provides specific guidelines pertaining to the research, education and recreation aspects of the North Campus, as well as specific implementation steps that support the actions outlined in the Major Actions chapter of the Plan.

Both short and long-term priorities have been identified. Some steps can be taken almost immediately and at little cost. Others require longer-term development and/or have budgetary impacts. For example, hiring a North Campus manager could be done relatively quickly; however, funding for the position has not yet been identified.

Regardless of the timeline necessary to implement the actions of the plan, the North Campus Plan is an integral part of the overall Campus Master Plan. It will bring improved organization, management and process to a very important part of the campus. It is anticipated that these actions, once implemented, will have the following consequences:

- Comprehensive and coordinated management will increase the benefits and quality of the experience to all users.
- No unchecked development will occur.

- Research needs will be better facilitated.
- Research will face more scrutiny with respect to infrastructure in the North Campus.
- Existing educational uses will be preserved, while evolving educational needs will be considered when evaluating future growth.
- Recreation opportunities will continue to be available at current levels, including the diversity of quality ski trails and supporting infrastructure.
- Multi-use trails may be improved.
- Although recreational use may increase, there may not be a corresponding increase in designated trails.
- Skiing will neither take priority over, nor compromise, other uses.
- Negative impacts to groomed ski trails will decrease with better management of access and improved communication among users.

Through the implementation of this plan, North Campus will truly become a multiuse area that provides opportunities for research, education and recreation.

A1. Action: Implement an effective management process.

1. Continue the functions of the North Campus Subcommittee

GUIDELINES:

The NCS will be involved in setting priorities for planning and management of North Campus lands. It will have primary responsibility for approving and monitoring routine activities affecting the area (e.g. routine trail maintenance, conducting resource inventories, etc.). In doing so, it will work in close coordination with the NCM and Facilities Services. It should continue to have a diverse membership representing research, education, and recreation interests and Facilities Services. The NCS should meet regularly (at least monthly) to discuss both routine and non-routine matters affecting North Campus. Management questions brought before the NCS that are not routine, that raise significant policy questions, or that are in conflict with the North Campus Plan or the Campus Master Plan will normally be elevated for MPC consideration and recommendations. Ultimately, it is the Chancellor who has authority to make management decisions not otherwise delegated.

IMPLEMENTATION:

1. Fill all vacancies on the NCS; add a representative from the Arboretum Committee
2. Complete implementation steps necessary to hire the NCM.
3. If funding for the NCM is not available, prioritize tasks outlined in position description (see Appendix J) and take necessary steps to accomplish actions through the NCS.
4. Make regular reports to the MPC regarding progress on implementation of the NC plan

2. Hire a North Campus manager (NCM)

GUIDELINES:

The North Campus manager will provide a vital function in serving as the first point of contact for all uses and activities in the area. The reporting structure will be determined by senior administration. The NCM will be a member of the Arboretum

Committee, as well as an ex officio member of both the NCS and the MPC, where s/he will report regularly on North Campus matters.

IMPLEMENTATION:

1. Finalize position description (see Appendix J) and reporting structure
2. Secure funding for position
3. Obtain hiring authority; advertise, interview and hire individual to fill position

3. Continue direct involvement of Facilities Services in North Campus matters.

GUIDELINES:

The third essential element of the North Campus management process involves Facilities Services (FS). FS staff, primarily Grounds, must be actively involved in NC decisions, both through membership on the NCS and direct consultation with the NCM. With guidance from the NCS, FS must approve and supervise all maintenance and construction, including volunteer labor activities. FS has the responsibility to ensure that safety, risk management and compliance requirements, and proper design and construction standards, are satisfied.

Conversely, FS will not initiate activities on NC without notifying the NCM. For example, major improvements to any existing infrastructure will require review and approval by the NCM/NCS. Exceptions are routine maintenance and/or immediate safety situations.

IMPLEMENTATION:

1. Work with Facilities Services to finalize trail design and maintenance standards and practices
2. Coordinate wayfinding and signage design and installation with Facilities Services
3. Facilities Services representative signs off on all maintenance and construction activities for which a permit is required
4. All volunteer work on NC lands involving maintenance and/or construction must be supervised by Facilities Services



Facilities Services workers place fence posts along the North Campus ski trails.

UAF PHOTO BY TODD PARIS

5. NCM meet regularly with the Grounds staff of Facilities Services to review NC activities progress

A2. Action: Implement a permitting process for specific activities.

1. Modify and implement the UAF land use authorization/event application process for North Campus activities

GUIDELINES:

In order to streamline the processing of permit applications for use of the North Campus lands, there will be one point of entry: the North Campus manager. Any individual or group wishing to use the lands must file a permit application (see Appendix K) with the NCM for activities such as research projects, large group activities, classes, etc. All research, education and recreation proposals must be examined to ensure that they do not conflict with the stated values and mission of the NC. Another reason for the permits is to ensure that non-sponsored users carry required insurance, will indemnify the university and, in most cases pay a fee to execute the permits. This includes events that have been held in the past. Failure to submit a permit application and obtain approval for using NC lands will result in termination of the project or activity.

The NCM will be responsible for doing the initial evaluation of all permit applications for North Campus, and will determine whether or not additional paperwork must be filed to meet university requirements, particularly in the case of groups not directly associated with the University. The NCM will assist all applicants in filing the necessary paperwork. As use of the North Campus continues to increase, it will be important to ensure that permitted activities do not occur over an existing research plot. In order to provide this protection for research, it is critical for NC management to know where research is located and the duration of the projects. At the same time, it is important for the NCS to evaluate research proposals to ensure they are compatible with the North Campus values. As part of the process, any permit requests denied by the NCS can be appealed to the MPC.

Applications for land use and events proposed for identified management areas (e.g., Mini-Track, CIGO site, Biological Reserve, Rifle Range, Arboretum), which have

their own management structures and restricted access, shall also begin with the NCM. However, the NCM will forward a copy of the proposal to the appropriate chief administrative officer (e.g. Institute Director or Dean). The officer will then review the application and provide her/his recommendations to the NCM.

If additional land use approvals are required, the NCM will advise the applicant and assist with completion.

IMPLEMENTATION:

1. Finalize the draft permit application (see Appendix H)
2. Disseminate information regarding the permitting process to current users, as well as through general campus information channels
3. Inform current users that all currently allowed uses will be continued; however, expansion in use will be subject to review by the NCS and NCM.
4. Provide assistance to applicants with paperwork required by permitting process
5. List approved permits on NC web site; update database accordingly

2. Evaluate all permit applications based upon the specifications set forth in the North Campus plan.

GUIDELINES:

Projects and activities on NC lands are evaluated based upon whether they are passive or active. Passive uses do not require any permit. Active uses require a permit, which is processed through the NCM.

Passive uses include individual and small-group recreation (e.g. walking, running, skiing, picnicking), most educational activities, or non-consumptive uses involving small groups. Fishing in Ballaine Lake is also considered a passive use when consistent with applicable regulations. These uses do not require any permit or formal notification to the NCM. Small, formally organized groups (for example, school groups) are encouraged to inform the NCM in advance about their intended uses and needs. However, the NCM, in consultation with the NCS, has the authority to require a permit, regardless of group size, depending upon the nature of the activity.

Active uses involve any organized research, commercial activities, consumptive use of resources (other than fishing in Ballaine Lake), creation or modification of infrastructure (e.g., roads, buildings, trails), significant modification of land resources, and organized events or group activities involving larger groups (normally 30 people or more), whether or not university-affiliated. These require notifying the NCM and securing a permit.

For active uses, the NCM will conduct the preliminary evaluation of the permit application. The NCM will review the permit application expeditiously, consistent with guidelines established by the NCS. The permit may stipulate limitations on uses, including but not limited to timing, location, impacts on other uses or resources, and requirements for insurance, cleanup and reclamation. For larger or more detailed applications, the NCM may require that the applicant make a presentation to the NCS.

As part of the permitting process, any permit application denied by the NCM or NCS may be appealed to the MPC and ultimately to the Chancellor.

Existing research projects may continue, assuming that a reclamation agreement is signed and the project meets NC access and management guidelines. If an existing project conflicts with these guidelines, the NCM will work with the PI to bring the project into compliance, if possible. Permission to start new projects may be dependent on satisfactory cleanup and/or reclamation of prior research projects sponsored by the same schools or institutes.

IMPLEMENTATION:

1. Evaluate the amount of required infrastructure and environmental manipulation for the proposed project or activity
2. Check all research proposals to: a.) ensure that there is not an existing project or that educational users are not displaced in the area; b.) identify incompatible infrastructure; c.) ensure a plan for removal of all equipment and infrastructure at the completion of the project
3. Ensure protection of research projects by locating away from existing trails when feasible, concealing to reduce vandalism and visual impact to other users, or fencing (as a last resort)

4. Review existing research projects to determine whether or not a reclamation agreement is in place. If not, contact the PI and get an agreement signed and on file
5. Continue to accommodate special events such as the Equinox Marathon, cross country and Nordic ski races, UAF Trails Day, BLM Outdoor Days, and other educational events originating with community and school groups.
6. If a project requires power, it should be located in the areas where power is currently present, unless it can be demonstrated that this condition poses an insurmountable obstacle to a project deemed important to UAF.

3. Promote the permit system.

GUIDELINES:

Although some aspects of the permitting system are currently in place, it is not widely adhered to by North Campus users. It is essential that the permitting system become widely understood and used. Promotion of this system will be critical.

IMPLEMENTATION:

1. Post flyers at trailheads indicating that the permit is required for research, education and recreation, the latter two for large-group activities.
2. Distribute information regarding the purpose of the permitting process
3. Actively promote the permit process among past users.

4. Expedite the permitting and approval process in order to make it as efficient as possible.

GUIDELINES:

In order for the system to work, the application process must be simple and quick, and applications must be processed with expediency. With one entry point for all activities on NC, the system will be relatively uncomplicated. However, processing of applications must occur quickly so that users gain confidence in the system and do not try to circumvent it. The amount of time for review will depend on the complexity of the proposal.



Chuck Kuhns gives a thumbs up while running in the Equinox Marathon.

UAF PHOTO BY RYAN WILSON

IMPLEMENTATION:

1. Set a schedule for permit application submission and review. Make the schedule available to a wide audience, including web postings.
2. If additional information is required of an applicant, request it as soon as possible, in writing.
3. Advise the applicant of approval or denial of the application immediately.
4. All appeals will be forwarded to the MPC for immediate consideration by the Executive Committee. The MPC will be informed of the appeal and, if the complexity of the proposal merits, will be considered by the entire body.

A3. Action: Develop and implement a system to monitor conditions, features, and uses**GUIDELINES:**

A monitoring system is required to ensure that the recommendations of the plan are met. The monitoring system will compare current conditions to desired conditions. The GIS database that has been developed will provide a key component in the monitoring of the conditions of the NC. Monitoring of conditions will be one of the primary responsibilities of the North Campus manager.

IMPLEMENTATION:

1. Monitor the following related to NC use:
 - The number and width of trails developed to access research sites
 - Total number of research projects and size of new research infrastructure
 - Number and types of university classes that use the NC
 - Areas used for education
 - Increase or decrease in trails (including new or expanded) related to all NC activities
 - Width of the trails, as measured on average trunk to trunk
 - Amount of disturbed ground cover on trails, as measured by instances within a given trail mile
 - Evidence of change to permafrost conditions (melting, heaving, etc.)
 - Incidences of reported conflicts between education, recreation and research

2. Maintain and update the Geographic Information System (GIS) database that has been developed.

GUIDELINES:

The following information is currently contained in the existing GIS database:

- Research: location, size/shape of site, type, timeframe, PI
- Education: location, size of area, class, instructor for areas used for education
- Roads: location, length, name, right-of-way for AK Department of Transportation roads
- Trails: location, length, width, seasonal uses, surfacing, grading
- Arboretum: location, size of area, vegetation classification, Multi-band aerial image circa 1978, aerial image circa 1948
- Trailheads: locations
- Gates: locations
- Fences: locations, lengths
- Digital Elevation Models
- Visual bands aerial image, circa 2002

The main trails and roads are mapped, as are some of the user trails; however, many user trails remain unmapped. A multi-spectral image of the North Campus should be acquired to aid in the management of and planning for scientific research on North Campus. The multi-spectral image can be used for classification of vegetation communities. This process will be greatly facilitated by the existing vegetation classification done on the Arboretum that can be used for highly accurate training areas. The Natural Resources Conservation Service (NRCS) has completed the fieldwork for the Fairbanks Soil Survey. The data are currently being digitized..

IMPLEMENTATION:

1. The NCM will have primary responsibility for the tasks associated with maintaining and updating the database
2. Obtain a multi-spectral image of the North Campus
3. Incorporate digitized files from the Alaska NRCS ftp site and incorporate into the database
4. Document the formal boundaries of the Smith Lake buffer zone

A4. Action: Review and update existing plans for safety and security.

GUIDELINES:

Safety and security actions specific to the North Campus must be part of existing plans. All plans should clearly identify the potential problem (fire, personal injury, assault, etc.) and appropriate responses.

IMPLEMENTATION:

1. Identify and compile all documents that are concerned with issues of safety and security on North Campus. Of particular importance are:
 - The response plan for fires in the North Campus
 - Routes to access areas of the North Campus for rescue purposes
 - Hazardous materials that may exist in the North Campus
2. Work with the UAF Police, Fire, and Environmental Health and Safety Departments to identify issues of concern for the North Campus that are not covered in the aforementioned documents.
3. Post safety and security information at appropriate locations throughout North Campus as part of the Wayfinding and Signage Plan.

A5. Action: Develop and implement plans for areas of special concern.

1. Develop and implement a plan for the ridge top area (previous campground) of West Ridge

GUIDELINES:

The area formerly known as the West Ridge Campground requires consideration for best use. Given its proximity to the Georgeson Botanical Garden and the Arboretum, as well as other current uses, there may be ways to enhance the ridge top area that will be of benefit to all users. The NCS shall review current and past uses of the area and develop potential strategies for improvement, which may include no formalized use of the area.

IMPLEMENTATION:

1. Identify all potential stakeholders and issues associated with the ridge top area
2. Form an ad hoc working group with wide stakeholder involvement to review and evaluate all uses of the area (past, current and potential); develop a plan for the area if appropriate that will be mutually agreeable, and include control of access, prevention of vandalism to research, safety concerns, and minimize environmental effects to the area.
3. Identify funding sources to implement the plan for the area.

2. Investigate the feasibility of re-establishing a campground on campus

GUIDELINES:

Interest has been expressed in reopening the West Ridge Campground. Although the NCS recommends against re-opening the West Ridge campground due to concerns over safety, impacts to the land, and vandalism to research, it acknowledges that there are other pertinent issues relevant to the use of this ridge top area (see Step 1. above). If it can be documented that a campground on campus is a legitimate need, the NCS should investigate possibilities for North Campus or elsewhere.



The former West Ridge Campground.

IMPLEMENTATION:

1. Document the history associated with the creation of the campground, particularly the involvement of the Alumni Association and ASUAF; make a recommendation regarding outstanding issues surrounding the previous operation;
2. NCM will conduct a study to determine if there is a legitimate need for a campground on campus. If there is, identify a user group to determine the appropriate scope of operations, including management, and potential locations, either on North Campus or elsewhere on campus
3. As part of the evaluation of the ridge top area, include consideration of a campground

3. Develop and implement a plan for the Rifle Range

GUIDELINES:

The rifle range is a unique education facility on the UAF campus and a valuable facility for the UAF Athletics and Recreation Department. Concerns have been raised over the facility's present conditions and whether it is actually used to its full potential. The NCS shall develop a plan if continuation of the rifle range is deemed appropriate.

IMPLEMENTATION:

1. Determine actual uses and frequency, both by the university and the community;
2. Assess the range for safety as well as noise; this should be done in collaboration with the UAF Athletics and Recreation Department and Facilities Services;
3. If documented usage indicates a clear need for the range, form an ad hoc working group with appropriate stakeholders, and develop a plan for its continued use and improvement. Include noise mitigation measures, controlled access, and specific hours when the rifle range can be used.
4. Identify funding sources to implement the plan for the area.
5. All requests for use will be processed by the NCM.

4. Develop and implement a plan for Smith Lake access

GUIDELINES:

Smith Lake is a unique area of North Campus. In 1950, the Board of Regents created a 100-yard “park” around the lake. There are legitimate concerns about the various access points to the lake, as well as the park designation itself.

Access to Smith Lake has been an ongoing issue for many years. Specific concerns related to the parking situation on Sheep Creek Road have been raised by the Alaska Department of Transportation. Although access is more of an issue during the winter months when Smith Lake provides early season skiing, as well as a flat area for beginners and children, to date there has been no effective solution to the Smith Lake access issue. The NCS shall develop an access plan for Smith Lake.

IMPLEMENTATION:

1. Review all pertinent documents related to Smith Lake and the specific designation of a “park” that may have implications for access. Revisit the designation to determine its applicability to the current plan.
2. Formally identify the actual 100-yard buffer zone boundaries around Smith Lake.
3. Consider the following restrictions on all trails within the hundred-yard buffer, if it is retained:
 - a. The trail connecting the south side of Smith Lake to the Potato Field can be no wider than 30 ft. measured from tree to tree.
 - b. The trail connecting the northwest side of Smith Lake to the T-Field Road can be no wider than 30 ft. measured from tree to tree.
 - c. The trail connecting the east end of Smith Lake to the T-Field Road can be no wider than 15 ft. measured from tree to tree.
 - d. The remainder of the trails will be no wider than 5 ft. measured tree to tree.
4. Identify both current and desired uses for the area. Major access from Sheep Creek Road at the existing trail to the lake should not be encouraged.



Looking west near Sheep Creek access.



Looking east near Sheep Creek access.



A fly fisherman practices his technique at Ballaine Lake.

UAF PHOTO BY TODD PARIS



Associate Professor Doug Schamel points out some aquatic animals that Vicki Harbison found in her sample.

UAF PHOTO BY RYAN WILSON

5. Review plan status for both the realignment of the Alaska Railroad and the Miller Hill Bike Path and how either or both could impact access to Smith Lake.
6. If there are no legal impediments to the use of Smith Lake, a plan for safe access and minimal impact from some point along Sheep Creek Road shall be developed. Elements of the plan would include:
 - a. Parking should be limited in size, so as to not become a surrogate access point for other trailheads, such as Ballaine Lake, the Ski Hut, and Musk Ox Farm.
 - b. Ideally, parking should be north of West Tanana Loop/ Sheep Creek Road so users do not have to cross the road to access the NCA; however, encroachment into the NCA is strongly discouraged. A preferable alternative is rerouting the road to the south, allowing parking on the campus side of the road.
 - c. The North Campus Subcommittee should be highly involved with any planning process and subsequent decisions made regarding parking along West Tanana Drive which will affect the NCA.
 - d. Converting the intersection of the West Tanana Drive, Sheep Creek Cutoff, and Sheep Creek Road into a three-way stop should be investigated.
7. Identify funding sources to implement the plan.

4. Develop and implement a plan for Ballaine Lake

GUIDELINES:

Ballaine Lake poses a special subset of management concerns. The lake is easily accessible from Farmer's Loop Road, is stocked with fish by ADF&G, and receives heavy use. Because of the heavy use there continue to be strong concerns about bank erosion, litter, and human waste. Issues to consider include:

- a. Effective management strategies with increased use
- b. Should additional infrastructure be installed at the site (waste containers and portable toilets)?
- c. Bank erosion should be monitored and mitigation steps taken if needed. Mitigation steps might include boardwalks or temporarily closing certain sections of the bank to use.

- d. Management signs are needed (such as “please keep this area clean”, “stay on designated trails,” etc.).

IMPLEMENTATION:

1. Conduct a review of Ballaine Lake uses and current management with representation from all stakeholder groups
2. Identify funding sources to support management of Ballaine Lake
3. Implement recommendations of management study.

5. Coordinate with the Arboretum Committee on all matters pertaining to the Arboretum

GUIDELINES:

The Arboretum was established primarily for research and education. There should be no significant expansion of trails in this area. Although the Arboretum is under the direction of the Arboretum Committee, all uses of the area must comply with the NC Plan. Since it comprises a significant portion of the NC (approximately 300 acres), it is imperative that the NCS and the NCM coordinate management efforts with the Arboretum Committee. The NCM is the first point of contact for all permit applications relating to the Arboretum. The Arboretum Committee will review and act on all such applications.

IMPLEMENTATION:

1. Appoint a member of the Arboretum Committee to serve on the NCS.
2. The NCM will serve on the Arboretum Committee
3. The NCM will review all permit applications involving the Arboretum and forward them to the Arboretum Committee for action.

A6. Action: Insure that the design of Tanana Loop extension addresses issues of concern.

GUIDELINES:

Until the Tanana Loop extension design is completed, there is no way to know exactly where and what the impacts of this roadway will be on North Campus. Based on preliminary designs, however, there are anticipated impacts which must be considered prior to design work. Although potential impacts have been identified during the NC planning process, these impacts must be further scrutinized. It will be essential that the NCM and the NCS lead a process that clearly identifies, from the list of recommendations, those issues that are insignificant and possible “red herrings;” those that can be easily mitigated, say through planned relocation, and those that present significant difficulties and require substantial funding or other resources to solve. Issues discussed herein have not been fully reviewed yet to determine their relative merit.

When design work does commence on the road, there should be at least one representative from both the NCS and the MPC on the user group.

The most significant potential impacts of the proposed Tanana Loop extension are:

- long-term research plots, as well as some storage and instrumentation buildings, may require relocation
- increased lights and noise could significantly compromise wildlife research
- new security measures may be required as accessibility increases
- trail alignments and access may be impacted and require relocation

Based upon the information that is currently available regarding the potential alignment of Tanana Loop, the following recommendations for its design include:

General:

- a. As part of the project, include funding for relocation of trails, critical trailheads, trail access points, warm up huts, research projects and other impacted structures used for research, education and recreation.

- b. If possible, align the road so that it stays within the existing cleared area as much as possible. In all likelihood, soil conditions will dictate much of the alignment as well as circulation and increasing parking demands on West Ridge. Minimizing encroachment into North Campus, however, is in accordance with Value Statement 1 and contributes to the overall well-being of UAF faculty, staff and students.
- c. Design the road and include crossings to ensure safe and convenient access to the North Campus. Every effort should be made to include tunnels or bridges to accommodate all research, education, and recreation users, minimize at grade road crossings for public safety, and promote the idea that the North Campus is, indeed, part of campus. During the summer months gates can be installed to prevent vehicles from entering the trail system, with the gates open in winter so grooming equipment can pass.
- d. Visitor parking needs to be provided convenient to the trailhead. The possibility of a central parking area, trail access, and beginner's ski area on the land NE of the museum and south of the proposed Tanana Loop extension should be explored. This could be adjacent to, and coordinated with the proposed UA Museum/NSF open space. Plans for this open space should allow for North Campus trail access in case this is necessitated by construction of Tanana Loop.



The ski hut at trailhead west of IARC.

Research:

Current research areas and associated issues with the roadway include:

There are 17 documented research sites within 200 meters of the proposed road alignment. The IAB Biological Reserve, including the paper birch tree grove and its transition into spruce forest north of the ski trail behind the Irving and O'Neill Buildings, is an environmental resource for research and education. The Reserve is unique and irreplaceable on the UAF campus in terms of accessibility by students and researchers and as habitat rich in diversity of plants and animals but reclusive and undisturbed enough for study. It contains a variety of animal holding facilities, and observatories. The Biological Reserve has been used since the 1960s for physiological and ecological studies. Several long-term research plots may not be



Elementary education majors Thad Curtis and Emily Mcguire inspect and take notes on samples collected from Ballaine Lake during a field trip in their Natural History of Alaska class.

UAF PHOTO BY TODD PARIS

re-locatable. Current and proposed research investment in this area includes \$15M in programs.

The close location of the Biological Reserve to Irving Building allows for research instrumentation connections between field site and labs, access to power and water, access to labs and lab equipment, and better security than more remote sites. Research sites used for animal research require oversight and inspection by federal agencies and/or their representatives at UAF. Any relocation of animal research will require compliance with federal animal health regulations.

The GI storage areas may have to be relocated, as well as the College International Geophysical Observatory Data Interface Analysis shed.

Recommendations:

- a. Minimize, as much as possible, impacts on long-term research areas.
- b. Evaluate existing research projects and facilities to determine feasibility of relocation, including designation of alternative research sites.

Education:

The NCA is a major teaching resource for UAF and the Fairbanks community. The trails just north of GI, O'Neill and Irving as well as the ski hut trailhead are the major access routes for biology, natural resources, oceanography and other UAF science classes. Additionally the IAB Biological Reserve and the area just northwest of the ski hut are used for instructional activities in several Biology & Wildlife classes (e.g., ecology and animal behavior). The proposed Tanana Loop extension could possibly eliminate the white birch stand (north of the Irving Building) annually studied by ecology students and may also require relocation of animal holding facilities that are used by classes studying hibernation and other animal adaptations to the cold. The trailhead (ski hut area) and nearby overlook parking area is the principal staging area for K-12 school activities in the North Campus area. The Borough-wide Outdoor Days, in which more than 900 school children participate in science-related activities, is centered in the woodlands immediately west to northwest of the existing Tanana Loop.

Recommendations:

- a. Road alignment designs will need to ensure convenient and safe access to the NC for students and instructors.
- b. If possible, the road should be designed to avoid relocation of animal holding facilities in the Biological Reserve.
- c. Road alignment designs should provide for parking and a staging area for larger school groups (K-12) that use the NCA for science activities.

Recreation:

The area north of the West Ridge buildings contains major access points to the North Campus area from the main recreational trailhead to a portion of the historic Skarland trail that parallels the existing parking area. The trailhead, in particular, is used heavily by UAF, school groups, the community and visitors for personal as well as group recreational activities. Local high schools, in particular, use this area for competitive cross country running and ski events, and the extension would bisect a portion of the Equinox Marathon trail. The existing ski hut and main trailhead to North Campus could be displaced by the proposed Tanana Loop extension. If relocated, the new site could be significantly improved over the current location if it included enough space to accommodate buses for school events and a large staging area for races.

A portion of the Skarland trail could perhaps be eliminated or isolated. The Memorandum of Understanding with the FNS Borough states that UAF will make every attempt to preserve this trail since it is also part of the Borough trail system; however, UAF does reserve the right to relocate the trail. This portion of the trail system also includes the major access points to North Campus trails systems. The proposed Tanana Loop extension would require relocation of the trail. Without relocation, 0.4 miles of existing trail will be isolated from the rest of the trail system, and 0.4 miles of trail would have to be eliminated. Trail relocation will, in turn, impact the Biological Reserve Research area and other storage areas.

Recommendations:

- a. Multi-use trails lost due to the construction should be relocated, especially the historic Skarland Trail. For every kilometer of lighted trail lost a new section of trail should have lights installed.



Agnes Stowe, a junior majoring in civil engineering, enjoys a loop around the award-winning UAF ski trails with Tim Stallard, a graduate student working on a master's in business administration.

PHOTO ©2003 MATT HAGE

- b. The 6-Mile Trail should be continuous. The width needs to be 15 feet to accommodate skate skiing and classic skiing.
- c. A vegetation barrier should be left between the new road/bike path and the trail system. This helps to keep vehicles off the trail, reduces noise, provides a buffer for research projects and education programs, and helps maintain the natural setting.
- d. The trails should be aesthetically pleasing with gentle meandering curves. Avoid long straight sections close to the road.
- e. If wet ground is crossed, chip trail or other appropriate coverings should be installed to facilitate use in the summer.
- f. The location of the ski hut should have good visibility from a campus building to prevent vandalism.
- g. All-season vehicle access to the ski hut needs to be provided.
- h. A wide area with gentle grades needs to be provided near the ski hut. The area can double as a starting zone for running and ski races. For a race start the widest part of the trail needs to be at the start line. The trail should continue at full width for 100 yards, after which it can slowly narrow in width with no constrictions.
- i. Possible trail connections between the proposed UA Museum of the North/NSF open space and the North Campus must be factored into both the design of Tanana Loop and the proposed Troth Yeddha' Park, as well as trail connections between core campus and North Campus.

IMPLEMENTATION:

1. Catalog all anticipated impacts of Tanana Loop completion. For each impact, a specific reference to a research project, infrastructure, educational program, event, etc. must be made.
2. On a case-by-case basis, examine each impact identified in 1. and clearly identify whether it is: an insignificant issue; an activity that could be relocated to another area on North Campus or elsewhere on main campus; an activity that cannot be terminated or relocated and will require significant planning and resources to tackle.
3. Through the MPC, make recommendations to the Chancellor for consideration of Tanana Loop issues in the design process.

4. Have representation on the Tanana Loop user group; NCM should attend as an ex officio member

A7. Action: Adopt and implement a wayfinding and signage plan

GUIDELINES:

Wayfinding and signage are critical to the North Campus. Of primary importance is marking trails for safety and directional purposes. Users need to know where they are at all critical juncture points. Posting information pertinent to trail use is also important, including approved and unapproved uses of particular trails.

IMPLEMENTATION:

1. Post signs at all NC entry points with NCM contact information, and notification of research permit and group use requirements.
2. Limit access points in order to control access and funnel users through trailheads with adequate information.
3. Install “confidence” markers along trails, and at all trail junctions post directional signs with maps and use restrictions.
4. All signs will be in compliance with UAF sign guidelines.
5. All naming activities (trails, ski huts, etc.) must follow UA policies and practices. All existing names on NC that have not been formally approved must go through this process.

A8. Action: Remove abandoned infrastructure and restore original site features

GUIDELINES:

NC values are maintained by restoring lands to near-original conditions when developed land uses have ended.

All structures and equipment from projects or activities must be removed within a reasonable time from the end date of the project. A “reasonable time” will be



Maps currently posted on North Campus trails.

defined by the complexity of the equipment removal, the time of year in which the project ends, and potential for project renewal. Responsibility and funding for removal must be identified in advance as part of the approval process. Each project must be directly affiliated with, and under the responsibility of, a UAF school, institute, or department and must file appropriate permit applications. This is also applicable to any non-affiliated organizations. The reclamation process, including possible reestablishment of natural vegetation, needs to be a best effort as determined by the NCS.

New or expanded structures or equipment will be subject to the permitting process described in A2.

IMPLEMENTATION:

1. Review the database to determine how many existing projects have signed reclamation agreements on file; draw up agreements for those that are not on file and get them signed
2. Develop a schedule for project reclamation. Where old projects are identified but the responsible unit is unknown, work with Facilities Services to reclaim the area.
3. Conduct periodic on-site review of all research sites to identify any existing or potential problems; notify primary investigators whose projects are scheduled for completion for details of clean up plan, including removal of all equipment.
4. Review all proposals that require new or expanded structures or equipment, or significant land use.

A9. Action: Resolve trails designation and use issues

GUIDELINES:

This document supersedes all previous trails plans, including the earlier UAF Skarland Trails Management Plan that was never formally approved. However, numerous trail issues still require resolution pertaining to designation and/or use. Two examples are the connector trail behind the ASF antenna and the T-Field trail. There is also a network of informal trails that is not necessarily disputed but

has developed over time, often for no other reason than being the shortest route between two points. Some of these trails may result in unnecessary degradation of the land and could be eliminated.

For approved trails, the following apply:

- a. On designated, groomed ski trails: dogs, walkers and wheeled vehicles are not allowed in winter.
- b. Trails within the Arboretum will not be widened (i.e., the average width as measured trunk to trunk will not increase over current conditions nor will extensive brushing be allowed).
- c. The T-Field road should be improved to accommodate wheeled vehicle use during the wet times of the year
- d. Access to research plots during winter should be limited to snowmachine or non-motorized means only; no heavy, wheeled vehicles are permitted in wet areas during the rest of the year.

Research sites need to be accessed in a means appropriate for the management regime of the trails and roads involved.

The NCS suggests that, if needed, a snow machine is available for accessing research plots in winter (researchers can coordinate with the NCM). When required, access that negatively impacts ski trail grooming or wet areas should be coordinated with the manager so that corrective work can occur. It should be noted that recreational snowmachine use is not allowed in any areas of campus.

IMPLEMENTATION:

1. NCM, in conjunction with NCS, identifies locations and issues surrounding all disputed trails and roads.
2. NCS brings together all stakeholders of disputed trails and roads to discuss issues and determine designations and uses.
3. The NCM identifies the locations and issues surrounding the informal trail network. The NCS will evaluate the informal trail network and determine which trails will be eliminated or receive formal designation and approval. Some issues for consideration include:



On 52% of all trail miles, any non-motorized use is allowed.



17% of all trail miles, i.e., roads, allow any non-motorized use, plus authorized vehicles.

- a. The feasibility of a multi-use corridor, which can be used for non-motorized commuting from West Ridge to Yankovich Rd. should be explored.
 - b. College International Geophysical Observatory site has specified buffer zones in which new trails cannot be developed. This must be considered when examining a route for such a commuting corridor.
 - c. If an informal trail is eliminated, it should be returned to its original state.
4. Consider increasing the number of groomed winter walking trails.
 5. Continually update the official trail map to reflect any trail changes

A10. Action: Adopt and implement standards for trail design and maintenance practices

GUIDELINES:

In order to establish consistency with regards to trails throughout campus, design standards are essential. With the exception of the current trail conditions that are set out in Appendix I of this plan, formal trail design standards have never been developed. One design feature that must be finalized is the issue of expanded lighting. Due to the potential for negative effects on research, increased lighting is not planned at this time. The most often cited areas for expanding the lights are the T-Field road, followed by the Midnight Express and Big Whizzy loops. Another design issue that must be investigated is how the 1990 ADA standards relate to the NC trail system.

Trail maintenance issues have also been identified, e.g., areas of bare ground, persistently wet trails, trail width, etc. However, maintenance standards must be developed as well before these issues can be solved in a systematic and consistent manner. Another issue associated with trail maintenance is the long tradition of volunteerism associated with the NC. Again, guidelines pertaining to the use of volunteers on NC lands must be developed

IMPLEMENTATION:

1. The NCS will develop standards for trail design and maintenance practices based on the current trail features as identified in Appendix L, and the draft design and



Trail surface covered by woodchips

maintenance standards in Appendix M. These standards shall be submitted for review and approval to the MPC, for recommendation to the Chancellor.

2. The NCM will develop an inventory of resource experts to assist in the development of trail design and maintenance standards, as well as provide guidance on future issues related to implementation of such.
3. Determine if ADA compliance is required on NC.
4. Identify all individual volunteers and organizations that have provided services on NC. Include a plan in the design and maintenance standards and practices for the continued use of volunteers that speaks to issues of liability, supervision, and training.

A11. Action: Develop trail connections between main campus, North Campus, and surrounding areas

GUIDELINES:

Although the NCS has identified potential trail locations (see Appendix N), a strategy is needed for linking trails on main campus to those on North Campus and surrounding areas. Given that this is primarily a circulation issue, it is appropriate that the Circulation and Parking Subcommittee (CPS) be designated by the MPC as the lead in this effort. The strategy must be developed in concert with the NCS and consider both existing and future plans for campus and surrounding areas.

Of particular interest will be the proposed development of a bike path along Miller Hill and Yankovich roads, to the west and north respectively. This could have significant impact on the western boundary of North Campus but will be of benefit to the campus and Fairbanks community. NCS must be involved in the planning efforts for this path, which will be funded through the State of Alaska.

IMPLEMENTATION:

1. The MPC will direct the CPS to develop a trail strategy to link Lower Campus, West Ridge, and North Campus, as well as other surrounding trails off campus.



Trails no wider than 15 feet comprise 38% of total trail miles.



Trails 15 to 20 feet wide comprise 31% of total trail miles.

The NCM and NCS will be directed to assist in this undertaking. Input from the campus community is essential during the planning process.

2. Identify funding sources for implementing the campus wide trail strategy.

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Appendix A—Troth Yeddha Placenames



University of Alaska Fairbanks
Department of Alaska Native and Rural Development
 College of Rural Alaska

Troth Yeddha' Oral History
 Compiled by Miranda Wright
 April 2004

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The land now occupied by the University of Alaska Fairbanks campus was called Troth Yeddha' ("wild potato hill") by the Tanana Athabascans. Oral traditions that focus on place names have been documented through the Alaska Native Language Center, the Interior Aleutians Campus and the Rural Student Services. While the orthography has changed over time, the place names have remained constant.

April 15, 1968 Moses Charlie of Minto, AK provided the following information to Dr. Michael Kraus of ANLC:

<i>Troththid</i>	Fairbanks area in general
<i>Troth yeddha'</i>	College hill
<i>Troththidakhvna</i>	Noyes Slough

Minto Nenana Athabaskan Noun Dictionary, edited by Dr. Michael Kraus, Preliminary version February 1974 provides this information:

<i>Trothyeddha', Troyeddha'</i>	College Hill
<i>Troththeekhun'a</i>	Noyes Slough
<i>Troththeet</i>	Fairbanks area to Chatanika

Matthew and Dorothy Titus provided Krauss and Kari the following information on June 16, 1981:

<i>Troth Yettha mena'</i>	Smith Lake
<i>Troth Yetth</i>	College Hill, off Noyes Slough
<i>Tro yeddha' no'</i>	Deadman's Slough (Noyes Slough)

Lower Tanana Athabaskan Listening and Writing Exercises by James Kari, ANLC 1991:

<i>Troth Yeddha'</i> (hedysarum)	Ridge at University of Alaska lit. 'Indian Potato alpinum) ridge'.
<i>TrothGhotthit</i> Indian potato'	Geist Road-Fairbanks Street area, lit. 'below
<i>Troth Yedha' Xwu'a</i> potato ridge stream'	Deadman (or Noyes) Slough, lit. 'Indian
<i>Tr'exwghodegi Troth Yeddha' Bena'</i>	Smith Lake, lit. 'upper Indian potato lake'.
<i>Tr'exwghothidi Troth Yeddha' Bena'</i>	Ballaine Lake, lit. 'lower Indian potato lake'



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University of Alaska Fairbanks
Department of Alaska Native and Rural Development
 College of Rural Alaska

Lower Tanana Athabaskan Dictionary compiled by and edited by James Kari, ANLC, August 1994:

Troth' (hedysarum alpinum)
 Troth, -trodha'(n) Indian potato root of hedysarum alpinum.
 Troth Yeddha', Troth Yetth (p.n.) College Hill (ridge), lit. 'Indian

Potato Ridge'
Troth' difficult (X situation) is difficult

The late Eva Moffit of Salcha also provided information to James Kari, ANLC, regarding the importance of Troth Yeddha as a gathering place where Native bands would gather to harvest the wild potato and to hold council regarding the state of affairs among Native nations in the interior of Alaska. (personal communications with J Kari, 2003)

The following narrative published in the UAF catalog was compiled by the Interior Aleutians Campus and Rural Student Services after Chief Peter John of Minto, AK spoke to UAF students during the 1994 Native Student Summit. A video recording of this speech also exists:

"Our people used to come to this hill to pick Troth. They would paddle up the creek, Troth Yeddha' No, and camp by the Lake Troth Yeddha' Mena. Troth Yeddha' was important, a meeting place. The grandfathers used to come to talk and give advice to one another about what they were going to do. When they learned this place would be used for a school, the university, they came here one last time, to decide what they should do. They decided that the school would be good and would carry on a very similar traditional use of this hill (a place where good thinking and working together would happen). They placed an eagle feather on a pole. This was to let all the people know that the Dena would no longer be using the ridge for a meeting place or to pick wild potatoes. They were also giving a blessing so their grandchildren would be part of the new school." I am proud of it. I am an Indian. *What does it mean to put an eagle feather with the United States flag? The eagle feather is connected with the clan. It is a symbol of us. We are part of this new Nation. People from all over the world come to the university to go to school and teach. We have something in common. Something all American people can share in. Be proud of it. Make it all the way, not just part way.*" (Chief Peter John, Minto, Alaska as published in the UAF catalog)

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Appendix B—Master Planning Committee Recommendation

To: Chancellor Marshall Lind
From: John D. Craven
Chair, Master Planning Committee
Subject: MPC Recommendations Related to Formation of a Subcommittee for the North Campus Area

This recommendation seeks to address the recurring issue of responsibility for the North Campus area, one part of which is the trails system. As used herein, North Campus denotes those lands north of North Tanana Drive and the road's incomplete extension to the IARC parking lot, and then south to the Experiment Station.

Recommendations

1. It is recommended that the chancellor create a North Campus Subcommittee whose purpose is to represent all valid UAF stakeholders and identify the existing valid academic, research, service, and recreational functions of those lands for all members of the UAF community; students, staff, faculty. This committee will be a subcommittee of the Master Planning Committee, with a member of the MPC serving on the North Campus Subcommittee. The Master Planning Committee must approve all actions of its subcommittee.
2. It is recommended that the subcommittee be manageable in size, about eight members. This may be difficult as it is further recommended that the initial committee represent the following general groups, where specific examples are provided to assist in interpretation: biological sciences (terrestrial ecology, deer yards, and animal research), forestry sciences (arboretum), agriculture (experimental farm), physical sciences (seismology and infrasound), teaching laboratories (biology, geology, NRM), athletics (ski team), and recreation (summer and winter trails). A community representative should be included as well as an ex-officio member to represent Facilities Services. Other valid stakeholders may well exist and should be included. The members of this committee must avoid conflicts of self-interest. It is recommended that the chancellor appoint the chair in a manner consistent with his needs and expectations.
3. It is recommended that the MPC North Campus Subcommittee develop use and management plans consistent with the UAF Campus Master Plan's established principles for this area. Their plans should take into account such relevant documents as the UAF Skarland Trail System Management Plan (May 2000), the Smith Lake Conservation Area Management Plan (May 1993), work of the Arboretum Committee, and other current and historical documents related to the North Campus.

4. It is recommended that Facilities Services be assigned formal responsibility for maintaining the existing lands consistent with the UAF Campus Master Plan, and that Facilities Services may at its discretion through approved procedures transfer day-to-day responsibility to other UAF departments or organizations. As examples: operation of and harvesting on the several fields; routine maintenance of summer and winter trails; or assignment of research plots within areas previously identified for research by a specific entity, such as biology, that uses an oversight committee.

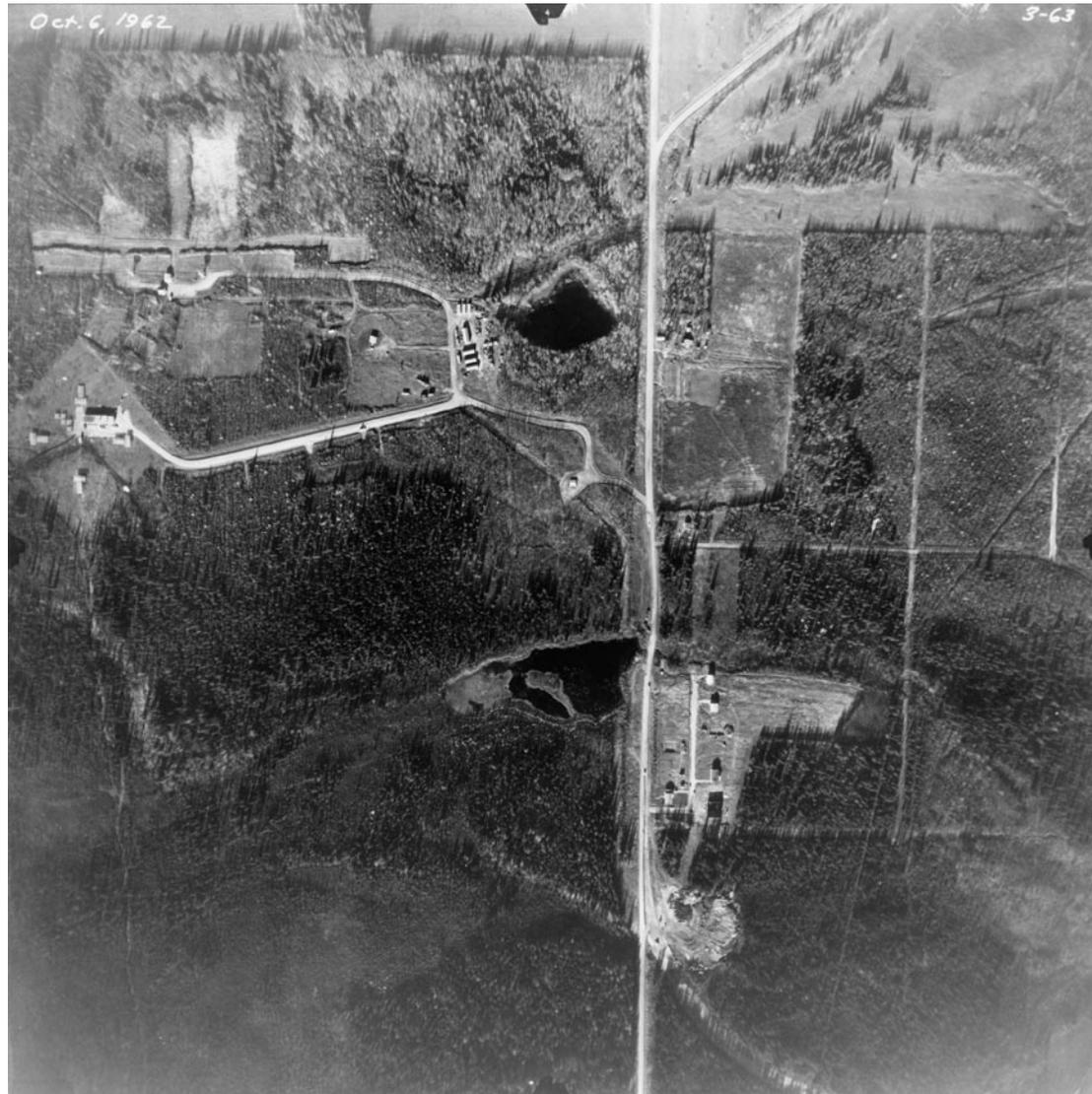
5. It is recommended that development within the North Campus that is shown to be fully consistent with the UAF Campus Master Plan can proceed upon concurrence of Facilities Services. Information copies of correspondence are to be forwarded to the Master Planning Committee but no action is required when work is consistent with the UAF Campus Master Plan.

6. It is recommended that the mechanism through which valid users gain access for new research projects, for example or other valid purposes must be established by the MPC North Campus Subcommittee, as must the definition of what constitutes a valid use.

7. It is recommended that the appropriate administrative officer draft policies regarding legal issues related to maintenance and alteration activities on these lands. Unauthorized activities would be subject to university legal action. The MPC North Campus Subcommittee would meet with appropriate administrative officers to understand existing UAF legal obligations for activities within the North Campus, some research activities are examples, and to contribute during the development of future obligations.

MPC Recommendations Approved: Meeting of June 28, 2001
Recommendation Submitted to the Chancellor: June 30, 2001

Appendix C—Historic Ballaine Lake Research Site



Ballaine Lake Research Site,
October 6, 1962. Photo
courtesy of Geophysical
Institute Operations.

Appendix D—Letter to Researchers and Accompanying Map

Researcher
UAF Department / Building
University of Alaska Fairbanks
Fairbanks, Alaska 99775

December 5, 2002

Dear Researcher,

In March of 2002, you had responded to an inquiry from Pat Holloway regarding your use of the North Campus Area (NCA). During that time, it was indicated that you conduct research in the NCA. The information that you provided to Pat is being used by the North Campus Planning Subcommittee to develop a management plan for the NCA. As part of that plan, research conducted in the NCA is being inventoried and mapped. This mapping process will serve several functions, including the following:

- Ensure future requests for research in the NCA do not encroach upon existing research.
- Ensure recreational trails do not expand into research areas, and
- Ensure areas of intensive research activity and high research value are protected in the future.

A map is attached that shows the extent of the NCA and some of the trails and areas of research that have already been mapped.

For management purposes, we would like to know more specifically where your research is located and additional information regarding your research. Please note, specific information about your research will not be made public. Some of the areas of interest are as follows.

1. Where are the sample plots located? GPS coordinates are the best format for this information. They are accurate and easy to obtain. However, an estimate of location is better than nothing. Please use the attached image to mark locations. Specific locations of plots will not be released to the public.

2. How big are the sample plots? What shape?
3. What measuring, collecting or alteration activities does your research include?
4. Is your sampling, or are the plots, particularly sensitive, i.e., to artificial light, noise, ground vibrations, trampling, collection of vegetation, fungi or animals, etc.?
5. If your project is sensitive, what is a minimum buffer area needed to protect from conflicting uses?
6. What is the frequency of your visits to the research areas? Is the research seasonal and if so, which season (s)?
7. For how long is the research planned?

Once again, the more information the better.

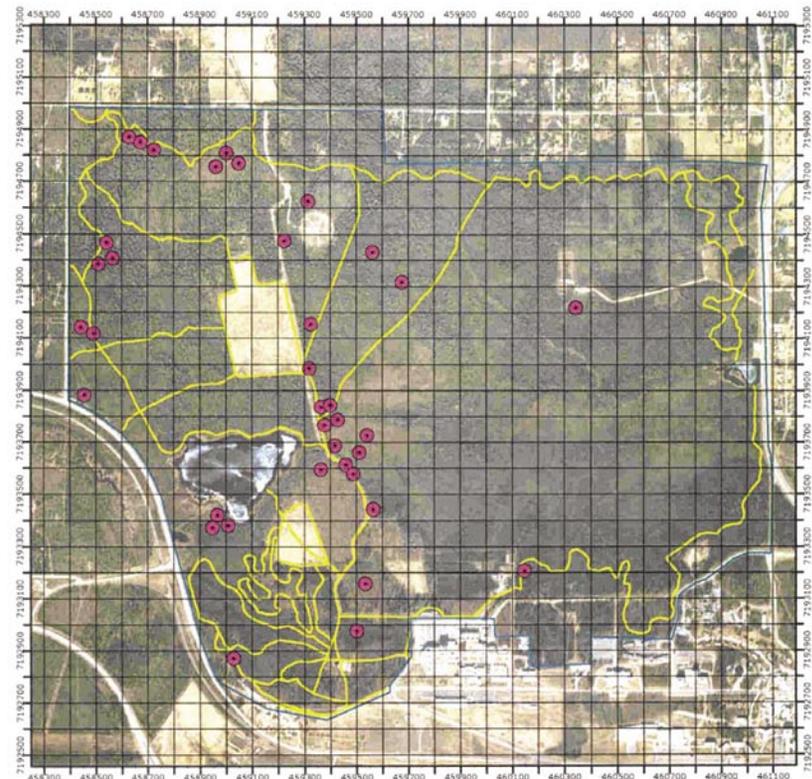
Please fold the map, so that the address is showing, and drop in campus mail. Attach notes regarding research to the map or email the notes to Michael Hay at fm1h@uaf.edu.

Thank you for your time.

North Campus Planning Subcommittee

If you have questions or concerns contact Michael Hay: fm1h@uaf.edu, phone # 7298

GPS coordinates are the preferred format for locational information.
If they are not available,
please mark the approximate location of your research on this map.



Appendix E—Special Management Areas

Location	Timetable	Authority/responsibility
Ballaine Lake	Permanent	State of Alaska navigable water, no restrictions on public use
Ballaine Lake Wayside	Permanent	Alaska Department of Transportation right of way. Permit required for construction, modifications in R.O.W.
Ballaine Lake Mini track site	Permanent	Geophysical Institute- buildings maintained by G.I. Padlocked entrance to minimize traffic, vandalism
Biological Reserve	Permanent	Permission of Director, Institute of Arctic Biology required for all uses, access <ol style="list-style-type: none"> 1. Access limited to scientists and research technicians 2. No dogs
Boreal Arboretum	Permanent	Arboretum Committee
Cistern	Permanent	Agricultural and Forestry Experiment Station, maintenance by farm manager. Revegetation recommended.
College International Geophysical Observatory (CIGO Site)	30 Sept 2016	Permission of Geophysical Institute required. Access limited to CIGO employees, and UAF employees and contractors who are working on specific maintenance and service projects. <ol style="list-style-type: none"> 1. No interference by trail users with scientific projects 2. maintenance to roads/paths to the site, snow removal, building maintenance, and landscaping. 1. No hazardous materials and underground fuel storage tanks. 2. Full, non-motorized access to existing trails within the CIGO 500 - 800 foot radius boundary. Any new trails within this area must be approved by the CIGO Chief. This agreement is contingent upon non-interference by trail users of CIGO projects.
Contour Ditch	Permanent	Agricultural and Forestry Experiment Station – northern edge of Experiment farm maintained by Farm manager. No changes to ditch without permission of farm manager <ol style="list-style-type: none"> 1. Maintain integrity of ditch for runoff and erosion control 2. No flattening or changing grade 3. No breaching without subsequent compaction 4. No removal of nearby natural living vegetation to minimize erosion 5. Minimize pedestrian, vehicle use or stabilize ditch to prevent erosion 6. Stabilize trails to prevent culvert blockage by erosion
Facilities Services Soil Stockpile	Permanent?	For use by Facilities Services only. Access restricted.
Geophysical Institute West Ridge Storage	Permanent but relocatable	Geophysical Institute maintains site.
Fairbanks Infrasound Array (12 sites)	Permanent	Geophysical Institute maintains all research locations. <ol style="list-style-type: none"> 1. No tree cutting, branch trimming in area 2. Minimize heavy traffic and human activities in vicinity (fences required if vandalism becomes a problem) 3. Summer and winter access required

Northern Tree Plantation	Permanent	Permission of Dean, School of Natural Resources and Agricultural Sciences and Head, Department of Forestry required <ol style="list-style-type: none"> 1. Limit access with fence 2. No tree cutting or digging 3. No soil disturbance other than tree planting
Potato Field	Permanent	Permission of Agricultural and Forestry Experiment Station director and farm manager required prior to site modifications, research projects. Farm manager will notify North Campus Subcommittee of all changes to research designs
Shooting Range	Permanent	Facilities Services responsible for maintenance
Smith Lake	Permanent	State of Alaska (navigable water, no restrictions on use of waters)
Smith Lake Park (100 yds around lake)	Permanent	Permission of Arboretum Committee required. No tree cutting 100 yards around the lake
Synthetic Aperture Radar (SAR) II Dish	Permanent	Permission of Geophysical Institute required for access. All site maintenance through Facilities Service via Geophysical Institute <ol style="list-style-type: none"> 1. Winter and summer access required. Notify Facilities Services in winter prior to access to allow for ski track restoration 2. Access limited to G.I. employees and maintenance technicians 3. Minimize vehicle access by locked gate on Farm Access Road and
T-field	Permanent	Permission of Agricultural and Forestry Experiment Station Director and farm manager required. Farm manager will notify North Campus Subcommittee of all changes to research designs
Warm-up Hut	Permanent	Permission of Athletics and Recreation required

Appendix F—Public Meeting Posters

Values Statement # 1

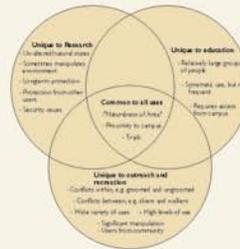
Protect the natural integrity of the North Campus Area while providing opportunities for education, research, outreach and recreation

The North Campus Area is comprised of approximately 1200 acres with natural covertypes including mixed deciduous and coniferous forests, and Black Spruce forests. The natural integrity of the area has persisted by maintenance of a low level of development for the varied uses, with a minimum of permanent structures or impacts. This natural integrity is required by all uses whether research, education, community outreach or recreation. While the uses require naturalness of the area, it is also the uses that could potentially threaten the naturalness. It is achieving a balance between uses of the North Campus Area and maintenance of its natural integrity that is the goal of the first values statement.



Relationship Between Outreach and Recreation and Value Statement 1

Outreach is a component of UAF's mission statement and is defined as: Application of teaching, research, and other scholarly and creative activity to constituencies outside the University of Alaska Fairbanks. The NCPS considers the recreation opportunities provided to the community to be part of outreach. Recreation on the North Campus not only provides benefits to the faculty, staff and students at UAF but is also extremely important to the community. While outreach and recreation will continue on the North Campus Area, they have the potential to impact the natural integrity of the area. However, like other uses, they also have the potential to create an ethic of stewardship for the land.



Relationship Between Research and Value Statement 1

Research is another component of UAF's mission. The North Campus Area is a valuable resource for research, providing a boreal forest environment in close proximity to the developed UAF campus. This provides extraordinary opportunities for monitoring and maintenance of research projects. Research taking place in the North Campus Area ranges from studies of forest growth to monitoring infrasound to detect nuclear explosions associated with the Comprehensive Nuclear Test Ban Treaty.

Some research has the potential to negatively impact the natural integrity of the area through infrastructure and the specimen gathering. However, much of the research in the area contributes to the understanding of the Boreal Forest Ecosystem and how it can be better managed.

Airphoto of NCA taken in May of 2002.



Value Statement 1 has several subcomponents to be explored:

- The value statement focuses on future use of North Campus, with actions recommended to mitigate impacts from past use (such as infrastructure left from previous projects).
- Should there be no net loss of natural areas on campus?
- Should all currently allowed uses in the North Campus Area be allowed to continue in the future?
- Naturalness of the area includes several components such as water quality, soils, vegetation, and visual impacts. What else should be included?
- Should the visual impact of the trail corridors be maintained - i.e., ensure a desirable viewscape on the trails is maintained?



Relationship Between Education and Value Statement 1

The North Campus Area is a vital part of the educational mission of UAF, being used for formal UAF courses, thesis and dissertation research, and community education programs. Education uses range from groups of students identifying plant communities to systematically sampling soil over several years. Group sizes can vary from a few students to more than 100. With respect to Value Statement 1, education use may negatively impact the natural integrity of the North Campus Area as users walk through certain areas. Also, manipulations of the land or plant communities may negatively impact the natural integrity of the North Campus Area. However, it must be noted that these educational uses may promote an increased environmental awareness and promote stewardship of the area.

Values Statement # 2

Preserve access on the North Campus Area for education, research, outreach and recreation

Proximity of the North Campus Area to the developed UAF campus and community in general provides a valuable resource for education, research, outreach and recreation. Access to users, both on campus and off, needs to be protected in perpetuity. Access is defined as the authorization of a use to occur in the North Campus Area. It is important to note that access for a use is not an absolute property right for all variations of that use. For example, access for research does not mean all research projects have authorization to occur on the North Campus Area. The University should fill in the gaps to facilitate the access requirements of allowed uses, as well as facilitate uses and make the necessary infrastructure available for access.

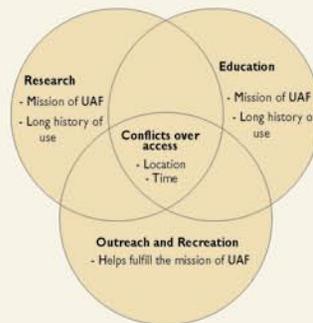


There are several subcomponents of access to be explored:

- There may be difference in types of trails such as: 1) athletic trail, 2) nature trail, and 3) access / research trail

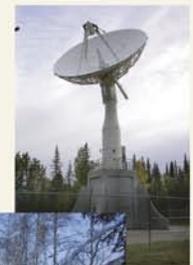
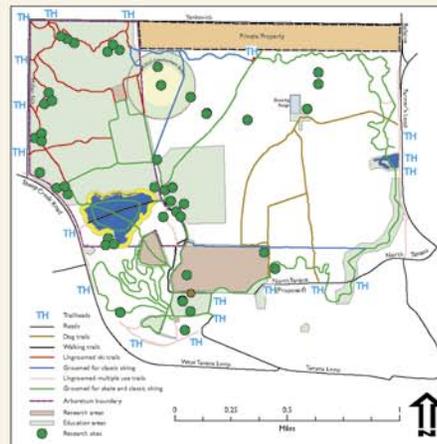


- There may be a difference in management for a recreation trail vs. access / research trail
- Need to examine visual corridors along main trails, research access trails, etc.



- With respect to trails for access, the University should encourage minimization of thawing of permafrost on North Campus lands
- Research may not be allowed if physical structures remain after research is complete
- Access is for all users of NCA (assuming use is allowed)
- Access should be used to promote education, research, outreach and recreation
- Management must look at impact of research access on a case by case basis, as some access corridors may re-vegetate quickly
- A manager is needed to facilitate a research database

This map illustrates the wide variety of legitimate uses and designations within the NCA. The multiple uses of the land can lead to management issues.



- Questions specific to overall access include:
- Is current access adequate?
 - What types of access points would you like to see more of?
 - What types of access points would you like to see less of?
 - Should access points be clearly marked?

Values Statement # 3

Continue to provide opportunities for community involvement that are compatible with the mission of North Campus.

Closely related to Value Statement 2, this value statement revolves around ensuring the community is involved with the North Campus Area. This includes many aspects. Two aspects of community involvement are recreation and the educational uses listed below. However, community involvement also includes ensuring the visual landscape is maintained and seeking community input on management plans.

Community use:

- UAF Summer Fine Arts Camp
- Statewide High School Science Symposium
- TOTE Family Fun Fest Museum
- Upward Bound Math Program
- Fairbanks JR. Nordic skiers
- Elderhostel
- Adventures in Lifelong Learning
- Equinox Marathon
- Society of American Foresters' Outdoor Education
- Outdoor Days

The North Campus Planning Subcommittee would like input from the community on what is desired from the North Campus Area.

Feedback from the community is required to incorporate into the management plan.



Questions specific to community involvement opportunities include: Feel free to write answers on poster.

- Should further community use (school field trips, commercial use, etc) be actively sought? _____

- What types of community involvement would you like to see more of on North Campus? _____

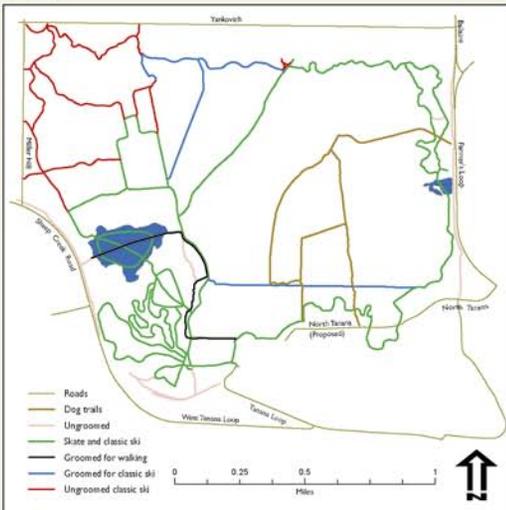
- What types of community involvement are incompatible with North Campus? _____

- To what extent should the community be involved in determining the future direction of North Campus? _____

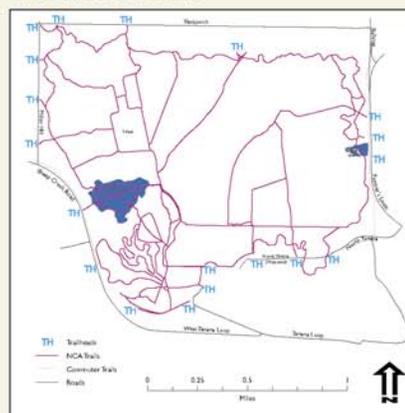
- Should a community advisory board be created to guide the future direction of North Campus? _____

- What are the best ways to seek community involvement in the management of the North Campus Area? _____

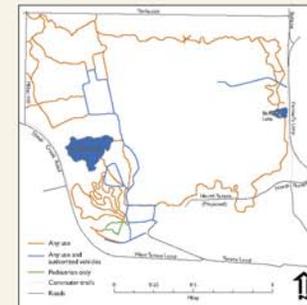
Winter trails



North Campus Area trails and trailheads.



Summer trails



Specific Issues

Conflict within broad categories of activities

Conflicts can occur within broad categories of activities / uses, for example within recreation. In these situations, the conflict is not over general uses of North Campus, but over which use should have priority.

1. Skiers / Walkers

One such conflict occurs between those desiring to use the winter trails for walking and those desiring to use the trails for skiing. The groomed ski trails can make for good walking paths, yet walking on the ski trails can diminish the quality of the grooming. However, given the prominence of groomed ski trails, walkers desiring to use the North Campus Area in winter, are severely limited.

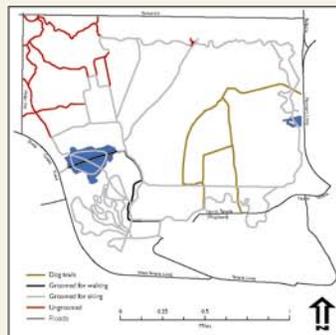
- Should walkers not be allowed on groomed ski trails?
- Should the network of winter walking trails in the North Campus Area be enlarged?
- Should prohibitive signs be more prominent, so walkers are aware of the conflict?

2. Dogs on ski trails

Dog owners also desire to use the north campus area in the winter, including walking with dogs and skiing with dogs. However, dogs can also damage the grooming on the ski trails and leave behind waste that is undesirable on ski trails.

- Should dogs not be allowed on groomed ski trails?
- Should dogs be allowed on maintained walking trails?
- Should the presently existing separate dog use trails be maintained?

In the winter the NCA has 2.5 miles of dog trails, 1 mile of trail groomed for walking, 3 miles of ungroomed ski trails, and 13 miles of trail groomed for skiing.



3. Winter trails / summer trails

45% of the trails are more than 20 feet wide.



The design of a trail for winter use can impact summer users and vice versa. For example, trails for skate skiing are wider, and this may negatively impact the experience of those using the trails in the summer.

- What trail width is appropriate?
- What percentage of trails should be allotted for widened trails?



Overhanging branches can be removed to allow more snow to reach the ski trails in the winter. However, this can impact summer uses of the trails.

- Is it acceptable to remove branches, without removing the entire tree, to allow more snow to reach the trail?



Specific trees that have many branches that hang over the trail could be removed to allow more snow to reach the ski trail in the winter. This may impact summer use of the trails.

- Is it acceptable to remove specific trees to allow more snow to reach the trail?

Some ski trails have sharp corners, through heavily wooded areas, that are difficult to navigate. This can result in safety issues for skiers. One solution is to remove trees and straighten the corner.

- Is it acceptable to remove trees to straighten difficult to navigate corners on ski trails?

Some winter trails are in areas of permafrost. While this is not an issue in the winter, they sometimes have standing water throughout most of the summer. Summer use may cause erosion and damage to the vegetation. The damaged vegetation may in turn stimulate melting of the permafrost. One potential solution would be to limit summer use.

- Is it acceptable to limit summer use in areas that are persistently wet in summer?

- Is it acceptable to put surfaces such as woodchips on trails to insulate the ground to protect the permafrost?



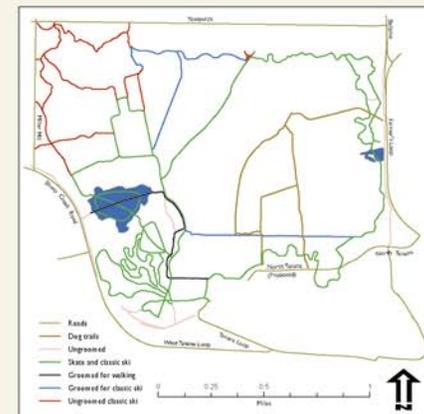
Conflict between broad categories of activities.

Education, research and outreach and recreation can sometimes be in conflict with each other. While all uses desire the North Campus Area for its proximity to campus and natural environment, recreation development sometimes conflicts with the goal of research and likewise research can limit recreational access. Some specifics of this conflict become apparent in the following ways.

- trampling of research plots
- lights interfering with research
- trail development through unique and highly valued research areas
- limitation on access for recreation



Designations for winter trails.



Specific Issues, cont.

T-field road

The T-field road is one area where an unusually high amount of conflict seems to occur. There is a high concentration of research along the road and it is also used to access many other research projects. The road is also excellent for skiing due to flatness and lack of tree cover to prevent snow from reaching trail. In the summer, conflicts are minimal, however, in the winter researchers desiring access by motor vehicle are in conflict with those desiring to use the road for skiing. The management difficulty is maintaining access to research sites, while preserving its value as a ski trail.

Prohibiting motorized access in the winter may be one potential solution. - How acceptable is it to prohibit motorized access in winter?

Another potential solution is to require advance notice from the researcher interested in motorized access be provided to the NCA manager. The motorized access could then be incorporated into the grooming schedule.

- How acceptable is it to require advance notice for winter motorized access to the T- field road?



Exposed roots

In some areas along the trail, erosion has exposed roots. The exposed roots make the trees more susceptible to disease. Potential solutions would include covering the trails with a surface such as wood chips, restricting use, or doing nothing.

- How acceptable is covering the trails with a surface such as wood chips to cover exposed roots?
- How acceptable is restricting use to prevent damage to trees with exposed roots?
- How acceptable is taking no action to prevent damage to trees with exposed roots?

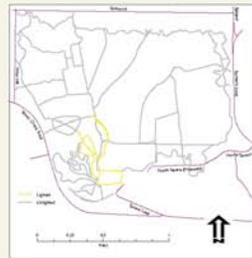


Lights along trails

Currently there are lights on approximately 2.2 miles of ski trails. The lights are along the T-field road, the potato field, and the lighted loop. The trails are frequently used at night. Some may like to see the amount of lighted ski trails expanded, others may not feel expanding the amount of lighted ski trails is appropriate on the North Campus Area.

- How acceptable is it to expand the amount of lighted ski trails on the North Campus?

If you feel the amount of lighted ski trails should be increased, please indicate on the map where you think they should, or should not be located.



Lighted Trails



Smith Lake Parking

- Is a parking lot that is closer to Smith Lake than is currently available needed?
- What types of trail access to Smith Lake should be maintained; ie. summer trails, winter trails groomed for skiing, etc?



- Where should the parking lot be located?
- How big should the parking lot be?

Please indicate on the map what you think is the appropriate location for a Smith Lake parking lot, or an area that is not appropriate.



Campground

In the past a campground was maintained on West Ridge, near where the SAR dish is currently located. Many of the campsites are still in place.

- Should the campground be reopened?



West Ridge camping area



Tanana Loop Rd.

The master planning committee has proposed completing the Tanana Loop road. The map shows one of the proposed locations. This location would negatively impact several features of the North Campus Area:

- The Biological Reserve
- The Skarland six mile ski trail
- How acceptable is the completion of the Tanana Loop road in the location shown on the map?
- Are there other locations for the Tanana Loop road that should be considered?

Proposed loop road



Parking in North Campus

If the Tanana Loop road is completed it will eliminate some current parking on West Ridge. One potential solution is to create a parking area in the North Campus Area.

- How acceptable is it to create a parking area in North Campus?

Relationships between Value # 2 and Education, Recreation and Research

Education

Due to its proximity to campus and its diverse natural character the North Campus Area is useful as an outdoor classroom.

UAF classes that use the NCA include:

- Art
- Biology
- Military Science
- Natural Resource Management

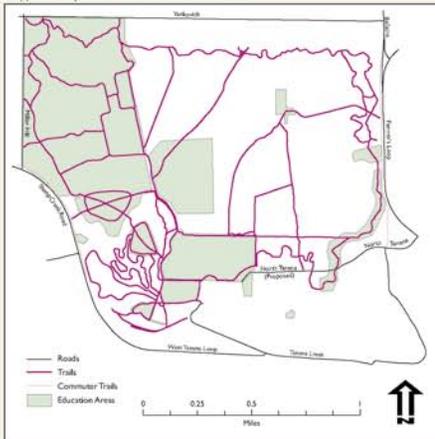
Negative interaction of education with other uses could involve:

- Inadvertent trampling of research plots.
- Removal of vegetation from a vegetation sensitive research site.
- Class groups walking on groomed ski trails

Questions specific to educational use:

- Should some areas be reserved specifically for educational use?
- Should some areas be restricted to educational use?

Approximately 40% of the NCA is used for education



Research

The NCA is utilized for a diversity of research, including Master's theses, Ph.D. dissertations, faculty members' research programs, and research programs of various UAF institutes and centers. There are currently over 20 identified UAF sponsored research projects taking place in various areas within the NCA.

This research is funded by:

- U.S. Department of Agriculture
- U.S. Geological Survey
- Department of Defense
- National Science Foundation
- And others.....

The NCA is ideal for research conducted by UAF faculty and students due to its unique environment and proximity to campus. Many of these research projects make use of the trail system in the NCA. Ongoing research includes: soils, forest growth, permafrost, micrometeorology, infrasound, and various biological studies. There are three areas within the NCA that are specially designated as research areas; the Arboretum, the Biological Reserve, and the CIGO site. Benefits of research are numerous; enhancement of the educational mission of the University, increased knowledge of the processes of the boreal forest and permafrost, and financial returns to the University. As is often the case the impacts are not one-sided. Research equipment has been tampered with, and research plots can be disturbed by other users, however there are concerns with the infrastructure required for research. This includes power lines, buildings, and trail access to the research project. There are concerns with safety and ensuring infrastructure is removed after the research project has been completed. There are areas of the NCA where infrastructure has remained after the completion of a project.



Research specific questions include:

- What types of research activities are compatible with the North Campus Area?
- What types of research activities are incompatible with the North Campus Area?
- Should there be a maximum disturbance allowance of proposed research?
- Should there be more specially designated research areas in the North Campus Area?

Recreation and Outreach

The recreational use of the North Campus Area provides many benefits to members of the surrounding community as well as UAF faculty, staff and students. Many forms of recreation take place in the NCA, including:

- | | | |
|--------------------------|----------------------|------------------|
| Cross country skiing | Berry picking | Mountain biking |
| Walking | Painting / sketching | Wildlife viewing |
| Running | Mushroom picking | Horseback riding |
| Self guided nature walks | Dog walking | Snowshoeing |

Participants in these various forms of recreation have different motivations and desired psychological outcomes. Interestingly, some of the different forms of recreation may actually share the same desired outcomes, but the methods of achieving that outcome may differ greatly and require different management settings. The most common concerns with recreational use are negative interactions between users practicing different types of recreation.

Questions with respect to access for outreach

- Is current access for these programs adequate?
- Are there specific areas on the North Campus Area where access should be increased for outreach programs?
- Should a special events permit be required for these programs?

Questions for recreation access:

- Is current level of recreation access adequate?
- What types of recreation access would you like to see more of?
- Where should additional recreation access points be located?

Research locations



Summer trails



Appendix G—Results from North Campus Subcommittee Public Meetings

North Campus Planning Subcommittee Scoping Meetings April 5 to April 7, 2003

Results

Peter Fix
Assistant Professor

Michael Hay
Research Assistant

Department of Resources Management

July 8, 2003

Executive Summary

The North Campus Planning Subcommittee is charged with developing a management plan for the University of Alaska Fairbanks' (UAF) North Campus Area (NCA). As part of the development of the plan, three public meetings were held during early April 2003. The meetings were an opportunity to exchange information between committee members and those attending meetings. In addition, surveys were distributed to those attending meetings.

This report provides meeting and survey results, and analysis of the results. Analyses include:

- Content analysis of written comments,
- Response analysis of surveys, and
- Cluster analysis of surveys.

The meetings were attended by approximately 100 people, resulting in 338 written comments. One hundred and twenty eight individuals completed the survey. Key findings from the verbal testimony, written comments and surveys are as follows.

- A diversity of viewpoints regarding the appropriate uses of the NCA was expressed.
- Use limitations appear to have a low level of support.
- A majority of attendees indicated the area could, and should, be managed for multiple values and uses.

As indicated by both the written comments, and the survey responses, the trail system was the most important factor to the respondents. Approximately 23% of the written comments were about the trails specifically, while other categories, such as research, had lower response rates. Cluster analysis indicated three groups; a group focused on recreation (44%), a group more favorable toward walking and dogs (12%), and a group protective of research interests (44%). Although each of the three cluster groups had a recreational component, they differed in a few key areas with management implications. Given the hypothetical situation of an increase in research activity, the recreation cluster group was more accepting of restricting research activities, whereas the research cluster found this less acceptable. Given a hypothetical scenario of widening a trail into a research area, the recreation cluster group found not allowing the trail widening to be highly unacceptable, while the research cluster group found it to be acceptable to not allow the trail widening. The walking / dog cluster group found it unacceptable to restrict walkers and dogs on groomed ski trails. This group also found it the most acceptable to expand the network of winter walking trails.

Table of Contents

Executive Summaryii
 Table of Contents.....iii
 List of Figures.....iv
 List of Tablesiv
 Background1
 Methods1
 Results.....2
 Content Analysis of Written Comments2
 Survey8
 Hypothetical Future Scenario 18
 Hypothetical Future Scenario 29
 Hypothetical Future Scenario 39
 Hypothetical Future Scenario 411
 Questions Regarding Walkers and Dogs12
 Questions Regarding Branches / Tree Removal13
 Questions Regarding Trail Surfaces, Permafrost Issues and Damage to Roots14
 Questions Regarding T-Field Road15
 Questions Regarding Ski Trails16
 Most Preferred Ski Trail Alternative17
 Cluster Analysis.....18
 Appendix A.....20

Please note, table of contents references page numbers from original report and do not match page numbers listed in this plan.

List of Figures

Figure 1. Responses to Hypothetical Future Scenario 18
 Figure 2. Responses to Hypothetical Future Scenario 2.....9
 Figure 3. Responses to Hypothetical Future Scenario 3.....10
 Figure 4. Responses to Hypothetical Future Scenario 4.....11
 Figure 5. Responses to Questions Regarding Walkers and Dogs.....12
 Figure 6. Responses to Questions Regarding Branches / Tree Removal.....13
 Figure 7. Responses to Questions Regarding Trail Surfaces, Permafrost Issues, and Damage to Roots.....14
 Figure 8. Responses to Questions Regarding T-Field Road.....15
 Figure 9. Responses to Questions Regarding Ski Trails.....16
 Figure 10. Most Preferred Ski Trail Alternative.....17

List of Tables

Table 1. Where the Written Comments were Obtained.....2
 Table 2. Area on Poster or Survey that Prompted Written Comment3
 Table 3. Comparison of area that Prompted Comment and how Comment was Obtained.....4
 Table 4. Category of Written Comments.....5
 Table 5. Subcategories of Comments Regarding Access6
 Table 6. Subcategories of Comments Regarding Ballaine Lake6
 Table 7. Subcategories of Comments Regarding Dogs6
 Table 8. Subcategories of Comments Regarding Lights6
 Table 9. Subcategories of Comments Regarding Tanana Loop Road6
 Table 10. Subcategories of Comments Regarding Parking6
 Table 11. Subcategories of Comments Regarding Research7
 Table 12. Subcategories of Comments Regarding Skiing7
 Table 13. Subcategories of Comments Regarding Trails7
 Table 14. Results of Reliability Analysis18
 Table 15. Results of K-Means Cluster Analysis.....15

Please note, list of figures and list of tables reference page numbers from original report and do not match page numbers listed in this plan.

Background

The North Campus Planning Subcommittee (NCPS) has been meeting every other week from August 2002 to April 2003 to develop a plan for the North Campus Area (NCA).¹ As part of the plan development, it was imperative to involve the UAF and Fairbanks communities. Three public meetings were held to seek input from these communities. The meetings were held at different locations to facilitate representation from different segments of the public. The meeting locations and times were:

1. April 1, 2003, University of Alaska (UAF) Wood Center. The target of this location was faculty, staff, and students with home departments on UAF's main campus. This location was also felt to be well suited to gather input from the UAF student population. This meeting was held from 11:00 a.m. to 4:00 p.m., when traffic through the Wood Center is at its peak.
2. April 2, 2003, Fairbanks' Noel Wien Library. The target of this location was community members of Fairbanks. This meeting was held from 4:00 p.m. to 7:30 p.m. allowing individuals with differing work schedules to attend.
3. April 3, 2003, the Globe Room in the Geophysical Institute. The target of this location was faculty, staff, and students with home departments on UAF's West Ridge. The meeting was held from 4:00 p.m. to 6:00 p.m., which was felt to be most convenient for this target audience.

The media for the meetings consisted of seven 4' x 6' posters displaying information regarding the NCA that was gathered through meetings of the NCPS. Four posters related to value statements that were developed for the NCA, and three posters related to specific issues of concern in the NCA.

- Poster 1: Value Statement 1, Preserve the natural integrity of the North Campus Area
- Posters 2 & 3: Value Statement 2, Ensure access for research, education, outreach and recreation.
- Poster 4: Value Statement 3, involve the community in the North Campus Area
- Posters 5, 6, & 7: Specific issues of concern on the North Campus Area, e.g., trail width, dogs on ski trails, walking trails, lights, and trail improvements.

Methods

During each meeting, those attending were allowed to walk through and read the posters. Post-it notes were available for attendees to post written comments on the posters. Members of the NCPS were at each meeting to answer any questions and record verbal testimony. NCPS members asked attendees if they had any questions or if they would like to make comments. The comments on the Post-it notes were entered into a database as were any verbal testimony. Content analysis was conducted on the written statements and verbal testimony.

¹ Details of the North Campus Area or North Campus Planning Subcommittee are not presented here. For information regarding either, please see the University of Alaska Master Planning section of their website at www.uaf.edu/mastplan

An eight-page self administered survey and printouts of the posters were distributed to those attending the meetings. The survey consisted of 40 questions with a Likert Scale response format, i.e., a response scale ranging from strongly agree to strongly disagree or highly acceptable to highly unacceptable. The Likert Scale response format allows for systematic tabulation of results and comparisons across questions.

The survey had several subcomponents. The first section of the survey presented hypothetical scenarios and asked a series of questions regarding each hypothetical scenario. The next sections asked a series of specific questions about walking on ski trails, issues revolving around permafrost, maintenance acceptability of different ski trail allocations, the T-Field Road and lighting ski trails.

It is important to note that those who completed the survey were self-selected. The sampling frame consisted of only those who attended the meetings and was given or took a survey, or was given a survey by someone who attended the meeting. Therefore, while the surveys represent those who attended the meetings, statements generalizing these results back to the broader population of UAF faculty, staff and students or the Fairbanks community cannot be made.

The data were analyzed in the Statistical Package for the Social Sciences (SPSS). The data analysis consisted of frequencies of responses, reliability analysis and scale construction where appropriate, and cluster analysis.

Results

Content Analysis of Written Comments

There were 338 comments written on the Post-it notes and attached to the posters at one of the meeting locations, written on the survey posters and returned to the committee, or written on the survey and returned to a committee member (Table 1).

Table 1. Where the Written Comments were Obtained

	<u>Frequency</u>	<u>Percent</u>
Comments on poster handout	32	9.5
Globe	73	21.6
Survey	121	35.8
Wien	50	14.8
Wood Ctr	62	18.3
Total	338	100.0

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Wood Ctr	62	18.3
Total	338	100.0

These comments were distributed across various locations on the posters, poster handouts, or surveys (Table 2). The specific issues 1 poster prompted the most comments, followed by specific issues 2 and 3.

Table 2. Area on Poster or Survey that Prompted Written Comment

Comment Location	# comments	%	Comment Location	# comments	%
SI-1 ^a	58	17.2	VS-1	9	2.7
SI-2	38	11.2	Scenario 4	7	2.1
SI-3	36	10.7	T-Field	7	2.1
General	33	9.8	Permafrost	6	1.8
VS-2 ^b	27	8.0	Scenario 3	6	1.8
PSH Oral	16	4.7	Ski Trails	6	1.8
Skiers / Walkers	14	4.1	Box	4	1.2
VS – 2 Rel	14	4.1	Erosion	4	1.2
VS-3	13	3.8	Scenario 1	4	1.2
Dogs on Trails	11	3.3	Scenario 2	3	.9
Lights	10	3.0	Comments	1	.3
Winter / Summer	10	3.0	PF Oral	1	.3
			Total	338	100.0

a. SI refers to specific issues, of which there were three posters related to specific issues (e.g., 1, 2, & 3).

Refer to Appendix B to see the content of the Specific Issues posters.

b. VS refers to Value Statements, of which there were three value statements with four posters (there were 2 posters for Value Statement 2). Refer Appendix B to see the content of the Value Statement posters.

- The specific issues posters prompted 39% of the comments

It is also possible to examine the area on the poster or survey that prompted the written comment and how the written comment was obtained (Table 3).

- Specific Issues 1, which was concerned with conflicts within and between broad categories of activities, prompted the most comments at the Globe room.
- The comments at Noel Wien library were prompted by Specific Issues 1 & 2.
- Comments at the Center were prompted by all three Specific Issues posters and the Value Statements Posters.

Table 3. Comparison of area that Prompted Comment and how Comment was Obtained

	<i>How Written Comment was Obtained</i>					<u>Total</u>
	<u>Comments on poster handout</u>	<u>Globe</u>	<u>Survey</u>	<u>Wien</u>	<u>Wood Ctr</u>	
Box	0	0	0	0	4	4
Comments	0	0	0	0	1	1
Dogs on trails	0	0	11	0	0	11
Erosion	0	0	4	0	0	4
General	0	0	33	0	0	33
Lights	0	0	10	0	0	10
Permafrost	0	0	6	0	0	6
PF Oral	0	1	0	0	0	1
PSH oral	0	7	0	9	0	16
Scenario 1	0	0	4	0	0	4
Scenario 2	0	0	3	0	0	3
Scenario 3	0	0	6	0	0	6
Scenario 4	0	0	7	0	0	7
SI-1	0	32	0	11	15	58
SI-2	2	10	0	16	10	38
SI-3	10	14	0	0	12	36
Ski trails	0	0	6	0	0	6
Skiers / walkers	0	0	14	0	0	14
T-field	0	0	7	0	0	7
VS - 2 rel	14	0	0	0	0	14
VS-1	0	0	0	1	8	9
VS-2	0	9	0	9	9	27
VS-3	6	0	0	4	3	13
Winter / summer	0	0	10	0	0	10
Total	32	73	121	50	62	338

The 338 written comments could be placed in 733 categories with different topic areas (i.e., some comments could be placed in more than one topic area). Comments related to trails made up the largest category (24% of comments) followed by comments related to skiing, research, trees, access, walkers, dogs, parking and lights (Table 4).

Table 4. Category of Written Comments

<u>Category</u>	<u>Count</u>	<u>Percent</u>	<u>Category</u>	<u>Count</u>	<u>Percent</u>
Trails	175	23.9	Wildlife	5	.7
Ski	74	10.1	Fire Management	4	.5
Research	50	6.8	Permits	4	.5
Trees	36	4.9	Runners	4	.5
Access	33	4.5	Ski Hut	4	.5
Walkers	29	4.0	Volunteers	4	.5
Dogs	28	3.8	Buildings	3	.4
Parking	28	3.8	Erosion	3	.4
Lights	24	3.3	Skijor	3	.4
Vehicles	21	2.9	Events	2	.3
Smith Lake	19	2.6	Races	2	.3
Loop Road	15	2.0	Road	2	.3
Outreach	14	1.9	T-Field	2	.3
Signs	12	1.6	Thermokarst	2	.3
Trails Maintenance	12	1.6	Trail Maintenance	2	.3
Ballaine Lake	11	1.5	Tree Plantation	2	.3
Education	11	1.5	Shooting Range	2	.3
Boardwalk	9	1.2	Arboretum	1	.1
Campground	8	1.1	Bike Path	1	.1
Wood Chips	8	1.1	Gates	1	.1
Bikes	7	1.0	Historic Preservation	1	.1
Fence	7	1.0	Maps	1	.1
Recreation	7	1.0	Permafrost	1	.1
Trash	7	1.0	Security	1	.1
Entire Area	6	.8	Thanks	1	.1
Planning	6	.8	Vandalism	1	.1
Power Lines	6	.8	Viewing Platform	1	.1
Fishing	5	.7	Total	733	100
Trailhead	5	.7			

The comments were also analyzed by including a subcategory for each broad category and the direction – stating a favorable or unfavorable position – of the comments. The results for the categories that had an n > 10 are presented below.

Table 5. Subcategories of Comments Regarding Access

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Development	12	7	5
Motorized vehicles	4	4	0
Permits	4	0	4
Well marked trailheads	2	1	1

Table 6. Subcategories of Comments Regarding Ballaine Lake

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Erosion	5	3	2
Fishing	5	3	2
Trash can size	1	1	0

Table 7. Subcategories of Comments Regarding Dogs

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Limits on dogs	15	1	14
More dog trails	6	2	4
Responsible pet ownership	3	0	3

Table 8. Subcategories of Comments Regarding Lights

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
General	7	4	3
Increased lighting	15	5	10

Table 9. Subcategories of Comments Regarding Tanana Loop Road

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Installing a road crossing	5	0	5
General	11	8	3

Table 10. Subcategories of Comments Regarding Parking

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
General	4	0	4
Smith Lake	17	3	14

Table 11. Subcategories of Comments Regarding Research

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
General	9	0	9
Limits / restrictions on research ¹	34	5	29

1. Limitations does not imply no research allowed, but refers to limitation or restrictions on certain types of research, or restrictions on cleaning research sites after completion of research project.

Table 12. Subcategories of Comments Regarding Skiing

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Increased grooming	4	2	2
Sharing	31	23	8

Table 13. Subcategories of Comments Regarding Trails

<u>Subcategory</u>	<u>n</u>	<u>Unfavorable</u>	<u>Favorable</u>
Boardwalk	5	2	3
Development	4	0	4
Limits in summer	10	2	8
New trails	4	1	3
Tree cutting	24	15	9
Wheel vehicles in winter	10	9	1
Widening	7	4	3
Wood Chips	11	2	9

A few notable trends in the open ended comments:

- Those commenting on dogs on ski trails seemed favorable toward limiting dogs on ski trails,
- With respect to increased lights on ski trails, 2 to 1 favored increasing lighting,
- Several comments were received on the need to install a road crossing if the Tanana Loop road extension is built, however several comments unfavorable to the Tanana Loop road extension were received,
- Comments regarding Smith Lake Parking were generally favorable,
- Most of the comments regarding research were favorable toward ensuring research is compatible with values of the north campus area,
- A majority of comments regarding skiing indicated a desire for skiing only trails in the winter, and
- With regards to tree cutting, the majority of comments were unfavorable.

Survey

One hundred and twenty eight individuals completed the survey. Since the respondents were self-selected, the response rate cannot be calculated. Because the results were not based on a probability sample of the population, confidence intervals for population parameters cannot be computed and caution must be used when generalizing the results.

Although most questions included a seven point response scale, ranging from highly acceptable or strongly agree to highly unacceptable or strongly disagree, the following figures show the responses collapsed into acceptable / neither / unacceptable categories. The results across all response categories appear in Appendix A.

Hypothetical Future Scenario 1

Research use has increased dramatically in the North Campus Area, and many of the projects require the area to be free from human disturbance. There are now many signs stating that use is restricted and more fences to keep people from research sites. While most of North Campus is still available for outreach and recreation, it is becoming more difficult for users to know where they can and cannot pursue their activities, and some feel the visual appeal of the area has been diminished.

Solutions may include restricting additional research activity in certain areas of North Campus, restricting additional research activity in the North Campus Area in general, requiring additional research projects in North Campus to be more compatible with other uses, or taking no action.

In the situation described in hypothetical future scenario 1, how acceptable would it be to:

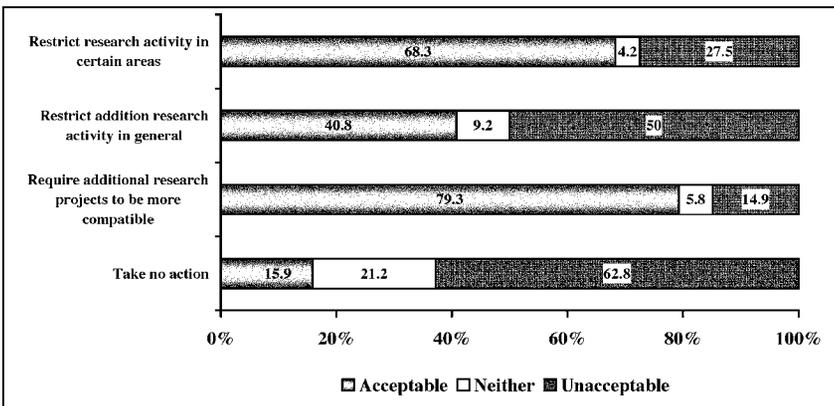


Figure 1. Responses to Hypothetical Future Scenario 1
 Note, although there was item nonresponse, all n's vary around 109-128. See Appendix A for individual n's.

- The majority of respondents felt taking no action to reduce conflicts between research and outreach and recreation is unacceptable.
- The approach to reduce these conflicts with the most acceptance was requiring research to be more compatible with other uses.
- Respondents were relatively divided on restricting research in general.

Hypothetical Future Scenario 2

It has been proposed to widen a one-mile segment of an existing trail. The wider trail will allow skate skiing in the winter. However, widening the trail would encroach on several areas that are highly desirable for future research projects.

Under the conditions described in hypothetical future scenario 2, please indicate your level of agreement with the following statement.

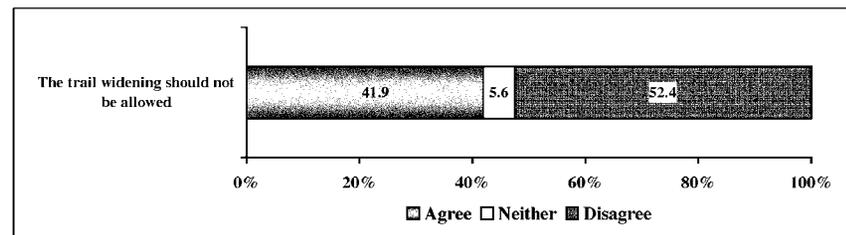


Figure 2. Responses to Hypothetical Future Scenario 2

- Respondents were split with respect to allowing the trail to be widened.

Hypothetical Future Scenario 3

Outreach and recreation use has increased in North Campus and is starting to encroach on research activities. Research equipment has been tampered with, resulting in expensive repairs and missing data. In addition, outreach and recreation users have accidentally trampled research plots, essentially ruining long-term research efforts.

One potential solution would be to restrict outreach and recreation use. Restricting outreach and recreation use may be accomplished by closing certain trails, closing certain parking areas, or closing off certain sections of the North Campus Area to outreach and recreation. Another potential solution would be to take no action.

In the situation described in hypothetical future scenario 3, how acceptable would it be to:

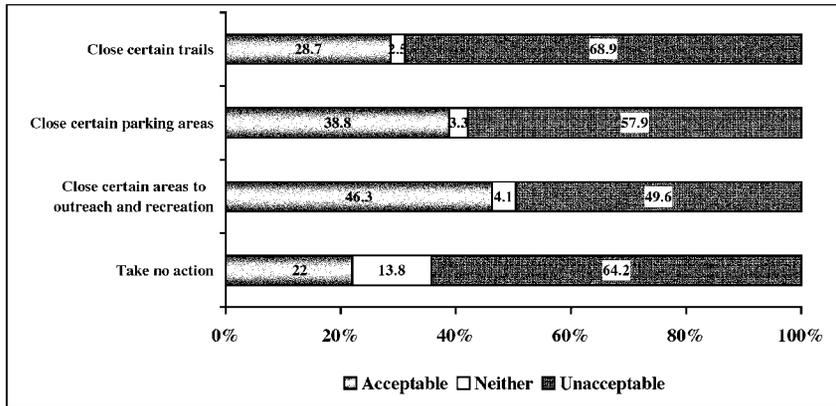


Figure 3. Responses to Hypothetical Future Scenario 3

- The majority of respondents felt taking no action to alleviate conflicts between outreach and recreation and research was unacceptable.
- Of the potential solutions, closing certain areas to outreach and recreation had the highest level of support.

Hypothetical Future Scenario 4

A research project is proposed that would require a specific research site in North Campus to be free of any direct human disturbance for a period of three years. There is a trail adjacent to the area that is used as a multi-use trail in the summer and as an ungroomed ski trail in the winter. The researchers propose fencing the site to ensure the area remains free from direct human impacts. While current uses would continue, a fence would be visible.

Under the situation described in hypothetical future scenario 4, please indicate your level of agreement with the following statements.

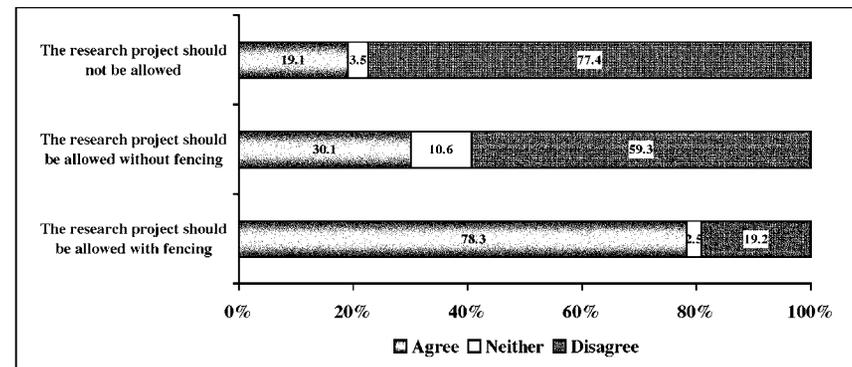


Figure 4. Responses to Hypothetical Future Scenario 4

- The majority of respondents agreed that the research project should be allowed with fencing.
- Only two of 10 respondents agreed that the research project should not be allowed.

Questions Regarding Branches / Tree Removal

Some trees lining the trails in North Campus have branches that hang over the trail, preventing snow from reaching the trails in some areas and causing safety concerns (such as falling branches) in both summer and winter. Overhanging branches or entire trees can be removed to allow more snow to reach the ski trails in the winter and improve safety of the trails. However, this can impact the aesthetics of the trails, and not all may agree that removing branches or trees along the trails is appropriate for management of the North Campus.

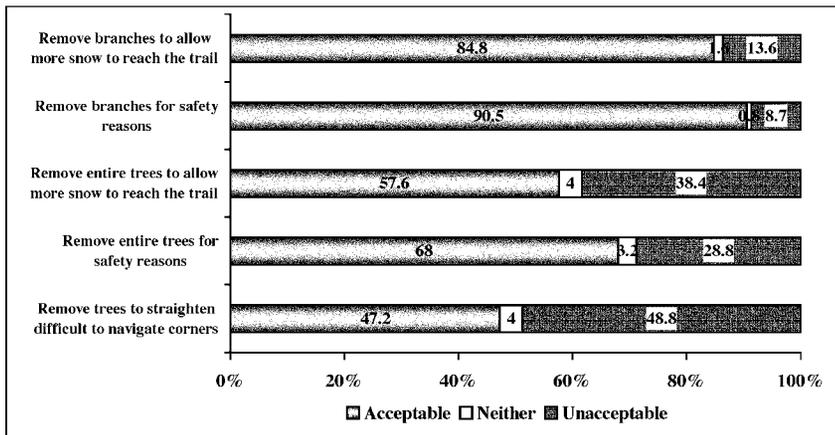


Figure 6. Responses to Questions Regarding Branches / Tree Removal

- Respondents found it more acceptable to remove branches to allow more snow to reach the trail and for safety than removing entire trees for the same reason.
- Respondents were split on the acceptability of removing trees to straighten difficult to navigate corners.

Questions Regarding Trail Surfaces, Permafrost Issues, and Damage to Roots

Some North Campus trails are in areas of permafrost. While this is not an issue in the winter, they sometimes remain wet throughout most of the summer. Summer use of these trails may cause erosion and damage to the vegetation. The damaged vegetation may, in turn, stimulate melting of the permafrost. One potential solution would be to limit summer use. Another potential solution would be to install surface insulation materials such as wood chips to prevent the permafrost from melting. An additional solution may be building boardwalks to prevent erosion and damage to the vegetation.

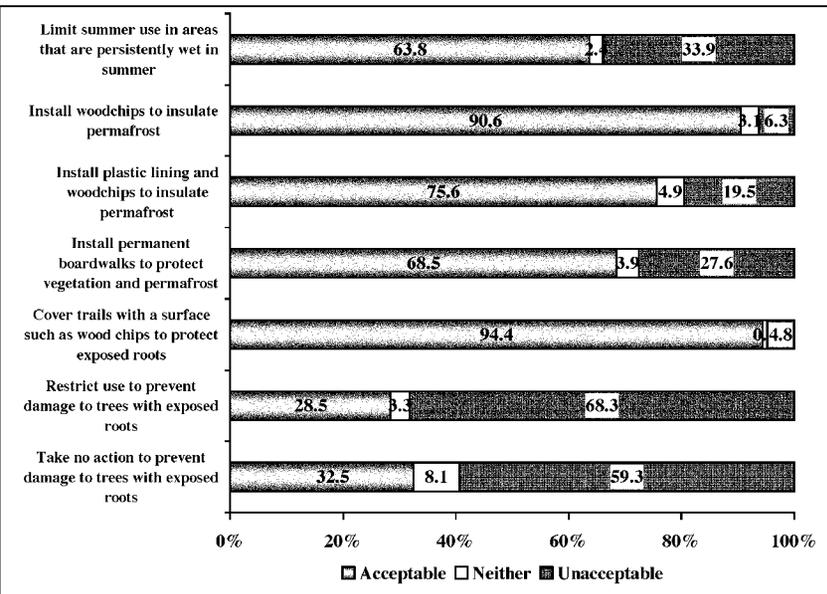


Figure 7. Responses to Questions Regarding Trail Surfaces, Permafrost Issues, and Damage to Roots

- Approximately 9 out of 10 respondents felt it was acceptable to cover trails with woodchips to insulate permafrost and to protect exposed roots.
- Installing permanent boardwalks to protect vegetation was acceptable to approximately 7 out of 10 respondents.
- Approximately 7 out of 10 respondents felt restricting use was unacceptable.

Questions Regarding T-Field Road

The T-field Road is one area where a relatively high amount of conflict seems to occur. There is a high concentration of research along the road, and it is used to access many other research projects. The road is also excellent for skiing due to flatness and lack of overhanging branches. In the winter, researchers desiring access by wheeled motorized vehicles can be in conflict with those desiring to use the road for skiing. The management difficulty is maintaining access to research sites along the T-field Road, while preserving its value as a ski trail.

Prohibiting wheeled motorized access in the winter is one potential solution. Another potential solution is to require advance notice from the researcher interested in wheeled motorized access to be provided to the NCA manager. The trails could then be groomed after the wheeled motorized access.

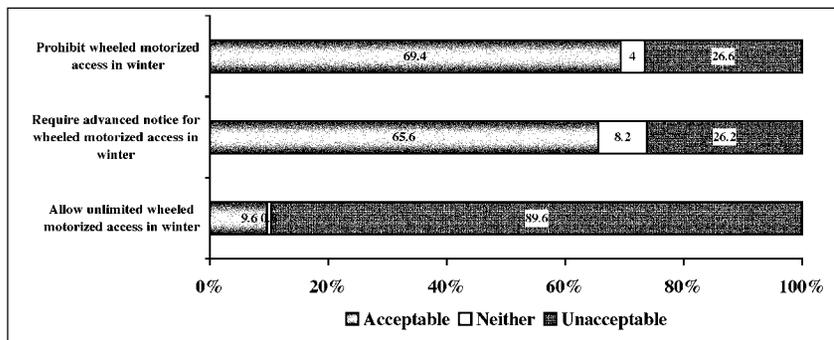
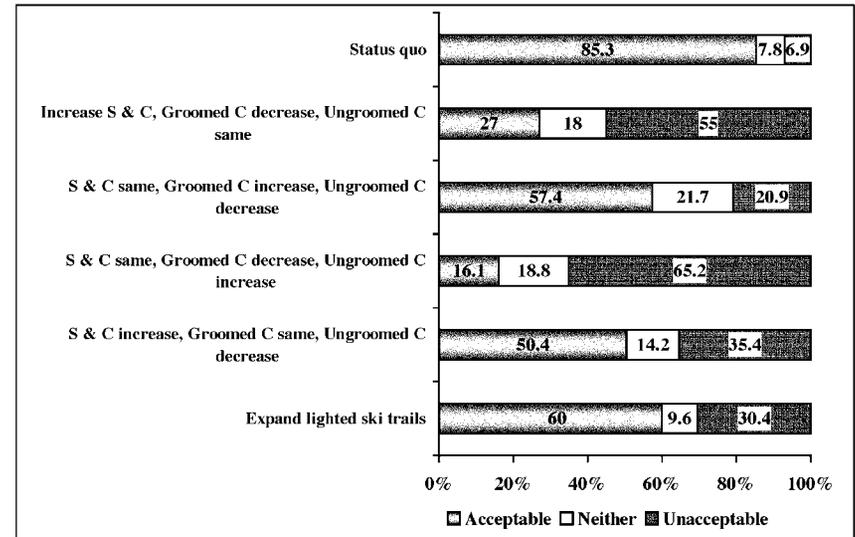


Figure 8. Responses to Questions Regarding T-Field Road

- 9 of 10 respondents felt it was unacceptable to allow unlimited wheeled motorized access in winter.
- Approximately 7 of 10 respondents found it acceptable to limit motorized wheel access in winter and require advanced notice for wheeled access.

Questions Regarding Ski Trails

Currently in the North Campus Area, there is a mix of winter trails groomed for skate and classic skiing, groomed for classic skiing only, and ungroomed for classic skiing. Different people may have different perspectives on the appropriate mix of ski trails in the North Campus Area. The current allocation of ski trails is: Groomed skate and classic = 68%, Groomed classic only = 12%, Ungroomed classic skiing = 20%.

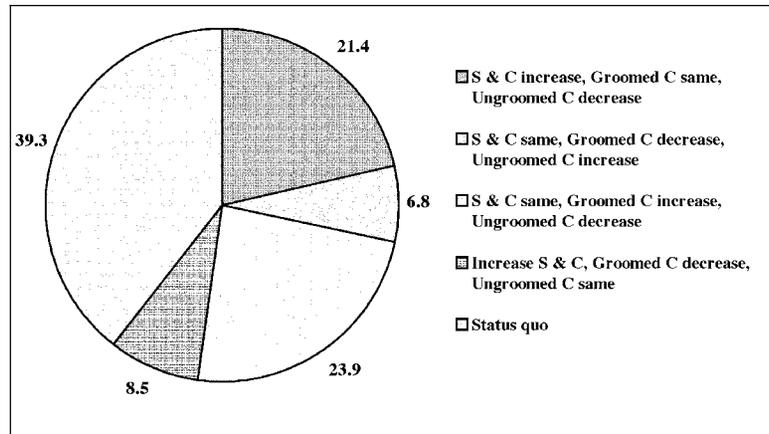


Note: S & C = groomed skate and classic, Groomed C = Groomed classic only, Ungroomed C = Ungroomed classic only

Figure 9. Responses to Questions Regarding Ski Trails

- Keeping the proportions of ski trails at status quo had the highest level of acceptability.
- Approximately one-half of respondents found the alternative that kept groomed skate and classic trails the same, but increased groomed classic only trails and decreased ungroomed classic trails acceptable.
- Approximately one-half of respondents found the alternative that increased groomed skate and classic trails, kept groomed classic only trails the same and decreased ungroomed classic trails acceptable.
- Approximately 6 of 10 respondents felt expanding the lighted ski trails was acceptable.

Most Preferred Ski Trail Alternative



Note: S & C = groomed skate and classic, Groomed C = Groomed classic only, Ungroomed C = Ungroomed classic only

Figure 10. Most Preferred Ski Trail Alternative

- Status quo was the most preferred alternative.

If the respondents felt the amount of lit ski trails should be expanded, they were asked to indicate where on a map the lights should be located (Figure 11).

- The most cited location for additional ski trail lights was the T-Field.
- The second most cited locations for additional ski trail lights were midnight express, Big Whizzy, and the Smith Lake Connector.

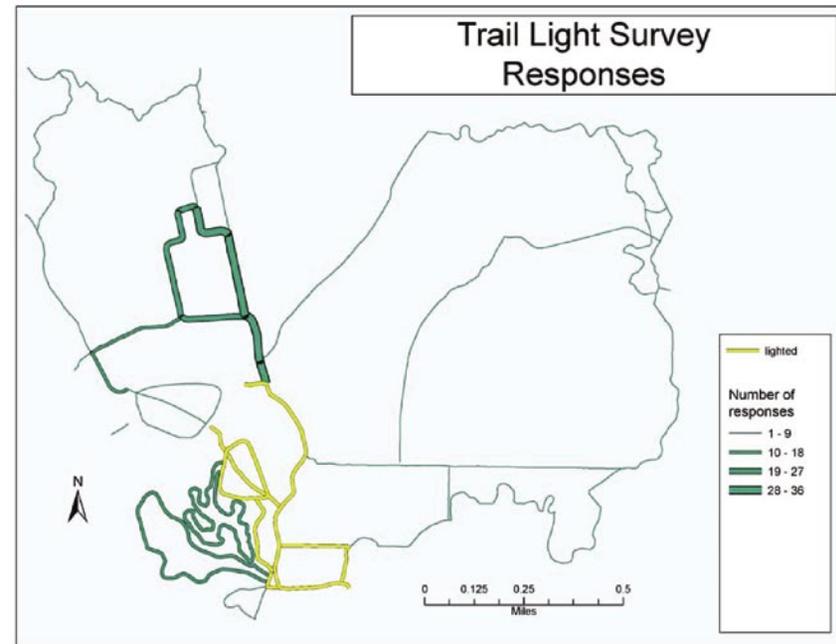


Figure 11. Responses to Where Additional Ski Trail Lights Should be Located

Cluster Analysis

While the frequencies provide an indication of the acceptability or agreement of specific management issues, it does not give an overall indication to different segments of the respondents. Cluster analysis groups the respondents into groups based on similar response patterns. This provides a segmentation of respondents who hold similar views toward management.

Reliability analysis / scaling

Cluster analysis groups respondents by response patterns to questions. It is advantageous to have a diversity of questions to group respondents. However, too many questions and it may be difficult to make meaningful distinctions between groups. This survey consisted of 40 questions, however some questions measured similar concepts. To simplify the analysis, the questions that measure similar concepts can be averaged together to form one score, or scale, for the concept the questions are measuring.

The first step to constructing a scale is to ensure the questions are measuring the same concept. One way to determine this is through reliability analysis. One such reliability analysis is Cronbach's Alpha, which computes the average of all possible correlations among items to be included in the scale. Typically an Alpha value of .6 or higher is taken as an indication the items are measuring the same concept. To be more stringent, an alpha value of .7 was used as the cut off for this analysis. In other words, if the items had a Cronbach's Alpha of .7 or higher, they were combined into a scale. The following items were combined into scales.

Table 14. Results of Reliability Analysis

Items	Cronbach's Alpha	n
Restrict additional research activity in certain areas of North Campus	.83	119
Restrict additional research activity in the North Campus in general		
Close certain trails	.79	121
Close certain parking areas		
Close certain areas of outreach and recreation use		
The research project should not be allowed ^a	.85	114
The research project should be allowed with fencing the research site		
Remove branches to allow more snow to reach the trail	.82	125
Remove branches for safety reasons		
Remove entire trees to allow more snow to reach the trail		
Remove entire trees for safety reasons		
Install woodchips to insulate permafrost	.70	119
Install plastic lining and woodchips to insulate permafrost		
Line the trails with woodchips to protect exposed roots		

a. reverse coded

A cluster analysis was conducted on the scale items and the following items.

Table 15. Results of K-Means Cluster Analysis

	Cluster		
	1 n=50 (44%)	2 n=13 (12%)	3 n=50 (44%)
Restrict research activity*	2.50	4.08	4.64
The trail widening should not be allowed	6.46	2.77	2.50
Allow research project along trail*	3.24	2.19	1.91
Walkers should not be allowed on groomed ski trails	1.12	5.23	1.64
Dogs should not be allowed on groomed ski trails	1.38	4.46	1.24
The network of winter walking trails in the North Campus Area should be expanded	2.72	2.08	3.30
Close area to outreach and recreation*	5.95	3.69	3.93
Remove trees or branches for snow and safety*	2.09	3.75	2.76
Install woodchips on trails*	1.94	2.49	2.11
Prohibit wheeled motorized access in winter	1.76	4.23	2.86

* Scale items – see above for items in scale

1 = Highly Acceptable or Strongly Agree; 7 = Highly Unacceptable or Strongly Disagree

Cluster 1 could be labeled as skiers / recreationists. This group, which comprised 44% of the respondents, considered it to be most acceptable to restrict research activity, least acceptable to no allow the trail widening, found in less acceptable to allow the research project along the trail, strongly agreed that walkers and dogs should not be allowed on groomed ski trails, found it unacceptable to close area to outreach and recreation, and had the highest level of acceptability for removing trees of branches for snow and safety.

Cluster 2 might be labeled walkers / researchers / natural. This group (12% of respondents) had less acceptability than cluster 1 toward restricting research activity, found not allowing the trail widening acceptable. This group found not allowing walkers or dogs on the trails to be more unacceptable than the other groups and felt it was acceptable to expand the network of winter walking trails. This group also had the least acceptability toward removing trees and installing woodchips on trails.

Cluster 3 seems to represent researchers / skiers. This group (44% of respondents) rated restricting research activity with the highest level of unacceptability and found it acceptable to allow the research project along the trail and restrict the trail widening. Yet this group found it to be acceptable to not allow walkers and dogs on groomed ski trails and found it acceptable to remove branches for snow and safety reasons and to prohibit wheeled motorized access in winter.

Interestingly no group found it highly acceptable to close the area to outreach and recreation.

APPENDIX A – ALL RESPONSE CATEGORIES

Hypothetical Scenario 1^a

	n	Highly acceptable	Moderately acceptable	Slightly acceptable	Neither	Slightly unacceptable	Moderately unacceptable	Highly unacceptable
...restrict additional research activity in certain areas of North Campus?	120	28.8	23.3	19.2	4.2	6.7	10.8	10
...restrict additional research activity in the North Campus Area in general?	120	10.8	13.3	16.7	9.2	10	18.3	21.7
...require additional research projects in North Campus to be more compatible with other uses?	121	46.3	18.2	14.9	5.8	4.1	6.6	4.1
...take no action?	113	2.7	7.1	6.2	21.2	10.6	14.2	38.1

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Hypothetical Scenario 2^a

	n	Strongly agree	Moderately agree	Slightly agree	Neither	Slightly disagree	Moderately disagree	Strongly disagree
The trail widening should not be allowed.	124	22.6	15.3	4	5.6	9.7	13.7	29

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Hypothetical Scenario 3^a

	n	Highly acceptable	Moderately acceptable	Slightly acceptable	Neither	Slightly unacceptable	Moderately unacceptable	Highly unacceptable
...close certain trails?	122	6.6	10.7	11.5	2.5	5.7	18	45.1
...close certain parking areas?	121	10.7	16.5	11.6	3.3	7.4	19.8	30.6
...close certain areas to outreach and recreation use?	123	10.6	17.1	18.7	4.1	3.3	12.2	34.1
...take no action?	109	10.1	3.7	8.3	13.8	14.7	14.7	34.9

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Hypothetical Scenario 4^a

	n	Strongly agree	Moderately agree	Slightly agree	Neither	Slightly disagree	Moderately disagree	Strongly disagree
The research project should not be allowed.	115	7.8	4.3	7	3.5	12.2	20.9	44.3
The research project should be allowed, but without fencing.	113	11.5	8.8	9.7	10.6	16.8	20.4	22.1
The research project should be allowed with fencing the research site.	120	45.8	20	12.5	2.5	5	6.7	7.5

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Skiers and walkers^a

	n	Strongly agree	Moderately agree	Slightly agree	Neither	Slightly disagree	Moderately disagree	Strongly disagree
Walkers should not be allowed on groomed ski trails.	123	72.4	8.9	6.5	.8	4.1	2.4	4.9
The network of winter walking trails in the North Campus Area should be expanded.	127	29.1	21.3	26.8	3.9	2.4	7.9	8.7

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Dogs on ski trails^a

	n	Strongly agree	Moderately agree	Slightly agree	Neither	Slightly disagree	Moderately disagree	Strongly disagree
Dogs should not be allowed on groomed ski trails.	127	77.2	7.9	5.5		3.1	3.1	3.1
Dogs should not be allowed on maintained walking trails.	126	11.1	4.8	7.9	11.1	7.9	24.6	32.5
The designated winter dog use trails should be expanded.	124	22.6	17.7	17.7	12.1	4	8.9	16.9

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Winter / summer trails^a								
	<u>n</u>	<u>Highly acceptable</u>	<u>Moderately acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>
...remove branches to allow more snow to reach the trail?	125	52.8	18.4	13.6	1.6	4	4	5.6
...remove branches for safety reasons?	126	68.3	15.9	6.3	.8	5.6	.8	2.4
...remove entire trees to allow more snow to reach the trail?	125	29.6	12.8	15.2	4	8	7.2	23.2
...remove entire trees for safety reasons?	125	42.4	16	9.6	3.2	9.6	10.4	8.8
...remove trees to straighten difficult to navigate corners on ski trails?	125	28	10.4	8.8	4	5.6	16.8	26.4
a. n = number of responses for each item, all other cell entries are percent of respondents in each category								
Permafrost^a								
	<u>n</u>	<u>Highly acceptable</u>	<u>Moderately acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>
...limit summer use in areas that are persistently wet in summer?	127	22	26	15.7	2.4	11.8	11	11
...install woodchips to insulate permafrost?	127	47.2	29.1	14.2	3.1	1.6	3.1	1.6
...install plastic lining and woodchips to insulate permafrost?	123	37.4	25.2	13	4.9	7.3	5.7	6.5
...install permanent boardwalks to protect vegetation and permafrost?	127	29.9	17.3	21.3	3.9	8.7	10.2	8.7
a. n = number of responses for each item, all other cell entries are percent of respondents in each category								

Ski trails^a										
<u>Types of ski trails</u>			<u>Please indicate your acceptability of each scenario</u>							
<u>Groomed skate and classic</u>	<u>Groomed classic only</u>	<u>Un-groomed classic</u>	<u>n</u>	<u>Highly acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>	
Status quo	same	same	116	61.2	24.1	7.8	5.2			1.7
Scenario A	increase	decrease	same	111	14.4	12.6	18	29.7		25.2
Scenario B	same	increase	decrease	115	35.7	21.7	21.7	11.3		9.6
Scenario C	same	decrease	increase	112	10.7	5.4	18.8	30.4		34.8
Scenario D	increase	same	decrease	113	31.9	18.6	14.2	14.2		21.2
a. n = number of responses for each item, all other cell entries are percent of respondents in each category										
Erosion / exposed roots^a										
	<u>n</u>	<u>Highly acceptable</u>	<u>Moderately acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>		
...cover the trails with a surface such as wood chips to protect exposed roots?	124	60.5	25	8.9	.8	.8	2.4			1.6
...restrict use to prevent damage to trees with exposed roots?	123	4.1	6.5	17.9	3.3	14.6	20.3			33.3
...take no action to prevent damage to trees with exposed roots?	123	8.1	13	11.4	8.1	16.3	16.3			26.8
a. n = number of responses for each item, all other cell entries are percent of respondents in each category										

T-Field Road^a

	<u>n</u>	<u>Highly acceptable</u>	<u>Moderately acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>
...prohibit wheeled motorized access in winter?	124	51.6	9.7	8.1	4	10.5	10.5	5.6
...require advance notice for wheeled motorized access in winter?	122	38.5	16.4	10.7	8.2	6.6	8.2	11.5
...allowed unlimited wheeled motorized access in winter?	125	4.8	2.4	2.4	.8	4.8	8.8	76

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Lights Along Ski trails^a

	<u>n</u>	<u>Highly acceptable</u>	<u>Moderately acceptable</u>	<u>Slightly acceptable</u>	<u>Neither</u>	<u>Slightly unacceptable</u>	<u>Moderately unacceptable</u>	<u>Highly unacceptable</u>
...expand the amount of lighted ski trails in North Campus?	125	32	15.2	12.8	9.6	6.4	8.8	15.2

a. n = number of responses for each item, all other cell entries are percent of respondents in each category

Appendix H—Current Uses and Users of North Campus

Research uses				
	Vegetation	Soils	Satellite dishes	Wildlife biology
Activities	Long term and short term plots.	Long term and short term plots.	Permanent, highly developed sites	Long term and short term plots.
Experience	Learning, advancing field, thesis, dissertation, published findings in peer-reviewed journals, fulfilling UAF research program	Learning, advancing field, thesis, dissertation, published findings in peer-reviewed journals, fulfilling UAF research program	Learning, advancing field, thesis, dissertation, published findings in peer-reviewed journals, fulfilling UAF research program	Learning, advancing field, thesis, dissertation, published findings in peer-reviewed journals, fulfilling UAF research program
Resource requirements	Protection from disturbance either by remoteness of site and lack of permanent structures, or by fencing around the study site.	Protection from disturbance either by remoteness of site and lack of permanent structures, or by fencing around the study site.	Protection from disturbance through fencing.	Protection from disturbance either by remoteness of site and lack of permanent structures, or by fencing around the study site.
Managerial requirements	Prevent development from occurring over sites with ongoing studies. Ensure recreation / other users do not destroy research. Access roads in both winter and summer. Easy / convenient access to research plots.	Prevent development from occurring over sites with ongoing studies. Ensure recreation / other users do not destroy research. Access roads in both winter and summer. Easy / convenient access to research plots.	Power, access roads in both winter and summer.	Prevent development from occurring over sites with ongoing studies. Ensure recreation / other users do not destroy research. Access roads in both winter and summer. Easy / convenient access to research plots.

Education uses

	Art class	Field trips (UAF)	Interp. signs	Informal Family	Field trips (elem. school)	Rifle range
Activities	Recreating natural scenes using various media.	Examining and learning about the boreal systems. Short and long term research, sampling, experimental designs	Examining and learning about the boreal systems.	Picnicing, hiking, bird watching, plus other uses.	Examining and learning about the boreal systems.	Gun safety courses, training
Experience	Skill development, being in nature, learning about nature	Course requirements, learning, being part of group	Learning, being with family friends, teaching others, exercise, change of pace	Learning, family bonding, teaching others, being out of doors, change of pace	Learning, being with others, change of pace from classroom	Certification, learning, meeting requirements for programs
Resource requirements	Access trails from campus.	Access trails from campus.	Access trails from campus and parking areas.	Access trails from campus and parking areas.	Access trails from campus and parking areas.	Range long enough to shoot required distance
Managerial requirements	Route access trails through urban interface.	Route access trails through urban interface.	Signs should be quickly accessed from parking areas open to the public.	Provide parking, general trail maintenance, undeveloped land.	Route access trails through urban interface.	Sufficient backstop, access at different times of year, limitations of other users.

Winter recreation uses (skiing)

	Skate skiers	Classic skiers	General touring	Ski Joring
Activities	Skate skis on groomed trails, skis fast and long distances	Uses classic racing equipment on set tracks, skis fast and long distance	Uses more general touring skis, skis on groomed and un-groomed trails. Can go long or short distances.	
Experience	Seeks physical challenge / competition, developing skills as a skier, enjoys using their equipment, enjoys seeing others	Seeks physical challenge / competition, developing skills as a skier, enjoys using their equipment, enjoys seeing others	Comfort of an activity in a natural setting, minimal contact with others. Commuting.	Comfort of an activity in a natural setting, time spent with pet, exercise for pet.
Resource requirements	Needs wide trails that are groomed specifically for skate skiing, can cover long distances in short time, desires extensive trail system	Prefers to ski on trails that have been groomed for classic skiing, sharing trails with skate skiers is acceptable, desires extensive trail system.	Cleared trails.	Not compatible with most other skiers – asymmetrical antipathy. Cleared trails. Mix of groomed trails and ungroomed trails
Managerial requirements	Trail maintenance needed in summer to smooth trails and ensure vegetation does not grow in from sides, grooming required in winter. Signs requesting non-skiers to stay off the groomed area.	Summer trail maintenance necessary, but width not as critical as skate trails, grooming required in winter. Signs requesting non-skiers to stay off the groomed area.	Very little maint. required, make sure no major obstacles (e.g., fallen trees) in the trail, does not require grooming in winter. Signs requesting non-skiers to stay out of the ski tracks.	s of trail designated for dog use. Trails cleared of obstacles, and wide enough for dogs.

Winter recreation uses (NON-Skiing)

	Walkers	Running	Walking dog	Biking	Ice skating
Activities	Walks of generally short distance and duration. Commuting.	Runs of varying distances and durations.	Walks of generally short distance and duration with dogs.	Rides of long distance, commuting.	Access to skating areas, hockey
Experience	Solitude, get sunlight.	Physical challenge.	time spent with pet, exercise for pet.	Excitement, physical challenge, commuting.	Hockey has the experiences of team sports
Resource requirements	Cleared and groomed trails with trailheads easily accessible from campus buildings and parking areas.	Cleared and groomed trails	Cleared and groomed trails	Cleared trails, trails must be packed, but not necessarily wide.	Parking, access trails, snow-free ice.
Managerial requirements	Trail routing through urban interface to open space. Grooming.	Grooming.	Grooming.	Keep trails clear, signs directing bikers to appropriate trails.	Route ski trails that cross the lake around ice-skating areas.

Summer recreation uses

	Walking	Horseback riding	Running	Walking dog	Mountain Biking	Fishing	Berry picking	Picking Mushrooms
Activities	Varying lengths of walks, in varying areas, relatively short distances covered. Commuting	Varying lengths of rides, in varying areas, relatively short distances covered.	Varying lengths of runs.	Exercise for self and pet.	Long rides on rustic trails	Accessing fishing areas on Smith and Ballaine Lakes.	Picking berries	Picking mushrooms
Experience	Solitude, or in groups, exercise.	Solitude, or in groups, exercise.	Solitude, or in groups.	Chance to be with pet, exercise for self and pet.	Speed, excitement, fitness	Solitude or being with family friends, develop skills	Being in nature, Getting food, solitude or with friends	Being in nature, Getting food, solitude or with friends
Resource requirements	Semi-natural trails, remote, relatively dry		Long trails of varying type and steepness, ie. Narrow trails and widened trails.	Cleared, dry. Trailheads close to campus buildings and parking areas for off-campus users.	Long trails of varying type and steepness, ie. Narrow trails and widened trails.	Access trails, Parking areas, waterside trails.	Healthy boreal forest and berry plants, some trails.	Healthy boreal forest and mushrooms, some trails.
Managerial requirements	Some improvements in marshy areas, trails left narrow, minimal signs of human impact (e.g., other uses, research fences); easy access		Improvements in wet areas.	Route trails through urban interface. Signs requesting owners clean-up after their dogs.	Improvements in wet areas, hardening in some areas to prevent erosion	Prevent erosion on access trails. Info board for seasonal/permit info	Protect ecosystem from too much development. Provide parking where needed.	Protect ecosystem from too much development. Provide parking where needed.

Appendix I—Soil Characteristics of North Campus

Following □

TABLE 1. Classification of major soil series occurring in the North Campus area (USDA Soil Conservation Service and Alaska Agricultural Experiment Station 1963)

Soil Type	Susceptibility to Frost Action	Characteristics
Minto silt loam	High to moderate	Subarctic Brown Forest Soil. Deep, silty material over bedrock, Occurs at the bases of hills dominated by Fairbanks series soils. erodible, seasonably high water table, susceptible to piping, poor stability in embankments, moderate permeability, moderate water holding capacity, May have irregular, discontinuous masses of ice at a depth of 6 feet or more, melting of underground ice masses may result in irregular subsidence, pitting. Plant cover is mostly aspen, birch or white spruce. May also have some black spruce forests; ; permeability 0.2 – 0.6 inches per hour*; available water, 2.0 – 2.5 inches per foot of depth; pH 4.5 – 5.0 grading to 7.5 – 8.0 below 15 inches; dispersion* in water, high; shrink-swell potential**, moderate; plasticity index, 2-10, liquid limit, 25-40
Fairbanks silt loam	High to moderate	Subarctic Brown Forest Soil. Well drained upland soils, moderately deep to deep micaceous silt; shallow to bedrock in places; erodible; cleared areas are highly susceptible to sheeting and gully erosion; susceptible to piping, not usually susceptible to thermokarst pitting; poor stability in embankments; moderate water holding capacity; water table usually more than 15 ft depth; occurs mostly on middle of long, south facing slopes and on low hills near the alluvial plain; supports stands of birch, white spruce, aspen and sometimes alder, micaceous loess parent material; permeability 0.2 – 0.6 inches per hour; available water, 2.0 – 2.5 inches per foot of depth; pH 5.0 – 6.5; dispersion in water, high; shrink-swell potential, low, plasticity index, 2-10, liquid limit, 25-40.
Goldstream silt loam	High	Low-Humic Gley Soil. Deep, poorly drained silty soils with permafrost; wet to surface; susceptible to piping; poor stability in embankments; moderate erodibility; ground water perched above permafrost; depth from surface to water table, less than 1 ft; occurs in broad low areas of the alluvial plain along drainage ways and rivers and at the base of hills; vegetation is dense growth of shrubs with a few black ; permeability 0.2 – 0.6 inches per hour; available water 2.0 – 2.5 inches per foot of depth; pH 5.0 – 7.0; dispersion in water, high; shrink-swell potential, moderate; spruce, willow and tamarack; sedge tussocks common; permafrost at 10-24 inches depth; soils above permafrost are always semi-fluid; contains black streaks of organic matter locally known as muck; plasticity index, 0 - 10, liquid limit, 30 – 50.

• dispersion refers to the degree and rapidity with which the soil structure breaks down in water

** shrink-swell potential is an indication of the volume change to be expected in the soil with changes in moisture content

TABLE 2. Interpretation of engineering properties of soils (USDA Soil Conservation Service 1974)

	Soil Series Rating for engineering properties		
	Fairbanks	Goldstream	Minto
Shallow excavations	Moderate to severe limitations on slopes greater than 7% slope, steepness	Too wet, severe restrictions, subject to flooding, permafrost restricts use	Moderate to severe limitations on slopes greater than 3%, wet, too steep
Small commercial buildings	Severe limitations over 7% slope, too steep	Too wet, severe restrictions, subject to flooding, permafrost restricts use	Severe restrictions due to thermokarst pitting
Local roads and streets	Frost action likely	Too wet, severe restrictions	Severe limitations due to frost action, thermokarst pitting
Picnic areas	Moderate limitations on slopes greater than 7% slope, too steep	Too wet, severe restrictions	Moderate limitations due to wetness
Playgrounds	Moderate limitations on slopes greater than 3% slope, too steep	Too wet, severe restrictions	Moderate limitations due to wetness; severe limitations at slopes greater than 7%, too steep
Pond reservoir area	Piping likely	Permafrost restricts use	Restrictions due to thermokarst pitting, erosion, and steepness
Embankments, dikes, levees	Soil has low bearing strength, hard to compact, piping likely	Soil has low bearing strength, piping likely	Soil has low strength or bearing strength, compacts poorly, susceptible to piping

Thermokarst mounds in the Fairbanks area are polygonal or circular hummocks 10 to 50 feet in diameter, 1-8 feet in height and are composed of loess. They are commonest in cultivated field but there are also some in abandoned fields now reforested. In some fields the mounds are separated by trenches 1-5 feet wide, but in others the trenches are poorly developed. The trenches form as a result of melting of ice masses.

A field on a gentle north-facing slope at the AES has the best developed mounds and the most detailed record in the Fairbanks area. The surface of the field was smooth before clearing in 1908. By 1922 pronounced individual and connected depressions had formed and by 1926 some trenches between mounds were as much as 5 feet deep. Cultivation stopped a year or two later because the irregular topography formed by the pits and mounds was dangerous to the operation of farm machinery. The field then was seeded to pasture. By 1938, the mounds were 3 to 8 feet high and about 20 to 50 feet in diameter. Rockie studied the field in November 1938 in order to determine whether the ice still was actively melting “A tractor bulldozer was used to remove the upper part of every hummock and fill each pit until the land surface assumed approximately a uniform slope. The surface remained smooth for nearly a year but in July 1939 irregularities began to form. In succeeding years polygonal mounds formed as the ground surface subsided over melting ice.

Mounds in the test area smoothed in 1938 were as large and as high as those in the part of the field that had not been smoothed when the writer first studied the field in 1947. Maximum mound height was 8 feet. Comparisons of aerial photos with those taken 10 years earlier reveal that in 1948 mounds were about the same size and shape and in the same position as in 1938. Probing with a soil auger on 14 July 1948, revealed no ice or frozen ground at a depth of 9 feet below the surface of a trench (Pewe1954, 1982)

Appendix J—North Campus Manager Position Description


POSITION DESCRIPTION FORM

UNIVERSITY
of ALASKA

PCN:

Job Description (Please attach an Organization Chart)

% of time	List primary duties of the position in order of importance. Be specific. For each duty indicate the average percent of time over the course of a year. Total should equal 100%.
30%	Serve as first point of contact for all those proposing to use North Campus lands, review and process routine requests for research, education, and recreation activities in the North Campus.
10%	Report regularly as ex officio member to the North Campus Subcommittee and, as necessary, to the MPC
20%	Consult closely with Facilities Services, which must approve and supervise work done in North Campus
20%	Coordinate with North Campus stakeholders including, but not limited to, the research community, Arboretum Committee, Nordic Ski Club of Fairbanks, and UA Statewide land management office
10%	Maintain a database of resource inventories and historic and contemporary research, education, and recreation activities.
5%	Promote educational and community use of the North Campus
5%	Communicate effectively with all North Campus stakeholders and the broader community, providing information about the management process and about the area's values.

DRAFT

Office of Human Resources
Form Revised: May 5, 2005

www.alaska.edu/hr
Page 2 of 7

Appendix K—Permit Application

PERMIT APPLICATION FOR RESEARCH IN NORTH CAMPUS AREA UNIVERSITY OF ALASKA FAIRBANKS

The North Campus Area (NCA) provides an excellent outdoor research laboratory for a variety of disciplines. Faculty, graduate and undergraduate students, and visiting scientists have used the NCA for research in ecology, plant science, soils, wildlife and wetlands biology, water chemistry, geophysical sciences, permafrost, agriculture, ornithology, art, photography, native studies, and more. Its value lies primarily in its accessibility on campus and diversity of ecological habitats.

UAF's North Campus Plan (www.uaf.edu/mastplan/norhecampus) seeks to ensure that the NCA remains an outstanding campus laboratory for current and future research programs. The North Campus Subcommittee (NCS), created by the UAF Master Planning Committee, reviews and approves all NCA activities consistent with the North Campus Plan. Membership and the activities of the NCS are included at the web site listed above.

All NCA research requires a permit from the NCS; research in the Boreal Arboretum also requires approval from the UAF Arboretum Committee. Permits are valid for up to two years, with renewals possible upon further NCS review. Attached is a permit application that should be accompanied with a brief summary (3-page maximum) of your proposed work. The NCS will review your application and respond in writing, including a request for additional information (if required). The summary of proposed work should include the following:

1. **Goals:** Describe your research goals and objectives. Why is the NCA the most appropriate location for this research?
2. **Timeline:** What is the timeline for your research?
3. **Access:** Describe how you will access the site: by what means, how often, and in what seasons.
4. **Location:** Provide GPS coordinates of your proposed site(s) together with a North Campus Area map (See below) that indicates the proposed site. The NCS Chair can provide a GPS unit if you do not have access to one. Specific research locations will not be divulged to the general public but will be used by the NCS strictly for management decisions. Photographs or digital images of the site are also helpful.
5. **Size and dimensions of study area:** Give the size and dimensions of your proposed study area.
6. **Site modifications:** One of the objectives of the North Campus Plan is to maintain the natural integrity of the NCA and ensure a quality research environment for the future. How will your research meet these objectives? Describe any required modifications to the location such as new trails, soil pits, boardwalks, tree removal, construction projects, or other infrastructure.
7. **Utilities:** Indicate if your research requires power lines or connections.
8. **Potential hazards:** Describe any environmental hazards associated with your proposed NCA research, including use of harmful chemicals, radiation, or infrastructure that could harm the NCA and/or its users.
9. **Potential conflicts:** The NCS is committed to maintaining quality standards of multiple use in the NCA. Describe any potential conflicts with educational or recreational users.
10. **Restoration:** The UAF North Campus Plan requires that all evidence of the research project be removed from the site within 90 days of project completion and restoration of the area. Describe how you will accomplish this.

Contact the NCS Chair (contact information below) if you need any help with the application process. The NCS strives to expedite the permitting and approval process to make it as efficient as possible.

Regulations for Research in NCA

1. Motorized vehicles will only be allowed on designated services roads (exception, emergency vehicles)
2. Walking and use of wheeled vehicles will not be permitted on groomed ski trails in winter. The only exception will be emergency vehicle access and if a situation arises with the research project that requires access for maintenance, equipment installation, etc. and if a snowmachine will not suffice. Any researcher requiring access that includes possible damage to groomed winter trails or boggy summer trails **MUST** obtain permission from the NCS Chair prior to using the trails. When required, access that has negative impact on groomed ski trails or wet areas should be coordinated with the NCS Chair to ensure that any necessary corrective work is carried out. Use of a snowmachine, if needed, also should be coordinated through the NCS Chair.
3. Researchers and/or their departments will be responsible for funding repair to trails and roads caused by non-approved vehicle access.
4. Projects should be located at a sufficient distance off trails to avoid vandalism and reduce visual impact to other users.
5. Fencing for protection of research project sites is a last resort and requires NCS approval.
6. Trees and other living plant materials near the research site may not be used as signposts, supports for wires and equipment, or other uses that might cause permanent damage or provide entry points for disease or insect pests.
7. All structures, equipment, flagging, cables, and other research materials must be removed within 90 days of project completion. The researchers and/or department will be billed for anything not removed.
8. If modifications to the site have been made, it must be restored as mutually agreed upon in the permit application by the researcher, their department and the NCS. The researchers and/or department will be billed for any modifications not accomplished.

Permitting Process

Once the NCS Chair receives your completed application it will be distributed electronically to the full North Campus Subcommittee. They will respond to the NCS Chair within 5 working days. If there is no further discussion needed you will be notified by the NCS Chair. If further discussion is needed the NCS Chair will schedule a meeting to decide how the research will fit in with the values of the North Campus.

Please note that applications from students must be approved and signed by a faculty advisor or advisors. Faculty advisors and their departments or institutes will be responsible for removal of research materials and site cleanup after project completion.

Applications from researchers not affiliated with UAF require a sponsor from UAF faculty or staff.

If approved

Research sites need to be accessed in a means appropriate for the management regime of the trails/roads involved. Motorized vehicles will only be allowed on designated service roads (see map below). No walking or wheeled vehicles on designated ski trails in winter. No heavy, wheeled vehicles in wet areas. If needed, a snow machine is available for accessing research plots in winter (researchers can coordinate with the NCS Chair). As a last resort, access that damages ski trail grooming, or creates large ruts in a wet area needs to be coordinated with NCS Chair so that corrective dirt work or grooming can occur.

Research projects should be located away from existing trails and should be concealed to reduce vandalism and visual impact to other users. Fencing is a last resort for protecting research projects, and will require the approval of the NCS.

All equipment and artifacts from research projects must be removed within 90 days of the completion of the research project. This includes all structures, equipment, data loggers, and flagging. Responsibility and funding for removal must be identified as part of the approval process. All research projects need to fall under the responsibility of a UAF school or department that will take financial responsibility for post-project clean-up.

Continuation of research beyond the permitting period will require a permit renewal. Requests for renewal should be submitted to the NCS Chair.

If denied

Denial of permit applications by the NCS can be appealed to the Master Planning Committee. A written appeal should be forwarded to the MPC for immediate consideration by the Executive Committee. The MPC will be informed of the appeal and, if the complexity of the proposal merits, will be considered by the entire body. Final appeal can be made directly to the UAF Chancellor.

Contact for Further Information

Richard Boone, Associate Professor
Chair, North Campus Subcommittee
Institute of Arctic Biology, and
Department of Biology & Wildlife
311 Irving Building
Phone: 907-474-7682
FAX: 907-474-6967
Email: r.boone@uaf.edu

Application for Research in North Campus Area

**University of Alaska, Fairbanks
PO Box 757520
Fairbanks, AK 99775**

Project Title _____

Project start date _____ Project end date _____

Total project duration _____

Principal Investigator _____

Work Address _____

Phone number _____ Email _____

Co-Investigators, Faculty Advisor (s), or UAF Sponsor _____

Work addresses _____

Phone numbers _____ Email _____

Department head/director _____ Phone number: _____

UAF address: _____ Email _____

Project's funding source(s): _____

Budget number (to be used only if agreed-upon repairs/restoration have not been accomplished and only with notification of researcher, department head and/or director listed above) _____

Signatures (include date) _____

Principal Investigator: _____

Department Head or Institute Director: _____

Faculty Advisor(s) if application is from a student _____

UAF sponsor if applicant is not affiliated with UAF: _____

Approved _____ Declined _____ by North Campus Subcommittee on _____

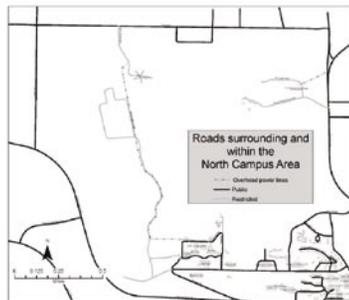
Chair, North Campus Subcommittee: _____

North Campus Area including the Boundaries of the Arboretum and the Biological Reserve

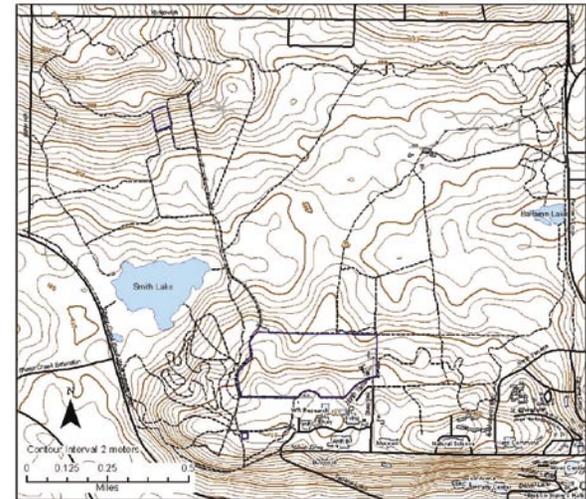


— = Approximate boundary of North Campus Area
— = Approximate boundary of Arboretum
— = Approximate boundary of Biological Reserve

Roads Within and Surrounding North Campus Area



Topographic Map of North Campus Area



— Fences
— Power lines
- - - Trails
roads
— Public
— Restricted

Appendix L—Current Trail Standards

Current Trail Standards

Current physical characteristics of trails

1. Trails

- Total trails: 28 miles
- Social (not formally maintained): 5.8 miles
- Maintained: 22.2 miles

2. Trail surface (social excluded)

- Gravel surface: 0.6 miles
- Woodchips: 0.6 miles
- Unsurfaced (defined as no cover): 21 miles

Table 3. Trail mileage by width.

3. Trail width, measured tree trunk to tree trunk*

- < 5 ft: 0.2 miles
- 5 - 9 ft: 5.7 miles
- 10 - 19 ft: 4.8 miles
- 20 - 29 ft: 4.7 miles
- 30 - 40 ft: 6.8 miles

Width in Ft.	LENGTH	%of total
1.5	0.07	0.31
3.0	0.17	0.76
5.0	5.66	25.48
10.0	2.53	11.40
15.0	2.24	10.11
20.0	4.69	21.11
30.0	5.69	25.62
40.0	1.16	5.24
	22.22	100.02

* Measures taken at several points taken along trail from trunk to trunk across trail. The average width was extrapolated across similar trail sections.

4. Winter designations of trails (as defined by UAF trails map)

- Groomed for skate and classic skiing: 11.4 miles
- Groomed for classic skiing only: 2.3 miles
- Ungroomed classic skiing: 3.0
- Multi-use: 2.0 miles
- Dog use: 2.6 miles
- Groomed for walking: 1.0 miles

Other:

- Lights: 2.2 miles
- Miles groomed: 14.6 miles (7.6 miles ungroomed)

5. Summer uses of trails (as defined by UAF trails map)

- Any non-motorized use: 11.6 miles
- Any use and authorized vehicles: 3.8 miles
- Pedestrian only: 0.3 miles

Table 4. Mileage and percentage of summer trail type

Summer Use Category	Length	%of total
Any non-motorized use	11.58	52.13
Any non-motorized use and authorized vehicles	3.85	17.33
No summer use (i.e., lakes)	1.58	7.11
Pedestrian only	0.31	1.41
Wet trail	4.90	22.04
	22.22	100.02

Appendix M—Draft Trail Guidelines

Guidelines for trails

The trail system is a key component for education, research, and recreation taking place in the North Campus . The trail system provides convenient access for research and education, for both the UAF scientists and community, and provides recreation opportunities for UAF and the Fairbanks community. The UAF Master plan directs the North Campus Subcommittee to develop a plan that promotes the UAF trail system as a valuable campus and community asset. However, the trail system, and its uses, *must* be compatible with the other uses occurring on the North Campus and the value statements of the North Campus. Recommendations regarding the trail system follow.

Americans with Disabilities Act compliance

The North Campus manager will pursue detailing how the Americans with Disabilities Act of 1990 relates to the trail system of the North Campus . This may be especially relevant to the use of the North Campus for education.

Guidelines for lights along trails

The issue of expanded lighting has been raised. Due to the potential for negative effects on research, increased lighting is not planned at this time. If lights are to be increased in the future the most likely route would be from the current northern terminus of the lights on the T-Field road to the southeastern corner of the T-Field. The survey conducted during the public involvement meeting found that 60% of respondents felt expanding the ski trail lights is acceptable; 30% felt it is unacceptable. The most often cited area for expanding the lights was the T-Field road, followed by the Midnight Express and Big Whizzy loops.

1. If the lights are expanded, they should be located near existing power.
2. The lights should be concentrated in a small area to minimize the extent of light pollution.
3. The lights on the remainder of the T-Field road (leading to the T-Field) should be a priority as power exists in this area and this area was identified as a priority for lighting in the Skarland Trails Management Plan.
4. The T-Field itself, may receive enough light from the moon sky (plus potential T-Field road lights) to be safely skied at night.
5. The Midnight Express Loop may have potential for lighting due to its compact nature (e.g., one light pole may illuminate several sections of the trail) and proximity to areas that already have lights.
6. Expansion of Trail lighting would require North Campus Subcommittee approval.

Guidelines for walking trails in North Campus

The Skarland Trails Plans lists several proposals for winter walking trails on the North Campus . This plan upholds those recommendations.

1. Increase amount of groomed winter walking trails. These trails should be loops of roughly one-half to one mile. Three to four new loops should be formed, either on existing trails, or by cutting new corridors. The trails should be distributed along the southern boundary of the North Campus , and have easy access from various points on campus, such as West Ridge, student housing, and lower campus. New walking trails can potentially cross groomed ski trails at right angles, but should not be adjacent to the same route, which leads to walkers ending up on groomed ski trails. Walkers are often the new to the University (e.g., new students) and least familiar with North Campus so they need adequate signage to ensure they know where to go and why walking on groomed ski trails in winter is not allowed.
2. Where possible, efforts will be made to accommodate walkers on the edge of groomed skate skiing trails. However, the feasibility of compatibility with skiing will have to be explored.
3. The feasibility of a multi-use corridor, which can be used for commuting from West Ridge to Yankovich Rd. should be explored.
 - a. The corridor would be a multiuse path for walkers and bikers
 - b. The agreement between UAF and the United States Geological Survey for the College International Geophysical Observatory site specified buffer zones in which new trails cannot be developed. This must be considered when examining a route for such a commuting corridor.
 - c. Alternate route: Dalton Trail to Pooch Loop to North Tanana.

Other guidelines for trails

1. Groomed ski trails: Dogs and walkers are not allowed on trails designated for skiing only.
2. Trails within the Arboretum will not be widened (i.e., the average width as measured trunk to trunk will not increase over current conditions nor will extensive brushing be allowed).
3. Maintenance of groomed trails: continue mowing, brushing and flattening as needed.
4. Erosion should be mitigated using appropriate techniques.
5. Trail width: A limit to trail width should be established. Essentially, this applies to trails cut through the wooded areas.
 - a. No trail wider than 40 ft. (an exception would be an approved "practice area").

- b. No more than 40% of the trail miles can be 30 to 40 feet wide.
 - c. At least 30% of the trail miles remain 10 feet or less in width.
6. Trail surface
- a. Continue to evaluate areas of trails that are persistently wet during summer.
 - b. Explore options for trail cover, such as geo-matting, to prevent further erosion.
 - c. Approximately 5% of trail miles could end up covered with some appropriate trail surfaces.
 - d. Permanent boardwalks should be avoided on trails.
7. Restrictions on wet areas: While there was support for placing some limitations on use in areas that are continuously wet in the summer, the extent of erosion from this use is not likely too great. Therefore, no restrictions are recommended at this time, but wet areas should be monitored for erosion. Increased informational signage is expected to reduce (often accidental) use of wet areas in summer.
8. Trail construction: Trail development shall be reviewed by the North Campus manager, and the North Campus Subcommittee. Trail development should minimize disturbance to permafrost and should preserve the natural aesthetic of the area (i.e. no berms, no big brush piles, etc.). Trails should be cleared and surfaced to avoid erosion.
9. The possibility of a central parking area, trail access, and beginner's ski area on the land NE of the museum and south of the proposed Tanana Loop extension should be explored. This could be adjacent to, and coordinated with the proposed UA Museum/NSF open space. Plans for this open space should allow for North Campus trail access in case this is necessitated by construction of Tanana Loop.
10. Smith Lake Preserve: Existing trails that occur within the hundred-yard buffer will be exempted to the following specific limits.
- a. The trail connecting the south side of Smith Lake to the Potato Field can be no wider than 30 ft. measured from tree to tree.
 - b. The trail connecting the northwest side of Smith Lake to the T-Field Road can be no wider than 30 ft. measured from tree to tree.
 - c. The trail connecting the east end of Smith Lake to the T-Field Road can be no wider than 15 ft. measured from tree to tree.
 - d. The remainder of the trails will be no wider than 5 ft. measured tree to tree.

Appendix N—Proposed Trail Connections from Main Campus to North Campus

UAF North Campus Planning – Connecting the trails to campus, recognizing trails within the main campus, and facilitating human powered commuting to campus

Proposed by Tim Stallard Outdoor Adventures Coordinator, Wood Center

Date: May 2004

Three types of trails are proposed in this document: trails that connect the campus with the North Campus Trail system, natural trails that connect areas of the developed campus, and trails that facilitate bicycle and pedestrian commuting to campus. Due to time constraints, only the Central Campus Trailhead was endorsed by the North Campus Subcommittee. There was not time to adequately consider the remaining trails, but they are put forth as proposals for consideration by future campus planning efforts. This document accompanies a GIS map titled “Proposed on-campus trails” created by SNRAS Graduate Student Michael Hay.

1. Campus Connector Trails

- a. **Central Campus Trailhead:** Trailhead on North Chandalar Drive near the University Fire Station (access to lower campus and Wood Center – where skis can be rented and stored)
 - i. Trail travels behind faculty housing on N. Chandalar crossing Kuskokwim Way to connect with Six-mile Loop
 - ii. Use designation: ski only in winter (route is paralleled by sidewalks)
 - iii. Current status: not designated trail, but used informally. Corridor threatened by future N. Chandalar housing improvements?
 - iv. Improvements –
 1. New trailhead sign at corner of Colville and North Chandalar.
 2. New fencing to protect trail from N. Chandalar turnaround and Hess Village access and/or new trail cut through the trees/brush along Kuskokwim way
 3. Sign east of Kusko way “Central UAF campus this way”
 4. Trail improvements and sign west of Kuskokwim way to connect with Skarland Six-mile trail
 5. Maintenance: no-grooming needed – maintained by ski use
- b. **Gym access trail** – west of SRC, traveling below sledding hill, through the trees up the hill – above Tanana Loop ending across from the Lookout
 - i. Trail connects trails with parking, locker, and shower facilities at the SRC and Patty Gym
 - ii. Use: Ski only in winter (route is paralleled by road with marginal shoulder for bikes/pedestrians)
 - iii. Current status: Trail has been groomed in previous years, but not heavily used. Parking crunch on West Ridge makes alternative parking for trails imperative. Bottom portion of trail corridor cut out of hillside for roundabout construction.
 - iv. Management: Trail will be groomed for skate and classic skiing

2. Inter-campus Trails

- a. **West Ridge – Main Campus trail.** This trail will parallel Yukon Drive and connect lower campus, Natural Sciences building, gym facilities, and West Ridge area.
 - i. Management: trails would be multi-use, but primarily for walkers. Dogs would be okay on leash, bikes may need to be prohibited if these trails remain narrow. This trail could be open to skiers, but would probably not interest skiers due to the number of road crossings. This would be a primitive trail: gravel could be added if needed, but the trail would not be paved.
 1. Risk management and accessibility issues would need to be considered. Perhaps a management sign that designated the trail as a ‘rustic natural trail’ that warned users to ‘travel at their own risk’ would suffice.
 - ii. These trails would facilitate folks traveling by foot between upper and lower campus and will also expand opportunities for recreational walkers.
 1. Spur trails: existing trail west of SRC up to Museum that crosses Yukon drive and extends to North Tanana corridor
 - iii. Current status and improvements: expand existing (heavily used) social trails through the woods with several new sections.
 1. New trail beginning west of Wood Center between Copper Lane and Chapman building. Crossing the ‘walkway’, continuing above the Haida parking lot connecting to an existing social trail up to Natural Sciences building. The new trail would continue west below Yukon Drive to connect with existing informal trails that connect to the Museum (and then Six-mile trail), IAB Greenhouse, and gym facilities. (The parking plan called for an upgrade of this trail
 - iv. Maintenance: current social trails are ‘maintained’ by foot traffic. This works, but does keep the trails narrow. If the trail was wider, it could be packed by a snow machine. Alternatively, the trail could be packed/widened by snowshoes.
- b. **Patty Parking to Lower Campus/Wood Center** – there are currently two short social trails through the woods that could be protected and enhanced to increase the woody feel of the UAF campus. The third trail below is a new proposal and could be an alternative or an additional trail in this area.
 - i. **Denali Lane to Chapman building**
 - ii. **Denali Lane to the Wood Center driveway**
 1. These first two social trails are heavily used and connect the lower parking lots/lower dorms and central campus
 2. The second, eastern most trail has been degraded by the new dumpster pads behind Nerland and Mackintosh. In the winter it is no longer usable because of the large snow dump south of Chapman.
 - iii. **East Patty to Chapman Building:** this path could connect the large parking areas south of the Patty Center with lower campus and Wood Center. This path would also connect the upper dorms with gym facilities
 1. A similar trail in this area was proposed in the Parking Plan – noting an existing social trail/sled run. The trail proposed here would be less steep and cut across the hill at a lower angle. This trail would intersect

- the 'walkway' and then lead through the woods to the Chapman building and lower campus.
- 2. See West Ridge– Main Campus trail for discussion of Risk Management and accessibility issues.
- 3. Improvements: Signage, cut 3-4 foot trail into hillside. Planted trees could help define the trail on the currently open slope
- 4. Maintenance – this could be a rustic, natural trail maintained by pedestrian traffic

3. Commuter Trails (improved bike and pedestrian access will reduce parking pressure)

a. **Sheep Creek Commuter trail**

- i. Multiuse (widen to facilitate bicycle use)
- ii. Current status: this trail connects old trails, power lines and the drainage ditch; trail receives regular use. Trail begins at Sheep Creek Trailhead and turns to the right. Trail is very narrow then takes a left before the farm and climbs steeply up to the drainage ditch. Trail follows the ditch behind/above the farm and ends at the scenic overlook.
- iii. Improvements
 - 1. widen narrow parts of trail and improve signage
 - 2. Consider moving trailhead to new entrance area (to reduce impact to ski trails)
 - 3. Smooth grade
- iv. Maintenance –
 - 1. Winter: periodic packing with snow machine?
 - 2. Plow in winter?
 - 3. Integrity of drainage ditch needs to be maintained

b. **Extension of bike path from Farmers Loop**

- i. New multi use path along east section of Tanana Loop until intersection with Yukon Drive
- ii. Current status: many students use the bike trail to commute from Farmers Loop; but at the intersection with North Tanana, the trail drops off the ridge and bypasses campus.
- iii. Path could be on east or west side of road. There is a large (new) shelf of land on the east side of the road for most of this distance that would be perfect for a multiuse path or sidewalk.
- iv. Improvements
 - 1. harden trail (gravel or pave)

c. **Yankovitch to West Ridge commuter trail** through North Campus

- i. Multiuse path for walkers and bikers (winter only? In summer bikers can use drier ski designated trails).
- ii. Problematic for previous planning effort due to agreement with CIGO site (no new trails near CIGO site)
- iii. Alternate route: Dalton Trail to Pooch Loop to North Tanana (very wet in summer)
- iv. Improvements: signage

v. Maintenance

- 1. Periodic packing with snow machine

d. **Parks Highway/Geist Intersection to Experimental Farm Commuter trail.** This trail is a short cut for pedestrians and bicyclists from Chena Pump road and Chena Ridge.

- i. Multiuse
- ii. Current status: used regularly, occasional pedestrian traffic above West Tanana on east side of Botanical Gardens
- iii. Improvements: signage
- iv. Maintenance: pack with snow machine in winter?

e. **General (not on map) – Bike lanes/wider shoulders need to be added to**

- i. Yukon Drive west of Museum
- ii. Southwest section of Tanana Loop
- iii. West Tanana Drive



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