



# U.S. Department of the Interior Bureau of Land Management

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<http://www.blm.gov/ak/st/en/fo/ado.html>

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## Environmental Assessment

**Applicant:** Trailside Discovery

**Case File No.:** AA-085091

AK-010-08-EA-017



### **Location:**

T 12 N., R. 3 W., Seward Meridian  
Campbell Tract, Anchorage, Alaska

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February, 2008

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**1.0. INTRODUCTION**

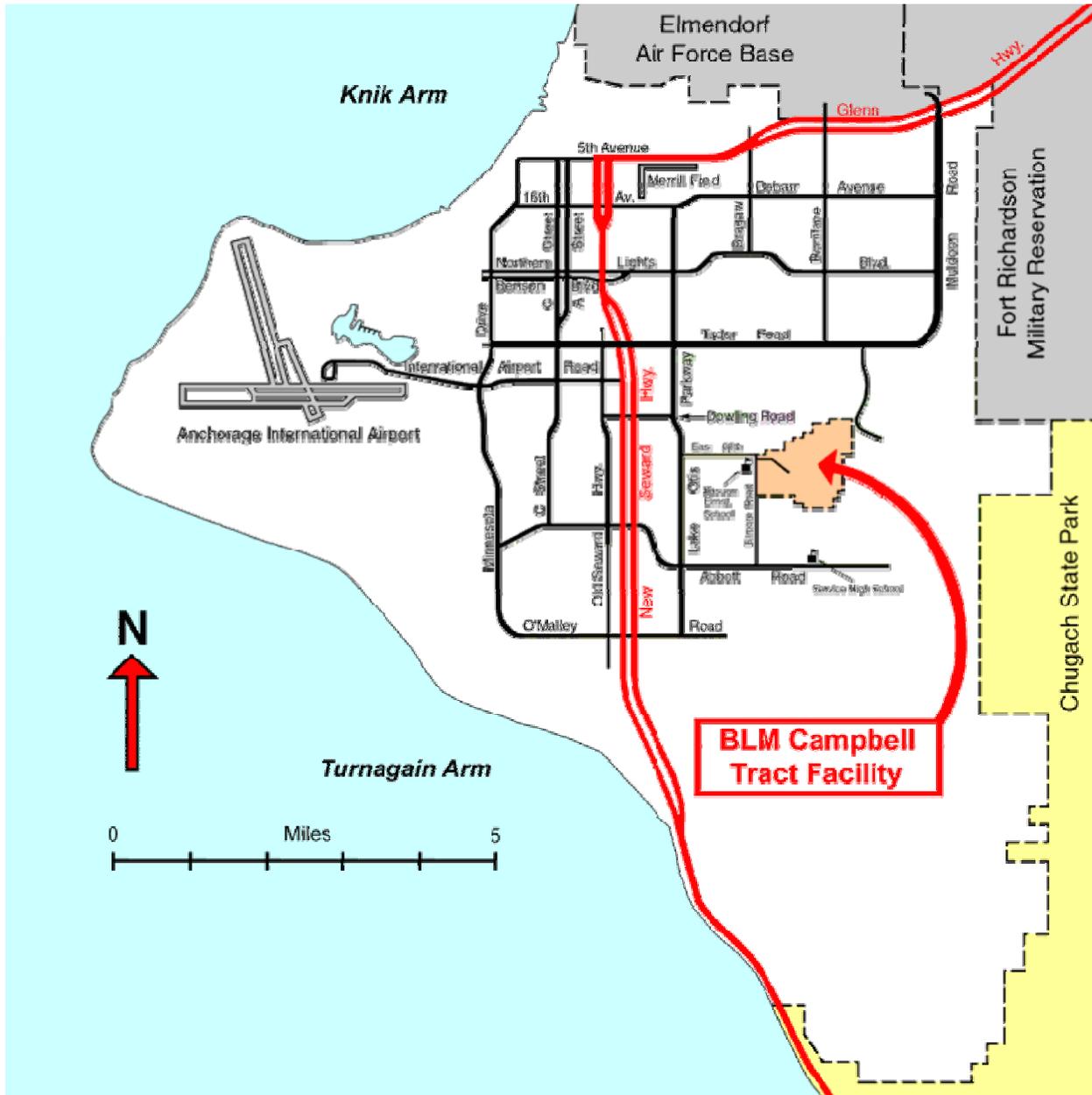
The Bureau of Land Management’s Campbell Tract, a 730-acre parcel of Federal public land on Anchorage’s southeast side, provides the public with outdoor recreational opportunities in convenient proximity to the city’s urban environment. The Tract includes over 12 miles of developed trails, an environmental education center, a complement of resident wildlife, and substantial areas of intact coastal boreal forest and associated terrain.

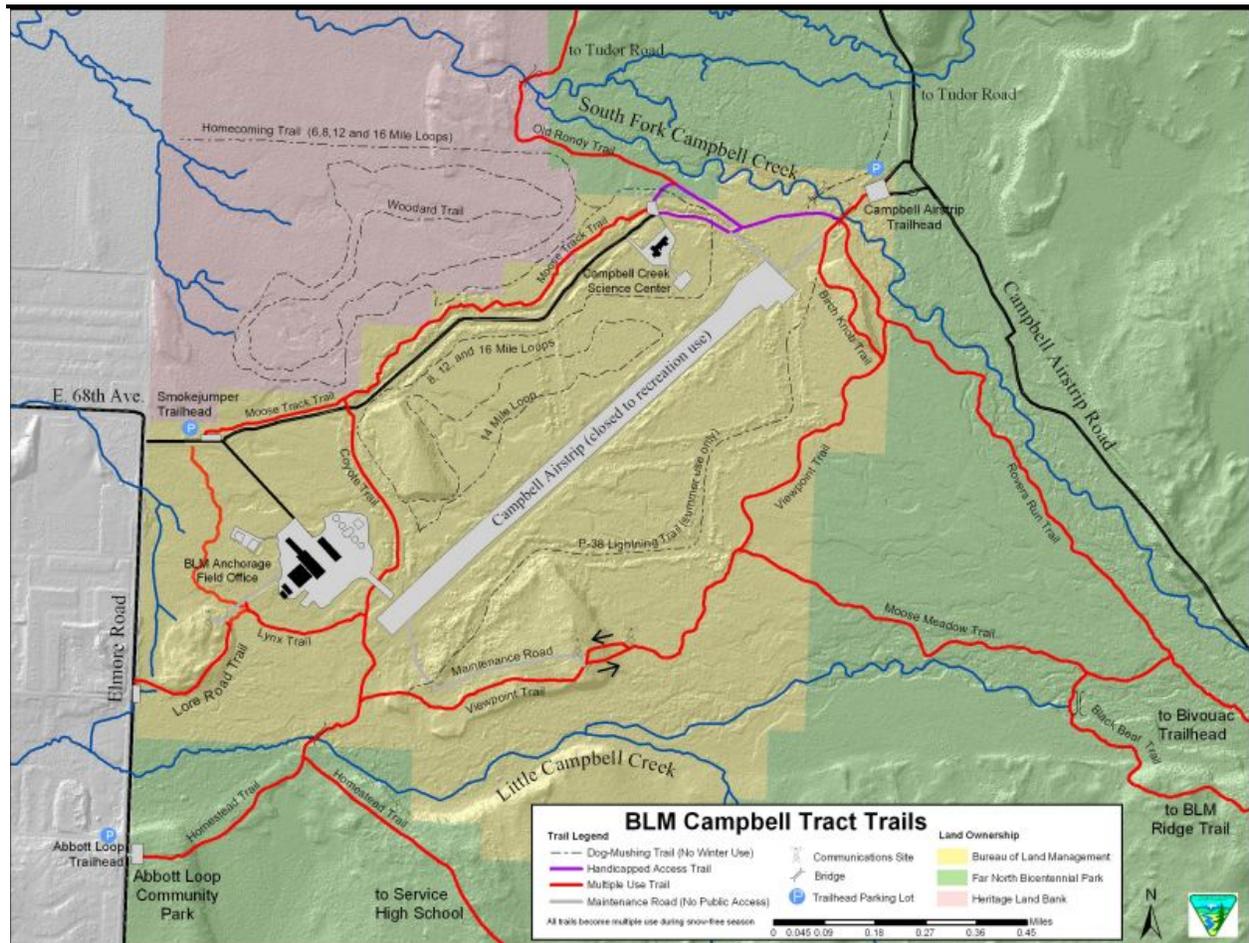


In addition to casual public use, private groups conduct various outdoor educational programs on the Tract. Trailside Discovery, a unit of the Alaska Center for the Environment in Anchorage, utilizes the Tract and the Campbell Creek Science Center to sponsor educational day camps for school aged children teaching environmental education and outdoor education skills including nature appreciation, riparian science, archeology, and non-motorized winter and summer activities.

**1.1. Land Status**

The Campbell Tract is withdrawn from the Federal public domain for use by the Bureau of Land Management, *Public Land Order 7471*, dated 2/11/2002.





**1.2. Relationship to Statutes, Regulations, Policies, Plans or Other Environmental Analyses**

**1.2.1. Statutory and Regulatory Authority**

The Federal Land Policy and Management Act directs the Secretary of the Interior to manage the public lands under principles of multiple use and sustained yield through the issuance of permits or other appropriate legal instruments while preventing unnecessary or undue degradation of the lands, 43 U.S.C. §1732(b). Recreational use of the public lands is within that management authority, 43 U.S.C. §1701(a)(8).

The Federal Land Recreation Enhancement Act authorizes the Secretary of the Interior to issue Special Recreation Permits (SRP) for *specialized recreational use* of public lands, 16 U.S.C. §6802(h).

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The implementing regulations of the Federal Land Recreation Enhancement Act require a Special Recreation Permit for commercial recreational use of the public lands, 43 CFR §2932.11. Commercial recreational use is defined as:

*Commercial use* means recreational use of the public lands and related waters for business or financial gain.<sup>1</sup>

(1) The activity, service, or use is commercial if—

(i) Any person, group, or organization makes or attempts to make a profit, *receive money*, amortize equipment, or obtain goods or services, *as compensation from participants* in recreational activities occurring on public lands led, sponsored, or organized by that person, group, or organization;

(ii) Anyone collects a fee or receives other compensation that is not strictly a sharing of actual expenses, or exceeds actual expenses, incurred for the purposes of the activity, service, or use;

(iii) There is paid public advertising to seek participants; or

(iv) Participants pay for a duty of care or an expectation of safety.

[Emphasis added, 43 CFR §2932.5]

As Trailside Discovery receives money as compensation from participants in recreational activities occurring on the Tract, the Secretary of the Interior is required to manage its *specialized recreational use* of the Tract through the issuance of a Special Recreation Permit.

## **1.2.2. Plans**

### **1.2.2.1. Conformance with Land Use Plan**

The Tract is within the Ring of Fire Resource Management Plan, dated March 2008. Under the management goal O-2: Allocations, “[M]anagement of this . . . site would continue to be guided by a *Management Plan for Public Use and Resource Management on the Bureau of Land Management Campbell Tract Facility* (BLM 1988) and any future amendments to this plan.”

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<sup>1</sup> Commercial use in this context does not contemplate an irreversible, irretrievable or long-term commitment of resources such as gravel extraction or the harvest of forest products. Rather, commercial use in this context is incidental and secondary to recreational use and a temporary, short term non-consumptive use of resources.

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**1.2.2.2. Campbell Tract Facility Management Plan**

The Campbell Tract Facility Management Plan acknowledged that “.... opportunities exist for commercial recreation ....” on the Tract. Further, environmental education was specifically recognized as a legitimate use of the Tract,

Authorize environmental education group uses of the tract in Zone 3. Limit organized group uses of the CT to environmental education activities.

[Part IV: The Management Program, Paragraph C.2.  
Action EE-2 Environmental Education Events]

Trailside Discovery’s *specialized recreational use* of the Tract is in conformance with the Campbell Tract Facility Management Plan.

**1.3. Environmental Analysis**

The National Environmental Policy Act of 1969 requires that the BLM analyze the environmental effects of activities it authorizes on the public lands to determine whether they will have a significant affect on the quality of the human environment, 42 U.S.C. §4332. In managing the environment, the BLM is required to “.... prevent unnecessary or undue degradation of the lands,” 43 U.S.C. §1732(b). In Alaska the BLM is also required “.... to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of [the public] lands ....,” 16 U.S.C. §3112(1).

Effects on the land, rural residents and the resources upon which they rely and the affect on the quality of the human environment associated with Trailside Discovery’s *specialized recreational use* of the Tract were previously analyzed in environmental documents: AK-040-93-003, dated December, 1992; AK-040-98-008, dated April, 1998; and AK-040-03-EA-004, dated February, 2003.

This document is intended to reassess the effects on the land, rural residents and the resources upon which they rely and the affect on the quality of the human environment associated with continued authorization of Trailside Discovery’s *specialized recreational use* of the Tract.

**1.4. Purpose and Need for the Proposed Action**

Trailside Discovery is in need of a natural outdoor venue for environmental education discovery and learning experiences that increase awareness, understanding and appreciation for the natural processes of the sub-arctic

environment in Southcentral Alaska. As a rental client, the Trailside Discovery program stages out of the BLM Campbell Creek Science Center and utilizes the adjacent Tract lands as a natural, wilderness-like area for their educational activities.



## 2.0. PROPOSED ACTION AND ALTERNATIVES

### 2.1. Proposed Action – continuance of prior authorizations

The BLM proposes to continue to manage and facilitate Trailside Discovery's *specialized recreational use* of the Tract through the issuance of a Special Recreation Permit that will incorporate appropriate provisions aimed at preventing unnecessary or undue degradation of the lands and protection of resources.

Trailside Discovery would like to conduct eleven one-week child education programs in the summer and two separate week-long winter programs based out of the Campbell Creek Science Center and the Tract annually. The mission of

Trailside Discovery is “to provide a broad range of outdoor environmental education experiences for students of all ages and from all economic, social, and ethnic backgrounds”. Trailside Discovery rents the science center facility for each weekly session and utilizes various sites on the Tract for their outdoor environmental education activities.

The participants in summer programs range in age from 4 through 16 years of age and may be on-site for up to 8 hours per day, Monday through Friday, for each weekly session. Students are physically checked into the Trailside Discovery program on each morning of a week-long session by parents or guardians, and picked up and checked out at the end of each day. No overnight activity is permitted. Younger age group students tend to operate on the Tract for the entire week session. Older students tend to spend the first few days of the week on the Tract and then move off-site for more advanced outdoor skills experiences to areas including Chugach and Denali State Parks, Homer, and Seward. This causes the student population on the Tract to fluctuate from a maximum of 135 students early in the week to as low as 50 per day by Wednesday afternoon.

Trailside Discovery offers a five-day winter program during the traditional December/Christmas school break and a one-week winter session during the school spring break in March. The non-summer sessions serve up to 24 students each learning a variety of snow-season nature and outdoor skills including cross-country skiing, snowshoeing, orienteering, winter survival techniques, animal tracking, winter ecology and wildlife studies. Students spend up to five hours per day in the field on the Tract and the balance of their time inside the science center where they receive classroom instruction, snack breaks, and meals. Winter outdoor activities utilize a radius of approximately ½ mile from the science center. Virtually all activities in the field occur on accumulated snow pack above frozen ground. Students walk, ski and snowshoe within this training radius, and utilize accumulated snow to construct temporary snow shelters.

Summer session program participants may range up to one mile from the science center for their outdoor education activities including the entire network of trails on the Tract and woodland and streamside sites south of the South Fork of Campbell Creek.

Dispersed areas of woodlands within ¼ mile of CCSC are utilized for nature study, tracking, and other outdoor skills activities. CCSC instructors coordinate use of these areas on a daily basis to reduce impacts on any single site. TD instructors are responsible for closely monitoring and controlling student groups in off-trail areas to minimize impacts to CT resources.

Instructional groups of students also utilize six designated open-field activity

areas to conduct educational programs including the Weasel Field, Lynx Field, Raven Field, Mammoth Clearing, Four Corners Field and CAT Clearing. Instructors rotate use of these areas weekly to minimize impacts. Woodland activities are provided at various established sites surrounding the science center that are also used year-round by CCSC staff. Access to these sites is gained on designated and well-marked trails to reduce impacts to surrounding vegetation.

Instructors utilize down and dead logs and sticks to teach survival and camping skills. Very small amounts of leaves, moss, and other vegetative materials may be collected in the course of nature study. Dead logs, sticks, rocks, and other natural products will be returned to natural positions in areas collected upon completion of each day's activities. Dead sticks may be discretely stockpiled for repeated use in activity areas, to be scattered into the environment at the end of the summer season. No cutting of live vegetation beyond the collection of sample leaves is allowed.

Streamside activities include capturing, identifying and then releasing aquatic insects and micro-organisms utilizing waders and dip nets, measuring and analyzing various stream parameters and water chemistry, and observing fish and other riparian fauna. Educational streamside activities are permitted on existing gravel bars at three designated sites accessed from Salmon Run Trail named Pole Point, Alder Access, and Salmon Platform Access, and adjacent to the Mushing and Campbell Airstrip Bridges. Salmon Run Trail stream access sites are reached by marked and established trails to reduce stream bank erosion along the rest of the stream course.

Trailside Discovery hires and trains up to 50 instructors who are charged with the close monitoring of students to prevent vegetation cutting and limb removal, habitat destruction, wildlife harassment, rock and stick throwing, social trail development, and other inappropriate outdoors behavior detrimental to the environmental health of the Tract. Instructors are required to promote a stewardship ethic in the conduct of their educational activities and serve as role models for students at all times. Leave No Trace principles are practiced in the execution of all outdoors activities and programs. Instructors report incidents of habitat and wildlife destruction to program supervisors, who are responsible for timely notification of the BLM authorized official. The TD program manager is responsible for the monitoring of individual instructors for compliance with environmental and safety stipulations established for use of CT.

To reduce the potential for negative wildlife encounters all lunches and most snacks are consumed inside the science center building. Snacks may only be carried into the field on hikes of two hours or more, and must be double-bagged to prevent attracting bears. All garbage and food remains associated with this

exception are gathered and stored in double bags. Toothpaste, sunscreen and other fragrant food-like products are not permitted in backpacks during field activities.

Approximately 80 vehicles converge on the science center during the 30-minute morning and afternoon high-traffic student delivery periods. The Trailside Discovery program director is responsible for notifying parents and guardians of appropriate drop-off and pick up sites and procedures, speed and parking restrictions on the science center access road, and to promote carpooling during the summer season. Trailside Discovery assigns staff to direct and control vehicle traffic in the science center parking lot during the high-traffic periods. Program managers are also responsible for educating parents on the proper preparation of students for day-long outdoor exposure.

The BLM authorized official or designee will present mandatory pre-season training for Trailside Discovery staff that includes review and discussion of all Special Recreation Permit stipulations for Campbell Tract, Leave No Trace and minimum impact principles, and a science center and Tract site tour to all activity fields, stream access locations, and sensitive sites. The authorized official will work closely with the science center staff to insure that TD activities result in minimum impact to the resources of CT.

Recognizing the potential for dangerous encounters with bear and moose, all Trailside Discovery instructors are trained in bear awareness techniques and procedures, and are required to carry defensive bear spray, radios and cell phones on all field activities, and to always travel and operate in class-sized groups with two adult instructors. Instructors are required to be familiar with the Campbell Tract Wild Animal Response Policy and the Anchorage Bear Committee bear threat signing system.

Due to the increased risk of brown bear encounters in the riparian areas adjacent to the South Fork of Campbell Creek, Trailside Discovery instructors and participants are not permitted to enter or conduct activities in the riparian area downstream of the beginning of Salmon Run Trail, upstream of the CAT Bridge, or anywhere on the north side of Campbell Creek except between the Mushing and CAT Bridges. The riparian area is defined as any land north of Old Rony Trail or Viewpoint Trail.

The BLM authorized official will conduct periodic audits of Trailside Discovery programs and activities and monitor changes to the environment in established activity areas, stream bank sites, and dispersed use areas. The authorized official will coordinate durable group assembly locations with TD managers and monitor impacts from regular use.

As part of their use authorization, Trailside Discovery participants are required to work on stewardship projects on the Tract including light trail maintenance, planting of vegetation, watering revegetation sites, and related activities at the science center.

The proposed action involves a minimal impact human use and experience and does not involve an irreversible, irretrievable, or long-term commitment of resources or land mass.



**2.1.1. Issues of environmental concern**

1. Health and safety issues associated with potential conflicts with brown bears on Campbell Creek and the killing of bears for the defense of life and property.
2. Disturbance of cultural resources.
3. Competing use amongst recreational users of the Tract.
4. Vegetation damage from trampling, snow compaction and use of live vegetation.
5. Wildlife harassment and disturbance.

**2.2. Alternative B: No action alternative – discontinuance of prior authorizations**

Under this alternative, the BLM would discontinue its authorization of Trailside Discovery's *specialized recreational use* of the Tract. This alternative would fail to manage and facilitate responsible *specialized recreational use* of the Tract. Further, it is reasonable to postulate that failure to authorize Trailside Discovery's *specialized recreational use* of the Tract may result in Trailside Discovery relocating to other sites. Although such a scenario may result in prevention of unnecessary or undue degradation of BLM lands and protection of their resources, it may not avoid or minimize adverse impacts on the quality of the human environment as it would visit those impacts on other lands.

**3.0. AFFECTED ENVIRONMENT**

The Tract is located in the Cook Inlet Taiga ecoregion. The boreal forest ecosystem is predominant. The ecosystem is permafrost based and is comprised of forests, wetlands, bogs, fens, peatlands, rivers and lakes. Soils are cold and often very shallow. Water tables are high. Growing seasons are short. Biological processes are slow. Nutrient availability is low. Native plants and animals have adapted to life under harsh climatic conditions. It is a relatively sensitive place, easily damaged.

The ecoregion surrounds the upper reaches of Cook Inlet in south central Alaska,

and is surrounded by the mountains. It is level to rolling, with areas of ground moraine and stagnant ice topography, drumlin fields, eskers, and outwash plains. Most of the lowland is less than 500 ft (150 m) above sea level, with a local relief of 50-250 ft (15-80 m). Soils are formed with wind-blown loess from the glacial floodplains and with volcanic ash from mountains to the west. The soils lie on top of glacial deposits. Spodosols are the principal upland soils.

Although the climate is subarctic, it is less severe than the interior of Alaska, because the region is sheltered by the Alaska Range to the north. Proximity to the Gulf of Alaska makes the climate transitional to the marine climates to the south. Average annual temperatures range from 32 to 39F (0 to 4C), with a winter average of about 5F (-15C) and summer maximums of about 64F (18C). Average annual precipitation ranges from 10 to 18 in (260 to 460 mm). Annual snowfall averages from 4 to 10 in (100 to 260 mm).

Its relatively mild climate, level to rolling topography, and coastal position has contributed to the wide variety of vegetation communities found in the ecoregion. The most widespread are coniferous, broadleaf, and mixed forests, dominated in differing combinations by black spruce (*Picea mariana*), white spruce (*P. glauca*), Sitka spruce (*P. sitchensis*), quaking aspen (*Populus tremuloides*), balsam poplar (*P. balsamifera*), black cottonwood (*P. trichocarpa*) and paper birch (*Betula papyrifera*) (Gallant et al. 1995). Lowland spruce-hardwood forests are abundant. Bottom land spruce-poplar forest adjoins the larger river drainages, along with thickets of alder and willow. Wet tundra communities exist along the coastline. White spruce forests occur on southfacing gravelly moraines, and cottonwood-tall bush communities are common on large floodplains. Other important communities include low scrub, tall scrub, low scrub bog, mesic graminoid, graminoid herbaceous, and wet forb herbaceous communities.

This ecoregion probably has experienced the most extensive human disturbance and alteration in Alaska. Nevertheless, it remains approximately 90 percent intact, and still supports all of the top level terrestrial predators within, or close to, their natural ranges of variation. (These predators include brown bear (*Ursus arctos*), wolf (*Canis lupus*), wolverine (*Gulo gulo*), and coyote (*Canis latrans*.) The diversity of habitats supports a large variety of species. Muskrats and red foxes are present, and moose flourish in lowland areas. Both black bear and brown bear populations are present throughout the region.

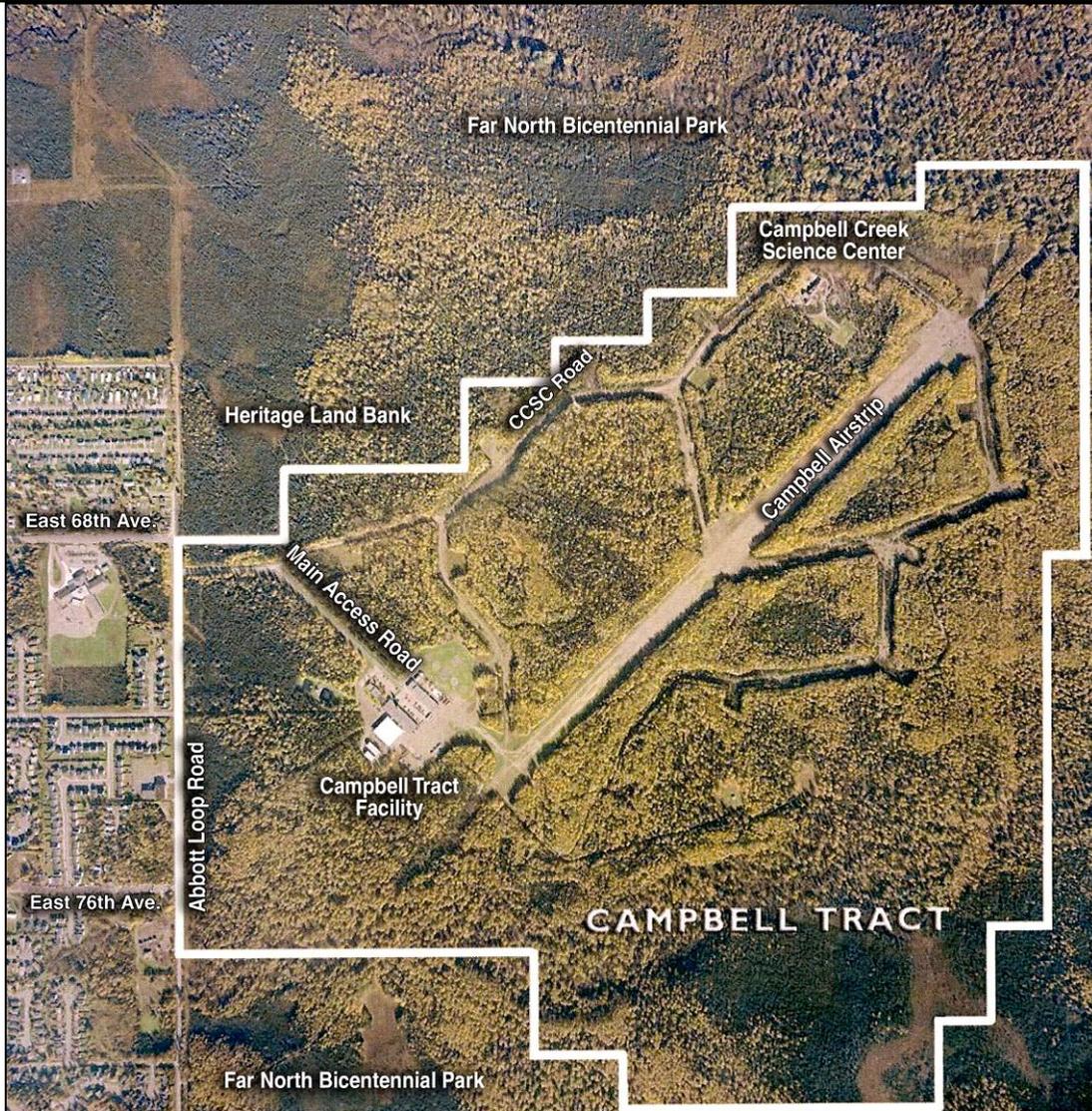
The ecoregion also produces all five species of Pacific salmon, which support a wide range of terrestrial species as well as large commercial, sport, and subsistence fisheries.

Wildfire occurrence is moderate to high (especially in dry years), and fires range

in area from 1 ha to 22.7 km<sup>2</sup>, averaging 1.6 km<sup>2</sup> (Gallant et al. 1995). Spruce bark beetle is also a common disturbance in the forests of this ecoregion. A current infestation has reached all parts of the ecoregion with up to 80 percent of the mature spruce in many stands killed. The spruce bark beetle is naturally occurring and may be the most important cause of stand renewal in the ecoregion.

Most human disturbance is concentrated in urban and residential development of the lower Kenai River, Anchorage Basin, and Palmer-Wasilla area. Some agriculture occurs in Palmer and Point McKenzie, across Knik Arm from Anchorage. Other forms of human land use include timber harvest and oil and gas exploitation on the Kenai Peninsula and across Cook Inlet from Anchorage.

The Tract was under Department of Defense jurisdiction during World War II. An Army garrison was stationed at the Tract which then included a 5,000 air field, barracks, an officer's quarters, a recreation hall, a mess, an aid station and several storage huts. While there are few remnants of these facilities, the airstrip and taxiways are essentially the same as when they were constructed in 1942. The airstrip is in use today by the BLM to support field operations.



**3.1. Critical Elements of the Human Environment**

The following discussion is organized around the Ten Significance Criteria described in 40 CFR §1508.27 and incorporated into BLM’s 14 Critical Elements of the Human Environment list (H-1790-1), and supplemental Instruction Memorandums, Acts, Regulations and Executive Orders. There is a fifteenth Critical Element of the Human Environment for consideration by BLM-Alaska, Subsistence, ANILCA Title VIII, Sections 801 and 802.

**3.1.1. Unaffected Critical Elements of the Human Environment**

The following Critical Elements of the Human Environment have been analyzed and are either not present or will not be affected by the Proposed Action or the No Action Alternative:

1. Air Quality  
None anticipated.
2. Areas of Critical Environmental Concern  
None present.
3. Invasive, non-native species  
None anticipated.
4. Environmental Justice  
Not pertinent.
5. Farmlands (Prime or Unique)  
None present.
6. Flood Plains  
While some of the proposed action activities do occur within the Campbell Creek floodplain there are no structures being built or equipment with hazardous materials being utilized by the project proponent within the floodplain. In addition, the educational activities occurring within the floodplain are integral to the curriculum being taught and the threat to human health or safety by conducting these activities during the times prescribed on the permit is minimal. Any impacts to wetlands/riparian areas are discussed under the wetlands/riparian areas critical element. Therefore, no further analysis of this critical element is necessary.
7. Native American Religious Concerns  
There are no known Native American Religious Concerns.
8. Subsistence, ANILCA Title VIII  
The lands comprising the Tract are Federal public lands as defined by ANILCA Section 102(3) and fall under the regulatory authority of the Federal Subsistence Board. The Tract is in the Anchorage Management Area, Game Management Unit 14C. In accordance with the provisions of the Subsistence Management Regulations for the harvest of Wildlife on Public Lands in Alaska, the Anchorage Management Area is closed to the subsistence taking of wildlife. The Tract is in the Cook Inlet Subsistence

Fishing Area. In accordance with the provisions of the Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Waters in Alaska, the Cook Inlet-Remainder only allows harvest of fish other than salmon, Dolly Varden, trout, char, smelt, grayling, and burbot.

Therefore, with regard to Tract, neither the Proposed Action nor the No Action Alternative will significantly restrict Federal subsistence use, decrease the abundance of Federal subsistence resources, alter the distribution or movement of Federal subsistence resources, or limit qualified Federal subsistence user' access from currently existing conditions and no further subsistence analysis is necessary.

9. Threatened & Endangered Species

There is no reason to believe that:

- a. an endangered or a threatened species is present in the area affected by the proposed action;
- b. implementation of the proposed action will jeopardize the continued existence of an endangered or threatened species;
- c. implementation of the proposed action will result in the destruction or adverse modification of critical habitat of such species;
- d. implementation of the proposed action will jeopardize the continued existence of any species proposed to be listed as endangered or threatened;
- e. implementation of the proposed action will result in destruction or adverse modification of critical habitat proposed to be designated for such species;

therefore, no consultation with the U.S. Fish and Wildlife Service is considered necessary pursuant to Section 7 of the Endangered Species Act of 1973, 16 U.S.C. §1536.

10. Wastes, Hazardous/Solid

None anticipated.

11. Water Quality, Surface/ground

No impacts to water quality, either surface or ground, are anticipated.

12. Wetlands/Riparian Zones

Impacts to wetlands and riparian areas are confined to the minimum area necessary to perform the educational activities. The areas being utilized

have been identified and improved in previous planning efforts to prevent unnecessary or undue degradation of wetlands. All activities conducted by this permit will occur on those areas currently being impacted by general members of the public (i.e. casual users) and no additional impacts to wetlands or riparian areas are anticipated from the issuance of this permit.

13. Wild and Scenic Rivers

There are no Wild and Scenic River designations on the Tract.

14. Wilderness

There are no Wilderness designations on the Tract.

**3.1.2. Affected Critical Elements of the Human Environment**

The following Critical Element of the Human Environment may be affected by the Proposed Action or the No Action Alternative.

**3.1.2.1. Cultural Resources**

Historic resources from the World War II era are scattered throughout Campbell Tract. The Campbell Garrison (AHRS # ANC-01384) is situated on the grounds of Campbell Tract. The garrison and airstrip were developed in 1942 as one of four 5,000 foot long satellite airfields associated with Fort Richardson. In 2004 the Campbell Garrison was determined eligible to the National Register of Historic Places. Numerous surface features including foxholes, cement building foundations and the rusted remains of discarded equipment can be found on the Tract. There are no known prehistoric cultural resources on the Tract.

**3.2. Non-critical Elements of the Human Environment**

The following Non-critical Elements of the Human Environment may be affected by the Proposed Action or the No Action Alternative.

**3.2.1. Competing use**

The proximity of the Tract to Anchorage places a high demand on the site for recreational use. Recreational use is primarily focused on year round trail use. Trails developed on World War II tank roads and airplane taxiways are linked to a city's trail systems on adjoining park lands.

Access to the Tract's trail system is gained from two on-site trailheads and five trails from the city's park lands. Established trailheads, with parking, include the Smoke Jumper Trailhead located at the main entrance to the Tract and the Campbell Airstrip Trailhead located at mile 1.1 on Campbell Airstrip Road.

Recreational users of the Tract are primarily residents of Anchorage and surrounding communities. Many users live close to the Tract and use the area regularly for exercise, often with their family dogs. Tract visitation in 2007 exceeded 95,000 visits. Recreational use of the Tract includes walking, running, mountain biking, skiing, snowshoeing, dog mushing and horseback riding throughout the Tract.

Regular competitive events, often starting on the city's park lands traverse the Tract including the Nordic Ski Club's Tour of Anchorage and National and World Sled Dog Championship Races.

Trail maintenance, signing, and event permitting is a cooperative effort between the BLM, the city's Parks and Recreation Division, and various volunteers and user groups. The use of motorized vehicles on the Tract is prohibited.

### **3.2.2. Vegetation**

The Tract contains a variety of habitats including spruce and birch forests, bogs, and riparian areas. Cottonwood and birch dominate the woodlands, interspersed with less mature white spruce. Old growth spruce has experienced high rates of recent beetle kill. The under-story is comprised of shrubs, forbs, lichens and moss above a ground cover of heavy organic litter.

### **3.2.3. Wildlife**

The Tract contains a rich diversity of resident and non-resident wildlife. Resident species include moose, porcupine, mink, weasel, red squirrel, muskrat, beaver, snowshoe hare, voles, and shrews and at least 50 species of resident and non-resident birds including 40 species of land birds, horned owl, northern saw-whet owl, boreal owl, northern goshawk, and spruce grouse. Many species move seasonally through the Tract to and from the Chugach Mountains and include grizzly bear and black bear, red fox, lynx and wolf. The South Fork of Campbell Creek traverses the northeast corner of the Tract. This stream supports populations of king and silver salmon, as well as rainbow trout, dolly varden, and spiny sculpin.

Recent ADF&G research on the habitat use, movement and food habits of brown bears has shown a minimum of 20 brown bears inhabit the North and South fork of Campbell Creek, and the home ranges of 4 adult brown bears are known to overlap Salmon Loop trail where Trailside educational activities are conducted (Farley et. al. 2008). The study showed that some bears in the area are highly reliant on major and minor trails during the summer months. The proximity of bears to trails and streams decreases from about the end of June thru July/early August. Several bears were found to maintain minimum distances of less than one kilometer to salmon streams for several week-long periods. Within any given day

those bears are often within 10 meters from the streamside. Additionally, most of the brown bears displayed a strong dependence on access to salmon streams. Females tend to approach salmon streams perpendicular to the stream channel, possibly to minimize encounters with other bears, while males tend to patrol parallel to streams.



The presence of many bears attracted to seasonal food concentrations, coupled with expanding development along salmon spawning streams, and increasing human activity in parks and other natural areas, will increase the probability of bear-human interaction occurring..

### 3.2.4

#### **Health and Safety**

Trailside Discovery has been in operation since 1982 and has operated on Campbell Tract continuously since 1993. Over this period of time, the program has matured and expanded and created well-established protocols and training mechanisms for camp and program safety. The Trailside Discovery program is also accredited by the American Camp Association which provides certification and direction on a range of health and safety topics including driver and instructor certification, building and site safety and inspections, client health and emergency procedures, physical security and outdoor environment hazards.

The participants in Trailside Discovery participate in indoor and outdoor educational activities. As a consequence of participating in these educational

activities there are accompanying risks to health and safety. The most notable health risks to Trailside Discovery participants operating on Campbell Tract are physical hazards associated with the natural outdoor environment. These include but are not limited to the following: potentially dangerous wildlife encounters, traveling on uneven and undulating terrain, fallen tree limbs or exposed tree roots, rocks, adverse weather, and wet/slippery soils. All outdoor educational activities conducted in Alaska have these types of risks associated with them; however, recent brown bear research has shown a particular high risk for brown bear encounters along riparian areas within Campbell tract during salmon spawning. This additional information creates a risk not readily apparent to the general public and creates additional notification and procedural safeguards on part of the operator to ensure adequate protections are in place to protect Trailside Discovery participants from this hazard.

In addition to the known physical hazards other types of hazards include transportation hazards, large catastrophic events, and personal individual health and safety concerns.

#### **4.0. ENVIRONMENTAL CONSEQUENCES**

#### **4.1. Impacts of the Proposed Action – continuance of prior authorizations**

#### **4.1.1. Critical Elements of the Human Environment**

#### **4.1.1.1. Cultural Resources**

Educational activities in and around cultural sites may trample historic sites and degrade the integrity of foxholes and earthen features. Social trails resulting from educational use of the historic features may draw in outside visitation to individual features resulting in addition impacts. Collection or disturbing of WWII artifacts will destroy the archeological provenience and may result in permanent loss.

#### **4.1.2. Non-Critical Elements of the Human Environment**

#### **4.1.2.1. Competing use**

Recreational users of the Tract are often seeking solitude and quiet in an effort to escape the noise and congestion of Anchorage. Group educational activities near multi-use trails will visually impact upon the visitor experience and reduce this sense of peace and solitude. Educational activities may also increase noise levels for users if conducted near multi-use trails. Trailside Discovery groups conducting activities on or near multi-use trails may create safety hazards for both

themselves and other users, especially when encountering fast moving mountain bikers, skiers and equestrians.

**4.1.2.2. Vegetation**

Vegetation will be damaged from trampling and snow compaction. Some individual tree branches may suffer damage from being cut by students. Leaves and vegetation may be damaged during identification exercises or by over-collecting.

**4.1.2.3. Wildlife**

Outdoor training sessions may have local, short-term impacts on wildlife. In winter months, moose, snowshoe hare and other animals that browse and use forested habitats may be temporarily displaced.

Populations of birds and mammals may be impacted by education activities that occur in the animals feeding or reproductive habitat. Birds may not reproduce or leave the area for the season if disturbed during breeding season. Wildlife encounters may occur in all seasons. Moose and bear are potentially dangerous. Brown bears inhabit the South Fork of Campbell Creek, and recent research has shown that four bears, including sows with cubs, maintain home ranges that overlap Salmon Loop trail and the area of Trailside's activities. The presence of many bears attracted to seasonal food concentrations, coupled with expanding development along salmon spawning streams, and increasing human activity in parks and other natural areas, will increase the probability of bear-human interaction occurring.

The use of the Salmon Run Loop by Trailside Discovery increases the potential for conflict between brown bears and people, and increases the potential for the killing of brown bears for the defense of life and property. The closure of trails to recreational use and educational activities to avoid conflict with bears is done annually by the Eagle River Nature Center on Eagle River by Chugach State Park, and at Troublesome Creek in Denali State Park.

Streamside activities could impact spawning salmon and increase siltation downstream.

**4.1.2.4 Health and Safety**

The impacts from various outdoor hazards to the participants of Trailside Discovery program could be severe. The consequences for conducting environmental education programs in the natural environment range from minor to catastrophic injuries that could cause serious bodily injury or death. In particular, are consequences associated with dangerous wildlife encounters that

could result in significant impacts to the health and safety of both participants and instructors of Trailside Discovery. Therefore, specifically devised measures must be taken to reduce these impacts and minimize as much as possible the level of concern regarding physical injuries.

Recognizing the potential for outdoor physical hazards and emergency incidents on Campbell tract, Trailside Discovery has established Emergency Procedures (Appendix A) for all anticipated incidents. All Trailside Discovery staff are trained in these procedures to prepare them for handling severe injury and illness incidents, fire and earthquake emergencies, severe weather emergencies, transportation emergencies, missing person incidents, and outdoor environment and wildlife safety. Annually, Trailside Discovery instructors attend a mandatory week-long orientation training that includes detailed information on program safety policy, emergency response procedures and risk management. Instructors receive training in CPR and first aid, and practice handling mock emergencies. As they operate in the field, instructors are required to always carry first aid supplies, radios, and cell phones and communicate regularly with their supervisors based at the science center.

In addition to specific Trailside Discovery policies and procedures, the science center rental agreement obligates Trailside Discovery to assimilate and adhere to established CCSC risk management and health and safety policies including the Wild Animal Response Policy for Campbell Tract (Appendix B).

Instructors receive an annual mandatory briefing presented by the BLM recreation staff that reviews and discusses the conditions of their special recreation permit and attached stipulations. These stipulations govern the use of the science center and the Campbell Tract grounds and provide detailed information on use and area prohibitions, wildlife hazards and response techniques and resource protection. The briefing also includes a tour of the Campbell Tract grounds and trails adjacent to the science center, pointing out permitted riparian access points, activity fields and sensitive cultural sites to avoid.

Of particular concern on CT is the opportunity for potentially dangerous wildlife encounters including moose, black bear and brown bear. Recent research conducted by the Alaska Department of Fish and Game and summarized in April of 2008 and discussed above has revealed that brown bear populations of a minimum of 20 individuals are summer residents on Campbell Tract and Far North Bicentennial Park in the riparian zones of both the North and South Forks of Campbell Creek. This population is resident for the duration of the salmon season in these creeks and can be expected to be encountered anytime between May 15 and November 15 in the vicinity of Campbell Creek. To address this wildlife concern, BLM recreation staff and Trailside Discovery have implemented

increased safety measures to reduce the possibility of negative encounters between bears and clients. The research closely correlates the brown bears with the riparian zones of the creeks, therefore, instructors are prohibited from utilizing all areas north of Old Rondy Trail that are downstream of Salmon Run Trail and upstream of the Campbell Airstrip Trailhead bridge during summer programs. This includes sites on both Campbell Tract and Far North Bicentennial Park.

Instructors are only allowed to use the 1700 foot long Salmon Run Trail, a hardened and well traveled route that parallels the South Fork of Campbell Creek adjacent to the science center, and the area between the two main bridges located immediately upstream from Salmon Run Trail. Instructors may use three designated riparian study sites for programs that require stream access as part of the curriculum which are accessed from the Salmon Run Trail. The locations of these stream access points, which were selected for hardened gravel bars, good visibility, and rapid egress are clearly marked with labeled flagging and specifically shown to instructors during their orientation and safety training. Instructors are also permitted to access the stream at the Campbell Airstrip and mushing bridges, both sites with established heavy public use patterns. Groups are also required to stay together throughout the day and walk to activity areas with an instructor in front and at the rear of each group. Average group size for all trailside activities is 2 instructors 13 clients. The minimum permitted group size is one instructor and five students. When a special need arises to bring in a client from the field, either the entire group walks in to the science center or a staff member is sent to the field to accompany the client and one instructor in. By policy, no Trailside Discovery client is ever alone with a single instructor.

As described in the Guided Group Educational Activities on Campbell Tract Risk Management Worksheet, “sightings of any bear, reports of aggressive bear behavior and discoveries of animal carcasses with indications of bear predation on any part of Campbell Tract will result in a complete pullback of activities from that area for the rest of the day, or until the threat has passed.” Trailside is required to adhere to this policy and has demonstrated their proper compliance on numerous past occasions. They are not allowed to return to an activity site for the day of the incident, and may be further restricted from use of an area on successive days depending on the nature of the threat.

All parents of Trailside Discovery clients are required to review and sign a “Parent Policy Brochure” (Appendix C) before enrolling their children in any TD program. The brochure covers administrative procedures for enrolling a child as well as health and safety information including discipline management, environmental hazards, and emergency care procedures. Clients are physically checked in and out of the program on a daily basis by parents or guardians.

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**4.1.3. Cumulative Impacts associated with continuance of prior authorizations**

Cumulative impacts result from the incremental impact of human activity when added to other past, present, and reasonably foreseeable future human activity. They can result from individually minor but collectively significant actions taking place over a period of time.<sup>2</sup> (40 CFR § 1508.7)

The Tract, a wilderness-like urban natural recreation area, is under pressure from many directions. Housing developments press against the western boundary of Tract and closely follow the southern boundary of the city's adjacent Far North Bicentennial Park. Numerous social trails can be followed onto Tract from these neighborhoods. The population of Anchorage is growing exponentially and the Municipality has established a new sports park consisting of ball fields and a 200 vehicle parking lot adjacent to the southeast corner of the Tract. A major developed trailhead also departs from this new parking lot, leading onto Tract from the south. The recently opened Elmore Road (formerly the Abbott Loop Extension) has resulted in many more thousands of vehicles passing by the entrance of Tract on a daily basis, drawing more attention to the site by individuals who may not have been familiar with the site. These combined factors of growing population, neighbor encroachment, ball park access and changing traffic patterns will all result in significant increases in future visitation to Tract. Independent of the opening of Elmore Road and ball park influences, the Tract's visitation has grown from 55,000 visits in 2002 to 95,000 visits in 2007.

In addition, recreation technology is changing rapidly, drawing more participants out onto the trails and into the woods on the Tract. Snowshoeing and skate skiing are becoming increasingly accessible and popular with local families and individuals. Mountain biking on summer trails has increased dramatically over the past five years, and winter mountain bikers, sporting specialized wide-tire snow-capable rigs, are rapidly encroaching on traditional ski trails. The rapidly growing sport of Geocaching is also drawing many new recreationists off the trails and into the trackless areas of the Tract. Approximately 15 geocaches were in existence on the Tract in the Spring of 2008 and more than 80 can be found within a one mile radius of the Tract on city and private lands.

These influences and other factors will lead to increased use and recreation pressure on area park lands including the Tract. Increased trail wear, forest impacts, and wildlife disturbance and displacement are obvious outcomes of heavier use. User experience and perception of solitude will be degraded by these increases, and by the increased noise associated with Elmore Road vehicle traffic and ball field activities.

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<sup>2</sup> 40 CFR § 1508.7

Trailside Discovery's educational activities on the Tract, at their present levels and designated locations, result in minimal impact to the land and user experience. An increase in program size, or a change to weekend instead of weekday programs, could result in higher levels of impact on other Tract users' experiences.

#### **4.1.3. Mitigation Measures for continuance of prior authorizations**

The following mitigation measures are recommended and are either in addition to or an enhancement of the mitigation measures contained in the proposed action:

1. The ADFG study (Farley et.al. 2008) shows brown bears closer to trails and streams from the end of June thru late July/early August during salmon run peaks. The biological staff recommends that access to the educational activities along Salmon Run trail be via the main trail with access points perpendicular to the Salmon Run trail to minimize education participant's exposure during potential peak brown bear utilization. Another recommendation would be a complete pull back or closure of riparian corridor trails during peak bear utilization.
2. Locate environmental education activity sites in areas where cultural resources are not present. Increase instructor awareness on the value and types of cultural resources found on the Tract. Require formal briefings for all instructors on the prohibitions of collecting, disturbing or destroying cultural resources.
3. When practical, locate environmental education activity sites away from heavily used multi-use trails to reduce impact on other user's recreation experience. Trailside Discovery instructors will be encouraged to conduct outdoor education activities in areas that allow maximum screening of noise and visual impacts from public trails and commonly used recreation locations. Instructors will be briefed on the presence of high-speed multi-use traffic during their orientation training and will coach their students to be especially cautious on or near recreation trails.
4. Locate environmental education activity sites and activity areas away from sensitive habitat areas including stream banks and areas of unique vegetation. Trailside Discovery instructors will brief all clients on Leave No Trace practices and Tract prohibitions on stripping trees and cutting live vegetation. Instructors will monitor client behavior closely and immediately halt resource damaging actions. BLM recreation staff will regularly monitor activity sites for social trailing, impacts to trees and ground vegetation, and wildlife impacts during winter and summer sessions.

5. Trailside Discovery instructors will be required to attend BLM-sponsored resource protection training that will review all stipulations and requirements of the Special Recreation Permit. Instructors will be responsible for insuring that all student participants exhibit Leave No Trace practices and minimize impacts on all Tract resources. Instructors will be familiar with the Campbell Tract Wildlife Response Policy, will be trained in safe behavior when moose and bear are encountered, and will carry defensive pepper spray on all outdoor activities. During periods of confirmed bear sightings and posted bear warning events, all outdoor education activities will be pulled back to the immediate CCSC grounds until an “all-clear” decision is authorized by the CCSC director.
6. BLM will reserve the option to close streamside trails to use by Trailside during salmon runs to increase to distance between educational activities and brown bears attracted to Campbell Creek to feed on salmon. The closure of trails to recreational use and educational activities to avoid conflict with bears is done annually by the Eagle River Nature Center on Eagle River by Chugach State Park, and at Troublesome Creek in Denali State Park.
7. In addition to the standard “Parent Policy Brochure,” Trailside Discovery should specifically disclose to parents or guardians of clients the recently completed ADF&G study (Farley et.al. 2008) that describes the population density of brown bears in riparian areas within CT.

**4.2. Impacts of Alternative B: No action alternative – discontinuance of prior authorizations.**

**4.2.1. Critical Elements of the Human Environment**

**4.2.1.1. Cultural Resources**

Discontinuance of Trailside Discovery’s prior authorizations would eliminate the risk of disturbance or destruction of WWII cultural resources. Unprotected sites would continue to be subject to impacts from the general public.

**4.2.2. Non-Critical Elements of the Human Environment**

**4.2.2.1. Competing Use**

Discontinuance of Trailside Discovery’s prior authorizations would pose a substantial drop in potential user conflicts through the reduction of approximately 7000 users on the Tract.

**4.2.2.2. Vegetation**

Discontinuance of Trailside Discovery's prior authorizations would pose a reduction in the potential for vegetation damage by the removal of approximately 7000 users concentrated in the vicinity of the Campbell Creek Science Center.

**4.2.2.3. Wildlife**

Discontinuance of Trailside Discovery's prior authorizations would pose a reduction in the potential for impacts to wildlife and encounters with brown bears by the removal of approximately 7000 users concentrated in the vicinity of the Campbell Creek Science Center.

**4.2.3. Cumulative Impacts of Alternative B: No action alternative – discontinuance of prior authorizations.**

Discontinuance of Trailside Discovery's prior authorizations would result in a lesser degree of cumulative impact on the environment as Tract visitation would drop by approximately 7000 users. The combined Tract and Campbell Creek Science Center visitation was 140,000 in 2008. Visitation to the Tract is expected to continue to increase between 5% and 8% annually.

**5.0 CONSULTATION AND COORDINATION**

**5.0.1. Consultation**

Tom Bureck-Trailside Discovery  
Jeff Brune- Campbell Creek Science Center

**5.0.2. List of Preparers**

The following BLM specialists participated in the preparation of this analysis:

Donna Redding	Cultural Resources
Laurie Thorpe	Vegetation, Invasive/Non-Native Species
Geoff Beyersdorf	Subsistence
Doug Ballou	Recreation/Visitor Services, Visual Resources
Larry Beck	Waste, Hazardous/Solid
Bruce Seppi	Wetlands/Riparian Zones, Threatened or Endangered Species, Wildlife
David Krantz	NEPA Coordinator