Appendix D: Trails Management Process

Knik River Public Use Area

Trails Management Process

Introduction

OHV use related to recreation, hunting and fishing has increased significantly in the Knik River Valley in recent years. As a result, numerous trails have been created and areas that previously received little or no motorized use are now seeing frequent use. Some of these trails have been developed in sensitive fish and wildlife habitat areas. Others have been developed in wetlands, where repeated use results in degradation of the soil and development of multiple routes. DNR seeks to address trails impacts to wetlands and sensitive habitat through a comprehensive Trails Management Process (TMP).

Trails Management Process

The TMP will address existing and newly developed trails in the Knik River Public Use Area (PUA). The TMP will provide an inventory of all trails to be managed by DNR, and provide an assessment of trail conditions and their impacts to fish and wildlife habitat. The assessment will identify trails that have significant impacts on fish and wildlife habitat, particularly waterfowl nesting areas, trumpeter swan or loon nesting areas, moose calving concentration areas, and fish spawning areas. Trails in wetland areas will be assessed to determine if they are having significant impacts on soils and hydrology. Trails impacting other state resources will also be assessed.

Based on those assessments, existing trails determined to have significant negative impacts on fish and wildlife habitat, or other state resources, may be closed, be re-routed, or face seasonal restrictions. These actions are consistent with the statutory mandate to protect fish and wildlife habitat so traditional use of the fish and wildlife populations can continue.

Through the TMP, DNR will identify potential new trails (non-motorized and motorized) for development. DNR may also identify existing trails that can be developed to a higher standard or expanded. Trails may also be identified for reservation as public easements for specific purposes. These actions are consistent with the statutory mandates to maintain and enhance recreation and to provide for a full spectrum of recreational opportunities.

The TMP will not address motorized and non-motorized uses that are allowed by regulation off of trails. Examples of this type of use include game retrieval, recreational use off existing trails, and recreation off trails when snow and frost conditions permit. In general the impacts associated with this type of use do not persist from year to year, and are minor in nature. These uses are subject to regulations at 11AAC 96.015(c). Trails associated with these uses will not be classified through this process.

DNR may accept and adjudicate applications to re-route, designate, develop, or expand trails. DNR may reserve limited use easements on trails developed consistent with Department authorizations.

All new trails authorized by the Department will be reserved through public easements, and be developed as sustainable trails. Sustainable trails are capable of handling the intended use without serious environmental degradation. By following landscape contours, utilizing terrain features, and shedding water, sustainable trails require minimal maintenance over the long term.

The foundation of trail sustainability focuses on initial trail design to maximize the resilience of the trail to use-related impacts, minimize resource degradation, and maximize user enjoyment. While initial construction costs may be more for sustainable trails because the tread length is often longer to meet controlled grade limits, reduced future maintenance costs should compensate for those initial investments. Integral to sustainability is a sound trail plan to meet user needs and desires within the trail location environment. This planning is the core for any successful trail project.

Trails Management Process Policy

Intent
This Trails Management Process is intended to be used for all classified trails in the PUA. The process provides direction and design parameters for trail planning, construction, maintenance, and condition assessment. Trail managers will implement the process following adoption of the PUA Management Plan with the following benefits in mind:

1. Maintaining and enhancing opportunities for the recreating public.
2. Manage use through proper planning, design and construction of trails.
3. Ensure long-term savings in maintenance costs.
4. Demonstrate that DNR is committed to managing uses, and the associated impacts, so future generations are able to enjoy the resources of the PUA.

Goals
The following goals will guide DNR in management of trail resources in the PUA:

1. Establish Trail Management Objectives for individual trails and trail segments.
2. Implement a standardized trail classification system, including general criteria and design parameters.
3. Support the creation of sustainable trails.
4. Develop an effective and efficient procedure for trail inventory and assessment.
5. Standardize trail terminology that is consistent with other public land management agencies throughout the state.

Process
The following text provides the general process that DNR will follow in the classification and assessment of trails in the PUA.

1. **Trail Management Objectives**
   Trail Management Objectives (TMOs) are defined as the documentation of the intended purpose and management strategies of a trail based upon the management plan or management intent of an area. TMOs document the Trail Class, Designed Use, Design Parameters, and other trail-specific considerations for both planned and existing trails. A trail may have different TMOs for sections of the trail that are or will be managed differently. TMOs are very helpful in providing information for subsequent trail planning, management, and reporting. Each classified trail should have TMOs identified based upon the unit's management or trail plan.

2. **Trail Classification System**
   The Trail Classification System is intended to provide uniform principles for trail classification, maintenance, marking, design, and construction. The Trail Classification System adopted by DNR is a close adaptation of the National Trail Classification System being formally adopted by most federal land management agencies, and therefore will be a major step forward in applying consistent terminology and management guidance on trails in the PUA. This system is based on identifying the Type and Class of an existing or planned trail.

   Only two Trail Types are referenced in this process: Terra (Standard) Trails, and Water Trails. Each trail is further separated into one of five Trail Classes, ranging from least developed (Trail Class 1) to most developed (Trail Class 5). General criteria are supplied to define Trail Classes applicable to all system trails. Trail Classes are further refined through Trail Design Parameters that offer construction specifications by the type of Designed Use, such as hiker, bicycle, ATV, motorized and non-motorized boating and snowmobile. Trail Design Parameters provide guidance for the assessment, survey and design, construction, repair, and maintenance of trails, based on the Trail Class and Designed Use of the trail.

3. Sustainable Trails

A Sustainable Trail is defined as a trail that conforms to its terrain and environment, is capable of handling its intended use without serious degradation, and requires minimal maintenance.

Trail "Sustainability" is a fairly new and progressive concept that is being discussed broadly within the national trails community. Certain design concepts that are time-tested, sound, and fairly simple, form the essential elements of sustainable design, while best management practices are currently being developed to guide overall trail management.

Sustainable trails are guided by trail management objectives (TMOs) and constructed to design parameters that support intended use without impact to the surrounding environment, which contributes to user enjoyment and protection of resources. Trail alignment and grades conform to the local terrain, while erosion is minimized and the tread stabilized. Sustainable trails integrate well into the environment and do not negatively impact the ecological integrity of the environment.

This process mandates that a sustainable trails be incorporated as follows:

- New Trails: All new trails will be built as sustainable trails.
- Existing Trails: As existing trails are repaired or re-routed, they may be upgraded using the Sustainable Trails Framework.

4. Develop a Means for Trail Inventory and Assessment

Before trail maintenance and repair strategies can be fully developed, an assessment of trails and their condition must be made, based on the TMOs identified for the trail. While TMOs provide a vision for future trail conditions, Trail Assessments offer an accurate snapshot of existing conditions and what is needed to meet Design Parameters identified by TMOs. The difference between TMOs and Trail Assessments will help determine repair costs.

Trail inventories and assessments require that detailed data be collected for each trail. There are several data collection methods being used in Alaska, from simple pen and paper technologies to sophisticated GPS/data-logger programs. Various methodologies will be reviewed during planned assessments and options will be considered based on their cost effectiveness and ease of use. No specific method is recommended at this time.

5. Trail Terminology

Terminology referenced in this process has been adopted from many sources including the U.S. Forest Service, DNR, Division of Parks and Outdoor Recreation, and the Alaska Parks and Recreation Association. Uniform terminology will also greatly benefit the application process for State Park's Recreational Trail Grant program or other grant and funding sources.

Trail Classification System Criteria

The trail classification used in this process is adopted from sources including the U.S. Forest Service, and Bureau of Land Management, the Division of Parks and Outdoor Recreation. The five Trail Classes range from least developed (Trail Class 1) to most developed (Trail Class 5):

- Trail Class 1: Minimal/Undeveloped Trail
- Trail Class 2: Simple/Minor Development Trail
- Trail Class 3: Developed/Improved Trail
- Trail Class 4: Highly Developed Trail
- Trail Class 5: Fully Developed Trail

Trail Classes are an inventory convention used to identify applicable Design Parameters. Trail Class descriptors reflect typical attributes of trails in each class. Trail-specific exceptions may occur for any Trail Class descriptor, provided that the general intent of the corresponding Trail Class is retained. There is a direct relationship between Trail Class and Managed Use: one cannot be determined without consideration of the other. There can be only one Trail Class identified per trail or trail segment. The Trail Class for each trail or trail segment will be based on applicable land management plan direction, trail-specific decisions, and other related direction. The appropriate Trail Class should be determined at the trail-specific level. Apply the Trail Class that most closely matches the trail's TMOs.

Trail prescriptions describe the desired management of each trail, based on management plan direction. These prescriptions take into account protection of sensitive resources and other management guidelines and recommendations. To meet prescription, each trail is assigned an appropriate Trail Class (1-5). These general categories are used to identify applicable Trail Design Parameters and basic indicators used to help determine construction and/or maintenance costs. These classes have been adapted from the U.S. Forest Service. The General Criteria below define each Trail Class and are applicable to all system trails. Trail Class descriptions define “typical” attributes, and exceptions may occur for any attribute.

Trail Attributes	Trail Class 1 *Minimal/Undeveloped Trail*	Trail Class 2 *Simple/Minor Development Trail*	Trail Class 3 *Developed/Improved Trail*	Trail Class 4 *Highly Developed Trail*	Trail Class 5 *Fully Developed Trail*
General Criteria Physical Characteristics to be Applied to all Designated Trails					
Tread & Traffic Flow	◆ Tread intermittent and often indistinct ◆ May require route finding ◆ Native materials only	◆ Tread discernible and continuous, but narrow and rough ◆ Few or no allowances constructed for passing ◆ Native materials	◆ Tread obvious and continuous ◆ Width accommodates unhindered one-lane travel (occasional allowances constructed for passing) ◆ Typically native materials	◆ Tread wide and relatively smooth with few irregularities ◆ Width may consistently accommodate two-lane travel ◆ Native or imported materials ◆ May be hardened	◆ Width generally accommodates two-lane and two-directional travel, or provides frequent passing turnouts ◆ Commonly hardened with asphalt or other imported material
Obstacles	◆ Obstacles common ◆ Narrow passages; brush, steep grades, rocks and logs present	◆ Obstacles occasionally present ◆ Blockages cleared to define route and protect resources ◆ Vegetation may encroach into trailway	◆ Obstacles infrequent ◆ Vegetation cleared outside of trailway	◆ Few or no obstacles exist ◆ Grades typically <12% ◆ Vegetation cleared outside of trailway	◆ No obstacles ◆ Grades typically <8%
Constructed Features & Trail Elements	◆ Minimal to non-existent ◆ Drainage is functional ◆ No constructed bridges or foot crossings	◆ Structures are of limited size, scale, and number ◆ Drainage functional ◆ Structures adequate to protect trail infrastructure and resources ◆ Primitive crossings and fords	◆ Trail structures (walls, steps, drainage, raised trail) may be common and substantial ◆ Trail bridges as needed for resource protection and appropriate access	◆ Structures frequent and substantial ◆ Substantial trail bridges are appropriate at water crossings ◆ Trailside amenities may be present	◆ Structures frequent or continuous; may include curbs, handrails, trailside amenities, and boardwalks ◆ Drainage structures frequent; may include culverts and road-like designs

Trail Attributes	Trail Class 1 *Minimal/Undeveloped Trail*	Trail Class 2 *Simple/Minor Development Trail*	Trail Class 3 *Developed/Improved Trail*	Trail Class 4 *Highly Developed Trail*	Trail Class 5 *Fully Developed Trail*
General Criteria Physical Characteristics to be Applied to all Designated Trails					
Signs	◆ Minimum required ◆ Generally limited to regulation and resource protection ◆ No destination signs present	◆ Minimum required for basic direction ◆ Generally limited to regulation and resource protection ◆ Typically very few or no destination signs present	◆ Regulation, resource protection, user reassurance ◆ Directional signs at junctions, or when confusion is likely ◆ Destination signs typically present ◆ Informational and interpretive signs may be present	◆ Wide variety of signs likely present ◆ Informational signs likely ◆ Interpretive signs possible ◆ Trail Universal Access information likely displayed at trailhead	◆ Wide variety of signage is present ◆ Information and interpretive signs likely ◆ Trail Universal Access information is typically displayed at trailhead
Typical Experience	◆ Natural, unmodified	◆ Natural, essentially unmodified	◆ Natural, primarily unmodified	◆ May be modified	◆ Can be highly modified ◆ Commonly associated with Visitor Centers or high-use recreation sites