

**“70 Mile Trail” All-Terrain Vehicle/Off Highway Motorcycle  
Monitoring, Maintenance, and Enforcement Plan**

**V.3**

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## **EXECUTIVE SUMMARY**

This ATV/OHM trail monitoring, maintenance and management, and enforcement plan is to be used to guide monitoring general trail conditions, determining relative amounts of use and use patterns, determining impacts to the environment, establishing trail maintenance procedures, and monitoring adherence to state laws and county ordinances regarding ATV and OHM use. Information gathered from these areas will be used to determine thresholds for trail management actions including maintenance scheduling, facility development, enforcement needs, trail rehabilitation, and trail closure. There is a corresponding trail monitoring form that will be used by County personnel as part of the program described in this Plan. This plan is a dynamic document that will be periodically reviewed and updated as needed.

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# I. Monitoring

## A. Trail Conditions

Working definition: Includes factors such as fallen limbs or trees, washouts, rutting, vegetative growth that obscures sight lines, trail signage, evidence of unauthorized use, damage to facilities or trails, trail user numbers, and noxious weeds.

### 1. Inspections: General

- a. Trails will be inspected at least two times per month by a combination of volunteers and County staff. Volunteers may be comprised of MN DNR's Trail Ambassador program, local ATV clubs or Aitkin County staff. Actual schedules for trail inspections will be determined in cooperation between the County, MN DNR Trail Ambassador Program, and local ATV clubs.

### 2. Volunteer Inspections

- a. ATV Clubs are expected to coordinate trail inspections with the County.
- b. Any trail or facility identified as having damage will be flagged, GPS located, recorded and communicated to necessary parties. For Trail Ambassadors Trail Logs will be reported to responsible MN DNR authority. If trail maintenance or management needs are identified through the Trail Ambassador process, the MN DNR Trails and Parks Division will notify all necessary parties.

#### a. Trail Ambassadors and ATV Clubs Participating in County Inspections:

1. Each participating local GIA ATV Club will have a number of members who have successfully completed the Minnesota Department of Natural Resources *Trail Ambassador* training program as required. Each ATV Club may designate a *Lead Ambassador* for the Club in compliance with any requirements of the Trail Ambassador Program.
2. Local Club members will be expected to answer questions from other trail users, provide assistance, if necessary, and inform trail users of state laws and county ordinances.
3. Clubs and Trail Ambassadors may be asked to assist in conducting user surveys during the course of the season to obtain information on users, their experience, and their satisfaction in conjunctions with the MN DNR. Assistance for such surveys will occur only under approval of appropriate authority of participating organizations.

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**Please Note:**

\*\*\* Please note that Trail Ambassadors carry no law enforcement authority above that of a regular citizen.

\*\*\* Requirements of the MN DNR Division of Enforcement, Safety/Education section for individuals interested in volunteering for the Trail Ambassador program include:

- Be 18 years of age or older
- Be an active *Certified MN DNR Volunteer Youth ATV Safety Training Instructor*
- Submit to a thorough background investigation
- Possess a valid drivers license
- Complete the MN DNR ATV Safety Training CD
- Be sponsored by a **‘Qualified Organization’**
- Complete a ‘Trail Ambassador’ training session

\*\*\* For more information regarding training and requirements of the MN DNR Trail Ambassador Program please visit: [www.dnr.state.mn.us/safety/vehicle/ta/index.html](http://www.dnr.state.mn.us/safety/vehicle/ta/index.html).

### 3. Staff Inspections

#### Scheduled Inspections

- a. County Land Department recreation staff will inspect the trail system prior to trail opening in the spring, three times throughout the summer season, and in November. County staff will complete the ***Trail Assessment Form*** following each inspection and these forms will be retained in County records with the County Land Department.
- b. Any trail damage requiring trail closure will be inspected by the County Land Department prior to reopening. Trail closures will be posted to our County Recreation website along with the rationale used to determine the trail closure.

#### Random Inspections

- a. The County Land Department, County Sheriff’s Department, MN DNR Conservation Officers, Townships, and Trails & Waterways Unit personnel that use the trail system in performance of their job duties may also record their observations. These observations may be sent to the County Land Department who will notify all necessary parties.
- b. A subsample of trails will be randomly selected for County staff inspections each year.

## **B. Environmental Conditions**

Working definition: Regular observations regarding potential environmental impacts including erosion, sedimentation, vegetative damage, off-trail/illegal riding damage, noise.

### **1. Wildlife Monitoring**

- a. Baseline avian (bird) monitoring may be established prior to construction of one new loop and scheduled for sampling each year. First year sampling may be completed in the spring of 2008. Avian monitoring would be considered representative of other wildlife species for monitoring purposes. Other avian baseline data may be collected on a similar, nearby existing trail for comparison.

### **2. Invasive Plants**

- a. County Land Department trails staff will be trained in common invasive plant species as part of the County Integrated Pest Management (IPM) Program. The primary reference material for this will be, "Invasive Plant Species of Minnesota's Forests" (2005, Community Forestry Resource Center).
- b. As part of the County IPM, any observations of new infestations that occur on state or federally owned lands will be reported to the appropriate management agency and the County will work cooperatively with state and federal agencies whenever County managed lands are involved in invasive control measures.
- c. Trail Ambassadors are trained in the identification and reporting procedures for invasive plant species through the MN DNR, Invasive Species Operations Order 113.

### **3. Noise**

- a. MN-DNR Trails & Waterways staff, Conservation Officers, and the County Sheriff's Department may occasionally measure sound levels of motorized equipment over the course of the year. Aitkin/Itasca County currently does not have equipment and training to conduct this at this time although we will use information provided by other agencies. Frequency commitments will be determined between the County and appropriate enforcement agencies.

## **C. Monitoring Methods**

### **1. Photo-points**

- a. Photo-points may be used to establish thresholds for trail design changes. The County Land Department may establish a fixed number of photo-points, which include a representative sample of trail conditions, rest areas, and parking facilities.
- b. Photo-point locations may include areas prone to erosion or that have regular or experimental erosion control measures in place. Digital photos will be taken at least three (3) times during the year – early (May-June), mid-season (July-August), and

late (September-October). Photos will be compared to previous corresponding photos to evaluate changes in trail conditions and any environmental impacts.

## 2. Electronic Traffic Counters

- a. Electronic traffic counters may periodically be placed at various locations along the trail system to provide information about the relative amount of use occurring on the trail segments.

## 3. User Surveys

- a. Formal and informal user surveys may be conducted during the course of the year to obtain information on users, their experiences, and their satisfaction with trails and facilities.
- b. Results of some surveys will be made available online at the County website.

# II. Trail Management

Working definition: Trail maintenance, repair, rehabilitation, and closures activities related to impacts such as erosion, rutting, sedimentation, obstacles, trail braiding, signage, and infrastructure repair.

## A. Routine Maintenance

- a. **Pre-season:** The designated local ATV Club will annually schedule a minimum of one, preseason trail maintenance work day after spring break-up. Club members will clear trails of obstructions such as downed trees, limbs, and brush, repair trail erosion, replace missing or damaged signs, grade the trail as necessary, gather litter, and repair any damage to outhouses, picnic shelters, fire rings, gates, etc.
- b. **Post-Season:** The designated local ATV Club will schedule a minimum of one, fall work day in October to clean and inspect facilities and equipment (such as outhouses and picnic tables).

## B. Trail Repair

Working Definitions:

- **Trail Compaction:** Trail compaction is defined as the depression of the soil surface 3 inches or more deep, but without displacement of soil. Trail compaction is normal when heavy vehicles, such as ATVs and motorcycles, repeatedly traverse the same path. Trail compaction binds mineral soil particles together so they are not as readily erodible; however, it also reduces the ability of surface water to penetrate the trail surface, forcing the water to flow across the ground.
- **Trail Rutting:** Trail rutting is defined as a more drastic disturbance than compaction where soil is displaced (in excess of 3 inches), the sides of the tires are in contact with soils and often a wiping action occurs on the side of the rut. Ruts can cause deep compaction, disrupt water movement through the soil, damage root systems, and create erosion channels.
- **Trail Erosion:** Trail erosion is the actual movement of soil material, usually by water action. Trail erosion can cause sedimentation of streams, ponds, and wetlands, expose root systems of nearby vegetation, and dangerously degrade the trail surface.
- **Displacement:** Displacement is defined as the horizontal movement of soil due to frictional forces (i.e. tires, hooves, etc.).

- a. **Trail Compaction:** Trail compaction should be repaired only when the compaction eliminates the trail's ability to shed water. Over time, compaction and displacement will tend to cause ridges on the edge of the trail and depressions in the wheel tracks.
  - i. When trail segments lose their ability to shed water they will be reshaped to remove standing or running water from the tread way. In most cases gravel will be brought in to replace the displaced material and raise the tread way to allow water to shed.
  
- b. **Trail Rutting:** Trail rutting is a condition caused by gravitational forces being greater than the cohesive nature of the surface or subsurface material. Moisture tends to reduce soil's ability to "stick" together.
  - i. Rutting on any trail segment in excess of a total of 25-feet out of a 100-foot section will require temporary closure of the segment until soil conditions stabilize or the rutting can be controlled through water diversion methods, soil stabilization, or other methods. Ruts, of any length, in excess of 6 inches deep are cause to temporarily close the trail segment until soil conditions stabilize or the rutting can be controlled.
  - ii. Trails that experience rutting due to surface water will be repaired so that surface water sheds from the tread way.
  - iii. Trails that experience rutting due to subsurface moisture will either be relocated to more stable soils, or repaired using such methods as geotextile fabric, corduroy, trail armoring, or through the construction of a boardwalk.
  
- c. **Trail Erosion:** The movement of soil from a trail can cause environmental damage, as well as, create hazardous conditions for trail users. Extensive or repeated erosion may be a sign of a flaw in the design of the trail.
  - i. Any trail experiencing erosion will be temporarily closed until the trail can be repaired or redesigned.
  - ii. Trails experiencing erosion will be repaired so that water will shed from the trail surface, rather than be carried along it.
  - iii. Trails experiencing repeated or severe erosion should be redesigned to reduce the amount and duration of time that surface water travels along the trail.
  
- d. **Displacement:** Because of the aggressive tread on the tires of ATVs and motorcycles, displacement may be a continuing maintenance issue.
  - i. Trail segments experiencing soil displacement will be bladed to spread the surface material evenly across the tread way.
  - ii. On trail segments not easily accessible to mechanical means of blading, smoothing of the trail surface may be done by hand.

## **C. Trail Closures**

### **1. Authority and Conditions of Trail Closures**

- a. The County retains sole authority to determine conditions for trail closure and whether or not the conditions for a trail closure have been met on County managed lands.
- b. The County will post conditions for trail closures to the County website as they are developed.

### **2. Temporary Trail Closure**

- a. In the event that a trail segment needs to be temporarily closed:
  - i. Barricades, or other means of temporarily blocking the trail, will be installed at both ends of the trail segment.
  - ii. Signs reading “Trail Temporarily Closed” will be installed at both ends of the trail segment.
  - iii. A notification will be posted to the County website including trail name, location, reasons for closure, and conditions for re-opening the trail.
  - iv. Notification will be provided to the appropriate personnel of the Minnesota Department of Natural Resources.

### **3. Permanent Trail Closure**

- a. The County retains sole authority to determine conditions for trail closure and whether or not the conditions for a trail closure have been met on County managed lands.
- b. The County will post conditions for trail closures to the County website as they are developed.
- c. In the event that a trail needs to be permanently closed:
  - i. All signs along the trail will be removed and boulders or other permanent trail closure methods will be installed at both ends of the trail segment.
  - ii. The closed trail area should be reclaimed and returned to a natural appearance by removing gravel surfacing and planting trees in the abandoned tread way.

## **D. Rehabilitation of Unauthorized or Permanently Closed Trails**

- a. As unauthorized trails are identified or when a trail segment is permanently closed, these trails should be reclaimed and returned to a more natural appearance. Any artificial surfacing should be removed and the subsurface material aerated to reduce soil density. The surface should be graded to match the nearby landscape. Trees and shrubs should be planted within the abandoned tread way for at least 100 feet from the junctions of all existing connecting trails and roads.

### III. Public Trail Information and Education

#### A. Website Materials and Announcements

##### Website Materials

- a. Recreational information held at kiosks, such as maps and other materials, will also be available at the County website in PDF format.

##### Trail Openings and Closures

- a. There will be a notification posted to the County website listing any new closures along with reasons for the closure.
- b. In the event that a trail segment needs to be temporarily or permanently closed:
  - iii. Barricades, or other means of temporarily blocking the trail, will be installed at both ends of the trail segment.
  - iv. Signs reading “Trail Temporarily Closed” or “Trail Permanently Closed” will be installed at both ends of the trail segment.
  - v. A notification will be posted to the County website including trail name, location, reasons for closure, and conditions for re-opening the trail (if temporary).
  - vi. Notification will be provided to the appropriate personnel of the Minnesota Department of Natural Resources.

##### Links

- a. Links will be established for connecting to important educational materials available at the Minnesota Department of Natural Resources Recreation website.

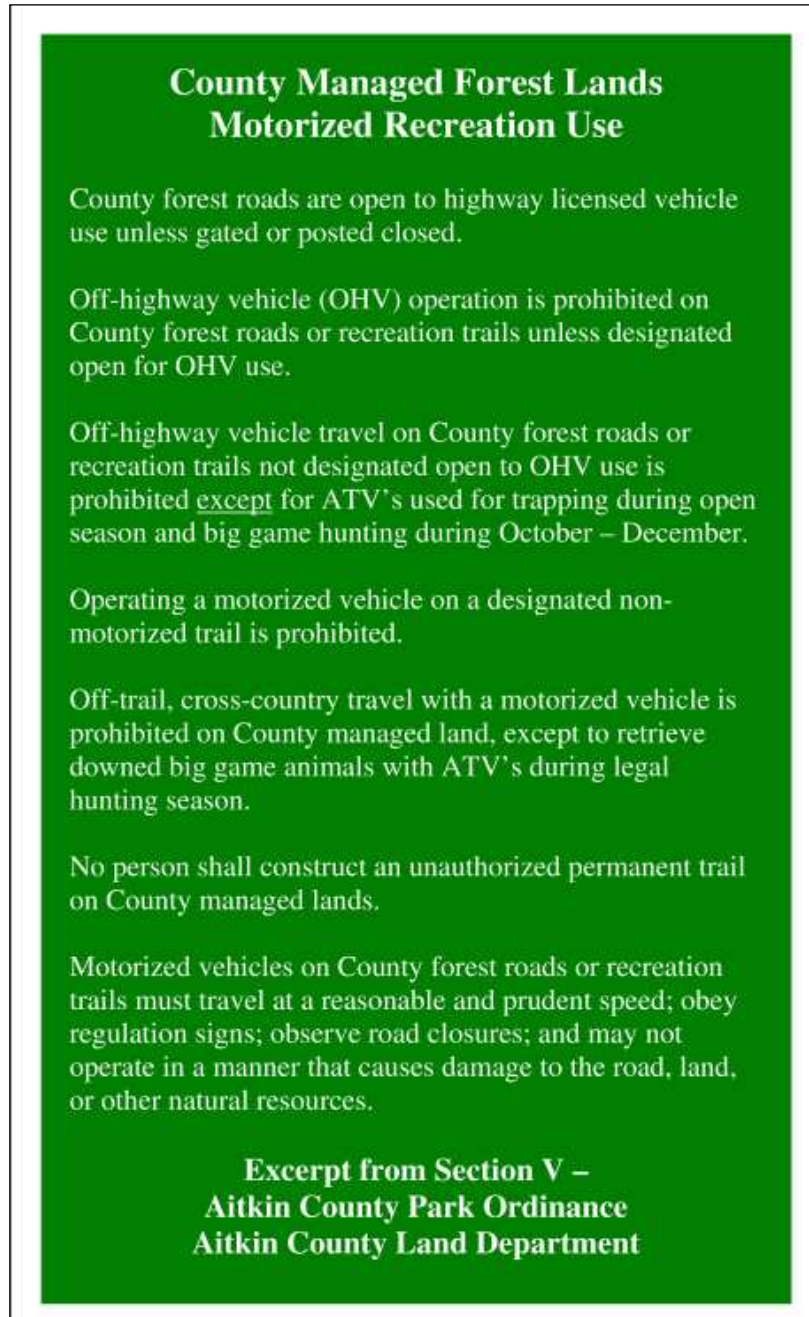
#### B. Trail Signs

##### 1. Sign Types and Locations

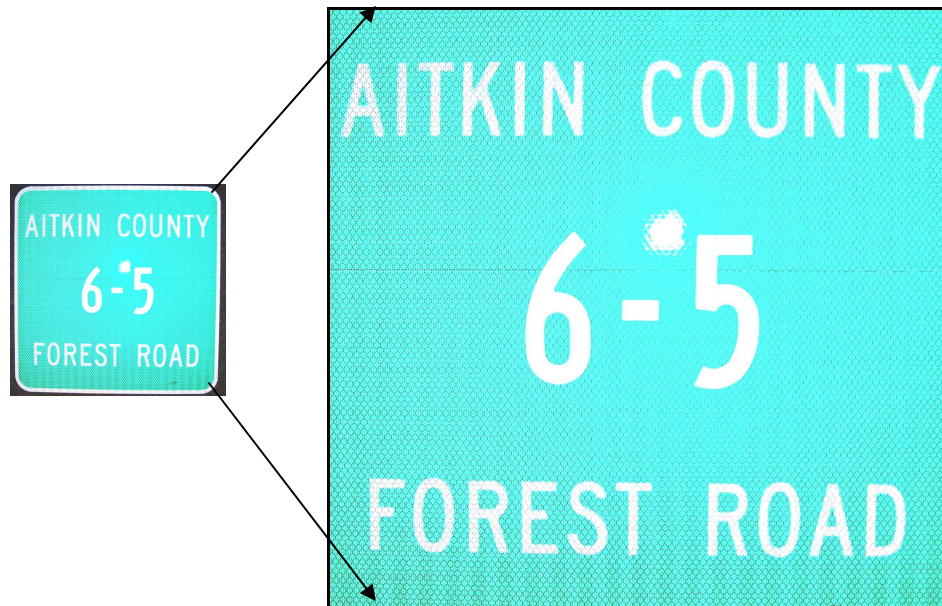
- a. **Education and Information** signs and kiosks will be located at parking facilities, trail heads, high traffic areas and other appropriate locations. These will educate the public on proper use of trails, maps and provide other general information and materials about County trails.



- b. **Pest information** will be posted at parking facilities and other appropriate locations and will include invasive plant information and pest alerts for forest insects and diseases, as part of ACLD's IPM.
- c. **County recreation ordinance signs** will be posted at trail heads/trail parking facilities and other suitable locations. These signs provide County ordinance information regarding use of designated trails by motorized vehicles.



- d. **Forest Road Signs** will be posted so that road numbers may be used in trail maps, GIS base layers, and on the County website providing riders with the Forest Road numbers appearing on maps of designated trails open to ATVs.



## IV. Enforcement

Working definition: Inspections monitoring for compliance with state laws, county ordinances, license & registration, equipment requirements.

### A. Conservation Officers

- a. A MN DNR Conservation Officer will randomly patrol the trails. Trail patrols should predominantly occur on the weekends during daylight hours; however, weekday and evening patrols are acceptable. The Conservation Officer may choose to patrol with a Sheriff's Deputy, with the Trail ambassadors, or alone. The Conservation Officer may complete a *Trail Assessment Form* following the completion of the patrol.

### B. Sheriff's Department

- a. The County Sheriff's Department will randomly patrol the trails. Trail patrols should predominantly occur on the weekends during daylight hours; however, weekday and evening patrols are acceptable. The deputy may choose to patrol with a Conservation Officer, with the Trail ambassadors, or alone. The Sheriff's Deputy may complete a *Trail Assessment Form* following the completion of the patrol.