

- Those persons issued a valid temporary or permanent handicapper parking permit issued by the Secretary of State.
- Those persons holding Permits to Hunt from a Standing Vehicle.
- Those persons with a physicians certification for the following disabilities:
  - Loss of 1 or both legs or feet;
  - Inability to walk more than 200 feet without having to stop and rest;
  - Inability to walk without prolonged use of wheelchair, walker, crutches, braces or other devices to aide in mobility;
  - Lung disease from which the person's expiratory volume for 1 second is less than 1 liter when measured by spirometry;
  - Lung disease from which the person's arterial oxygen is less than 60 mm/hg of room air at rest;
  - Cardiovascular disease from which the person measures between 3 and 4 on the New York heart classification scale/
  - Cardiovascular disease from which a marked limitation of physical activity causes fatigue, palpitation, dyspnea or anginal pain;
  - Other disease or disorder including but not limited to severe arthritis or neurological-orthopedic impairment that creates a severe mobility limitation.
- Persons with *obvious* severe disabilities (i.e., paraplegics, quadriplegic).

Operation of the ORV is subject to licensing and all other requirements and restrictions, and shall only be at a speed and in a manner which does not degrade the environment. These privileges may extend to one companion of the disabled person serving as operator or passenger of the disabled person's ORV, if the ORV is designed for passenger use.”

The disabled operator must carry a physician certification (form PR 9137 available from the DNR Law Enforcement Division, the DNR website or a DNR Operation Service Center) of the disability on his/her person. The certificate lists the disability or disabilities and whether the condition is judged to be permanent or temporary by the physician.

### **ORV Trail, Route and Area System**

#### **Initial Inventory Criteria**

The 1979 ORV Plan reported that the state forest system was being inventoried for potential ORV opportunity by modifying the State Forest Operations Inventory (OI) to include a more detailed inventory of roads and trails. Prior to this time, OI had primarily focused on timber, wildlife and general forest recreation. Ten percent of the state forest was and still is annually inventoried.

#### **Initial Identification and Evaluation Criteria**

State forest areas, roads and trails were initially identified and their suitability for ORV use assessed based on the following criteria as reported in the 1979 ORV plan:

Unsuitable for any ORV activity: (e.g. closed to all ORV use)

- (a) Dedicated wilderness, quiet or natural areas

- (b) Areas where plant communities are vulnerable to ORV use
- (c) Areas of critical wildlife habitat, particularly to endangered or threatened species
- (d) Areas of critical soils and slope where severe erosion and sedimentation are likely to occur (e.g. areas adjacent to or in surface waters or wetlands, on steep slopes, etc.)
- (e) Areas of geological, historical or archeological importance
- (f) Areas of use/user conflict
- (g) Areas of outstanding natural or aesthetic features

Suitable for unrestricted ORV activity: (e.g. scramble area)

- (a) Areas presently heavily used for motorsports
- (b) Areas along the existing Michigan Cross Country Cycle Trail
- (c) Areas suitable should have a size of 500 – 3,000 acres
- (d) Areas with rolling terrain are acceptable where sedimentation would not be a problem
- (e) Areas that are forested that can restrict speed and reduce noise

Possibly suitable for designated ORV trail or route:

- (a) All other state forest lands not defined by the conditions above

It was anticipated that most ORV trails and routes would be developed on the lands in this category.

### **Initial Designation**

Using the above criteria for inventory, identification and evaluation, the DNR over the period 1979-1991 evaluated the state forest system for ORV use potential, within the constraints of:

- (a) Protect natural resources and ecosystems
- (b) Separate conflicting uses
- (c) Promote user safety
- (d) Within the (a-c) constraints, provide optimum opportunity for recreation on state-owned lands by ORV users

In 1990 the DNR designated 1,500 miles of ORV trails (50" wide or less for motorcycles and in some cases ATVs) on state forest land to allow implementation of administrative rules limiting ORV use to the designated system and state forest roads on state-owned land. The Michigan NRC expanded on this designation in May 1991 when they designated 2,721 miles of trails and routes and 1,819 acres of designated ORV use area. No specific trail-by-trail inventory was available of that designation. However, in February 1994, the DNR did conduct an inventory of Michigan's public ORV facilities (Table 5).

Table 5. Michigan public ORV facility inventory, 1994.

Region/Manager	Trail miles (a)	Route miles (b)	Area acres	Road miles
UP State Forests	511	207	0	2,376
UP National Forests	0	0	0	7,000
UP Total	511	207	0	9,376
NLP State Forests	1,021	355	1,315	0
NLP State Parks	0	0	450	0
NLP National Forests	488	0	15	0
NLP Total	1,509	355	1,819	0
SLP Genesee County Park	0	0	379	0
SLP Total	0	0	379	0
<b>State Total (c)</b>	<b>2,020</b>	<b>562</b>	<b>2,198</b>	<b>9,376</b>

- (a) Designated trails are two-way single track paths or ways capable of travel by a vehicle 50" in width or less. May be maintained to motorcycle trail specifications which are 24" at ground level, 40" at handlebar height, brushed 8' above ground level or to ATV trail specifications which are 50" at ground and handlebar height and brushed 8' above the ground.
- (b) Designated routes are two-way forest roads having a minimum width of 72".
- (c) In addition, it was noted that the Michigan Cross Country Cycle Trail was 739 miles, but that much of it was composed of sections of forest and county roads that require road (Secretary of State) licensing. It was also noted that the majority of the trail system is maintained to motorcycle specifications.

This trail mileage encompassed a total of 56 designated trails on state forest land and 7 designated trails on national forest land. The number of routes were not provided, but they were designed not be a loop or long distance point-to-point routes, but rather to be a connectors between ORV trail loops using selected sections of state forest roads in the NLP where needed and suitable.

### **1996 Inventory, Evaluation and Resource Management Plan for the Designated System**

In 1996 the DNR contracted to have another inventory conducted of the designated ORV system that included evaluation of trail/resource conditions, user conflicts and illegal activities. The inventory was focused on the state forest portion of the designated trail system and the results were published in 1997 (Lynch and Nelson 1997).

The inventory focused solely on the designated system of trails and routes and did not include designated scramble areas or forest roads in the Upper Peninsula. It found that there were 71 trails/routes with 2,531 miles in the designated system, excluding some segments of the Michigan Cross Country Cycle Trail (Table 6).

Table 6. Michigan public ORV facility inventory, 1997 (Lynch and Nelson 1997).

<b>Region/Manager</b>	<b>Trail miles (a)</b>	<b>Route miles (b)</b>	<b>Area acres</b>
UP State Forests	578	157	0
UP National Forests	0	0	0
UP Total	578	157	0
NLP State Forests	1,086	362	1,315
NLP State Parks	0	0	450
NLP National Forests	348	0	15
NLP Total	1,434	362	1,819
SLP Genesee County Park	0	0	379
SLP Total	0	0	379
<b>State Total (c)</b>	<b>2,012</b>	<b>519</b>	<b>2,198</b>

- (a) Designated trails are two-way single track paths or ways capable of travel by a vehicle 50" in width or less. May be maintained to motorcycle trail specifications which are 24" at ground level, 40" at handlebar height, brushed 8' above ground level or to ATV trail specifications which are 50" at ground and handlebar height and brushed 8' above the ground.
- (b) Designated routes are two-way forest roads having a minimum width of 72".
- (c) In addition, it was noted that the Michigan Cross Country Cycle Trail was 739 miles, but that much of it was composed of forest and county roads that require road (Secretary of State) licensing. It was also noted that the majority of the trail system off county and forest roads was maintained to motorcycle specifications.

The trails/routes on state forest land were evaluated for trail/resource conditions, user conflicts and illegal activities. The findings for the state forest portion of the system are shown in Table 7.

Table 7. Mileage, rated condition and illegal uses and conflicts on the DNR state forest designated trail/route system, fall 1996 (Lynch and Nelson 1997) (a)

Region/ Type	No. trails /routes	No. (%) miles in good condition (b)	No. (%) miles in fair condition (b)	No. (%) miles in poor condition (b)	Total no. trail/route (%) miles	No. (%) trails/ routes with illegal use	No. (%) trails/ routes with conflicts
UP	13	241 (53%)	116 (26%)	96 (21%)	453 (100%)	4 (31%)	0 (0%)

Cycle							
UP ATV	5	12 (10%)	34 (27%)	80 (63%)	126 (100%)	0 (0%)	0 (0%)
UP Route	5	137 (87%)	20 (13%)	0 (0%)	157 (100%)	3 (60%)	0 (0%)
UP Total	23	390 (53%)	170 (23%)	176 (24%)	736 (100%)	7 (30%)	0 (0%)
LP Cycle	9	209 (61%)	82 (24%)	53 (15%)	344 (100%)	9 (100%)	0 (0%)
LP ATV	21	516 (70%)	213 (29%)	13 (1%)	742 (100%)	7 (33%)	3 (14%)
LP Route	12	162 (59%)	98 (36%)	16 (5%)	276 (100%)	4 (33%)	0 (0%)
LP Total	42	887 (65%)	393 (29%)	82 (6%)	1,362 (100%)	20 (48%)	3 (7%)
System Total	65	1,277 (61%)	563 (27%)	258 (12%)	2,098 (100%)	27 (42%)	3 (5%)

- (a) Does not include Michigan Cross Country Cycle Trail or designated cycle or ATV trail on national forest land.
- (b) Condition: good > 95% mileage meets maintenance; fair = 75%-95% mileage meets maintenance standards; poor < 75% mileage meets maintenance standards.

In total, the majority of the system mileage was in good condition. However, 39% needed specific improvement to reach good trail maintenance standards. Illegal uses were relatively common, with almost half the trails and routes reporting such concerns. Conflicts were uncommon with only one in twenty facilities having noted conflicts.

### 2004 Inventory and Evaluation

As part of this planning process, during summer and fall 2004, DNR FMFM personnel inventoried, evaluated and provided trail-by-trail resource management plans using an instrument and methodology very similar to that developed in 1996. The assessment instrument is found in Appendix A. The FMFM trail analysts were critical to this effort as was the support of FMFM field leadership. In addition, trail managers in the Huron-Manistee National Forests inventoried and evaluated the portions of the designated system on national forest lands in the Lower Peninsula. This inventory, evaluation and the accompanying set of resource management plans is somewhat more inclusive than the 1996 inventory, as it includes all designated Forest Service motorcycle and ATV trails in the Lower Peninsula and three parts of the Michigan Cross Country Cycle on US Forest Service lands. The system has also grown slightly since 1996 and those additional trails/routes are included. The goal of this process was to clearly identify the designated trail/route system and its key infrastructure, evaluate the condition of the system and clearly state resource management plans designed to bring the entire trail system up to “good” condition. Good condition is defined as a trail or route meeting maintenance standards on more than 95% of its mileage. Those standards are fully defined in IC 1990 “DNR ORV Trail Improvement Fund Procedures Manual”, IC 1991 “DNR ORV Trail and Route Maintenance Handbook” and IC 3600 “DNR ORV Trail Maintenance Grant Application Information”.

The inventory included 82 designated trails and routes covering 2,705 miles. It does not include portions of the Michigan Cross Country Cycle Trail connectors managed by the DNR. Table 8 specifically focuses on the length of trail mileage, the number of designated trailheads, the condition of the trail/route and key trail infrastructure features that directly affect rider safety and trail maintenance costs.

Table 8. Designated ORV system mileage, condition and infrastructure by trail/route.

<b>Trail /Route</b>	<b>Mile -age</b>	<b>Desig -nated Trail-heads</b>	<b>Condition (a)</b>	<b>Culverts</b>	<b>Bridges</b>	<b>Boardwalks</b>	<b>Road and Pathway Cross-ings</b>
<b>UP Cycle</b>							
Bass Lake	26	1	Good	3	0	3	22
Birch Hill	9	1	Good	0	0	0	8
Brevort – Trout Lake	63	1	Fair	12	5	0	53
Foreman Lake	13	1	Good	0	0	0	9
Kinross	30	1	Good	0	0	1	78
Newberry-Rexton	54	1	Fair	9	0	1	77
Porterfield Lake	22	1	Good	3	0	4	12
Sandtown	36	1	Good	0	0	0	38
Silver Cr.	34	1	Fair	3	2	3	30
<b>UP Cycle Trails</b>	<b>287</b>	<b>9</b>	<b>6 (Good) 3 (Fair)</b>	<b>30</b>	<b>7</b>	<b>12</b>	<b>327</b>
<b>UP ATV</b>							
Baraga Pl.	28	1	Good	2	0	0	37
Bay City L	9	1	Good	0	0	0	12
Cranberry Lake	8	1	Good	7	2	0	0
Danaher P	29	1	Good	1	1	0	17
Drummond Island	60	2	Good	2	1	0	10
Forest Islands	33	2	Good	3	5	2000' boardwalk	10
Norway	25	0	Fair	4	5	12	4
Pine Ridge	49	1	Fair	0	0	0	59
Two Heart	36	1	Fair	0	2	1	42
<b>UP ATV Trails</b>	<b>277</b>	<b>11</b>	<b>6 (Good) 3 (Fair)</b>	<b>19</b>	<b>16</b>	<b>13 + 2000'</b>	<b>191</b>
<b>UP Route</b>							
B. Nicholls	41	0	Good	162	4	0	26

Trail /Route	Mile -age	Desig -nated Trail-heads	Condition (a)	Culverts	Bridges	Boardwalks	Road and Pathway Cross-ings
Iron R. - Marinesco	67	2	Good	127	33	0	31
Hancock – Calumet	14	2	Good	35	4	0	27
Felch Gr.	38	0	Good	3	10	0	8
Champion – Republic	9	1	Good	3	10	0	7
<b>UP Routes</b>	<b>169</b>	<b>5</b>	<b>5 (Good)</b>	<b>330</b>	<b>61</b>	<b>0</b>	<b>99</b>
<b>UP TOTALS</b>	<b>733</b>	<b>24</b>	<b>17 (G),6 (F)</b>	<b>379</b>	<b>84</b>	<b>25 +2000'</b>	<b>617</b>
<b>LP Cycle</b>							
Big O	96	2	Good	4	5	0	81
Bummers	21	0	Fair	0	0	0	13
Evert	23	1	Good	0	3	0	5
Grand Tr.	66	2	Good	0	0	5	35
Holton	32	1	Good	0	0	0	37
Horseshoe	27	1	Good	1	1	0	33
L Manistee	46	2	Good	2	4	0	30
Long Lake	27	1	Good	0	0	0	15
MCCCT Cadillac	46	1	Fair	3	0	0	20
MCCCT Meadows	25	1	Fair	0	1	0	32
Missaukee Junction	18	1	Good	0	0	0	7
Red Bridge	28	0	Fair	0	0	0	13
Tin Cup	22	1	Good	0	0	0	10
Tomahawk	102	2	Good	0	0	0	85
<b>LP Cycle Trails</b>	<b>579</b>	<b>16</b>	<b>10 (Good) 4 (Fair)</b>	<b>10</b>	<b>14</b>	<b>5</b>	<b>416</b>
<b>LP ATV (b)</b>							
Ambrose	9	1	Good	0	0	0	6
Atlanta	82	1	Fair	0	1	0	97
Big Bear	20	0	Good	0	0	0	21
Black L.	38	1	Fair	0	0	0	66
Bull Gap	96	8	Fair	2	2	0	66
Cedar Cr.	24	1	Good	0	2	0	18
Crapo Cr.	18	0	Good	0	0	0	16

Trail /Route	Mile -age	Desig- nated Trail-heads	Condition (a)	Culverts	Bridges	Boardwalks	Road and Pathway Cross- ings
Denton Cr.	43	1	Good	0	0	10	90
Frederic	29	1	Good	0	0	0	19
Geels	50	1	Good	0	0	0	55
Gladwin-N (b)	38	NA	Poor	NA	NA	NA	NA
Gladwin- S	14	1	Fair	0	0	0	8
Hunt Cr.	33	0	Fair	0	0	0	38
Huron	46	4	Fair	3	1	0	45
Kalkaska	90	2	Good	0	2	0	28
Leetsville	25	1	Good	0	0	0	18
Leota	55	1	Good	0	2	0	35
Lincoln H.	21	0	Good	0	0	0	12
Little O	41	2	Good	0	0	0	50
M 20	15	1	Good	0	1	0	27
Meadows	105	3	Fair	2	2	0	41
Mio	25	2	Fair	0	0	0	20
N. Missaukee	73	2	Good	0	6	2	22
Ogemaw Hills	11	0	Good	0	0	0	23
Old State House	17	1	Good	0	0	0	20
Rose City	15	0	Good	0	0	0	18
St. Helen	30	1	Good	0	0	0	50
W. Higgins	39	1	Good	0	0	0	65
<b>LP ATV Trails</b>	<b>1104</b>	<b>37</b>	<b>19 (Good) 8 (Fair) 1(Poor)</b>	<b>7</b>	<b>19</b>	<b>12</b>	<b>974</b>
<b>LP Routes</b>							
Black L.	15	0	Fair	0	0	0	14
Brush Cr.	35	1	Good	0	1	0	43
Denton	11	1	Good	0	0	0	60
Devil's L.	10	1	Good	0	0	0	1
Elk	15	1	Good	0	0	0	30
Frederic	10	1	Good	0	0	0	17
Lincoln H.	21	0	Good	0	0	0	12
Little Manistee	46	2	Good	2	4	0	30
Mio	14	1	Good	0	0	0	15
N. Branch	26	2	Good	0	0	0	30
Ogemaw	5	0	Good	0	0	0	7

Trail /Route	Mile -age	Desig -nated Trail-heads	Condition (a)	Culverts	Bridges	Boardwalks	Road and Pathway Cross-ings
Hills							
Old State House	12	1	Good	0	0	0	14
Red Bridge	7	0	Fair	0	0	0	13
St. Helen	19	0	Good	0	0	0	20
Tin Cup	20	1	Good	0	0	0	10
Tomahawk Creek	15	1	Good	0	0	0	22
Tomahawk	8	0	Poor	0	0	0	2
<b>LP Routes</b>	<b>289</b>	<b>13</b>	<b>14 (Good) 2 (Fair) 1 (Poor)</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>340</b>
<b>LP TOTAL</b>	<b>1972</b>	<b>66</b>	<b>43 (Good) 14 (Fair) 2 (Poor)</b>	<b>19</b>	<b>38</b>	<b>17</b>	<b>1730</b>
<b>SYSTEM TOTAL</b>	<b>2705</b>	<b>90</b>	<b>60 (Good) 20 (Fair) 2 (Poor)</b>	<b>349</b>	<b>122</b>	<b>42 + 2000'</b>	<b>2347</b>

- (a) Condition: good > 95% mileage meets maintenance; fair = 75%-95% mileage meets maintenance standards; poor < 75% mileage meets maintenance standards.
- (b) Gladwin North ATV trail is closed due to poor condition and no evaluation was made of culverts, bridges, boardwalks or crossings as extensive changes due to re-routes, new boardwalk, etc. are being examined in current engineering feasibility studies.

It is clear from the inventory that the trail system has matured from the situation documented in 1996. Field personnel report the trail system has 90 designated trailheads, creating a considerable infrastructure maintenance responsibility. In addition, 21 of the 81 trails/routes (26%) need to be upgraded to reach good condition. In terms of on-trail infrastructure beyond trailheads, 349 culverts, 122 bridges, thousands of feet of boardwalk and 2,347 road and pathway crossings require additional regular inspection, maintenance and signage. As is also clearly demonstrated above, this infrastructure maintenance burden is not evenly distributed among trails. For example, Forest Islands, an ATV trail in the Upper Peninsula, was rated in poor condition in the 1996 inventory and evaluation. Resource management plans were implemented that called for an extensive boardwalk system to protect erodible soils and surface waters in this wet site. Today, there is a boardwalk system with an estimated 2,000 feet (1/3 of a mile) on this one 33-mile trail. Another example is the six UP ORV routes, which have 94% of the

reported culverts and 50% of the reported bridges, yet provide only 6% of the state's designated trail/route mileage (excluding the MCCCT).

Comparing the condition of the system in 2004 to 1996, it is apparent that FMFM and Forest Service personnel assess the system in overall better condition, although there may be individual trails/routes in 2004 that are in worse condition than 1996 (Table 8).

Table 8. Rated condition of designated ORV system by type and region in Fall 2004 and comparison to system rating in fall 1996 (Lynch and Nelson 1997).

<b>Region/Trail Type</b>	<b>Number Trails/Routes</b>	<b>Mileage (%) Good</b>	<b>Mileage (%) Fair</b>	<b>Mileage (%) Poor (f)</b>	<b>Total Mileage</b>
<b>UP Cycle</b>	9 (a)	136(47%)	151(53%)	0(0%)	287 (100%)
<b>UP ATV</b>	9 (b)	167 (60%)	110 (40%)	0 (0%)	277 (100%)
<b>UP Route</b>	5	169 (100%)	0 (0%)	0 (0%)	169 (100%)
<b>Total UP</b>	23	472 (64%)	261 (36%)	0 (0%)	733 (100%)
<b>LP Cycle</b>	14 ( c)	459 (79%)	120 (21%)	0 (0%)	579 (100%)
<b>LP ATV</b>	28 (d)	625 (57%)	441 (40%)	38 (3%)	1104 (100%)
<b>LP Route</b>	17 (e)	259 (90%)	22 (7%)	8(3%)	289 (100%)
<b>Total LP</b>	59	1343(68%)	583(30%)	46(2%)	1972(100%)
<b>Total State Fall 2004</b>	82	1815 (67%)	844(31%)	46(2%)	2705 (100%)
<b>Total State Fall 1996</b>	65	1277 (61%)	563 (27%)	258 (12%)	2102 (100%)

- (a) Fair: Brevort-Trout Lake Cycle Trail, Newberry-Rexton Cycle Trail, Sliver Creek Cycle Trail.
- (b) Fair: Norway ATV Trail, Pine Ridge ATV Trail, Two Hearted ATV Trail.
- (c) Fair: Bummer's Roost Cycle Trail, MCCCT Cadillac (FS), Meadows MCCCT (FS), Red Bridge Cycle Trail.
- (d) Fair: Atlanta ATV Trail, Black Lake ATV Trail, Bull Gap ATV Trail, Gladwin South ATV Trail, Hunt Creek ATV Trail, Huron ATV Trail, Meadows ATV Trail, Mio ATV Trail. Poor: Gladwin ATV Trail N.
- (e) Fair: Black Lake Route, Red Bridge Route. Poor: Tomahawk Route.

The most visible change in the system is that only two trails/routes comprising less than 2% of the system (46 miles) were rated in poor condition in 2004 compared to 258 miles of trail/route (12%) in 1996. While the proportion in fair condition was slightly higher in 2004 than in 1996, by the nature of a fair rating, these trails/routes are easier to bring to good condition as less mileage needs to be upgraded. Considering trails/routes that need to be upgraded, a higher percentage of mileage in the Upper Peninsula is rated as fair than in the Lower Peninsula. This is particularly true of motorcycle trails in the UP where more than half the mileage is rated fair. In the Lower Peninsula, ATV trails have the highest percentage of miles with a rating below good.

### Resource Management Plans for Trails/Routes Rated Fair or Poor

Table 9 provides specific resource management plans for each trail/route rated fair or poor to bring each up to good specifications.

Table 9. Problems to be rectified to bring system components rated fair or poor into compliance (good rating) by trail/route, 2004.

<b>Trail /Route</b>	<b>Management Unit(s)</b>	<b>Recommended Action(s)</b>
<i><b>UP</b></i>		
Brevort-Trout Lake Cycle Trail	Soo	Some areas need to be brushed to meet specifications.
Newberry-Rexton Cycle Trail	Newberry, Soo	Some areas need to be brushed to meet specifications
Silver Cr. Cycle Trail	Newberry	Poor job of brushing, some areas need to be brushed to meet specifications.
Norway ATV Trail	Crystal Falls	Numerous wet areas need reroutes or boardwalks. ORV users are doing reroutes by bypassing these areas, but a permanent reroute or boardwalk needs to be done in most cases. A portion of the trail that lies west of Norway Truck Trail (runs N/S) should be closed. Major damage is occurring in some areas and no options for reroutes in most locations. Predominantly rock and swamp. Possibilities do exist to use other two tracks and a portion of forest road to eliminate this poor trail mileage and replace it with comparable mileage of usable trail.
Pine Ridge ATV Trail	Newberry	Poor job of brushing, some areas need to be brushed to meet specifications.
Two Heart ATV Trail	Newberry	Some areas need to be brushed to meet specifications
<i><b>LP</b></i>		
Bummers Roost Cycle Tr.	Atlanta	Poor signage. Needs more and appropriate confidence markers and stops. Needs better brushing, especially in front of signs.
MCCCT Cadillac	Cadillac Ranger District - FS	Need to restore some erosion along road crossings and sandy areas. A wet area north of Boon Rd. needs to be improved. Plans being made to make this improvement as part of a timber sale.
Meadows MCCCT	Mio Ranger District -FS	Need for erosion control and additional brushing.
Red Bridge Cycle Tr.	Gaylord	Signage is poor. Need more confidence markers, directional arrows, begin and end signs and stops.
Atlanta	Atlanta	Needs additional brushing. Reroutes need to be put back

<b>Trail /Route</b>	<b>Management Unit(s)</b>	<b>Recommended Action(s)</b>
ATV Tr.		on original treadway. Grading is also needed.
Black Lake ATV Tr.	Atlanta	Poor signage. Needs more and appropriate confidence markers, directional arrows and stops.
Bull Gap ATV Tr.	Mio Ranger District - FS	User trails around wet spots, poor signing, erosion problems at some hill climbs and wet areas.
Gladwin-N ATV Tr.	Gladwin	Trail closed for major renovation. Key challenges included wet sites, braided trail and whooped out trail. Renovations in progress include rerouting, boardwalks, bridges, culverts and grading. Currently in engineering phase.
Gladwin -S ATV Tr.	Gladwin	Trail is braided everywhere. Trail is very whooped out.
Hunt Cr. ATV Tr.	Atlanta, Grayling	Needs additional brushing and improved signage.
Huron ATV Tr.	Tawas Ranger District - FS	Several wet spots need to be hardened. Because of wide trail width, some motor vehicle traffic and sign vandalism where people feel the need to drive trucks/SUVs. Trail needs more frequent grading (now being planned) by FS. Illegal scramble area has been created on Consumers Energy land under powerlines across from Old Orchard Park.
Meadows ATV Tr. FS	Mio Ranger District - FS	User made trails, wet areas, poor signage and erosion.
Mio ATV Tr.	Grayling	Needs more brushing and better signage. Grading will need to continue as it is currently being done by CCC.
Black L. Route	Atlanta	Poor signage. Needs more and appropriate confidence markers, directional arrows and stops.
Red Bridge Route	Gaylord	Signage is poor. Needs more confidence markers, directional arrows and begin and end signs.
Tomahawk Route	Gaylord	Two segments connecting Tomahawk Creek Cycle trail are fine. However, recommend decommissioning loop in Sections 14, 15, 22 and 23 of T33N, R4W due to terrain, access, safety hazards and neglect.

Better brushing and signage are the two most common management steps need to bring the trails/routes to good condition. In a number of instances however, additional steps are required including re-routes and/or boardwalks to protect against soil erosion or compaction in wet or steep areas. There are also challenges with user made trails (illegal volunteer trails that braid the existing single treadway system). These may require re-routes or boardwalks if the braiding is the result of wet or unsafe trail conditions, or some form of appropriate barrier and signage if riders are taking short-cuts that bypass safe and appropriate trail mileage. Improved signage recommended typically focuses on

confidence markers, directional arrows and stop signs as specified in IC 1991 “DNR ORV Trail and Route Maintenance Handbook”.

Further resource management planning is needed to reduce illegal use and minimize user conflicts. Trail evaluators provided the following comments by trail concerning illegal use, conflicts and additional comments that often point toward management remedies (Table 10).

Table 10. Illegal use, conflicts and additional comments by evaluators by trail/route.

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
<b>UP Cycle Trail</b>			
Bass Lake	Illegal spur trails	None	None
Birch Hill	None	None	None
Brevort – Trout Lake	Hill climb in an area previously attempted to be closed off with ORV grant project. Illegal spur trails created and used by hunters	None	None
Foreman Lake	None	None	None
Kinross	Illegal spur trails made by hunters	Aware of a conflict between motorcycle rider and equestrian.	None
Newberry-Rexton	Illegal spur trails created by hunters	None	None
Porterfield Lake	Illegal spur trails	None	None
Sandtown	Illegal hill climb in Section 2. Illegal spur trails created and used by hunters.	None	None
Silver Creek	Illegal spur trails created and used to access hunting and fishing opportunities	None	None
<b>UP ATV Trails</b>			
Baraga Plains	Illegal spur trails for hunting access	None	None
Bay City Lake	ORVs (trucks and ATVs) riding around lake shoreline at low	None	None

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
	water levels. Illegal spur trails.		
Cranberry Lake	None	None	None
Danaher Plains	Illegal spur trails for hunting and fishing access.	None	None
Drummond Island	Illegal spur trails for hunting access.	None	Challenges with water as the islands bedrock is very near the surface and we have perched water table on rock or clay substrate.
Forest Islands	Illegal spur trails. Jeeps riding and destroying boardwalks created for ATV use. Some snowmobile use also starting to occur on boardwalks.	None	None
Norway	Illegal spur trails. Bypasses around wet areas getting wider and wider.	None	Southern Dickinson County near trail consists of numerous rocky outcrops mixed with swampy areas. More portions of this trail need to be placed on existing two tracks and forest roads. This will enhance safety and reduce erosion. Trail mileage can be maintained.
Pine Ridge	ATV use is increasing and there are reports of illegal use down the Lake Superior shoreline. Illegal spur trails.	None	None
Two Heart	Illegal spur trails and hill climbs. Illegal riding on Lake Superior shoreline.	None	None

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
<b>UP ORV Routes</b>			
Bill Nicholls	Illegal spur trails to residences and to access streams.	Use permits are issued for loggers to use this grade as a summer haul road. Has not been a major conflict.	The grade extends north to Canal Rd. This part of the grade was not designated because of the Old Mill Rd. crossing slope problems. We should reevaluate this decision. It would be feasible if the trail surface was upgraded to protect from erosion on the slope and would expand route mileage.
Iron River - Marinesco	Illegal spur trails to residences.	Some residents concerned about dust, noise from ATV traffic.	Trail needs annual maintenance – spot gravel and grading. There is a three mile segment where DNR does not own the grade. The current reroute uses a county road – Old US2- as the trail. USFS owns the connector to the West. The Gogebic County Road Commission owns most of the Old US2 ROW. The problem is on the east end and DNR/FS should address this jointly.
Hancock to Calumet	Some spur trails in Hancock and Calumet.	Major conflict on this trail is due to noise and dust in the cities and villages. There are regular complaints and most are about dust. Many young ATV users waiting to “graduate” to cars for	This trail needs annual maintenance by spot gravel and grading. Some form of hard surfacing in town areas would help control dust.

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
		transportation between towns.	
Felch Grade	Spur trails to residences	Illegal grade crossings (driveways) with no land easement. Trespass issues on the east end of the grade onto adjacent private lands. The grade is being used as a dump area for household appliances and trees.	None
Champion - Republic	Illegal spur trails	None	None
<b>LP Cycle Trails</b>			
Big O	Biggest problem is unlicensed ORVs on this system. Illegal spur trails and hill climbs.	Legal vs. illegal use of county and forest roads and trespass on private lands.	Highest priority of FS is to inventory all opportunities to move trail from public roadways to single track motor cycle trail.
Bummers Roost	None	None	Need a connector trail/route developed to connect to Red Bridge Cycle Trail to the west (8 miles). Need better delineation between this cycle trail and Black Lake ORV trail to the north.
Evert	None	None	There is an official cycle scramble area here, but it is unmarked and unmapped and both need to happen.
Grand Traverse	None	None	None
Holton	Illegal road riding by non SOS licensed vehicles.	ATVs in conflict with motorcyclists on this motorcycle trail.	None

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
Horseshoe	Illegal road riding by non-SOS licensed vehicles.	ATVs riding on a motorcycle trail.	None
Little Manistee	None	None	None
Long Lake	None	None	None
MCCCT Cadillac	Hill climbs off trail along the Pine River, in the Briar Hills/Harrietta area, Yuma Hills, Meawataka area.	ATVs and horses on the MCCCT. Horses especially prevalent on spur by Caberfae Way parking lot.	None
Meadows MCCCT	None	None	None
Missaukee Junction	None	None	None
Red Bridge	Non-designated spur trails (e.g. to restaurant off Black R. Rd.). Either designate or remove. Large illegal scramble area needs to be effaced.	None	Trail appears underutilized. Perhaps use will increase with development of trailhead. Need connector trail/route to Bummers Roost Cycle Trail 8 miles East.
Tin Cup	None	None	Public has asked for ORV trail/route connection to Little Manistee Cycle Trail from Tin Cup Cycle Trail.
Tomahawk	None	A lot of ATV use on this trail maintained solely for motorcycles. Consider conversion of some mileage to ATV trail (50").	None
<b>LP ATV Trail</b>			
Ambrose Lake	None	None	None
Atlanta	Lots of illegal spur trails due to those taking short cuts and use of gas well related roads.	None	Need culvert and gravel at flooding ford in Section 8 of T32N, R3E. Bridge needs to be replaced at Brush Creek

Trail/Route (a)	Illegal Use	Conflicts	Additional Evaluator Comments
	Montmorency County has opened all county road shoulders which has led to illegal use of state forest land by ORVs.		in Section 11 of T31N, R3E and is currently in engineering stage. The farther north you go on the trail, the worse the maintenance (signing, brushing and treadway).
Big Bear	None	None	None
Black Lake	<u>Lots</u> of illegal scramble areas and spur trails. These need to be blocked and restored. Lots of illegal riding in and around Black Lake SF campground, including between upper and lower units.	Lots of user conflict stemming from both counties opening their road shoulders and the maze of designated ORV system, snowmobile trail and pathways in the area.	Consider DNR Directors Order to prohibit ORVs in Lower Black Lake SFC and one to prohibit camping in designated parking lots within the Black Mountain Recreation Area. Post scramble area boundaries and rules. Continue blocking illegal trails and post signs designating appropriate use groups.
Bull Gap	Numerous illegal hill climbs, trails and instances of road use. Have aggressively worked to correct and limit illegal use but use has dramatically increased in past decade. Hence, new problems continually arise.	Some conflict between ATVs and cycles. ATVs want wider, smoother trail, cycles more technically challenging. To separate have more heavily maintained (graded) north part of the system, favoring ATV while south part has been maintained to favor cycles.	On some years progress made by trail personnel is often overshadowed by new problems at other locations. In short, we often break even. The overall problem of managing a trail system of this size is money. We need more personnel to make contacts and issue violations, do rehab work and maintain adequate signage and trail conditions.
Cedar Creek	Numerous illegal spur trails, illegal road riding.	Area is habitat for Karner Blue butterfly – a federally endangered species. Conflicts with ORVs off trail on	None

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
		open fields which are Karner Blue habitat.	
Crapo Creek	None	None	None
Denton Creek	None	None	None
Frederic	None	None	None
Geels	None	None	None
Gladwin South	Illegal spur trails numerous	None	ORV trails N of M61 currently closed. Official 21-acre scramble area needs official boundary, fencing and posts.
Gladwin North	NA (Trail closed)	NA (Trail closed)	NA (Trail closed)
Hunt Creek	Illegal use of non-designated forest trails and snowmobile trails by ATVs. Environmental damage to Avery Hills areas to the north due to illegal hill climbs, spur trails.	ATVs on roads to oil/gas facilities are in conflict with well operators. Conflicts with snowmobilers and hunters in season.	None
Huron	Many illegal hill climbs. Fencing put up to stop this has been moderately effective but still considerable illegal use.	None	Need to provide sign consistency for dual snowmobile/ORV use. Consistent size, wording/symbol for stop ahead and stop signs especially needed.
Kalkaska	None	None	None
Leetsville	None	None	None
Leota	None	None	A designated camping area would be a great asset. A special use area is available near the parking lot.
Lincoln Hills	None	None	Although Lincoln Hills does not have a designated trailhead, I don't believe one it needed. The trailhead on the Little Manistee is within 4-5 miles using

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
			the ORV connector route.
Little O	Illegal spur trails and road riding.	Trespass on private property.	None
M20	Illegal road riding	ATVs conflict with cars/trucks on public roads during illegal road riding.	None
Meadows	None	None	None
Mio	Illegal road riding. New trailhead on Oak Lake Road should help. Illegal hill climbs in Sec. 23 T28N, R2E	None	None
N. Missaukee	None	None	None
Ogemaw Hills	None	None	None
Old State House	None	None	None
Rose City	None	None	None
St. Helens	None	None	None
W. Higgins	None	None	None
<b>LP Routes</b>			
Black Lake	Lots of illegal scramble areas and trails. Heighten visibility of official scramble area.	Lots of user conflict on Black Mtn. Recreation Area with maze of designated ORV, snowmobile and pathways, as well as forest and county roads.	None
Brush Creek	Lots of illegal spur trails. Montmorency County has opened up county road shoulders, which has led to illegal use of adjacent state forest lands.	None	Since this is also a snowmobile trail, most of the maintenance is done by the snowmobile grant sponsor, Canada Creek Ranch.
Denton	None	None	None
Devil's Lake	Illegal trails and shortcuts across loops	Only designated ORV facility in	Railroad crossing needs to be upgraded to public

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
	need to be blocked. Access to lake needs to be controlled. Illegal ORV use in lakeside wetlands/shoreline. Lots of illegal dumping. Major illegal scramble area. Should either designate it as a legal scramble area or close and restore it.	Alpena County, where a sizeable population base exists that is interested in ORV use.	crossing criteria as per federal standards.
Elk	Lots of illegal spur trails. Montmorency County has opened up county road shoulders, which has led to illegal use of adjacent state forest lands.	None	None
Frederic	None	None	None
Lincoln Hills	None	None	None
Little Manistee	None	None	None
Mio	None	None	None
North Branch	Illegal road riding to reach Big Bear L. SFC. An ORV route connector to the campground would be beneficial to decrease illegal road riding. Lots of well roads that attract illegal use.	This is also a designated snowmobile trail and is well used by large 4 WD vehicles. Conflicts regarding signage, useage.	None
Ogemaw Hills	None	None	None
Old State House	Lots of illegal trash dumping along route.	Conflict regarding signage as this is also a designated snowmobile trail.	None
Red Bridge	Non-designated spur trails. Large illegal scramble area on route needs to be	None	None

<b>Trail/Route (a)</b>	<b>Illegal Use</b>	<b>Conflicts</b>	<b>Additional Evaluator Comments</b>
	addressed.		
St. Helens	None	None	None
Tin Cup	None	None	None
Tomahawk Creek	Lots of illegal spur trails. Montmorency County has opened up county road shoulders, which has led to illegal use of adjacent state forest lands.	None	None
Tomahawk	Illegal trails throughout area. Lack of trailhead encourages non-SOS vehicles on county roads and forest trails.	None. Low use.	Recommend decommissioning of the loop leaving the cut across the segments in Tomahawk C. Maybe replace the lost mileage in the form of more cut across trails in B and A loops. Could widen A, B or C to accommodate more traffic by cycles and ATVs.

(a) Gladwin North ATV Trail was not rated as it was already closed for major renovation at the time of the assessment. Key challenges included wet sites, whooped out trail. Renovations in progress include a significant amount of boardwalk, some rerouting and grading.

In total, 44 (54%) of designated ORV trails/routes currently open had reported illegal uses. This is up from 42% of the trails having reported illegal use in 1996 (Table 6). Illegal uses appear to differ by region. For example, in the UP, illegal uses are most likely to be spur trails being created off designated cycle and ATV trails to enhance access to hunting and fishing locations. In the Lower Peninsula there is a much greater variety of illegal activity including illegal spur trails leading to illegal hill climbs and scramble areas, riding in wetlands or on lake/river shorelines, riding roads near trails only open to Secretary of State licensed vehicles and cutting between campgrounds and other recreation/service facilities appears more common. This suggests that additional education to focus on unwitting violators and additional enforcement to target knowing violators should be provided. In addition, effective restoration of illegal hill climbs that both blocks access to such sites and restores their environmental integrity should be undertaken.

Managers reported conflicts on 20 (25%) of designated ORV trails/routes. This is a higher proportion than the 5% of trails/routes with reported user conflicts in 1996 (Table

6). Conflicts within the ORV community tended to be primarily between motorcyclists and ATV riders. There were conflicts with ORV riders and non-motorized users who walk, ride horses or use mountain bikes on designated motorcycle and ATV trails. There were also conflicts on ORV trails/routes that are also designated snowmobile trails. These were between ORV and snow machine users and those who groom snowmobile trails. These include situations of ORV use immediately prior to winter resulting in a less than smooth treadway surface and uses during periods of minimal snow in winter by ORV and snowmobile users. There were trespass issues in some locations where ORV users strayed from the designated trail and entered private lands.

Some conflicts seemed regional in nature. For example, in the UP there were some short-term conflicts on UP forest roads used for logging traffic that are also designated ORV routes. Also in the UP there were also conflicts where ORV riders use routes through communities as transportation from town to town. This appears to involve many under 16 who are waiting to “move up” to a car or truck but cannot obtain a driver’s license. The key concern is that it involves considerable noise and dust in populated areas and much of this riding also appears to lack of direct adult supervision (a violation). In the Lower Peninsula, there were conflicts in northeastern Lower Michigan with the oil and gas industry. ORV riders illegally rode on oil and gas service roads and had unplanned interactions with oil and gas service vehicles, often large trucks. Also, the Black Mountain area, with its array of motorized trail and non-motorized pathway opportunities along with designated state forest campgrounds, there is reported conflict among trail users and between ORV oriented campers and non-ORV campers. Specific suggestions to reduce or eliminate these conflicts are provided by the evaluators in Table 10.

Finally, on 20 (25%) of trails, evaluators made additional substantive comments about challenges faced and improvements needed. Some key themes in the UP were to better use alternate routes in areas with water and rocky outcrops and to consider ways to hard surface portions of routes running through villages/towns where dust is a serious problem. In the Lower Peninsula, suggestions included better signing on the ground of existing designated scramble areas, connectors between cycle and ATV trail loops that would lengthen riding opportunities and provide access to goods and services, specific infrastructure repairs/improvements, clearer signage about where snowmobile and/or ORV use is appropriate and different approaches to managing camping on or near selected ORV trails and routes.

### **Trends in Michigan ORV Use and Users**

This section provides information about ORV use and users from ORV registration and license data and three statewide Michigan ORV studies published in 1977, 1989 and 2000. Copies of these major reports (Alexander and Jamsen 1977; Nelson 1989; Nelson et al. 2000) can be found in the appendices of this plan. Key trends across the 24-year (1976-1999) span encompassed by the three studies are summarized in Nelson and Lynch (2001). All three studies used mail questionnaires sent to a representative sample of ORV registrants (1977 and 1989) or ORV licensees (2000) to elicit information.