Introduction

A primary goal for all New York State Parks Trail Systems is to develop sustainable trails that have minimal impacts on the environment, require little maintenance, and meet the needs of the users. This document is one of a series of technical documents developed by State Parks to provide standards and guidelines for trail design and development, accessibility, and trail assessment and maintenance techniques that help ensure a sustainable trail system. Additional topics include guidelines for trail signage, trail monitoring, and trail closure and restoration. The complete list of technical documents is provided on the web at: http://www.nysparks.state.ny.us/recreation/trails/technical-assistance.aspx.

These documents were designed for use within New York State Parks but can be used as resources for trail projects outside of the Parks. Within State Parks, use of these documents for implementation of trail projects will be done in conjunction with a review and approval process as laid out in Technical Document # 7 - Trail Project Approval Process. These documents may be updated periodically. Additional documents will be developed in the future as part of this series.

This document is a step by step training presentation for the trail assessment process.
Why do trail assessments?

✓ To inventory trail assets
✓ To determine trail conditions
✓ To identify trail management and maintenance issues
✓ To identify opportunities for additional interpretation
✓ To identify hazards

Provides staff/volunteers direction to address trail management and maintenance issues
Overall Process

1. Fill out Volunteer Service Agreement form
2. Assessment Presentation
3. Groups of 3 people per trail assessment
4. Perform assessments
5. Hand in assessment forms/equipment at Main Office
6. Email any digital photos to main contact.
**Assessment Form**

**Trail Assessments at Minnesota State Park Preserve**

**Tools:** Assessment Forms, GPS unit, Clinometer, Tape Measure, Poles, Clipboards, Trail map, Digital Camera

**Instructions:**
1. Fill out the top of the Assessment Form (please print clearly).
2. Take a waypoint (¶) at the trailhead using GPS unit (latitude and longitude).
3. Locate issues/issue along trail and take a waypoint.
4. Only for major issues such as complete washout of trail: Take a photo of the location/issue - include Parcel Number (PH) with fingers held up in image or Photo Number written on paper.
5. Identify type of infrastructure using categories provided (see descriptions below).
7. If excessive slope (>15%) in conjunction with erosion, utilize clinometer for % slope.
8. Provide additional description/comments about issue/infrastructure as noted below.
10. Take a waypoint at end of the trail and enter it on first page (latitude/longitude).
11. Drop off equipment and assessment forms at the Main Office.
12. Email all photos to nancy.sheean@opq2.state.mn.us with reference to what trail on what date.

**Trail Assessment Descriptions:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Bridges, overpass, bog bridges, culverts. Note construction material, length/width (feet) and condition of bridge.</td>
</tr>
<tr>
<td>UC</td>
<td>Unimproved Crossing (stream crossing). Note if wading or rock steps and any maintenance or required (drivable) crossing</td>
</tr>
<tr>
<td>C</td>
<td>Closed - open or closed drain across the trail. Note condition of culvert, length/diameter, and if sufficient for situation.</td>
</tr>
<tr>
<td>E</td>
<td>Erosion - look for exposed roots, rocks, or gravel on trail. Describe situation (exposed roots, gravel on road, located on full line (going straight down a hill regardless of grade) and length of eroded section (if greater than 25% approximate distance). If excessive slope (&gt;15%) in conjunction with erosion; measure steep slope with clinometer (if numerous steep rocky slopes, no need to measure each one - note that trail has numerous steep slopes section).</td>
</tr>
<tr>
<td>RC</td>
<td>Rock Control Devices - check dunes, water bars. Note type and condition of structure.</td>
</tr>
<tr>
<td>WC</td>
<td>Washout - section of trail has been mostly completely washed away. Note length/width/deepness and any hazards associated with washout. Take photo.</td>
</tr>
<tr>
<td>WA</td>
<td>Wet washout (water deeper than 3 ft diameter). Note length/depth.</td>
</tr>
<tr>
<td>OB</td>
<td>Obstacle - fallen tree or other obstacles blocking roadway (include broken branches or tree about to fall over trail &quot;widow maker&quot;). Note diameter of tree from.</td>
</tr>
<tr>
<td>IB</td>
<td>Inescapable Erosion/Marking - if you are entering next blaze marker as you are crossing past a blaze marker or hard to locate next blaze marker. Note if blaze markers missing or worn off.</td>
</tr>
<tr>
<td>SI</td>
<td>Signage - identify if Trailhead, Directional or Interpretive and if in need of repair. Note type of repair.</td>
</tr>
<tr>
<td>AC</td>
<td>Additional Comment - specific locations that warrant noting such as a scenic vista, unique feature (trees, rocks, etc.)</td>
</tr>
</tbody>
</table>

**Development Standards for Footpath:**

Vertical Clearances: 8-10 ft, Cornice Clearances: 4-6 ft, Tread width: 18-30 inches.
What to look for...

- Bridges
- Unimproved stream crossings
- Culverts
- Erosion
  - Excessive Grade
- Erosion control structures
- Washouts
- Wet areas
- Obstacles (fallen trees)
- Insufficient Blazing
- Signage
- Additional assets (scenic vistas, caves, rock walls)
(B) Bridges

Includes bridges, puncheon/bog bridges, turnpikes

- Take a waypoint and provide description
  - Construction material
  - Length/width of the bridge
  - Condition of the bridge (good, in need of repair – provide details)
(B) Bridges

Turnpike

Sources: Wetland Trail Design and Construction © 2007 U.S. Department of Agriculture, Forest Service
Trail Planning, Design, and Development Guidelines © 2006 MN DNR
Stream crossings without bridges

- Take a waypoint and provide description
  - Note whether stepping stones or wading
  - Any maintenance required (unstable stepping stones)
(C) Culverts

Open or closed drain across the trail

- Take a waypoint and provide description
  - Condition of the culvert itself (broken, moved out of place)
  - Length and diameter
  - Sufficient size for situation (water flowing above it across the trail?)
(E) Erosion

Erosion: a natural process by which rock and soil are worn away by wind and water.
Signs of erosion: exposed roots and rocks; gullies on trail.

Source: Trail Solutions: IMBA’s Guide to Building Sweet Singletrack © 2004 IMBA
(E) Erosion
(E) Erosion

- Take a waypoint and provide a general description
  Examples:
  - Located along fall line (going straight down a hill regardless of grade)
  - Trail tread has gullies
  - Section of severely exposed roots
- Length of eroded section (measure or approximate if longer than 25 ft)
- If eroded in conjunction with steep grade (>15% slope), use clinometer to measure grade
  (If trail has numerous steep rocky slopes, don’t measure grade.)
(EC) Treadway Erosion Control Devices

Structures constructed in the treadway to direct or slow water flow (ex. check dams, water bars)

- Take waypoint and provide description
  - Type of structure
  - Condition of structure/
  - need of repair
(EC) Treadway Erosion Control Devices

Waterbars – at an angle to the trail tread
Check dams – perpendicular to the trail tread
(WO) Washouts

Section of the trail has been mostly or completely washed away

- Take a waypoint and provide description
  - Measure length/width along trail and depth in feet
  - Any hazards associated with washout
- Take photo (identify #)
Muddy or boggy areas or puddles (3 feet in diameter or larger)

- Take a waypoint and provide description
- Measure length and width in feet

*Keep in mind recent weather conditions

Sources: Trail Planning, Design, and Development Guidelines © 2006 MN DNR
NYS OPRHP
Fallen tree or other large obstacle blocking treadway.

- Take a waypoint and provide a description
  - Diameter of tree trunk
  - Blocking whole tread or part of treadway
- Include other tree hazards such as broken branches or trees about to fall over trail ("widow makers").
(IB) Insufficient Blazing

Should be able to see the next blaze as you are moving past a blaze along the trail

- Take a waypoint and provide description, if
  - Missing or worn off blazes
  - Hard to tell where trail continues

- Take a general waypoint for the area of insufficient blazing (not at every missing blaze location).
(SI) Signage in need of repair

- Take waypoint and provide description
  - Identify if Trailhead, directional or interpretive
- Type of repair if needed
  - Examples: Sign broken, sign missing, paint faded (hard to read)
Take a waypoint and provide description

Includes:

- Scenic vistas
- Unique features
  - Caves, mines, rock walls
When done...

Please drop off equipment at park office:
- Assessment forms
- Clipboards/Pens
- GPS units
- Clinometers

Team designee:
- Email any photos to: insert contact name with reference to trail name and date of assessment.
Tools needed

- Assessment Forms
- Clip board/pens
- GPS unit
- Clinometer
- Tape measure (25ft)
- Trail map
- Digital camera