

Universal Trail Assessment Process

Information provided about trails has traditionally been very limited. It usually consists of trail length and a subjective rating such as “easy” or “difficult.”

Subjective ratings reveal very little about the actual conditions of the trail. For example, a hiker who uses a wheelchair cannot determine from an “easy” rating whether a trail is wide enough throughout to permit the wheelchair to pass. If the trail is too narrow, the user may have to turn back. This is frustrating for both the hiker using a wheelchair and any hiking companions.

13.1 Overview

The Universal Trail Assessment Process (UTAP) is an inventory tool that

records accessibility and maintenance information on a trail. The UTAP was designed to meet the information needs of both trail users and land management agencies. The assessment process was developed over a four-year period through the collaboration of Federal, State, and local land management agencies, as well as trail organizations. The UTAP has been implemented by several agencies and organizations to record trail conditions for access and maintenance information, including:

- USDA Forest Service;
- USDI Bureau of Land Management;
- USDI National Park Service;



Figure 13-1. The Universal Trail Assessment Process (UTAP) Tool Kit.

- California State Parks;
 - Florida Trail Association;
 - Indiana Department of Natural Resources; and
 - Minnesota Department of Natural Resources.
- Trail length;
 - Maximum and average cross slopes;
 - Maximum and average grades;
 - Surface type and firmness;
 - Minimum clear width; and
 - Average tread width.

The Universal Trail Assessment

Process (UTAP) is used to collect data that can be used to provide objective information to users about the conditions of trails. The primary accessibility information recorded for trails includes:

- The primary maintenance information recorded about a trail includes:
- Tread condition;
 - Obstacle locations and magnitude;



Figure 13-2. The Universal Trail Assessment Process can be completed by a team of volunteers under the leadership of a trail assessment coordinator.

- Vegetation within the trail corridor;
- Condition of drainage structures;
- Presence of downed trees;
- Washed out sections of the trail;
- Condition of signage; and
- Condition of benches, tables, and other amenities, as well as whether or not these are accessible designs.

in selecting the best routes for travel. Conducting trail assessments are also beneficial because they allow trail managers to inventory trail conditions and plan for trail projects including:

- Determining if the trail meets intended design specifications and guidelines;
- Prioritizing trail maintenance projects;
- Budgeting for trail projects;
- Identifying portions of trails that can be made more accessible;
- Developing maintenance schedules;
- Quantifying the extent of repair work required;
- Cataloging feature and maintenance information;
- Sharing trail data and project plans with disability focus groups; and
- Creating objective trail information for users, such as signing, maps, and websites.

13.2 Benefits of assessment

Assessing the content and condition of existing trails is the first step towards providing access for all users. One of the greatest obstacles people face when trying to select a trail to hike is the lack of objective information regarding trail access. With enough specific information, people will be better able to travel independently with confidence in their ability to reach their destination safely.

Objective data obtained from trail assessments enables trail managers to create maps, signage, and other informational guides that will assist users



Figure 13-3. A member of the trail assessment team uses a hand-held clinometer to measure the running grade between two stations.

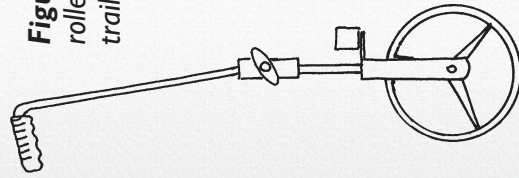


Figure 13-4. A rolatape is rolled down the center of the trail to measure trail length.



Figure 13-5. A clinometer is used to measure running grade between stations.

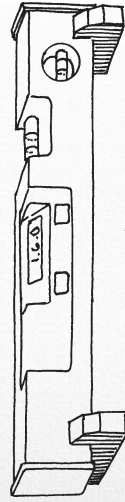


Figure 13-6. A digital inclinometer is used to measure maximum grades, cross slopes, and maximum cross slopes.

13.3 Trail assessment coordinators

The Universal Trail Assessment Process (UTAP) should be conducted by a certified Trail Assessment Coordinator. UTAP Coordinator Workshops are offered to teach the assessment process and to train people to become Trail Assessment Coordinators. The workshop involves two days of training that is conducted through classroom and on-trail learning experiences. Upon completion of the workshop, participants have the knowledge and experience that is needed to conduct assessments. Approximately 350 people have been trained to lead the Universal Trail Assessment Process. For more information about training opportunities, contact Beneficial Designs, Inc. (contact information listed in Appendix C).

13.4 Data collection and processing

The Universal Trail Assessment Process relies on inexpensive and easy-to-

use tools to reduce costs and to simplify the process. An overview of the tools used to conduct the UTAP is provided below. For more specific information about how measurements are collected, it is recommended that an individual attend a UTAP Coordinator Workshop.

1. A **rolatape**, which is a wheeled measurement device, is rolled down the center of the trail to measure trail length.
2. **Stations** are marked to provide a location for trail measurements to be taken.
3. A hand-held **clinometer** is used to measure running grade between stations.
4. A **digital inclinometer (level)** is used to measure maximum grades, cross slopes, and maximum cross slopes. The inclinometer is 610 mm (24 in) long, and it provides measurements over the same distance spanned by the length and width of the wheelbase of an average wheelchair, walker, or crutch span.



Figure 13-7. A tape measure is used to record trail width and the magnitude of obstacles.

5. A **tape measure** is used to record:

- Trail width at each station;
- Height of the clear vertical passage when it is less than the specified design for the trail (vertical clearance);
- Distance and magnitude of trail segments narrower than specified for the trail (minimum clear width); and
- Dimensions of features, obstacles, and protruding objects, that might obstruct passage or require maintenance or repair.

Trail surfaces are subjectively classified as paved, hard, firm, soft, or very soft. The trail data collected during the UTAP can be processed and summarized into Trail Access Information (TAI) by a computer software program called TrailWare™. The program creates tables listing the most severe measurements of each trail characteristic, calculates

average trail grade, cross slope and width, tabulates surface type percentages, and produces a trail grade profile. In addition, the program provides a list of features and potential maintenance items that can be sorted and used to prioritize work projects. The program also generates reports, complete with graphics, that can be used as trail signage or information sheets. For more information about TrailWare™, contact Beneficial Designs, Inc. (listed in Appendix C).

13.5 Presenting trail access information

Trail Access Information (TAI) on signs, maps, and other trail guide products provides potential users with the information needed to determine which trails can best meet their desired experiences, interests, and abilities. A system of symbols and trail signage layouts has been developed to convey TAI in attractive and easy-to-use formats. Providing the information in multiple formats, such as large print or audible

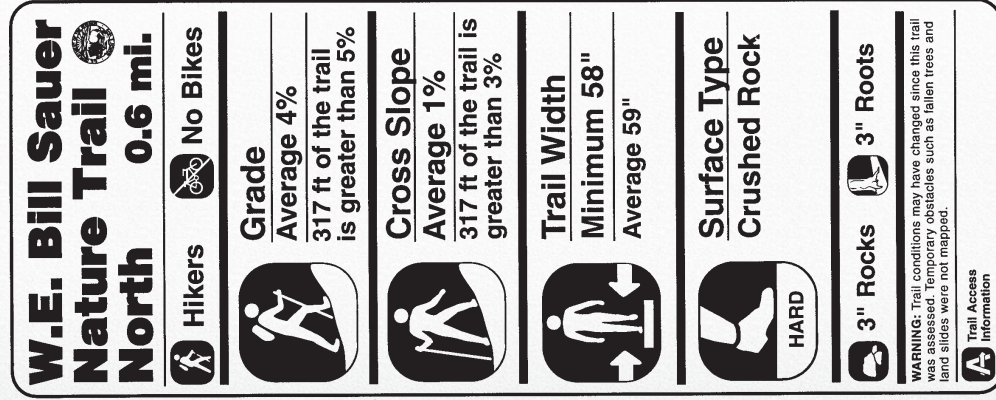
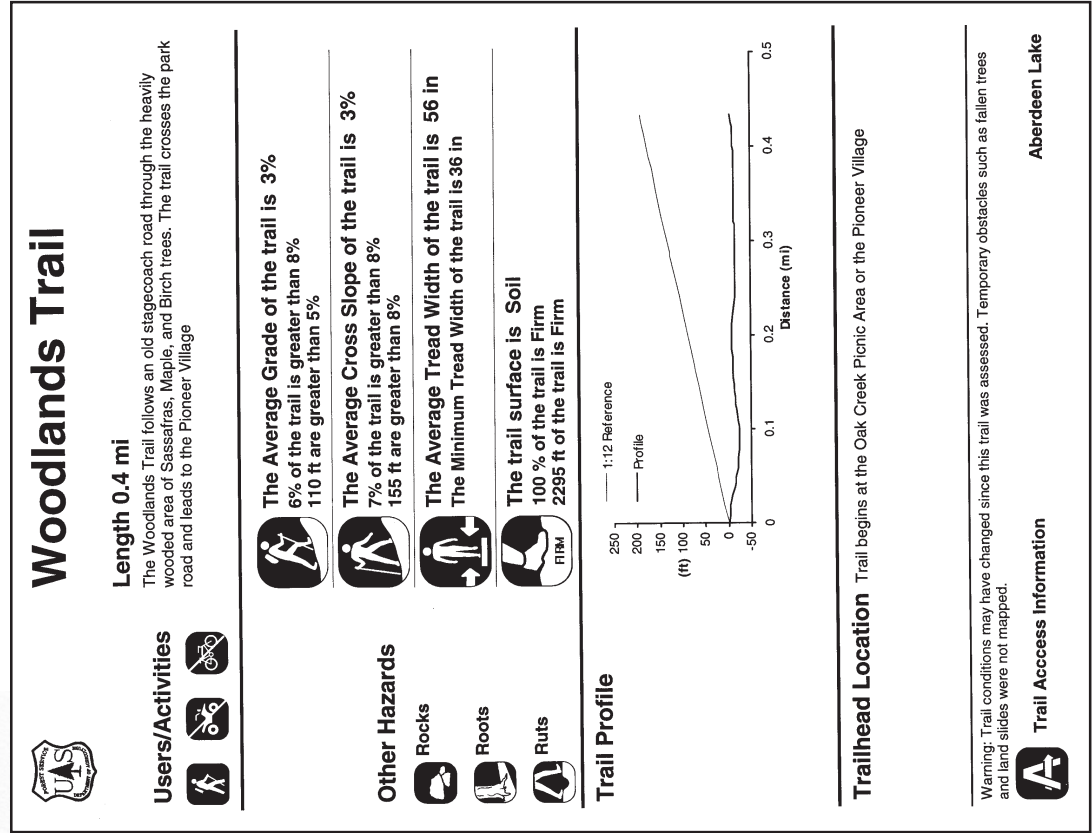


Figure 13-8. Example of a Trail Access Information strip.

formats, will benefit people of all abilities. The following formats are examples of how Trail Access Information can be disseminated:

- **Trailhead signage** — A trailhead map containing text, grade profiles with surface information, a top view map with symbols showing the location of major obstacles, and Trail Access Information.
- **Trail Access Information strip** — A trail map summarizing critical Trail Access Information with symbols and measurement numbers formatted as a slim strip that can be attached to trail posts and located at trailheads or trail intersections.
- **Trail Information Sheets** — An informational sheet that can be provided at the trailhead or visitor center summarizing Trail Access Information with symbols and measurement numbers, a trail grade profile, description of the trail, and location of trailhead.
- **Audio descriptions** — A short audible narrative with descriptions of trail conditions and details about the trail environment. This format may benefit individuals who have vision impairments or who have limitations reading in English.
- **Pocket map** — A trail map featuring trail descriptions, Trail Access Information, and a grade profile that folds up to fit into a pocket.
- **Guidebook** — A trail manual containing Trail Access Information, interpretive information, scenic photographs, directions to the trailhead, and other information about trails within a given recreational area.
- **Computerized visitor kiosk** — An interactive accessible computer display at a visitor center providing trail selection tools, Trail Access Information, and visual and audio descriptions of images at

Figure 13-9. Example of a Trail Information Sheet.



selected destinations. Guidelines recommended for making kiosks accessible to people with mobility and vision impairments are available through the U.S. Access Board; and

- **Website** – Trailexplorer.org is an Internet site containing Trail Access Information about recreation trails in a variety of regions throughout the United States.

