



Introduction

The Oregon Statewide Trails Inventory, Analysis, and Mapping Project is intended to provide a systematic review and inventory of the entire public trails system in Oregon. The overall goal of this project is to create databases containing trail information that can be accessed by government agencies, libraries, and recreationists for management and trip planning purposes. The databases will be compatible with geographic information systems (GIS) and will allow agencies and other users to identify and map trail resources and characteristics for public lands in Oregon.

Trail resources in the statewide inventory will include existing and proposed significant:

- roads, trails, and accessible areas for legal off-highway vehicle (OHV) operation,
- non-motorized recreational trails, and
- water trails.

Methods

Some existing trail information is currently available from federal, state, county, and municipal agencies in Oregon at differing levels of specificity and in a variety of formats. However, no centralized database containing trail location and characteristics currently exists. The Oregon Statewide Trails Inventory, Analysis, and Mapping Project will gather information for public trail systems in Oregon through surveys, existing maps and databases, and other sources. Collected information will be integrated to create a set of statewide digital databases.

For the purposes of the trail inventory, the following definitions of trails will apply.

Recreational trails* in Oregon are used by a variety of outdoor enthusiasts, both in urban areas and the backcountry. For the purposes of this inventory, a terrestrial “trail” is defined as a regularly maintained recreation pathway typically used by hikers, skiers, equestrians, bicyclists, and off-road motor vehicles. The designated** trail should be purposefully planned and constructed for recreation purposes, but in some cases can be used for commuter purposes.

* Recreational trails do not include city streets and sidewalks and bike lanes incorporated into the design of city streets and rural highways.

** A significant percentage of existing trails were not purposefully planned or constructed for the use they are now receiving.

Water trails in Oregon are recreational boating routes on a lake, river, or ocean. Water trails are typically designed for users of small watercraft such as canoes, sea kayaks, rowboats, hand-carried sailboats, and drift boats. Like other recreational trails, water trails are corridors between specific locations. Water trails are comprised of recreation facilities including a safe place for the public to put in, parking for motorized vehicles, sanitation facilities, a safe place to take out, and in some cases day-use sites and overnight camp sites. Although water trails may be primarily developed for users of non-motorized watercraft, Oregon’s waterways are open to all types of watercraft, including motorized watercraft (unless current state or federal regulations prohibit or restrict their use).

Trail types will be categorized into three broad categories: motorized, non-motorized, and water recreational trails. Many trail systems exist within Oregon and the inventorying of all trail systems would require an exhaustive effort. To help guide inventory efforts and to meet the overall goal of this project, that of creating databases for Oregon agencies to assist with management and planning activities, only the trail types as described in the following sections will be considered for inclusion in the trail databases.

Motorized Recreational Trails

- Existing off-road motorized recreational trails at the state’s 40 Designated OHV Management Areas including:

<ul style="list-style-type: none"> Blue Mountain (USFS) Blue Ridge (BLM) Chetco (USFS) Christmas Lake Sand Dunes (BLM) Crane Mountain (USFS) Cottage Grove (USFS) Diamond Lake (USFS) East Fort Rock (USFS) Edison Butte (USFS) Elliott Ridge (USFS) Galice (USFS) Green Mountain (USFS) Henderson Flat (USFS) Honeyman State Park (OPRD) Huckleberry Flat (USFS) John’s Peak (BLM) Klamath Sportsman’s Park (Park Assn) McCubbins Gulch (USFS) McGrew 4WD Trail (USFS) Millican Valley (BLM) 	<ul style="list-style-type: none"> Morrow County Trails Mt. Baber ATV Trails (ODF) Mt. Fanny (USFS) North Umpqua (USFS) Oregon Dunes NRA (USFS) Pine Grove (USFS) Prairie City (USFS) Prospect (USFS) Roseland Recreation Site (BLM) Sand Lake Recreation Area (USFS) Santiam Pass (USFS) Shotgun Creek OHV Area (BLM) Tillamook OHV Area (ODF) Unity (USFS) Upper Nestucca OHV Area (BLM) Upper Walla Walla (USFS) Virtue Flat (BLM) West End-Sunflower (USFS) Winchester OHV Trails (Coos Co.) Winom Frazier (USFS)
---	---
- Proposed trail additions to Designated OHV Management Areas
- Proposed Designated OHV Management Areas
- Proposed trail connections between areas of concentrated use where practical
- Existing snowmobile trails (on and off-road)
- Proposed snowmobile trails (on and off-road)

Non-motorized Recreational Trails

- Existing recreational trails provided by Federal and State Agencies, American Indian Tribes, County and City Park and Recreation Departments, Special Park and Recreation and Port Districts.
- Proposed recreational trails potentially managed by Federal and State Agencies, American Indian Tribes, Regional Park & Recreation Department/District, County and City Park and Recreation Departments, Special Park and Recreation and Port Districts.

Water Trails

- Existing water trails provided by Federal and State Agencies, American Indian Tribes, County and City Park and Recreation Departments, Special Park and Recreation and Port Districts.
- Proposed water trails to potentially managed by Federal and State Agencies, American Indian Tribes, County and City Park and Recreation Departments, Special Park and Recreation and Port Districts.

Through the direction of the Oregon Parks and Recreation Department (OPRD), a series of meetings between federal, state and local agency representatives has led to the identification of attributes for inclusion into the various trail databases (Tables 1, 2, and 3).

Table 1. Existing trails: attributes for inclusion in inventory survey.

1. Trail Name
2. Agency Identification Number
3. Trail Inventory Identification Number (We assign)
4. Managing Agency/Organization
5. Provider Type
6. County(s)
7. City(s)
8. Length of Trail (miles)
9. Average Width of Trail (feet)
10. Does Trail Have Shoulders? (Yes/No) If Yes, Width of Shoulders (Feet)
11. Is This Trail a Rails-To-Trails Conversion Project? (Yes, No)
12. Trail Uses Permitted
13. Trail Surface Type
14. Difficulty Rating
15. Traditional Season of Use (Winter, Spring, Summer Fall, Year round) Is it officially closed outside of this period? If yes, give begin/end dates of closure.
16. Location of designated public trailheads (A public trailhead is a designated public use trail access point which has been designed and developed for public trail access purposes and provides some level of trail-related amenities such as parking, trail information, rubbish containers and water and sanitary facilities.)
17. Location of public boat launch sites (Water Trails)
18. Type of public boat launch facility (boat ramp, fixed dock, floating dock, beach) (Water Trails)
If beach, is the surface mud, sand, cobble or rock?
19. Do water levels or winds affect availability/suitability of site? (Water Trails)
20. Speed limit or horsepower restrictions (Water Trails)
21. Dogs Allowed
22. Closure Status (Temporary, Seasonal, or Permanent)
23. Trail Accessibility
24. Recreational Opportunity Spectrum (ROS) Setting Classification
25. Is a trail map is currently available in GIS format (yes, no)
If yes: contact name, file format (e.g. shape file)
If no: provide hard copy of best map available
26. Functional designation of significance (Statewide, Regional, Local, or Historic Significance)
27. Is this trail covered by an existing adopt-a-trail or partnership agreement? If yes, by who?
28. Is this trail also a commuter trail?

Table 2. Existing motorized recreation areas: attributes for inclusion in inventory survey.

1. Designated OHV Management Areas
2. Agency Identification Number
3. Inventory Identification Number (We assign)
4. Managing Agency/Organization
5. Provider Type
6. County(s)
7. City(s)
8. Acres of Designated Riding Area
8. Uses Permitted
9. Difficulty Rating
10. Is an area map currently available in GIS format (yes, no)
If yes: contact name, file format (e.g. shape file)
If no: provide hard copy of best map available

Table 3. Proposed trails: attributes for inclusion in inventory survey.

1. Trail Name
2. Trail Inventory Identification Number (We assign)
3. Managing Agency/Organization (In some cases may be more than one)
4. Provider Type
5. County(s)
6. City(s)
7. Length of Trail (miles)
8. Average Width of Trail (feet)
9. Will the Trail Have Shoulders? (Yes/No) If Yes, Width of Shoulders (Feet)
10. Will this Trail be in a Riparian Zone? (Yes/No) If Yes, Width of Separation
Between Trail and Water's Edge (Feet)
11. Is This Trail a Rails-To-Trails Conversion Project? (Yes, No)
12. Estimated Date of Trail Construction (0-5 years, 6-10 years, 11-20 years, 21 years
or more)
13. Trail Uses Permitted
14. Trail Surface Type
15. Difficulty Rating
16. Traditional Season of Use (Winter, Spring, Summer Fall, Year Round)
17. Location of Proposed Public Boat Launch Sites
18. Speed limit or horsepower restrictions (Water Trails)
19. Recreational Opportunity Spectrum (ROS) Setting Classification
20. Is the trail's conceptual alignment map currently available in GIS format (yes, no)
If yes: contact name, file format (e.g. shape file)
If no: provide hard copy of best map available
21. Functional designation of significance (Statewide, Regional, Local or Historic
Significance)
22. Will this trail also be a commuter trail?

To gather this attribute information, agency contacts for inventory trails will be identified through SCORP, Internet, and other sources. Agency contacts will receive a trails information survey for the items in the trail attribute tables either through digital (e-mail) or hard-copy (mail) format. The survey will be pre-tested prior to distribution to ensure that it meets inventory goals. It's anticipated that agency contacts will require one to two months to reply and that follow-up contacts, in some cases, will be necessary to gather all information.

Data gathered through the survey will be encoded, entered into a digital database, and checked for consistency. Potential errors or omissions will be verified and corrected. In some cases, the verification process may require contacting the data provider.

The desired format for trail location information will be GIS compatible. The availability of trails data in a GIS format is an included item in all trail attribute lists (Tables 1, 2, 3). GIS databases offer many advantages including the ability to provide resource measurements, incorporate information from other GIS databases, and to map and spatially investigate resource locations. In addition, the creation of GIS databases serves as a digital record of baseline trail conditions from which future products can be created including on-line accessibility to mapped trails data, an atlas of Oregon trails, and a starting point for more detailed inventorying of statewide trail resources. While many agencies (USFS, BLM, Portland Metro) have adopted GIS for resource mapping and will have trail locations readily available in a GIS format, it is likely that other agencies, particularly those with smaller jurisdictions will not. All survey contacts will be asked to provide a hard copy map of trails that are not currently in a GIS format. The map information will be used to create GIS layers of trails for map products in the absence of existing GIS data.

Although location data for trails may only be available in hard copy format, baseline GIS data for the majority of the Oregon's waterways are already available through data sources such as the Oregon Geospatial Data Clearinghouse, U.S. Geological Survey, and StreamNet. OSU will use data from these sources to create GIS layers when waterways location data are not available from other agencies. In some cases, water trail locations may have to be converted from existing maps into GIS compatible databases. Information collected from the trail surveys will be used to populate the waterways database attributes.

Once data have been gathered from agency contacts and other sources, GIS databases of motorized, non-motorized, and water trails will be assembled. The databases will contain the location of each trail and all trail attributes that were collected. The GIS databases will also be checked for spatial accuracy and logical consistency. The map projection of the GIS databases (the digital location of database features relative to the earth's surface) will be consistent with that recommended for Oregon agencies by the Oregon Geospatial Data Clearinghouse: the Oregon centered Lambert projection. All state agencies in Oregon have been encouraged to adopt this map projection for spatial data since a common projection system streamlines spatial database sharing and use between agencies.

After the initial GIS databases are created, necessary analysis, interpretation, and reporting of GIS database information will be completed. The first step in this process will be to generate a unique identification number for all trails. The number will be a combination of the longitude and latitude of the starting point of each trail. This numbering system provides an added advantage of providing map coordinates for those interested in navigating to a trail. Subsequent steps will be to generate trail length and grade information for inclusion in the trail attributes list. In addition, attributes from other GIS data layers may be used to complete or to create attribute listings. The culmination of these processes will be GIS databases from which trail resources can be analyzed and interpreted.

Inventory Products

Data reporting will describe statewide trail resources in several aspects. Reports will include creating attribute summaries by trail type (motorized, non-motorized, and waterway), agency jurisdiction, and by trail planning region. These data reports will provide the first comprehensive source of information of state trail resources. The final stage of the project will be a project summary report that provides documentation of the inventory methodology, database creation and contents, and statewide trail resources.

Specific report components will include:

1. A description of the inventory methods.
2. A summary of analysis results from the trail inventory information included in the databases for each of the three planning components (motorized, non-motorized and water).
3. A comparison of inventory results with the participation results from the 2002 SCORP survey in terms of the current supply and demand for motorized, non-motorized and water trails by trails planning regions. The intent of this analysis is to identify where current shortages in the trail supply are found.
4. A set of recommendations for improving the database, updating trail data, and how the trail inventory database should be mapped on a statewide GIS system.

Specific mapping components will include:

1. A set of statewide (motorized, non-motorized and water) trail vision maps showing the backbone or spine of a statewide trails system that could be linked to regional or local trail systems.
2. A set of non-motorized regional vision maps for those areas in the state (e.g. Portland, Eugene, Bend) that have existing regional trail system maps in GIS format. In addition, a listing of all trails of national, statewide, regional and local significance for each of the 6 trails planning regions will be generated.

Project Timeline

The project will be initiated in July 2003 and end in May 2004.