

Environmental Considerations

Considerations of any potential environmental impacts of the Regional Trails Plan to the natural, human-built, and social environment are broader than what can be accomplished by any discussion in this plan. This section attempts to summarize in general the potential environmental benefits and costs that shared-use trails may pose to the environment.

This plan evaluated opportunities for connecting and expanding the existing trail network across the entire Thurston Region. The available rights-of-way (ROW) and the parameters used to select trail corridors were very limited. Trails require long linear corridors. As such, the trail corridors identified in this plan were selected from abandoned and active railroad lines, and public transportation and private utility ROW. In a few instances, city or county owned parcels designated for future recreation or open space preserves were also included where they serve to complete missing links.

Environmental issues and considerations were broadly examined for Thurston County and its communities. The regional trail planning process is a first step towards many future phases that will be led by the local agencies. Local jurisdictions over time will follow up with more detailed planning, environmental analysis and construction of the projects identified or recommended in this plan.

The Value of Environmental Review

The Regional Trails Plan will enable the resolution of potential impacts to the environment by increasing public and local agency awareness of the issues. This plan includes recommendations that must be addressed prior to the construction and operation of certain trail corridor segments. Information for environmental considerations for individual trail corridors was obtained from local planning documents, first hand knowledge from local agency staff, and public input. Known issues are listed for individual trails in Chapter 3, Conditions and Recommendations. By increasing community awareness of the issues, the problems may be tracked and addressed by the appropriate stakeholders as plans are updated, site-specific designs are created, projects are implemented and facilities are opened for operation. Thurston Regional Planning Council (TRPC) will continue to provide a venue for local agencies to share their lessons learned - which may in turn lead to time and cost saving measures for project delivery.

Regional Trail Planning Environmental Review Limitations

It is beyond the scope of this plan to review every recommendation and project specific details to certify every potential project will comply with all local, state, and federal environmental regulations. Furthermore, this section does not contain a comprehensive summary of all potential environmental issues that the local agencies will need to consider when planning, designing, and constructing their respective trail corridors. For each local agency's individual trail project, whether it is the construction of a trail or a restroom facility at a trailhead, each project may require at a minimum:

- A project specific environmental review;
- Regulatory approvals; and
- Appropriate public review processes.

Local jurisdictions have several resources available to assess project specific potential impacts, including: a cultural resource database containing over 1,300 sites, information about significant tribal and aboriginal lands, a critical database and mapping tool, and detailed zoning and land use maps.

Environmental Responsibility



Boardwalk through Woodard Bay Nature Preserve forest. Trails coursing through environmentally sensitive areas can provide public access to areas of interest without significant impacts to the environment. Photo by Stacey Brewster.

Many potential impacts will be addressed through existing regulations. Agency compliance with state and federal environmental laws, including the inventory and assessment of sensitive lands, cultural resources, and community assets will likely minimize any impacts the planned and proposed projects included in this plan will have on these areas.

Effective mitigation for impacts might involve:

- A design change
- The use of a specific low impact construction technique
- An alternative alignment
- A decision to not develop a trail segment or trail access site

The nature of the known or potential impacts is highly site specific and dependent on the particular design and construction of individual projects. Local jurisdictions will be responsible for the design and construction of the projects. By law, they are required to comply with all state and federal environmental laws and permitting processes during design

and engineering phases. In fact, any projects funded by state and federal dollars will not receive funding unless the responsible agency completes the necessary environmental reviews and obtains the appropriate permits for construction.

The Natural Environment

Air Quality

The Regional Transportation Plan (RTP) is required to model future transportation projects' contribution of pollutants known as PM10. PM10 is a category of air pollutants that are comprised of particulate matter less than 10 microns in size. Wood smoke from home wood heating sources is the primary source of this pollutant in the Thurston Region. Automobile emissions and dust from tire and brake wear are also measurable sources.

Bicycle and pedestrian facilities do not contribute to PM10. Sidewalks, bike lanes, and trails are exempt from air quality conformity requirements for the region's Air Quality Maintenance Area per 40 CFR 93.126. The operation of shared-use trail facilities does not generate any other measurable source of air pollution. By increasing the availability and connectivity of trails, sidewalks, and bicycle facilities, more non-polluting modes of transportation are enabled. People can decrease their reliance on their automobiles for certain kinds of trips. Both the RTP and the Regional Trails Plan contain policies that recognize shared-use trails as a vital component of the multimodal transportation network.

The construction of trail facilities during very dry weather may temporarily create localized dusty conditions that may affect people with respiratory diseases such as asthma and Chronic Obstructive Pulmonary Disorder (COPD). Local agencies can mitigate this condition by notifying local residents of construction plans and advising people with respiratory problems to remain indoors with their doors and windows closed, and by prohibiting trail users access to the construction site. In addition, construction crews often utilize water trucks to control dust plumes. Diesel vehicle and equipment operation and idling in the construction zone can be managed to limit construction crews' and other peoples' exposure to engine and equipment exhaust.

Water Quality

Thurston County has a great diversity of water resources and shorelines that require protection: the Puget Sound, lakes, rivers, creeks, wetlands, and aquifers. It is important to protect the region's many water resources and watersheds for the benefit of people and their environments and wildlife and their habitats.



The public desires access to shorelines and open spaces. Environmental laws serve to balance the needs of people while offering protections for plants, animals, and critical areas. Photo by Paul Brewster.

Trails can provide the public non-motorized access to waterfronts and natural areas for its recreation and enjoyment. The need to provide public access and protect water resources and habitat must be balanced. Almost every trail in the plan will encounter some form of water body or landscape with a hydrological condition that requires attention. Where possible, local agencies should plan trail alignments that avoid or minimize impacts to hydrologically sensitive areas. Inevitably, a trail must cross a creek or river and will require a bridge. Local agencies will evaluate low impact trail surfaces for wetlands and

shoreline facilities such as boardwalks, permeable trail surfaces, or identify detours. The use of impermeable surfaces, fill material, and other construction through wetlands is prohibited without a permit from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service and other regulatory agencies.

Controlling surface water is one of the most important aspects of trail design and development. Local agencies are responsible for evaluating the surrounding topography, soil and drainage conditions, and determine how water will collect and drain through a trail corridor. Additional considerations must be provided for trails that may pass through areas prone to flooding.

During construction, local agencies and contractors offset risks to water resources by implementing temporary erosion and sediment control measures, and develop spill prevention and countermeasure plans.

Plants, Animals, and their Habitat

The natural environment is subject to change through natural processes and events and human modifications. The effects of human development and colonization of landscapes can be detrimental to plants and animals and their resources. Environmental laws and policies are intended to balance the needs of people with protections for natural resources and wildlife. The protection of other species and biotic communities is essential to preserve and maintain the region's natural heritage, protect watersheds, and maintain biodiversity.

Considerations for flora, fauna, soils, and the resources and the structural integrity of habitats must be addressed during the design and construction phases of a trail and its associated facilities. Special considerations must be given to threatened and endangered species and species of special concern. Local agencies are required to survey landscapes that provide or potentially provide suitable habitat for these kinds of species. Any potential adverse affects that a trail poses to wildlife must be mitigated.

Ninety-seven percent of the proposed regional trail would be built within corridors that are already established. Most of the existing, proposed, planned, and potential trail corridors are aligned within abandoned or active railroad and utility easement corridors. These corridors' soils, vegetation, and animal life have already been disturbed by human development and activity. The conversion of abandoned railroad corridors to shared-use trails presents opportunities for removal of hazardous materials and invasive plant species. Short and long term opportunities to amend soils and restore native plants can convert these former industrial corridors into greenway corridors. Greenways can provide continuous pathways with vegetated cover for animals moving between habitats surrounded by landscapes fragmented by urban developments.

Trail uses such as walking, running, cycling, and horseback riding are quiet and relatively low speed activities that usually occur during the daylight hours. Most diurnal birds and mammals will adapt to trail activities. Trail activities that may create potential disturbances for sensitive species during breeding season can be minimized through trail management techniques. Temporary trail closures, detours, or prohibition of certain activities could be implemented for some segments of trails that pass through or by sensitive habitat. The same management techniques could be considered for trails around shorelines and waterways that might offer winter foraging habitat for flocks of grebes, ducks, scoters, and other water birds that migrate to South Puget Sound waters.

Energy

The RTP, local agency comprehensive plans, and commute trip reduction (CTR) plans contain goals and policies that promote mixed-use urban development and connected sidewalks, bike lanes, trails, and transit service. The Regional Trails Plan also contains policies that promote trail use for both recreation and utility trips. The goals of these plans aim to create livable communities that enable shorter distance trips that people can make by walking, cycling, and using transit services. Peoples' reliance upon their automobiles for shorter distance trips will be reduced and thereby decrease their demand for fossil fuels.

The Built Environment

Land Use and Transportation

By 2030, the Thurston Region's population is expected to reach 373,000. This growth will place significant demands on the available buildable land supply. Additional demand will be placed on the transportation network, parks and open spaces. Trails are unique because they serve both recreation and transportation functions.

The relationship between land use and transportation is important. It is desirable to link existing and future trails to increase the trail network's effectiveness for connecting people with their desired destinations, and to offer sufficient space for people to be physically active outdoors. The availability of abandoned railroad corridors opened new opportunities for traveling and recreating across long distances. Many communities have realized this value and now consider their trails essential public facilities. In the summer of 2007 the Central Puget Sound Growth Management Hearings Board ruled that a Lake Forest Park ordinance, limiting the expansion of the Burke-Gilman Trail through the city, violated the Washington State Growth Management Act. The Board's ruling stated that the Burke-Gilman Trail is a regional commuter route (2000 commuter cyclists per day through Lake Forest Park) and considered it "an essential regional public facility." Their ruling cleared the way to allow the trail to be expanded.

Like most established communities throughout the United States, the Thurston Region is challenged to plan and link its trails around and within an existing built environment, which is predominantly privately owned. The 2025 Thurston Regional Transportation Plan includes more than eight policies that recognize the value of trails and other elements of the non-motorized transportation system. The Regional Trails Plans includes policies that promote trail development in existing public ROW, utility easements, and shorelines. These ROWs may be the most cost effective corridors to utilize for future trail network expansion and connectivity.

Some critical trail alignments identified in the Thurston regional trail network follow sections of the Deschutes River, Percival Creek, and West Bay shorelines. The development of some of these trail segments conflict with existing land use and shoreline development policies and regulations. In some instances, the conflicts are not entirely due to potential environmental impacts, but more so with community values regarding public access along shorelines and waterfronts. For example, the *Deschutes River Special Area Management Plan* allows pedestrian access to the waterfront and the base of Deschutes

Falls, but restricts bicycling. The Regional Trails Plan recommends that local agencies review their shoreline master plans as opportunities arise to reevaluate the role of shared-use trails in their communities and their interaction with shoreline environments.

This plan includes policies for integrating trail access with sidewalks, bicycle lanes, and transit services. Unfortunately, some Thurston County residents don't live in proximity to trailheads and trail access points, or they don't have connected sidewalks and bicycle lanes that enable walking and bicycling to trails. A significant portion of the population will need to drive to trailheads and access points. The auto trips generated by the induced demand of future trails and trailheads will have little effect on the level of service of the road networks. These kinds of recreation trips usually occur during the off-peak non-commute travel periods. The availability of parking at trailheads will likely be no more full than parking lots at other municipal parks and open spaces.

Social Environment

Historic and Cultural Preservation

Trail projects can modify the physical structure of historic transportation infrastructure, principally former railroad structures. Other historic settings, structures, or elements of cultural significance should be considered during a project's design phase. The Washington State Office of Archaeology and Historic Preservation (OAHP) maintains a database of historically significant sites. This database along with Geographic Information Systems can assist planners in determining if a trail project poses any potential impacts to these resources. In addition, jurisdictions must also consult tribal cultural resources staff regarding properties or sites that are unpublished or whose location and significance are a tribal matter, as well as OAHP's confidential record of known archaeological sites.

State and federal regulations require careful and specific consideration of project impacts on cultural resources, and most local agencies have enacted their own policies and processes for preserving historic resources. The goals and policies of the RTP, as well as the design concepts suggested in this plan, support investments that contribute to a community's overall sense of place, including the preservation, interpretation, and education of historic and cultural resources.

Environmental Justice

Federal Environmental Justice is: “The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (Environmental Protection Agency, 2007).

In general, low-income and minority populations tend to be more concentrated in the urban core of Lacey, Olympia and Tumwater. However, the more rural communities of Bucoda, Yelm, Rainier, Rochester/Grand Mound and Tenino also have households living below the poverty level. Members of the Nisqually Tribe and the Confederated Tribes of the Chehalis Reservation experience poverty levels that are much higher than the county average. The distribution of minority populations is fairly even across most of the region.

The RTP calls for investments in a multimodal transportation system comprising of appropriate levels of transit services, pedestrian, and bicycle facilities to supply travel choices for all residents - regardless of ethnicity or income. The Regional Trails Plan evaluated a system wide network of trails that would expand non-motorized transportation opportunities for all residents. The proposed Thurston regional trail network could create a trail system that traverses and connects neighborhoods, cities, and neighboring counties.

Thurston Regional Planning Council strives to conduct public processes that reach out to all residents. TRPC fully complies with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities.

Title VI ensures that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal financial assistance.