

TRINITY COUNTY

BIKEWAYS

MASTER PLAN



Prepared by:

TRINITY COUNTY TRANSPORTATION COMMISSION

2015

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1 INTRODUCTION

The main purpose of the Trinity County Bikeways Master Plan (BMP) is to encourage development of a unified bicycle system throughout Trinity County that serves the needs of bicycle commuters, students, users of non-motorized rolling modes of transportation, seniors and recreational bicyclists with safe connections to other regional non-motorized systems. This plan is primarily an update of the “Trinity County Bikeways Master Plan”¹ and includes:

- Updated Census data based on 2010 Census results;
- Updated land use regulations;
- Updated locations of bikeways;
- A re-evaluation of project priorities and corresponding modification to meet Active Transportation standards

This revised version of the BMP will become a component of the Trinity County Active Transportation Plan and recommendations within it will be given priority for various state and federal funding sources. Since the last BMP was created in 2004, federal and state transportation laws affecting funding mechanisms and sources have changed significantly through the adoption of Moving Ahead for Progress in the 21st Century (MAP-21) and subsequent formation of the Active Transportation Program (ATP). As a result, funding for bicycle and pedestrian transportation has been reduced and consolidated into a broader program called “Transportation Alternatives.” In 2004, funding sources included Safe Routes to School, Traffic Enhancement, and the Bicycle Transportation Account as separate accounts. Now all funding is in the State Highway Account and is competitive based on ATP guidelines established by the California Transportation Commission. Although some of the programs in existence prior to MAP-21 still exist (including Safe Routes to School and the Bicycle Transportation Account), funds for those programs are now awarded through the ATP rather than as separate programs.

Further, the BMP will be included by reference within the Circulation Element of the Trinity County General Plan, and will therefore ultimately become a component of a comprehensive, long-term regional plan supporting the primary goals of Trinity County planning efforts. The objectives and policies included in this BMP focus on providing maintenance and safety improvements to the existing roadway system, and developing facilities for non-motorized modes of transportation. The BMP strongly supports the County’s overall goal of providing an effective, balanced and coordinated transportation system, at reasonable costs, consistent with socioeconomic and environmental needs within Trinity County.

BENEFITS OF BEING A BIKE-FRIENDLY REGION

¹ Trinity County Bikeways Master Plan was prepared in 2004 by Alta Planning + Design, Inc.; most of the design criteria is from Alta. Alta Planning + Design, Inc. has no responsibility for any revisions of the 2004 Trinity County BMP included in this update.

Planning to create a more bicycle friendly region contributes to several issues important to residents of the region. These include safety benefits, public health benefits, economic vitality, air quality improvement, better access to community services, and enhanced quality of life.

Safety Benefits

Safety is a key concern of citizens, whether they are avid or casual recreational cyclists or bicycle commuters. A consistent bicycle network with bike lanes, wider curb lanes, or shoulders and signing would be tremendous improvements toward encouraging more in-town cycling throughout the county.

Conflicts between bicyclists and motorists result from poor riding and/or driving behavior as well as insufficient or ineffective facility design and/or signage. Encouraging development and improvements in which bicycle travel is fostered improves the overall safety of the roadway environment for all users. Well-designed bicycle facilities improve security for current cyclists and also encourage more people to bike, which in turn, can further improve bicycling safety. Providing information and educational opportunities about safe and lawful interactions between bicyclists and other roadway users likewise enhances safety.



Public Health Benefits

The Trinity County Department of Public Health has provided the following information.

Improving opportunities to bike or walk will impact the health of the community in the following ways: by providing an option for individuals to ride a bike to school, work, or for recreation; it will improve the safety near schools, allowing children to safely walk to school; and can have an impact on an individual's physical

health as well as their mental well being by increased endorphin release that takes place during exercise. The Institute for Medicine recommends moderate levels of physical activity such as walking briskly for 30 minutes 5 or more days per week, to reduce the risk of premature mortality and prevent the development of certain chronic diseases.

The built environment is an important connection between population health and chronic disease. Even though the majority of research regarding built environment focuses on urban and suburban areas, it is important to consider rural areas for built environment projects and funding. Rural communities are often under developed, and do not have capacity for safe walk-ability. According to the walk score website, Weaverville is ranked 32 out of 100, which classifies Weaverville as a Car-Dependent neighborhood. Being a car dependent neighborhood can deter or prevent an individual from engaging in a physical activity, such as walking or riding a bike to school or running errands due to the lack of

accessibility to safely do so. Physical inactivity is a Public Health concern and largely a preventable threat to the health of the population.

Based on the 2013 County Health Rankings from the Robert Wood Foundation, physical inactivity rates are greater among the rural counties in California. According to the Health Rankings, the inactivity rates are the highest among rural counties making up 59% of the bottom half of the rankings (29) counties in California. Trinity County's physical inactivity rate is 22.9%, with a fourth of the population in Trinity County not meeting the national standard for physical activity. This may partially be due to the need for more sidewalks and road shoulders to ride a bike, walk or exercise outdoors.

Decreased physical activity has been related to several disease conditions such as: type 2 diabetes, cancer, stroke, hypertension and obesity. According to the 2011-2012 California Health Interview Survey, 31.4% of Trinity County adults are obese (BMI.30) and 68.7 are obese or overweight, which is higher than that for California (24.8 and 59.8%). 14.6% of the children 5 years and younger are overweight for their age. 12.5% of adolescents 15-17 years, are overweight or obese. This percentage increases 5 times in adults 18 to 24 years (61.7%), reaching the highest prevalence on adults 25 to 64 yrs. old with a little decline in seniors 65-79 yrs old. This data shows a continuing increase of obesity prevalence with age (California Department of Health Services). The prevalence of diabetes among the adult senior population is 7%, including 1,093 individuals with type II Diabetes. The prevalence of heart disease is 8.9%, including 1,216 individuals with heart disease (CHIS 2009). By providing more options for families to access bicycle facilities introduced or promoted in this bike plan, we hope to cause a positive change in physical activity and help prevent chronic disease and obesity in individuals.²

Economic Vitality

Development of bicycle trails or paths as part of a master plan for trail development can have positive economic impacts on communities in Trinity County. For example, as the number of cycling events, particularly mountain bike races, held on the Weaver Basin Trail System have increased since publication of the last BMP, Trinity County trails have attained notable distinction of becoming worthy of world class competitive riders, as reflected in the selection of the Weaverville Basin Trail System as the host for the 2015 World Solo 24-Hour Mountain Bike Championship. This event, sanctioned by the World Endurance Mountain Bike Organization, will attract a diverse set of participants and spectators from within and outside the area who stay in local motels, and purchase food and/or other merchandise during their stay. The goal of connecting more trails to community activity centers, such as community parks as well as commercial centers, will provide even greater opportunities for enriching the experience of these bicycle enthusiasts and encouraging them to return to the area in the future.

² The information for the Public Health section came from a variety of sources:

Health Rankings Profiles- Robert wood Foundation, California Health Interview Survey (2011-2012), Walk Score Website, California Department of Public Health and California Department of Social Services Data Systems and survey Design Bureau. Kidsdata.org 2013, Trinity County data from the United States Census Bureau 2010. Institute of Medicine: Does Built Environment Influence Physical Activity. UC Cooperative Extension Needs Assessment Data.

Air Quality Improvement

Trinity County has some of the cleanest air in California. In an effort to maintain the county's air quality the addition of more bicycle and pedestrian friendly facilities would be helpful.

Replacing vehicular trips with bicycle trips or using a combination of transit with cycling has a measurable impact on reducing human generated greenhouse gases (GHGs) in the atmosphere that may contribute to climate change. Fewer vehicle trips and vehicle miles traveled (VMT) translates into fewer mobile source pollutants, such as carbon dioxide, nitrogen oxides and hydrocarbons, being released into the air. The addition of a better coordinated bicycle and pedestrian network of facilities will also contribute to a general positive affect on air quality.

Better Access to Community Services

Access for bicyclists between communities and other destinations such as schools, work, and services is hampered in many instances by long distances, inclement weather, and the County's mountainous roads with characteristic switch back turns and significant elevation changes. In addition the connecting routes such as SR 3, SR 36, and SR 299 can be challenging to all but the most experienced bicyclists due to limited or non-existent road shoulders, truck traffic, and excessive auto speeds.

Another benefit of increasing the connectivity of bicycle and pedestrian paths is to provide easier access to community services by bicycle or on foot. People who do not bicycle often find travelling on highway bicycle lanes to be stressful or uncomfortable due to a perception of fast moving traffic and possible conflict with parked automobiles. By connecting interior local roads, the health benefits for economically disadvantaged residents who may not have access to motorized transportation, for senior citizens, or for others who may prefer to stay off of the major highways will improve significantly. Comfortable access to parks, public buildings, activity centers and social services could be provided by these local road connections and will be inherently inviting due to their convenient nature.

Enhanced Quality of Life

Objectives established in this BMP take measurable steps toward the goal of improving every citizen's quality of life. Developing a bicycle system that is attractive and inviting is a key element in preserving Trinity County as a desirable place to live, work and visit. This is an important premise as the County seeks to improve its' local economic climate and plans for new housing, businesses, and roads in previously undeveloped areas. The attractiveness of the environment not only invites bicyclists to explore Trinity County's beautiful rural scenery, hills, and waterways, but helps to improve everyone's positive feelings about the quality of life in Trinity County.

Education, enforcement, engineering, and funding are the basic components of an effective implementation program for this BMP. Education must be targeted not only towards the bicyclist, but also towards the motorist regarding the rights and responsibilities of the bicyclist and automobile driver. Comprehensive enforcement of existing traffic and parking laws, coupled with the implementation of sound design and engineering principles for bicycle corridors is critical. This plan also proposed systematic review of all new development projects, including public works efforts, to assure compliance with planning and building codes and the principles of this plan. Finally, this BMP proposes an aggressive strategy for obtaining grants and competing for other funding sources in order to realize the recommended physical and programmatic improvements.

Fostering conditions where bicycling is accepted and encouraged increases a community's livability from several perspectives that are difficult to measure but nevertheless important. The design, land use patterns and transportation systems that comprise the 'built environment' have a profound impact on quality of life issues. People living in communities with built environments that promote bicycling and walking tend to be more socially active, civically engaged and are more likely to know their neighbors. Settings where walking and riding bicycles are viable also offer greater independence to elderly people who are unable to drive automobiles. (See also citations and discussion under 1.1.2 Public Health)

RECREATIONAL NEEDS

Studies have shown that recreational trails have numerous beneficial impacts on the communities in which they are located, including increased property values, a boost to



tourism, expanded local recreation expenditures and destinations, and new business opportunities, as well as more transportation choices. Because recreation is a major part of the lifestyle in Trinity County and an attraction for tourists, the subject of recreational trails is a critical piece in the County's overall bicycle plan. Due mostly to the fact that recreational trails are generally developed as trails and not as paths that can be accessible to all non-motorized modes of transportation that meet ADA requirements, recreational trails were not a major component of the 2004 BMP. Over the past decade, however, recreational trail systems developed in Hayfork and Weaverville have provided unforeseen connectivity in the communities, thus becoming alternative routes for bicycle commuters. In addition, the benefit of coordinating with stakeholders associated with the development of these trail systems, including the Trinity County Resource Conservation District, U.S. Forest Service, Natural Resources Conservation Service, Sierra Pacific Industries, and Watershed Research Training Center, has underlined the beneficial nature of collaborative projects and promoted healthy relationships between parties that share

common and progressive goals. Due to their rising role in providing connectivity and promoting collaborative projects, recreational trails are discussed in more detail within this BMP.

Unpaved forest service roads are a significant component of the overall Trinity County roadway network. These roads have the ability to provide recreationists with links between communities, access to non-timber private property and as alternate travel routes in case of emergency. The Forest Service, rather than Trinity County, is responsible for maintaining these roads for the use of bicyclists or pedestrians.

To educate the public on recreational bicycling opportunities, the U.S. Forest Service has developed several brochures explaining popular mountain biking routes in the Shasta-Trinity National Forest. These can be downloaded at <http://www.fs.fed.us/r5/shastatrinity/maps/rog-index.shtml> . There are several trails looping the Hayfork community which are used by bicyclists, hikers and equestrians.

Segments of a trail system can also be found around Trinity Lake. While connecting and expanding this trail system has been discussed for many years, lack of funding has prevented the project from coming to fruition.

The Trinity County Resource Conservation District has prepared a Master Plan for the Weaverville Basin Trail System. The website for the trail system can be found at:

<http://tcrd.net/index.php/2014-02-05-08-30-03/weaverville-basin-trail-system>

The trail system is a cooperative effort between the district, federal agencies, private land owners and volunteers who help maintain it.

With its amazing scenery, numerous campgrounds, distinctive seasons, and terrain that ranges from easy to challenging, Trinity County has everything to offer recreational riders and pedestrians.

For trail projects that are primarily recreational to be eligible for Active Transportation Program funding, the projects must meet federal requirements of the Recreational Trails Program as such projects may not be eligible for funding from other sources. Multipurpose trails and paths that serve both recreational and transportation purposes are generally eligible in the Active Transportation Program, so long as they are consistent with one or more goals of the program (see Introduction, above). The Recreational Trail Program is administered through the California Department of Parks and Recreation. Caltrans administers the Active Transportation Program through guidelines adopted by the California Transportation Commission on March 20, 2014.

ROLE OF THE BIKEWAYS MASTER PLAN

This BMP is a complementary document to the existing Trinity County Regional Transportation Plan and a major component of the 2014 Trinity County Active Transportation Plan under development. The BMP is primarily a coordinating and resource document that establishes a vision for a transportation system throughout the County that makes bicycling more convenient and comfortable. The plan provides short-term and long-range goals to increase the amount and quality of cycling within Trinity County.

The goals and recommendations proposed within the BMP are regional in scope and provide a planning framework to guide decision-making. The vast land area and rural nature of the County with dispersed

communities require a well-prepared plan in which an efficient strategy is established that will serve the communities equally well while considering individual community's geographical limitations and interests.

Steps Toward Fulfillment of Active Transportation Plan and Bicycle Transportation Plan Requirements

Creation of a BMP allows the County to take major steps toward fulfilling mapping and data requirements of an Active Transportation Plan and a Bicycle Transportation Plan. Completion of a Bikeways Master Plan, and to a greater extent, a formal Active Transportation Plan and Bicycle Transportation Plan, will provide viable access to State and Federal funding programs including Active Transportation Program funds for bicycle transportation projects. Because Caltrans plays an oversight and review role in funding these projects, it is beneficial for the County to provide information within this BMP that helps meet the requirements of an Active Transportation Plan and/or Bicycle Transportation Plan. The requirements for a Bicycle Transportation Plan are listed below and are followed by a description of where they appear within this BMP or if they are still needed.

Requirements for an Active Transportation Plan and Bicycle Transportation Plan overlap. Some of the requirements for one Plan will also fulfill the requirements for the other Plan. By completing this Bikeways Master Plan, the groundwork is in place for pursuing funding sources to complete an Active Transportation Plan and/or Bicycle Transportation Plan.

Table 1. California Bicycle Transportation Plan Requirements

| <i>Bicycle Transportation Plan Requirement</i> | <i>Location Addressed Within this BMP</i> |
|--|--|
| a. The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan. | Chapter 2, Tables 3 and 4 |
| b. A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers. | Need |
| c. A map and description of existing and proposed bikeways. | Need |
| d. A map and description of existing and proposed end-of-trip bicycle parking facilities, centers, public buildings, and major employment centers. | Need |
| e. A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landing, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels. | Need |
| f. A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities. | Need |
| g. A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists. | Need |
| h. A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support. | Need |
| i. A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting. | Need |
| j. A description of the projects proposed in the plan and a listing of their priorities for implementation. | Chapter 5, Table 6 |
| k. A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area. | Need |

BMP Consistency with Local Plans

The following studies, planning efforts, and State and Federal policies are pertinent to bicycle facility planning in Trinity County. These plans have been reviewed for consistency and have been incorporated into this BMP where appropriate.

Douglas City Community Plan (1987)

The Douglas City Community Plan evolved from an earlier effort to establish a Trinity River Plan. The Douglas City Plan includes a 35 square mile area centered around the Trinity River between Grass Valley Creek and just downstream from Steiner Flat. In order to achieve the Plan's goal of increasing the bicycle network, recommendations included working with Caltrans to improve Highways 299 and 3 and developing bicycle and pedestrian pathways within the central core of Douglas City.

Hayfork Community Plan (1996)

The Hayfork Community Plan was adopted by the Trinity County Board of Supervisors in 1996. This plan was created to guide development within the 41.6 square mile area around Hayfork. Providing bike lanes, widened shoulders, and trails were important objectives and policies in the Transportation and Community Design elements of the plan. Bicycle projects were recommended as follow:

Capital Improvement Program (CIP) Projects

- Morgan Hill Road-bike lane
- Oak Street (Bridge Road)-bike lanes
- Hyampom Road-shoulder widening/bike lanes

Five-year CIP Projects

- Tule Creek Road-bicycle and pedestrian paths
- Brady Road-bicycle and pedestrian paths
- Bicycle improvements on a case-by-case basis

Of these recommendations, the Oak Street bike lanes and the Brady Road bike and pedestrian path has been completed, including a 2.5 mile loop around Ewing Reservoir.

Junction City Community Plan (1987)

To help guide future development in the Junction City area, a community plan was adopted in 1987. Increasing bicycle use by developing more bike routes and trails was one of the goals of the Transportation Element. Widened shoulders for bicyclists were recommended for Highway 299. An off-street pathway was recommended between the old Junction City town site and Junction City Park, the County Park on Sky Ranch Road, and on to Dutch Creek Road and along Red Hill Road.

Lewiston Community Plan (1986)

The Lewiston Community Plan was adopted by the Trinity County Board of Supervisors in 1986. In the Transportation Planning section of this plan, Goal #3 states, "To provide for a pedestrian and bicyclist circulation system within the community core and Historical District area. To meet this goal, the

following objectives were proposed: develop a network of pedestrian/bicyclist path systems connecting high use areas.

Weaverville Community Plan (1990)

The Trinity County Board of Supervisors adopted the Weaverville Community Plan in 1990 to guide future development in the community and basin. As the most populated community in the county and the one most likely to experience growth, Weaverville must be equipped to serve all transportation modes. Establishing a bikeway system and providing storage facilities was one goal of this plan. Working closely with Caltrans to improve Highway 3 and 299 was one key implementation objective. This plan also acknowledged the need to consider air quality issues when planning transportation projects.

The Weaverville Basin Trail System Master Plan

The concept of the Weaverville Basin Trail System stemmed from its inclusion in the Recreational Element of the Weaverville Community Plan in 1989. A Master Plan was designed in 2000 to guide the development and management of the trail system in the Weaverville Basin. When completed, the network will include over 50 miles of trails around Weaverville with connections to other trails within the Shasta-Trinity National Forest and trail access to the Trinity Alps Wilderness Area.

The Weaverville Basin Trail System will include both paved and unpaved trails for use by hikers, mountain bikers, and equestrians. Paved trails will be designed to meet Caltrans Class I bikeway design requirements. The proposed paved trails that are considered priority projects are also included in this countywide bikeways plan. These include:

West Weaver Creek Trail: proposed five mile trail between Lee Fong Trail and Highway 299 over West Weaver Creek.

Lee Fong Trail: proposed 3.1-mile paved trail between Lee Fong Park and the Trinity Alps Industrial Park and the Industrial Park Wetlands. A 10-foot wide paved trail is recommended between Lee Fong Park and the Industrial Park with an equestrian soft shoulder, whereas a three-foot paved trail will be acceptable in the more remote areas.

Lowden Park Trail: proposed 3.8-mile long paved trail from Lee Fong Trail to Lowden Park, including a pedestrian bridge across East Weaver Creek at Lowden Park and a Highway 299 West undercrossing at the highway bridge.

Glen Road/Browns Ranch Road Trail: proposed 1.6 mile long paved trail between Highway 299 West and Highway 3.

South Fork Management Unit Recreational Trails

Hayfork Basin lies between South Fork Mountain and Hayfork Divide on the South Fork Management Unit of the Shasta-Trinity National Forest. It is a lightly used area that provides a wide variety of roads and trails for recreational use. These roads and trails pass through diverse forest environments,

beautiful scenery, and vistas that are attractive to visitors during any season. Over 50 miles of trails in the South Fork Management Unit Recreational Trails network are suitable for bicyclists.

Shasta-Trinity Trail Draft Concept Plan

The Draft Concept Plan for the **Shasta-Trinity Trail Connections Project** was prepared by the National Park Service's Rivers, Trails and Conservation Assistance Program for the Project's Steering Committee in December 2000. The project envisions a multi-use trail linking Redding and the Trinity Alps. Major portions of the proposed regional trail will be located in Shasta County between the Sacramento River in Redding and the Whiskeytown National Recreation Area near the eastern edge of Trinity County. Near the western edge of Whiskeytown Lake, the trail diverges with a spur heading to French Gulch and the spine continuing westward to the Lewiston Turnpike and following it into Trinity County to the town of Lewiston. From Lewiston, a spur leads north to Lewiston Lake and the Trinity Dam, while the spine continues westward to Weaverville. The plan calls for local jurisdictions to dictate trail design standards. Various levels of improvement have been envisioned, from rudimentary hiking paths where topography and sensitive habitat limit major improvements, to equestrian trails and Class I multi-use paths.

Trinity County General Plan-Circulation Element (2002)

The Circulation Element of the Trinity County General Plan emphasizes the importance of bicycling to both residents and tourists. Policies included paved shoulders on State highways, developing this BMP, including bikeways in community plans, and adding bicycle parking. The Circulation Element contains maps of existing and proposed bikeways in Hayfork, Junction City, Lewiston, Douglas City, and Weaverville that were used as the basis for the bikeway network proposed in this plan.

Trinity County General Plan-Land Use Element (1988)

The Land Use Element identifies the location and extent of proposed land uses. Due to the rural nature of Trinity County, minimum lot sizes for some communities are very large compared to a dense urban environment. This creates longer distances between places, which can then discourage bicycling and walking. As the largest community in the county, Weaverville is the exception. Multi-family developments are encouraged, as is a concentration of commercial and office uses in the downtown area to strengthen the vitality of the district.

Particulate Matter (PM10) Attainment Plan (1995)

The North Coast Unified Air Quality Management District—Humboldt, Del Norte, and Trinity Counties—is classified as a nonattainment area for particulate matter under 10 microns (PM10). Under the California Clean Air Act, air quality districts must develop control measures to achieve and maintain ambient air quality standards. Among the control measures mentioned in the 1995 Attainment Plan are programs to accommodate bicycle use and land use development practices that enable people to walk to more destinations and reduce automobile use.

BMP Consistency with Federal and State Policies

Active Transportation Program

In the wake of MAP-21, the Active Transportation Program was created by Senate Bill 99 (chapter 359, Statutes of 2013) and Assembly Bill 101 (chapter 354, Statutes of 2013) to encourage increased use of active modes of transportation, such as biking and walking.

Pursuant to statute, the goals of the Active Transportation Program are to:

- ◆ *Increase the proportion of trips accomplished by biking and walking.*
- ◆ *Increase the safety and mobility of non-motorized users.*
- ◆ *Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals as established pursuant to Senate Bill 375 and Senate Bill 391.*
- ◆ *Enhance public health, including reduction of childhood obesity through the use of programs including, but not limited to, projects eligible for Safe Route to School Program funding.*
- ◆ *Ensure that disadvantaged communities fully share in the benefits of the program.*
- ◆ *Provide a broad spectrum of projects to benefit many types of active transportation users.*

Trinity County Active Transportation Plan

According to the Active Transportation Program Guidelines published in 2014, funding from the Program may be used to fund the development of bike, pedestrian, safe routes to schools, or active transportation plans in disadvantaged communities. The Trinity County Active Transportation Plan is currently in preparation and anticipated to be completed in 2016.

Regional Transportation Plan

Regional Transportation Planning Agencies are required to adopt and submit an updated Regional Transportation Plan (RTP) to the California Transportation Commission and the California Department of Transportation every four or five years depending on air quality attainment within the region. An update to the Trinity County RTP is anticipated to be completed in November 2016. The overall focus of the RTP is directed at developing a coordinated and balanced multi-modal regional transportation system that is financially constrained to the revenues anticipated over the life of the plan in Trinity County.

Included in the RTP and relevant to this BMP is **Goal 3: Bicycle, Pedestrian, and Other Alternative Modes** which proposes to *promote alternative mode travel by developing a safe and convenient system of bicycle routes, pedestrian facilities, and trails to connect Trinity County's activity centers and communities consistent with demand and resources*. Objectives supporting this goal include increasing the total mileage of safe bike routes and trails.

MAJOR RECOMMENDATIONS OF THE PLAN

The BMP sets forth two groups of bicycle projects which are recommendations to facilitate accomplishing our region's goals.

- 1) High Priority Projects. These are projects to be implemented as soon as funding and planning allow and are based on eight recommendations that meet the underlying goals of the Bikeways Master Plan including:
 - ◆Safety: Projects focused on improving safety, particularly those meeting Safe Routes to School criteria
 - ◆Equity: Projects located throughout the geographical range of Trinity County, in disadvantaged communities, and designed to meet ADA standards
 - ◆Connectivity: Projects focused on improving connectivity and promoting easier, less stressful opportunities for bicycling between high use areas; these projects aim to close gaps in the regional bicycle network thereby increasing mobility
 - ◆Integrated Planning: Projects aligned with the goals stated in their corresponding community plans or the Trinity County Regional Transportation Plan
 - ◆Increase the overall usage of bicycles as a mode of transport through infrastructure improvements, education, and public outreach
- 2) Long-Term Projects. These are projects to be implemented over the next 20 years pending the availability of funding. The goal of this group of projects is safety; all of the long-term projects are road shoulder-widening projects on State, County, or Forest Service roads.

High priority and long-term projects appearing as recommendations in this BMP were identified through an assessment of the region's program deficiencies and needs determined through extensive public outreach, direction from the Bicycle Advisory Group, comparisons with national model programs, and an analysis of the probable effectiveness of each program within the context of Trinity County. Projects were also assessed and prioritized based on how well their attributes satisfied the goals established in the Active Transportation Program as summarized in the Federal and State Policies section above. High priority projects include bicycle infrastructure improvements, educational components, and public outreach, whereas all of the long-term projects are infrastructure improvements.

Bicycle Infrastructure Improvements

The BMP presents an interconnected network of bicycle corridors that would enable residents to bicycle with greater safety, directness, and convenience within and between major regional destinations and activity centers. The regional network consists of a combination of standard bicycle facilities, including Class I bike paths, Class II bike lanes, and Class III bike routes which are described and depicted in greater detail in Chapter 4.

The network selection and classification process included a public outreach program, on-going interaction with the Weaver Basin Trail System Committee, the United States Forest Service, the Bureau of Land Management, the Natural Resources Conservation Service, the Trinity County Bicycle Advisory Committee comprised of additional member of government agencies as well as mountain biking and road cycling advocates, and private property owners.

A major component of the BMP is the development of secure bicycle parking at schools, shopping centers, public buildings, parks, and major employment centers to encourage bicycle commuters.

Efforts to establish bikeshare opportunities at County airports for visiting pilots or during community events to accommodate tourists who would rather explore the area on bicycle are included as well as innovative use of share the road arrows (“sharrows”) to promote motorists’ awareness of cyclists on shared roadways.

Recommended Programs

With safety as the highest priority, educational programs, including presentation to school children coordinated with the California Highway Patrol, and public outreach efforts through a media campaign are recommended. The development of promotional materials including paper maps and access to a website with downloadable maps, bike route descriptions, current trail conditions, and videos of trails is suggested to encourage new cyclists, increase the use of bike routes, and to increase the awareness of cycling as a method to decrease greenhouse gas emissions.

2 EXISTING REGIONAL BICYCLE NETWORK

Current Estimate of Bicycle Trips

Bicycle commuting statistics are provided in Table 2. Accurately quantifying the number of bicycle commuters in the County will be a key component in developing a baseline against which to measure the performance of this BMP over time. The primary data source for this information is from the U.S. Census Bureau’s 2008-2012 American Community Survey. We evaluated data for three of the County’s largest communities, and Trinity County as a whole against data available for the State of California in an effort to provide a more complete contextual understanding of the number of county residents who currently commute via bicycle.

Slightly over 1 percent of employees in California commute to work via bicycle. In Trinity County the number of bicycle commuters is nearly 50% higher than the state norm with 1.5% of employees in the County cycling to work.

Table 2. Commute to Work Statistics

| <i>Mode of Transportation</i> | <i>Calif</i> | <i>Trinity Co.</i> | <i>Hayfork</i> | <i>Lewiston</i> | <i>Weaverville%</i> |
|--------------------------------------|--------------|--------------------|----------------|-----------------|---------------------|
| | <i>%</i> | <i>%</i> | <i>%</i> | <i>%</i> | |
| Car, truck, van – drive alone | 73.3 | 64.9 | 67.7 | 54.2 | 63 |
| Car, truck, van – carpooled | 11.1 | 15.9 | 23.1 | 24.2 | 12.7 |
| Public transportation | 5.3 | 2.3 | 4 | 1.2 | 3.9 |
| Walked | 2.7 | 5.3 | 0 | 6 | 9.2 |
| Bicycle | 1.1 | 1.5 | 0 | 0 | 4.3 |
| Other means | 1.3 | 2.2 | 0 | 0 | 3.8 |
| Worked at home | 5.2 | 7.9 | 5.1 | 14.4 | 3 |

Source: U.S. Census Bureau 2008-2012 American Community Survey

Although the Census data only includes adult bicycle commuters who ride to work, any automobile trip that is replaced by a bicycle benefits the community. Commuter bicyclists actually also include children who ride to school, and people riding to commercial, residential, and transit centers (“utilitarian bicyclists”—people who occasionally run errands or make social trips, for example, via bicycle). Thus, the number of County residents using the bicycle as a mode of transportation is higher than the percentage reported by the U.S. Census Bureau. Table 3 captures users of this type with data collected from Standard Bicycle Intersection Counts conducted in Hayfork, Lewiston, and Weaverville.

Trinity County Bikeways Master Plan

Table 3. Standard Bicycle Intersection Counts Summary

| | Location | | |
|--|------------------------|-----------------------|--------------------|
| | <i>Hayfork</i> | <i>Lewiston</i> | <i>Weaverville</i> |
| User Count 1 (Total in two hours) | 18 | 1 | 13 |
| User Count 2 (Total in two hours) | 18 | 0 | 0 |
| User Counts Total | 36 | 1 | 13 |
| Average Utilitarian Bicycle Users per hour (User Counts Total / 4) | 9 | 0.25 | 3.25 |
| Utilitarian Bicycle Users per day (Average Bikes/hour x 6 hours; Hours of use from 10:00 AM to 4:00 PM=6 hours) | 54 | 1.5bike users/day | 19.5 bikes/day |
| Utilitarian Bicycle Users per week (Bikes/day x 7 days/week) | 378 bike users/week | 10.5 bike users/week | 136.5 bikes/week |
| Utilitarian Bicycle Users per month (Bikes/week x 4.33 week/month) | 1,636 bike users/month | 45.5 bike users/month | 591 bikes/month |
| Utilitarian Bicycle Users per year (Bikes /month x 12 months/year) | 19,632 bike users/year | 546 bike users/year | 7,092 bikes/year |

*Bike user count data is included in Appendix 4

Table 4 merges data from the Standard Bicycle Intersection Counts with U.S. Census Bureau demographic and bicycle commuter information.

Table 4. Trinity County Demographics and Estimated Number of Current and Future Bicycle Users

| <i>Category</i> | <i>Total</i> | <i>Source/Calculation</i> |
|-----------------------------|--------------|-------------------------------------|
| Population | 13,786 | 2010 Demographic Profile |
| # of Employed Persons | 5,568 | 2008-2012 American Community Survey |
| Population: Ages 5-14 years | 1,384 | 2008-2012 American Community |

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| | | |
|--|---------|--|
| | | Survey |
| # of College Students | 529 | 2008-2012 American Community Survey |
| Total # of Student Commuters | 95 | 5% of elementary school students (1,384 children 5-14 years old; 529 college students) |
| Average # of Miles Ridden per Student Commuter per Year (Based on 5 miles roundtrip/day x 65 school days (3 months)/year) | 325 | National Center for Safe Routes to School |
| Total # of Miles Ridden by Student Commuters per Year | 30,875 | Total # Student Commuters x Average # of Miles Ridden per Student Commuter |
| Total # of Bicycle-to-Work Commuters | 67 | 2008-2012 American Community Survey |
| Average # of Miles Ridden per Bicycle Commuter per Year | 1858 | A Summary of North American Bicycle Commuters for Bicycle-to-Work Commuters; |
| Total # of Miles Ridden per year by Bicycle Commuters | 124,486 | Total # Bicycle-to-Work Commuters x Average # of Miles Ridden by Bicycle Commuters per Year) |
| Total # Utilitarian Bicycle Users per Year | 9,090 | Standard Bicycle Intersection Counts in Hayfork, Lewiston, and Weaverville, September 2014 |
| Average # of Miles Ridden by Utilitarian Bicyclists per Year | 45,450 | 5 mile roundtrip average per each Utilitarian Bike User |
| Total # All Bicycle Users Per Year | 9,252 | Bicycle-to-Work Commuters + 5% of Students + Utilitarian Bicyclists |
| Total # of Miles Ridden by All Bicycle Users per Year | 200,811 | Total # of Miles Ridden by Student Commuters, Bicycle-to-Work Commuters, and Utilitarian Bicyclists per Year |
| Total # Future Bicycle Users | 11,565 | Based on 25% increase in Bicycle Use by 2020 |

- 1 Standard Bicycle Intersection Counts methodology established by the National Bicycle and Pedestrian Documentation Project.
- 2 A Summary of North American Bicycle Commuters by William E. Moritz, PhD, University of Washington.

Estimate of Future Bicycle Usage

Based on implementation of projects and programs recommended in this Plan, the County estimates an approximate 25% increase in bicycle usage among commuters, students, and/or utilitarian cyclists. As infrastructure projects and educational programs are implemented, the perceived safety, comfort and confidence levels among bicyclists will increase significantly.

Current Air Quality Conditions

Legislative Background and Relevance

According to leading climate scientists from around the world, anthropogenic climate change (that caused by humans) is a significant and growing problem that must be addressed in order to avoid the worst effects. Climate change is the result of various GHGs that are emitted into the atmosphere, such as carbon dioxide (CO₂) and methane (CH₄), which have a heat forcing effect on the atmosphere. Sharp rises of GHGs over the last century and a half have led to higher overall worldwide temperatures, reduced snowpack in the higher elevations, greater fluctuations of temperature and precipitation, global sea level rise and more frequent and severe extreme weather events, including hurricanes, heatwaves and droughts.

The passage of the California Global Warming Solutions Act of 2006, AB 32, marked a new approach to air quality management in California by requiring in law a sharp reduction of greenhouse gas (GHG) emissions and setting the stage for a transition to a sustainable, low-carbon future. AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change. The bill requires the California Air Resources Board to develop regulations and market mechanisms to reduce California's greenhouse gas emissions to 1990 levels by the year of 2020, representing a 25% reduction statewide, with mandatory caps beginning in 2012 for significant emissions sources.

In 2008, the Sustainable Communities and Climate Protection Act, also known as SB375, was passed. SB375 is a California law designed to provide key support to achieve the goals of AB 32 primarily through targeting reductions in greenhouse gas emissions from passenger vehicles. Passenger vehicles are the single largest source of greenhouse gas emissions statewide, accounting for 30% of total emissions.

Although the State of California leads the nation in energy efficiency standards and plays a lead role in environmental protection, is also the 12th largest emitter of carbon worldwide according to the State of California Office of Governor. Greenhouse gas emissions are defined to include Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride* (NF₃). Nitrogen trifluoride was not listed initially in AB 32 but was subsequently added to the list via legislation.

Funding sources for transportation projects frequently require a general summary or a specific accounting of existing, and/or predicted greenhouse gas conditions related to proposed projects. Agencies increasingly encourage implementation of transportation strategies that reduce vehicle emissions to meet goals set forth in legislation. Thus, possessing a working knowledge of State laws and existing regional air quality conditions is crucial to funding success.

Air Quality Index (AQI)

The Air Quality Index, AQI, is a numerical index used for reporting severity of air pollution levels to the public. In addition to greenhouse gas levels, the measure of air quality is determined by the presence of particulate matter and ozone levels. The AQI incorporates five criteria pollutants -- ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen dioxide -- into a single index.

According to the California Communities Environmental Health Screen Tool, and air quality reports available for Trinity County from 2010-2013 (Homefacts website, available online at <http://www.homefacts.com/airquality/California/Trinity-County.html>), Trinity County’s air quality is consistently high, having maintained a rating of “Good” over 95% of the days from January 1, 2010 until February, 2014 with acceptable levels of the five AQI criteria gases.

Existing Bikeways

There are approximately 7.5 miles of existing bikeways in Trinity County. Weaverville, in particular, has a good spine bikeway network with bike lanes on Highways 3 and 299 through town and on Washington Street. Although the County has numerous trails, very few meet Caltrans Class I or Class II standards.

Table 5 lists the existing bikeways by classification type and length.

Table 5. Existing Bikeways in Trinity County

| Area | Street | From | To | Class | Length |
|---------------|-------------------|--|-------------------------------|-------|--------|
| Hayfork | Hwy 3 | Hyampom Rd | Brady Rd | II | 0.5 |
| Hayfork | Morgan Hill Road | Hwy 3 | Oak Street | III | 1.0 |
| Hayfork | Morgan Hill Road | Oak Street | Kyler Avenue | II | 0.4 |
| Hayfork | Oak Street/Bridge | Hwy 3 | Morgan Hill Rd | I | 0.5 |
| Junction City | Red Hill Road | Junction City Elementary School | Dutch Creek Rd | II | 0.5 |
| Lewiston | Lewiston Road | Portions of Lewiston Road and Fremont Street | Lewiston Elementary School | I | 0.5 |
| Weaverville | Hwy 299 | N. Miner St | Cox Rd | II | 1.8 |
| Weaverville | Hwy 3 | Airport | Weaverville Elementary School | II | 1.4 |
| Weaverville | Washington Street | Hwy 3 | Hwy 299 | II | 0.5 |
| Weaverville | Lee Fong Park | Bremmer St | Around park | II | 0.5 |

State Highways

State Highways 3, 36 and 299 are the most important roadways in Trinity County for inter- and intra-regional commuting, recreation, and business. Because they reach the larger communities and link to neighboring counties, these roadways form the spine of the Trinity County bikeway network. However, with the exception of SR 299 east of Weaverville to the Shasta County line, conditions for bicyclists on these state highways are virtually nonexistent. Narrow or no road shoulders, winding roadways, and high truck traffic make bicycle travel extremely challenging. Caltrans is cognizant of these conditions and is making incremental progress toward improving travel conditions for both motorized and non-motorized travels. To address the need to improve these conditions, the following projects are currently in progress:

- The Buckhorn Grade Improvement project, a multi-year project to straighten the narrow curved roadway between the Trinity-Shasta County line to approximately the French Gulch turn-off. Shoulders will be wider when the project is completed.
- Shoulder widening project on SR 3 between Trinity Center and Wyntoon, an area of heavy use by residents and tourists visiting these resort areas.
- Another major improvement by Caltrans is the extension of the bike lane on Highway 3 in Hayfork. This project had been high on the Hayfork community's list of safety improvements.

County Roadways

While the State highway system serves as the main spine of the countywide bikeway network, some county roads become spur bikeways from the State routes to reach more remote communities, campgrounds, and other places of interest. While some of these roads funnel a high volume of traffic periodically throughout the day or year, they are generally low volume, narrow roads that do not have sufficiently wide enough shoulders for safe cycling and they do not include signage.

Recreational Trails

Weaverville Basin Trail System (WBTS)

The Weaverville Basin Trail System (WBTS) offers over 60 miles of trails suitable for mountain bikers, pedestrians, and equestrians. The concept of the WBTS stemmed from its inclusion in the Recreational Element of the Weaverville Community Plan in 1989. The network includes over 60 miles of trails around the Weaverville Basin with connections to other trails within the Shasta-Trinity National Forest and trail access to the Trinity Alps Wilderness Area. Currently, the WBTS includes unpaved trails, although four Class I multi-modal paved trails are included as priority projects in the future.

South Fork Management Unit Trails

The South Fork Management Unit of the Shasta-Trinity National Forest boasts over 50 miles of cycling trails. Trail distances and difficulties range from an easy 1.7 mile trail to a moderate 18 mile trail and consist of single track trails, jeep trails, and forest roads. Trails in the South Fork Management Unit overlap with Off-Highway Vehicle (OHV)-designated routes, providing linkages to many more miles of riding in addition to the established trail rides published by the Forest Service.

Shasta-Trinity Trail Draft Concept Plan

The Draft Concept Plan for the Shasta-Trinity Trail Connections Project was prepared by the National Park Service's Rivers, Trails, and Conservation Assistance Program for the Project's Steering Committee in December 2000. The project envisions a multi-use trail linking Redding and the Trinity Alps. Major portions of the proposed regional trail will be located in Shasta County between the Sacramento River in Redding and the Whiskeytown National Recreation area near the eastern edge of Trinity County. Near the western edge of Whiskeytown Lake, the trail diverges with a spur heading to French Gulch and the spine continuing westward to the Lewiston Turnpike and following it into Trinity County to the town of Lewiston. From Lewiston, a spur leads north to Lewiston Lake and the Trinity Dam, while the spine continues westward to Weaverville where it will join the Weaverville Basin Trail System.

Trinity Around the Lake Trail

Although still in an informal, preliminary planning stage, the Trinity Around the Lake Trail project envisions a trail encircling Trinity Lake through use of existing trails, Forest Service roads, and County roads located within proximity to the lake and has enthusiastic support from mountain bikers in particular. The south end of the trail will be located approximately 0.25 miles from the Shasta-Trinity Trail, essentially accommodating a future trail network connecting Trinity Lake with Whiskeytown and Shasta Lakes in the Shasta-Trinity National Recreation Area as well as the trail network in and around the Redding area.

US Forest Service Trinity Unit Trails

Trails built and maintained by the US Forest Service around Trinity and Lewiston Lakes generally follow the lake shorelines. The Trinity Lakeshore Trail follows the western shore of Trinity Lake, beginning at Clark Springs Campground and ending four miles southwest at Pinewood Cove.

The Forest Service maintains three separate trailheads on the western shoreline of Lewiston Lake. The two-mile long North Lakeshore Trail runs from Ackerman Campground to near Pine Cove Boat Ramp. Baker Gulch Trail, a 0.2 mile trail between Baker Gulch and the Cooper Gulch Campground, merges with the South Lakeshore Trail at Cooper Gulch. From here, the South Lakeshore Trail runs south for 0.8 miles.

In addition to these shorter cycling and pedestrian-friendly trails near Lewiston and Trinity Lakes, the Forest Service provides guidance regarding several



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routes on Forest Service roads tailored to mountain bike use. The “Almost at the Downhill” route is a 13 mile loop beginning on Guy Covington Drive, and connecting with Bowerman Ridge Road before dropping back down to State Route 3. Riders use the highway for the last two miles of the ride to get back to the starting point.

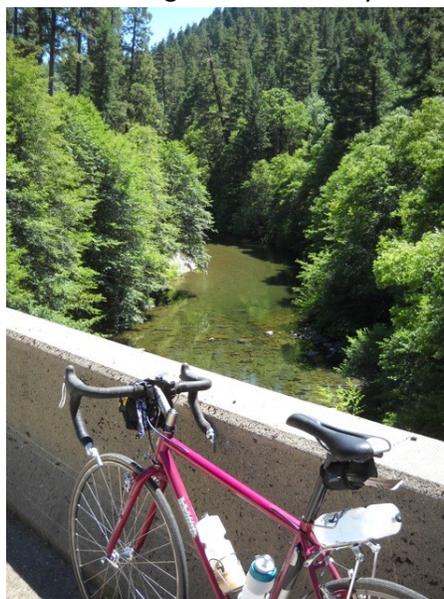
As a side trip on the “Almost at the Downhill” route, the “Earn Your Lunch” route is a 12 mile out-and-back ride that follows Bowerman Ridge Road south to Mariner’s Roost Campground.

The Buckeye Ridge Basalt Road route is designed to use a shuttle where a vehicle is left at one end of the route on Trinity Dam Blvd. If riders prefer not to use a shuttle and make a loop of the rest of the route, they can extend the ride to a distance of nearly 18 miles. If a shuttle is used, the route is 8.9 miles long.

3 LAND USE

Trinity County is located in the remote reaches of northwestern California between the northern end of the Sacramento Valley and the Redwood Coast. The County encompasses the southern tip of the Cascade Range and is bounded by Humboldt County to the west, Mendocino and Tehama Counties to the south, Shasta County to the east, and Del Norte and Siskiyou County to the north.

Trinity County has a population of 13,443 residents (Trinity County Economic and Demographic Profile 2014) and covers approximately 3,200 square miles, much of which is National Forest Land. Mostly undeveloped, the County consists of vast Douglas fir and pine forests that cover towering peaks and extend down to the rock-walled canyons that line many of the County's rivers and waterways. Approximately 85% of the terrain in Trinity County is mountainous; the remaining 15% is relatively flat and contains the County's population centers. According to the Land Use Element of the County General Plan and its GIS database, 75% of the county's land area is under the ownership or management of federal or state government for timber production, mining, reservoirs, and recreation. The remaining 25% is privately owned with approximately 5.3% of it devoted to residential, commercial, industrial, and tourist and recreational uses. The remaining privately-owned land is used primarily for timber production.



The Land Use Element in the County General Plan includes 12 diverse planning areas: Denny, Junction City, North Lake, Salyer/Burnt Ranch, Big Bar, Weaverville, Lewiston/Douglas City, Hyampom, Hayfork, Wildwood, South Fork, and Southern Trinity. The communities comprising these planning areas differ widely in character, geography, population base, accessibility, and layout. A unique challenge of developing a Bikeways Master Plan for Trinity County is adequately addressing the varied settings of these small communities while simultaneously fulfilling their shared needs and values. A truly functional BMP will equally serve different land uses in the community of Denny, with a population of less than 100 and located on a dead end road more than 20 miles from State Hwy 299 as it will serve the land uses in the main hub of the County—Weaverville—with a population of over 4,000 through which the major transportation routes of the County, State Route 299 and State Route 3 pass. Although Denny currently has no bicycle commuters on record while Weaverville does, the goal of this BMP is to facilitate and maximize bicycle transportation on a measurable and appropriate scale and with specific attributes suitable to the communities in which projects are proposed.

4 GOALS, OBJECTIVES, PERFORMANCE MEASURES AND POLICY DIRECTION

This Chapter sets forth the vision, goals, objectives, performance measures, and policies that will support the vision of the bikeways network and programs in Trinity County.

- The *vision* articulates community aspirations.
- A *goal* makes the vision explicit by describing desired outcomes. Goals are general in nature and characterized by a sense of timelessness.
- An *objective* describes how each goal will be achieved. Objectives are intermediary steps toward attaining goals.
- A *performance measure* evaluates progress toward meeting plan goals and objectives.
- A *policy* is a direction statement that guides decisions with specific actions to address performance measures and meet objectives.

Federal and State Policy Directives

Directives issued by federal and state transportation agencies support and prioritize bicycle travel and greatly influence the goals and objectives established in this BMP.

U.S. Department of Transportation MAP-21

In 2012, Moving Ahead for Progress in the 21st Century Act (MAP-21) became effective. MAP-21 establishes a new program to provide for a variety of alternative transportation projects that were previously eligible activities under separately funded programs. This program is funded at a level equal to two percent of the total of all MAP-21 authorized Federal-aid highway and highway research funds, with the amount for each State set aside from the State's formula apportionments. Unless a State opts out, it must use a specified portion of its Transportation Alternatives funds for recreational trails projects. Eligible activities include:

- Transportation alternatives (new definition incorporates many transportation enhancement activities and several new activities including construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation)
- Recreational trails program (program remains unchanged)
- Safe routes to schools program
- Planning, designing, or constructing roadways within the right-of way of former Interstate routes or other divided highways.

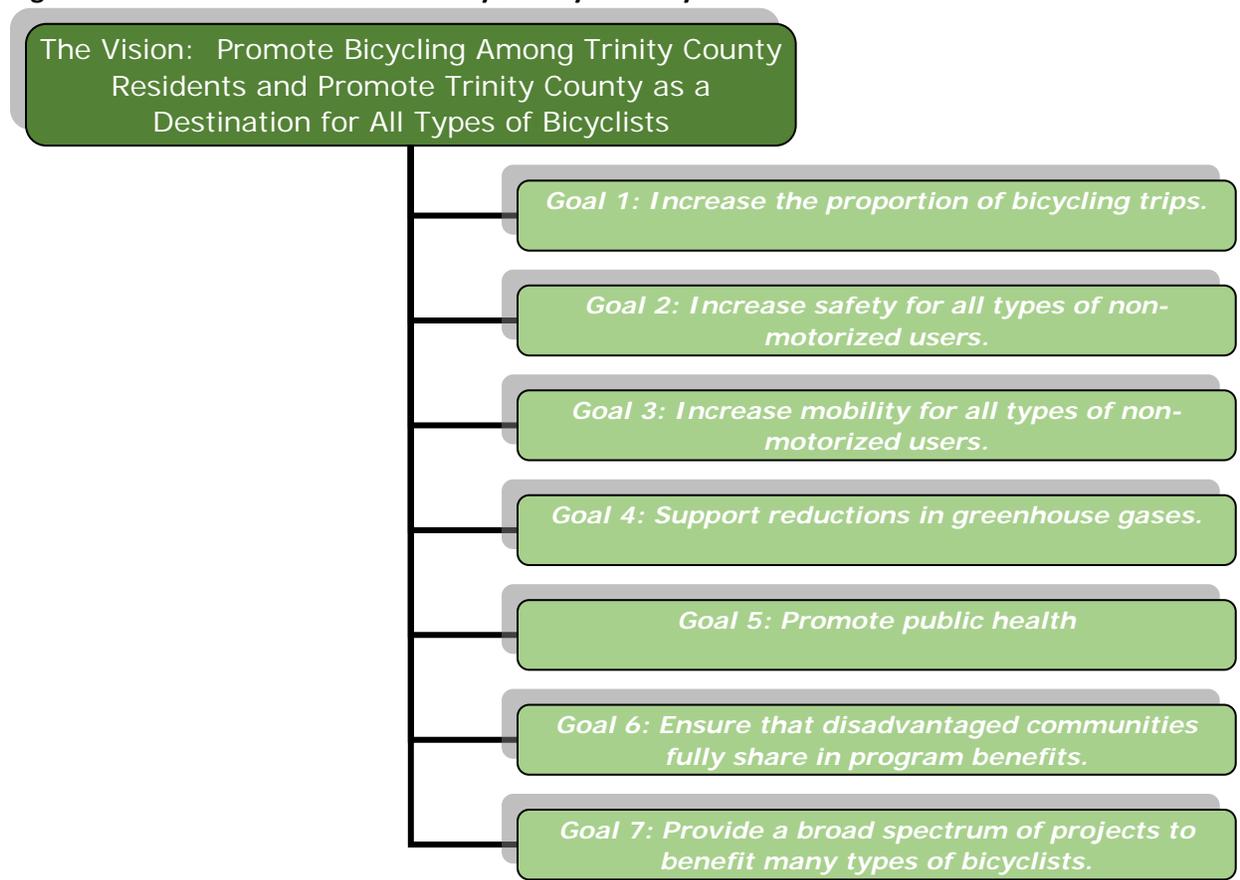
Caltrans also has policy directives related to non-motorized travel. In 2008, Caltrans Deputy Directive 64 (DD-64-R1) became effective and reads:

The California Department of Transportation (Department) provides for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system. The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.

The Department develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is facilitated by creating “complete streets” beginning early in system planning and continuing through project delivery and maintenance and operations. Developing a network of “complete streets” requires collaboration among all Department functional units and stakeholders to establish effective partnerships.

In accordance with these directives and the Trinity County Regional Transportation Plan, Figure 1 represents the vision and goals presented in this BMP.

Figure 1. Vision and Goals of the Trinity County Bikeways Master Plan



Goal 1: Increase the proportion of bicycling trips.

Objective 1.1 – Complete a network of bikeways and facilities that are feasible, fundable over the life of the Plan, and that serve bicyclists’ needs, especially for travel to employment, schools, commercial sites, transit, civic locations, and recreational destinations.

Performance Measure 1.1: Performance would be measured based on the number of new miles of bicycle improvements planned, designed and/or constructed bi-annually; added signage; and on the number of new bicycle parking facilities added to the system.

Policy 1.1.A – Seek funding for bikeway projects through regional, state and federal funding programs, encourage multi-jurisdictional funding applications.

Policy 1.1.B – Develop and implement a destination-based signing system for the bikeway network.

Policy 1.1.C – Coordinate with responsible agencies and developers in Trinity County to ensure appropriate opportunities for bicycle connections are planned, constructed, and maintained.

Policy 1.1.D – Design and construct bikeways for 20-year surface for maintenance.

Policy 1.1.E – Encourage agencies to design and construct new bicycle improvements so that they do not negatively impact the environment.

Objective 1.2 – Maintain and improve the quality, operation, and integrity of the bikeway network and facilities.

Performance Measure 1.2: Evaluate maintenance of bicycle facilities annually in the spring, after snow has cleared and road maintenance projects are being scheduled.

Policy 1.2.A – Encourage responsible agencies to undertake routine maintenance of the bikeway network and facilities, such as sweeping and clearing brush overgrowth from bicycle lanes and routine surface repair, as funding and priorities allow.

Policy 1.2.B – Encourage agencies that are responsible for repair and construction of transportation facilities to minimize disruption to the cycling environment to the extent practical.

Policy 1.2.C – Work with Caltrans to close shoulder gaps on the State Highway System where economically and environmentally feasible to improve bicycling conditions.

Policy 1.2.D – Each fiscal year allocate to the County of Trinity that portion of Local Transportation Funds designated for the exclusive use of pedestrians and bicycles, particularly Class I bicycle paths, signage and parking facilities that are not eligible for streets and roads funding (PUC, Sec 99233.3); or for the maintenance of bicycling paths used for transportation purposes which are closed to motorized traffic (PUC, Sec 99234).

Objective 1.3 – Provide short- and long-term bicycle parking and amenities in the employment and commercial areas, in multifamily housing, at schools, and at recreation and transit facilities.

Performance Measure 1.3: Bi-annually evaluate success in coordinating with area businesses and governmental service providers regarding the addition and maintenance of bicycle parking facilities.

Policy 1.3.A – Encourage the installation of short- and long-term bicycle parking in the public right-of-way.

Policy 1.3.B – Encourage local communities to work with area schools to promote bicycle commuting and to assist in purchasing and sighting long- and short-term bicycle parking. Work with private commercial enterprises to add bicycle parking facilities, where appropriate.

Policy 1.3.C – Consider adopting zoning code standards requiring that safe, secure bicycle parking facilities be built as part of new development projects.

Objective 1.4 – Support bicycle-transit integration to improve access to major employment and other activity centers and to encourage multimodal travel for longer trip distances.

Performance Measure 1.4: Annually verify that there are bike racks at major transit stops; and that bike storage is maintained on all transit vehicles.

Policy 1.4.A – Support the development of bicycle facilities that provide access to regional and local public transit services wherever possible.

Policy 1.4.B – Coordinate with transit providers to ensure bicycles can be accommodated on all transit vehicles and that adequate space is provided for their storage on board whenever possible.

Policy 1.4.C – Coordinate with transit agencies to install and maintain convenient and secure short-term and long-term parking facilities at major transit stops and terminals.

Objective 1.5 – Develop and implement education and encouragement plans aimed at youth, adult cyclists, and motorists. Increase public awareness of the benefits of bicycling and of available resources and facilities.

Performance Measure 1.5: Verification that coordination and education efforts with the CHP and schools are occurring and that educational material has been published and distributed.

Policy 1.5.A – Coordinate with California Highway Patrol (CHP) and area school districts to provide students with bicycle education material and occasional bicycle clinics, especially those schools most at-risk for accidents.

Policy 1.5.B – Bi-annually or more often, if necessary, coordinate with the CHP to place a large display ad in the Trinity Journal or Advertiser explaining the rights and responsibilities of bicyclists.

Objective 1.6 – Improve the connectivity and quality of the regional bicycle network.

Performance Measure 1.6: Bi-annually assess progress to close gaps in the bicycle transportation system; progress on creating looped routes and added way fare signage.

Policy 1.6.A – Support bicycle improvement projects that close gaps in the regional bicycle network either by implementing specific projects recommended in this plan or through other means.

Policy 1.6.B – Encourage bicycle projects that connect local facilities to the regional bicycle corridors.

Policy 1.6.C – Promote consistent way fare signage that directs bicyclists to destinations and increases the visibility of the regional bicycle network.

Objective 1.7 – When acquiring right-of-way, include additional area for eventual development of Class I or II bicycle lanes or paths when designing new arterial or collector roads or approving subdivisions which abut or include arterial or collector roads.

Performance Measure 1.7: Evaluate roads being proposed to ensure that additional width for bicycle needs is being provided.

Policy 1.7.A – Coordinate with Caltrans and County road design planners, engineers and right-of-way agents to expand the right-of-way acquired for new, realigned or reconstructed roadways to accommodate bike lanes/paths, even if funding for construction is unavailable at the time.

Policy 1.7.B – Amend the County Subdivision Ordinance to include a provision for additional easement or right-of-way width to accommodate bicyclists for subdivisions which abut or include arterial or collector roads.

Goal 2: Increase safety for non-motorized users.

Objective 2.1 – Identify and close gaps that exist between segments of bicycle routes, including the need to provide safe routes to transit facilities.

Performance Measure 2.1: Performance would be measured based on the number of new miles of bicycle improvements planned, designed and/or constructed bi-annually that close gaps in bicycle and pedestrian routes; and provide safe routes to transit facilities.

Policy 2.1.A – Coordinate with responsible agencies and developers in Trinity County to ensure appropriate opportunities for bicycle connections are planned, constructed, and maintained.

Policy 2.1.B – Support the development of bicycle facilities that provide access to regional and local public transit services wherever possible.

Objective 2.2 – Increase safety by providing wayfinding signage, traffic control devices, elimination of hazardous conditions and preventative maintenance of bikeways and walkways with the primary goal of increased safety, but also extending the service life of the facility.

Performance Measure: Evaluate maintenance of bicycle facilities annually in the spring, after snow has cleared and road maintenance projects are being scheduled.

Policy 2.4.A – Encourage responsible agencies to undertake routine maintenance of the bikeway network and facilities, such as sweeping and clearing brush overgrowth from bicycle lanes and routine surface repair, as funding and priorities allow.

Policy 1.4.B – Work with Caltrans to close shoulder gaps on the State Highway System where economically and environmentally feasible to improve bicycling conditions.

Policy 1.4.C – Each fiscal year allocate to the County of Trinity that portion of Local Transportation Funds designated for the exclusive use of pedestrians and bicycles, particularly Class I bicycle paths, signage and parking facilities that are not eligible for streets and roads funding (PUC, Sec 99233.3); or for the maintenance of bicycling paths used for transportation purposes which are closed to motorized traffic (PUC, Sec 99234).

Objective 2.3 – Encourage the California Highway Patrol to set up targeted enforcement, as opposed to general enforcement, activities around high bicycle injury and/or fatality locations (intersections or corridors).

Performance Measure: Performance will be based on the number of targeted opportunities able to be scheduled by law enforcement.

Policy 2.3.A – Trinity County will support, as appropriate, efforts of law enforcement agencies to set up targeted enforcement activities around high bicycle injury and/or fatality locations in the county.

Goal 3: Increase mobility for non-motorized users.

Objective 3.1 – Complete a network of bicycle facilities that are feasible, fundable over the life of the Plan, and that serve bicyclists' and pedestrian needs – with particular focus on ADA compliant, senior

friendly, and safe routes for children – especially for travel to employment, schools, commercial sites, transit, civic locations, and recreational destinations.

Performance Measure 3.1: Performance would be measured based on the number of new miles of bicycle improvements planned, designed and/or constructed bi-annually; added signage; and on the number of new bicycle parking facilities added to the system.

Policy 3.1.A – Where terrain will allow, design bicycle routes within communities as Class I routes and include measures that assist disabled persons, including areas to rest on long routes with slopes; senior needs, perhaps with pull-outs with shaded benches; and children safety.

Goal 4: Support reductions in greenhouse gases.

Objective 4.1 – Support the integration of bicycle related policies and infrastructure improvements that lead to VMT reduction by converting a higher share of total intra and intercommunity trips to bicycle or pedestrian trips.

Performance Measure 4.1: Increased miles and connectivity of bicycle facilities with schools, senior centers, community parks, governmental offices, medical facilities, social services agencies and other attractors that could reduce motorized travel and increase non-motorized travel.

Policy 4.1.A – Seek funding for bikeway projects through regional, state and federal funding programs, encourage multi-jurisdictional funding applications.

Policy 4.1.B – Develop and implement a destination-based signing system for the bikeway network.

Policy 4.1.C – Coordinate with responsible agencies and developers in Trinity County to ensure appropriate opportunities for bicycle connections are planned, constructed, and maintained.

Policy 4.1.D – Support the development of bicycle facilities that provide access to regional and local public transit services wherever possible.

Policy 4.1.E – Support bicycle improvement projects that close gaps in the regional bicycle network and/or pedestrian facilities either by implementing specific projects recommended in this plan or through other means.

Policy 4.1.F – Encourage bicycle projects that connect local facilities to the regional bicycle corridors.

Policy 4.1.G – Coordinate with Caltrans and County road design planners, engineers and right-of-way agents to expand the right-of-way acquired for new, realigned or reconstructed roadways to accommodate bike lanes/paths and pedestrian ways, even if funding for construction is unavailable at the time.

Goal 5: Promote public health.

Objective 5.1 – Reduce childhood obesity through the planning, design and construction of projects eligible for Safe Routes to Schools Program funding.

Performance Measure 5.1 – Performance would be measured based on the number of new miles of bicycle improvements planned, designed and/or constructed within two miles of a public school bi-

annually; added signage; and on the number of new bicycle parking facilities added to schools and transit facilities regularly used by students.

Policy 5.1.A – Coordinate with the Trinity County Department of Public Health and area schools to expand bicycle routes and facilities that will encourage more students to ride bikes or walk to school.

Policy 5.1.B – Apply for Safe Routes to Schools Program funding for projects to expand the network of bicycle facilities designed to encourage students to safely ride bicycles or walk to school.

Objective 5.2 – Develop and implement education and encouragement plans aimed at youth, adult cyclists, pedestrians, and motorists. Increase public awareness of the benefits of bicycling and of available resources and facilities.

Performance Measure 5.2 – Annually review progress made in preparing, publishing and/or distributing information to encourage the use of non-motorized modes of transportation.

Policy 5.2.A – Produce a Trinity County Bikeways Map for public use that identifies commuter and recreational routes and includes bicycle safety and promotional information.

Policy 5.2.B – Develop adult and youth bicycle education, encouragement and safety programs.

Policy 5.2.C – Market the health benefits of bicycling.

Objective 5.3 – Consider “Health” as well as safety in the selection and development of non-motorized projects.

Performance Measure 5.3: Performance would be measured based on the number of new miles of bicycle improvements planned, designed and/or constructed bi-annually; added signage; and on the number of new bicycle parking facilities added to the system; CHP, County Health Department efforts to educate and train the public.

Policy 5.3.A – Continue to include “Health in All Policies” (HiAP) as a basis for policy development and decision making.

Policy 5.3.B – Include the County Department of Public Health in projects affecting the built environment to consider project planning and design approaches that can enhance public health opportunities.

Policy 5.3.C – Coordinate with school officials to develop and rank a list of safety improvements that could be eligible for Safe Routes to School funding.

Goal 6: Ensure disadvantaged communities fully share in program benefits.

Objective 6.1 – Ensure that communities having a median household income of less than 80% of the statewide median, based on the most current census tract level data from the American Community Survey, have an equal chance of having bicycle projects developed within their community.

Performance Measure: Inclusion of projects located within disadvantaged communities for funding consideration.

Policy 6.1.A – Demonstrate equity by applying for grants and other funding for projects within disadvantaged communities, particularly where safety is a concern or recreational opportunities are lacking and when scoring criteria for funding would be equal to any other project.

Goal 7: Provide a broad spectrum of projects to benefit many types of active transportation users.

Objective 7.1 – Provide a coordinated and, where possible, interconnected regional system of both transportation paths and recreation trails.

Performance Measure:

Policy 7.1.A – Coordinate with the Trinity County Resource Conservation District, U.S. Forest Service, Bureau of Land Management and other agencies to expand the amount of recreational trails and/or recreational and transportation paths in the County.

Policy 7.1.B – When possible, expand transportation related non-motorized projects to include connections with existing and proposed recreational trails.

Policy 7.1.C – When planning and developing additional recreational trails consider including equestrian interests.

Objective 7.2 – Consult and, where appropriate, coordinate with Native American Nations, Councils and/or Tribes to develop bikeway projects.

Performance Measure 7.2: Verification of contact notification, correspondence, sign-in sheets, meeting notes and other measures to document that Native American interests have been provided a genuine opportunity to participate in the bikeway plans and processes.

Policy 7.2.A – Maintain contact notification, correspondence, sign-in sheets, meeting notes or other measures to document that Native American interests have been provided a genuine opportunity to participate in the bikeway plans and processes.

Objective 7.3 – Include organizations and agencies that work with disadvantaged, low income, senior and/or disabled persons when designing and implementing bikeway projects.

Performance Measure 7.3: Verification of contact notification, correspondence, sign-in sheets, meeting notes and other measures to document that organizations and agencies working with disadvantaged, low income, senior and/or disabled individuals have been provided a genuine opportunity to participate in bikeway planning, design and implementation processes.

Policy 7.3.A – Where possible all multi-model projects should be designed and constructed to meet the standards of the Americans with Disabilities Act (ADA).

Policy 7.3.B – Maintain contact notification, correspondence, sign-in sheets, meeting notes or other measures to document that Native American interests have been provided a genuine opportunity to participate in the bikeway plans and processes.

5 RECOMMENDATIONS

Proposed Regional Bikeways Network and Bicycle Facilities

The bikeways projects proposed in this section were derived from a variety of sources including existing community plans, staff input, development opportunities, and public input as well as input from the Bicycle Advisory Group Steering Committee. Projects possessing the following general attributes were chosen as high priorities and worthy of the County's time and financial investment:

- ◆ Safety: Projects improving safety, particularly those meeting Safe Routes to School criteria
- ◆ Equity: Projects located throughout the geographical range of Trinity County, in disadvantaged communities, and designed to meet ADA standards
- ◆ Connectivity: Projects improving connectivity and promoting easier, less stressful opportunities for active transport between high use areas and that close gaps in the regional bicycle network
- ◆ Integrated Planning: Projects aligned with the goals stated in their corresponding community plans or the Trinity County Regional Transportation Plan
- ◆ Increase the overall use of bicycles as a mode of transportation

In addition to these characteristics, projects are recommended based on an assessment of travel time to work statistics and the corresponding likelihood of future use. Bicycling to work or school generally requires short commutes, typically less than three miles one way, which runs counter to many of California's historical land use and transportation policies which have had the effect of encouraging people to live farther and farther from where they work. Access to transit helps extend the commute range of bicyclists between communities, but transit systems also face an increasingly dispersed live-work pattern that is difficult to serve. Despite these facts, Trinity County has the potential to increase the number of local residents who ride to work or school along with visitors because of (a) the small size of its communities, (b) the proximity of its residential neighborhoods to jobs, (c) a climate where commuters could potentially commute over 200 days a year, and (d) a high percentage of work trips that are less than 15 minutes (60.8% of the employed population in 2008-2012) by car.

Although bike lanes, bike routes, and shared use pathways function as basic components of the bicycle system, a successful network of bikeways also depends upon other amenities and educational or encouragement programs to make it functional and user-friendly. Recommendations addressing the need for these additional components are included in this BMP.

The eight specific recommendations described below include high-priority projects that the BAC would like to take action on immediately or implement within 10 years. A list of long-term, lower priority

potential projects follows these recommendations. Table 6 provides a summary of the high-priority projects proposed in each recommendation.

A Summary of Recommendations

- #1: Promote Safe Commute Routes to School
- #2: Promote Bicycle Safety and Use of Safe Commute Routes to School
- #3: Close gaps in the Weaverville Basin Trail System
- #4. Provide Class I Hard Surface Multi-Modal Routes
- #5: Provide Bicycle Parking
- #6: Increase Usage of Bikeways Network Through Media Campaign
- #7: Install bicycle signage on State Routes 3, 36, and 299
- #8: Install bicycle signage on County Roadways

Recommendation #1: Promote Safe Commute Routes to School

Identify school commute routes that are most often used by youth getting to and from schools. For all recommended projects, include share the road arrows, striping, and signage that directs bicyclists to destinations and increases the visibility of the regional bicycle network.

Downriver

◆ Construct a 0.5-mile long Class II bike lane on Corral Bottom Road from State Route 299 to Cox Bar Elementary School in Big Bar. This route would allow students from the north side of the Trinity River to bicycle to school.

◆ Identify routes adjacent to State Route 299 that allow students to access Red Hill Road which lead to Junction City Elementary School. Possible routes east and west of Junction City include old highway, road, utility, or historical trail corridors.

In Hayfork

◆ Complete a 0.75-mile long Class II bike lane on Brady Road from State Route 3 to Ewing Reservoir in Hayfork. Although visibility is good, motorists using Brady Road tend to drive fast. Completion of this bike lane would allow students living in neighborhoods off Brady Road to bicycle to school more safely.

In Trinity Center

◆ Construct a 0.5-mile long Class II bike lane on Hwy 3 across Swift Creek from Airport Road to North Fork Cut Off. This route would serve students living north of Swift Creek to ride safely on State Route 3.

In Weaverville

◆ Complete a 0.1 mile long Class III bike route from the south side of Weaverville Elementary School to Brannan Street through the open space/wetlands. Creation of this route would allow students to avoid congestion on Washington Street (a major collector) and pass through an open space before exiting on to Brannan Street (a County road).

◆ Complete a 0.25 mile long Class III bike route from the north end of Ridge Road to Red Hill Road and from Red Hill Road west to Trinity High School. High school students from multiple neighborhoods on the north side of Weaverville could use this route.

◆ Complete a 0.2 mile long Class III bike route from Waterworks Avenue east across Ten Cent Gulch to Willow Street. This route would provide safer bicycling access to school for multiple neighborhoods west of Ten Cent Gulch including Taylor Street, Garden Gulch Street, Barbara Avenue, Easter Avenue, Ridge Road, and Red Hill Road.

◆ Complete a 0.1 mile long Class II bike lane from Pioneer Lane to Lance Gulch Road (upon completion of Lance Gulch Road). This route would provide access to safer routes for the Martin Road neighborhood.

◆ Complete a 0.75 mile long Class I bike route from the East Weaver Levee south, along the levee to the confluence of West Weaver Creek. This route would serve the Timber Ridge, Mill Street, and Masonic Lane neighborhoods.

◆ Construct 1.5 mile long Class II bike lanes on State Route 3 from Brooks Lane and East Weaver Creek Road to Weaverville Elementary School.

Recommendation #2: Promote Bicycle Safety and Use of Safe Commute Routes to School

Promote bicycle safety to elementary school children through classroom presentations given by the California Highway Patrol. Encourage commuter contests to increase participation and increase the visibility and regular use of the regional bicycle network.

Recommendation #3: Close gaps in the Weaverville Basin Trail System

Close gaps in the Weaverville Basin Trail System to complete connectivity of the entire WBTS with bridges or other safe trail passages at the following locations:

- ◆ Musser Hill/Hwy 3
- ◆ 299 @ West Weaver Creek crossing
- ◆ 299 @ Industrial Park

State Routes 3, 36 and 299 form the backbone of the Trinity County bikeways network while County roadways, private roads, and trails provide the remaining access corridors. The extensive network of

recreational trails included in the Weaverville Basin Trail System provides an unusually high number of trail miles that access nearly all neighborhoods in the Weaverville Basin. Although few of these trails meet Caltrans Class I standards, feedback received during public outreach efforts expressed interest in the potential to connect county roadways and trails in a way that diverts bicyclists from state highways onto safer alternative routes for school children and bicycle commuters. Closing the final three gaps in the WBTS will create a completely looped system which will provide the added benefit of immediate, improved connectivity of County roadways throughout the Weaverville Basin if plans develop in the future to connect County roadways to the WBTS.

Recommendation #4. Provide Class I Hard Surface Multi-Modal Routes

To encourage multiple modes of non-motorized travel including bicycles, roller blades, skateboards, strollers, walkers, and wheelchairs, construction of Class I hard surface routes are recommended in the Trinity County bikeways network as follow:

- ◆Construct a 0.5 mile long Class I Bike Path from Lowden Park to the Senior Center, including a pedestrian and bicyclist bridge over East Weaver Creek east of the park.

- ◆Construct the Lee Fong Trail, a 3.1 mile long Class I Bike Path connecting downtown Weaverville to the Industrial Park and County offices. This path would begin at Lee Fong Park and proceed south, adjacent to West Weaver Creek, to the Industrial Park. Connections to neighborhoods off of Mill Street, Masonic Lane, Mountain View Street, and Glen Road would be included in the project. Connections between the Class I Bike Path and the neighborhoods would consist of Class III bike routes.

Recommendation #5: Provide Bicycle Parking

Provide bicycle parking at all public destinations, including transit centers and bus stops, community centers, parks, schools, downtown areas, and civic buildings. All bicycle parking should be in a safe, secure, covered area (if possible), conveniently located to the main building entrance.

To encourage bicycling it is important to have bicycle parking facilities at key destinations. Figure 2 identifies parking facilities and where they connect with other modes of travel, such as transit and park-and-ride facilities. The inability to safely secure a bicycle at a destination is a deterrent to bicycling. The Goals, Objectives and Policies section of this BMP established performance measures (1.4 and 5.1) to address the need for bicycle parking facilities at schools, high use areas, and transit facilities as a method to encourage bicyclists.

Table 6. High-Priority Projects

| <i>Area</i> | <i>Project</i> | <i>Class</i> |
|---|--|--------------|
| | Recommendation #1: Promote Safe Commute Routes to School | |
| <i>Big Bar</i> | Bike lane from State Route 299 to Cox Bar Elementary School (0.5 mile) | II |
| <i>Hayfork</i> | Bike lane from State Route 3 to Ewing Reservoir (0.75 mile) | II |
| | <i>Bike lane from library to Rattlesnake Road (approximately 6 miles)</i> | II |
| <i>Hayfork</i> | Extend bike lane from high school to Frontier Village (0.75 mile) | II |
| <i>Trinity Center</i> | Bike lane from Airport Road across Swift Creek to North Fork Cut Off | II |
| <i>Weaverville</i> | Bike Route from Weaverville Elementary School to Brannan St (0.1 mile) | III |
| <i>Weaverville</i> | Bike Route from Ridge Rd and Red Hill Rd to Trinity High School (0.25 mile) | III |
| <i>Weaverville</i> | Bike Route from Waterworks Ave to Willow St (0.2 mile) | III |
| <i>Weaverville</i> | Bike Lane from Pioneer Ln to Lance Gulch Rd (0.1 mile) | II |
| <i>Weaverville</i> | Bike Path from East Weaver Levee to West Weaver Creek (0.75 miles) | I |
| <i>Weaverville</i> | Bike Lane from Brooks Ln and East Weaver Creek Rd to Weaverville Elementary School (1.5 miles) | II |
| | Recommendation #2: Promote Bicycle Safety and Use of Safe Commute Routes to School | |
| <i>Elementary Schools throughout the County</i> | Promote bicycle safety to elementary school children through classroom presentations given by the California Highway Patrol. | |
| | Recommendation #3: Close gaps in the Weaverville Basin Trail System | |
| <i>Weaverville</i> | Musser Hill Rd /Hwy 3 safe trail passage | I-III |
| <i>Weaverville</i> | SR 299/West Weaver Creek safe trail passage | I-III |
| <i>Weaverville</i> | SR 299/Industrial Park safe trail passage | I-III |
| | Recommendation #4. Provide Class I Hard Surface Multi-Modal Routes | |

| | | |
|---|---|---|
| <i>Weaverville</i> | Bike Path from Lowden Park to the Senior Center (0.5 mile) | I |
| <i>Weaverville</i> | Lee Fong Trail connecting downtown Weaverville to the Industrial Park and County offices (3.1 miles) | I |
| Recommendation #5: Provide Bicycle Parking | | |
| <i>Hayfork, Weaverville</i> | Bicycle parking at public destinations, including transit centers and bus stops, community centers, parks, schools, downtown areas, and civic buildings | |
| Recommendation #6: Launch a Multi-Media Campaign to Increase Bicycle Ridership and Promote Use of Bikeways and a Corresponding Reduction in Greenhouse Gas Emissions | | |
| <i>Elementary Schools throughout the County;</i> | Provide guide maps and trail descriptions, and establish a website with downloadable maps and trail descriptions to encourage more use of bikeways to local residents and tourists. | |
| <i>County Offices;</i> | Promote bicycle commuting as a method to reduce greenhouse gas emissions | |
| <i>Major Employment Centers</i> | | |
| <i>State Routes Throughout County</i> | Recommendation #7: Install signage on State Routes 3, 36, and 299 | |
| <i>County Roadways Throughout County</i> | Recommendation #8: Install signage on County Roadways | |

Recommendation #6: Launch a Multi-Media Campaign to Increase Bicycle Ridership and Promote Use of Bikeways and a Corresponding Reduction in Greenhouse Gas Emissions

Provide guide maps with trail descriptions and develop a website with downloadable maps, trail descriptions, and profile data to encourage more use of bikeways and a reduction in greenhouse gas emissions among local residents as well as tourists.

The California Air Resources Board (CARB) encourages implementation of transportation strategies that reduce vehicle emissions. Although a number of gases contribute to greenhouse gases (GHG), the U.S. Environmental Protection Agency reported that of the nation’s total U.S. greenhouse gas emissions in 2012, 82% of the emissions were carbon dioxide. Because carbon dioxide is the largest contributor to greenhouse gas emissions, and to simplify estimates of greenhouse gas reductions as a result of increased bicycle usage, this BMP focuses on carbon dioxide levels.

Estimates involving reductions in carbon dioxide emissions are somewhat easier to intuitively understand compared to the other greenhouse gases. The U.S. Energy Information Administration reports that about 19.64 pounds of carbon dioxide are produced from burning a gallon of gasoline that does not contain ethanol. About 22.38 pounds of carbon dioxide are produced by burning a gallon of diesel fuel.

In Trinity County, travel time to work statistics indicated that the three largest categories of travel time included a commute time of less than five minutes (21.7%), 5-14 minutes (39.1%), and 15-24 minutes (16.7%). Table 9 provides a summary of commute times, greenhouse gas emissions, and projections of greenhouse gas reductions.

Table 7. Commute Times to Work, GHG Emissions, and Potential GHG Reductions

| | <i>Travel Time to Work</i> | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| | Less than 5 minutes | 5-14 minutes | 15-24 minutes |
| Number of workers in Trinity County with this travel time | 915 | 1,648 | 705 |
| Percent of Total (Total number of workers in Trinity County not working at home 4,216) | 21.7% | 39.1% | 16.7% |
| Average roundtrip mileage | 4 | 10 | 20 |
| Average gallons of gasoline per roundtrip (Average of 17 mpg) | 0.23 g | 0.59 g | 1.18 g |
| Number of gallons of gasoline used annually by each worker with this commute time (260 work days per year) | 60 | 153 | 307 |
| Pounds of carbon monoxide generated for each worker with this commute time (Average 19 pounds/gallon of gasoline) | 1140 pounds/worker | 2907 pounds/worker | 5833 pounds/worker |
| Total pounds of carbon monoxide generated annually for all workers with this commute time | 1,043,100 pounds/all workers | 4,790,736 pounds/all workers | 4,112,265 pounds/all workers |
| Potential Reduction in Carbon Monoxide (Assuming 10% of workers with this commute time become bicycle commuters) | 90,402 pounds | 407,056 pounds | 348,270 pounds |
| Total tons of carbon monoxide reduction | 52 tons | 239 tons | 205 tons |

Greenhouse Gas Reduction Goal

Projections of GHG reductions are based on 10% of workers with a commute time of 24 minutes or less to becoming bicycle commuters. If this number of people became commuters, the County would benefit from a total reduction of 496 tons of carbon dioxide.

The Bicycle Advisory Committee has set the goal to reduce GHG emissions by targeting half this number of people. Our goal is to gain 162 new bicycle commuters (5% of the total work force in the County currently commuting 24 minutes or less to work) through educational presentations and public outreach

efforts in schools, County offices, and major employment centers. With the addition of these bicycle commuters, the County would benefit from a total reduction of 248 tons of carbon dioxide.

Recommendation #7: Install signage on State Routes 3, 36, and 299

Install signage on State Routes 3, 36, and 299 to improve safety for cyclists by improving motorists’ awareness with “Share the Road” signs. “Share the Road” signs are a signal to motorists that a bicyclist may be on the roadway and to stay alert. Trinity County bike route logo signs can be used to let bicyclists know they are welcome to use the roadway. These signs should be installed every two to three miles and at the county boundaries. The County will need to work with Caltrans to site and maintain the signs. More information about the use, design, and installation of signs can be found in Chapter 7, Design Guidelines. Provide a map of possible bicycle routes on State Routes to encourage and accommodate bicycle touring.

Recommendation #8: Install signage on County and Forest Service Roadways



Install signage on approximately 350 miles of County roadways to improve safety of cyclists. While the State highway system serves as the main spine of the countywide bikeway network, some county roads become spur bikeways from the State routes to reach more remote communities, campgrounds, and other places of interest. Because these roadways are generally low volume, narrow roads, only minimal signage is recommended. “Share the Road” and Trinity County bike route logo signs should be posted just off the main State Route and only periodically thereafter,

primarily at changes in direction. More information about the use, design, and installation of signs can be found in Chapter 7, Design Guidelines. Produce a map depicting suitable County and Forest Service Roadways for bicycle use.

Table 8 lists the County Roads and Forest Service roads included in the Trinity County bikeways network. This table does not include County roads within communities.

Table 8. County Roads on the Bikeways Network

| <i>County Road</i> | <i>Limits</i> |
|---------------------------------|--------------------------------|
| 13 Dips Road (Co 347) | SR 3 to Salt Creek Campground |
| 42N17 | Siskiyou County to SR 3 |
| Alder Point Bluff Road (F8C090) | Humboldt County to Co 516 |
| Coffee Creek Road (Co 104) | 1 mile west of SR 3 to SR 3 |
| Corral Bottom Road (Co 327) | 05N60 to CO 301 |
| Denny Road (Co 402) | SR 299 to Devil's Canyon Trail |
| East Weaver Creek Road (Co 228) | East Weaver Campground to SR 3 |

| | |
|-----------------------------------|---|
| Eastside Road (Co 106) | SR 3 to Shasta County |
| Hobo Gulch Road (Co 421) | 34N07Y to SR 299 |
| Hyampom Road (Co 301) | Hyampom to Hayfork |
| Long Canyon Road (Co 115) | 35N10 to SR 3 |
| Mad River Road (Co 501) | SR 36 to Ruth Store/Post Office |
| Mad River Road (Co 504) | Mad River Road (Co 501) to 27N02 |
| Post Mountain Road (Co 354) | Rattlesnake Road (Co 353) to SR 36 |
| Rattlesnake Road (Co 353) | SR 3 to Lower Rattlesnake Road |
| Rush Creek Road (Co 204) | SR 3 to Trinity Dam Blvd (Co 105) |
| Ruth Zenia Road (Co 502) | Mad River Road (Co 501) to Van Duzen Road (Co 511) |
| Ruth Zenia Road (Co 502) | Zenia Lake Mountain Road (Co 503) to Thompson Creek Road |
| Steel Bridge Road (Co 218) | Steel Bridge Campground to SR 299 |
| Swift Creek Road (Co 123) | Swift Creek Trailhead to SR 3 |
| Trinity Alps Road (Co 112) | Trinity Alps Resort to SR 3 |
| Trinity Dam Blvd (Co 105) | Mountain View Drive to SR 299 |
| Trinity Dam Blvd (Co 105) | SR 3 to Deadwood Road |
| Underwood Mountain Road (Co 417) | 05N60 to SR 299 |
| Van Duzen Road (Co 511) | 3 miles south of SR 36 to Ruth Zenia Road (Co 502) |
| Wildwood Road (Co 302) | SR 3 to SR 36 |
| Zenia Lake Mountain Road (Co 503) | Ruth Zenia Road (Co 502) to Mendocino County |
| Forest Service Roads | |
| Indian Valley Road | St. John to Tule Creek Road |
| Lower Rattlesnake Road | Rattlesnake Road (Co 353) to SR 36 |
| Lower South Fork Road (Co 311) | Big Slide Campground to Hyampom Road (Co 301) |
| Pelletreau Ridge Road | South Fork Mountain Road to Lower South Fork Road |
| South Fork Mountain Road | Pelletreau Ridge Road to SR 36 |
| Underwood Mountain Road (05N60) | Underwood Mountain Road (Co 417) to Corral Bottom Road (Co 327) |

In addition to the recommendations above, the Bicycle Advisory Committee recommends implementing another group of projects that are less time-sensitive but important to the overall development of a

comprehensive network of bikeways in Trinity County. Table 9 summarizes these projects as long-term undertakings that could be pursued within the next 20 years as funding is available. The basis of all of these projects is safety; all of the projects promote wider road shoulders to accommodate bicyclists.

Table 9. Long-Term Projects

| <i>Area</i> | <i>Project</i> | <i>Description</i> | <i>Class</i> |
|-----------------|-------------------------------|--|--------------|
| <i>Caltrans</i> | SR 3 | Siskiyou County to East Weaver Creek Rd | III |
| <i>Caltrans</i> | SR 3 | SR 299 to Big Creek Rd | III |
| <i>Caltrans</i> | SR 3 | Morgan Hill Road to SR 36 | III |
| <i>Caltrans</i> | SR 36 | Humboldt County to Shasta County | III |
| <i>Caltrans</i> | SR 299 | Humboldt County to Junction City Post Office | III |
| <i>Caltrans</i> | SR 299 | Dutch Creek Road to N. Miner St | III |
| <i>Caltrans</i> | SR 299 | Steiner Flat Road to Shasta County | III |
| <i>County</i> | 13 Dips Road (Co 347) | SR 3 to Salt Creek Campground | III |
| <i>County</i> | 42N17 | Siskiyou County to SR 3 | III |
| <i>County</i> | Alder Point Bluff Rd (F8C090) | Humboldt County to Ruth Zenia Road | III |
| <i>County</i> | Coffee Creek Rd (Co104) | 1 mile west of SR 3 to SR 3 | III |
| <i>County</i> | Corral Bottom Rd (Co 327) | 05N60 to Co 301 | III |
| <i>County</i> | Denny Road (Co402) | SR 299 to Devil's Canyon Trail | III |
| <i>County</i> | Eastside Rd (Co 106) | SR 3 to Shasta County | III |
| <i>County</i> | Hobo Gulch Rd (Co 421) | 34N07Y to SR 299 | III |
| <i>County</i> | Hyampom Rd (Co 301) | Hyampom to Hayfork | III |
| <i>County</i> | Long Canyon Rd (Co 115) | 35N10 to SR 3 | III |
| <i>County</i> | Mad River Rd (Co 504) | Mad River Road (Co 501) to 27N02 | III |
| <i>County</i> | Post Mountain Rd (Co 354) | Rattlesnake Rd (Co 353) to SR 36 | III |
| <i>County</i> | Rattlesnake Rd (Co 353) | SR 3 to Lower Rattlesnake Rd | III |
| <i>County</i> | Rush Creek Rd (Co 204) | SR 3 to Trinity Dam Blvd (Co 105) | III |
| <i>County</i> | Ruth Zenia Road (Co 502) | Mad River Rd (Co 501) to Van Duzen Rd (Co 511) | III |
| <i>County</i> | Ruth Zenia Rd (Co 502) | Zenia Lake Mountain Rd (Co 503) to Thompson Creek Rd | III |
| <i>County</i> | Steel Bridge Rd (Co 218) | Steel Bridge Campground to SR 299 | III |

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|-----------------------|------------------------------------|--|-----|
| <i>County</i> | Swift Creek Rd (Co 123) | Swift Creek Trailhead to SR 3 | III |
| <i>County</i> | Trinity Alps Rd (Co 112) | Trinity Alps Resort to SR 3 | III |
| <i>County</i> | Trinity Dam Blvd. (Co 105) | Mountain View Dr to SR 299 | III |
| <i>County</i> | Trinity Dam Blvd. (Co 105) | SR 3 to Deadwood Rd | III |
| <i>County</i> | Underwood Mountain Rd (Co 417) | 05N60 to SR 299 | III |
| <i>County</i> | Van Duzen Rd (Co 511) | 3 miles south of SR 36 to Ruth Zenia Rd (Co 502) | III |
| <i>County</i> | Wildwood Rd (Co 302) | SR 3 to SR 36 | III |
| <i>County</i> | Zenia Lake Mountain Rd (Co 503) | Ruth Zenia Rd (Co 502) to Mendocino County | III |
| <i>Douglas City</i> | Riverview Rd (Co 260) | End to Steiner Flat Rd | III |
| <i>Forest Service</i> | 2N10 Indian Valley Rd | St. John Rd (Co 316) to Tule Creek Rd (Co 317) | III |
| <i>Forest Service</i> | 30N54 Lower Rattlesnake Rd | Rattlesnake Rd (Co 353) to SR 36 | III |
| <i>Forest Service</i> | 3N10 Pelletreau Ridge Rd | South Fork Mountain Rd (USFS Rd 1) to Lower South Fork Rd (Co 311) | III |
| <i>Forest Service</i> | South Fork Mountain Rd (USFS Rd 1) | Pelletreau Ridge Rd (3N10) to SR 36 | III |
| <i>Forest Service</i> | Underwood Mountain Road (05N60) | Underwood Mountain Rd (Co 417) to Corral Bottom Rd (Co 327) | III |
| <i>Hayfork</i> | Morgan Hill Rd (Co 319) | Kyler Ave (HF17) to end of rd | III |
| <i>Hayfork</i> | Tule Creek Rd (Co 317) | Indian Valley Rd (2N10) to SR 3 | III |
| <i>Hyampom</i> | St. John Rd (Co 316) | Hyampom Rd to USFS Rd 10 | III |
| <i>Junction City</i> | Canyon Creek Rd (Co 401) | Canyon Creek Trailhead to SR 299 | III |
| <i>Junction City</i> | Dutch Creek Rd (Co 413) | Red Hill Rd to Sandy Flat Rd | III |
| <i>Junction City</i> | Red Hill Rd (Co 415) | Lake Rd to Senger Rd | III |
| <i>Junction City</i> | Sky Ranch Rd (Co 412) | SR 299 to Dredger Place | III |
| <i>Lewiston</i> | Deadwood Rd (Co 211) | Trinity Dam Blvd. to School House Rd | III |

Trinity County Bikeways Master Plan

| | | | |
|-----------------------|----------------------------|--|-----|
| <i>Lewiston</i> | Goose Ranch Rd (Co 215) | Lewiston Rd (Co 202) to School House Rd | III |
| <i>Lewiston</i> | Lewiston Rd (Co 202) | SR 299 to Fremont St | III |
| <i>Lewiston</i> | Lewiston Turnpike (Co 212) | Rush Creek Rd (Co 204) to School House Rd (Co 233) | III |
| <i>Lewiston</i> | School House Rd (Co 233) | Lewiston Turnpike (Co 212) to Lewiston Rd (Co 202) | III |
| <i>Trinity Center</i> | Airport Rd (TC 06) | SR 3 to Trinity Center Airport | III |
| <i>Trinity Center</i> | Mary Ave (TC 02) | Airport Rd (TC 06) to Azalea Dr (TC 07) | III |
| <i>Weaverville</i> | Garden Gulch St (WVC 43) | Easter Ave (WVC 47) to SR 299 | III |



6 IMPLEMENTATION AND EVALUATION

This chapter describes the estimated costs needed to implement and evaluate bicycle infrastructure projects, educational programs, and public outreach efforts recommended in this plan. The largest implementation hurdle to overcome is funding the recommended projects and programs. This chapter identifies costs that need to be verified for the proposed bicycle improvements, plus preliminary strategies on potential funding sources.

IMPLEMENTATION

Needed cost estimates are separated between high priority recommendations and long-term projects, as shown in Table 10. The total costs over 20 years for all projects and programs should be estimated. It is important to note that while many of the projects can be funded with federal, state, and regional transportation safety, and/or air quality grants, others are recreational in nature and must be funded by non-transportation sources or, if the recreation project meets ATP standards to qualify as a “multipurpose trail or path”, then partial funding may be available from a combination of programs. These funding sources and programs are described later in this chapter.

Table 10. Cost Estimates Needed for High Priority Projects Recommended in this BMP

| <i>Description</i> | <i>Known Quantity</i> | <i>Unit Cost to be Determined</i> | <i>Total Cost to be Determined</i> |
|---|--|-----------------------------------|------------------------------------|
| <i>Estimate By Recommendation</i> | | | |
| <i>Recommendation 1</i> Promote Safe Commute Routes to School | 0.75 mile Class I bike path | \$/mile | \$ |
| | 1.6 miles Class II bike lanes | \$/mile | \$ |
| | 0.55 mile Class III bike routes | \$/mile | \$ |
| <i>Recommendation 2</i> Promote Bicycle Safety and Use of Safe Routes to School | 22 schools | \$/school | \$ |
| <i>Recommendation 3</i> Close gaps in the Weaverville Basin Trail System | 3 safe trail passage over State Routes | \$/passage | \$ |
| <i>Recommendation 4</i> Provide Class I Hard Surface Multi-Modal Routes | 3.6 miles Class I bike path | \$/mile | \$ |
| <i>Recommendation 5</i> Provide Bicycle Parking | 5 bike racks | \$/rack | \$ |
| <i>Recommendation 6</i> | Design and printing | \$/map | \$ |

| | | | |
|---|------------------------|---------|----------------|
| Increase Use of Bikeways Network Through Media Campaign | Development of website | \$/hour | \$ |
| Recommendation 7 Install Signage on SR 3, SR 36, and SR 299 | 189 miles | \$/mile | \$94,500 (old) |
| Recommendation 8 Install Signage on County Roadways | 350.4 miles | \$/mile | \$87,600 (old) |

Funding Sources

There are a variety of potential funding sources including local, state, regional, and federal funding programs that can be used to construct the proposed bicycle and pedestrian improvements. Most federal and state programs are competitive and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Several funding sources available for bicycle and pedestrian projects are described in this section.

The current federal transportation law, “Moving Ahead for Progress in the 21st Century Act” (MAP-21), changed the funding flow but not the programs under which projects would qualify for funding. The one exception is that some projects that previously qualified only for recreation trail funding, may now, under specific requirements pertaining to transportation aspects of a project, qualify for transportation funding. MAP-21 reconstituted various federal transportation funding programs, including the former Transportation Enhancements Program, and creates the new federal Transportation Alternative Program comprised of various former separate programs.

Federal/State Funding

Federal funding passes through California for distribution. SB-99, approved by the Governor on September 26, 2013, created the Active Transportation Program (ATP). It eliminated the separate accounts for various bicycle and pedestrian improvement programs and instead moved that funding to the State Highway Account. It directed the California Transportation Commission to develop guidelines for the various active transportation projects and established specific goals to be met by the ATP (S&H, Sec. 2380). The goals in this plan are patterned after the ATP goals.

Instead of having separate grant applications for bicycle related projects, safe routes to school, pedestrian improvements, and recreation trails and park projects – those “that facilitate trail linkages or connectivity to non-motorized corridors, and conversion of abandoned railroad corridors to trails,” – the new ATP funding program uses one grant application process. The legislature declared that funding through the ATP program (from the State Highway Account) would be distributed in the following manner:

- 40% to Metropolitan Planning Organizations with populations greater than 200,000, awarded competitively;
- 10% for small urban and rural regions (populations of less than 200,000), awarded competitively;
- 50% for statewide distribution on a competitive basis;

- At least 25% of the overall program funds must benefit ‘disadvantaged communities’ during each program cycle. (There is no match requirement for grants benefiting disadvantaged communities.)

Regional/Local Funding

Regional and local funding sources are extremely limited, particularly due to the decrease in Secure Rural Schools funding. Under the Transportation Development Act, a small amount of funds could be available through Local Transportation Funds, although this source is contingent upon funds that remain after previous allocations have been made to higher priority purposes.

EVALUATION

Evaluating the County’s progress toward continually expanding non-motorized travel opportunities is critical to ensuring that planning, programs and facilities are effective and is necessary to understanding changing needs that should be incorporated in the planning process for interim amendments to the plan or for the next major update of the plan. Maintaining consistent count programs, reporting on progress, and convening the Bicycle Advisory Committee are methods for monitoring efforts and for holding agencies accountable to the public.

To evaluate the success of completed projects and to monitor the progress toward future projects, the Bicycle Advisory Committee should meet at least twice per year. During these semi-annual meetings, committee members will review planning needs and design updates for projects in progress and will re-assess the list of high priority projects to determine the most effective strategy for future implementation based on available funding and interest expressed by stakeholders.

7 DESIGN GUIDELINES

This section provides detail on the recommended design and maintenance of the Trinity County bikeway system.

Existing Bicycle Design Standards and Classifications

Design standards for bikeways have been developed by the American Association of Highway and Transportation Officials (AASHTO) and the California Department of Transportation (Caltrans). “Chapter 1000: Bikeway Planning and Design” in Caltrans’ *Highway Design Manual* (HDM) serves as the official design standard for all bicycle facilities in California. Design standards in Chapter 1000 fall into two categories, mandatory and advisory. Caltrans advises that all standards in Chapter 1000 be followed, which also provides a measure of design immunity to the County. Not all possible design options are shown in Chapter 1000. For example, intersections, ramp entrances, rural roads, and a variety of pathway locations are not specified in the HDM.

Caltrans classifies bikeways into three categories: Class I (off-street path), Class II (on-street bike lane), and Class III (on-street bike route). More detailed descriptions of these classifications are found on the following pages.

General Design Recommendations

All designated Class I, II, or III bicycle facilities should conform to the Caltrans *Highway Design Manual* Chapter 1000. Where facilities do not meet these criteria, they should not be referred to as Class I, II, or III.

Class I, II, and III Bikeway Design Guidelines

The following guidelines present the recommended minimum design standards and ancillary support items for Class I bike paths (also referred to as shared use pathways or multi-use trails), Class II bike lanes, and Class III bike routes.

All Class I bike paths should generally conform to the design recommendations in Table 11.

- Multi-use trails and unpaved facilities that serve primarily a recreation rather than a transportation function and will not be funded with federal transportation dollars may not need to be designed to Caltrans standards.
- Class I bike path crossings of roadways require preliminary design review.
- Landscaping, if any, should generally be low water native vegetation.
- Lighting should be provided where commuters will use the bike path. Lighting should be appropriately placed and/or shielded to limit impacts to adjacent properties.
- Barriers at pathway entrances should be clearly marked with reflectors and ADA accessible (minimum five feet clearance).

- Bike path construction should take into account impacts of maintenance and emergency vehicles on shoulders and vertical requirements.
- Provide two-foot wide unpaved shoulders for pedestrians/runners or a separate tread way, where feasible. Direct pedestrian to right side of pathway with signing and stenciling.
- Provide adequate trailhead parking and other facilities such as restrooms, drinking fountains, and telephones at appropriate locations, when feasible.
- Where bottlenecks preclude continuous bike lanes, they should be linked with Class III route treatments.
- A bike lane should be delineated from motor vehicle travel lanes with a solid 6" white line, per MUTCD. An 8" line width may be used for added distinction.
- Word and symbol pavement stencils should be used to identify bicycle lanes, as per Caltrans and MUTCD specifications.

Table 11 – Class I Bicycle Path Specifications

| | | Depth of Material |
|---|---|-----------------------|
| Pavement Type | Recycled Asphalt | 3" (75 mm) |
| | Asphalt ¹ | 3" (75 mm) |
| | Concrete ² | 3" (75 mm) |
| Sub-Base | Granite | 4-6" (100-150 mm) |
| | Gravel | 4-6" (100-150 mm) |
| Shoulders | Decomposed Granite | 2-4" (50-100 mm) |
| Width | Minimum 1-way Path | 5' (1.5 m) |
| | Minimum 2-way Path | 8' (2.4 m) |
| | Preferred 2-way Path | 12' (3.6 m) |
| Shoulders | | 2-3' (0.6-1.0 m) |
| Lateral Clearance | | 2-3' (0.6-1.0 m) |
| Vertical Clearance | | 8-10' (2.5-3.0 m) |
| | with Equestrians | 12' (3.6 m) |
| Striping | Center-line (none, dashed yellow, solid yellow) | 4" (100 mm) |
| | Edge-line (none or solid white) | 4" (100 mm) |
| Signing | | |
| Minimum Cross Slope | | 2% |
| Minimum Separation from Roadway ³ | | 5' (1.5 m) |
| Design Speed | | 20-30 mph (40-50 kph) |
| Maximum Super-elevation | | 5% |
| Barrier Posts | (minimum spacing) | 5' (1.5 m) |
| Lighting | (if night use expected) | 5-22 LUX |

Source: Caltrans Highway Design Manual Chapter 1000

¹ Asphalt may be unsuitable for bike paths in stream channels due to asphalt oils.

² A 6” concrete thickness may be used directly on compacted native materials.

³ Unless physical barrier provided

All Class II bike lanes should generally conform to the design recommendations in Table 12.

Caltrans provides recommended intersection treatments in Chapter 1000 including bike land “pockets” and signal loop detectors. The Public Works Department should develop a protocol for the application of these recommendations so that improvement can be funded and made as part of regular improvement projects.

- Signal loop detectors should be considered for all arterial/arterial, arterial/collector, and collector/collector intersections. The Caltrans bicycle detector stencil should identify the location of the detectors.
- Bike lanes (min. four feet wide) between right turn lanes and through lanes should be provided wherever available width allows, and right turn volumes exceed 150 motor vehicles/hour.

Table 12. Class II Bicycle Lane Specifications

| <i>Minimum Widths</i> | Adjacent Parking | 5’ (1.5 m) |
|-----------------------|--|--------------------|
| | No Parking ¹ | 4’ (1.2 m) |
| | Combination Parking Lane ² | 11-13’ (3.3-3.9 m) |
| <i>Striping</i> | Left side line: solid white stripe | 6” (150 mm) |
| | Right side line: solid white stripe | 4” (100 mm) |
| | Approach to intersections: Dashed white stripe | 100-200’ (30-60 m) |
| <i>Signing</i> | R81 Bike Lane Sign | |
| | Beginning of all bike lanes | |
| | Far side of all bike path crossings | |
| | At approaches and far side of all arterial crossings | |
| | At major changes in direction | |
| | Maximum ½ mile (0.8 km) intervals | |

Source: Caltrans Highway Design Manual Chapter 1000

¹ Minimum 3’ (0.9 m) between stripe and gutter joint.

² Rolled curb 11” (3.3 m), vertical

Class III Bike Routes

Class III facilities can be shared with either motorists on roadways or pedestrians on a sidewalk and is identified only by signing. There are no recommended minimum widths for Class III facilities, but when encouraging bicyclists to travel along selected routes, traffic speed and volume, parking, traffic control devices, and surface quality should be acceptable for bicycle travel. A wide outside traffic lane (14") is preferable to enable cars to safely pass bicyclists without crossing the centerline.

With the signing of Assembly Bill 1371 in 2014, the "Three Feet for Safety Act" requires the driver of a motor vehicle overtaking and passing a bicycle that is proceeding in the same direction on a highway to pass in compliance with specified requirements applicable to overtaking and passing a vehicle, and to do so at a safe distance that does not interfere with the safe operation of the overtaken bicycle, having due regard for the size and speed of the motor vehicle and the bicycle, traffic conditions, weather, and the surface and width of the highway. The bill prohibits, with specified exceptions, the driver of the motor vehicle that is overtaking or passing a bicycle proceeding in the same direction on a highway from passing at a distance of less than 3 feet between any part of the motor vehicle and any part of the bicycle or its operator. A violation of these provisions results in an infraction punishable by a \$35 fine. The bill also requires the imposition of a \$220 fine on a driver if a collision occurs between a motor vehicle and a bicyclist causing bodily harm to the bicyclist, and the driver is found to be in violation of the above provisions.

The use of sidewalks as bicycle facilities is strongly discouraged by Caltrans, even as a Class III bike route. Chapter 1000 suggests that designating sidewalks at a bikeway should only be considered under special circumstances:

1. To provide bikeway continuity along high speed or heavily traveled roadways having inadequate space for bicyclists, and uninterrupted by driveways and intersections for long distances.
2. On long, narrow bridges. In such cases, ramps should be installed at the sidewalk approaches. If approach bikeways are two-way, sidewalk facilities should also be two-way.

Signing

Bicyclists use many existing roads in Trinity County, but they are not always well noticed by motorists. Good signage can improve safety and enhance the bicycling environment in a very short time with relatively low costs. It will notify cyclists of the routes and the destinations they serve, and also let motorists know that cyclists are present.

All bikeway signing in Trinity County should conform to the signing identified in the Caltrans Traffic Manual and/or the Manual on Uniform Traffic Control Devices (MUTCD). These documents give specific information on the type and location of signing for the primary bike system.

Signs important in this plan include bicycle log signs, directional signs, safety signs, location signs, and kiosks as approved by Caltrans.

- Bicycle Logo Signs posted along the designated bikeways. This type of sign helps direct travel by having a bicycle logo and can also indicate the total number of miles to the end destination. Although route numbering systems are used in conjunction with these signs in some counties, they are not recommended in Trinity County.
- Bike Route and Bike Lane Signs are posted where existing or new bikeways conform to specific Caltrans standards. These signs provide assurance to cyclists that they can expect a consistent type of bikeway. In addition, the signs help advise motorists to expect bicycles on the designated street. This type of signage could have distance indicators in miles to the final destination.
- Safety Signs can be created that warn either motorists of bicyclists or caution bicyclists of oncoming motor vehicles. Both of these types of signs help increase safety.
- Location signs are needed to help bicyclists use off-street bike paths more easily.
- Kiosks could be placed along Class I bicycle paths that include a map and other helpful information about the route, safety and the County.

Fluorescent Yellow-Green Warning Signs

The “fluorescent yellow-green” (FYG) designation is the name of a color the FHWA approved as an option for warning signs about schools, pedestrians, and bicycles in an amendment to the *Manual on Uniform Traffic Control Devices* in June 1998.

The use of fluorescent yellow-green was extensively studied by the FHWA for six years before being approved for use. According to a 1992 FJWA study at five pedestrian and bicycle crossing in the Washington, D.C. area, the number of vehicles that slowed and stopped for pedestrians and bicyclists in response to FYG warning signs increased, and the number of conflicts of vehicles with pedestrians and bicyclists decreased. Another FHWA study in 24 jurisdictions indicated that the color enabled motorists to detect the signs with greater frequency and to recognize the signs from greater distances – especially in low light and foggy/rainy weather – than they were able to detect and recognize standard yellow warning signs. The higher rate of visibility is due to the fluorescent colorants contained in the signs which absorb high energy (short wavelength) light and re-emit lower energy (longer wavelength) light. Although the study found that many of the jurisdictions did not find significant changes in vehicle speeds in response to the FYG signs, motorists commented that the signs heightened their awareness of activity in the roadway environment.

MAINTENANCE

Most of the maintenance costs for bikeway facilities are associated with the proposed off-road bike paths, as bike lanes and routes are assumed to be maintained as part of the routine roadway maintenance. However, as bicycle lanes do require occasional restriping, replacing signs, and other

maintenance, approximately \$2,000 per mile annually can be expected based on experience in other communities.

Class I bike path maintenance costs are based on \$8,000 per mile which includes cleaning, resurfacing and restriping the asphalt path, repairs to crossings, cleaning drainage systems, trash removal, and landscaping. Underbrush and weed abatement should be performed once in the late spring and again in mid-summer.

In addition, these same maintenance treatments should be performed on Class II and Class III facilities. These facilities should be prioritized to include an accelerated maintenance plan that is already a part of on-going street maintenance. A maintenance schedule and checklist is provided in Table 13.

Table 13. Bikeway Maintenance Checklist and Schedule

| <i>Item</i> | <i>Frequency</i> |
|--|------------------------------|
| Sign replacement / repair | 1 – 3 years |
| Pavement marking replacement | 1 – 3 years |
| Tree, shrub & grass trimming / fertilizing | 5 months – 1 year |
| Pavement sealing / potholes | 5 – 15 years |
| Clean drainage system | 1 year |
| Shoulder and grass mowing | As needed |
| Trash disposal | Weekly / as needed |
| Lighting replacement / repair | 1 year |
| Graffiti removal | Weekly – monthly / as needed |
| Maintain furniture | 1 year |
| Fountain / restroom cleaning / repair | Weekly – monthly / as needed |
| Pruning | 1 – 4 years |
| Bridge / tunnel inspection | 1 year |
| Remove fallen trees | As needed |
| Weed control | Monthly / as needed |
| Maintain emergency telephones, CCTV | 1 year |
| Maintain irrigation lines | 1 year |
| Irrigate / water plants | Weekly – monthly / as needed |

EARTHEN TRAIL GUIDELINES

This section sets forth design and maintenance recommendations for earthen recreational trails. These recommendations reflect current thinking with respect to the functioning of low-impact multiple-use earthen trails. The earthen trail design recommendations are geared towards providing a high quality trail system that provides trail users with a high quality recreational experience. Proposed recommendations seek to meet the anticipated needs of a wide variety of trail users.

Because trails are bare earthen surfaces, erosion from rainfall, runoff, and trail use can produce significant amounts of sediments. Thus, potential trail impacts on local water quality should be considered. Trails can also impact groundwater, wetlands, wildlife, vegetation, community layout, scenic

values, and land uses. Because of these considerations, the design recommendations and maintenance program for the earthen trail system should aim to fulfill the following goals:

- Provide workable facilities for multiple users
- Preserve scenic resources
- Protect water quality, wetlands, floodplains, and streams
- Protect sensitive areas, including designated wildlife habitats and plant communities
- Protect historic resources
- Control erosion and protect exposed soil areas.

Define Levels of Challenge for Multi-Use Trails

Because the needs of trail users vary, trail specifications can be combined in different ways to develop level-of-challenge categories for multiple use trails in the trail network. By grouping the trails into three broad levels, decisions can be made about such issues as whether to provide abundant trail amenities, how wide to make bridge crossing, and other considerations.

Level I trails, the easiest category of multi-use trails, would be wide, low-gradient trails with large turning radii, few obstructions, and opportunities for half- and full-day excursions and/or loops of five miles or less. Such trails would accommodate the widest variety of uses and are also prime candidates for winter grooming. Level II trail users would expect to find moderate gradients, possibilities for longer excursions, and more rugged tread surfaces. Level III trails would have steeper overall gradients and pitches, narrower and more primitive tread surfaces, and possibly longer routes.

Table 14. Trail Characteristics by Level of Challenge

| Level I – Easiest | Level II – Moderate | Level III - Difficult |
|---|---|---|
| <ul style="list-style-type: none"> ➤ Many trail amenities ➤ High level of maintenance ➤ Signage indicating destinations within ½-1 mile ➤ Info kiosks on route ➤ Close ties with trail heads and restroom facilities ➤ Links to major destinations and commercial areas ➤ Limited sections of moderate grades ➤ High numbers of people present ➤ 12’ vertical clearance ➤ Trail treads – 24” wide ➤ Trail blazes always in sight | <ul style="list-style-type: none"> ➤ Moderate grades ➤ 10’ vertical clearance ➤ Moderate numbers of people present ➤ Good connectivity and signage to main trails ➤ Narrow treads, 18’ wide ➤ Signage indicating major destinations, 2-4 mile distances | <ul style="list-style-type: none"> ➤ Sections with steep grades ➤ Low numbers of people present ➤ Signage indicating major destinations, 3-5 mile distances ➤ Narrow treads ➤ Non-groomed ski trails |

Trail Design Considerations

Trail design considerations include gradient, overall elevations gain, sight distance, overhead and right-of-way clearing, radii for switchbacks and climbing turns, and tread width and conditions. Trails for different user groups may require specific design solutions and the people in the various users groups will have certain expectations about the location of amenities and the level of difficulty desired on an outing. Key user groups are hikers, mountain bikers and equestrians.

Sight Distance

When sight distance is limited, pullouts should be provided that can accommodate all types of trail users. For mountain bicyclists, it is important to provide sufficient sight distance for stopping at 15 mph on straight-aways and 5 mph on blind curves and switchbacks.

Tread Preparation of Support

It is recommended that wet areas be avoided when deciding on the location of any type of trail. If it is not possible to avoid a wet area, foundation rock should be used as a tread preparation. Under-drainage should be provided for water crossing trails that are also used during snow conditions.

When preparing the tread of a trail for hikers, gravel can be used in wet spots. For mountain bike trails, avoid using cobbles and other large materials and use elongated drain dips over water bars. Equestrian trails should be located on stable soils and in places where the tread can be drained.

Water Crossings

Some recommendations for water crossings on hiking, biking, or equestrian trails include:

- **Hiking:** If not on a bridge, the tread (rocks or logs) across water or wet areas should be a minimum of 12" wide, 24" apart.
- **Mountain Biking:** Ramps should be provided up to a bridge structure so cyclists do not have to dismount. Approaches to bridges should be straight.
- **Equestrian:** Provide stable, naturally-armored, in-water crossing near bridge structures with stinger trail to and from main trail. The water depth should be less than 24". The trail base through a ford should be 36" minimum. Large rocks should be removed. If a bridge must be built, it must have a load-carrying capacity to sustain the maximum number of loaded animals that can occupy it at one time. The width should be 48" minimum and railing should not snag packs.

Protect Water Quality, Wetlands, Floodplains, and Streams

Earthen trails have the capacity to change the timing, quantity, and quality of runoff by "short-circuiting" the natural hydrologic system and delivering both sediments and water directly to streams, wetlands, and riparian resources. For this reason, care should be taken to minimize the impacts of trails on these resources. Practices to achieve this protection include:

- **Avoid wet areas.** Trails should avoid wet areas, springs, floodplains, stream corridors, wetlands, and the lower portions of slopes, especially those that are north-facing.
- **Identify and map water resources within 200 feet of the trail system.** Accurately locating wetlands, streams, and riparian areas relative to the trail is an important element of trail planning. The location of these potential "receiving resources" for trail drainage and associated sediments will affect decisions about placement of trail drainage structures, maneuvering of maintenance equipment, season of work, interception and infiltration of trail drainage, and disposal of earth materials generated during maintenance activities.
- **Minimize crossings of streams and wetlands.** Minimize channel crossings and changes to natural drainage patterns.
- **Minimize trail drainage to streams and wetlands.** Minimize the hydrologic connectivity of trails with streams, wetlands and other water resources.
- **Keep heavy equipment off wet trails.** Avoid operating heavy equipment on trails when they are wet. Use alternate routes for heavy equipment when trails are wet.

- **Provide crossing structures where needed.** Where trails traverse wet areas, structures should be provided to avoid trail widening and damage at “go-around” spots. Crossing structures also help protect water quality, wetlands, and riparian areas.
- **Establish vegetative buffers between trails, streams, and wetlands.** Retain a buffer between trails and water resources by establishing riparian and streamside management zones (RSMZs), with which trail influences such as drainage, disturbance, and trail width are minimized.

The following practices are important in preventing or minimizing the impacts of trails in wet meadows:

- Groundwater and surface drainage should not be intercepted, diverted, or concentrated by in-meadow ditches, interception ditches, berms or fill embankments;
- Meadows should not be used for borrow materials;
- Upland roads should not drain directly to wet meadows;
- Culvers should not be below grade;
- Incision should not be occurring below the meadow surface;
- Discharge of human-influenced drainage should be by level spreading;
- Maintenance of existing ditches should only be carried out when needed and should not result in ditch deepening or sediment transport to wet meadow;
- Existing ditches should have frequent turnouts and plugs;
- Under-drains should have drop inlets and these should not be undercut;
- Outlet scour pools should not be present or enlarging;
- Headcuts should not be present;
- Upland species should not be invading;
- Meadow should provide base flows to downstream channel during dry season.

Protect Sensitive Areas, Including Designated Wildlife Habitats and Plant Communities

In today’s regulatory environment, resource-disturbing activities on federal lands such as construction of new trail alignments are subject to the requirements of federal ecosystem and watershed planning as well as the *Clean Water* and *Endangered Species Acts*. For this reason, decisions made during trail master planning that concern trail alignment, decommissioning and some kinds of maintenance will be subject to environmental impact analysis. A few over-arching principles can provide some guidelines for master planning, and hopefully steer many project elements away from the lengthy and expensive environmental assessment process.

- **Avoid new construction in late successional forest stands.** Minimize disturbances in late successional reserve stands of timber, which are characterized by older trees, often with closed canopy, and where certain flora and fauna area of concern for protection.
- **Utilize disturbed areas.** Utilize existing disturbed areas and clearings for trails and parking facilities, to the extent that such use does not detract from the area’s scenic quality.
- **Establish vegetative buffers for non-conforming uses.** Industrial and commercial uses adjacent to trails should be screened by means of fully planted native vegetative buffers at least 25 feet wide.
- **Establish riparian and streamside management setbacks (RSMS).** Vegetative disturbances such as thinning, pruning, and felling to improve canopy openings should be allowed as necessary to maintain existing trails in RSMSs. However, no heavy equipment should operate outside the trail clearing limits here. Stormwater discharges from roads and trails to the RSMS should be minimized to the maximum extent possible. Stormwater discharges that cannot be avoided should be designed for maximum treatment, sedimentation, infiltration, and level-spreading before entering the RSMS.
- **Avoid wet areas unless special construction techniques are used.**
- **On federal lands, make certain to coordinate with the U.S. Forest Service.** Numerous plant and animal species are protected on federal lands. Where disturbances for construction of maintenance of the trail system will occur on federal lands, it will be essential to coordinate with the U.S. Forest Service to assure that species inventory and protection protocols are followed.
- **Leave artifacts and document their location.**
- **Remove non-historic items.** Remove trash and objects foreign to the historic character of the resource.
- **Prevent uses that degrade the historic routes.**

Control Erosion and Protect Exposed Soil Areas

Earthen trails must be sloped so that their surfaces shed water and the materials supporting the tread remain structurally sound. Favorable drainage gradients are achieved in numerous ways, including cross-sloping (in-sloping, out-sloping, or crowning) and by means of rolling dips and water bars. It is essential to limit both the slope length and gradient of the road runoff to control erosion. The following drainage practices are commonly prescribed and are essential to the long-term stability of earthen trails and protection of the resources where runoff is directed:

- **Avoid steep trail grades.** Avoid steep trail grades in excess of 12 percent. It is very difficult to control drainage on steep grades, and erosion on steep grades is expensive to remediate.

- **Maintain minimum drainage gradients.** Maintain positive surface drainage by means of out-slope, in-sloped, or crowned sections having cross slopes of 3 percent to 5 percent. The road surface should be graded to shed water before it can run very far down the road.

Table 15. Rolling Dip/Water Bar Spacing in Different Materials

| Trail Grade | Trail Materials | | | |
|-------------|----------------------------------|--|--|--|
| | Coarse, rocky gravelly materials | Gravelly sands, silty sandy gravels, coarse pyroclastics | Silty clays, clays, fine sandy silty clay, weathered metavolcanics | Friable silts, fine silts and sands, fine decomposed granite soils |
| 2-4% | 280-300 ft. | 145-160 ft. | 121-136 ft. | 85-100 ft. |
| 6-8% | 230-250 ft. | 135-140 ft. | 106-113 ft. | 70-75 ft. |
| 10-12% | 175-200 ft. | 115-125 ft. | 80-97 ft. | 50-60 ft. |

Source: *Geotechnical / Materials Engineering Training Session*, by Keller and Vanderhust, USDA. Forest Service, Region V., 1982.

Notes: Spacing given is to avoid rilling in excess of one inch. In middle topographic position, reduce spacing 18 feet. In lower topographic position, reduce spacing 35 feet. On SW aspects, reduce spacing 15 feet. For each 10 percent decrease in slope steepness below 80 percent, reduce spacing 5 feet.

- Provide drainage at frequencies appropriate for soils and gradients.** Roll grades or undulate the road profile frequently to disperse water from the tread. Rolling dips and water bars provide essential drainage relief frequency that prevents erosion from damaging the earthen surface of the trail. Spacing depends on gradient and the erodibility of the native earth materials. Table 18 above summarizes drainage relief frequencies for low standard (non-surfaced roads, and can be used as a starting place of determining the necessary spacing of drainage features on trails.
- Assure that drainage facilities do not pose barriers to bicyclists.** Rolling grade dips must be “transparent” to bike wheel – that is, elongated so that riders roll smoothly through them – and must be angled at 45 degrees or so to the travel direction. They must fall at about 20 percent of slope so that they are “self-cleaning,” meaning that downslope-moving sediments delivered to them will be carried off the road in runoff. The mound and dip must be armored with gravel or rock.
- Prevent erosion at outlets of rolling dips and culverts.** Drainage outlets should be armored with rock to prevent erosion. Brush or native organic debris can be spread in lead-off ditches to slow the velocity of the runoff and facilitate the deposition of sediments. Even well-functioning rolling dips require maintenance.
- Install pipes and ditches as a last resort; assure funds are available to maintain them.** Road and trail under-drains (culverts) and associated ditches should be used only as a last resort to achieve good drainage. This is because these facilities require regular inspection and maintenance, and severe damage can result from their failure.

Table 16. Recommended Distance Between Culvert Cross-Drains

| <i>Trail Grade (%)</i> | <i>Soils with Low to Moderate Erosion Hazard (ft.)</i> | <i>Soils with High Erosion Hazard (ft.)</i> |
|------------------------|--|---|
| 0 – 3 | 500 | 325 |
| 4 – 6 | 400 | 230 |
| 7 – 9 | 325 | 160 |
| 10 – 12 | 280 | 130 |
| 12 + | 245 | 100 |

- **Avoid long sustained grades.** Avoid long, sustained grades that concentrate flows. Install grade breaks to get stormwater off the trail and to allow trail users a rest.
- **Avoid discharging trail runoff onto fill slopes and unprotected soils.** Concentrated runoff from trails can cause damage to fill slopes and unprotected soils adjacent to the trail. Discharge sites need to be carefully selected so that runoff velocities slowed and sediments settle out. Fill slopes should be armored where runoff is discharged onto them or the runoff should be conveyed in a down drain to a location where sediments can be deposited and the flow infiltrated.
- **Don't let watercourses run down the trail.** Descend to a water crossing from both sides of the channel so that streamflow cannot run down the road or trail.
- **Avoid floodplain stream crossing.** Cross streams at narrow spots where there is enough root support for bridge footing, the span will be out of reach of flood waters and the trail will not be subject to floodplain dynamics.
- **Select pipe sizes based on hydrologic data.** All culvert sizes should be prescribed based on the size of the contributing watershed and best hydrologic data available. If data are not available and the size of the contributing sub-watershed is 20 acres or less, add the number of acres in the sub-watershed to 8, then round up to the nearest even inch to estimate the culvert size.
- **Avoid maintenance activities that generate sediments.** To prevent the generation of sediments from runoff, only road surfaces that need to be reshaped should be bladed and only ditches that are plugged with sediments should be cleaned.
- **Season of work.** Maintenance work that results in disturbed earth should be delayed until after the wet season. Blading should be done when the trail surface materials are moist, but not dry.
- **Experience contractors.** Maintenance activities should be carried out by experienced contractors who have had input into the maintenance contracts, attended a pre-work site meeting, have had training, and are familiar with practices to protect the local water resources.

- **Disposal of excess earth materials.** Areas for disposal of excess earth materials generated during maintenance activities should be designated in the maintenance plan.
- **Management of spoils piles.** Excess earth materials that must be stored on slopes or where runoff from them can reach wetlands, riparian areas, streams or to other sensitive resources should be surrounded or covered with plastic or a thick layer of wood chips.
- **Stabilize disturbed earth.** Areas of disturbed earth should be seeded with native plant materials and mulched as soon as possible after disturbance.

Resolution from TCTC

To be completed at later date.

APPENDIX 2 ON-LINE LINKS TO VARIOUS PLANNING DOCUMENTS

1. Weaverville Basin Trails System w/ link to Master Plan
<http://tcrsd.net/index.php/2014-02-05-08-30-03/weaverville-basin-trail-system>
2. Trinity County Circulation Element
<http://docs.trinitycounty.org/Departments/Planning/Circulation%20Element.pdf>
3. Trinity County Regional Transportation Plan – 2005
<http://www.trinitytransportation.org/pg/files/Trinity-RTP-FINAL-REPORT-10122005.pdf>
4. Trinity County Regional Transportation Plan – 2010
<http://www.trinitytransportation.org/pg/Transportation-Planning-Documents.php>
5. Weaverville Community Plan
<http://docs.trinitycounty.org/Departments/Planning/Community%20Plans/Weaverville%20Community%20Plan.pdf>

APPENDIX 3 GLOSSARY OF TERMS

Active Transportation Plan: a written strategy including descriptions, maps, and data of existing and proposed conditions involving active modes of transportation such as bicycling and walking

Active Transportation Program: transportation law created by the California Legislature (SB-99; AB-101) to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidated federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation. The ATP is administered by the Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs.

Bicycle: a device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears, and having either two or three wheels in a tandem or tricycle arrangement.

Bicycle Commuter: a person making a trip by bicycle primarily for transportation purposes, including, but not limited to, travel to work, school, shopping, or other destination that is a center of activity, and does not include a trip by bicycle primarily for physical exercise of recreation without such a destination.

Bicycle Facilities: a general term denoting improvements and provisions to accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically defined for bicycle use.

Bicycle Network: a system of bikeways that may include bike lanes, bicycle routes, shared use paths, and other identifiable bicycle facilities.

Bicycle Rack: a stationary fixture to which a bicycle can be securely attached.

Bicycle transportation Plan: a plan to establish and implement a bicycle transportation system that includes, but is not limited to, the elements contained in Section 891.2 of the California Streets and Highways Code.

Bike path: see “Class I bikeway”

Bike lane: see “Class II bikeway”

Bike route: see “Class III bikeway”

Bikeway: all facilities that provide primarily for bicycle travel.

Class I bikeway: also known as “bike paths” or “shared-use paths” provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with cross-flows by motorists minimized.

Class II bikeway: also known as “bike lanes,” provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.

Class III bikeway: also known as on-street or off-street “bike routes,” provide a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Marked routes serve as connectors between other bike facilities, or provide direction to destinations. Route signage also has the effect of heightening drivers’ awareness of the presence of bicycles.

Complete Street: A transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the function and context of the facility.

Destination: Places where commuters travel such as schools, shopping areas, and workplaces.

Destination signage: signs found along bicycle routes that typically display distance, direction and in some cases, estimated travel time information to various destinations and activity centers.

Disabled Person: any individual who by reason of illness, injury, age, congenital malfunction, or other permanent or long-term temporary incapacity or disability, including, but not limited to, any individual confined to a wheelchair, is unable, without special facilities or special planning or design, to utilize non-motorized facilities and services as effectively as a person who is not so affected.

Disadvantaged Community: a community having a median household income of less than 80% of the statewide median based on the most current census tract level data from the American Community Survey; or on the smallest census based land area most closely approximating the boundaries of a community within Trinity County.

Electric Bicycle: also known as “e-bike” or “motorized bicycle” or “booster bike” or “pedelec” is legally classified as a “bicycle” in California. It is a bicycle with an integrated electric motor which can be used for propulsion. All have the ability to be pedaled by the rider and are therefore not electric motorcycles.

Manual on Uniform Traffic Control Devices (MUTCD): A document issued by the Federal Highway Administration (FHWA) to specify the standards by which traffic signs, pavement markings, and signals are designed, installed, and used. The California MUTCD is a state-

specific supplement that provides specific standards for bikeway and bicycle traffic control device development.

Multipurpose trails and paths: trails and paths that serve both recreational and transportation purposes and are generally eligible in the Active Transportation Program, so long as they are consistent with one or more goals of the program.

Multi-use Path: A facility that allows shared use by bicycles, pedestrians, skating, in-line skaters, joggers, and the non-motorized vehicle transportation and is not a sidewalk.

Non-motorized transportation facility: a facility designed primarily for the use of pedestrians, bicyclists, or equestrians. It may be designed primarily for one of more of those uses.

Pedelec: (from **pedal electric cycle**) refers to an e-bike where the *pedal-assist* electric drive system is limited to a decent but not excessive top speed, and where its motor is relatively low-powered. Pedelecs are legally classed as bicycles rather than low-powered motorcycles or mopeds.

Pedicab: a bicycle driven pedestrian taxi; rickshaw.

Roadway: The portion of the street, including shoulders, designed for vehicle use.

Safe Routes to School Project: 1) for ATP purposes, a project that is located within two miles of a public school or within the vicinity of a public school bus stop and that will directly increase safety and convenience for public school students to walk and/or bike to school; 2) a competitive funding program administered through Caltrans, in consultation with the California Highway Patrol, for the construction of bicycle and pedestrian safety and traffic calming projects.

Shared-use path: See Class I bikeway.

Trail: an unpaved route or path.

Transportation Alternative Program: (TAP) was authorized under Section 1122 of Moving Ahead for Progress in the 21st Century Act (MAP-21) and is codified at 23 U.S.C. sections 213(b), and 101(a)(29). Section 1122 provides for the reservation of funds apportioned to a State under section 104(b) of title 23 to carry out the TAP. The national total reserved for the TAP is equal to 2 percent of the total amount authorized from the Highway Account of the Highway Trust Fund for Federal-aid highways each fiscal year. (23 U.S.C. 213(a))

The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways

Wayfinding signage: signs found along bicycle routes that typically include mile-markers, route identification, and informational kiosks; they may also include directional signs; and they can help bicyclists avoid difficult and potentially hazardous road scenarios, such as steep terrain, dangerous intersections, highway and river crossings, or deteriorating road conditions.

APPENDIX 4 STANDARD BICYCLE INTERSECTION COUNTS SUMMARY

| Location | Time of Day | Intersection | Number of Bicycles |
|-------------------------------|-------------------|---|--------------------|
| Hayfork | | | |
| Thursday, October 2, 2014 | 10:00 am-12:00 pm | State Route 3, Brady Road | 18 |
| Saturday, October 4, 2014 | 12:00 pm-2:00 pm | State Route 3, Brady Road | 18 |
| Lewiston | | | |
| Saturday, September 20, 2014 | 10:00 am-12:00 pm | Lewiston Road, Trinity Dam Blvd. | 1 |
| Wednesday, September 24, 2014 | 10:00 am-12:00 pm | Lewiston Road, Fremont Street, Viola Lane | 0 |
| Weaverville | | | |
| Saturday, September 20, 2014 | 10:00 am-12:00 pm | State Route 299, Washington Street | 13 |
| Wednesday, September 24, 2014 | 10:00 am-12:00 pm | Forest Avenue, North Miner Street, South Miner Street | 0 |