

I. INTRODUCTION

The Hammond Coastal Trail Extension Analysis: From Trinidad to Fortuna is laid out to introduce readers to the trail development climate of the area, the Hammond Coastal Trail, the projects that built the trail, and the scope and goals of this extension analysis project before documenting the outcomes of this project. There is an in-depth Table of Contents provided for ease of use. Those readers that are familiar with the trail and its history, may wish to scan the introduction and history sections and resume in-depth review with Sections III. Methodology and IV. Route Ranking Criteria to become more familiar with methods and scope of this specific extension analysis project.

Section V. List of Identified Routes begins to document the project outcome and Section VI. Routes Selected for In Depth Analysis contains in-depth information on the priority routes including suggested conceptual designs, implementation strategies, and funding sources for the selected trail extensions. VII. Extension Analysis Recommendations further clarifies the required implementation steps, responsible agencies, and possible partner organizations for several trail development and extension projects including the two identified priority routes. The final sections include: VIII. Conclusion, IX. Contacts and Resources, and X. Appendices.

THE TRAIL DEVELOPMENT CLIMATE

Today, trails and trail development are gaining recognition as benefiting an area's tourism industry, improving community health, and enhancing quality of life. Trails have become "transportation corridors" and "economic development tools." This change in how trails are perceived, both locally and throughout the nation, has impacted the momentum generated toward local trail development. There are greater funding and technical support resources available for local efforts, in part because the types of organizations and programs funding trail development have increased.

During the earliest phases of development, the Hammond Trail was the only significant trail development in the County outside the National and State Parks. Currently, with the changes in perception of trails, there is a much greater emphasis on trails and subsequently, more trail development happening in the region than ever before. With this greater opportunity for trails comes additional responsibilities for those involved in the development. Trail development entities, be they County, City, consultants, or non profit organizations, now have a more challenging task of coordinating multiple trail planning efforts.

Coordinated planning has clear benefits. Not only is the potential for an integrated trail network within the region maximized, but by identifying potential connections between trails, a greater number and diversity of trail user needs will be met. Also, when trail planning and development entities work together, they increase their ability to secure trail funding for the region.

ULTIMATE GOAL FOR THE HAMMOND TRAIL

The ultimate goal for Hammond Coastal Trail partners, including the County of Humboldt Public Works Department, the California State Coastal Conservancy, (SCC), and the Natural Resources Services Division of Redwood Community Action Agency (NRS), is the completion of the Hammond Coastal Trail from Trinidad to Fortuna. Of particular concern to trail partners and advocates is linking the trail's central section, between Murray Road and Letz Avenue, known as the "Hole in the Hammond."

HAMMOND TRAIL PLANNING EFFORTS

Successful long-term trail development such as the Hammond Trail doesn't happen in a vacuum. Entities working to develop trails benefit from an understanding of past efforts and decisions which improves current decision-making, diminishes redundant actions, and makes current efforts more efficient and effective.

Early in the planning of the Hammond Trail, *completion* of the trail was defined as from "Trinidad to Fortuna". While this definition remains intact, it is worth noting that the original Hammond and Little River Railroad lines traveled from the North Spit of Humboldt Bay to Crannell. Historically, that railroad line never connected as far east as Arcata proper, or as far south as Eureka and Fortuna. Thus, defining the *Hammond* Trail from Trinidad to Fortuna, while not historically correct, reflects the desire of trail planners and advocates to develop multiple use trail linkages between all of the major coastal communities in Humboldt County. As multiple-use trail development in the region continues, it is entirely appropriate for future segments to be given names reflecting local significance, even if they are encompassed within the current definition of the *Hammond* Trail.

California Coastal Trail planning efforts separate from those extending the Hammond Trail, may bypass Fortuna when identifying a route for the "Mexico to Oregon" coastal trail. If the recommended routes do split, with the Hammond Trail heading to Fortuna and the Coastal Trail following a more coastal path, the Hammond Trail segment to Fortuna may become a spur of the Coastal Trail. While the Hammond Trail is currently part of the California Coastal Trail in its entirety, developing a Hammond spur to Fortuna provides diversity to the region's trail network and ties into trail development efforts in southern Humboldt.

The research and planning efforts that went into the creation of *The Hammond Coastal Trail Extension Analysis: From Trinidad to Fortuna*, have been coordinated with other ongoing trail planning efforts wherever possible. Those other efforts include:

- Trail-related efforts of Humboldt County Public Works and the Cities of Arcata, Eureka, Blue Lake and Trinidad
- McKinleyville Community Plan Update efforts with a particular focus on trail-related planning
- Humboldt Bay Trails Feasibility Study (State Coastal Conservancy-funded)
- Annie and Mary Rail-Trail Planning Project (State Coastal Conservancy-funded)
- Manila Dunes Recreational Area trails planning efforts
- Trail-related efforts of community groups including the Friends of the Hammond Trail,

the Blue Lake Trails Group, Friends of the Annie and Mary Rail-Trail, and the Humboldt Trails Coalition.

- Avenue of the Giants Trail planning efforts with the Avenue Trails Committee
- Redwood Region Pathway Implementation Strategy development project funded by the Humboldt County Association of Governments and the USFS Rural Communities Assistance Program

SCOPE OF THIS EXTENSION ANALYSIS

The *Hammond Coastal Trail Extension Analysis: From Trinidad to Fortuna* project was funded by the County of Humboldt through transportation planning funds provided by the Humboldt County Association of Governments (HCAOG). It has been completed by Natural Resources Services (NRS) in close association with the Humboldt County Department of Public Works.

This project included three components, culminating in this Extension Analysis Document. Component One was a cursory assessment and identification of possible extension routes and linkages to other trail in the region for the existing Hammond Trail. Component Two documented the possible routes, created ranking criteria, and prioritized the two highest priority routes and Component Three developed project-specific information on the two prioritized routes. The results of all three components are summarized in this document.

The goal of the Extension Analysis project is to facilitate the continued expansion of the Hammond Trail by assisting the Humboldt County Public Works Department staff. This assistance takes the form of gathering and documenting background and specific information that the Public Works Department, dealing with the very real road related concerns of the County, has little time or financial resources to pursue.

As stated in the workplan for this project:

“The proposed project will identify constraints and opportunities to coastal trail development and will prioritize potential trail projects. Project specific information including descriptions, conceptual plans, and cost estimates will be developed for a minimum of two of the highest priority projects. The specific project information will be geared to provide a basis for the County to conduct preliminary engineering, environmental permitting, and funding applications to enable construction of additional segments of the coastal trail.”

Figure 1. Humboldt County Location Map

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II. BACKGROUND

INTRODUCTION

The Hammond Coastal Trail is located along the central coast of Humboldt County in Northern California. The trail has been in development since the 1970's, when the County became interested in acquiring the abandoned Little River and Hammond Railroad properties for conversion to trails. With funding from several different agencies, including the California Department of Transportation (Caltrans) and the SCC, the County was able to acquire the existing railroad grade from the Mad River roughly 3 1/2 miles north to Clam Beach. South of the Mad River however, much of the abandoned railroad grade through the Arcata bottoms had been purchased privately. Thus, although the trail was envisioned to extend from Fortuna to Trinidad, trail expansion to date has been concentrated north of the Mad River on County-owned property.

Continued development of the Hammond Coastal Trail, both north to Trinidad and south to Eureka, Manila, and Fortuna, is a significant part of implementing Humboldt County's Trails Plan. Today, the multi-use trail provides an outstanding connection for bicycle commuters, linking recreational and educational opportunities, the communities of Arcata and McKinleyville, local businesses, schools, and parks. As envisioned, a fully completed Hammond Coastal Trail will provide even greater recreational and educational opportunities, as well as a safe non-motorized commuter corridor. The Hammond Coastal Trail also serves as a vital link in the California Coastal Trail. The Coastal Trail is planned to stretch from Mexico to Oregon, and has been recognized nationally as a priority by the Millennium Legacy Trails program.

Existing sections of the Hammond Trail provide one of the longest and best multi-use trailways in the county. With the majority of the trail either off-road or on low use rural roadways, the Hammond is a favorite commuter route, particularly for HSU students living in McKinleyville. The trail is also a recreational resource for all ages and types of users. Class I sections of trail are particularly favored by older residents, families, and those using in-line skates. The trail has been voted among the top three "best places to walk, jog, and bike" in the County for several years (Times Standard Annual Best of Humboldt County poll.)

Heavy use of the trail by local residents has sparked a great deal of community support for extending the Hammond Trail and increasing overall trail development in the area. During the most recent construction of trail, from Letz Avenue north through the McKinleyville Vista Point, inquiries were received daily regarding future plans for the trail, offering support for trail extension, and sharing appreciation for existing sections. Local business donated thousands of dollars of materials and special discounts, and local radio and television stations provided regular trail project updates to the public.

Overall, development of the Hammond Trail, and the resultant response from the community, has played a part in greater priority being given to trail and bikeway issues county-wide. In fact, the Humboldt Trails Coalition, an association of county-wide trail planning, management, development, and user groups was inspired by the Hammond Trail planning and construction process and has been meeting since 1999 to encourage greater trail development.

HISTORY OF HAMMOND TRAIL DEVELOPMENT

The original Hammond Trail route was planned and permitted by the County of Humboldt in the 1970's. A Coastal Development Permit and CEQA Negative Declaration were processed for the original construction phase of the trail route that followed the abandoned railroad corridor from the bridge over the Mad River to Clam Beach County Park. Initial trail improvements by the County of Humboldt included retrofitting the bridge over the Mad River for multi-use, and implementing upgrades to connect the trail north to Hiller Park.

Natural Resources Services (NRS), a division of Redwood Community Action Agency (RCAA), has been working on the continued development of the Hammond Trail since the early eighties. In concert with the County of Humboldt and several other government agencies, private landowners, and interested parties, NRS has been a driving force in continued funding acquisition and trail expansion. In 1987, several projects were funded by the California State Coastal Conservancy (SCC). These projects were the instigation for the development of an existing Third-Party Agreement between the County of Humboldt, RCAA, and the SCC.

Specifically funded by the SCC were two extensions of the Hammond Trail, as well as a feasibility analysis. In McKinleyville, the first trail extension from Hiller Community Park north to Knox Cove was completed by the County of Humboldt in 1987. This was followed, in 1992, by NRS extending the trail north from Knox Cove to Murray Road. The analysis, completed in 1994, identified and investigated possible routes to bypass an eroded section of the original railroad grade in order to connect the existing trail with Clam Beach.

The initial Hammond Trail feasibility analysis was conducted concurrent to the design and construction of the SCC funded trail segments between 1987 and 1994. Based on the recommendations within the 1994 *Hammond Trail Feasibility Analysis: An Analysis of Alternative Routes Between Murray Road and Clam Beach*, additional trail segments were planned and constructed between 1997 and 2000. These latest segments extend north of Letz Avenue, through the Caltrans Vista Point facility, and transition down the bluff towards Clam Beach County Park, near Strawberry Creek. Currently, a bridge across Strawberry Creek is planned to connect the trail with the Clam Beach County Park facilities and Clam Beach Drive. This bridge has been designed, funding has been awarded, and permits are being secured.

As a result of the research and analysis that went into the original *Hammond Trail Feasibility Analysis: An Analysis of Alternative Routes Between Murray Road and Clam Beach*, several trail easement-related developments also occurred. In 1992, communications established with landowners for the purpose of identifying different trail routes led to several offers to dedicate trail easements. One such offer, made by June Hartman, for an easement along her properties that parallel US 101 was never officially recorded.

Easements were also offered along Widow White Creek. At that time, NRS staff recommended to the staff of the County, the California Coastal Conservancy (SCC), and the California Coastal Commission (CCC), that they complete the proposed easement and property exchanges, which appeared to be the best option for completing the coastal trail. A County-owned section of the railroad grade, from just south of Widow White Creek to a point at the northwest corner of the Slagle property was given to the landowner. In exchange, the County received a permanent access easement for the purpose of developing a trail to and through the Widow White Creek

riparian corridor. This permanent easement lends protection to the riparian corridor as it extends from the centerline of the creek to the top of the northern bluffs. In addition, easement dedications were secured from the Hartman family for a section of trail approaching the planned Widow White Creek crossing site (then a proposed bridge) and from the McKinleyville Community Services District (MCSD) for the easement along their sewer pumping station access road (from the pumping station itself north to Letz Avenue). These easements follow the route now identified as the Pedestrian / Interpretive Route.

The easement acquisition and subsequent decision to develop Widow White Creek Pedestrian / Interpretive Route set the stage for permitting and planning. However, during the permitting process, the area experienced several severe winters and changes in the meander pattern of Widow White Creek began to be apparent. At the proposed bridge site, winter storms blew down several mature trees. Although none of the trees would have directly hit the proposed bridge, it was decided that a smaller scale crossing would be more appropriate until the creek meander pattern stabilizes. This pedestrian-only interpretive trail designation allows for optimum public benefit as an interpretive footpath, fully utilizes the dedicated easements, and affords protection to an invaluable riparian corridor within the community of McKinleyville.

A major factor in developing the Pedestrian/Interpretive Route along Widow White Creek was the broad support for the route. This route is supported by all of the agencies involved including Humboldt County Public Works, the SCC and the CCC. The Slagle and Hartman families, as well as MCSD staff, made securing the easements possible. However, this trail was never intended to meet the needs of all trail users. From its initial consideration as a connection between Murray Road and Letz Avenue, the trail was planned for pedestrian use. Equestrian use was also briefly considered but was rejected due to long-term maintenance issues and potential impacts to the riparian habitat. A desire to share the interpretive values along this route led to its development, but the need for a “bicycle bypass” (later a bicycle and equestrian bypass) was *always* part of the plan for the trail.

THE “HOLE IN THE HAMMOND”

Multi-use trail now exists from the Mad River Bridge north to Murray Road, and from Letz Avenue north to Strawberry Creek at Clam Beach County Park. However, there is a “Hole in the Hammond” between these two trail segments that extends from the intact railroad grade near Murray Road north to Letz Avenue.

Connecting the “Hole in the Hammond” gap is a priority for the Humboldt County Public Works Department (which contains the County’s Trails and Recreation personnel.) It is also a priority of other trail partners, including NRS and the SCC, and the community as shown through the level of public support and interest.

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III. METHODOLOGY

The *Hammond Coastal Trail Extension Analysis: From Trinidad to Fortuna* project was conducted by the staff of Natural Resources Services, working in conjunction with the staff of Humboldt County Public Works and Community Development Departments and the local (District 1) personnel from the California Department of Transportation (Caltrans). Efforts were also coordinated with other trail development and management entities and private landowners, where appropriate.

In Component One of the contract which funds this Extension Analysis, possible alternative routes were identified which provide potentially fully accessible, multi-use trail access north of Strawberry Creek to Trinidad, south from the Arcata Bridge to Fortuna, and in the “Hole in the Hammond” between Murray Road and Letz Avenue. Where possible routes exist that may not meet multi-use or full accessibility standards, those constraints were noted. To locate possible routes, NRS staff conducted research of existing planning and trail-related documents, reviewed air photos and maps, and conducted on-site investigations. NRS staff assessed:

- Approximate trail sections within each general route
- Topographic opportunities and constraints
- Creek, tributaries and drainage information
- Potential bridge locations, where necessary
- Existing land ownership and easement information
- General vegetative composition and environmental conditions along routes
- Permitting issues, habitat, and cultural concerns
- Road and highway features

The identified routes are described briefly (location and a general identification of opportunities and constraints) in Section V of this document.

In Component Two of the contract, ranking criteria were developed. The existing Goals and Objectives for the Hammond Trail were reviewed and updated. Combined with this was input from Humboldt County Public Works Department. The foundation for, and the updated Goals and Objectives of the Hammond Trail, can be found in Section IV. Route Ranking Criteria.

Contract Component Three includes compiling project specific information on the two priority trail segments identified in Component Two. This information is summarized in Section VI with additional information contained in various appendices. The content of the project-specific information was developed by NRS and Humboldt County Public Works, based on what would best facilitate moving trail development of the “Hole in the Hammond” section from the planning phase into the construction phase.

IV. ROUTE RANKING CRITERIA

RANKING CRITERIA

As stated, the ranking criteria for this project consisted of two elements: 1) the input of Humboldt County Department of Public Works staff, and 2) a review and update of the original Goals and Objectives of the Hammond Trail. A summary of the review and update of the Goals and Objectives follows, as well as the updated Goals and Objectives. The primary element in creating the ranking criteria was the request by Don Tuttle, Deputy Public Works Director, that the focus of the in-depth research be on the unconnected, central section of the trail. He recommended the Widow White Pedestrian Interpretive Trail and selection of a Bicycle and Equestrian trail linkage be identified as the two priority projects.

FOUNDATION OF THE GOALS AND OBJECTIVES

The Goals and Objectives for Hammond Trail Development are similar to those set for the 1994 *Hammond Trail Feasibility Analysis: An Analysis of Alternative Routes Between Murray Road and Clam Beach*, with some modifications, clarifications and additions. The foundation for the goals and objectives are based upon the relevant goals, objectives, and policies of the trail development partners, as well as relevant trail development considerations, as detailed below.

Humboldt County's Trail Goals and Policies

Humboldt County is the lead agency for trail permitting and the primary trail management and maintenance entity. The development of recreational trails is discussed in the 1979 Humboldt County General Plan, Volume 1. The continuing development of transportation and recreation trails is listed as "part of the overall long range goal of achieving a coordinated and balanced transport system." Further, the plan states "...a functional trails program in Humboldt County will come as a result of public need and comprehensive planning which takes into account environmental and various financial considerations, land uses, and property owner concerns." Where trails cross private lands, the General Plan states that Eminent Domain should be a last resort for property acquisition, and should not be employed at all to cross lands in agricultural or timber production.

The 1979 General Plan also provides standards for reviewing potential accessways to trails. The accessway should be consistent with adjacent land use and intensity of development, minimize the likelihood of trespass and vandalism of adjacent property, and have no adverse impact upon the adjacent landowners' use of property. In addition, the following trail-related specific Policies are listed in the General Plan:

- Develop an accessible trails network...including trails within and between communities, parks, and other publicly owned lands;
- Encourage the development of trails with varying lengths and difficulty through diverse terrain, scenery, and points of attraction;
- Blend trails into the natural environment to reduce environmental disruption; and,

- Encourage the placement of landscaping along horse-trails located adjacent to roadways to serve as safety and/or visual screens between trails and vehicle lanes.

California Coastal Conservancy's Goals and Purposes

The California Coastal Conservancy (SCC), a primary funding source and partner in Hammond Trail development and construction, outlines its trail-related goals, standards, and purposes in their document "The California Coastal Trail: An Inventory of Missing Links and Completed Segments." Applicable items include:

- Providing access to and along California's 1,100-mile coast, as specified in the California Coastal Plan of 1975;
- Linking existing trail segments to form a continuous trail system from the Oregon border to the border of Mexico;
- Coordinating Coastal Trail development and rights-of-way establishment with Local Coastal Plans, local and state agencies, and local trail groups;
- Promoting multiple uses wherever possible; and
- Promoting linkups with existing trails in the California state trails system.

Caltrans Definitions and Standards

Caltrans, as a source of funds via the Environmental Enhancement and Mitigation Grant and other programs, has been an active participant in the development of the Hammond Trail. As the management entity for public land over which sections of existing and proposed trail cross, Caltrans has also been consulted during the design of those trail sections. Therefore, it has become necessary to understand and take into account Caltrans' trail-related standards and guidelines. Caltrans' guidelines are contained in their *Highway Design Manual*, which focuses on accommodating bicycle commuters, one user group accommodated by multiple-use trails. The guidelines are primarily minimum standards for the three classifications of bikeways.

Within the Caltrans' *Highway Design Manual, Chapter 1000 – Bikeway Planning and Design*, are a number of statewide definitions, planning criteria, and detailed design standards for bikeways. A Class I bikeway, by definition, "Provides a completely separated right of way...for the use of bicycles and pedestrians with crossflow minimized" (Topic 1001, Index 1001. 1 – Definitions, 1995). The *Design Manual* further states that:

An important consideration in selecting the type of (bikeway) facility is continuity. Alternating segments of Class I and Class II (or Class III) bikeways along a route are generally incompatible, as street crossings by bicyclists are required when the route changes character (Topic 1002 – General Planning Criteria, 1002.1 Introduction).

In addition, Caltrans has very detailed specifications for the design of Class I bikeways in the *Highway Design Manual, Chapter 1000*. These specifications are too detailed to be contained here, but include such elements as maximum grade, trail width, visibility, and turning radius. (The Design Manual can be found on the internet at:

www.dot.ca.gov/hq/tpp/Bicycle/bikeguid.htm) These standards have also influenced the planning, preliminary design considerations, and route selection criteria for expansion of the Hammond Trail, particularly those sections planned to meet Class I Bikeway standards. While these Class I standards clearly accommodate most wheeled users, the designs must be adapted for true multiple-use. Adaptations used on existing sections of the Hammond Trail include an

unpaved “shoulder” along the bikeway that better serves the needs of pedestrians and equestrians.

“Landscape” Considerations

During the early planning stages for each new trail segment since the mid-1980’s, NRS staff have been the primary “on-the-ground” researchers, giving them a significant understanding of the “landscape” in which the trail fits. The purpose of this section is to inject that intimate knowledge of the “landscape”—the physical, safety, and land ownership environment— which affects the route selection process.

Physical constraints, which affect route selection, include the possibility of migration by creeks and rivers, slope stability, and the presence of sensitive habitats or species. It is neither cost effective nor reasonable to route a trail where a creek or riverbed is soon likely to erode the trail or a trail crossing. Similarly, trail designers must consider topography in route selection, particularly in selecting a route that can meet the multi-use goals and guidelines for grade changes, and balance the need for a stable trail with the costs of stabilizing cross-slope structures. Finally, the presence of sensitive species or habitat affects trail route selection. Regardless of the fact that acquiring the appropriate permits and environmental clearances is dependant upon mitigation of any harm trail construction may cause to local, state, or federally listed species and habitats, trail partners are committed to environmentally-appropriate and sensitive trail development.

Another physical constraint is the presence of State Route (Highway) 101, which bisects the study area. Safety and cost related concerns limit the routes considered by this study to existing crossings of the four-lane divided highway. Similarly, the presence of State Route 101’s primary McKinleyville feeder roads, Murray Road and Airport Road, also limit the routes considered. Routing the trail along these busy streets, connecting to them, or having the trail come anywhere near freeway off ramps presents special safety and design requirements and additional costs to be considered.

When considering the routing of a multiple-use trail along existing streets, safety is a priority. Additionally, an assessment should be made of whether the potential on-street route meets the needs of the targeted users. Each individual user assesses the street environment—number of cars, speed of traffic, road surface, presence of trash in the shoulder or edge of lanes, width of lanes, presence of on-street parking, number of driveways and street crossings, and so on. Then the user determines whether to use a given route based upon their individual characteristics—type of user (equestrian, cyclist, in-line skater, family with stroller, etc.), age or skill, and comfort with the above environment (known as the user’s “perception of hazard”). In addition, the directness of the route is considered. An assessment of these environmental and user characteristics can be completed to gauge whether the route is likely to be used by the targeted users.

Complex property ownership issues and the County’s policy of working only with willing landowners, combined with a lack of existing coastal north-south public access within the study area, further limit the routes studied. Potential routes crossing private property are deemed viable alternatives for study **only if** landowners have expressed some willingness to consider easement dedications or acquisition. In addition, routes affecting one or two landowners are generally

preferred to those affecting many. Similarly, where routes are suggested along existing roadways, easements could potentially be acquired to create a separate Class I pathway. However, research of this magnitude to plan street routes to Class I Bikeway standards is beyond the scope of this study. Routes along existing streets are therefore analyzed as Class II or III, as noted.

Natural Resources Services' Contribution

The final contributor to the goals and objectives is Natural Resources Services (NRS). NRS staff have been working on the development and design of the Hammond Trail since the mid-1980's. As a Hammond Trail development partner NRS, has synthesized the input of other partner agencies and also contributed toward the goals and objectives of this Extension Analysis. Due to NRS' role, NRS staff have a unique perspective on issues associated with a grant-funded, multi-agency, multiple-landowner trail development effort. For both Caltrans and the County of Humboldt Public Works Department, the Hammond Trail is a very small part of their much larger, primarily road-focused, programs. For NRS, extending the trail has had greater priority, particularly as the organization receiving and managing trail-related grant funding with clear deadlines for expenditure. This commitment to the continued development of the trail--in whatever form it eventually takes--gives NRS a different view.

NRS has become a driving force behind continued extension of the Hammond Trail. The mandates and goals of each trail development partner agency and funding source, while generally similar, do sometimes differ. NRS has historically encouraged the partners to work together to resolve these differences, keeping firmly in mind the common goal of construction of a multi-use trail. NRS' role includes facilitating the movement of information between the involved local and state agencies, as well as highlighting the needs and requirements of adjacent landowners, users, and funding sources. NRS has been able to share new ideas, look beyond existing standards and methods (that were largely designed for road development), keep sight of the fact that this is a *trail* project that benefits the public and has limited funding available.

In particular, there is a need for balancing a very cost effective trail design (to make the best use of available grant funds), the design standards of the public agency partners and the long-term maintenance costs the County must bear, as well as the implementation deadlines, full accessibility requirements, and other demands placed on a trail extension project by public funding. Often, the specific demands placed on a trail segment differ depending upon the funding source, which may not be identified in the route selection stage, and so some flexibility in overall planning is necessary. For instance, a trail segment funded by a transportation grant program may be required to meet Class I bikeway standards because of the transportation emphasis of the grant program, whereas the same trail segment funded by a health conscious funding source may require fitness equipment be installed along the corridor, or air quality related funding may require trees to be planted along the corridor. Each of these example trails would follow the same general route, but may have different trail surface and corridor width requirements.

Part of the purpose of a document such as this is to select a trail route that is "realistic"-- capable of being built with existing resources-- as well as able to meet the needs of trail users into the foreseeable future. Over the years, the Hammond Coastal Trail has been consistently designed and constructed with the goal of meeting the needs of trail users including recreational cyclists,

commuter cyclists, pedestrians, equestrians, and, as much as possible, mobility-challenged users. Frequently, meeting these needs has been with designs that reflect the highest Bikeway design standards reasonable for each segment. When it is not possible to meet Class I standards, trail planning and design decisions attempt to preserve the *opportunity* to upgrade trail segments to those standards at a later date. Thus, an additional goal of NRS is to select routes that provide for the greatest opportunity to fulfill the definition of Class I Bikeways, now or in the future, so that the entire Hammond Trail can eventually meet the needs of the greatest number of trail users.

Finally, in a grant-funded trail development project, route and design considerations that affect overall project costs must be balanced with the issue that if costs per trail mile get too high, no funding will be secured. Although a specific dollar amount per mile has not been identified as being “too much”, trail planning and route decisions must take into account cost related consequences and strive to be “reasonable”. Generally, trail developers will recognize cost-prohibitive routes, designs, and specifications, even without a set monetary definition.

GOALS AND OBJECTIVES OF THIS EXTENSION ANALYSIS

The Goals and Objectives for Development of the Hammond Trail are:

Goal 1. The completion of the Hammond Coastal Trail furthering the vital link between communities, schools, businesses, and recreational opportunities.

Objectives:

- Select a preferred route that provides a realistic option for completing the trail.
- Select a route that fulfills the needs of all trail user groups including pedestrians, bicyclists and other wheeled users, equestrians, and the differently-abled.
- Prioritize in multiple-use route selection, those routes which facilitate a minimum design of 8’ width for cyclists and wheeled users plus a 4’ width for equestrians and pedestrians.
- Provide a direct link between existing trail segments, and the businesses, schools, and recreational opportunities available near the trail.
- Select a route with reasonable costs associated with planning, permitting, and construction.
- Continue the momentum of community and local business support through trail extension and development.

Goal 2. To maintain the coastal influence and coastal access.

Objectives:

- Maintain coastal character by remaining as close to the coast as is reasonable given habitat, stability and cost limitations.
- Route options west of Highway 101 have greater coastal character.

Goal 3. To select a route that is direct and that encourages the public to stay on the trail between access points.

Objectives:

- Consider, where feasible, the connection of existing trails thereby discouraging unwanted uses where trail sections remain disconnected for long periods or dead end.
- Select trail routes with natural features that encourage users to stay on designated trails. This includes topographic features as well as a suitable distance from residential homes, agricultural operations or sensitive habitats.
- Encourage trail users to stay on the designated trail route through the use of trail design features such as appropriate fencing and screening and an aesthetic, natural setting.

Goal 4. To meet the requirements of local plans and authorizing agencies.

Objectives:

- Plan trail development that meets the goals and objectives of local plans.
- Include knowledge of environmental permitting issues of authorizing agencies in trail development decision making.

Goal 5. To provide a safe, low-maintenance trail.

Objectives:

- Prioritize off-street routes during trail development and route selection.
- Where routes must utilize roadways, prioritize those streets with the lowest volume and speed of auto traffic.
- Prioritize trail user safety when routing trails across roads and highways.
- Route selection that incorporates whether potential on-street routes meet the needs of the targeted users. Considerations should include both actual safety information and “perception of hazard” information.
- Include in trail development and decision making trail routing and design issues to minimize the costs and demands of long-term maintenance.

Goal 6. To be consistent with adjacent land uses and be sensitive to the concerns of adjacent land owners in trail planning and easement acquisition.

Objectives:

- Select routes that are compatible with adjacent land uses and zoning.
- Incorporate trail development and design that addresses adjacent landowner concerns.
- Prioritize routes that utilize lands in public ownership.
- Prioritize routes that utilize trail access agreements or lands granted by willing landowners.

Goal 7. To select a route that provides a diversity of terrain, scenery, and learning opportunities.

Objectives:

- Provide a quality aesthetic experience for trail users.
- Include opportunities for education and interpretation in trail development and management decision-making.
- Include connection of varied recreational opportunities in trail development.

Goal 8. To select a route that enhances the environment and/or mitigates for any significant disruption to the environment.

Objectives:

- Consider topography, stability and the presence of sensitive habitat when making route selection and trail design decisions.
- To avoid, or completely mitigate, trail impacts upon the environment.
- Where possible, incorporate trail improvements that blend with and enhance the environment.

Goal 9. To create a diverse trail system that provides trail loops and sections of varying lengths and difficulties to accommodate a variety of users.

Objectives:

- Selection of trail routes and development options that meet the needs of all trail user ages, capabilities, and skill levels. This includes designing trails with a variety of surfaces, lengths, interconnections (loop trails), and grades, as well as both on-and off-street cycling options.
- Make route selection and trail design decisions that maximize availability of fully accessible trails.
- Develop trails that provide a variety of habitat, scenery, and interpretive diversity.

As previously stated, these goals and objectives have been adopted as the secondary criteria for identification, ranking, prioritization, and analysis of routes considered in the Hammond Coastal Trail Extension Analysis project. The primary criteria was the input and direction received from Humboldt County Public Works staff.

V. LIST OF IDENTIFIED ROUTES

Railroads on the North Coast

The North Coast Railroad Association (NCRA) owns and manages the “active” railroads in Humboldt County. Although there is currently no service on the rail line north of Willits, the NCRA management plan calls for returning service to the area as soon as they are financially able. Trail options along railroad corridors may be either “rails-to-trails” where an unused rail line is legally abandoned and permanently converted to trail, “rails-with-trails” where the rail service is preserved and a trail is added within the rail corridor, or “rail banking” which is somewhere in between the other two options as it allows “temporary” trail use on the rail line.

For clarity within the following route descriptions, the terms “abandoned” and “working” will be used to differentiate the two primary types of trail development (an abandoned line would be *converted to* a trail and a “working” rail line— even if currently unused—would have trail parallel to the rail or “*rails-with-trails*”).

Private Property and Trail Development

One of the primary purposes of this project and the resultant document, is to identify possible route options *for further investigation*. Although some options identified in this document involve private lands, inclusion of these options is not intended to preclude the rights of the private landowners. In fact, establishing the interest and concerns of landowners is one of the earliest tasks necessary for further investigation during development along any of the identified routes.

NRS, as a primary partner in the development of the Hammond Coastal Trail, has worked diligently to establish a reputation with landowners as an organization sensitive to landowner concerns, while concurrently advocating responsible trail and bikeway development. The County of Humboldt concurs with this approach, as evidenced in Volume 1 of the 1994 Humboldt County General Plan, “...a functional trails program in Humboldt County will come as a result of public need and comprehensive planning which takes into account environmental and various financial considerations, land uses, and property owner concerns.”

Options for routes that cross private land should not be pursued without obtaining the support of landowners. And, as trail development occurs with the support of landowners, the needs and concerns of the landowners should be incorporated into the planning and design of the trail facilities.

Descriptions of Identified Routes

All of the identified routes meet some or all of the Hammond Trail Goals and Objectives. Unless otherwise noted, all identified routes are off-street, and have been selected for their potential to incorporate a trail design including 8’ paved bikeway and 4’ unhardened surface for pedestrian and equestrian users.

NORTH TOWARD TRINIDAD

See map, *Strawberry Creek to Trinidad Overview*.

All potential off-road trail routes identified under this section begin on the west side of US 101 just north of Strawberry Creek at Clam Beach County Park and proceed to the north. Strawberry Creek represents the northern terminus of trail extension efforts to date. As stated, a bridge over Strawberry Creek has been designed and funded and is in the process of being permitted by the County.

Strawberry Creek to Little River

See map, *Strawberry Creek to Clam Beach Drive Overpass*.

From Strawberry Creek, two general route options, described below, exist to extend the trail north to Little River. A mid-point crossover on a State Route 101 underpass allows these two general routes to cross, making for four distinct segments for consideration.

Strawberry Creek to Clam Beach Drive Overpass - West of US 101

The trail route stays on the west side of State Route 101 and Clam Beach Drive until it reaches the Clam Beach Drive overpass crossing of State Route 101. Heading north adjacent to the southbound lane of Clam Beach Drive, this separated trailway route crosses three County park accessways and skirts a number of roadside pullouts with related unofficial trailheads to the beach. At the Clam Beach Drive – State Route 101 intersection, the route would head north to the Little River remaining on the west of State Route 101. The route may also cross the Clam Beach Drive overpass (over US 101) to Little River Road and head north.

This routing most closely meets Hammond and California Coastal Trail objectives. Core attributes include its ease of development—the County owns and manages the property nearly to Clam Beach Drive Overpass and they are interested in extending the trail through this property (pers. comm. Bob Walsh). Other core attributes include the route's proximity to Clam Beach, a natural area and popular recreation resource for county residents and visitors. Trail users would not be required to cross any active roadways. Visitors would also have the benefit of County Park resources (restrooms, picnic areas, camping areas, and potable water) and have full access to the beach from the trail. Core constraints include increased visitor usage and increased impact to existing County facilities.

Strawberry Creek to Little River - Little River Drive

The trail route passes under US 101 overpass *on* Clam Beach Drive (at the Central Avenue – State Route 101 intersection) and heads north adjacent to Little River Drive and onto the closed portion of Little River Drive. The route then crosses Crannell Road before continuing along Little River Road to its intersection with the McGaughey Bridge. The route may also cross over State Route 101 at the Clam Beach Drive to continue north.

Figure 2. Strawberry Creek to Trinidad Overview
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Figure 3. Strawberry Creek to Clam Beach Drive Overpass
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Strawberry Creek to Little River - Little River Drive, Continued.

Core attributes include directness, some scenic qualities, and the absence of traffic-related interface on most of the route. Planning, permitting, and construction costs would be minimized for the portion that utilizes the closed portion of Little River Road. Core constraints include routing the trail on-street and the associated passage under US 101, crossing associated on- and off-ramps(at least once). In addition, the route fails to keep the trail in alignment with previously completed Hammond Trail segments: closest to the coast on the west side of US 101. An encroachment permit would also be required on Caltrans right of way. In addition, this route also requires crossing either Clam Beach Drive and Central Avenue to access Little River Drive.

Little River Crossing Options

See map, *Clam Beach Drive Overpass to Westhaven including Little River Crossings.*

The present State Route 101 bridge across the Little River was planned for and re-constructed (earthquake improvements and widening) over a 10-year period identified by Caltrans. No non-motorized uses other than bicycle use are accommodated by this bridge structure. Three route options are identified here to cross the Little River.

Cantilever on Highway 101 Bridge

To reach the proposed new bridge site, this route would continue north from Clam Beach Drive, on the west side of State Route 101. The trail route leaves Clam Beach Drive just before it begins to ascend toward the US 101 overpass and continues north past the overpass through the dunes. This State Park land contains a network of existing equestrian use and OHV trails which the route may follow, as is environmentally appropriate. The route would could cross over the Little River on a cantilever structure attached to the west side of the US 101 bridge.

Of the initial analysis given to the three proposed crossings of the Little River, a cantilever structure attached to the west side of US 101 bridge currently represents the preferred option for continued research and development. Core attributes include meeting of Hammond Trail objectives, lack of substrate abutment and trestle related issues—including tidal and upriver hydrological effects—and minimized highway viewscape impact (trail decking could be below that of highway surface levels). Caltrans facilities in other areas have utilized cantilevers. A core constraint is that constructing a cantilever onto an existing Caltrans facility requires approval by Caltrans at both the local District and State levels. A cantilever structure would also require significant engineering and design so that the US 101 bridge maintains integrity. In addition, upkeep and maintenance issues related to the cantilever and bridge would need to be resolved between the County and Caltrans.

New Bridge West of Highway 101

This route would also continue north from Clam Beach Drive, on the west side of State Route 101. The trail route leaves Clam Beach Drive just before it begins to ascend toward the US 101 overpass and continues north past the overpass through the dunes. At the south bank of the Little River adjacent to US 101 a bridge structure would be constructed to the north bank of the Little River.

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Figure 4. Clam Beach Drive Overpass to Westhaven including Little River Crossings.
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New Bridge West of Highway 101, Continued.

The routing of the trail through the dunes to the south bank of the Little River meets all Hammond Trail objectives. Core attributes include a close proximity to the beach, mildly meandering and undulating quality, aesthetics, and the natural dune ecosystem. In addition, construction of a trail through the dunes could be tied to restoration of “way trails” (illegal trails) and related dune ecosystem damage along the trail corridor. California State Parks developed a conceptual rendition of and cost estimate for a bridge structure, however never pursued final engineering and implementation due largely to lack of funding.

The core constraint includes the necessity of a bridge structure over the Little River. The span would be in excess of 300’ and likely require the placement of mid-span footings in the river. Any potential bridge structure would be constructed in sand substrate and be subject to tidal influence and hydrological effects, including those resulting from the US 101 bridge just upriver. In addition, a bridge structure--likely requiring footings and tower features--would impact the viewscape of highway traffic. Using the State Parks proposal as a guide, the cost of design, permitting, and construction of a bridge at this site presents substantial—possibly prohibitive—costs.

McGaughey Bridge Route

To utilize this river crossing option, the trail route would have to be heading north on Little River Road. Approximately 500’ north of the intersection of Little River Road and the Clam Beach Drive overpass is an existing vehicle bridge over the Little River. This (privately owned) bridge provides access to properties owned by Mr. Vern and Mr. Saundral McGaughey. The trail would cross this bridge and follow the Little River downstream close to its northern bank. The route would then cross under the US 101 Little River bridge, on a raised cantilever or related structure, to the west side of the bridge.

The lower Little River drainage has a wide variety of features that provide park-like qualities within a naturally rich setting. The potential exists for the lower portion of the Little River drainage to be purchased and or set aside in a conservation easement and a planned trail routing through this area may encourage this. However, the property is in private ownership and the existing owners would need to support the trail and provide necessary access. Routing the trail on the eastside of US 101 detours from the western Hammond Trail alignment to date.

Additional constraints include encroachment of Caltrans right of way at the Little River. Also, if the trail comes from the west of State Route 101, routing the trail across traffic entering and exiting US 101 on- and off-ramps at the Clam Beach Drive overpass would present constraints. The bridge crossing off Crannell Road to McGaughey land may require structural improvements. Portions of McGaughey land, and this proposed trail route, are within the floodplain and subject to saturation and flooding from even moderate flows. Additionally, wetland issues in this area may exist depending on specific routing. A cantilever, or related structure under the US 101 bridge, presents both right of way encroachment issues and engineering challenges. A detailed hydrologic study would be necessary to determine if a underpass trail structure was feasible given the possibility of high-water flows.

Little River to Trinidad

Only one distinct route was identified to link the Little River crossing to southern Westhaven: a route just west of southbound US 101. From Westhaven to the City of Trinidad, two general routes exist: one on Scenic Drive, west of US 101, and the other on Westhaven Drive, east of US 101.

Little River to Westhaven Drive Underpass

See map, *Clam Beach Drive Overpass to Westhaven Underpass with Little River Crossings*.

This route segment begins at the north bank of the Little River, within 50' of the highway bridge, and heads north on a Pacific Bell utility easement, and/or within Caltrans right of way. The route travels north to the Westhaven Drive underpass just north of the intersection with Scenic Drive.

Trail routing west of US 101 between the Little River and Scenic Drive closely meets Hammond Trail objectives. Core attributes include the proximity to the beach, route directness, the existence of a potential trail alignment on, or close to, utility easements, and gradient suitable for construction. According to photographic records of US 101 construction, there was once a two-lane highway to the west of the existing highway. While this old highway alignment was filled and stabilized once the new highway was opened, its western lane may present an opportunity as a future trail footprint. Although overgrown with vegetation, the old roadbed still exists under the fill. Easements would be required from Pacific Bell and/or Caltrans for the total length of this section. Core constraints include potential Caltrans right of way encroachment and slope stability/engineering requirements for construction of a trail along the old highway route.

Scenic Drive: Westhaven Drive Underpass to Trinidad

See map, *Westhaven Underpass to Trinidad*.

This on-street route section begins at the Westhaven Drive underpass and continues north on Scenic Drive, west of US 101, to the City of Trinidad.

Trail routing along Scenic Drive closely meets Hammond Trail objectives. Core attributes include access to a number of popular beaches. Scenic Drive is presently a two-lane road, however, portions of the bluff above the road and the road bed itself are subject to periodic failure forcing the road down to a single lane at times. In the future, an opportunity may exist to make a length of the road, or the entire roadway, a one-way single-lane road with an adjacent Class I Bikeway facility, or, close the road altogether for conversion to a trail. Core constraints of a trail along the existing roadway include the close proximity to traffic on a narrow road, often with short sight lines. Constraints of conversion of the road to one-way or trail access only include limits to beach access for some members of the population, reduced private property access for residents, and the need to develop new private property access road(s), likely adjacent to southbound US 101.

Figure 5. Westhaven Underpass to Trinidad.
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Westhaven Drive: Westhaven Drive Underpass to Trinidad

This on-street route heads east at the Westhaven Drive underpass, heading north on Westhaven Drive, through the community of Westhaven, and continues on to the City of Trinidad.

Trail routing along Westhaven Drive meets a limited number of Hammond Trail objectives. Core attributes include scenic qualities, trail access for community residents, and safety improvements for non-motorized users of Westhaven Drive. If coupled with a Scenic Drive trail facility, Westhaven Drive would complete a quality loop route for bicycles and pedestrians. Core constraints include Westhaven Drive-- a road with periods of moderately high traffic volume, particularly during morning and evening commute times. The road is narrow, ditch-lined and would likely require widening to provide sufficient width for safe multiple use due to traffic volume and sight lines. A more detailed study of the boundary of public right-of-ways, existing ditches, poles, trees, stumps, and other features impeding possible trail-related widening is a necessary next step in identifying constraints.

TRAIL OPPORTUNITIES EAST OF WESTHAVEN

Opportunities for future trails or trail development exist east of Westhaven Drive on the abandoned railroad grade between the north bank of the Little River and Trinidad Quarry. Private and industrial landowners that live on and around the old railroad grade would need to be involved in and supportive of trail development in this area. In particular, the Trinidad Limited Liability Corporation lands form critical linkages for any contiguous trail. Trail easements could be a part of transportation-related mitigations for new development in this area.

THE “HOLE IN THE HAMMOND”

See map, “*Hole in the Hammond*” *Route Alternatives*.

Presently, the Hammond Coastal Trail, a component of the California Coastal Trail, exists as two distinct sections. The completed northern section runs from north Letz Avenue, a US 101 frontage road, to Clam Beach County Park south of Strawberry Creek. The completed southern section runs north from the Mad River Bridge following the abandoned Hammond Railroad grade to near the mouth of Widow White Creek. Between these two sections of completed trail, exists a “hole”: from Murray Road to Letz Avenue. Within the “Hole in the Hammond” lies Widow White Creek and the need for a creek crossing. Once complete, a linkage between trail sections both north and south will provide through-travel and coastal access for non-motorized users between Mad River Beach County Park and Clam Beach County Park.

A description of several routes identified to connect the “Hole in the Hammond” follows. All routes are described from the end of the existing Hammond Trail heading north. For a discussion of the advantages and constraints of each route, and description of several additional routes, please refer to the *Hammond Coastal Trail Alternative Route Study: Murray Road to Letz Avenue, June 2001*. The Route Study is herein incorporated into this document by reference and may be found in its entirety in Appendix A.

Widow White Creek Pedestrian Interpretive Trail

From the northern terminus of the existing Hammond Trail, the route travels eastward up an existing ranch road--off the northern, unsurfaced portion of the Hammond Trail--and continues across a meadow before descending to and crossing Widow White Creek. The route continues eastward through the riparian zone until it meets the McKinleyville Community Services District (MCSD) pumping station access road. The route then turns north along the access road to the southern end of Letz Avenue. Access easements for this portion of the route currently exist. The route continues on-street along Letz Avenue to its northern terminus and the existing Hammond Trail.

This is currently a planned interpretive pedestrian route which is being permitted. This route meets a majority of Hammond Trail objectives. Core attributes, among many, include protection of the lower riparian corridor of Widow White Creek. The low impact trail will provide access to the natural scenic qualities including riparian vegetation, wildlife, and other creek associated ecosystem elements, and opportunities for education and interpretation, as well as a direct route connection. Core constraints include prohibitive impacts on the habitat within the riparian zone by construction of a *multi-use* trail and bridge within the riparian corridor, limiting the route to pedestrian use with seasonal access only.

Bicycle-Equestrian Bypass

Multiple options exist for a bicycle and equestrian route between Murray Road and south Letz Avenue. Many of the options share sections, however each is described in its entirety for clarity.

Private Property Option

The route travels on-street along Murray Road. Immediately west of the southbound US 101 off-ramp, the route turns northward following the McKinleyville Community Services District (MCSD) sewer line easement on private property (west of the highway.) The route follows the property boundary between private and Caltrans' property before crossing onto Caltrans' property south of Widow White Creek. The route crosses Widow White Creek over an existing US 101 culvert headwall and continues northward to the MCSD pump house. At the MCSD pump house facility, the route crosses out of Caltrans' right-of-way and continues northward to Letz Avenue along the pump house access road. The trail route then travels on-street the length of Letz Avenue and connects with the completed Hammond Trail north of Airport Road.

The route meets the majority of Hammond Trail objectives. Core attributes include route directness, maintaining the Coastal Trail west of US 101, scenic qualities in and around Widow White Creek, and a relative ease of construction. Core constraints include encroachment onto Caltrans right of way and acquisition of easements crossing private property.

Caltrans Right-of-Way Option

This route is similar to the previous route (Private Property Option) for the majority of its length. The only notable difference is that the route is completely in Caltrans right-of-way from Murray Road to the MCSD pump house facility, rather than partially on private property.

Figure 6. “Hole in the Hammond” Route Alternatives.
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Caltrans Right-of-Way Option, Continued.

Core attributes are similar to the previous route. Core constraints include additional encroachment onto Caltrans right-of-way and a closer proximity to US 101.

Pacific Sunset – Springer Street Route

The trail route begins at the intersection of Murray Road and Kelly Avenue. The route travels east on-street along Murray Road until it intersects with Fortune Road. The route turns north on Fortune Road to Ledru Street and turns west on Ledru to Springer Street. The route proceeds north on Springer Street to the northeast corner. At this point, the route leaves existing streets, traveling east along the private property boundary between the two subdivision lots at that location. The route would then turn north, closely following the MCSD pipeline easement across private property. Near the riparian zone, the route enters Caltrans' right-of-way, crosses Widow White Creek at the existing culvert headwall, and heads northeast to the MCSD pump house facility. At the MCSD facility, the route continues northward to Letz Avenue along the pump house access road. The trail route then travels on-street the length of Letz Avenue and connects with the completed Hammond Trail north of Airport Road.

Core attributes include easy trail access by residents of Pacific Sunset Subdivision and minimized encroachment needs onto Caltrans right-of-way. Core constraints include the acquisition of additional easements on private property and the remaining encroachment onto Caltrans right-of-way.

SOUTH TO ARCATA

See map, *Arcata to Fortuna Overview*.

Potential route alternatives below are broken into sections for clarity and described from north to south.

The Arcata Bottoms

See map, *The Arcata Bottoms*.

Routing a trail through the Arcata Bottoms, from the Mad River bridge to southern Arcata near State Route (SR) 101, meets many coastal objectives and adds new scenic and cultural resource elements to the existing Hammond Coastal Trail. The Bottom area is rural and pastoral. Agricultural activity, primarily ranching and farming, dominates the area. During initial extension analysis investigations, several ranchers and farmers expressed wariness of off-road trail development and the potential impact upon their holdings or operations. However, the ranching and farming community was clearly supportive of on-street trails that could reduce user conflicts and hazards and provide road surface improvements.

Trail routing can take a variety of forms through the Bottoms. Identified routes can be generally described as utilizing existing roads or the historic (abandoned) railroad route. Mixing and matching segments of roadway route with segments of railroad grade route may be the most viable solution.

All routes through the Bottoms begin at the southern end of the Hammond Trail Bridge over the Mad River. Routes end either at the north-eastern Arcata City limits, the south east end of Arcata for an eastern connection to Eureka, or in Manila on the North Spit for a western connection to Eureka.

Roadway Route Location

From the bridge, the trail follows Mad River Road as it winds south, east, and then south again. Several connections can be made with the City of Arcata from Mad River Road. The first such connection splits off at Miller Lane. This spur connection travels east on Miller Lane to Heindon Road, where the route turns south to the established Class II Bikeway (bike lanes) along Janes Road to the streets of Arcata proper. This spur may also serve as a connection east of US 101 as the intersection of Heindon and Janes Roads is just west of a highway overpass.

However, if the route were to continue past Miller Lane along Mad River Road, a second spur connection splits off at Upper Bay Road. Upper Bay Road heads southeast and connects with Janes Road's Class II Bikeway and the city street system.

The original County Road Route continues through the Bottoms. At the three-way junction of Mad River, Lanphere, Upper Bay Roads, the route heads west on Lanphere Road and then south on Seidel Road to Foster Avenue. Foster Avenue to the east connects to the city of Arcata at Alliance Road to form a connection around the eastern side of Humboldt Bay to Eureka. From Foster Avenue, the route may either continue on Foster Avenue into Arcata or split off onto Janes Road and head south to SR 255. State Route 255, intersecting with the Northwest Railroad line at K Street in Arcata. If the route follows Janes Road, it must pass through a locked gate onto private property before connecting with SR 255.

At the junction of Seidel and Foster, if the route continues west, a connection to Eureka is made through the community of Manila around the west side of Humboldt Bay. Western routing heads Along Foster towards the Mad River Slough. Foster Avenue turns into Jackson Ranch Road where the road turns south and intersects with SR 255. At this junction of Jackson Ranch Road and SR 255 three options exist to connect to Eureka: 1) heading west and south to Manila on SR 255; 2) continuing west along an off-street trail route developed between SR 255 and the adjacent railroad line; and 3) crossing SR 255 and continuing on Jackson Ranch Road south, bypassing the existing ranch compound, then heading west on the existing levee (private land). Of these three options, both 2 and 3 require either returning to SR 255 to cross the Mad River Slough on the existing bridge or construction of a new bridge.

If a western route around Humboldt Bay is pursued as a connection to Eureka, crossing Humboldt Bay would need to be addressed. The existing SR 255 bridges across Humboldt Bay, while used by cyclists and pedestrians, was not constructed to meet the requirements of a multiple-use trail route.

Core attributes for using existing roadways include the low traffic volume on rural roads, that the routes generally exist at present and that no encroachment onto private land is required. Utilizing existing roadways provides opportunity for connection to multiple points within Arcata and could allow road improvements to be done in phases.

Figure 7. Arcata to Fortuna Overview.
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Figure 8. The Arcata Bottoms.
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Core constraints include the fact that many existing roads within the Bottoms are narrow and have lane widths under 10'. Many roads are at "field height" (only slightly elevated or at the level of surrounding agricultural fields) and are subject to seasonal flooding. Many roads have drainage ditch lines on one or both sides and gradients are slight or non-existent hindering drainage improvements. Seasonal flooding currently encroaches onto the *roads*, narrowing them down to a "central" lane width, or submerging them altogether. Trails would be subject to similar flooding impacts.

Some roads, such as SR 255, have been constructed on elevated beds. This creates additional issues for trail development including possibly widening roadways and modifying existing road drainage to accommodate trails. Widening may require acquisition of additional road width in some areas.

The Rail Corridor

From the Hammond Trail bridge over the Mad River, this route follows Mad River Road briefly and, where the road turns east, the trail route continues to the south following the existing (abandoned) railroad grade. The McKinleyville Community Services District owns the first section of rail corridor encountered. Along one section of the MCSD railroad grade, the railroad grade's prism has been altered by the adjacent landowner. The rail corridor continues southward, adjacent to multiple private parcels, to where it meets Lanphere Road. This is the end of the MCSD easement.

Crossing Lanphere Road, the trail route would follow railroad corridor held in private ownership. A railroad junction exists approximately three quarters of a mile south of Lanphere Road. At this junction, the trail route may continue both east into Arcata (within the "working" rail corridor) or west toward Manila (continuing on abandoned rail line):

- Heading east, the trail route crosses Seidel Road, continues eastward on rail corridor, through a section owned by Sun Valley Farms, to the City of Arcata. Through the city, the route follows the "working railroad", where potential exists for rail service to resume, along L Street.
- Heading west (from the railroad junction), the trail is entirely in private ownership until it connects with SR 255. The trail route travels south approximately 1200', crosses Foster Avenue, and continues southwest before crossing Mad River Slough. Beyond the Mad River Slough, the route follows railroad corridor east and then south until it connects to SR 255 near Manila.

Core attributes of the railroad grade route include scenic qualities, historical significance, route directness, and structural soundness of the mostly-existing railroad grade. Flooding of the route through the Bottoms is less likely on the rail corridor's "high ground". In addition, development of trail access along the corridor may serve as flood refuge for dairy cows led there during flood events by dairy or grazing operators.

Core constraints are primarily landowner related. Dairy or grazing operators have cited concerns regarding a trail on or near their operations including; barking dogs, dogs that escape trail corridor barriers into occupied fields, human trespass, noise, and illegal trail use (motorcyclists and after hours users). The concern is that these impacts may result in dairy cows "holding their milk", property damage, loss of privacy, and other quality of life impacts. In addition, the rail

corridor currently provides year round access for dairy management efforts: feeding, herding, veterinary, etc. Operators would require this to continue.

Many of these potential impacts can be addressed with good trail planning and design. Potential design features could include: appropriate barriers and screening; signage of trail regulations; proper enforcement (perhaps including bicycle and mounted patrols and patrol car access); “dog-free” trail segments; development of elevated islands for refuge elsewhere on dairy lands; continued access or intermittent trail closures for moving cows; evening trail closures; and construction of low-impact adjacent ranch roads.

East Side of the Dunes (Study Area)

From the south ramp of the Mad River bridge, the trail route along the east side of the dunes heads west on or adjacent to Mad River Road to Mad River County Park (beach). At the parking lot closest to the beach, the trail route heads south on the east side of the dunes through private parcels and land managed by the Humboldt Bay Nation Wildlife Refuge. This route remains a “study area” rather than a specific route corridor due to the amount of additional research necessary to fully identify a route, particularly where there is no current or historic transportation use. The dune study area is privately held (except for the portion within the Humboldt Bay Nation Wildlife Refuge) and all of the area is heavily vegetated. The route would connect with the railroad corridor at the southern end.

Core attributes include close proximity to the coast, scenic views, and beach access alternatives between present facilities located at Mad River Beach County Park and Manila Community Center.

Core constraints of the route include substantial environmental impacts associated with the sensitive coastal forest and dune habitat which almost certainly contains listed plant species. In addition, there is likely to be private property concerns as well as management issues where the route passes trail through the National Wildlife Refuge. Although the route is very direct to Manila and the North Spit, it is furthest from the City of Arcata.

ANNIE & MARY RAIL-TRAIL (EAST – WEST CONNECTION)

The removal of rails for salvage from the Arcata and Mad River rail line in 1998, resulted in a tremendous upwelling of community support for developing a trail within the rail corridor. A community group, the Friends of the Annie & Mary Rail-Trail, was formed and began gathering support of city and county decision makers, the NCRA, and other agencies with a possible interest in the rail line. As a result of the efforts of the Friends, as well as the planning efforts by Natural Resources Services with the assistance of HSU students and the activities of many community members, the State Coastal Conservancy has funded a feasibility study assessing the possibility of converting the out-of-service Arcata & Mad River spur of the Northwestern Pacific Railroad into a multiple-use trail.

This 6.8-mile route between Arcata and Korbels travels through the community of Glendale and the City of Blue Lake. Affectionately known as the ‘Annie & Mary’ line, it is unlikely that rail service will return to the corridor in the near future, and as a trail the route could serve as an inland connection to the Hammond Coastal Trail as it passes through Arcata. The North Coast

Railroad Authority is maintaining ‘active’ line status to Arcata’s Aldergrove Industrial Park, however the trail could potentially be located on a City waterline easement and adjacent to the railroad corridor through town, or be connected with bike lanes that follow Guintoli Lane to Janes and Alliance Roads.

ARCATA TO EUREKA

See map, *Arcata Bay to South Bay*.

Several studies have been conducted to assess the possible trail (off-street) connections between Arcata and Eureka. The first, a *1997 Feasibility Analysis: Humboldt County Bicycle Facilities Planning Project*, funded by the North Coast Unified Air Quality Management District, focused on identifying potential routes, and assessing the advantages and disadvantages of each. The current study of potential trails in the Humboldt Bay area also includes a recommended route for the Coastal Trail to connect Arcata and Eureka. For more information of that study and its recommendations, see [Section IX. Contacts and Resources](#).

West Bay Options

A West Bay routing of the trail from the SR 255 Mad River Slough Bridge to the Samoa Bridges meets many Hammond Trail objectives. This route option places the trail through the community of Manila. The town includes two public parks: one on the bay and the other encompassing many acres of dune ecosystem including a diverse network of public access trails, several of which lead to the beach. The greatest constraint to placing the primary Hammond Trail route to the west of Humboldt Bay is returning the route to Eureka. The use of the Samoa Bridges over Humboldt Bay as a multi-use trail presents difficulties. While pedestrian and bicycle use exists on these bridges, safety improvements are suggested before increasing these uses. Significant alterations would also be necessary to enable equestrian use. Pursuit of a trail connection to the community of Manila provides valuable access to Manila residents as well as beach access to trail users—beneficial as a spur even if the primary Hammond Trail connection is developed on the east side of Humboldt Bay.

State Route 255

This route follows SR 255 from the Mad River Slough to and over the Samoa bridges.

This on-street route along the highway meets some Hammond Trail objectives. Core attributes include proximity and access to the coast, and route directness. A trail along this route is most likely to take the form of a Class II bikeway on both north and southbound lanes, or, less likely due to space constraints, as a Class I trail on one side only. Core constraints include trail users having to cross the highway to access bike lanes traveling in the desired direction. Another constraint is the use of the Samoa Bridges over Humboldt Bay as a multi-use trail. While pedestrian and bicycle use exists on these bridges, safety improvements would be recommended before increasing these uses and significant alterations would likely be necessary to enable equestrian use. Additionally, accommodations would have to be made at the intersection of SR 255 and the Samoa Bridges to make accessing the bridges safer. Other constraints include Caltrans’ right of way encroachment.

Railroad Grade

This route follows the “working” railroad corridor south down the North Spit. Beginning where the railroad crosses SR 255, the railroad travels on the east of SR 255 and Peninsula Drive, and continues through the commercial area of Manila to the Samoa Bridges. The railroad route would need to connect with SR 255 to access the eastbound Samoa bridges toward Eureka.

Core attributes include the rail road grade being zoned for transportation. This route would be fundamentally separate from adjacent road/highway traffic, have relatively unobstructed views of the bay, provide direct access from Mad River Slough to the Samoa bridges, and improve access to Manila community facilities and parks. Core constraints include that this section of the railroad has the potential for service to resume although a railway adjacent to the line may be possible depending on the width of the railroad corridor. Additional constraints include private property issues and wetland/tidal marsh impacts.

Peninsula Drive

This route follows SR 255 south, connecting with Peninsula Drive on the west side of SR 255. The trail runs on, or adjacent to, the Peninsula Drive. (Picture a “\$” where SR 255 is the vertical line and Peninsula Drive as the “S” shape--first on one side of the line, then crossing the line and continuing on the other side). Peninsula Drive travels east of SR 255, through residential and commercial areas of Manila. The trail route follows Peninsula Drive as it turns crosses SR 255. On the west side of SR 255 the route follows Peninsula Drive through residential areas, past the Manila Community Center and beach access. Where Peninsula Drive ends, the route returns to, or adjacent to, southbound SR 255 before crossing to the Samoa Bridges.

Core attributes include the provision of multiple access points for Manila residents and area visitors. The route could provide quality of life improvements for area residents and opportunities for some economic revitalization of Manila’s commercial district. Manila community residents and planners have been trying to get a pedestrian overpass constructed at the central crossing of Peninsula Drive and SR 255 and believe that such a structure would have immeasurable benefits to that community. Core constraints include the need for multiple highway crossings, the route’s indirectness, and the likelihood of encroachment onto Caltrans’ and residential properties to meet Class I or Class II bikeway standards.

East Bay Options

East Bay trail routes meet some Hammond Trail objectives. Five potential routes, segments of which could mix and match to address irresolvable elements of a single route option, are identified. All of the options are within an area that is the primary coastal visitor travel-way and a heavily used residential commuter corridor for the county. Connecting Arcata and Eureka around the eastern side of Humboldt Bay requires working with a number of different agencies including Caltrans, North Coast Railroad Authority, California Department of Fish and Game, U.S. Fish and Wildlife Service, and County of Humboldt. Several route options combine lands management by these entities with private property. Finally, potential wetlands are the predominate natural feature impacting route selection.

Figure 9. Arcata Bay to South Bay
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East Bay “Rails-With-Trails” Class I Path

The trail route, adjacent to “working” NCRA rail line west of US 101, travels from the eastern end of SR 255 in Arcata to Eureka.

Core attributes of the route are its scenic qualities, the existing zoning for transportation, directness as a commuter corridor, and its complete separation from motorized traffic. Core constraints include the narrow corridor for rail-with-trail, the narrow width of the rail corridor constraining rail with trail options, the number and nature of road crossings, the need to widen several water body crossings (for rail line adjacent railway), and wetland related issues.

Eureka Transmission Line Access Road/Path

From Arcata near the Highway Patrol station, the trail route follows Eureka’s water system transmission line easement south to Eureka. The Transmission Line easement follows a short section of Old Arcata Road in the area of the Indianola Cutoff. The route passes through private property and the Fay Slough Wildlife Refuge. *Construction of a trail along this route would only be feasible if the City of Eureka pursues development of an all-weather access road along their water transmission line. If constructed, an all-weather access road would be utilized by maintenance vehicles in the event of line failure or maintenance, but would otherwise serve as an excellent opportunity for trail development.*

This route would only be developed if the City of Eureka constructed an all-weather access road to their transmission line. If trail development were combined with development of the access road, the two projects could benefit mutually. Permitting and engineering costs could be shared, crossings over various sloughs would be bridged by the access road, and it is likely that trail-related grant funding could cover some of the construction costs common to both trail and access road development. Core attributes of the route include its ability to link many small communities together and the pastoral and scenic areas through which it travels. Core constraints include Department of Fish & Game concerns regarding impacts to the refuge and the need to utilize Old Arcata Road for a short segment.

Class I Path East of and Adjacent to State Route 101

The trail route would be located parallel to, but separate from, the east side of US 101 between Arcata and Eureka. From near the SR 255 and US 101 interchange, the route would travel predominantly within the Caltrans right-of-way to Indianola Cutoff. From the Indianola Cutoff, the route continues south following existing frontage roads and the Eureka Water Transmission Line easement to Jacobs Avenue. The route would require improvements to enable crossing of Gannon Slough, Jacoby Creek, Washington/Rocky Gulch and the Eureka Slough.

Core attributes of the route include the opportunity to utilize an existing transportation corridor, directness as a commuter route between Arcata and Eureka separate from the highway, potential accessibility for east bay residents along highway feeder roads, and scenic opportunities presented by nearby pasturelands and wetlands. Core constraints of the route are its proximity to the Eureka Airport, Caltrans opposition as the expressway is soon to be upgraded to freeway status with high-speed on and off ramps on feeder roads, new crossings over sloughs, and wetland-related issues.

Class II Improvement To Old Arcata Road/Myrtle Avenue

The trail route runs east from City of Arcata at the SR 255 and NCRA rail line junction, over the US 101 overpass, and south along Old Arcata Road to ‘Three Corners’ near Freshwater. The route continues along Myrtle Road, over Ryan Slough, and onto the streets of Eureka.

This route is proposed as a Class II Bikeway route. Portions of the route have already been upgraded to Class II Bikeway and upgrading another segment, from just south of Bayside Cutoff to Three Corners, has been a County priority for many years. Core attributes include zoning for transportation, a non-motorized link between north, south, and east bay communities, forest and pastoral views, and ease of implementation. Core constraints include the infeasibility of providing a route compatible with equestrian use, several water body crossing and road widening challenges, limited wetland issues, and close proximity to heavy traffic volumes and fast moving vehicles.

THROUGH EUREKA

Note: For additional detail on the proposed Coastal Trail link through Eureka, refer to the *Humboldt Bay Trail Feasibility Study* listed in [Section IX. Contacts and Resources](#). Copies of that document are available at local public libraries or through NRS.

Eureka Waterfront Route

From the Arcata-Eureka corridor along US 101, the route would cross the Eureka Slough by cantilever to an existing highway or railroad bridge or between them on a dedicated non-motorized bridge. The primary route would follow adjacent to and south of the railroad corridor, where there is adequate space, and connect with First Street at the entrance to Blue Ox Millworks. From there, the route would follow the Eureka waterfront (First Street, Waterfront Drive and/or railroad corridor), as a trail where feasible and as bike lanes and wide sidewalks elsewhere. Existing segments of trail to be included are: east of the Adorni Center; through the Eureka (Palco) Marsh; and south of Hilfiker Lane in Eureka’s Elk River Wildlife Area. The Humboldt Bay Trails Feasibility Study proposes expanded Class I facilities north of the Elk River Wildlife Area and north of the Eureka Marsh along Waterfront Drive.

This route through Eureka would include both Class I and Class II facilities, and is the primary route recommended by the Humboldt Bay Trails Feasibility Study. Attributes include that the suggested route is located on established road or trail corridors increasing the likelihood of it being constructed and the proximity to the bay and bay views. Constraints include the necessity of detouring some stretches onto roads, although traffic volumes are relatively low.

Gulches Route

This route is in the most initial stages of identification. A route traveling south through Eureka’s ‘gulches’ would begin by following the Eureka Slough under US 101, turn up Second Slough and McFarlan Gulch to Sequoia Park. From the park, the route would travel down Martin Slough.

Further study is definitely needed to assess the feasibility of trail access through the gulches of Eureka. Much of the route crosses privately owned land, and development of a multi-use trail within these corridors would likely encounter substantial habitat issues requiring sensitive

design. Further, connecting the gulch system requires negotiating sections of city streets and individual road crossings. Additionally, the route is not on or within sight of the bay. The benefits/attributes associated with the gulches route include preservation of the remaining greenspace within Eureka and that the route would become an attraction for locals and visitors. The benefits of developing this route are greatest if it is pursued as an addition to the trail system.

SOUTH BAY

Herrick To Hookton Roads – Coastal Route

The following describes the route from Herrick Road south to Hookton Road. For clarity, the route has been divided into two segments.

Herrick Road to Railroad Avenue (Fields Landing) - Through King Salmon Avenue

From the junction of Herrick Road and US 101, travel west to the terminus of Pound Road. Running along the “working” NCRA rail line, the trail route heads generally south until the trail route detours from the rail to follow the Harbor District-owned breakwater to the west (whereas the rail line continues southward). From the breakwater at Buhne Point, the route connects to and continues southeasterly along King Salmon Avenue. An old road bridge to the west of King Salmon Avenue could be utilized for the slough crossing. Another possible option would follow the rail line directly to King Salmon Avenue, bypassing the breakwater. This alternative is more direct but lacks the scenic impact of the breakwater. From the junction of King Salmon Avenue and NCRA rail line in King Salmon, the route travels south adjacent to the rail line, on the west side, to Railroad Ave in Fields Landing.

Core attributes include proximity to and views of Humboldt Bay, the separation from traffic on US 101, and the use of the existing transportation corridor (rail line). Core constraints include the need to develop rails-with-trails within the narrow rail corridor, wetland and potential flooding issues, and possible problems with existing rail corridor rip-rap protection structures. The trail would cross C Street in Fields Landing and, if the route follows the rail corridor between Herrick Road and King Salmon, rail line stability and wetland-related constraints may also exist.

Railroad Avenue (Fields Landing) to Hookton Road

From the junction of Railroad Avenue and the NCRA rail line in Fields Landing, the route continues south along the rail line. The rail line, and trail route, pass onto the northernmost portion of Humboldt Bay National Wildlife Refuge and continue under US 101 to Tompkins Hill Road. On or adjacent to Tompkins Hill Road, the route continues south past College of the Redwoods, turning west onto Hookton Road.

Core attributes include the route providing a connection to Humboldt County’s only community college, scenic qualities, utilizing an existing transportation corridor not associated with US 101, and the route being the only relatively direct trail corridor through the south bay. Core constraints include the potential impacts to tidal land and the narrow rail corridor.

It may be possible to partner with the Humboldt Bay National Wildlife Refuge to provide access to the refuge by routing the trail through the refuge to Hookton Road. This might provide a more direct link for the trail and allow it to remain on the west side of US 101 rather than following Tompkins Hill Road. However, this concept is very preliminary and further research is needed to clarify where existing access trails are in the refuge and the level of trail involvement is environmentally feasible for a refuge.

Herrick To Hookton Roads – Inland Route

See map, *Hookton Road to Fortuna with Ferndale Spur*.

Elk River Road and Bertas Valley Drive

From the junction of Herrick and Elk River Roads, this route follows Elk River Road south, past Ridgewood Drive. The route then turns onto Bertas Road, passes over a covered bridge, and continues south to the road's end. If access can be acquired across private property, the route would connect with College of the Redwoods. Utilizing CR service roads, the route would connect with Tompkins Hill Road to reach Hookton Road.

This route meets only some Hammond Trail objectives. Core attributes include its relative directness in linking Eureka to College of the Redwoods, scenic beauty, and light to moderate levels of motorized traffic on the roadways. Core constraints include narrow road corridors, the ¼ to ½ mile of privately owned land that would have to be crossed, and some hilly terrain. The route is not visible from US 101 and would require signs and promotion to encourage users.

HOOKTON ROAD TO FORTUNA

As noted elsewhere in this document, at some point in the historic planning of the Hammond Trail an objective was identified to provide a connection to Fortuna. To provide this connection, the objectives of the Hammond Trail (for a direct connection between communities) diverge from the objectives of the California Coastal Trail which focuses on the coast. The Hammond Trail route would likely split from the Coastal Trail route near Hookton Road, with Hammond heading southeast to Fortuna and the Coastal Trail following the coast to the southwest.

Tompkins Hill Road Route

From the junction of Tompkins Hill Road and Hookton Road, the trail route travels south on or adjacent to Tompkins Hill Road (this roadway is labeled Palmer Creek Road on the older maps). This road ends very near US 101, about 1 ¼ miles northeast of Fortuna. Unfortunately, there is no existing US 101 crossing at near this location to enable the trail to connect to the rail corridor and reach Fortuna. Options for a trail route that connects the southern end of Tompkins Hill Road to Main Street in Fortuna include an abandoned frontage road, two existing utility easements, or crossing private property.

This route meets few Hammond Trail objectives. Core attributes include scenic qualities and low traffic volume. Core constraints include a narrow, steep and winding road corridor that is quite indirect and the unidentified nature of the connection from the southern end of the road to Main Street in Fortuna.

Figure 10. Hookton Road to Fortuna with Ferndale Spur.
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Rail Corridor Route

Following the railroad corridor from Hookton Road to Fortuna would be optimal for the trail--the rail line has a steady grade, is quite aesthetically pleasing, and is the most direct route to Fortuna. However, this stretch of rail corridor passes under US 101 through a long tunnel just northeast of Loleta. Unless rail service is abandoned along the rail line, rail and trail uses are not compatible through the tunnel. Very preliminary identification of a possible detour may be to follow the rail corridor to near the tunnel entrance, then transition and connect to Singley Road. The route could follow Singley Road south, pass under US 101 at an existing crossing, and reconnect with the rail corridor to continue to Fortuna.

This route best meets the Hammond Trail objectives related to a direct connection to Fortuna. Core attributes include the direct connection, scenic qualities particularly where the rail parallels the Eel River, and access to Ferndale. Further exploration of the topographic and landowner issues related to the “transition” from the rail corridor to Singley Road are necessary. In addition, constraints include: wetland and rail corridor width issues if developing a rail-with-trail option, and maintenance of the tunnel if the rail were converted to trail.

Eel River Road - Rail Corridor Route

From the junction of Tompkins Hill Road and Hookton Road, the trail route heads west on Hookton Road crossing US 101 to Eel River Road. The route continues traveling south on Eel River Road through the town of Loleta and past Fernbridge. Where Eel River Road ends, the route continues on toward Fortuna using a combination of existing frontage roads and adjacent to the NCRA rail line. Possible alternatives could be made by following the utility line easements.

This route meets many Hammond Trail objectives. Attributes include scenic qualities of the Eel River Bottoms, connection to the community and businesses of Loleta, relative directness to Fortuna, and access to beach. Constraints include the presence of traffic along Eel River Road, the narrow rail corridor, and that the frontage roads don not extend continuously to Fortuna.

FERNDALE SPUR

From the Junction of Eel River Road and State Highway 211, the trail route travels southwest on Highway 211 to the City of Ferndale.

This route, which would provide access to the core north-south trail route between Fortuna and Trinidad, meets the Hammond Trail objective of providing a connection between the primary coastal communities of central Humboldt County, as well as other objectives. Core attributes of including this in the Hammond System as a spur route include the scenic qualities of the Eel River Bottom, the attraction that Ferndale presents to potential touring cyclists, and access to locations to the west. The Coastal Conservancy is presently acquiring a property off Centerville Road, which will managed by the Bureau of Land Management for the public as The Lost Coast Headlands. Potential exists for the Ferndale trail spur to be extended to this area.

The most significant constraint is the width of Fernbridge, which is the primary vehicular accessway to Ferndale and carries a great deal of traffic. Trail users would have to share the travel lanes with motorists.

VI. ROUTES SELECTED FOR IN DEPTH ANALYSIS

PRIORITY ROUTES

Criteria for selection of which identified sections to further research and develop were based heavily upon the input from Humboldt County Public Works staff. In early 2001, Public Works staff indicated that *their highest priority* for future development along the Hammond Trail was connecting the “Hole in the Hammond”—the uncompleted section between Murray Road and Letz Avenue. Emphasis for this extension analysis project was placed on identifying and *addressing* constraints inhibiting completion of the Hammond Trail. This emphasis led to several meetings between NRS, County Public Works, and Caltrans staff members to finalize a route and design for the trail, particularly for the section of trail proposed through Caltrans’ right-of-way. To address the Caltrans’ requirement that all other trail route options be considered before encroachment into Caltrans’ right-of-way, a route study was completed. The *Hammond Coastal Trail Alternative Route Study: Murray Road to Letz Avenue* assesses eight different options for connecting the trail, analyzes the possible creek crossing sites, recommends preferred routes, and documents the history and goals of the Hammond Trail (see Appendix A).

A significant issue addressed by the Route Study is review of potential Widow White Creek crossing sites and justifying the need to cross the creek on Caltrans’ fill slope adjacent to the culvert headwall. The Route Study discussed potential creek crossing zones, identifying topographic, wetland, and other constraints present within each. The conclusion is that the two proposed crossing sites (one each on the pedestrian Interpretive Trail and the Bicycle-Equestrian Bypass Trail) are the most geographically and environmentally appropriate, as well as cost affective, crossing sites.

Priority One – Widow White Creek Pedestrian Trail

Plans for linking the “Hole in the Hammond” include two trail segments, the Pedestrian Interpretive Trail through the Widow White Creek Corridor and the Bicycle-Equestrian Bypass which travels east on Murray Road before resuming a northward course. A successful grant application was submitted to provide construction funding for the Pedestrian Interpretive Trail. (Grant funds were transferred to construction of the Clam Beach trail section further north when severe winter storms and changes in Widow White Creek’s meander pattern raised concerns over the planned bridge site).

Because an application for construction funding exists for the Pedestrian Interpretive Trail (including a route description and background, conceptual design, and cost estimates), it was determined that the project specific information for this priority segment be an analysis of what is inhibiting the process and stopping construction of this segment. Additionally, significant efforts were expended in actually *trying to overcome the identified problems* through a series of meetings between NRS, County Public Works, and Caltrans staff. Finally, the remaining constraints were documented with recommendations for further action.

Priority Two – Bicycle-Equestrian Bypass

To meet the multi-use goal of the Hammond Trail, a second connection between Murray Road and Letz Avenue is also planned. This Bicycle-Equestrian Bypass was selected as the second priority segment for this Extension Analysis project. Project specific information gathered for this section includes development of a trail route and conceptual design that meet the requirements of the trail, private landowners, and Caltrans. Developing these conceptual designs (which may be found in **Appendix D**) required ongoing negotiations with the Caltrans and County staff, including several meetings. Finally, project specific information included documenting the actions taken and suggesting recommendations for continued efforts to reach implementation of the Bicycle-Equestrian Bypass.

THE WIDOW WHITE CREEK PEDESTRIAN INTERPRETIVE TRAIL

Route Description

Current plans for this interpretive trail call for a narrow footpath through the riparian corridor with a low-flow creek crossing or seasonal bridge. From the northern terminus of the existing Hammond Trail, the route switchbacks eastward up an existing ranch road and connects to a short section of trail constructed along the northern boundary of the Pacific Sunset Subdivision. The route makes a sharp turn northward and travels down within a 15' trail easement toward Widow White Creek where it enters a brief section of 10' wide trail easement to the creek crossing. At this time the method of creek crossing has not yet been determined, although it will most likely be a seasonal bridge or low-flow crossing with no specific structure (folks would have to wade or jump across). On the northeastern side of Widow White Creek, the trail generally continues east following the bottom of the north bank of the creek. The trail turns north and follows an easement along the eastern side of the MCSD pump house facility access road to Letz Avenue. Access easements for this route currently exist.

This pedestrian only interpretive trail designation allows for optimum public benefit as an interpretive footpath, fully utilizes the dedicated easements, and affords protection to an invaluable riparian corridor within the community of McKinleyville.

History

As stated, the original Hammond Trail route that was planned and permitted by the County of Humboldt in the 1970's followed the abandoned railroad corridor from the bridge over the Mad River to Clam Beach County Park. When the migration of the Mad River in the late '80's and early '90's eroded part of the abandoned railroad grade north of Widow White Creek, it became necessary to detour the trail. The Widow White Creek Interpretive Trail route was identified in the 1994 Feasibility Analysis.

Planning, permitting and construction designs were initiated in the early 1990's, and were partially funded by the SCC and the California Transportation Commission's Environmental Enhancement and Mitigation (EEM) Program. Planning included surveying property lines and securing the necessary easements through the Widow White Creek riparian corridor for the trail.

These include easements dedicated by: Diane M. Slagle to connect the existing Hammond Trail on the railroad corridor east to the Widow White riparian corridor, the Hartman family to access the creek crossing site, and Dianne Slagle for the area on the northeast side of the creek from the centerline of the creek to the break in slope at the top of the bank.

Subsequent to the easement acquisition, permitting was initiated. Consultation with the Natural Resources staff of Humboldt County Public Works, a mitigated Negative Declaration was prepared for the project. However, during the permitting process, the North Coast experienced several severe winters. Changes in the meander pattern of Widow White Creek began to be apparent. At the proposed bridge site, winter storms blew down several mature trees, and although none of the trees would have directly hit the proposed bridge, concerns over the project resulted in a delay in the permitting and review of the proposed design for the creek crossing. Environmental Enhancement and Mitigation funding, originally awarded for the design and construction of the Interpretive Trail, was shifted to final design and construction of the Clam Beach trail section rather than reverting to the funding source. Thereafter, Humboldt County Public Works, in conjunction with NRS trail planners, determined that a smaller scale crossing would be more appropriate until the creek meander pattern stabilizes.

Over the next several years, the conceptual design and permitting of the Widow White Creek Pedestrian Interpretive Trail has continued incorporating the scaled-down creek crossing concept. Unfortunately, efforts proceed slowly due to a lack of time available for County Public Works staff to devote as well as the lack of specific funding for this trail section.

Identified Constraints

As of this date, the trail section still requires:

- Final trail route and design, approved and fully supported by the Humboldt County Public Works Department, that specifically addresses the method of creek crossing.
- An amendment to the Local Coastal Plan (a component of the Humboldt County General Plan) specifically allowing the construction of a trail within the riparian corridor.
- CEQA permitting.
- A Coastal Development Permit.
- Streambank stabilization to repair a section of the proposed trail route undermined by Widow White Creek and to protect the route from further erosion.
- Funding to complete construction of the trail.

While CEQA Compliance, Amendment of the Local Coastal Plan, and Coastal Development permits are separate permits, if the timing of the paperwork is managed properly, many of the steps within the processes can happen simultaneously. This is particularly true of the review periods.

Final Route & Design

The route and structures recommended by trail designers at NRS are outlined in the following documents: *1996 Addendum to the Final Negative Declaration for the Hammond Coastal Trail* which outlines the proposed route, and the *Amendment to the 1996 Addendum to the Final Negative Declaration for the Hammond Coastal Trail* which reflects the change from the originally proposed bridge across Widow White Creek to the currently proposed low-flow crossing/seasonal bridge concept.

Several things have, or soon will, change since the 1996 Addendum to the Final Negative Declaration. At the “beginning” of the proposed Pedestrian Interpretive path, north of the Murray Road, there is a ranch road that heads uphill, eastward, to a meadow. This meadow has been slated for development and the developer was required to construct a trail linking the new residential development and an existing residential neighborhood to the existing Hammond Trail. This trail segment has been completed.

In addition, the Natural Resources Services Division of RCAA has been awarded a Department of Water Resources grant to construct in-stream fisheries enhancement in the lower reaches of Widow White Creek. Actual construction is scheduled for mid-2002, but the current plans will require access to the creek for the heavy equipment placing the in-stream structures. This equipment access will involve improvements along the Pedestrian Interpretive route, leaving a cleared and graded base for the trail. The access on the southwest side of Widow White Creek will begin where the residential development’s access trail turns south (at the northeast corner of the meadow). This improvement for the DWR grant will follow the trail corridor to the creek crossing site. Access will also be created from the northeast side of the creek crossing site along the trail route to the “berry patch”, where the equipment access improvements will then deviate from the proposed trail corridor to cross private property.

The current proposed design is to construct a 3’ wide pedestrian path through the Widow White Riparian corridor following the route proposed in the 1996 documents listed above. The low-impact path will begin where the DWR access improvements end, heading east from the “berry patch” to the MCSD access road. The cleared width would follow State Parks recommended clearing specifications, approximately 4’ – 6’ wide by 8’ – 10’ high. See Appendix B for conceptual drawings identifying the proposed route and structural improvements for the Pedestrian Interpretive Trail. See Figure 6 on page 33 for the existing trail segment constructed by the residential developer and the improvements planned by NRS’ DWR-funded project.

It is critical to the further development of this trail segment that the Humboldt County Public Works Department approve a final trail route and design that specifically addresses the method of creek crossing. Once the final design is approved and fully supported by Public Works, the staff must actively pursue the required Coastal and Community Plan changes and permitting required to construct the trail.

Once a final design and permits are acquired, the trail can be constructed through a combination of community-volunteer work days, local organization’s volunteer efforts, materials donations, and NRS grant-funded supervision and construction. However, the grants cannot be applied for prior to completed permitting which requires an approved design.

Local Coastal Plan Amendment

Consultation with Bob Merrill of the State Coastal Commission indicated that the Coastal

Commission would not require an amendment to the Local Coastal Plan (LCP) for the proposed trail access (pers. comm.. 1996). At that time, Bob Merrill indicated that a lateral access was included in the LCP nearer to the mouth of Widow White Creek. This original access, a planned driveway, was exchanged for the trail easement and proposed trail crossing site.

The County of Humboldt *is* requiring an amendment to the LCP due to a concern stemming from previous litigation related to appropriate development within stream corridors. Listed under Chapter 3 of the General Plan, Volume I, 3432 Standards #7, Streamside Management Areas:

“Development within Streamside Management Areas shall be limited to the following uses...” including “C. Road and bridge replacement or construction, when it can be demonstrated that it would not degrade fish and wildlife resources or water quality, and that vegetative clearing is kept to a minimum.”

Trails are not specifically mentioned among the uses. The Planning Department, in conjunction with Public Works, is presently taking action to amend the General Plan to specifically allow for trails. Steps, and status of those steps of the amendment process are as follows:

1. First, a petition to the Board of Supervisors must be filed by the Community Development Department to initiate the process along with the deposit of funds (\$2,000-\$3,000). **This step was completed by Humboldt County Public Works in March of 2001.**
2. If the petition is accepted by the Board, a staff report and environmental document is prepared by Public Works. *There is a one year period to submit the required staff report and environmental documentation before the petition to the Board of Supervisors and fee must be resubmitted.* While the staff report generally only takes a couple of weeks to create, the environmental permitting can take a minimum of several months (see CEQA and Coastal Development Permitting, below). **The funds on deposit for the Hammond Trail are only good until March of 2002. Public Works must complete the environmental permitting process and create a staff report before that time.**
3. Upon receipt of the staff report and environmental document, the Community Development Department schedules the item on the Planning Commission Agenda, and makes the presentation. Items for the Planning Commission must be submitted 4 weeks in advance of being scheduled.
4. If the Commission agrees with the amendment, they forward their recommendation to the Board of Supervisors. There is a 30 day public comment period after the item is addressed by the Planning Commission.
5. Upon receipt of the item from the Planning Commission, it is scheduled for a meeting of the County Board of Supervisors. Items being scheduled before the Board of Supervisors must be submitted 4 weeks in advance. If the Board approves it, the item is then sent to the Coastal Commission. There is a 90 day public comment period after the item is approved by the Board of Supervisors.
6. Upon being scheduled before the Coastal Commission Board, the item may receive Final Approval. Items being scheduled before the Coastal Commission Board must be submitted 4 weeks in advance, and if approved, there is a no additional public comment period.

So, once the environmental permitting documents and staff report are submitted, it is a *minimum* of roughly 150 days before the Plan Amendment can be approved and completed.

The required funds have been put on deposit with the Planning Department to initiate the Local Coastal Plan change. *These funds are only good for one year. The County Public Works staff have until March of 2002 to complete the environmental permitting process and submit a staff report.*

CEQA Compliance Issues

The Widow White Creek Pedestrian Interpretive Trail project requires CEQA review. An initial attempt was made to permit the trail by adding the 1976 Negative Declaration (Neg.Dec.) for the Hammond Trail. This document, the 1996 Addendum to the Final Negative Declaration for the Hammond Coastal Trail, was withdrawn from consideration, as previously explained. However, the addendum defined the “project” to include both the Widow White Creek Pedestrian Interpretive Trail and the Bicycle-Equestrian Bypass Trail. This action permanently tied the two projects together in terms of permitting.

Much of the information required by an initial study checklist has been gathered by NRS and the County during the past permitting efforts. In fall of 1996, NRS staff met with representatives of the California Department of Fish and Game, Army Corps of Engineers, and other regulatory agencies to review the project (as proposed in the 1996 Neg.Dec.). Although the project has changed somewhat, much of the information gathered in those site visits is still applicable. Additional information has been gathered subsequently, including a rare and sensitive plant study (see Appendix C.) This vegetation survey, *Sensitive Plant Survey on the Hammond Trail Phase V Easement, McKinleyville, California*, was conducted under contract by the County in May of 1997. The firm contracted to conduct the survey concluded that “no sensitive plants were encountered bordering the trail” in and along the dedicated trail corridor.

The Natural Resources Division of Public Works has indicated that, based on the information gathered to date, the project will probably require a mitigated Negative Declaration to comply with CEQA. *As the Lead Agency on the trails development project, the County must initiate the CEQA permitting process. They have the authority to subcontract the actual work to another organization, but if this is the method used, the County Public Works Department **must** approve of and support the resultant CEQA Compliance Document to successfully get it through the process.*

Again, much of the basic information required by a Neg.Dec. has been gathered and is on file at NRS. Because of the link between the two trail sections (Interpretive and Bypass), outlining the process for CEQA Compliance will be dealt with later in this chapter.

The Interpretive Trail was designed to minimize negative impacts. Some of the design factors added specifically to minimize environmental and social impacts of the trail include: selection of a route that detours potential wetland areas and minimizes the need to remove mature trees. The trail will channel the substantial amount of existing use within the corridor onto *one* more environmentally appropriate path and proposed construction plans include encouraging use on the official trail by rehabilitating existing unofficial use trails. The trail itself will be minimal and unpaved. An interpretive program is planned to foster stewardship among those who use the trail, with vandal resistant signs and brochures available off-trail at local public facilities to

minimize littering. Finally, fencing and the planting of native trees and vegetation has been proposed as a component of the trail design to address the concerns of adjacent landowners.

In addition, it is intended that the trail, when constructed, will have substantial benefits to the surrounding environment. “Widow White Pedestrian Interpretive Trail” section will provide significant educational and interpretive value to the Hammond Trail system. Development of the path will protect the creek corridor by channeling use onto an appropriately designed and maintained trailway, rather than the many use trails that now exist. Finally, development of this trail segment benefits the riparian corridor through which it travels because the trail access easement granted by the landowner permanently prohibits development from the centerline of the creek approximately to the top of the northern bluff above the creek.

Coastal Development Permitting

The Widow White Creek Pedestrian Interpretive Trail lies within the Coastal Zone and will require a Coastal Development Permit (CDP). At one point in the planning process it was thought that a Conditional Use Permit (CUP) would also be required, however, with the specific incorporation of the trail as an allowed use in the riparian zone, this may not be required. *Further research should be conducted to address this issue.*

As both the Interpretive and Bypass trails will require a CDP, (and CUP, if one is necessary), an outline of the process for obtaining those permits will follow later in this chapter. *This process can be undertaken simultaneously with the CEQA permitting process with the County Public Works Department as the lead agency.*

Stabilization of the Trail Corridor

As described, a Department of Water Resources grant awarded to NRS in the summer of 2001 will address some of the erosion along the Hammond Trail corridor through Widow White Creek. Prior to 1990, Widow White Creek flowed through sand-dunes before entering the Pacific Ocean. As the main river migrated northward, the dunes were eroded away and the creek was intercepted by the river and the base-level of the creek mouth dropped. A resultant increase in slope and subsequent water velocities contributed to channel down cutting. In conjunction with an increase in impervious surfaces in McKinleyville (increasing run off) and storm-caused peak flow events of the mid-1990's, Lower Widow White Creek has adjusted its meander sequence by incising and widening its channel. This has resulted in severe bank erosion in the lower channel.

The Widow White Creek Biotechnical Bank Stabilization Project seeks to address the potential for increased erosion and impacts on spawning and rearing fisheries habitat in the lower reaches of the creek. Unless measures are taken to arrest the erosion of the sandstone terrace through which the creek flows, damage will continue to occur to fisheries, forest, private property, and the Hammond Coastal Trail corridor. To treat the problem, a combination of boulders, on-site logs, and imported logs will be installed. This will stabilize eroded banks and improve fish habitat by providing cover structures. Live willow stake cuttings, six to eight feet long, will be planted between the boulders during construction to provide future overhanging vegetation for improved rearing habitat and enhanced riparian and wildlife habitat. Where appropriate, the slope above the rock slope protection and above the bank full flow line will be planted with a combination of willows and alders. Sitka spruce and shore pine will also be planted on the upper slopes and terraces. These trees will provide a future source of large woody debris for

recruitment into the channel and potential cover structures for fish, amphibians, and other aquatic organisms.

The Pedestrian Interpretive Trail will benefit by having a stable crossing site across the creek and bank stabilization in a second location upstream. In turn, the trail, when completed, will provide the public with direct exposure to bank stabilization and fisheries restoration techniques.

Construction Costs

With the exception of fencing, minimal investment in materials, equipment, and supervision is required to construct this trail. The trail itself can be constructed relatively inexpensively—using local community volunteers. An estimate of the costs of trail materials and construction follow and include:

1. The addition of a gate where the ranch road and the trail diverge.
2. Installation of a gate in the fence bordering the trail section constructed as mitigation by the residential subdivision developer, (located at the north east end of the subdivision currently under construction).
3. Trail tread improvements from the “berry patch” east to the connection with the existing pumping station access road.
4. Two drainage structures along the above section of trail.
5. Minor grading and retention of soil to compensate for an elevation change at the east side of the “berry patch”.
6. A twenty foot boardwalk connecting the footpath with the existing pumping station access road where drainage issues exist.
7. Fencing along the trail from the meadow to the west side of the creek crossing site and from the east side of the creek crossing along the trail easement boundary and along the existing pumping station access road to Letz Avenue (approximately 3500’).

Trail cost estimates are based upon the NRS suggested route and design. *No costs have been factored into the estimate for crossing Widow White Creek.* Cost estimates are in 2001 dollars and are exclusive of permitting and environmental compliance.

Labor:

| | |
|---|-------------|
| Pre-site Coordination (160 hours @ \$30.00) | \$4,800.00 |
| On-site Coordination (320 hours @ \$30.00) | \$9,600.00 |
| Construction Supervision (40 hours @ \$30.00) | \$1,200.00 |
| Construction Crew (2400 hours @ \$15.00) | \$36,000.00 |

Fencing Materials:

| | |
|--|-------------|
| Fencing (3500’ @ \$5.00 foot) | \$17,500.00 |
| Field fence with heavy duty metal fence posts @ 10’ spacing and wooden bracing | |
| Gates (3 @ \$250.00 each) | \$750.00 |

Trail Structure Materials:

| | |
|--|---------------------|
| Shale for Trail Tread | \$8,000.00 |
| 2000' long x 4' wide x 1.5' deep = 444 cu yds, | |
| 444 cu yds @ 1.5 ton/yd = 666 tons@ \$12/ton | |
| Retaining structure (50' long x 4' wide x less than 4' tall) | \$1,500.00 |
| 2 Drainage Structures (less than 10') | \$1,500.00 |
| 20' Boardwalk | \$1,500.00 |
| Equipment: | |
| Trucking of Shale (20 loads @ 2 hrs per x \$70/hour) | \$2,800.00 |
| Bobcat (120 hours x \$50.00/hour) | \$6,000.00 |
| Vibraplate, misc. | \$2,000.00 |
| Travel: | |
| (Vehicles to transport crew & hand tools. 60 trips @ \$65/day) | \$3,900.00 |
| Tool Use Fees | \$4,000.00 |
| Total Estimate | \$101,050.00 |

If construction is *not* implemented by the County Public Works Department, an additional 20% to 30% should be added to the base costs outlined above for administrative overhead and profit (depending on the organization/business). Estimates do not include costs for County project management, prevailing wages, engineering, or putting the project out to bid.

Funding

Creative funding opportunities exist for construction of the Widow White Creek Pedestrian Interpretive Trail. Because the trail has an interpretive and educational component inherent in its design, it may qualify for education and interpretation grant programs in addition to the most commonly considered trail grant sources. Similarly, stream-related grant programs sometimes allow for a trail component. An example of this is the DWR funded project currently being undertaken by NRS that will improve roughly half of the proposed Widow White Interpretive Trail route. Additional possibilities include tapping health-related sources, as trail projects provide facilities that can improve the health of regular users, particularly those who may not otherwise be recreating.

Finally, the scale of this pedestrian trail is small enough that the trail could be constructed using hand labor (rather than heavy equipment.) Given the scale of the trail construction, smaller-- even local-- programs focused on stimulating volunteerism may also be feasible sources for both volunteer labor and/or small grants. Locally, both Yakima and Coast Central Credit Union have constructed sections of trail during volunteer events sponsored by the businesses for their employees. Similarly, AmeriCorps and CCC programs require participants volunteer and have assisted with trail and stream projects locally. Some possible trail funding sources most appropriate for the planning and construction of this *pedestrian* are listed below.

California's Habitat Conservation Program

Administered by State of California Department of Parks and Recreation, this program provides up to 50% of the required funding for wildlife corridors and trails; riparian habitat; habitat for

rare and endangered, threatened, or fully protected species; or aquatic habitat for spawning and rearing of anadromous salmonids. Only local units of government are eligible. Will allow up to 20% of awarded funds to cover planning and project administration. Funding cycle is generally due in October, contact information is as follows:

California Department of Parks and Recreation
Planning and Local Services Section
1416 Ninth Street, Room 940
P.O. Box 942896
Sacramento, CA 94296-0001
916-653-7423
<http://www.cal-parks.ca.gov>

State Coastal Conservancy (SCC)

The SCC manages several programs that provide grant funds for coastal trails, access, and habitat restoration projects. The funding cycle for these programs are open. Funds are available to local units of government as well as non-profits. For information, contact:

Joan Cardilino
California State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
707-286-4093

American Hiking Society's National Trails Endowment

Grants will normally be awarded to trail organizations and other non-profits with a trail-related focus. Grants range from \$1,000 - 10,000 amounts. They provide grants for seed money for new trails, improvements to existing trails, securing trail lands, constituency building on specific trail projects. Contact for details:

American Hiking Society
1422 Fenwick Lane
Silver Spring, MD 20910

California Conservation Corps (Humboldt Center)

The CCC is a local source of labor for trail projects. Occasionally, they receive training dollars that they can use as a match to provide crews at a lower rate. They are only available from November to June for trail work. The local contact is:

Robert Frechou (Projects Coordinator)
1500 Alamar Way
Fortuna, CA 95540
707-725-5106

WIDOW WHITE CREEK BICYCLE-EQUESTRIAN BYPASS

Route Description

The proposed route for this multi-use trail section travels east along Murray Road utilizing a combination of sidewalks for pedestrian users and bike lanes for equestrian and wheeled users. Approximately 200-300 feet before the southern Highway 101 off-ramp, the route turns northward following a McKinleyville Community Services District (MCS D) sewer line easement along the property boundary between private residential properties and Caltrans' US 101 right-of-way. Several hundred feet south of Widow White Creek, the route turns toward the east to cross Widow White Creek. The proposed trail route would cross the creek slightly upslope of the existing culvert headwall which allows Widow White Creek to pass under US 101. On the northern side of the creek, the route travels northwest and transitions out of Caltrans' right-of-way near the MCS D pump house facility, where it joins the Pedestrian Interpretive Trail. Both trails then continue north to Letz Avenue along an easement on the west side of the MCS D pump house access road.

The 7,300 foot Widow White Creek Bicycle-Equestrian Bypass trail segment includes upgrading Murray Road to meet Class II Bikeway standards (bike lanes). From Murray Road to Letz Avenue, recommended design is to construct a Class I Bikeway with a 4 foot unpaved shoulder. Special design consideration should be given to the road crossing / trail access near the intersection of Murray Road and the US 101 southbound off-ramp. NRS also recommends upgrading Letz Avenue to a Class II Bikeway (bike lanes).

The Widow White Creek Bicycle-Equestrian Bypass Trail complements the Pedestrian Interpretive Trail, providing a more direct, year-round multi-use connection to the "Hole in the Hammond." Providing a relatively direct and easy-to-follow link for multiple-use will reduce trespass and inappropriate use in the Widow White riparian corridor.

History

The 1994 *Hammond Trail Feasibility Analysis: An Analysis of Alternative Routes Between Murray Road and Clam Beach* recommended development of both the Widow White Creek Pedestrian Interpretive Trail and the Bicycle-Equestrian Bypass. Shortly thereafter, a grant was secured to complete the final designs and secure the environmental and land use permits for the Widow White Creek Pedestrian Interpretive Trail. The permit application included the Bicycle-Equestrian Bypass within the definition of the overall "project", thus linking the two trails in the planning process. Because the two trails were linked at that time, and were covered under the same Negative Declaration document submitted, the two trails remain linked as components of one overall project. The long-term impact of linking the two projects is that, as long as plans exist to construct both sections someday, one can not be permitted without the other.

At the same time that the easements were being secured for the Widow White Creek Pedestrian Interpretive Trail, an easement was offered to the County for the Bicycle-Equestrian Bypass. June Hartman offered the easement along the MCS D sewer line easement that crosses her properties parallel to US 101 (north from Murray Road). Unfortunately, this easement donation was never officially recorded. When June Hartman passed away and the property changed hands, the offer to donate an easement outright was not reinstated. Discussions with the new owners of the property, the Hartman Trust, have indicated some willingness to negotiate an easement dedication, however, not necessarily without compensation. Further negotiations are necessary to determine the requirements, which may be as simple as the trail project including screening fence

and vegetation as part of construction. Additionally, since these negotiation in the early 1990's, two of the residential properties along the route, all once owned by June Hartman, have been sold to new owners. The new owners, when contacted, indicated support for the trail development and granting the needed trail easements *if* their concerns could be addressed through appropriate trail design. Again, additional negotiations are necessary.

During the course of this Extension Analysis, in addition to research and analysis, steps were taken beyond the original scope of the project to *address* some of the constraints of the Bicycle-Equestrian Bypass Trail. These steps include:

- Completion of the *Hammond Coastal Trail Alternative Route Study: Murray Road to Letz Avenue*.
- Several meetings and numerous telephone conversations between Caltrans, County, and NRS staff.
- Creation of conceptual plans for the Bicycle-Equestrian Bypass Trail section.
- Preliminary contacts with landowners regarding interest in supplying needed trail easements.

Identified Constraints

As of this date, the trail section still requires:

- Easement Acquisition.
- Final trail route and design, approved by the Humboldt County Public Works Department and Caltrans that specifically addresses the improvements to the culvert headwall facility to protect the structure while providing for a multi-use appropriate creek crossing.
- Caltrans Encroachment Permit.
- CEQA permitting.
- A Coastal Development Permit.
- Funding to complete permitting and construct the trail.

Easement Acquisition

In May and June of 2001 in conjunction with this extension analysis project, the County Public Works Department actively pursued easement acquisition potential with private land owners in the hope of securing the needed 900 feet of easements along the MCSD sewer line. The Department contacted the three owners involved. Two landowners gave positive indications regarding granting an easement but expressed concerns regarding appropriate fencing and related screening between their land and the trail. The third landowner, the Hartman Trust (and the owner of the other two lots until recently) has expressed concern that a trail may affect the sale potential or value of the remaining lot(s), however they are not entirely opposed to the trail. Further negotiation by County staff is necessary to determine 1) the exact concerns of the landowners, 2) trail design standards that can address those concerns, and 3) any additional compensation required by the landowners. Once this information is agreed upon and documented in writing, trail designs, implementation plans, and funding solicitation can proceed incorporating the agreed upon information.

In addition, *pursuit of the easements requires timely attention*. Four more of the lots currently owned by the Hartman Trust are available for sale. So potentially, easement negotiations with four more landowners could be required to secure the necessary trail corridor. This could significantly increase the time and cost of securing the easements.

Further development of this section of trail is entirely dependant on determining the exact route. Only the County has the authority to negotiate with private landowners for the required trail easements.

Final Route & Design

Final Route Selection

If all possible negotiations with the landowners have been exhausted and *no trail easement* has been secured across private property, there is a potential for routing the Bicycle-Equestrian Bypass twenty feet to the east on the Caltrans' side of the property boundary. This route would provide a similar trail link and experience. However, Caltrans is very wary of allowing long-term longitudinal encroachments across their right-of-way. The procedure specified by Caltrans' requires that "all other trail routing options have been exhausted" including Eminent Domain. This conflicts with the County's stated policy discouraging use of Eminent Domain for trail corridor acquisition.

Regardless of whether this 900' of trail is routed along easements on private property or twenty feet to the east through Caltrans' right-of-way, the Bicycle and Equestrian Trail route must enter into Caltrans right-of-way to cross Widow White Creek. The proposed crossing would take advantage of the existing US 101 crossing of the creek, routing the trail on the existing roadway fill slope above the culvert headwall outlet. To address the Caltrans' requirement that all other trail route options be considered, a route study was completed. The *Hammond Coastal Trail Alternative Route Study: Murray Road to Letz Avenue* assesses eight different options for connecting the trail, analyzes the possible creek crossing sites, recommends preferred routes, and documents the history and goals of the Hammond Trail. The complete route study can be found in Appendix A.

Final Design

The conceptual design for this trail includes upgrading the 1,300-foot stretch along Murray Road to Class II Bikeway (bike lanes). From Murray Road to Letz Avenue the trail incorporates a design that includes an 8' paved bikeway and 4' unhardened surface for pedestrian and equestrian users. North of Widow White Creek, the trail would connect with the MCSD pump house access road. Letz Avenue would also be upgraded to Class II Bikeway (bike lanes). Further information on the design of this segment of the Bicycle-Equestrian Bypass can be found in Appendix D, *Preliminary Conceptual Routing (Equestrian – Bicycle Bypass Section)*.

Regardless of the ownership of the property that the final trail crosses, fencing and appropriate screening vegetation will be an important component of the trail design. Proper fencing and vegetation can enhance the experience of the trail user, as well as protect adjacent property owners from unwanted trespass. In addition, special attention needs to be given during the final design to the intersection of the trail with Murray Road to provide a safe connection at the meeting point of cars exiting US 101, Murray Road traffic, and the trail users.

It is critical to the further development of this trail segment that the Humboldt County Public Works Department work with landowners to determine the trail route and obtain the required easements. Once the final route is approved, Public Works must work with Caltrans to approve a final trail design that allows for crossing Widow White Creek. With a route and design fully supported by both Caltrans and the County, an encroachment permit application must be completed. Finally, Public Works staff must actively pursue the required Coastal and Community Plan changes and environmental permitting required to construct the trail. These are steps that only the County Public Works Department can pursue and which will take applying consistent effort to accomplish.

NRS is willing to assist in this process wherever possible. In the past, easement acquisition has been under the sole authority of the County, however, NRS may be able to assist with negotiations between the County and Caltrans on final designs and encroachment permitting. Further, much of the information needed for the environmental permitting has been gathered and is on file at NRS. Finally, NRS and the County have a long history of successful grant solicitation and trail construction.

It may be both possible and advantageous to implement this section of trail in phases. The first phase could address upgrading Murray Road and Letz Avenues to Class II Bikeway standards (bike lanes) utilizing BTA funds. Later phases could be funded through other grant programs and may include easement acquisition, the acquisition of private property if necessary, and the construction of the Murray to Letz connection.

Caltrans Encroachment Permit

During the course of this Extension Analysis project, several meetings were held with NRS, County Public Works, and Caltrans staff to address the route and design concerns that Caltrans has with the Bicycle-Equestrian Bypass. At this time, Caltrans is awaiting the outcome of the attached Route Study to assist them in determining whether they will support trail planning and implementation through their right-of-way. As mentioned previously, a minimum 800 foot encroachment onto Caltrans right-of-way is required. It is worth noting that Caltrans has been an active partner in the design and funding of other sections of the Hammond Trail and has conceptually supported the Bicycle-Equestrian Bypass trail in the past, though with some design related reservations.

Based on previous experience seeking an encroachment permit for the Vista Point segment of the Hammond Trail, once Caltrans' District 1 staff have approved and support the trail route and design, securing the actual permit is relatively easy. It is reaching the point where all of the concerns and design considerations of Caltrans' staff have been expressed and addressed that requires significant application of diligent effort. To facilitate that, a route study was conducted and documented in the *Hammond Coastal Trail Alternative Route Study: Murray Road to Letz Avenue*.

Similarly, the Route Study addresses potential Widow White Creek crossing sites and justifies the proposed crossing on Caltrans' fill slope adjacent to the culvert headwall. Of all the potential crossing sites along Widow White Creek, between SR 101 and the beach, the present site is most appropriate because:

- It can be constructed to meet the needs of multiple users.

- It provides an environmentally appropriate method of creek crossing, with minimal disturbance of native or mature vegetation and no wetland impacts.
- The site has reasonable topography for a crossing (whereas other sites have elevation differences up to 40 feet from one side of the creek to the other).
- The crossing site is stable.
- The site does not require stream alteration or a bridge related structural material placed within the main channel.
- It is the most cost effective crossing of all potential crossings identified.
- It facilitates the recommended Bypass route which is direct, remains on the west side of US101.
- Respectful distance is maintained from surrounding private landowners and adjacent private landowners support the route.

Public Works must work with Caltrans to approve a final trail route and a design that allows for crossing Widow White Creek. With a route and design fully supported by both Caltrans and the County, an encroachment permit application must be completed. The County must take the lead in negotiating with Caltrans to accomplish these steps.

CEQA Compliance Issues

The Widow White Creek Bicycle-Equestrian Bypass Trail requires CEQA review. As stated previously, the Widow White Creek Pedestrian Interpretive Trail and the Bicycle-Equestrian Bypass Trail are linked together in the permitting process. This allows for one permit application to cover both trail sections, however, it also means that one section can not be permitted and constructed before the other section is permitted. Unfortunately, this means that the Bicycle-Equestrian Bypass Trail can not be permitted or constructed until the Local Coastal Plan amendment required for the *Pedestrian Interpretive Trail* has been secured.

The Natural Resources Division of Public Works has indicated that, based on the information gathered to date, the overall project will probably require a mitigated Negative Declaration to comply with CEQA. Again, much of the basic information required by a Neg.Dec. has been gathered and is on file at NRS. Because of the link between the two trail sections (Interpretive and Bypass), outlining the process for CEQA Compliance will be dealt with later in this chapter.

Coastal Development Permit

The Widow White Creek Bicycle-Equestrian Bypass Trail lies within the Coastal Zone and will require a Coastal Development Permit (CDP). As both the Interpretive and Bypass trails will require a CDP and one application must be submitted for both trail segments, an outline of the process for obtaining those permits will follow later in this chapter. This process can be undertaken simultaneously with the CEQA permitting process to expedite the permitting process.

Construction Costs

Trail cost estimates are based upon the NRS suggested route and design using cellular confinement retaining structures (CCS). *No costs have been factored into the estimate for adding bile lanes to existing roadways.* Cost estimates are in 2001 dollars and are exclusive of permitting and environmental compliance.

Labor:

| | |
|--|-------------|
| Pre-site Coordination (160 hours @ \$30.00) | \$4,800.00 |
| On-site Coordination (480 hours @ \$30.00) | \$14,400.00 |
| Construction Mobilization (80 hours @ \$30.00) | \$2,400.00 |
| Construction Supervision (2 x 300 hours @ \$30.00) | \$18,000.00 |
| Construction Crew (2000 hours @ \$15.00) | \$36,000.00 |

Equipment:

| | |
|--|-------------|
| Trucking of fill material (400 hours x \$70/per) | \$28,000.00 |
| Backhoe (320 hours x \$80/per) | \$25,600.00 |
| Excavator (40 hours x \$140/per) | \$5,600.00 |
| Roller (160 hours x \$70/per) | \$11,200.00 |
| Water Truck (80 hours x \$80/per) | \$6,400.00 |
| Misc. (bobcat, dozer, etc.) (120 hours x \$50/per) | \$6,000.00 |

Materials:

| | |
|--|-------------|
| CCS (40,000 sq. yards) | \$40,000.00 |
| Fill (3,000 cu. yards) | \$30,000.00 |
| Fencing (2,600' @ \$12.00 foot) | |
| Chain link | \$31,200.00 |
| Fencing (1,000' @ \$5.00 foot) | \$5,000.00 |
| Field fence with heavy duty metal fence posts @ 10' spacing and wooden bracing | |
| Corrugated Metal Pipe (CMP) (100' x \$20 per) | \$2,000.00 |
| Geo-textile Cloth (20,000' sq. @ \$1.00 per) | \$2,000.00 |
| Railing (1000' x \$10/per) | \$10,000.00 |
| Shale for Trail Tread | \$18,000.00 |
| 1800' long x 10' wide x 1.5' deep = 27,000 cu yds, 27,000 cu yds @ 1.5 ton/yd = 1500 tons@ \$12/ton | |
| Signs and Kiosks | 3,000.00 |
| Travel (Vehicles to transport crew & hand tools. 90 days @ \$65/day) | \$5,850.00 |
| Tool Use Fees | \$3,500.00 |

Total Estimate **\$308,950.00**

If construction is *not* implemented by the County Public Works Department, an additional 20% to 30% should be added to the base costs outlined above for administrative overhead and profit (depending on the organization/business). Estimates do not include costs for County project management, prevailing wages, engineering, or putting the project out to bid.

Cost estimates are exclusive of final design negotiations, permitting and environmental compliance, currently the primary hold up on this trail segment's implementation. The negotiations between Caltrans, the County and NRS staff required for the Vista Point section of the Hammond Trail added approximately \$50,000.00 to the costs of that section.

Although a final route and design has not been approved by the County and Caltrans, it is likely

that construction of this trail section will be accomplished primarily with the use of heavy equipment. The costs and design considerations may vary significantly depending on whether the 900' section of trail is located on the relatively flat private property or across the slope on Caltrans' right-of-way. The first minimizes required retaining structures while the second maximizes the necessary retaining structures.

Funding

Creative funding opportunities exist for construction of the Widow White Creek Bicycle-Equestrian Bypass Trail. Because the trail will be relatively direct, will link existing trail segments, and will have a surface suitable for bicycles, it is likely to qualify for transportation-related funds. Additional funding possibilities include tapping 1) air quality sources as an argument can be made that facilitating bicycle commuters will reduce automobile generated pollution, and 2) health-related sources. A collection of transportation, trails, and air quality funding programs are listed below.

TEA-21

On June 9, 1988 President Clinton signed into effect the new federal transportation bill, TEA-21 (Transportation Equity Act for the 21st Century). This legislation provides funding for trail projects through a variety of competitive grants programs, primarily available to municipalities and Regional Transportation Planning Agencies (RTPAs). Under some of the funding mechanisms, non profits may apply if they are partnered with a public agency. Of the \$3.6 billion allocated by TEA-21 spread over the next six years, 75% will be transferred to RTPAs. The other 25% will be divided into three programs: statewide enhancements, conservation lands, and Caltrans' projects related to state highways. For more information on these sources contact:

Marsha Mason
(916) 654-5275
www.dot.ca.gov/hq/TransEnhAct/

EEM (Environmental Enhancement & Mitigation Program)

The EEM program, administered through Caltrans, funds enhancement and mitigation projects which are "directly or indirectly" related to the modification of existing, or construction of new, Caltrans facilities. Two categories apply to trails: roadside recreation and projects that mitigate the loss of, or detriment to, resource lands within or near Caltrans rights-of-way. The funding cycle is generally in the fall, October or November. Contact:

| | | |
|---|----|------------------------|
| Jan Bulinski, Local Assistance Engineer | or | Ca. Resources Agency |
| Caltrans District 1 | | The Resources Building |
| P. O. Box 3700 | | Sacramento, CA 95814 |
| Eureka, CA 95502 | | 916-653-5656 |
| 707-445-6399 | | |

North Coast Air Quality Management District PM10 Program

May fund trail improvement or tree planting projects if the case is successfully made that the project will decrease air pollution. Primarily for commuter trails. May fund planning as well as construction, although the program changes annually. Has both small and larger grants with varying cycles. For more information, contact:

Bob Torzynski

North Coast Unified Air Quality Management District
2300 Myrtle Ave.
Eureka, CA 95501
707-443-3093

Bicycle Transportation Account (Caltrans Bicycle Facilities Unit)

Grant funds for new bike paths, bike lanes and bike routes, traffic control devices, planning, safety, education and maintenance of bike facilities. Application Deadline is December 31st. Contact is:

Rick Blunden
California Department of Transportation
1120 N Street; M.S. #1
Sacramento, CA 95814
916-653-0036

(RTIP) Regional Transportation Improvement Program

This is the program that funds transportation. Recently greater control over these funds was given to local governments, locally the Humboldt County Association of Governments (HCAOG). This is the program that funds streets, road maintenance, local bus service, etc. Although highly competitive, it is possible to get transportation-related bicycle and trail projects funded. Only municipalities are eligible. Funding is appropriated annually. For in depth information, contact:

Spencer Clifton
Humboldt County Association of Governments
235 Fourth Street, Suite F
Eureka, CA 95502
707-445-8208

ISSUES COMMON TO BOTH “HOLE IN THE HAMMOND” ROUTES

CEQA Compliance Process

CEQA compliance should be integrated early in the planning process. Compliance with CEQA should be started as soon as the project is proposed in initial stages. . CEQA permits (a Negative Declaration) for the original Hammond Trail route were secured in the 1970’s, however, the need to reroute sections of the trail have also required additional CEQA review.

The process involves three phases, each phase of which has steps with specific timelines. The following figure shows all steps and specific time limits, as well as indicating which steps have been completed for the “Hole in the Hammond” sections of the Hammond Coastal Trail.

Italics indicate steps completed in the Hammond permitting process

*** CEQA process Action with time limits**

Phase 1

Preliminary Review

- *Pre-Application Consultation. Completed 3/20/2001*
- Application submitted to Lead Agency (Community Development) by applicant (Public Works)
- *Determination that project is subject to CEQA (This determination made by Public Works in consultation with Community Development.)*
- *Review for Exemptions*
- ***Application determined to be complete – within 30 days from application submittal, the start EIR or Neg. Dec. must be initiated.**

Phase 2

Initial Study

- Checklist completed
- Consultation with responsible and trustee agencies (*This process was completed for the Interpretive Trail in 1995-1996 as part of the preparation of the 1996 Addendum to the Neg.Dec.*)
- *** Decision to prepare EIR or Negative Declaration must be made by lead agency within 30 days from acceptance of complete application**

Phase 3

**Preparation of Environmental Impact Report
or Negative Declaration (Neg.Dec.)**
(Process outlined below for Negative Declaration)

- *** Contract for Negative Declaration preparation executed (45 days from the decision to prepare Negative Declaration)**
- Mitigation measures identified and agreed to by the project proponent
- Draft Negative Declaration prepared
- *** Public notice and review (20 – 30 days)**
- Responses to Negative Declarations received
- Comments considered
- *** Negative Declaration completed (180 days from acceptance)**
- Commenting agencies notified of date of hearing on project
- Negative declaration adopted
- *** Mitigation reporting and monitoring program adopted**
- *** Lead Agency makes determination on project (2 months from Negative Declaration adoption)**
- *** Notice of Determination filed (5 days from project approval)**
- *** Notice of Determination (24 hours from filing)**
- *** Responsible Agency makes determination on project (180 days from the Lead Agency decision)**

CEQA Process Complete

Coastal Development Permitting Process

The following is a general outline of the process for getting a Coastal Development Permit (CDP). All trails projects within the coastal zone will *always* require a CDP.

1. Determine if the project requires a permit or qualifies for an exemption under the Coastal Act.
2. Obtain application forms and a Plot Plan Checklist from the County Planning Division: Community Development Services, Clark Complex, 3015 H Street, Eureka, CA 95501-4484
3. Assemble the following information to be submitted with the application:
 - A detailed description of the use you wish to make of the property, the Assessor's Parcel Number(s), and the name and address of the property owner(s) and of the person making the application.
 - A site plan showing contours, natural features, streets, property lines, setbacks, buildings, parking areas, and driveways (see the Plot Plan Checklist).
 - A floor plan and the elevations of any proposed buildings. (Not applicable to trails projects.)
 - A check made payable to the County of Humboldt using the most recently adopted Fee Schedule. Fees can be variable as they are based on the costs to process an average permit application. Review fees for other county agencies will be collected at the same time. These may include Building Inspection, Environmental Health and the Land Use Division. Applications prepared by applicants will require an application review fee of \$55 to review the application packet for completeness.

Private planning consultants can provide assistance in preparing an application or an Application Assistance meeting can be scheduled with the County planning staff. An additional deposit of \$50 will be collected for this meeting and any credits or balance due will be applied when the application is submitted.

1. Once the application is submitted, the Planning Division must determine if the application is complete within 30 days under state law. A letter will notify the applicant of the status of the application. If it is not complete, this letter will include a list of additional information that must be submitted. Once the application is accepted for filing and fees collected, the time limits on processing permits become effective.
2. Copies of the application packet will be sent to all interested public agencies for comments on the project. They have 15 days to respond, if no comments are received, it is assumed that the project conforms to the requirements of the department or agency concerned. For this area and type of project the agencies include: Department of Fish & Game; California Coastal Commission; Caltrans, Regional Water Quality Control Board; County Building, Land use, and Environmental Health Divisions; County Council; McKinleyville Community Services District; Arcata Fire Protection District; and the Yurok Tribe for archeological review.

3. Environmental Review is conducted by planning staff to determine what environmental documentation is needed. The Planning Department prepares a Staff Report with input from the listed agencies which receives the review and approval of the Supervisory Planner.
4. A public Hearing before the County Planning Commission will be scheduled and notice of public hearing will be sent to all land owners within 300 feet of the project. Items for the Planning Commission Agenda must be submitted 4 weeks in advance.
5. The Planning Commission hears comments on the application and makes a decision on the permit. Decisions can be appealed to the Board of Supervisors within 10 working days of the decision.
6. After the 10 day appeal period is completed, and assuming no appeal has been filed, the County issues a Notice of Determination.
7. Upon receipt of the Notice of Determination at the State Clearinghouse, a 30 day period begins wherein the permit may be appealed to the State Coastal Commission.
8. Upon completion of the appeal period, if no appeal has been filed, a permit is issued.

Note: Once the permit has been issued the project must be started within one year or an extension will have to be filed. Extensions will require additional fees.

The CDP permitting process generally takes two to three months, without appeals, once the application is submitted. Both the Widow White Pedestrian Interpretive Trail and the Bicycle Equestrian Bypass Trail require a CDP. Because the two projects have been linked in previous permitting processes, one overall application can be filed for both sections. As of the completion of this document, no application has been filed for the Hole in the Hammond project, however, much of the information listed in step 3 above is on file at NRS.

As the Lead Agency for the trail project and its permitting, all further trail construction is dependant on the County Public Works staff initiating the permitting process. If the County determines that contracting with another organization is the most expedient method of completing the permitting process, County staff must supply the required time, input, and review to the process required to fully support the subsequent permit application.

The CDP process can be undertaken simultaneously with the CEQA permitting process.

Common Funding Issues and Sources

In general, one of the primary constraints to local trail development is a “lack of funding”. While there are significant grant and foundation funds designed to *construct* trails, two problems exist. The first, is the limited ability of the County to tap grant and foundation resources with the hard-working but overworked staff. (Keep in mind that County “trails planning” staff are all within the Public Works Department whose primary responsibility is to keep our vast County road system functioning, particularly difficult in years with severe winter storm damage.) The second difficulty is that the majority of grant and foundation programs provide funds for final engineering and construction, *but not* planning, initial design, environmental permitting, or maintenance. This increases the work necessary for County Public Works staff to contribute, even when grant funding is available for trail construction.

The following is a list of trail funding sources that would apply to both the Widow White Pedestrian Interpretive Trail and the Bicycle Equestrian Bypass Trail.

Recreational Trails Program

This program is administered through the State of California, Resources Agency by the Department of Parks and Recreation and provides funding up to 80% for recreational trails and related projects. Funding is available for motorized and un-motorized trails to cities, counties, districts, state agencies, and non profit organizations that have management responsibilities over public lands. Funding cycle is generally due in October. For non-motorized projects, contact:

California Department of Parks and Recreation
Planning and Local Services Section
P.O. Box 942896
Sacramento, CA 94296-0001
916-653-7423
<http://www.cal-parks.ca.gov/GRANTS/RTP.html>

Millennium Trails Program

The Hammond Trail, a component of the California Coastal Trail which has been designated a Millennium Legacy Trail, may qualify for funding through the Millennium Trails program. Funding for Millennium Trails is available through the Public Lands Discretionary Fund. Further information about the program may be available at:

Office of the Secretary, S-3
United States Department of Transportation
400 Seventh Street, SW
Washington, DC 20590
www.fhwa.dot.gov/discretionary/

State Coastal Conservancy (SCC)

The SCC manages several programs that provide grant funds for coastal trails, access, and habitat restoration projects. The funding cycles for these programs are open. Funds are available to local units of government as well as non-profits. For information, contact:

Joan Cardilino
California State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
707-286-4093

Environmental License Plate Funds

Competitive grants administered by the California Resource Department for projects that protect or preserve the environment, abatement of air pollution, environmental education, and enhancement of resources. No stated requirements and no matching requirements. Deadline is July 15th, yearly. Contact for details:

Harold Waraas
1416 Ninth Street
Sacramento, CA 95814
916-653-5656

California Conservation Corps (Humboldt Center)

The CCC is a local source of labor for trail projects. Occasionally, they receive training dollars that they can use as a match to provide crews at a lower rate. They are only available from November to June for trail work. The local contact is:

Robert Frechou (Projects Coordinator)
1500 Alamar Way
Fortuna, CA 95540
707-725-5106

AmeriCorps National Civilian Community Corps

This program will provide a twelve person crew free of charge except for housing and feeding them during the project. Projects are selected through an application process one year in advance. For more information contact:

Sharon Morioka-Estrada
2650 Truxtun Road
San Diego, CA 92106-6001
619-524-0100

VII. EXTENSION ANALYSIS RECOMMENDATIONS

WIDOW WHITE CREEK PEDESTRIAN INTERPRETIVE TRAIL

Construction of this proposed trail extension first requires the project to be permitted. As a project within the Local Coastal Zone, the Widow White Creek Pedestrian Interpretive Trail requires a Coastal Development Permit. As a project within California, the project is subject to the California Environmental Quality Act (CEQA) and must go through the necessary impact analysis and environmental assessment process to be in compliance with CEQA. An assessment of impacts to the environment can be substantially different given a trail's design and location. Therefore, a route and design must be completed so that the environmental permits can be secured, which are required for the necessary Plan changes.

The following is a list describing the recommended steps to trail implementation, responsible agencies, and potential partner organizations.

1. Approve a Final Route, Design, and Method of Stream Crossing (County Public Works)

The needed permits, as well as grant proposal applications, require a County-approved trail route, design specifications, and method of stream crossing. NRS has developed and recommended all of the above for the Pedestrian Interpretive Trail. Whether it is the NRS' recommendations or another trail route and design, the County as Lead Agency must commit to a route, design, and stream crossing.

2. Complete the Required Plan Changes and Permit Applications (County Public Works)

The County Public Works and Planning Department staff have determined that to issue a required Coastal Development Permit to the Widow White Creek Pedestrian Interpretive Trail project will require changing the Local Coastal Plan to specifically include trails as an allowed use in the riparian corridor. (Currently the plan allows roads and bridges but not specifically trails.) In turn, the process to secure a Local Coastal Plan change, requires environmental permits (CEQA compliance) to be completed and proof submitted.

As the Lead Agency for the trail project and its permitting, all further trail construction to connect the "Hole in the Hammond" is dependant on the County Public Works staff completing the plan change and permitting processes. If the County determines that contracting with another organization is the most expedient method of completing these processes, County staff must supply the required time, input, and review to the process required to fully support the subsequent products.

It may be possible to coordinate the Coastal and Community Plan change process, the CEQA permitting process, and the Coastal Development permitting so that the agency reviews and public hearings coincide. This could significantly diminish the time required to secure the needed permits, but requires all of the following applications be prepared and submitted concurrently, and then tracked through the various processes.

- **Local Coastal Plan and Community Plan Changes.**

- **Fees were put on deposit with the Planning Department in March of 2001 to initiate**

the Local Coastal and Community Plan changes required for the Widow White Creek Pedestrian Interpretive Trail. **These funds are only good for one year during which the environmental permitting process must be *completed* and a staff report must be generated and *submitted*.** Public Works must actively work to complete the required steps within the LCP change process, including initiating and completing the environmental permitting.

- **CEQA Compliance**

As mentioned above, the CEQA review and compliance must be complete prior to the Local Coastal Plan changes being processed. The Natural Resources Division of Public Works has indicated that the project will probably require a mitigated Negative Declaration to comply with CEQA. Much of the information needed for the CEQA Initial Study and environmental assessment process has been gathered by and is on file at NRS.

- **Coastal Development Permit (County Public Works)**

Both the Widow White Creek Bicycle-Equestrian Bypass and Widow White Creek Pedestrian Interpretive trails will require one overall CDP. This permit application process can be concurrent to the environmental permitting and plan change processes and should be initiated immediately by Public Works or their designate. Again, much of the information needed for this permit was gathered by NRS for a previous CDP application that never completed the process (because of the need for the LCP change, the permit was pulled.)

A one point in the planning process it was thought that a Conditional Use Permit (CUP) would also be required, however, with the specific incorporation the trail as an allowed use in the riparian zone, this will probably not be required. The permitting agent should verify that a CUP is no longer needed for the Interpretive Trail.

1. Coordinate Construction of the Trail (County Public Works and NRS)

Once the permitting and plan changes are complete, trail construction is dependant upon funding acquisition. The fifteen year history of collaboration between NRS and the County is one successful method of providing trail implementation funding and construction assistance. NRS staff are greatly invested in the Hammond Trail project and have significant interest in acquiring needed funding for and assisting with trail construction. In addition, the County Public Works Department may wish to pursue funds that are not available to non profit organizations.

In addition, the scale of this pedestrian trail is small enough that the trail could be constructed primarily using hand labor (rather than heavy equipment.) Given the scale of the trail construction, smaller-- even local-- programs focused on stimulating volunteerism may also be feasible sources for both volunteer labor and/or small grants. Locally, both Yakima and Coast Central Credit Union have constructed sections of trail during volunteer events sponsored by the businesses for their employees. AmeriCorps and CCC programs require participants volunteer and have assisted with trail and stream projects locally. Similarly, local businesses have provided materials to other sections of the Hammond Trail and may be willing to provide needed materials for the interpretive section as well.

2. Implement the Pedestrian Trail Interpretive Program (County Public Works and NRS)

Implementation of the Interpretive Program developed for this trail section should be included in any construction-related grant funding proposal. Since the initial design and printing of the *Hammond Coastal Trail: Urban Trail from Historic Rail*, 1,000 copies of the brochure have been distributed. Updating and reprinting of the Hammond Trail Brochure, as well as installation of the listed trailside markers referred to by the brochure, is an important component of the overall trail project.

Interpretive materials are a way of fostering stewardship for creek and trail resources and educating the public about the importance of staying on the trail. As such, the interpretive program is vital part of responsible trail design within a riparian zone. In addition, the trail brochure is very popular with the community, demonstrated by the many, many requests for copies received by NRS staff since the last ones were given out.

The newly revitalized community group, “Friends of the Hammond Trail” have expressed interest in assisting with fundraising for implementation of the interpretive program. This group has made fund raising to implement the interpretive program along the Hammond Trail a primary focus of their efforts.

Approximate costs of implementing the Interpretive Program (in 2002 dollars, with no overhead or profit included):

| | | |
|---------------------------------|-----------------------|-------------|
| Updating the Brochure | 32 hours @ \$25/hour | \$800.00 |
| Printing & Distribution | | \$2,000.00 |
| Interpretive Markers (15) | \$25.00 each | \$375.00 |
| Kiosks & Interpretive Signs (2) | \$1,600.00 each | \$3,200.00 |
| Construction & Installation | 120 hours @ \$25/hour | \$3,000.00 |
| Tool Use | | 495.00 |
| Travel | (2 days @ \$65 /day) | \$130.00 |
| TOTAL ESTIMATED COST | | \$10,000.00 |

WIDOW WHITE CREEK BICYCLE-EQUESTRIAN BYPASS

Recommendations Dependant upon Permitting of the Interpretive Trail

As discussed earlier, the Widow White Creek Bicycle-Equestrian Bypass and Widow White Creek Pedestrian Interpretive Trail have been linked in the permitting process. Because of this, the Bicycle-Equestrian Bypass project can not be permitted or constructed until the Local Coastal Plan amendment required for the Pedestrian Interpretive Trail has been secured.

The Local Coastal Plan changes are only required for the Pedestrian Interpretive Trail. An environmental permit (CEQA compliance) is required to be acquired and submitted as part of the LCP change process. It is possible to include *both* the Widow White Creek Bicycle-Equestrian Bypass and Widow White Creek Pedestrian Interpretive Trail in the environmental assessment submitted during the LCP change process. This would expedite permitting of both trails and cut

the costs of permitting in half (one set of fees would cover both trail projects). Similarly, the required Coastal Development Permits could be submitted in one overall application, again minimizing costs and expediting the permitting process.

The following is a list describing the recommended steps to trail implementation, responsible agencies, and potential partner organizations. These steps are dependant upon the described Local Coastal Plan change and, if the two trail extension projects are permitted together, may be necessary steps required to complete the LCP change and CDP permitting processes.

1. Actively Pursue Easement Acquisition (County Public Works)

Further development of this section of trail is entirely dependant on determining the exact route (along private property or Caltrans right-of-way). Determining the final route will influence the final design of the Bicycle Equestrian Bypass Trail. Because final designs are required for permitting, and permits are required for most grant funds, pursuing the dedication of easements by private landowners along the route is a top priority. Only the County has the authority to negotiate with private landowners for the required trail easements. Easement acquisition can be accomplished in two steps:

- Further negotiation by County staff with the three landowners involved is necessary to determine 1) the exact concerns of the landowners, 2) trail design standards that can address those concerns, and 3) any additional compensation required by the landowners. Once this information is agreed upon and documented in writing, trail designs, implementation plans, and funding solicitation can proceed incorporating the agreed upon information.
- The actual easement dedication process.

2. Acquisition of the Caltrans' Encroachment Permit (County Public Works)

The Creek Crossing and Approach

Preliminary negotiations between County Public Works, NRS and Local Caltrans District 1 staff have been initiated. The purpose of these meetings is to secure the support of local Caltrans staff for the proposed Widow White Creek Bicycle-Equestrian Bypass Trail, particularly for the crossing of Widow White Creek. As currently proposed, the trail would cross the creek within Caltrans' right-of-way and utilizing an existing Caltrans' culvert and fill structure. One outcome of these initial negotiations was identifying the need for an alternative trail route study, which was completed by NRS as part of this extension analysis project and is attached a Appendix A.

Once negotiations with the private landowners has been completed and the final route has been determined, an additional round of negotiations between County Public Works' and Caltrans' staff will be necessary to approve a final trail design including the Widow White Creek crossing. NRS staff may also contribute to these negotiations, providing an understanding of funding possibilities and requirements.

When a route and design fully-supported by both Caltrans and the County, an encroachment permit application must be completed. Attaining the support of local Caltrans District 1 staff prior to initiating the encroachment permit has, in the past, significantly reduced the difficulty of securing the needed encroachment permit.

The Caltrans' Right-of-Way Alternate Route

If all possible negotiations with the private landowners have been exhausted and *no trail easement* has been secured across private property, there is a potential for routing the Bicycle-Equestrian Bypass twenty feet to the east on the Caltrans' side of the property boundary. This route would provide a similar trail link and experience. However, Caltrans is very wary of allowing long-term longitudinal encroachments across their right-of-way (so the private property option is preferable if the landowners are amenable).

The procedure specified by Caltrans to issue a long-term encroachment permit requires that "all other trail routing options have been exhausted" including Eminent Domain. This conflicts with the County's stated policy discouraging use of Eminent Domain for trail corridor acquisition (another reason to pursue the private property option).

Additional negotiations between County Public Works' and Caltrans' staff will be necessary to prepare the way for the encroachment permit should the route be predominantly within Caltrans' right-of-way. Only one permit should be necessary for the route and creek crossing.

3. Completion of Permit Applications (County Public Works)

The Widow White Creek Bicycle-Equestrian Bypass Trail will require compliance with CEQA and a Coastal Development Permit. As stated, the environmental assessment (CEQA compliance) submitted during the LCP change process may include the Widow White Creek Bicycle-Equestrian Bypass Trail project as well as the Pedestrian Interpretive Trail project. Similarly, the required Coastal Development Permits could be submitted in one overall application.

While applying for the Widow White Creek Bicycle-Equestrian Bypass Trail within the other permits would require additional work while conducting the assessment or developing the application, the benefits are numerous. When both projects are permitted together only one fee applies per permit, the required public hearings can be combined, and ultimately, the permits would be completed much sooner than if separate processes were conducted. As permits are the primary constraint to acquisition of additional grant funding, having the permits sooner means that the construction funding would also be available sooner.

As the Lead Agency for the trail project and its permitting, all further trail construction to connect the "Hole in the Hammond" is dependant on the County Public Works staff completing the permitting processes. NRS is willing to assist in this process wherever possible. If the County determines that contracting with another organization is the most expedient method of completing these processes, County staff must supply the required time, input, and review to the process required to fully support the subsequent products.

○ **CEQA Compliance**

The Natural Resources Division of Public Works has indicated that the project will probably require a mitigated Negative Declaration to comply with CEQA.

○ **Coastal Development Permit (County Public Works)**

This permit application process can be concurrent to the environmental permitting and plan change processes and should be initiated immediately by Public Works or their designate. Much of the information needed for this permit was gathered by NRS for a

previous CDP application that never completed the process (because of the need for the LCP change, the permit was pulled.)

4. Coordinate Construction of the Trail (County Public Works and NRS)

Construction of the trail is contingent upon acquisition of the funding. Solicitation of grant funding can be initiated once the plan change and permitting processes are underway. The fifteen year history of collaboration between NRS and the County is one successful method of providing trail implementation funding and construction assistance. NRS staff are greatly invested in the Hammond Trail project and have significant interest in acquiring needed funding for trail construction. In addition, the County Public Works Department may also wish to pursue construction funds. As trail development partners, NRS and the County should work together to coordinate funding solicitation and to support each other's grant applications.

Possible Immediate Actions

While the majority of project-related actions are dependant upon the acquisition of the LCP changes and permitting, several other actions may be possible in the mean time.

1. Pursue Bike Lanes on Murray Road

It may be possible to acquire funding and add bike lanes to Murray Road while the permitting of the Widow White Creek Bicycle-Equestrian Bypass and Widow White Creek Pedestrian Interpretive Trails is in process. The addition of bike lanes to existing roadways may be exempt from specific permit requirements.

An assessment should be conducted to determine if bike lanes are exempt. If so, solicitation of funding to add bike lanes to Murray Road from the Bicycle Transportation Account would be feasible. The deadline for applications to the BTA is December 31. Given this timeline, it is possible that the funds could be acquired and bike lanes constructed before the pending trail permits were issued.

2. Pursue Bike Lanes on Letz Avenue

Similarly, it may be possible to acquire funding and add bike lanes to Letz Avenue. An assessment should be conducted to determine if adding bike lanes to existing roadways is exempt from the permitting process. If so, a grant application to add bike lanes to Letz Avenue should be made. A joint application for both Murray Road and Letz Avenue bike lane improvements could be made to the Bicycle Transportation Account before the December 31 deadline. Given this timeline, it is possible that the funds could be acquired and bike lanes constructed before the pending trail permits were issued.

NORTHWARD EXTENSION OF THE HAMMOND TRAIL

Trail development recommendations to the north of the existing sections of Hammond Coastal Trail are ranked by priority:

1. Strawberry Creek Bridge

Existing sections of the Hammond Coastal Trail were connected to within 300' of Strawberry Creek in 2001. The trail was not connected to the creek to enable the designers of the bridge crossing Strawberry Creek leeway in the identification of a suitable crossing site.

Humboldt County Public Works Department has secured funding for the bridge from the State Coastal Conservancy, designed the crossing structure, and submitted an application for the required permits. However, Strawberry Creek bridge construction is on hold pending the outcome of permitting-related negotiations. The County--the lead agency for bridge construction—should actively pursue additional negotiations and whatever other actions are required to complete the permitting process and enable the bridge to be constructed.

2. Strawberry Creek to Clam Beach Drive Overpass - West of US 101

This route, described in [Section V](#) of this document, lies entirely within Clam Beach County Park property. The trail route stays on the west side of State Route 101 and Clam Beach Drive until it reaches the Clam Beach Drive overpass crossing of State Route 101. Heading north adjacent to Clam Beach Drive, this separated trailway route crosses three County park accessways and skirts a number of roadside pullouts with related unofficial trailheads to the beach.

Initial discussions with Public Works staff indicated that there is a high potential for development of an off-road pathway following this route. Routing the pathway near to, but separated from, Clam Beach Drive would minimize environmental issues and the fact that the County owns the entire stretch of proposed trail minimizes landowner issues. In addition, the design specifications for construction of a separated pathway through sand were developed in 1998 for the Clam Beach North section of the Hammond Trail and are on file at NRS.

After the “Hole in the Hammond”, this route is recommended as the highest priority for northern expansion of the Hammond Coastal Trail. Funding for further development, planning, environmental review and permitting should be sought, perhaps through a future round of STIP funding.

CONTINUED PLANNING AND STUDY

This Extension Analysis project was designed to take an initial look at the possible trail connections between Trinidad and Fortuna, prioritize two of the identified connections, and provide in-depth information on the two priority segments. Continued active planning efforts are necessary to develop trail projects to the point where trails can be constructed. To facilitate future trail development efforts, the following planning areas are recommended:

- Strawberry Creek to Clam Beach Drive Overpass - West of US 101

- Little River Crossing north to Trinidad
- South through the Arcata Bottoms
- Humboldt Bay Area
- South of Eureka to College of the Redwoods
- College of the Redwoods to Fortuna

GENERAL TRAIL-RELATED IMPROVEMENTS

There are several trail-wide improvements that surfaced during this Extension Analysis. The following is a list of proposed general trail-related activities or improvements:

1. Address Issues of Trails Impacts on Cattle

One of the issues that repeatedly came up during the course of this analysis was the impact of trails adjacent to cattle ranches. Some preliminary research into this issue discovered that there is little long-term impact to milk production when cows are grazed on land adjacent to trails. In addition, there was some indication in the research that trails can provide benefits to the cattle ranchers, particularly through the Arcata Bottoms where trails may diminish impacts of flood flows, serve as emergency access to land during floods, and vegetation along the trails may provide windbreaks. In additions, research provided suggested design considerations that may minimize impacts to cattle including closing of the trail at night, fencing the trail to limit access to the cattle, prohibiting dogs from particularly sensitive trail sections, and maintaining rancher's access and ability to move cows between fields. (Additional information is on file at NRS.)

Additional research into the impact of trails on cattle and trail designs that minimize impacts is needed. Once research is complete, a forum should be organized to share the results with landowners that border potential/identified trail routes.

2. Effectively Limit Motorcycle Use

Another concern expressed repeatedly during the research and outreach of this Extension Analysis project, was the frequency of motorcycles utilizing the trail and bridge over the Mad River. Numerous landowners whose property is adjacent to existing sections of the Hammond Trail have expressed concerns over motorcycle use of the trail, noting that use seems to be increasing.

Develop and include in future designs methods of limiting motorcycle use on multi-use trails.

3. Improve Identification and Regulatory Signs

The current style of trail identification sign is a wooden sign with inscribed and painted lettering. The signs include the name of the trail, the Coastal Conservancy— a primary funding source—and that the trail is for non motorized access only. Similar signs are posted at some neighborhood access points (where there are no improvements) and some trailhead locations (that have bathrooms, available water, and trash receptacles). Regulations are posted at trailhead locations only (Hiller Park and Clam Beach County Park).

Consistent identification and regulatory signage along all trail access points will help to establish a trail identity in the minds of users and enable users to understand and follow rules. Development of consistent guidelines for required signs will also enable future trail construction projects to install appropriate signs on trail extensions, and where appropriate, install or improve signs at existing trail end points to meet new consistent standards. Guidelines should include suggested standards for trail identification signs, those that identify allowed users, and regulatory signs.

In development of the sign standards or guidelines, specifying the differences in requirement for neighborhood access points and trailhead locations will also enable future projects to incorporate sign related-improvements. For example, it may be appropriate to recommend different regulatory signs at different types of locations—neighborhood access signs may be more effective in reaching users if rules are worded differently than on the more official and comprehensive regulatory signs at trailhead locations that are required to enable enforcement.

Further, informational signs directing users between the “Hole in the Hammond” section and providing updates as to the status of the linking sections may be appropriate during the interim while the connections are being planned and permitted.

4. Neighborhood Trail Access Improvements

In addition to clearer and more consistent signs, the Hammond Coastal Trail is attracting enough users that some basic improvements are required at existing neighborhood access locations. Such minimal improvements as trash receptacles and dog refuse collection and disposal stations would enhance the user’s experience as well as minimize maintenance demands.

If standards are developed now for neighborhood access improvements, future grants implementing extensions of the trail can include suggested improvements. In addition, if standards are developed, the County can then request assistance in implementing improvements in existing access points from users, local civic organizations, and the “Friends of the Hammond Trail”.

5. Trail Development and Road Maintenance

Once a preferred route for the trail is selected through an area, partner road maintenance programs with trail development. On the sections of the trail route that coincide with County roads, partner roads maintenance and re-paving with Bike Transportation Account and other grant sources to improve the roads with bike lanes where possible and improved shoulders where full bike lane width is infeasible. Let the roads program fix the roads and the grants implement the trail improvements. Collaborate with local groups such as NRS or the HBBCA to assist with grants. The process might work like this—

- County notifies interested organizations of planned road improvements early in the planning process to give non profits time to develop grant applications and receive funds. The County would provide improvements needed and approximate costs per mile for conceptual trail improvements (standards costs could be developed for shoulder improvements with widening, for paving and striping only, and for re-striping only.)
- CEQA compliance would be completed by the County as part of the road maintenance or

improvement.

- Trail groups could write grants in partnership with the County so that funding would be received in tandem with programming the roads improvement funds using template.

VIII. CONCLUSION

The development of the Hammond Coastal Trail is a true success story in collaboration and in “getting things done” with limited resources. The development and construction of existing sections of the Hammond Trail have involved numerous County and State agencies, non profit organizations, a national volunteer labor organization, many and continuing business supporters, and community participation. Rarely does any community find such strong cooperation over such a long time. This effort should be recognized for the successful example that it sets.

IX. CONTACTS AND RESOURCES

CONTACT INFORMATION

Further information regarding this study, items listed in this document as being “on file at NRS”, the history of the Hammond Trail, or developments subsequent to this report, may be obtained by contacting the Natural Resources Services division of Redwood Community Action Agency at 269-2065 or Humboldt County Public Works Department at 445-7652.

BAY TRAILS PROJECT

The goal of the Humboldt Bay Trail Feasibility Study is to look at the "big picture" of non-motorized access to and around Humboldt Bay in northwestern California. Funded by a grant from the California Coastal Conservancy (SCC), the Natural Resources Services Division (NRS) of the Redwood Community Action Agency will collect information about potential access projects, select and prepare preliminary designs for priority projects, and create a report that presents the overall recommendations and findings of the study.

California Coastal Trail

The Bay Trails Project will work in concert with the Hammond Coastal Trail Extension Analysis to identify a preferred California Coastal Trail route through the Humboldt Bay region.



PHOTO: JAY DOTTLER

Water Access and Routes

There is a known desire for improved water access around the bay, and additional kayak and canoe access sites and "water trail" routes will be researched.

Interpretive and Signing Programs

Designs for a consistent "Humboldt Bay Access" signing system will be researched and proposed to management entities around the bay for approval.

Bay Ridge Trail System

The ridgeline east of the bay area has attracted Humboldt residents as a potential for recreational routes. These timberlands are mostly privately-owned with the exception of Arcata Community Forest. A Weyerhaeuser system will be researched to allow access to timberland road systems in Oregon and Washington.

Campsite Recommendations

There are currently very limited camping options in the greater Humboldt Bay Area. In this study, research will be conducted on the potential establishment of additional campsites around the bay accessible by land and/or water.

The Bay Trails Projects is scheduled for completion in the Fall of 2001. Further information can be found on the internet at: www.rcaa.org/baytrails

RESOURCES

The following documents and resources were used during the research and analysis of routes contained in this study:

- 1994 Hammond Trail Feasibility Analysis: An Analysis of Alternative Routes Between Murray Road and Clam Beach, RCAA - Natural Resources Services.
- 1997 Feasibility Analysis: Humboldt County Bicycle Facilities Planning Project, RCAA - Natural Resources Services.
- 2001 Caltrans Highway Design Manual and *Highway Design Manual, Chapter 1000 – Bikeway Planning and Design*, Topic 1001, Index 1001. 1 – Definitions, 1995.
- 1979 Humboldt County General Plan, Volume I.
- 1999 Humboldt County General Plan: McKinleyville General Plan, Volume II, Public Hearing Draft, RCAA - Natural Resources Services.
- 1999 Phase VII Hammond Coastal Trail Plans: Letz Avenue to Clam Beach Segment.
- 1997 Specifications for Construction of the Hammond Coastal Trail - Widow White Creek to Letz Avenue: Phase B – Part B, RCAA - Natural Resources Services..
- 2000 County of Humboldt Property Assessors Map.
- 2000 County of Humboldt Air Photo's.
- 1993 'Trails for the Twenty-First Century: Planning, Design, and Management for Multi-Use Trails'. Rails to Trails Conservancy.
- Pacific Bell ISOL Conduit Records: #1-5 & 5-10, Aerial Maps #41-43.
- 1963 Caltrans Plan View Map: Widow White Creek Culvert.
- 1963 Caltrans Widow White Creek Culvert Structural Plans.
- 1996 Negative Declaration: Hammond Coastal Trail, Widow White Creek to Clam Beach County Park.
- 1999 Recommendations for Accessibility Guidelines: Outdoor Developed Areas – Final Report, U.S. Architectural and Transportation Barriers Compliance Board.
- 1975 MCSD Sewage Collection System Plan and Profile.
- 2000 Humboldt Area Bike Map, RCAA - Natural Resources Services
- California Department of Parks and Recreation, Klamath District Trails Manual, 1993.
- Designing Sidewalks and Trails for Access, Beneficial Designs, Inc. July 1999.

X. APENDICES

- A. Route Study
- B. Widow White Creek Pedestrian Interpretive Trail Conceptual Route, Design, and Improvements.
- C. Sensitive Plant Study
- D. Preliminary Conceptual Routing (Equestrian – Bicycle Bypass Section)

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