

**Establishment of a Statewide Greenways System for Hawaii:**  
**A Report to the Hawaii State Legislature**  
**in Response to Act 233, Session Laws of Hawaii 2011**



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## TABLE OF CONTENTS

<b>Executive Summary .....</b>	<b>iii</b>
Methodology .....	iii
Working Definition of Greenways.....	iv
<b>Summary of Findings .....</b>	<b>iv</b>
State Initiatives.....	v
County Initiatives.....	v
Other Jurisdictions’ Programs.....	vi
<b>Options and Recommendations for Establishment of a Statewide Greenways System.....</b>	<b>vii</b>
Options.....	vii
Recommendation .....	viii
 <b>I. Introduction.....</b>	 <b>1</b>
<b>Scope.....</b>	<b>1</b>
<b>Methodology .....</b>	<b>2</b>
 <b>II. Summary of Findings .....</b>	 <b>4</b>
<b>State Greenways-Related Initiatives .....</b>	<b>4</b>
Summary .....	4
DLNR Hawaii Statewide Trail and Access System, “Na Ala Hele” .....	5
DLNR Division of State Parks.....	7
Hawaii Department of Transportation Activities and the FHWA Transportation Enhancement (TE) Program .....	8
Statewide Pedestrian Master Plan ( <a href="http://www.hawaiipedplan.com">http://www.hawaiipedplan.com</a> ).....	11
Bike Plan Hawaii 2003 .....	12
Other State Initiatives that Complement Greenways Systems Development .....	12
<b>County Greenways Initiatives and Concerns.....</b>	<b>13</b>
Summary .....	13
City and County of Honolulu.....	14
County of Hawaii .....	17
County of Kauai .....	17
County of Maui .....	19
<b>Stakeholders and Survey Responses .....</b>	<b>19</b>

<b>Greenways Programs in Other Jurisdictions .....</b>	<b>20</b>
Role of State Agencies.....	21
Funding Mechanisms and Sources.....	22
Model Framework for a Statewide Greenways System.....	22
<b>Resources for Greenways-Related Initiatives .....</b>	<b>25</b>
Federal and Other National Funding Sources .....	25
State and County Funding Opportunities.....	25
Mapping Resources.....	28
 <b>III. Options for Establishment of a Statewide System of Greenways and Trails .....</b>	 <b>28</b>
<b>Options.....</b>	<b>29</b>
Option 1 – Continue the Current Course .....	29
Option 2 – Allocate Funding and Resources for a State Greenways and Trails Facilitator .....	29
Option 3 – Expand Scope, Budget, and Resources of Na Ala Hele Program.....	30
Option 4 – Establish and Fund a New State Greenways Program.....	30
<b>Recommendation.....</b>	<b>30</b>
 <b>References .....</b>	 <b>32</b>

## Appendices

- A. Act 233, Session Laws of Hawaii 2011
- B. Interest Groups Identified in Legislative Testimony and Consultation
- C. Agency Consultation Letters and Responses
- D. Transportation Enhancement Program Projects Funded by the State  
Department of Transportation
- E. Projects, Plans, and Activities Reported Related to Greenways and Trails  
in the State of Hawaii
- F. County of Hawaii Greenways and Trails Projects, Existing and Proposed
- G. Summary Results of OP Greenways Web Poll
- H. Overview of Other State Greenways Programs
- I. Links to State, Regional, and Local Greenways Plans

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## **EXECUTIVE SUMMARY**

Governor Neil Abercrombie signed House Bill 1405, HD 1 SD 1 CD 1, into law on July 12, 2011 (Act 233, Session Laws of Hawaii 2011), recognizing the benefits that greenways and trails can have for Hawaii's communities.

Act 233 directs the State Office of Planning (OP) to develop a plan to establish a statewide system of greenways and trails, and to report to the State Legislature for the 2012 legislative session on its findings and recommendations, including any proposed legislation. In doing so, OP was tasked with: (1) coordinating with the Departments of Transportation (HDOT) and Land and Natural Resources (DLNR); (2) consulting with the Counties regarding the establishment of a system of greenways and trails for each County; (3) researching other jurisdictions that have established and implemented a system of greenways and trails; (4) investigating the use of federal Transportation Enhancement funds to establish and implement a statewide system of greenways and trails; and (5) establishing a timeline for implementing a statewide system of greenways and trails.

No funds were appropriated to implement Act 233 or to develop a plan for a statewide system of greenways and trails as called for in Act 233. Therefore, due to staffing and funding constraints, OP's study was limited to surveying State and County activities related to greenways and trails, and existing resources and entities engaged in greenways planning and development in Hawaii. This report summarizes the findings of this initial scoping study.

### **Methodology**

In July 2011, OP conducted preliminary research on plans, studies, and initiatives related to the establishment of trails and greenways at the County and State levels. In August 2011, key stakeholders in State and County government and interested organizations were identified and contacted for input on greenways efforts in Hawaii. In August, OP contacted selected State and County agencies by letter to inform them of the enactment of Act 233 and to request information on greenways and trails planning and project activities and funding sources as directed by Act 233. Consultation letters were sent to the State Department of Transportation (HDOT), the State Department of Land and Natural Resources (DLNR), Na Ala Hele Trail and Access Program, and the Federal Highway Administration (FHWA) regarding greenways and trails and the use of federal Surface Transportation Program Transportation Enhancement (TE) funds in establishing and implementing a statewide system of greenways and trails. On September 28, 2011, OP convened a meeting with representatives of HDOT and DLNR Na Ala Hele Trails and Access Program and Division of State Parks to discuss their respective positions on the establishment of a statewide system of greenways and trails.

Similarly, consultation letters were sent to County departments of planning, parks and recreation, transportation, public works, and economic development agencies, as well as County council chairs, requesting their input on the establishment of a system of greenways and trails for

their County, areas appropriate for greenways or trails, impediments to establishing a system of greenways and trails in their County, and how the State could assist in developing greenways and trails in their County.

Since OP could not conduct public or statewide meetings in the course of this preliminary study, individuals with known interest in greenways and trails and representatives from community groups working on greenways and trails were contacted via email and telephone to provide input to the study. OP provided three Internet-based forums through which community members could participate: (1) a feedback form posted to the Internet in August for inputting information on projects, plans, activities, and other active groups related to greenways and trails in Hawaii; (2) an informal survey posted in August to gauge attitudes and support for greenways, and experience with greenways initiatives in Hawaii; and (3) social media using OP's Twitter (HawOfcPlanning) and Facebook accounts.

A survey and review of other jurisdictions, including all fifty states (including the District of Columbia) and U.S. territories, was conducted to determine whether or not greenways plans existed, and if so, what level of government (i.e., state, regional, county, municipality, non-governmental organization) were developing greenways plans. The survey also examined what role, if any, the state played in greenways programs, and where State programs existed, which agency administered this program. Where available, information on funding mechanisms or budgets dedicated to greenways plans and/or implementation of greenways plans was also compiled.

### **Working Definition of Greenways**

Act 233 did not define the term “greenway.” The following definition and descriptions of greenways and their functions were culled from the research done for this report, and are consistent with the working definitions and attributes of existing county greenway initiatives here in Hawaii. They provide a context for understanding the opportunities and challenges for the development of a statewide greenways system.

Generally, greenways are defined as corridors of land and/or water that **connect** and **protect** the natural, cultural, and recreational resources that define communities, linking these features within the surrounding landscape. Greenways systems help to create sustainable landscapes where ecological and community processes are maintained and enhanced, rather than fragmented by development. Greenways, by their nature, require the linkage of local plans to the larger regional landscape.

A greenways system is a network of three interconnected parts: *links* (green corridors); *hubs* (destinations/attractions for people and wildlife); and *sites* (smaller features than hubs that serve as point of interest, origins, or destinations).

Greenways serve multiple uses: health and fitness; recreation; mobility with less dependence on motorized vehicles; protection of historic and cultural resources; wildlife and habitat protection; scenic amenity; environmental education; and economic activity and investment.

### **Summary of Findings**

In the course of this preliminary study effort, OP found that a lot of work is already being done in this area through the efforts of community members, County and State agencies,

and non-profits. Dozens of plans, studies, and initiatives related to the establishment of trails, greenways, bike routes, parks, and other projects have been completed or are ongoing at both the County and State levels. These projects have creatively leveraged public and private funding, community support and advocacy, and cooperation from private landowners.

### **State Initiatives**

Both DLNR and HDOT have programs and projects that are actively supporting greenways and trails development. DLNR's Na Ala Hele Trails and Access Program (NAH), housed within DLNR's Division of Forestry and Wildlife, is charged with planning, developing, and acquiring land or rights for public use of land, construction, and coordination of activities to implement a trail and access system in Hawaii. DLNR Division of State Parks prepares and implements the State Comprehensive Outdoor Recreation Plan (SCORP), which identifies resources and opportunities for outdoor recreation, including trails and other recreational corridors. HDOT is engaged in funding and assisting numerous projects and programs related to greenways and trails, including the Leeward Bikeway on Oahu, Lydgate Park Multi-Use Path on Kauai, and Baldwin Avenue Multi-Use Path on Maui, the State Bikeways Master Plan (Bike Plan Hawaii 2003), and the Statewide Pedestrian Master Plan. Both NAH and HDOT tap federal transportation funding programs in support of greenways and trail enhancement projects statewide.

State agency representatives felt that efforts to establish a statewide system of greenways and trails need to take advantage of the opportunities for linkages with ongoing programs, projects, and initiatives at both the State and County levels of government. It also affords an opportunity to consider all modes of surface transportation for the State. They felt an appropriate role for the State would be to facilitate coordination of the various greenways and trails-related programs and projects. None of the agencies felt that it was appropriate for their particular program to undertake the responsibility for planning and implementing the establishment of a statewide greenways and trails system because they felt that this additional responsibility would detract from and possibly conflict with their core missions.

### **County Initiatives**

All of the Counties incorporate planning for trails and greenways in some form in their general and community or development plans, and existing and proposed greenways and trail systems have been identified or mapped in their planning documents. All have been engaged in regional and local greenways and trails projects requiring the support of community organizations and other State and federal partners.

Challenges/impediments to greenways development. The most common impediment raised by County agencies is the lack of funding for planning, design, acquisition, improvements, operations, and maintenance of greenways and trails. The cost of maintenance is particularly troublesome for public agencies that are viewed as being stretched thin under current budget constraints. Personal injury liability also has a chilling effect on the expansion of County greenways, trails, and access, as the Counties are not afforded protection from lawsuits due to injuries sustained on public trails. By their nature, greenways typically traverse property owned by multiple owners, and assuring public access can be a major challenge for greenways projects. How greenways are defined is in itself a challenge, especially in cases where greenways have the potential for conflicts between use values, for example, when increased or undeterred access to

sensitive or protected resource areas such as protected watersheds or streams or facilities such as harbors or airports could result in possible harm to or impairment of the resource or to facility operations. Another impediment identified is the lack of proactive government/community partnerships for greenways development, which makes dealing with these challenges much more difficult on a project-by-project basis.

State assistance for greenways development. State funding for priority projects was identified as desirable. Assistance in addressing private property rights issues, liability, and public access is another area where State assistance would be helpful; provision of County protection from personal injury lawsuits was specifically identified. Assistance in planning for and/or facilitating access over State property appears to be needed: several projects were mentioned where access across State property was complicating implementation of greenways projects. The State could also assist with the development and maintenance of a more robust trail and access inventory and database, one that could be managed at the county-level to keep information current.

### **Other Jurisdictions' Programs**

OP's survey of the states (including the District of Columbia) and U.S. territories found that a total of 51 have greenways plans in some form, either standalone or specifically called out in related plans. These plans may be at the state, regional, county, municipality, or non-governmental organization level. Two states, Arkansas and Hawaii, do not have greenways plans. Of the U.S. territories (Guam, Commonwealth of the Northern Mariana Islands (CNMI), American Samoa, Puerto Rico, and U.S. Virgin Islands), two (Guam and CMNI) have greenways plans.

Nineteen of the states have greenways plans developed at the state-level. Two are standalone plans, and the remaining state-level greenways plans are either part of statewide recreational trails or bicycle plans, pedestrian transportation plans, or statewide comprehensive outdoor recreation plans. The majority of states, including those that have statewide greenways plans, have regional, county, or local municipality governments, or non-governmental organizations (NGOs) developing specific greenways plans.

Role of state agencies. While a large percentage of states have greenways plans, a majority of greenways plan development and implementation occurs at the regional, county, or municipal level. In many instances, state agencies such as departments of land and natural resources, state park divisions, or departments of transportation have roles in greenways plan development, including developing a statewide vision for greenways; planning and implementation of greenways that span great distances; and administering funding sources and providing technical assistance for the implementation of regional, county, or local level greenways plans. An example of the involvement of a state agency that performs all of the above roles is the State of Florida's Office of Greenways and Trails, which is part of the Parks Services Division of the Department of Environmental Protection.

Funding mechanisms and sources. Information on funding mechanisms for greenways (at state government levels) was found for 26 states and one U.S. territory. In many cases, there are also funding mechanisms at the regional, county, and municipal levels, however many of these funding mechanisms rely on state appropriations or federal grant funding pass-throughs by state agencies.

At the federal level, primary funding mechanisms or sources for greenways are FHWA Transportation Enhancement Funds or FHWA Recreational Trails Program. State funding of agencies or greenways programs/projects is supplemental to federal funds that are sought, typically covering administrative costs of governmental agencies involved. A survey of annual state budgets for governmental departments or agencies between Fiscal Year (FY) 2011 to FY 2013 fall within the range of \$750,000 to \$279 million.

### **Options and Recommendations for Establishment of a Statewide Greenways System**

In this preliminary scoping, OP found a high level of interest and activity statewide in greenways development at the County and State levels. The Counties and the State have a wealth of plans and technical reference documents with which to identify greenways opportunities and resources in communities and regions of each island statewide. The Counties are actively engaged in the implementation of individual greenways projects in consultation and collaboration with community advocacy groups and State and private entities. Projects are using funds available under federal transportation programs to the extent that they are able.

A virtual statewide greenways system plan already exists among the individual plan components and project plans of County, State, federal, and private and community organizations. What is clear from this initial survey is that current efforts to implement and develop greenways elements and systems are fragmented and project-driven. Each project faces a host of issues identified earlier that make project implementation more challenging: lack of funding, multiple landowners to negotiate with, liability concerns, permitting requirements, potential use conflicts that need to be resolved, project fatigue due to lengthy timeframes for project development, or even lack of an identified partner or organization to commit to long-term maintenance of greenways facilities.

#### **Options**

There are various approaches the State could adopt in facilitating the establishment of a statewide greenways system. Four options with increasing levels of resource commitments were identified: (1) maintain the current course; (2) establishing a Statewide Greenways and Trails Facilitator position to assist in greenways implementation statewide; (3) expanded authority and funding for a greenways program as an adjunct to the Na Ala Hele Program or another State entity; and (4) establishing dedicated funding for a new and separate statewide greenways program.

Foremost, however, is the need for a plan to establish or facilitate the development of a statewide system of greenways and trails in Hawaii. This will require additional analysis and consultation with affected State, County, and federal agencies, other advocacy and community groups, landowners, and private sector interest groups to develop a plan that builds on and supports existing planning and greenways initiatives of the individual Counties and their public, private, and community partners. Development of such a plan will require a commitment to fund a process that would: (1) identify stakeholders and interest groups for each island; (2) involve the public and stakeholder groups in identifying opportunities, barriers, and priority projects for each island; (3) provide public outreach and education about the value of greenways and involvement in community greenways programs; (4) result in a framework and implementation plan for facilitating greenways development statewide, including the establishment of a State-level position or program to support implementation, and permanent funding for a greenways



support at the State-level; and (5) establish a monitoring component to evaluate progress in implementing the plan.

### **Recommendation**

Based on this scoping effort, the Office of Planning recommends that the Legislature authorize and appropriate funds for the development of a statewide system of greenways and trails in two phases as follows:

1. **Phase I:** Provide authorization and funding for the development of a plan for the establishment of a statewide greenways plan. The funds would provide for a two-year contract with a consultant to develop a plan as described above. Funding required is estimated at \$100,000 to ensure in part, adequate community and stakeholder involvement on each island.
2. **Phase II:** Provide authorization and funding for a Statewide Greenways and Trails Facilitator to implement the statewide greenways plan and facilitate greenways initiatives at the local and regional level statewide. With program success and as resources allow, the Legislature could consider expanding the program as outlined in Options 3 and 4 above. Annual funding required for a Statewide Greenways and Trails Facilitator and program expenses is estimated at a minimum of \$88,000.

The proposed expenditures in support of greenways development statewide are a good investment toward improving not only the quality of life of individuals and communities statewide, but also the quality of the visitor experience for visitors to the State.

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## **I. INTRODUCTION**

Governor Neil Abercrombie signed House Bill 1405, HD 1 SD 1 CD 1, into law on July 12, 2011 (Act 233, Session Laws of Hawaii 2011), recognizing the benefits that greenways and trails can have for Hawaii's communities. Act 233 directs the State Office of Planning (OP) to develop a plan to establish a statewide system of greenways and trails. Specifically, Act 233 requires OP to respond to five directives related to the establishment of a statewide greenways system:

1. Coordinate with the Departments of Transportation (HDOT) and Land and Natural Resources (DLNR) to develop a plan for a statewide system of greenways and trails;
2. Seek input from the Counties regarding:
  - a. The establishment of a system of greenways and trails for each County;
  - b. The areas in each County that may be appropriate to designate as a greenway or trail; and
  - c. The various impediments to establishing a system of greenways and trails in each County;
3. Investigate and explore other jurisdictions that have established and implemented a system of greenways and trails;
4. Investigate and consider, in consultation with HDOT, the use of transportation enhancement funds to establish and implement a statewide system of greenways and trails; and
5. Establish a timeline for implementing a statewide system of greenways and trails.

Act 233 also requires OP to submit a written report to the State Legislature for the 2012 legislative session on its findings and recommendations, including any proposed legislation. This report summarizes the findings of OP's study.

### **Scope**

No funds were appropriated to implement Act 233 or to develop a plan for a statewide system of greenways and trails as called for in Act 233. Therefore, due to staffing and funding constraints, the scope of OP's study was limited to surveying State and County activities related to greenways and trails, and existing resources and entities engaged in greenways planning and development in Hawaii. This report thus provides only an overview of the resources available and opportunities that could serve as building blocks for a statewide greenways system. Additional resources, analysis, and consultation with affected State and County agencies and

other stakeholder organizations will be necessary to develop a plan for the establishment of a statewide system of greenways and trails in Hawaii. This is discussed further in OP's recommendations.

## **Methodology**

In July 2011, OP conducted preliminary research on plans, studies, and initiatives related to the establishment of trails, greenways, bike routes, parks, and other projects both at the County and State levels. From this early scan, key stakeholders in State and County government and interested organizations were identified for this initial survey of greenways activities in Hawaii. In August, OP contacted selected State and County agencies by letter to inform them of the enactment of Act 233 and to request information on greenways and trails planning and project activities and funding sources as directed by Act 233. OP similarly contacted community interest groups via email with a request for their participation in the study via a survey and feedback form, which were posted on the Internet.

State consultation. Formal written consultation letters were sent to the State Department of Transportation (HDOT), the State Department of Land and Natural Resources (DLNR), Na Ala Hele Trail and Access Program, and the Federal Highway Administration (FHWA) regarding greenways and trails and the use of federal Surface Transportation Program Transportation Enhancement (TE) funds in establishing and implementing a statewide system of greenways and trails. Each agency was asked to respond to five questions:

1. Can FHWA Transportation Enhancement funds be used to establish and implement a statewide system of greenways and trails?
2. If so, what type of activities can be funded?
3. In addition to the HDOT, can County agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?
4. Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails? If so, was FHWA Transportation Enhancement funds used or were other sources of funding used?
5. Do you have any ideas or comments about establishing a statewide system of greenways and trails?

Responses received from the agencies served as the starting point for further investigations. On September 28, 2011, OP convened a meeting with representatives of HDOT and DLNR Na Ala Hele Trails and Access Program and Division of State Parks to discuss their respective positions on the establishment of a statewide system of greenways and trails. Copies of the Office of Planning letters and written responses from the agencies are provided in Appendix C.

County consultation. Formal written consultation letters were sent to County departments of planning, parks and recreation, transportation, public works, and economic development agencies, as well as County council chairs. County representatives were asked to provide information on the following:

1. The establishment of a system of greenways and trails for their County;
2. The areas in their County that may be appropriate to designate as a greenway or trail;
3. The various impediments to establishing a system of greenways and trails in their County;
4. The things the State could do to facilitate, encourage, or assist with establishing greenways and trails statewide; and
5. Other stakeholder groups the County has worked with on greenways and trails planning.

See Appendices B and C for a copy of OP's letter to the Counties, the list of agencies contacted, and comments from the responding agencies.

Other stakeholder consultation. Since OP did not have funding to conduct public or statewide meetings in the course of this preliminary study, individuals with known interest in greenways and trails and representatives from community groups working on greenways and trails were contacted via email and telephone to provide input to the study. OP provided three Internet-based forums through which community members could participate: (1) a feedback form posted to the Internet in August for inputting information on projects, plans, activities, and other active groups related to greenways and trails in Hawaii; (2) an informal survey posted in August to gauge attitudes and support for greenways, and experience with greenways initiatives in Hawaii; and (3) social media using OP's Twitter (HawOfcPlanning) and Facebook accounts. The informal survey results are discussed later in this report. See also Appendix G for compiled survey results.

Research on greenways programs in other jurisdictions. A survey and review of all 50 states (including the District of Columbia) and U.S. territories was conducted to determine whether or not greenways plans existed, and if so, what level of government (i.e., state, regional, county, municipality, non-governmental organization) were developing greenways plans. The survey also examined if state agencies were involved in developing greenways plans and if so, identifying which state entity played a role. Where available, information on funding mechanisms or budgets dedicated to greenways plans and/or implementation of greenways plans was compiled.

The survey methodology primarily involved: (1) Internet searches using common search engines and a review of organization websites such as American Trails ([www.americantrails.org](http://www.americantrails.org)); (2) further analysis by exploring state government websites; and (3) selected reviews of websites developed for specific greenways plans (i.e., by municipal governments, non-governmental organizations, etc.). The findings were tabulated into a listing of the states, existing plans, plan responsibilities, funding, and contact information. The table can be found in Appendix H.

## II. SUMMARY OF FINDINGS

In the course of this preliminary study effort, OP found that a lot of work is already being done in this area through the efforts of community members, County and State agencies, and non-profits. Dozens of plans, studies, and initiatives related to the establishment of trails, greenways, bike routes, parks, and other projects have been completed or are ongoing at both the County and State levels. These projects have creatively leveraged public and private funding, community support and advocacy, and cooperation from private landowners.

This section summarizes existing public sector efforts and the greenways opportunities that were identified by County and State agencies, community interest groups, and individuals that responded to OP's request for information.

### State Greenways-Related Initiatives

#### Summary

Both DLNR and HDOT have programs and projects that are actively supporting greenways and trails development. DLNR's Na Ala Hele Trails and Access Program (NAH), housed within DLNR's Division of Forestry and Wildlife, is charged with planning, developing, and acquiring land or rights for public use of land, construction, and coordination of activities to implement a trail and access system in Hawaii. DLNR Division of State Parks prepares and implements the State Comprehensive Outdoor Recreation Plan (SCORP), which identifies resources and opportunities for outdoor recreation, including trails and other recreational corridors. HDOT is engaged in funding and assisting numerous projects and programs related to greenways and trails, including the Leeward Bikeway on Oahu, Lydgate Park Multi-Use Path on Kauai, and Baldwin Avenue Multi-Use Path on Maui, the State Bikeways Master Plan (Bike Plan Hawaii 2003), and the Statewide Pedestrian Master Plan. Both NAH and HDOT tap federal transportation funding programs in support of greenways and trail enhancement projects statewide.

State agency representatives felt that efforts to establish a statewide system of greenways and trails

#### *What is a "greenway"?*

In his 1990 book, *Greenways for America*, Charles Little, an environmental author and journalist, provided a comprehensive set of definitions for 'greenways' that has been adopted by greenways programs across the country:

- A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, scenic road, or other route;
- Any natural or landscaped course for pedestrian or bicycle passage;
- Any open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas;
- Certain strip or linear parks designated as parkway or greenbelt.

Greenways are corridors of land and/or water that **connect** and **protect** the natural, cultural, and recreational resources that define communities, linking these features within the surrounding landscape. Greenways systems help to create sustainable landscapes where ecological and community processes are maintained and enhanced, rather than fragmented by development. Greenways, by their nature, require the linkage of local plans to the larger regional landscape.

A greenways system is a network of three interconnected parts: *links* (green corridors); *hubs* (destinations/attractions for people and wildlife); and *sites* (smaller features than hubs that serve as point of interest, origins, or destinations).

Greenways serve multiple uses: health and fitness; recreation; mobility with less dependence on motorized vehicles; protection of historic and cultural resources; wildlife and habitat protection; scenic amenity; environmental education; and economic activity and investment.

Greenways are designed to provide opportunities close to home and work for people to reconnect with the land, nature, and others.

needs to take advantage of the opportunities for linkages with ongoing programs, projects, and initiatives at both the State and County levels of government. It also affords an opportunity to consider all modes of surface transportation for the State. They felt an appropriate role for the State would be to facilitate coordination of the various greenways and trails-related programs and projects. None of the agencies felt that it was appropriate for their particular program to undertake the responsibility for planning and implementing the establishment of a statewide greenways and trails system, because they felt that this additional responsibility would detract from and possibly conflict with their core missions.

State program activities are described further below.

### **DLNR Hawaii Statewide Trail and Access System, “Na Ala Hele”<sup>1</sup>**

The Na Ala Hele (NAH) Program, the Hawaii Statewide Trail and Access Program, was established in 1988, and is codified in Chapter 198D, Hawaii Revised Statutes (HRS). Section 198D-2, HRS, directs DLNR to plan, develop, and acquire land or rights for public use of land, construct, and coordinate activities to implement a trail and access system in Hawaii.

The goal of the NAH Program is to provide public outdoor recreation opportunities for hiking, biking, hunting, camping, equestrian, and off-highway vehicle use. In addition, the NAH Program is responsible for the inventory and documenting of ownership of specific historic trails and non-vehicular old government roads for public use where it is feasible and culturally appropriate. The Na Ala Hele Program’s primary focus is on the management of wilderness trails. Trails and unpaved access roads serve critical resource management and recreational functions, providing access for:

- Search and rescue efforts
- Restoration of native flora, fauna, and watersheds
- Monitoring and removal of invasive plant and animal species
- Control of wildland fire through firebreaks
- Protection of Hawaiian culture through preservation of ancient and historic trails
- Hunting, hiking, biking, equestrian, and off-highway vehicle activities and
- Commercial trail tour opportunities to strengthen Hawaii’s economy.

The majority of staff time is spent maintaining program trails and access roads to ensure public safety, and to protect these trail and historical values. Management specifications are explained in the Trail Design Guidelines of the 1991 NAH Program Plan (<http://hawaii.gov/dlnr/dofaw/nah/NAH-Program-Plan-1991.pdf>).

Ancient and historic trails. Section 264-1(b), HRS, also assigns to the State Board of Land and Natural Resources the responsibility for trails and other non-vehicular rights-of-way declared to be public, as follows:

“(b) All trails, and other non-vehicular rights-of-way in the State declared to be public rights-of-way by the Highways Act of 1892, or opened, laid out, or built by the government or otherwise created or vested as non-vehicular rights-of-way at

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<sup>1</sup> “Report to the Twenty-Sixth Legislature, Regular Session of 2011, Hawaii Statewide Trail and Access System.” Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife, Na Ala Hele Trail and Access Program, December 2010.

any time thereafter, or in the future, are declared to be public trails. A public trail is under the jurisdiction of the State Board of Land and Natural Resources unless it was created by or dedicated to a particular county, in which case it shall be under the jurisdiction of that county.”

Section 198D-3, HRS, requires that an inventory of trails and accesses be established, maintained, and amended as required. NAH locates and determines State jurisdiction over historic roads and ancient trails throughout the State. Further review by the Island Advisory Council and NAH staff assist in assessing options for developing and restoring trail and non-vehicular access roads. If an historic trail is located on private property, additional mandates pursuant to Chapters 6E, 171, 264, and 198D, HRS, require historic trail management and protection by DLNR’s Land Division, State Historic Preservation Division, DOFAW, and affected private landowners. Recent projects include the Hokulia Trail System, Puna Trail, Ala Kahakai National Historic Trail on Hawaii Island, Bridal Trail on the slopes of Haleakala, Maui, and the Moloaa Bay Coastal Trail on Kauai.

NAH funding sources. Na Ala Hele receives funding from a number of State and federal sources, as follows:

- Federal sources**
- **FHWA Recreational Trails Program (RTP)**, which is a separate funding source from the Surface Transportation Program’s TE Program. RTP is created by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 1101(a)(8), 1109. RTP is a Federal Highway Administration Program, under 23 USC 104(h) and 206. In order to receive RTP funds, DOFAW must maintain a trail council consisting of motorized and non-motorized recreational users; prepare a State Comprehensive Outdoor Recreation Plan; comply with an Assured Access to Funds requirement where a minimum of 30% of funding must be used for motorized trail use, 30% for non-motorized trail use, and 40% for diversified (multiple) trail use; and provide an 20% match. RTP funding for NAH was about \$1.197 million in the last funding cycle.

**State sources**

**Special funds:**

- **Liquid Fuel Tax (LFT)**, 0.3% of LFT collected under Chapter 243, HRS, is deposited each fiscal year into the Special Land and Development Fund of DLNR. The funds are used for management, maintenance, and development of NAH trails and accesses established under Chapter 198D, HRS. DLNR is limited to \$250,000 in revenue from LFT.
- **Transient Accommodation Tax (TAT)**, allocated from revenues collected by the Hawaii Tourism Authority. In 2007, a provision allowed DLNR to receive \$1,000,000 in TAT revenue (\$900,000 for DLNR’s Division of State Parks and \$100,000 to NAH). TAT funds are used to improve the quality of maintenance and install amenities such as benches

and interpretive signage on specific trails and scenic routes for visitors and residents, provide public safety information for all user groups, and reduce non-native plant species along trail corridors for resource management and ecotourism values.

**User fees:**

- **Commercial Trail Tour Activity (CTTA).** Act 106, SLH 1997, authorized DLNR to develop user fees for commercial use of NAH trails and access routes with revenues from these fees going back into trail and access management, including monitoring of commercial trail tour operations on public trails. The CTTA fees generated \$69,594 in revenue in FY 2010, but over time has fluctuated with the health of the tourism industry.
- **Camping fees.** In 2009, DOFAW was granted Board of Land and Natural Resources (BLNR) approval for increased fees for Forest Reserve System and NAH System camping permits, with fees to be deposited into the respective program special funds.

**General Funds.** Approximately \$263,800 in State general funds is appropriated each year for payroll.

**NAH Funding by Revenue Source, Fiscal Year 2010<sup>2</sup>**

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Special Funds (Fuel tax, TAT, CTTA) – ceiling	\$603,497.00
Federal Recreational Trails Program - ceiling	\$1,197,655.00
LNR 804 NAH General Fund - estimate	\$300,000.00

**DLNR Division of State Parks**

The DLNR Division of State Parks is the State agency responsible for preparing and implementing the State Comprehensive Outdoor Recreation Plan (SCORP), which is prepared in support of receiving federal grants for outdoor recreation projects under the Land and Water Conservation Fund (LWCF) administered by the National Park Service. According to State Parks, preparation of a SCORP is required for States to be eligible for LWCF assistance with the acquisition and development of public lands for outdoor recreation. The SCORP 2008 Update (April 2009) focuses on identifying and addressing the shifting needs and challenges related to outdoor recreation and the importance of preserving and improving outdoor recreation resources. The SCORP directs LWCF grant funding into facilities that best meet outdoor recreation needs.<sup>3</sup> For details about the SCORP, go to <http://hawaii.gov/dlnr/scorp>. The Technical Reference Document of the 1990 State Recreation Functional Plan is another reference identified by State Parks for identifying potential recreational opportunities, including trails.

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<sup>2</sup> Ibid, NAH, p. 7.

<sup>3</sup> *State Comprehensive Outdoor Recreation Plan (SCORP), A 2008 Update*, Hawaii Department of Land and Natural Resources, April 2009.



## **Hawaii Department of Transportation Activities and the FHWA Transportation Enhancement (TE) Program**

The HDOT's jurisdictional areas are the State Highway System and Federal Aid System; its primary mission, focus, and functions are the movement of people and goods. This is vital in the consideration of how federal TE funds are used.

In 1991, the U.S. Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which established the Transportation Enhancement (TE) program administered by the Federal Highway Administration (FHWA) to provide funding for innovative opportunities to enhance and contribute to the transportation system. Transportation enhancement activities are intended to improve the transportation experience in and through local communities.<sup>4</sup> TE activities enable the development of projects that enhance the travel experience for people traveling by multiple modes of transportation as well as improve the quality of a community.<sup>5</sup> TE projects provide a range of benefits to communities, including economic stimulation, improved transportation, and localized improvements such as bike lanes. The TE set-aside is the largest source of federal funding for bicycling and walking.

To be eligible for federal TE aid, a project must meet two conditions:

- (1) Qualify under one or more of twelve eligible TE activities; and
- (2) Relate to surface transportation.

The twelve TE activities established by federal law (23 U.S.C. 101(a)(35)) that are eligible for TE funding<sup>6</sup> are listed below along with project examples, which are provided by the National Transportation Enhancements Clearinghouse to illustrate each eligible activity:<sup>7</sup>

1. *Provision of facilities for pedestrians and bicycles.*  
New or reconstructed sidewalks, walkways, curb ramps, bike lane striping, paved shoulders, bike parking, bus racks, off-road trails, bike and pedestrian bridges and underpasses.
2. *Provision of safety and educational activities for pedestrians and bicyclists.*  
Programs designed to encourage walking and bicycling by providing potential users with education and safety instruction through classes, pamphlets, and signs.
3. *Acquisition of scenic easements and scenic or historic sites (including historic battlefields).*  
Acquisition of scenic land easements, vistas, and landscapes, including historic battlefields; purchase of buildings in historic districts or historic properties.
4. *Scenic or historic highway programs (including the provision of tourist and welcome center facilities).*

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<sup>4</sup> FHWA Guidance - Transportation Enhancement Activities, U.S. Department of Transportation, Federal Highway Administration, March 25, 2010.

<sup>5</sup> *Enhancing America's Communities - A Guide to Transportation Enhancements*, National Transportation Enhancements Clearinghouse, March 2007.

<sup>6</sup> FHWA, March 25, 2010.

<sup>7</sup> National Transportation Enhancements Clearinghouse, March 2007, p. 2.

- Construction of turnouts, overlooks, visitor centers, and viewing areas, designation signs, and markers.
5. *Landscaping and other scenic beautification.*  
Street furniture, lighting, public art, and landscaping along street, highways, trails, waterfronts, and gateways.
  6. *Historic preservation.*  
Preservation of buildings and facades in historic districts; restoration and reuse of historic buildings for transportation-related purposes; access improvements to historic sites and buildings.
  7. *Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals).*  
Restoration of historic railroad depots, bus stations, canals, canal towpaths, historic canal bridges, and lighthouses; rehabilitation of rail trestles, tunnels and bridges.
  8. *Preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails).*  
Acquiring railroad rights-of-way; planning, designing and constructing multi-use trails; developing rail-with-trail projects; purchasing unused railroad property for reuse as trails.
  9. *Inventory, control, and removal of outdoor advertising.*  
Billboard inventories or removal of non-conforming billboards.
  10. *Archaeological planning and research.*  
Research, preservation planning and interpretation; developing interpretive signs, exhibits, guides, inventories, and surveys.
  11. *Environmental mitigation to address water pollution due to highway runoff, or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.*  
Runoff pollution mitigation, soil erosion controls, detention and sediment basins, river cleanups, and wildlife crossings.
  12. *Establishment of transportation museums.*  
Construction of transportation museums, including the conversion of railroad stations or historic properties to museums with transportation themes and exhibits, or the purchase of transportation related artifacts.

TE projects are often a mix of elements, some of which may not be on the eligibility list. Only those project elements which are on the eligibility list may qualify as TE activities.<sup>8</sup>

The TE program is a federal-aid reimbursement program, not an advanced grant program, which is an important distinction when considering the use of TE funds. The funding ratio for TE projects is generally 80% federal with a 20% State and/or local match. Reimbursable project costs usually include feasibility studies, planning and engineering plans, environmental reviews,

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<sup>8</sup> FHWA, March 25, 2010, p. 4.

land acquisition, and construction.<sup>9</sup> Use of these federal funds requires the preparation of an environmental assessment or environmental impact statement pursuant to the federal National Environmental Policy Act (NEPA), and subjects projects to other federal permit approvals and procedures.

Transportation Enhancement Program Projects in Hawaii. HDOT's Highways Division, Planning Branch manages the State's TE Program, and is responsible for distributing federal funds from the FHWA TE Program for projects related to greenways and trails. All four Counties have initiated recent and ongoing greenways and trails projects using TE Program funds.

The majority of the projects funded by HDOT through the TE Program are related to greenways and trails. HDOT is engaged in numerous ongoing projects and programs related to greenways and trails, including the Statewide Pedestrian Master Plan. A list of HDOT TE-funded projects is presented in Appendix D. Note that the project selection cycle occurs every three years, with 2010 being the latest cycle.<sup>10</sup> Three examples of HDOT TE-funded greenways and trails-related projects are described below:

#### Leeward Bikeway, Oahu

The proposed bikeway is part of the State's master plan for bikeways and will be built within the abandoned Oahu Railway and Land Company's 40-foot wide right-of-way from Waipio Point Access Road to Lualualei Naval Road. The scope of work for this project includes constructing a 14-mile long, 10-foot wide asphalt concrete bike path with 2-foot graded areas. Construction will also include bridges, retaining walls, railroad crossings, and culverts. Phase I will begin at Waipio Point Access Road and end at the Hawaii Railway Society Train Station. Phase II will begin at the Hawaii Railway Society Train Station and end at Lualualei Naval Road. The purpose of this project is to create a route for transportation. The shared use path will also provide local residents a path for the purpose of recreation. The project will connect several existing shared use paths and allow commuters to travel on bike or foot from Waianae to Honolulu.

#### Lydgate Park Multi-use Path, Kauai

The proposed bike/pedestrian path begins south of the Wailua River between Kuhio Highway and the Aloha Beach Resort and ends at the Waikaea Canal footbridge in Lihi Park in Kapaa (covering approximately two miles). The scope of this project also includes the connection of two other "feeder" routes connecting (1) the Lydgate Park-Kapaa bike/pedestrian path to the Wailua House Lots Park, and (2) the Kawaihau Road bike/pedestrian path to the Kapaa-Kealia bike/pedestrian path. This project is a portion of a 16-mile shared use path for east Kauai from Nawiliwili to Anahola. It is proposed in the Kauai General Plan and Bike Plan Hawaii and will have a design width of 10-12 feet. The project will improve safety for pedestrians, bicyclists, and other non-motorized modes of transportation. It also increases choices among alternative modes of

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<sup>9</sup> National Transportation Enhancements Clearinghouse, March 2007, p. 9.

<sup>10</sup> Transportation Enhancement Program Profile - Hawaii Department of Transportation, National Transportation Enhancements Clearinghouse, [www.enhancements.org](http://www.enhancements.org).

transportation, greater connects destination nodes, and increases potential for economic activities associated with use of the path.

#### Baldwin Avenue Multi-use Path, Maui

The Upcountry Greenways Master Plan is currently being developed by the County Planning Department in collaboration with residents and members of the bicycling community to propose a system of multi-user trails covering an area from Ulupalakua to Haiku. A high priority project in the Upcountry region is to complete bicycle and pedestrian improvements to Baldwin Avenue since most of the bicyclists riding downhill from Haleakala National Park pass through Makawao Town and continue on Baldwin Avenue. Initial designs have been modified to avoid the displacement and relocation of large shower trees. The Baldwin Avenue Multi-use Path would provide more commuter and recreational opportunities. It would be constructed as a two-way facility, starting at Paia Gym and extends to Aala Place just below Makawao Town, approximate length 5.5 miles. There is a major gulch crossing at Rainbow Park and 4 way-station/rest-stops along the bike path. Parking areas for five to six vehicles and transfer areas will be incorporated at Paia Gym and Aala place terminuses. While most of the bike path would be located in private property, previously sugar cane and pineapple fields, a portion will be within the Baldwin Avenue right of way.

#### **Statewide Pedestrian Master Plan (<http://www.hawaiipedplan.com>)**

The HDOT Statewide Pedestrian Master Plan is a current initiative that is directly related to the concept of greenways and trails. The vision of the plan is as follows:

Hawaii's integrated and multi-modal transportation system provides a safe and well-connected pedestrian network that encourages walking among all ages and abilities. The system promotes a positive pedestrian experience; promotes environmental, economic and social sustainability; fosters healthy lifestyles; and conserves energy. More people in Hawaii choose to walk for both transportation and recreation as a result of enhanced walking environments, mobility, accessibility, safety, and connectivity throughout the transportation system.<sup>11</sup>

In the development of the Master Plan, HDOT has been coordinating with DLNR's Na Ala Hele Program, looking at points of connection of their trails with the State Highway System for better intermodal connection. The Draft Statewide Pedestrian Master Plan was made available for public comment on August 23, 2011 and comments were accepted through September 30, 2011. The plan is primarily aimed at decreasing pedestrian injuries and fatalities statewide. The plan identifies the most critical needs of the State's highway system infrastructure, including safety improvements or repairs, and will provide guidance for future projects to address the problems.<sup>12</sup> The Statewide Pedestrian Master Plan presents opportunities to combine pedestrian safety with elements related to the concept of greenways and trails.

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<sup>11</sup> Draft Statewide Pedestrian Master Plan, Hawaii Department of Transportation, Highways Division, August 2011, p. 15.

<sup>12</sup> Hawaii Statewide Pedestrian Master Plan, [www.hawaiipedplan.com](http://www.hawaiipedplan.com).

## **Bike Plan Hawaii 2003**

HDOT's Bike Plan Hawaii is a comprehensive master plan for integrating bicycling into the State's transportation system. It serves as a guide for State efforts to accommodate and promote bicycling: to improve conditions for thousands of people statewide who bicycle and to encourage new bicyclists. The plan provides an inventory of existing bicycle facilities and maps proposed bicycle facility improvements for each island, including the locations and routes that could function as shared use paths. The plan provides an important building block in planning for the expansion of multi-use greenways systems statewide.

## **Other State Initiatives that Complement Greenways Systems Development**

The development of greenways and trails systems and their hubs or linkages in more built up areas and along major highways is complemented and facilitated by activities undertaken in two other program areas under HDOT and County transportation departments' jurisdictions.

HDOT Hawaii Scenic Byways Program. Hawaii joined the Federal Highway Administration's National Scenic Byways Program in 2009. The mission of the National Scenic Byways Program is to "provide resources to the byway community in creating a unique travel experience and enhanced local quality of life through efforts to preserve, protect, interpret, and promote the intrinsic qualities of designated byways."<sup>13</sup> Local sponsors comprised of community organizations, business groups and government agencies apply through HDOT for designation by the national program. Once designated, the local scenic byway becomes eligible for grants for projects that protect, preserve, and promote archaeological, cultural, historic, natural, recreational, and scenic qualities along their unique byway corridors. Activities include: (1) coordinating and leveraging marketing and public information promoting a designated Hawaii Scenic Byway; (2) preparing and submitting grant application to fund projects related to a designated Scenic Byway; (3) enhancing, managing, and promoting tourism in proximity to Hawaiian centers of recreation and commerce; and (4) encouraging public and interagency participation in evaluating byways nominated for designation. Currently, the following byways are applying for designation: (1) Kau Scenic Byway – The Slopes of Mauna Loa; (2) North Kohala Scenic Byway – Ke Ala O Kohala, The Way of Kohala; and (3) Kauai Scenic Byway – Holo Holo Koloa Scenic Byway.

Complete Streets Policy. Act 54, enacted May 6, 2009, amended Chapter 286, HRS, Highway Safety, to mandate that HDOT and the County transportation departments adopt a Complete Streets policy (codified as Section 264-20.5, HRS). "Complete Streets" is defined by the State's Complete Streets Task Force as "transportation facilities that are planned, designed, and maintained to provide safe access and mobility for all users, including bicyclists, pedestrians, transit riders, freight, and motorists, and that are appropriate to the function and context of the facility."<sup>14</sup> The Complete Streets policy is to apply to all new construction, reconstruction, and maintenance of highways, roads, streets, ways, and lanes--if appropriate for the application of Complete Streets practices--for any development within urban, suburban, and rural areas for which planning or design commences after January 1, 2010. Implementation of Complete Streets complements greenways development by making it easier for non-motorized modes of

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<sup>13</sup> <http://byways.org/learn/program.html>

<sup>14</sup> Complete Streets Task Force, Final Complete Streets Legislative Report, November 2010, p. 4.

travel to move seamlessly from streets to greenways within and between communities or other destinations.

State Department of Health, Healthy Hawaii Initiative. The Healthy Hawaii Initiative program, funded by the Tobacco Settlement Special Fund, is also an important partner in the planning and development of greenways systems in Hawaii. The Healthy Hawaii Initiative is a statewide health promotion campaign aimed at reducing core behaviors—smoking, inactivity, and poor diet—that contribute to chronic disease. The HHI program funds the Hawaii Nutrition and Physical Activity Coalition (NPAC) whose programs objectives include increasing opportunities for physical activity and active lifestyles. NPAC’s Built Environment Task Force is focusing its advocacy and public education efforts in support of the adoption of Complete Streets policies, Safe Routes to Schools, and pedestrian and bicycle safety and accessibility through the implementation of the Statewide Pedestrian Plan and the Honolulu Bike Plan.

## **County Greenways Initiatives and Concerns**

### **Summary**

All of the Counties incorporate planning for trails and greenways in some form in their general and community or development plans, and existing and proposed greenways and trail systems have been identified or mapped in their planning documents. County general and community or development plans are part of the statewide planning system pursuant to HRS chapter 226. These plans are adopted by the respective County and inform land use decisions, like zoning and subdivision. All have been engaged in regional and local greenways and trails projects requiring the support of community organizations and other State and federal partners. Specific plans and projects are identified in the summaries of County responses that follow and in Appendices E and F.

Challenges/impediments to greenways development. The most common impediment raised by County agencies is the lack of funding for planning, design, acquisition, improvements, operations, and maintenance of greenways and trails. The cost of maintenance is particularly troublesome for public agencies that are viewed as being stretched thin under current budget constraints. Personal injury liability also has a chilling effect on the expansion of County greenways, trails, and access, as the Counties are not afforded protection from lawsuits due to injuries sustained on public trails. By their nature, greenways typically traverse property owned by multiple owners, and assuring public access can be a major challenge for greenways projects. How greenways are defined is in itself a challenge, especially in cases where greenways have the potential for conflicts between use values, e.g., when increased or undeterred access to sensitive or protected resource areas such as protected watersheds or streams or facilities such as harbors or airports could result in possible harm to or impairment of the resource or to facility operations. Another impediment identified is the lack of proactive government/community partnerships for greenways development, which makes dealing with these challenges much more difficult on a project-by-project basis.

State assistance for greenways development. State funding for priority projects was identified as desirable. Assistance in addressing private property rights issues, liability, and public access is another area where State assistance would be helpful; provision of County protection from personal injury lawsuits was specifically identified. Assistance in planning for and/or facilitating access over State property appears to be needed: several projects were

mentioned where access across State property was complicating implementation of greenways projects. The State could also assist with the development and maintenance of a more robust trail and access inventory and database, one that could be managed at the county-level to keep information current.

### **City and County of Honolulu**

The Department of Planning and Permitting (DPP) has established greenways in the City's development plans as large landscaped areas for travel ways, such as roads and sidewalks, which connect open space areas. The City recognizes that a system of greenways and trails can serve many functions, including ecological (wildlife conservation), recreational, or social functions, as well as being providing for the movement of people. Ecologically oriented greenways can follow rivers and streams. Urban greenways can provide an alternative route that separates pedestrians, bicyclists, and other slower-moving modes of transport from motorized traffic.

The Planning Branch of the Facilities Division of the Department of Design and Construction (DDC) addresses greenways and trails planning within the DDC in support of facilities owned and operated by the Department of Parks and Recreation (DPR). DDC is responsible for the design and oversight of City projects. The City's Department of Transportation Services and Department of Planning and Permitting also have interests in such planning. The Department of Transportation Services (DTS) has been actively planning and constructing bikeways for many years. Among these bikeway projects are bike paths at various locations that can lend themselves to being considered greenways. The 1999 Honolulu Bicycle Master Plan has a component of the plan titled the "Lei of Parks." This component of the plan seeks to connect the City's existing parks via mostly off-street bike paths. The City also has many bike paths outside of urban Honolulu such as the Pearl Harbor Bike Path, the Ke Ala Pūpūkea Bike Path, and the Waialua Beach Road Bike Path. All of these paths could be considered for greenway designation.

Many of the City's bike paths cross through DPR property, making them a critical stakeholder in the greenways planning process. Also, DPP is working on the transit oriented development (TOD) plans, and they are looking for opportunities to include greenways in the TOD areas.

The areas most appropriate and offering the greatest immediate opportunity for designation as greenways are existing, publicly-owned land parcels and rights-of way. For reasons of cost and legal complexity, the acquisition of new, privately owned properties to create a continuous greenway should be minimized as much as possible.

New and improved greenways and trails have been recommended by a variety of community plans prepared by DPP, including those in the list below (available at the DPP website at [www.honoluludpp.org/planning](http://www.honoluludpp.org/planning)). These plans include both community-based ideas, and implementation strategies that might be helpful to planning for a statewide greenways system. Generally, the sections identified before refer to trails, off-street multi-use paths, and greenways:

- Aiea-Pearl City Livable Communities Plan - Proposed paths and greenways are depicted in Figure 5-27 and on pages 5-59 through 5-61.

- Aiea-Pearl City Neighborhood Transit-Oriented Development Plan (Draft) - Off-street multi-use paths proposed to improve neighborhood connectivity to the Pearl Harbor Historic Trail (PHHT) are shown in Figures 11, 24, and 36. East Kapolei Neighborhood Transit-Oriented Development Plan (Draft) - A greenway is proposed to connect the East Kapolei station areas to one another and to the regional greenway trail network.
- Waipahu Neighborhood Transit-Oriented Development Plan (Draft) - Multi-use pathways are proposed along waterways in both station areas.
- Primary Urban Center Development Plan - See Open Space Map for proposed promenades and stream greenbelts.
- North Shore Sustainable Communities Plan - Section 4.1.3 describes proposed shared use paths. The plan also recommends the use of utility corridors for pedestrian and bicycle routes and a system of mauka trails and paths to interconnect major recreational areas (Sections 3.1.2.8 and 3.3.2.2). Exhibit 3.2 shows the location of North Shore hiking trails.
- Koolau Loa Sustainable Communities Plan (2010 Public Review Draft) - Trails are addressed in Section 3.1.2.1.
- Koolau Poko Sustainable Communities Plan - Trails are addressed in Section 3.1.3.1. The plan is currently undergoing revision, and new language about providing access to existing mountain trails through residential areas and military and agricultural lands is proposed for this section.
- East Honolulu Sustainable Communities Plan - Trails are addressed in Sections 2.2.4 and 3.1.
- Ewa Development Plan (2008 Public Review Draft) - Greenways and paths are addressed in Sections 2.2.3, 3.1.4.8, 3.4.3.1, and 4.1.5, as well as on the Public Facilities Map.
- Central Oahu Sustainable Communities Plan - Greenways and paths are addressed in Sections 3.1.4.8, 3.3.2.2, 3.4.3.1, and 4.1.5, as well as on the Public Facilities Map.
- Waianae Sustainable Communities Plan (2010 Final Revised Draft) - The plan recommends a walking/jogging/biking path that extends along the entire Waianae Coast.
- Kalihi Palama Action Plan - A paved trail along Kapalama Canal has long been desired by the community.
- Kahaluu Community Master Plan - Greenways and pathways are proposed in Section 3.2.3 - Circulation Plan.
- Waipahu Livable Communities Initiative & Waipahu Town Plan - In addition to PHHT improvements, the plans recommend a trail connection to Hawaii's Plantation Village.
- Pearl Harbor Historic Trail Master Plan



Honolulu Botanical Gardens (HBG) of DPR's Division of Urban Forestry is comprised of five garden sites on Oahu: Foster, Hoomaluhia, Koko Crater, Liliuokalani, and Wahiawa Botanical Gardens. These garden sites may be thought of as green 'islands' that could serve to connect State and/or City greenways or trails that may be developed throughout Oahu in the future.

Impediments. One of the challenges related to greenways, particularly along streams, that could benefit from State investigation is the complex relationship among private property rights, liability, and public access. Key issues impeding the creation of more greenways and trails are questions as to who maintains the greenways, how much it will cost, and how the additional cost will be borne. New property acquisitions and/or improvements to existing public lands made more accessible to the public imply expansion of government planning, design, construction, and maintenance functions and personnel to meet the increased property inventory. The government authorities that assume ownership responsibility must allocate considerably more resources to properly operate and maintain them. Most State and County agencies that would logically be called upon to maintain and manage greenways are probably already stretched very thin on staff and funds.

Benefits need to be weighed against additional costs, particularly to achieve sustainability. The establishment of greenways could conceivably greatly enhance property valuations and quality of life, or further environmental conservation objectives, which might ultimately equal or exceed the costs.

DTS has encountered problems when they have to cross State property. One example is at the Waikiki-Kapahulu Public Library, where DTS is currently implementing the Lei of Parks - Route I, which will connect Kapiolani Park with Ala Moana Beach Park via off-street bike paths. The route crosses the sidewalk area in front of the Waikiki-Kapahulu Public Library, but the route was found to be very narrow. Widening the sidewalk area became complicated since the property is under State jurisdiction. DTS observed that implementation of this improvement might have been facilitated if the route was on a State greenway plan.

Similarly, the State Department of Transportation might facilitate the establishment of a major greenway project by extending the Pearl Harbor Historic Trail to Nanakuli. This is an example of a greenway project that has been substantially delayed due to the scarcity of State funding, although the City's portion of the trail has been largely developed as planned. This potential greenway could take advantage of the existence of the former OR&L railway right-of-way in a similar way that New York City did with its recently opened High Line linear park from an abandoned elevated railroad line.

The City's Board of Water Supply (BWS) raised concerns regarding the establishment of trails on BWS watershed lands and the potential impacts to important aquifers used by the BWS. An increase in public access may promote the introduction of invasive species tracked in to these areas, which would degrade the natural forest area and reduce recharge of the underlying aquifer. In addition, a proliferation of undesirable watershed activity may result if current restrictions on access is lifted. The designation of restricted watersheds has been a sound resource protection strategy, which could be undermined by greenways expansion into these areas.

Other planning considerations. BWS notes that water system improvements necessary to service greenways and trails will be the responsibility of the project developer. The applicant would be required to pay the applicable Water System Facilities Charges, and availability of

water would need to be coordinated with the BWS. BWS rules require the use of non-potable water for the irrigation of large landscaped areas if a suitable supply is available. BWS recommends the use of drought tolerant/low water use plants and application of xeriscaping principles for all landscaping, and installation of an efficient irrigation system such as drip irrigation.

### **County of Hawaii**

The County Council and County Planning Department (PD) expressed interest in greater collaborative efforts to protect open space and create greenways and trails on the island of Hawaii. In the County's islandwide community development planning efforts, residents have repeatedly articulated that preservation of the island's natural resources is a priority concern. The PD noted that the concept of green infrastructure is a major component of current planning processes, and it will be important to link greenways and trails to this larger infrastructure field. The PD also views greenways and trails as an important component and link to destinations, scenic byways/heritage corridors, and developed urban areas. The greenways and trails system for the County is currently developed and managed by the County's Department of Parks and Recreation.

The County is currently working on a number of major greenways and trails projects, including: (1) linkage of County-owned oceanfront land in North Kohala with the Ala Kahakai National Historic Trail administered by the National Park Service (NPS); (2) a proposed trail that is proposed to go from Hilo Harbor where the cruise ships dock through Downtown Hilo; and (3) the Waimea Greenways and Trails project, a decade-long initiative to develop a network of paths that provide routes for non-motorized circulation within and adjacent to Waimea town. For the Ala Kahakai trail, the County is partnering with the NPS to allow NPS to access the County property and to maintain the segment of the trailway that traverses County land.

Appendix F provides two tables, which list (1) existing greenways and trails, and (2) proposed greenways and trails that have been identified on the island of Hawaii. The list does not include areas or features dedicated to only one mode of transportation, such as bicycle paths and shoreline public access.

Impediments. Primary impediments are the lack of proactive government/community partnerships with initial funding, use of private property and dealing with multiple owners along a route, maintenance issues, and lack of funding.

State assistance. The State could assist Counties by providing funding for priority projects. This would be a 'big win' that stimulates implementation of already identified projects that currently do not have funding. The proposed Hilo Bayfront Trail raises the dual role of State assistance in (1) negotiating route alignments that do not conflict with State facility operations, and (2) facilitating the necessary approvals and rights of entry for access for segments of the trail alignment that would be located on State property.

### **County of Kauai**

The Planning Department, as the supporting agency for the County's Public Access, Open Space and Natural Resources Preservation Fund and its Commission, has facilitated the acquisition of the 'Hodge Property' for Black Pot Park Expansion. This acquisition was the first utilization of this fund and was not possible without the partnership with other County agencies

(Department of Parks and Recreation) and a non-profit organization (Kauai Public Land Trust, now known as Hawaii Public Land Trust). This acquisition located on Kauai's north shore and adjacent to the Hanalei Beach Park provides additional shoreline property for the park's master plan and park expansion.

This Commission has proposed an amendment to its original ordinance to expand the Commission's role to also serve as an advocate for open space, and establish partnerships with other government entities, private owners, or non-profit organizations. The goal of the amendment is to gain greater authority for ensuring lands or entitlements will benefit the public and are protected in perpetuity.

The County's Transportation Agency supports the creation of a system of greenways and trails for Kauai. They are actively engaged with other County agencies in facilitating the State's "Complete Streets" Initiative. The Agency also maintains relationships with organizers of groups on Kauai like Kauai Path, who are working on creating multi-use paths around Kauai. The County is currently developing a 16-mile coastal bike and pedestrian trail, the Ke Ala Hele Makalae Bike/Pedestrian Path, from Nawiliwili to Anahola. The project has five phases. Two phases are completed: Phase I, a 2.5-mile path through Lydgate Park, and Phase II, a 4.3-mile stretch from Lihi Boat Ramp in Kapaa to Ahihi Point at Kuna Bay or Donkey Beach. Phases III to V will connect the existing trail segments and extend the trail in a northward direction to Anahola and southward to Ahukini.

Opportunities. All of the Kauai County beach accesses and trails currently registered with the Na Ala Hele Trail and Access Inventory and database are potential candidates for inclusion in a statewide greenways system. The website of Kauai Path, a community-based organization, <http://www.kauaipath.org>, has a map of all the current and proposed locations of paths. The County's many rivers and water ways that lead from mauka to makai are natural paths that can connect communities to natural resources, and the town core in Lihue is also a great area to connect as a greenway. Koloa, Poipu, Princeville, and Hanalei areas are County visitor areas that do not have safe areas for walking and exercise. Access to greenways and trails that would offer the resident and visitors the ability to safely exercise and access the community would be a great asset. The Westside of the island (Kekaha-Eleele) is another area that is ripe for the development of safe access to trails and community connectivity through paths or greenways.

Impediments. The greatest impediments to establishment of greenways and trails within Kauai County are concerns over personal injury liability and the lack of funding. Currently, only private landowners and the State, to some degree, enjoy protections from lawsuits arising from injuries on trails. The County is concerned about holding ownership of accesses and trails as long as the County remains exposed to liability. This liability issue is in part a consequence of inexperienced tourists trekking across an environment they are not familiar with. The County would like to see the State Legislature enact a liability exemption for County-owned trails and accesses.

State assistance. Funding is needed. The State could also maintain a more robust Trail and Access Inventory and database. Management at the county-level would assure information is current and manageable for use within the larger State program.

## **County of Maui**

The County's General Plan, draft Island plans, and existing community plans support the expansion of greenways and trails systems and bikeways for non-motorized travel, and the development of a county-wide network of bikeways and pedestrian paths. The County has also prepared an Upcountry Greenways Master Plan to provide a system of multi-user trails covering an area from Ulupalakua to Haiku. The trail system is envisioned to provide recreational facilities as well as serve as an alternative interregional transportation system.

The County's Department of Transportation (MDOT) is responsible for the planning and implementation of all modes of transportation in Maui County, and coordinating the County's transportation programs with other county departments and with agencies of the State and federal government. MDOT does not presently have a specific directive that addresses greenways or trails within Maui County. However, they are often asked to comment on development plans that include such components and how they might impact our current delivery of services. This allows the department to promote the use of multi-modal transportation throughout Maui County, especially where it helps to facilitate improvements or enhancements to the County's existing services and provides connectivity to areas outside the immediate project or plan area.

In this context, MDOT is in a position to identify possible locations of such trails or greenways as they relate to transportation facilities and/or services. In addition, MDOT noted that many bike riders use the Maui Bus, which has limited bike carrying capacity. As more and more trail opportunities arise, this could become an area of concern as residents and visitors use multi-modal transportation to traverse the islands.

MDOT is already taking into consideration the State's advocacy for "Complete Streets" planning, and this may provide another way to educate the public on the importance of connectivity in creating healthy communities.

Other planning considerations. The County's Department of Water Supply (DWS) recommends consulting with the various watershed partnerships in Maui County regarding establishment of trails in forested watershed areas. These watershed partnerships work to protect watershed areas: critical watershed areas are fenced and may not be appropriate for public access. The watershed partnerships could also provide information on mitigation measures to prevent the spread of invasive species from the establishment and use of new trails. The DWS recommends that trail and greenway design provides an opportunity to display the richness of the State's botanical diversity, including native plants that promote water conservation.

## **Stakeholders and Survey Responses**

There is a wide array of community and non-profit organizations who are engaged in greenways and trails-related activities and projects statewide. These groups range from facility user groups, such as bicycling and trails advocacy organizations, to environmental organizations, health and fitness advocacy groups, and local community associations. Some have been critical to the success of many greenways projects. Future efforts to establish and expand greenways facilities statewide will need to partner with these organizations. Appendix B includes a shortlist of organizations that were identified as being active in greenways projects in each county.

In August 2011, OP provided an opportunity for individuals from organizations such as these to provide input on greenways and trails and their use. OP posted a survey on the Internet to gather information about individual attitudes about greenways, and invited stakeholder groups

to participate in the online survey. As of December 14, 2011, 94 survey responses had been submitted. The survey is informal and unscientific, and the survey results cannot be used to make inferences as to how Hawaii's population as a whole views greenways. Nevertheless, the information contained in the results presents an interesting snapshot of potential greenways users and their current use of greenways or trails-related facilities.

Of the 94 respondents, 52% were female, 60% were 46 years old or older, 41% reported to be a resident of Oahu, 40% resided on the island of Hawaii, 10% on Kauai, and 2% resided in Maui County. Thirty-five (35) percent belonged to an organization or club that advocates for greenways or trails, and 33% reported being involved in establishing or attempting to establish a greenway or trail in Hawaii.

Not surprisingly, respondents reported more frequent use of greenways and trails-related amenities for less intensive daily activities like walking, dog walking, or recreational open space/park use, than for more intensive activities such as mountain biking, inline skating, off-road vehicle use, or hunting/fishing/gathering. Twenty-eight (28) percent reported using greenways-like amenities to walk on almost a daily basis.

Safety/security was considered the most important factor in considering use of greenways or trails by the respondents. Quality and maintenance was the next in importance, and the availability of support facilities such as parking and restrooms followed in importance. Eighty-seven (87) percent felt that it was important or very important that greenways connect with trails, with 75% of respondents ranking connections to parks and bike lanes/trails as important or very important. Sixty-nine (69) percent felt that it was important or very important for greenways to connect to beaches, and 67% felt that it was important or very important for greenways to connect with communities. Sixty (60) percent felt it was important or very important that greenways connect with public transit, while only 29% felt it was important or very important that greenways connect with businesses.

Among this group, a high value was placed on the use of greenways for improving quality of life, the conservation of natural resources, and protection of animal and plant habitat: 94, 84, and 78%, respectively, reported that quality of life, conservation of natural resources, or protection of habitat was an important or very important factor in creating a greenways and trails system for Hawaii. Behind these, providing for alternative transportation modes and historic preservation were also considered important or very important factors for creating greenways.

Requiring new residential projects to provide and maintain portions of greenways that traverse their community was by far the favored method among respondents for funding and developing greenways and trails. Next was continued use or an increase in use of the transient accommodations tax, then County property taxes, State income tax, and user fees.

For those respondents who had participated in some kind of greenways or trail initiative, all encountered impediments that for some projects are still unresolved. Planning work for most of the projects respondents were involved in took three or more years.

Appendix G provides a summary compilation of the informal survey responses.

### **Greenways Programs in Other Jurisdictions**

OP's survey of the states (including the District of Columbia) and U.S. territories found that a total of 51 have greenways plans in some form, either standalone or specifically called out

in related plans. These plans may be at the state, regional, county, municipality, or non-governmental organization level. Two states, Arkansas and Hawaii, do not have greenways plans. Of the U.S. territories (Guam, Commonwealth of the Northern Mariana Islands (CNMI), American Samoa, Puerto Rico, and U.S. Virgin Islands), two (Guam and CMNI) have greenways plans. See Appendix H for information compiled on greenways programs in other jurisdictions, and Appendix I for Internet addresses for selected greenways plans and related resources.

Nineteen of the states have greenways plans developed at the state-level. Two are standalone plans: *Pennsylvania Statewide Greenways Action Plan* (2001), developed by the Pennsylvania Department of Conservation and Natural Resources, and *Metropolitan Greenways and Circulation System* developed by the Federal Highways Administration for the District of Columbia. The remaining state-level greenways plans are either part of statewide recreational trails or bicycle plans, pedestrian transportation plans, or statewide comprehensive outdoor recreation plans.

The majority of states, including those that have statewide greenways plans, have regional, county, or local municipality governments, or non-governmental organizations (NGOs) developing specific greenways plans. Regional greenways plans cover small regions within a state or between neighboring states, as well as multiple states such as the East Coast Greenway spanning from South Carolina to Maine.

Of the U.S. territories, Guam and CNMI have greenways plans as part of other related plans. Greenways are noted in Guam's *Statewide Forest Resource Assessment and Resource Strategy 2010-2015*, as well as the *North and Central Guam Draft Land Use Plan* (2009). In the CNMI, Saipan Beach Road Pathway currently exists as a 27-mile coastal greenways system, and legislation is currently being considered for the establishment of a Greenways Strategy Steering Committee to design transportation systems that would be an alternative to the use of cars and for a more environment-friendly commonwealth.

### **Role of State Agencies**

While a large percentage of states have greenways plans, a majority of greenways plan development and implementation occurs at the regional, county, or municipal level. In many instances, state agencies such as departments of land and natural resources, state park divisions, or departments of transportation have roles in greenways plan development as follows:

- Developing the statewide vision for greenways;
- Planning and implementation of greenways that span great distances throughout a state; and
- Administering funding mechanisms or sources and providing technical assistance for the implementation of regional, county, or local level greenways plans.

An example of the involvement of a state agency that performs all of the above roles is the State of Florida's Office of Greenways and Trails, which is part of the Parks Services Division of the Department of Environmental Protection.

## **Funding Mechanisms and Sources**

Information on funding mechanisms for greenways (at state government levels) was found for 26 states and one U.S. territory. In many cases, there are also funding mechanisms at the regional, county, and municipal levels, however many of these funding mechanisms rely on state appropriations or federal grant funding pass-throughs by state agencies.

At the federal level, primary funding mechanisms or sources for greenways are FHWA Transportation Enhancement Funds or FHWA Recreational Trails Program. Other potential sources include: U.S. Environmental Protection Agency (EPA) Section 604(b) [Clean Water Act]; American Recovery and Reinvestment Act (ARRA) stimulus funds; and the U.S. National Park Service's Land and Water Conservation Fund. See Table 1 for a list of potential funding sources for greenways and trails development.

State funding of agencies or greenways programs/projects is supplemental to federal funds that are sought, typically covering administrative costs of governmental agencies involved. A survey of annual state budgets for governmental departments or agencies between Fiscal Year (FY) 2011 to FY 2013 fall within the range of \$750,000 to \$279 million.<sup>15</sup> Funding for the Massachusetts Greenways and Trails Program was approximately \$42 million for FY 2011 and FY 2012.

## **Model Framework for a Statewide Greenways System**

A majority of the states that have greenways plans embarked upon a variety of planning processes in order to develop their respective plans. The following is a model for development of a greenways system offered by the 1000 Friends of Florida and posted at their website, which also has posted the Florida Greenways Commission's Report to the Governor (<http://www.1000fof.org/PUBS/Greenways/recommend.asp>).

### **1. Create an institutional framework for greenways**

Assigns responsibility for coordinating and integrating government and private sector greenways efforts and supports state and community greenways initiatives and coordinates.

#### ***Suggested strategies:***

- Create a Greenways Coordinating Council to advocate, educate, facilitate, and provide technical assistance for the statewide greenways system.
- Designate a lead state agency responsible for coordinating and integrating state programs within the institutional framework.
- Develop incentives to encourage private involvement in greenways initiatives.
- Develop and promote less-than-fee simple acquisition alternatives that offer a greater range of opportunities for the involvement of private landowners in greenways initiatives.
- Address liability issues associated with the use of greenways and trails on public and private lands.

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<sup>15</sup> Budget range provided are for administrative costs of an entire state department, division, or office that has roles or responsibility for greenway development or implementation. See Appendix E for specific information.

2. **Create and manage community greenways through community initiatives**

Stimulate public and private sector awareness, involvement, and action in creating and managing community greenways and greenways systems.

***Suggested strategies:***

- Facilitate and encourage private sector support and strong community involvement in local greenways initiatives.
- Foster the promotion and creation of community greenways and green spaces using local, county and state planning tools and programs.

3. **Conserve native ecosystems and landscapes**

Design and manage a statewide system of greenways that provides essential ecological linkages and conserves green infrastructure of native ecosystems and landscapes.

***Suggested strategies:***

- Identify and conserve an integrated, statewide system of greenways that encompasses the full range of native ecosystems and landscapes.
- Utilize rivers, springs, lakes, and other inland and coastal aquatic features as strategic building blocks in the statewide greenways system.
- Link regional landscapes through system of greenways, including lands ranging from native ecosystems that are publicly owned to highly managed forestry and agricultural properties that are privately owned.
- Utilize the best information available about the requirements of native ecosystems and landscapes to plan and manage the statewide system of greenways.
- Address native ecosystem conservation/human use compatibility issues by developing minimum greenways design and management guidelines.
- Undertake and/or support the research and monitoring efforts necessary to effectively plan and manage the native ecosystems and landscapes within system of greenways.

4. **Incorporate urban open spaces, working landscapes, historical sites, and cultural resources into the greenways system**

***Suggested strategies:***

- Identify, protect, and manage appropriate urban open spaces and corridors as integral components of system of greenways.
- Identify opportunities for incorporating working landscapes that contribute to conservation into system of greenways in ways that respect private property rights and interests.
- Incorporate historical resources into system of greenways.
- Incorporate cultural resources and opportunities into system of greenways.

5. **Provide access to system of greenways**

Design, develop, and maintain linkages/trails that provide public access to



and promote appreciation, support, and conservation of the natural, cultural, and historical features of the state's system of greenways.

***Suggested strategies:***

- Establish an institutional framework that actively fosters and promotes trail conservation and access.
- Identify trails for protection through local, regional, state, and federal planning.
- Integrate linear facilities (transportation, utility, canal, and other human-built corridors) where appropriate as human-use connectors and/or access to system of greenways.
- Develop a process for recognizing and/or designating trails as part of system of greenways.

6. ***Educate and involve the public***

Educate and inform diverse audiences about the concept of greenways and the statewide system of greenways.

***Suggested strategies:***

- Develop and implement a comprehensive education program for informing and educating the general public about greenways and the statewide greenways system.
- Involve educational groups in planning, developing and implementing student/teacher education programs that promote awareness, appreciation and understanding of greenways and how they aid in sustaining vital native ecosystems and landscapes.
- Educate the business community and landowners about the impacts of greenways to address concerns and foster support of greenway programs and projects.
- Encourage local public land managers and comprehensive planners to incorporate the concept of greenways and greenways linkages in open space/ natural area planning and regulation.
- Encourage under-represented groups to become more active in greenways and persuade greenways leaders to include urban and rural areas in greenways planning.

7. ***Fund a statewide greenways system***

Fund the creation and maintenance of a statewide greenways system using a combination of funding sources.

***Suggested strategies:***

- Use and enhance existing funding sources, where appropriate, to meet the need for acquisition of greenways system components of all types, as well as facilities, resource management and operations and maintenance needs of the statewide greenways system.
- Provide sufficient new funding for the institutional framework and associated technical assistance, education, and other planned programs.
- Develop and use new, innovative direct and in-kind funding sources to support creation of the statewide greenways system.
- Develop innovative methods for funding community greenways.

## **Resources for Greenways-Related Initiatives**

### **Federal and Other National Funding Sources**

Table 1 compiles information on funding sources that may be applicable to greenways system planning and development.<sup>16</sup> Some of the funding sources have been discussed earlier. Non-motorized transportation facility projects are broadly eligible for funds from all major federal-aid highway, transit, safety, and other programs. Non-motorized projects are defined as “principally for transportation, rather than recreation, purposes,” and projects must be designed and located in accordance with required state and Metropolitan Planning Organization transportation plans. The federal share of the cost of transportation projects is generally 80% with a 20% state or local match, although the federal share for some of the funding sources may exceed 80%. Eligibility criteria or the amount of funding that might be available to Hawaii or the Counties under the individual funding formulas or guidelines may preclude their use here.

### **State and County Funding Opportunities**

The State and Counties have all adopted funding mechanisms for open space and natural resource preservation, which is a significant resource for greenways systems development.

**State Legacy Land Conservation Program.** In 2005, Act 156, SLH 2005 established a permanent funding source for land conservation by increasing the State conveyance tax on the transfer of real property and dedicating 10% of the annual proceeds to what is now the Land Conservation Fund. A year later, Act 254, SLH 2006 established the Hawaii Legacy Land Conservation Program within DLNR, now codified in Chapter 173A, HRS, to administer the funds for the acquisition and protection of threatened resources, and as recently amended, for the operation, maintenance, and management of lands acquired. Grants from the Land Conservation Fund are available to State agencies, Counties, and non-profit land conservation organizations to acquire property that has value as a resource to Hawaii, including lands for watershed protection, parks, coastal areas, beaches, and ocean access, natural areas, habitat protection, agricultural production, cultural and historical sites, open spaces and scenic resources, and recreational and public hunting areas. County agency or nonprofit land conservation organization grant recipients must provide matching funds of at least 25% of the total project costs. More information on the Program is available at <http://hawaii.gov/dlnr/dofaw/lhcp>.

**Hawaii Coastal and Estuarine Land Conservation Program.** The National Oceanic and Atmospheric Administration (NOAA) Coastal and Estuarine Land Conservation Program (CELCP) was established in 2002 to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. The program provides State and local governments with matching funds to purchase or acquire conservation easements on significant coastal and estuarine lands from willing sellers and protect these lands in perpetuity. The Coastal Zone Management (CZM) Program in the State Office of Planning coordinates the CELCP for the State of Hawaii. CZM funded the development of a State CELCP plan. The plan provides an assessment of priority land conservation needs and clear guidance for nominating and selecting land conservation projects within the State. By utilizing the State CELCP Plan in partnership with interested government, private for-profit and not-for-profit organizations, and the public, the CZM Program is able to identify and develop proposals to submit for annual competitive NOAA CELCP grants.

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<sup>16</sup> *First Coast Regional Greenways & Trails Plan*, First Coast Metropolitan Planning Organization, September 2006, pp. 45-56.

**Table 1. Potential Funding Sources for Greenways Development**

<b><i>Federal-aid Highway Program: Federal Highway Administration</i></b>	
National Highway System funds	Bicycle transportation facilities and pedestrian walkways on land adjacent to highways of National Highway System, including interstates
Surface Transportation Program (STP) funds	Bicycle transportation facilities and pedestrian walkways, or non-construction projects (e.g., maps, brochures, public service announcements) related to safe bicycle use and walking
STP Transportation Enhancements (TE)	10% set-aside of annual State STP funds for specific list of activities (see pages 8-9)
Hazard Elimination & Railway-Highway Crossing programs	10% set-aside of annual State STP funds to address bicycle and pedestrian safety
Recreational Trails Program	All kinds of trail projects; of State allocation, 30% for motorized trail uses, 30% for non-motorized trail uses, 40% for diverse trail uses (in combination)
Preservation (TCSP) Pilot Program	Discretionary grants to improve the efficiency of the transportation system; reduce environmental impacts of transportation; reduce need for future public infrastructure investments; ensure efficient access to jobs, services, and centers of trade; and examine private sector development patterns and investments that support these goals
Federal Lands Highway Program	Road and trail construction within (or, in some cases, providing access to) federal lands
Job Access and Reverse Commute Grant	Projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment
High Priority Projects and Designated Transportation Enhancement Activities	Identified by SAFETEA-LU, bicycle, pedestrian, trails, and traffic calming projects in communities throughout the country
<b><i>Federal Transit Program</i></b>	
Urbanized Area Formula Grants, Capital Investment Grants and Loans, and Formula Program for Other than Urbanized Area transit funds	Improving bicycle and pedestrian access to transit facilities and vehicles; investments in "pedestrian and bicycle access to a mass transportation facility" that establishes or enhances coordination between mass transportation and other transportation
Suburban Mobility Initiatives Program	Provide assistance to suburban public agencies in their efforts to reduce dependence on the single occupant vehicle
Regional Mobility Program	Technical assistance, develops planning methods, and conducts outreach, research, demonstration and project evaluations that assist local communities in improving regional transportation mobility
<b><i>Safety Programs</i></b>	
State and Community Highway Safety Grants	Section 402 program: activities related to pedestrian and bicyclist safety; Section 403 program: research, development, demonstrations, training to improve highway safety, including bicycle and pedestrian safety
Safe Routes to School Program	Projects and activities to improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools, including on- and off-street bicycle facilities, secure bicycle parking facilities; state allocation based on relative share of enrollment in primary and middle schools.
<b><i>Other Federal Programs</i></b>	
Land and Water Conservation Fund (LWCF) Grants, National Park Service	Exclusively for recreation purposes, in perpetuity, to provide "close-to-home" parks and recreation facilities, including trails and greenways; 50% local match; all projects in accordance with State SCORP
Community Development Block Grants (CDBG) US Department of Housing and Urban Development (HUD)	Annual direct grants to entitlement communities to revitalize neighborhoods, expand affordable housing and economic opportunities, improve community facilities and services, principally to benefit low- and moderate-income residents. Communities have used CDBG funds for greenways projects.
<b><i>Private</i></b>	
National Trails Fund, American Hiking Society	Only privately funded national grants program dedicated solely to hiking trails; used for land acquisition, constituency building campaigns, and traditional trail work projects

City and County of Honolulu, Clean Water and Natural Lands Fund. In 2006, voters approved Charter Question 3, which set aside a half-percent of real property tax revenues for land conservation purposes (Revised Charter of Honolulu (ROH), Section 9-204(a)). Pursuant to the charter amendment, in 2007, the Honolulu City Council established the Clean Water and Natural Lands Fund (Ordinance 07-18) and the Clean Water and Natural Lands Commission (Reso. 07-355 CD1). The Clean Water and Natural Lands Commission receives applications and makes recommendations on funding requests to the City Council. Funds may be used for the following purposes: protection of watershed lands to preserve water quality and water supply; preservation of forests, beaches, coastal areas, and agricultural lands; public outdoor recreation and education, including access to beaches and mountains; preservation of historic or culturally important land areas and sites; protection of significant habitats or ecosystems, including buffer zones; conservation of land in order to reduce erosion, floods, landslides, and runoff; and acquisition of public access to public land and open space.

County of Hawaii, Public Access, Open Space, and Natural Resources Preservation Fund. The Fund, established in 2005 by Ordinance No. 05-85, set aside two percent of the County's real property tax revenues collected annually for acquiring lands or property entitlements in the County for the following purposes: public outdoor recreation and education, including access to beaches and mountains; preservation of historic or culturally important land areas and sites; protection of natural resources, including buffer zones; preservation of forest, beaches, coastal areas, natural beauty, and agricultural lands; and protection of watershed lands to preserve water quality and water supply. Ordinance 05-166 established a Public Access, Open Space, and Natural Resources Preservation Commission to develop and annually update an islandwide prioritized list of qualifying lands for mayoral consideration and County Council action.

County of Kauai, Public Access, Open Space, and Natural Resources Preservation Fund. In November 2002, Kauai voters approved a County Charter amendment establishing the Public Access, Open Space, and Natural Resources Preservation Fund to be funded by a set-aside of a minimum of a half-percent of County real property tax revenues. Ordinance 812, adopted in December 2003 pursuant to the Charter amendment, established procedures for the administration of the Fund, as well as the Public Access, Open Space, and Natural Resources Preservation Fund, which is tasked with developing an annual list of recommended priorities for land acquisition, property entitlements, or funding for projects, as well as making recommendations for improving access, open space, and natural resources preservation on Kauai. Funds may be used to acquire lands or property entitlements for the following purposes: public outdoor recreation and education, including access to beaches and mountains; preservation of historic or culturally important land areas and sites; protection of significant habitats or ecosystems, including buffer zones; preserving forests, beaches, coastal areas and agricultural lands; protecting watershed lands to preserve water quality and water supply; conserving land in order to reduce erosion, floods, landslides, and runoff; improving disabled and public access to, and enjoyment of, public land and open space; or acquiring disabled and public access to public land, and open space.

County of Maui, Open Space, Natural Resources, Cultural Resources, and Scenic Views Preservation Fund. Ordinance No. 3128 approved in June 2003, established an Open Space, Natural Resources, Cultural Resources, and Scenic Views Preservation Fund, to be funded by a

set-aside of a minimum of one-half percent of County real property tax revenues each year. The Fund may be used to purchase or otherwise acquire lands or property entitlements for land conservation purposes in the County for the following purposes: public outdoor recreation and education; preservation of historic or culturally important land areas; protection of significant habitat or ecosystems, including buffer zones; preserving forests, beaches, coastal areas, and agricultural lands; protecting watershed lands to preserve water quality; conserving lands for the purpose of reducing erosion, floods, landslides, and runoff; and improving disabled and public access to, and enjoyment of, public land, open space, and recreational facilities.

### **Mapping Resources**

Geographic information system (GIS) applications are a powerful tool in planning for and identifying potential opportunities and constraints in the development of a statewide greenways system. One of the major obstacles in the implementation of new greenways is land acquisition or access to land for developing linkages and easements between destinations and attractions. Thus, the identification and mapping of publicly-owned lands using GIS is a simple and early step that can be taken to initiate planning for the establishment of a statewide greenways system. OP's Statewide GIS Program maintains a large number of data sets, such as land ownership and other natural and structural attributes, which would be invaluable to such an effort. GIS has also been used to support methods for prioritizing greenways identification and project prioritization for system development.

## **III. OPTIONS FOR ESTABLISHMENT OF A STATEWIDE SYSTEM OF GREENWAYS AND TRAILS**

In this preliminary scoping, OP found a high level of interest and activity statewide in greenways development at the County and State levels. Greenways, trails, and other forms of pathways are identified and incorporated in the development of County general and community plans, and the benefits of greenways to community and individual quality of life and the local economy are recognized in County plan policies and proposed open space and recreational facility programming. The Counties are actively engaged in the implementation of individual greenways projects—many years, if not decades in the making—in consultation and collaboration with community advocacy groups and State and private entities. Projects are using funds available under federal transportation programs to the extent that they are able.

The Counties and the State have a wealth of plans and technical reference documents with which to identify greenways opportunities and resources in communities and regions of each island statewide. A virtual statewide greenways system plan already exists among the individual plan components and project plans of County, State, federal, and private and community organizations. What is clear from this initial survey is that current efforts to implement and develop greenways elements and systems are fragmented and project-driven. Each project faces a host of issues identified earlier that make project implementation more challenging: lack of funding, multiple landowners to negotiate with, liability concerns, permitting requirements, potential use conflicts that need to be resolved, project fatigue due to lengthy timeframes for project development, or even lack of an identified partner or organization to commit to long-term maintenance of greenways facilities.

## **Options**

There are various approaches the State could adopt in facilitating the establishment of a statewide greenways system. Several options are discussed below.

Foremost, however, is the need for a plan to establish or facilitate the development of a statewide system of greenways and trails in Hawaii. This will require additional analysis and consultation with affected State, County, and federal agencies, other advocacy and community groups, landowners, and private sector interest groups to develop a plan that builds on and supports existing planning and greenways initiatives of the individual Counties and their public, private, and community partners. Development of such a plan will require a commitment to fund a process that would: (1) identify stakeholders and interest groups for each island; (2) involve the public and stakeholder groups in identifying opportunities, barriers, and priority projects for each island; (3) provide public outreach and education about the value of greenways and involvement in community greenways programs; (4) result in a framework and implementation plan for facilitating greenways development statewide, including the establishment of a State-level position or program to support implementation, and permanent funding for a greenways support at the State-level; and (5) establish a monitoring component to evaluate progress in implementing the plan. Funding required for the development of a plan for a statewide greenways system is estimated at \$100,000.

### **Option 1 – Continue the Current Course**

This option would rely on existing County, State, and federal planning and implementation efforts summarily described in this report. No additional funding or resources would necessarily be appropriated to support existing efforts, except to maintain the level of funding available through the existing special funds and federal transportation funds that are being used for greenways projects. Greater communication and consultation between State and County agencies regarding greenways planning and project development might facilitate and enhance greenways development. A greenways task force created and funded by the legislature with County, State and federal agency and community stakeholders could facilitate this cooperative effort.

### **Option 2 – Allocate Funding and Resources for a State Greenways and Trails Facilitator**

This option would establish and fund a Statewide Greenways and Trails Facilitator, who would be charged with implementing the statewide greenways plan, which would integrate the greenways, trails, and pathway plans and initiatives of County, State, federal, and other organizations, consulting with and coordinating efforts of County, State, federal, private landowners and community organizations on greenways projects statewide. The facilitator would also be tasked with studying and reducing barriers to greenways development and implementation, such as liability concerns, facilitating consultations with State agencies regarding access and permit approvals, and improvements to trails and greenways databases.

**Funding Required:** The minimum recommended annual budget for a program manager/facilitator and program administration expenses is \$88,000 per year.

It is not clear at this time where a Statewide Greenways and Trails Facilitator would be housed, since the facilitator would be working in support of a wide range of greenways activities and projects, from urban projects to greenway corridors in more undeveloped, natural landscapes. The range of environments and project types would typically go beyond the traditional mission and scope of either DLNR or HDOT programs discussed in this report.

### **Option 3 – Expand Scope, Budget, and Resources of Na Ala Hele Program**

This option would require legislation to clarify the authority and expand the scope of the Na Ala Hele Program in support of greenways planning and programs that have a more urban character than NAH's core programming. This would require the appropriation of additional funds to ensure that NAH has the capacity to support these new functions, and that the new functions do not detract from or adversely impact NAH's existing programs. The new greenways program would be tasked with the implementation of a statewide greenways plan that would integrate the greenways, trails, and pathway plans and initiatives of County, State, federal, and other organizations.

**Funding Required:** The minimum recommended annual budget for a greenways program within NAH is \$242,000 per year, which would fund a program manager, two staff planners, and program administration expenses.

### **Option 4 – Establish and Fund a New State Greenways Program**

This would involve the establishment of a comprehensive standalone program that would be capable of undertaking a range of program activities, including implementation of a statewide greenways plan, project implementation, coordination, a grant program for community projects, and technical assistance. This would be the most costly option. A comparable program, such as the Massachusetts Greenways and Trails Program, receives annual funding in the range of \$42 million per year.

### **Recommendation**

Based on this scoping effort, the Office of Planning recommends that the Legislature authorize and appropriate funds for the development of a statewide system of greenways and trails in two phases as follows:

1. **Phase I:** Provide authorization and funding for the development of a plan for the establishment of a statewide greenways plan. The funds would provide for a two-year contract with a consultant to develop a plan as described above. Funding required is estimated at \$100,000 to ensure in part, adequate community and stakeholder involvement on each island.
2. **Phase II:** Provide authorization and funding for a Statewide Greenways and Trails Facilitator to implement the statewide greenways plan and facilitate greenways initiatives at the local and regional level statewide. With program success and as resources allow, the Legislature could consider expanding the program as outlined in Options 3 and 4 above. Annual funding required for a Statewide Greenways and Trails Facilitator and program expenses is estimated at a minimum of \$88,000.

The proposed expenditures in support of greenways development statewide are a good investment toward improving not only the quality of life of individuals and communities statewide, but also the quality of the visitor experience for visitors to the State.



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<<http://www.hawaiiscenicbyways.org/>>.

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<<http://www.dcnr.state.pa.us/brc/greenways/gwplan.pdf>>.

“What is a Greenway?” *Tennessee Greenways and Trails*, Tennessee Department of Environment and Conservation, Parks and Conservation, 2008. Web.  
<[http://www.connectwithtn.com/index.php/learn/what\\_is\\_a\\_greenway](http://www.connectwithtn.com/index.php/learn/what_is_a_greenway)>.

## **APPENDICES**

- A. Act 233, Session Laws of Hawaii 2011
- B. Interest Groups Identified in Legislative Testimony and Consultation
- C. Agency Consultation Letters and Responses
- D. Transportation Enhancement Program Projects Funded by the State Department of Transportation
- E. Projects, Plans, and Activities Reported Related to Greenways and Trails in the State of Hawaii
- F. County of Hawaii Greenways and Trails Projects, Existing and Proposed
- G. Summary Results of OP Greenways Web Poll
- H. Overview of Other State Greenways Programs
- I. Links to State, Regional, and Local Greenways Plans

## **APPENDIX A**

### **Act 233, Session Laws of Hawaii 2011**

on JUL 12 2011

HOUSE OF REPRESENTATIVES  
TWENTY-SIXTH LEGISLATURE, 2011  
STATE OF HAWAII

ACT 233  
H.B. NO. 1405  
H.D. 1  
S.D. 1  
C.D. 1

## A BILL FOR AN ACT

RELATING TO PLANNING.

### BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that given Hawaii's  
2 limited natural resources, the implementation of smart growth  
3 principles, including the preservation of open space, is crucial  
4 to the sustainability of the islands. There are ten principles  
5 of smart growth:

6 (1) Creating a range of housing opportunities and choices;

7 (2) Creating walkable neighborhoods;

8 (3) Encouraging community and stakeholder collaboration;

9 (4) Fostering distinctive, attractive communities with a  
10 strong sense of place;

11 (5) Making development decisions predictable, fair, and  
12 cost-effective;

13 (6) Mixing land uses;

14 (7) Preserving open space, farmland, natural beauty, and  
15 critical environmental areas;

16 (8) Providing a variety of transportation choices;



1 (9) Strengthening and directing development toward  
2 existing communities; and

3 (10) Taking advantage of compact building design.

4 Smart growth principles are most successful when the State  
5 makes systemic changes that are consistent with these principles  
6 in community planning and development as well as land  
7 preservation. Several other states have implemented similar  
8 programs successfully. For example, Maryland has implemented a  
9 series of legislation promoting smart growth, and Florida has  
10 implemented a greenways and trails program to provide more  
11 recreational opportunities and venues.

12 The purpose of this Act is to promote smart growth and  
13 sustainability in the State by requiring the office of planning  
14 to develop a plan to establish a statewide system of greenways  
15 and trails.

16 SECTION 2. (a) The office of planning shall develop a  
17 plan to establish a statewide system of greenways and trails  
18 that shall consist of individual greenways and trails and  
19 networks of greenways and trails.

20 (b) The office of planning shall:



1 (1) Coordinate with the department of transportation and  
2 the department of land and natural resources in its  
3 efforts to develop a plan for a statewide system of  
4 greenways and trails;

5 (2) Seek input from the counties regarding:

6 (A) The establishment of a system of greenways and  
7 trails for each county;

8 (B) The areas in each county that may be appropriate  
9 to designate as a greenway or trail; and

10 (C) The various impediments to establishing a system  
11 of greenways and trails in each county;

12 (3) Investigate and explore other jurisdictions that have  
13 established and implemented a system of greenways and  
14 trails;

15 (4) Investigate and consider, in consultation with the  
16 department of transportation, the use of  
17 transportation enhancement funds to establish and  
18 implement a statewide system of greenways and trails;  
19 and

20 (5) Establish a timeline for implementing a statewide  
21 system of greenways and trails.



1 (c) The office of planning shall submit a written report  
2 to the legislature of its findings and recommendations,  
3 including any proposed legislation, no later than twenty days  
4 prior to the convening of the regular session of 2012.

5 SECTION 3. This Act shall take effect on July 1, 2011.

APPROVED this 12 day of JUL , 2011

*Neil Abernethy*  
GOVERNOR OF THE STATE OF HAWAII





## **APPENDIX B**

### **Interest Groups Identified in Legislative Testimony and Consultation**

## Interest Groups Identified in Legislative Testimony and Consultation

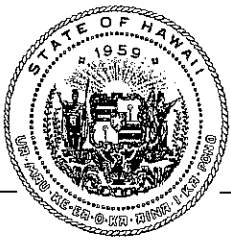
Organization	Name	Title	Mailing Address	City	Zip	Phone	E-mail/Web Address
Outdoor Circle	Bob Loy	Director of Environmental Programs	1314 South King Street, Suite 306	Honolulu	96814	808-593-0300	mail@outdoorcircle.org
Individual	Marjorie Erway		PO Box 2807	Kailua-Kona	96745	808-324-4624	merway@hawaii.rr.com
City & County of Honolulu, Department of Planning and Permitting	David K. Tanoue	Director	650 S King St 7th Fl	Honolulu	96813		dtanoue@honolulu.gov
Sierra Club Hawaii Chapter	Robert D. Harris	Director	PO Box 2577	Honolulu	96803	808-538-6616	robertharris@mac.com
Na Ala Hele, DOFAW, DLNR	Nelson Ayers	Statewide Program Manager	1151 Punchbowl Street, Rm 325	Honolulu	96813	587-4175	Nelson.L.Ayers@hawaii.gov
Windward Ahupua'a Alliance	Shannon Wood	President & Co-Founder	PO Box 6366	Kaneohe, HI	96744	247-6366	info@waa-hawaii.org
PBR HAWAII	Vincent Shigekuni		1001 Bishop Street, ASB Tower, Suite 650	Honolulu	96813	521-5631	vshigekuni@pbrhawaii.com
Sierra Club	Randy Ching	Sierra Club Liaison					oahurandy@yahoo.com
PATH - Peoples Advocacy for Trails Hawaii	Laura Dierenfield	Executive Director	PO Box 62	Kailua-Kona	96745	808-326-7284	laura@pathhawaii.org
Waimea Trails & Greenway Committee, Waimea Preservation Association	Clemson Lam					808-885-4431	c.lam4@hawaiiantel.net
Kimura International	Glen Kimura					808-944-8848	
Kauai Path							<a href="http://www.kauaipath.org">www.kauaipath.org</a>
AARP Hawaii	Jackie Borland						<a href="mailto:jboland@aarp.org">jboland@aarp.org</a>
Hawaii Nutrition & Physical Activity Coalition							<a href="http://www.npachawaii.org">www.npachawaii.org</a>
Get Fit Kauai - Kauai County Nutrition & Physical Activity Coalition						808-212-4765	<a href="http://www.getfitkauai.com">www.getfitkauai.com</a>
Maui County Nutrition & Physical Activity Coalition						808-264-7895	<a href="http://www.npacmaui.com">www.npacmaui.com</a>
Hawaii Bicycling League							
Hawaii Trail & Mountain Club							
Oahu Metropolitan Planning Organization							
U. S. National Park Service							
Island Transitions, LLC	Debbie Chang		Island of Hawaii				
UH Dept. of Urban and Regional Planning (grad student)	Nicole Lowen	Graduate Research Assistant	P.O. Box 62175	Honolulu	96839	808-937-8196	nlowen@gmail.com

## **APPENDIX C**

### **Agency Consultation Letters and Responses**

## Federal, State, and County Agencies Sent Consultation Letters

Organization	Response Received
Federal Highway Administration, Hawaii Division	<input checked="" type="checkbox"/>
State of Hawaii	
Department of Land and Natural Resources	<input checked="" type="checkbox"/>
State Department of Transportation	<input checked="" type="checkbox"/>
City & County of Honolulu	
Department of Design & Construction	<input checked="" type="checkbox"/>
Department of Parks & Recreation	<input checked="" type="checkbox"/>
Department of Planning and Permitting	<input checked="" type="checkbox"/>
Department of Transportation Services	<input checked="" type="checkbox"/>
Board of Water Supply	<input checked="" type="checkbox"/>
City & County Council	
County of Hawaii	
Planning Department	<input checked="" type="checkbox"/>
Department of Parks and Recreation	
Department of Water Supply	
Department of Research and Development	
Mass Transit Agency	
Department of the Corporation Counsel	<input checked="" type="checkbox"/>
Hawaii County Council	<input checked="" type="checkbox"/>
County of Kauai	
Planning Department	<input checked="" type="checkbox"/>
Department of Public Works Engineering Division	
Department of Water	
Office of Economic Development	
Transportation Agency	<input checked="" type="checkbox"/>
Kauai County Council	
County of Maui	
Department of Parks and Recreation	
Planning Department	
Department of Public Works	
Department of Transportation	<input checked="" type="checkbox"/>
Department of Water Supply	<input checked="" type="checkbox"/>
Maui County Council	



# DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE  
GOVERNOR  
RICHARD C. LIM  
DIRECTOR  
MARY ALICE EVANS  
DEPUTY DIRECTOR  
JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

## OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824

Ref. No. P-13369

August 9, 2011

Ms. Elizabeth Fischer  
Transportation Enhancement Program Coordinator  
Federal Highway Administration, Hawaii Division  
Prince Jonah Kuhio Kalanianaʻole Federal Building  
300 Ala Mona Boulevard, Room 3-306  
Honolulu, Hawaii 96850

Dear Ms. Fischer:

Subject: Act 233/HB1405 Establishing a Statewide System of Greenways and Trails

Governor Abercrombie signed Act 233/HB 1405 (enclosed) into law on July 12, 2011, recognizing the benefits that greenways and trails can have for our communities. Act 233 directs the State Office of Planning (OP) to develop a plan to establish a statewide system of greenways and trails, and requires OP to fulfill five specific directives. Directive no. 4 requires OP to: "Investigate and consider, in consultation with the department of transportation, the use of transportation enhancement funds to establish and implement a statewide system of greenways and trails."

Act 233 requires a report from OP on our findings and recommendations on how the state might proceed in facilitating a statewide system. Relative to directive no. 4, we have initiated consultation with the State Department of Transportation (HDOT) and would also like to receive your input on the use of Federal Highway Administration (FHWA) Transportation Enhancement funds and have the following questions.

1. Can FHWA Transportation Enhancement funds be used to establish and implement a statewide system of greenways and trails?
2. If so, what type of activities can be funded?
3. In addition to the HDOT can county government agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?

**Federal Consultation Letter**

Ms. Elizabeth Fischer

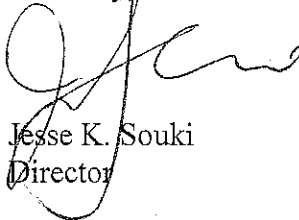
Page 2

August 9, 2011

4. Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails in Hawaii? If so, were FHWA Transportation Enhancement funds used or were other sources of funding used?
5. Do you have any ideas or comments about establishing a statewide system of greenways and trails?

We would appreciate your assistance in answering the above questions. You may submit your responses by letter or email to John Nakagawa at [jnakagawa@dbedt.hawaii.gov](mailto:jnakagawa@dbedt.hawaii.gov). Please respond by Monday, August 29, 2011. If you have any questions, please call John Nakagawa at 587-2878.

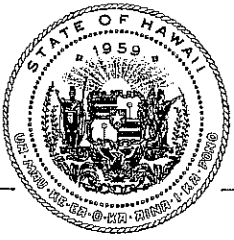
Sincerely,



Jesse K. Souki  
Director

Enclosure

c: Representative Jo Jordan (w/o enclosure)



# DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE  
GOVERNOR  
RICHARD C. LIM  
DIRECTOR  
MARY ALICE EVANS  
DEPUTY DIRECTOR  
JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

## OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

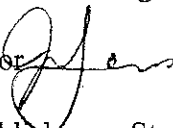
Telephone: (808) 587-2846  
Fax: (808) 587-2824

Ref. No. P-13369

August 9, 2011

To: Jadine Urasaki, Deputy Director  
Department of Transportation

Attention: David Zevenbergen  
Transportation Enhancement Program Manager

From: Jesse K. Souki, Director 

Subject: Act 233/HB1405 Establishing a Statewide System of Greenways and Trails

Governor Abercrombie signed Act 233/HB 1405 (enclosed) into law on July 12, 2011, recognizing the benefits that greenways and trails can have for our communities. Act 233 directs the State Office of Planning (OP) to develop a plan to establish a statewide system of greenways and trails, and requires OP to fulfill five specific directives. Directive no. 4 requires OP to: "Investigate and consider, in consultation with the department of transportation, the use of transportation enhancement funds to establish and implement a statewide system of greenways and trails."

Act 233 requires a report from OP on our findings and recommendations on how the state might proceed in facilitating a statewide system. Relative to directive no. 4, we have initiated consultation with the State Department of Transportation (HDOT) and would also like to receive your input on the use of Federal Highway Administration (FHWA) Transportation Enhancement funds and have the following questions.

1. Can FHWA Transportation Enhancement funds be used to establish and implement a statewide system of greenways and trails?
2. If so, what type of activities can be funded?
3. In addition to the HDOT can county government agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?

Ms. Jadine Urasaki

Page 2

August 9, 2011

4. Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails in Hawaii? If so, were FHWA Transportation Enhancement funds used or were other sources of funding used?
5. Do you have any ideas or comments about establishing a statewide system of greenways and trails?

We would appreciate your assistance in answering the above questions. You may submit your responses by letter or email to John Nakagawa at [jnakagawa@dbedt.hawaii.gov](mailto:jnakagawa@dbedt.hawaii.gov). Please respond by Monday, August 29, 2011. If you have any questions, please call John Nakagawa at 587-2878.

Enclosure

c: Representative Jo Jordan (w/o enclosure)





RE: Greenways & Trails (Act 233)

Elizabeth.Fischer

to:

JNakagaw

08/10/2011 03:37 PM

Cc:

David.L.Zevenbergen, Ken.Tatsuguchi, Paul.J.Conry, Nelson.L.Ayers, jsouki

Hide Details

From: <Elizabeth.Fischer@dot.gov> Sort List...

To: <JNakagaw@dbedt.hawaii.gov>

Cc: <David.L.Zevenbergen@hawaii.gov>, <Ken.Tatsuguchi@hawaii.gov>,

<Paul.J.Conry@hawaii.gov>, <Nelson.L.Ayers@hawaii.gov>, <jsouki@dbedt.hawaii.gov>

History: This message has been replied to and forwarded.

#### 1 Attachment



HI GreenwayTrails (Act 233).pdf

Thanks for the email, John! Appreciate digital over paper every day.

Most of your questions are answered via the FHWA Transportation Enhancements Program website:

<http://www.fhwa.dot.gov/environment/te/index.htm> with additional information available through the Recreational Trails Program site: <http://www.fhwa.dot.gov/environment/rectrails/index.htm>.

1. **Can FHWA Transportation Enhancement funds be used to establish and implement a statewide system of greenways and trails?**

Only if they have a transportation specific purpose...after all, these are Federal transport funds in question.

2. **If so, what type of activities can be funded?**

This list of twelve items are the only legal/ eligible activities that may be funded under the TE Program, two areas are highlighted that have the closest relevance to your query.

- *Provision of pedestrian and bicycle facilities (see also #1 above, otherwise see RecTrails program info)*
  - Provision of pedestrian and bicycle safety and education activities
  - Acquisition of scenic or historic easements and sites
  - Scenic or historic highway programs including tourist and welcome centers
  - Landscaping and scenic beautification
  - Historic Preservation
  - Rehabilitation and operation of historic transportation buildings, structures, or facilities
  - *Conversion of abandoned railway corridors to trails (see also #1 above, otherwise see RecTrails program info)*
  - Control and removal of outdoor advertising
  - Archaeological planning and research
  - Environmental mitigation of highway runoff pollution, reduce vehicle-caused wildlife mortality, maintain habitat connectivity
  - Establishment of transportation museums
3. **In addition to the HDOT can county government agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?**
- HDOT oversees TE funds which are apportioned to the State for specific TE activities.
  - DLNR oversees RTP funds which are apportioned to the State for specific eligible trails activities.
4. **Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails in Hawaii? If so, were FHWA Transportation Enhancement funds used or were other sources of funding used?**

Not to my knowledge. TE funds have explicit and limited (see #2 above) permissible uses. Bottom line is that Federal transport funds may be used for purposes that have a direct transport function.

5. **Do you have any ideas or comments about establishing a statewide system of greenways and trails?**
- Talk with DLNR-DOFAW's Na Ala Hele Trails and Access Program (<http://hawaiitrails.hawaii.gov/home.php>) managers, Paul Conry & Nelson Ayers) about how their long standing efforts might be able to play into Act 233's requirements.
  - Talk with HDOT-HWY's Transportation Enhancements and Scenic Byways Programs manager, David Zevenbergen, about how these two programs work here in Hawaii and might be able to link to Act 223's requirements.

Hope CZM has fun with this....  
Liz

USDOT Emergency Coordinator – HI, AS, GU, CNMI

Elizabeth E Fischer, RLA, ASLA, APA, IAEM  
USDOT FHWA Hawai'i  
300 Ala Moana Blvd Rm 3306  
Honolulu HI 96850-3306

808.541.2325 - v  
808.778.5611 - c  
703.861.0561 - c  
[elizabeth.fischer@dot.gov](mailto:elizabeth.fischer@dot.gov)

*Ho'okahi ka'ilau like ano*

**From:** John Nakagawa [<mailto:JNakagaw@dbedt.hawaii.gov>]  
**Sent:** Wednesday, August 10, 2011 1:29 PM  
**To:** Fischer, Elizabeth (FHWA)  
**Subject:** Greenways & Trails

To: Elizabeth Fischer, FHWA  
From: John Nakagawa, State of Hawaii, Office of Planning, 587-2878

Governor Abercrombie signed Act 233/HB 1405 (attached) into law on July 12, 2011, recognizing the benefits that greenways and trails can have for our communities. Act 233 directs the State Office of Planning (OP) to develop a plan to establish a statewide system of greenways and trails, and requires OP to fulfill five specific directives. Directive no. 4 requires OP to: "Investigate and consider, in consultation with the department of transportation, the use of transportation enhancement funds to establish and implement a statewide system of greenways and trails."

Act 233 requires a report from OP on our findings and recommendations on how the state might proceed in facilitating a statewide system. Relative to directive no. 4, we have initiated consultation with the State Department of Transportation (HDOT) and would also like to receive your input on the use of Federal Highway Administration (FHWA) Transportation Enhancement funds and have the following questions.

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2. If so, what type of activities can be funded?
3. In addition to the HDOT can county government agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?
4. Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails in Hawaii? If so, were FHWA Transportation Enhancement funds used or were other sources of funding used?
5. Do you have any ideas or comments about establishing a statewide system of greenways and trails?

We would appreciate your assistance in answering the above questions.  
Thank you very much.

NEIL ABERCROMBIE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

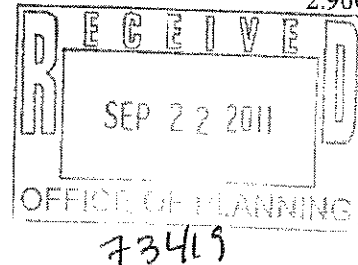
GLENN M. OKIMOTO  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
FORD N. FUCHIGAMI  
RANDY GRUNE  
JADINE URASAKI

IN REPLY REFER TO:

HWY-PS  
2.9607

September 21, 2011



TO: JESSE K. SOUKI, DIRECTOR  
OFFICE OF PLANNING  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

FROM: *Jadine Urasaki*  
JADINE URASAKI, DEPUTY DIRECTOR-PROJECTS  
DEPARTMENT OF TRANSPORTATION

SUBJECT: ACT 233 ESTABLISHING A STATEWIDE SYSTEM OF GREENWAYS AND TRAILS

This is in response to your letter dated August 9, 2011, Ref. No. P-13369, outlining direction given to the Office of Planning to develop a plan to establish a statewide system of greenways and trails.

On a National level, the Transportation Enhancement (TE) Program was created by Congressional legislation in 1991, under the Intermodal Surface Transportation Efficiency Act and was subsequently supplemented in the Transportation Equity Act for the 21<sup>st</sup> Century and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users to the present. The legislation carried with it certain objectives and eligibility requirements, all related to the state's surface transportation systems and specific transportation-related activities. Transportation activities are the priority eligibility consideration for these funds and recreation is incidental to transportation. Under the federal program 23 U.S.C. 101(a)(35), there are twelve TE activity categories that ensure the funds are properly used. The State of Hawaii has, by policy, limited the funding to eight categories – primarily because the other four are not appropriate to Hawaii. A listing of the categories is provided as an attachment with the four categories highlighted.

Currently, the Department of Transportation, Highways Division, Planning Branch (HDOT), manages the State's TE Program.

The following are our responses to your questions in the above-referenced letter.

1. Can FHWA Transportation Enhancement funds be used to establish and implement a statewide system of greenways and trails?

Response: Yes, it is an eligible activity.

2. If so, what type of activities can be funded?

Response: See attached list of eligible transportation-related activities.

3. In addition to the HDOT, can county government agencies and non-profit organizations receive FHWA Transportation Enhancement funds to carry out greenways and trails related activities?

Response: In addition to HDOT, only other state and county governmental agencies are eligible to receive these funds, with some requiring certification by HDOT.

4. Are there any past or current activities, projects, or programs that are related to establishing a statewide system of greenways and trails in Hawaii? If so, were FHWA Transportation Enhancement funds used or were other sources of funding used?

Response: No. However, efforts to link TE funded bike/ped projects and facilities in urban areas are meeting with some success. For example, the Leeward Bikeway project on Oahu, the Lydgate Park multi-use path on Kauai and the Baldwin Avenue multi-use path on Maui, when completed will provide transportation activities for nearby communities.

5. Do you have any ideas or comments about establishing a statewide system of greenways and trails?

Response: Yes. DLNR's existing statewide Na Ala Hele Trail and Access System Program could possibly be expanded to include statewide greenways and trails as identified in the Act. The development for this proposed modified plan would include agency coordination for intermodal planning and project delivery using funding from the Recreational Trails Program which create linkages/connectors with existing greenways and trails.

Attachments

The twelve activity categories that meet the objectives of the federal Transportation Enhancement program are as follows:

1. Provision of facilities for pedestrians and bicycles;
2. Provision of safety and educational activities for pedestrians and bicyclists;
3. Acquisition of scenic easements and scenic or historic sites (including historic battlefields);
4. Scenic or historic highway programs (including the provision of tourist and welcome center facilities);
5. Landscaping and other scenic beautification;
6. Historic preservation;
7. Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals);
8. Preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails);
9. Inventory, control and removal of outdoor advertising;
10. Archaeological planning and research;
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity; or
12. Establishment of transportation museums.

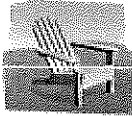
Please confirm, update or add information in each cell for your state. Highlight changes in red.

[Home](#)

## Current TE Eligibility Practices

- × (O in Wingdings 2) Historically Eligible per enhancements.org
- ✓ (P in Wingdings 2) Currently Eligible Muni/County/State assumed currently eligible unless otherwise noted
- [blank] Not Eligible

State	Eligible Activities	Ineligible Activities	Eligible Applicants	Municipality	County	State Agency	Federal Agency	Tribe
Alabama	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency, Tribe, Military, or University.	✓	✓	✓		×
Alaska	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, county, non-government organization (NGO), transit provider, tribal government, state or federal agency, or a private organization.	✓	✓	✓	×	×
Arizona	1 2 3 4 5 6 7 8 9 10 11 12	3	Municipality, County, State agency, or Tribe. An organization is also eligible, as long as	✓	✓	✓		×
Arkansas	1 2 3 4 5 6 7 8 9 10 11 12			✓	✓	✓		
California	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency, University, Federal government, or Non-profit. Only state and federal agencies can apply for ITIP TE.	✓	✓	✓	×	
Colorado	1 2 3 4 5 6 7 8 9 10 11		Municipality, county, state, local, or federal agency. (A government agency may submit an	✓	✓	✓	×	
Connecticut	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency, Tribe, Military, University, or NGO. All applicants must be sponsored by a government body (i.e. municipality or state agency), regional planning organization, or tribal nation in order for a federal aid agreement to be arranged.	✓	✓	✓		×
Delaware	1 2 3 4 5 6 7 8 9 10 11		Municipality, County, State agency, and NGOs.	✓	✓	✓		
District of Columbia	1 2 3 4 5 6 7 8 9 10 11 12		City agency, University, NGO or Federal agency.	✓	N/A	N/A	×	
Florida	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency, Tribe, or Federal agency.	✓	✓	✓	×	×
Georgia	1 2 3 4 5 6 7 8 9 10 11		Municipality, County, Public University, or an Authority created by the General Assembly.	✓	✓			
Hawaii	1 2 3 4 5 6 10 11	7 8 9 12	County or State agency.		✓	✓		
Idaho	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency, Tribe or University.	✓	✓	✓		×
Illinois	1 2 3 4 5 6 7 8 9 10 11		The applicants must be a taxing body able to enter into an agreement with IDOT.	✓	✓	✓		
Indiana	1 2 3 4 5 6 7 8 9 10 11 12		Municipality, County, State agency or University.	✓	✓	✓		



## HI Pedestrian Master Plan

**Nelson L Ayers** to: John Nakagawa

This message is digitally signed.

08/17/2011 02:30 PM

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History: This message has been replied to and forwarded.

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Aloha John -  
Here is that site on DOT website.

<http://www.hawaiipedplan.com/Home.aspx>

Please call me anytime if DLNR can help in anyway. DOT is a great partner for the FHWA, Recreational Trails Program in Hawaii. If we can tie in projects for Act 233 using RTP funds it will need to go through DLNR. Am certain the same requirements remain for the Transportation Enhancement Funds as this program is managed through State DOT.

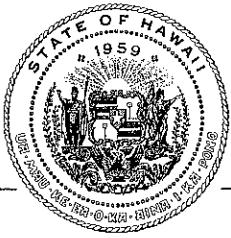
As a disclosure, this is DLNR's reply per OSP Director Jesse Souki's memo to William Aila, Jr. DLNR, Director for information regarding RTP. Looking forward to continued discussion for Act 233. Regards and Aloha,

\*\*\*\*\*

Nelson L. Ayers, Staff Forester  
State of Hawaii, Dept. Land/Natural Resources  
Division of Forestry and Wildlife  
1151 Punchbowl St. Rm. 325  
Honolulu, Hawaii 96813  
Nelson's Direct Line: (808) 587-4175  
Business Line: (808) 587-0166  
Fax: (808) 587-0160  
E-Mail: [Nelson.L.Ayers@hawaii.gov](mailto:Nelson.L.Ayers@hawaii.gov)  
Web Page: [www.state.hi.us/dlnr/dofaw](http://www.state.hi.us/dlnr/dofaw)

\*\*\*\*\*





## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE  
GOVERNOR  
RICHARD C. LIM  
DIRECTOR  
MARY ALICE EVANS  
DEPUTY DIRECTOR  
JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

### OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824

Ref. No. P-13368

August 9, 2011

Mr. Michael A. Dahilig, Director  
Department of Planning  
County of Kauai  
4444 Rice Street, Suite 473  
Lihue, Hawaii 96766

Dear Mr. Dahilig:

**Subject: Assistance in Responding to Act 233 (2011) Requesting a Report on the  
Establishment of a Statewide Greenways and Trails Program**

Governor Abercrombie signed the subject Act into law on July 12, 2011, recognizing the benefits that greenways and trails can have for our communities. Act 233 requires the Office to submit a written report to the 2012 Legislature outlining how the State might proceed in facilitating the development of a statewide greenways and trails system.

Specifically, Act 233 requires that we seek input from the Counties regarding:

1. The establishment of a system of greenways and trails for each county;
2. The areas in each county that may be appropriate to designate as a greenway or trail; and
3. The various impediments to establishing a system of greenways and trails in each county.

In addition, we would like know, from a county perspective, how the State might facilitate, encourage, or assist with establishing greenways and trails statewide.

As a county stakeholder with knowledge and experience in this area or whose programs interface with greenways and trails programs, your input is particularly valuable. We recognize that a lot of work has already been done in this area through the efforts of community members, county and state agencies, and non-profits. In our preliminary research, we have found dozens of completed and ongoing plans, studies, and initiatives related to the establishment of trails, greenways, bike routes, parks, and other projects both at the county and state levels. These projects have creatively leveraged public and private funding, community support and advocacy, and cooperation from private landowners.

Related to the above questions, please let us know if there is anyone else in the county who we should be speaking with regarding greenways and trails planning related to your county,

**County Consultation Letter**

Mr. Michael A. Dahilig  
Page 2  
August 9, 2011

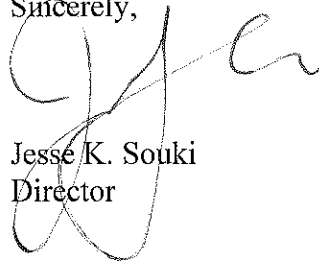
and any stakeholder groups that you have been working with who may be able to provide us with information for preparing the Act 233 report.

Documentation of the above findings and recommendations, including any proposed legislation regarding the above activities, must be submitted in a written report to the legislature by our office no later than 20 days prior to the convening of the regular session, which is Thursday, December 29, 2011. An official copy of Act 233 is online at [http://www.capitol.hawaii.gov/session2011/bills/GM1337\\_.PDF](http://www.capitol.hawaii.gov/session2011/bills/GM1337_.PDF).

We would appreciate your assistance in providing the information requested above. You may submit your answers by post or by e-mail to [Jesse.K.Souki@DBEDT.hawaii.gov](mailto:Jesse.K.Souki@DBEDT.hawaii.gov). **Please respond on or before Monday, August 29, 2011.**

Thank you for your time and attention to this matter. If you have any questions, please contact me at (808) 587-2846.

Sincerely,



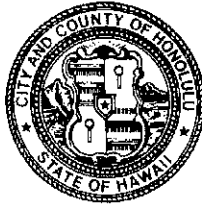
Jesse K. Souki  
Director

c: Representative Jo Jordan

DEPARTMENT OF PARKS & RECREATION  
**CITY AND COUNTY OF HONOLULU**

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707  
Phone: (808) 768-3003 • Fax: (808) 768-3053  
Website: www.honolulu.gov

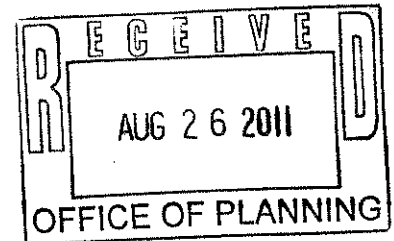
PETER B. CARLISLE  
MAYOR



August 24, 2011

GARY B. CABATO  
DIRECTOR

ALBERT TUFONO  
DEPUTY DIRECTOR



Mr. Jesse K. Souki, Director  
State of Hawaii  
Department of Business, Economic  
Development and Tourism  
Office of Planning  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Souki:

This is in reply to your letter dated August 9, 2011 requesting input with regards to Act 233 (2011), which pertains to the establishment of a statewide greenways and trails program.

Honolulu Botanical Gardens (HBG) of the Division of Urban Forestry is comprised of five garden sites on O'ahu; Foster, Ho'omaluhia, Koko Crater, Lili'uokalani, and Wahiawa Botanical Gardens. The HBG's jurisdiction is limited to these City and County of Honolulu gardens which encompass an area of approximately 650 acres. All the gardens have roads and/or pathways of varying degrees of development that visitors use for jogging, hiking, or to meander through the garden's scenic grounds that offer many areas of interest, such as tropical plant collections, a butterfly garden, etc.

These garden sites may be thought of as green "islands" that could serve to connect State and/or City greenways or trails that may be developed throughout O'ahu in the future. As the Department of Design and Construction (DDC) is the department that is responsible to design and oversee City projects, you may wish to contact Mr. Collins Lam, Director of DDC, at 768-8480, for input.

Should you have any questions, please call Winifred Singeo, Director of Botanical Gardens, at 522-7060.

Sincerely,

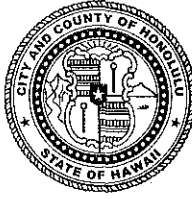
A handwritten signature in cursive script that reads "Gary B. Cabato".  
Gary B. Cabato  
Director

GBC:jn  
(429394)

cc: Winifred Singeo, HBG  
DDC

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honoluluodpp.org](http://www.honoluluodpp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)



PETER B. CARLISLE  
MAYOR

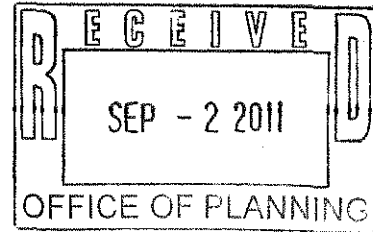
DAVID K. TANQUE  
DIRECTOR

JIRO A. SUMADA  
DEPUTY DIRECTOR

2011/ELOG-1800

August 30, 2011

Mr. Jesse K. Souki, Director  
Office of Planning  
Department of Business, Economic  
Development and Tourism  
State of Hawaii  
P. O. Box 2359  
Honolulu, Hawaii 96804



73355

Dear Mr. Souki:

Subject: Assistance in Responding to Act 233 (2011) Requesting a Report on the  
Establishment of a Statewide Greenways and Trails Program

We are in receipt of your letter dated August 9, 2011, requesting information related to planning and developing a statewide greenways and trails system. New and improved greenways and trails have been recommended by a variety of community plans prepared by the Department of Planning and Permitting that include the list below (they are available on our website at [www.honoluluodpp.org/planning](http://www.honoluluodpp.org/planning)). These plans include both community-based ideas, as well as implementation strategies that may be helpful to you. Generally, the sections identified refer to trails, off-street multi-use paths, and greenways.

- *Aiea-Pearl City Livable Communities Plan* – Proposed paths and greenways are depicted in Figure 5-27 and on pages 5-59 through 5-61.
- *Aiea-Pearl City Neighborhood Transit-Oriented Development Plan (Draft)* – Off-street multi-use paths proposed to improve neighborhood connectivity to the Pearl Harbor Historic Trail (PHHT) are shown in Figures 11, 24, and 36.
- *East Kapolei Neighborhood Transit-Oriented Development Plan (Draft)* – A greenway is proposed to connect the East Kapolei station areas to one another and to the regional greenway/trail network.
- *Waipahu Neighborhood Transit-Oriented Development Plan (Draft)* – Multi-use pathways are proposed along waterways in both station areas.
- *Primary Urban Center Development Plan* – See Open Space Map for proposed promenades and stream greenbelts.
- *North Shore Sustainable Communities Plan* – Section 4.1.3 describes proposed shared use paths. The plan also recommends the use of utility corridors for pedestrian and bicycle routes and a system of mauka trails and paths to interconnect major recreational areas (Sections 3.1.2.8 and 3.3.2.2). Exhibit 3.2 shows the location of North Shore hiking trails.

- *Koolau Loa Sustainable Communities Plan (2010 Public Review Draft)* – Trails are addressed in Section 3.1.2.1.
- *Koolau Poko Sustainable Communities Plan* – Trails are addressed in Section 3.1.3.1. The plan is currently undergoing revision, and new language about providing access to existing mountain trails through residential areas and military and agricultural lands is proposed for this section.
- *East Honolulu Sustainable Communities Plan* – Trails are addressed in Sections 2.2.4 and 3.1.
- *Ewa Development Plan (2008 Public Review Draft)* – Greenways and paths are addressed in Sections 2.2.3, 3.1.4.8, 3.4.3.1, and 4.1.5, as well as on the Public Facilities Map.
- *Central Oahu Sustainable Communities Plan* – Greenways and paths are addressed in Sections 3.1.4.8, 3.3.2.2, 3.4.3.1, and 4.1.5, as well as on the Public Facilities Map.
- *Waianae Sustainable Communities Plan (2010 Final Revised Draft)* – The plan recommends a walking/jogging/biking path that extends along the entire Waianae Coast.
- *Kalihi Palama Action Plan* – A paved trail along Kapalama Canal has long been desired by the community.
- *Kahaluu Community Master Plan* – Greenways and pathways are proposed in Section 3.2.3 – Circulation Plan.
- *Waipahu Livable Communities Initiative & Waipahu Town Plan* – In addition to PHHT improvements, the plans recommend a trail connection to Hawaii's Plantation Village.
- *Pearl Harbor Historic Trail Master Plan*

Other individuals, organizations and plans that you may want to contact or investigate further include:

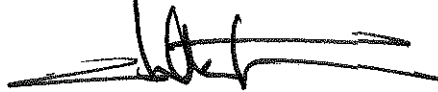
- *Oahu Bike Plan (Draft)*, City & County of Honolulu Department of Transportation Services
- *Bike Plan Hawaii*, State of Hawaii Department of Transportation
- *Koolau Loa & Waianae Watershed Management Plans*, Honolulu Board of Water Supply
- City & County of Honolulu Department of Parks and Recreation
- City & County of Honolulu Department of Design and Construction – contact Terry Hildebrand at [thildebrand@honolulu.gov](mailto:thildebrand@honolulu.gov)
- *The City of Kapolei Urban Design Plan*, Kapolei Property Development LLC
- AARP – contact Jackie Boland at [jboland@aarp.org](mailto:jboland@aarp.org)
- State of Hawaii Department of Land and Natural Resources
- Oahu Metropolitan Planning Organization

Finally, one of the challenges related to greenways, particularly along streams, that could benefit from State investigation is the complex relationship among private property rights, liability, and public access.

Mr. Jesse K. Souki, Director  
Office of Planning  
August 30, 2011  
Page 3

If you have any questions or need assistance locating the materials referenced above, please contact Renee Espiau of my staff at (808) 768-8050 or [respiau@honolulu.gov](mailto:respiau@honolulu.gov).

Very truly yours,

A handwritten signature in black ink, appearing to read 'D. Tanoue', with a long horizontal line extending to the left.

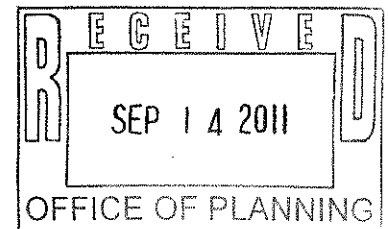
David K. Tanoue, Director  
Department of Planning and Permitting

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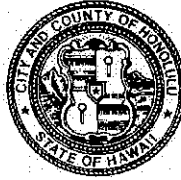
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**DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)



PETER B. CARLISLE  
MAYOR



COLLINS D. LAM, P.E.  
DIRECTOR

LORI M. K. KAHIKINA, P.E.  
DEPUTY DIRECTOR

73380

September 9, 2011

Mr. Jesse Souki  
Department Of Business,  
Economic Development & Tourism  
Office of Planning  
P. O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Souki:

Subject: Assistance to Responding to Act 233 (2011) Requesting a  
Report on the Establishment of a Statewide Greenways and  
Trails Program

The Department of Design and Construction have the following comments to offer: The purposes for establishment of a system of greenways and trails can be many. Greenways often have ecological (wildlife conservation), recreational, or social functions, as well as being circulatory - for the movement of people. Ecologically-oriented greenways can follow rivers and streams; urban greenways can provide an alternative circulation route to motor vehicles for separating pedestrians, bicyclists, and other slower-moving modes of transport. The latter type would be very well-used and beneficial to public safety, as exemplified by the Village Homes subdivision development in Davis, California, and the 1930's era Greenbelt developments, such as Greenbelt, Maryland and Greendale, Wisconsin. It is possible to lay out a network of greenway trails and paths that avoids crossing roads, thus minimizing conflicts between motor vehicles and pedestrians.

1. The areas most appropriate and offering the greatest immediate opportunity for designation as greenways are existing, publicly-owned land parcels and rights-of-way. For reasons of cost and legal complexity, the acquisition of new, privately-owned properties to create a continuous greenway should be minimized as much as possible.

2. In our experience, there are several key issues impeding the creation of more greenways and trails. The issues may be summarized as questions as to who maintains the greenways, how much does it cost, and how are the additional cost borne. New property acquisitions and/or improvements to existing public lands made more accessible to the public imply expansion of government planning, design, construction, and maintenance functions and personnel to meet the increased property inventory. The government authorities that assume ownership responsibility must allocate considerably more resources to properly operate and maintain them. Most State and County agencies that would logically be called upon to maintain and manage greenways are probably already stretched very thin on staff and funds.


Benefits need to be weighed against additional costs, particularly to achieve sustainability. The establishment of greenways could conceivably greatly enhance property valuations and quality of life, or further environmental conservation objectives, which might ultimately equal or exceed the costs.

The State Department of Transportation might facilitate the establishment of a major greenway project by extending the Pearl Harbor Historic Trail to Nanakuli. This is an example of a greenway project that has been substantially delayed due to the scarcity of State funding, although the City's portion of the trail has been largely developed as planned. This potential greenway could take advantage of the existence of the former OR&L railway right-of-way in a similar way that New York City did with its recently opened High Line linear park from an abandoned elevated railroad line.

The Planning Branch of the Facilities Division of the Department of Design and Construction (DDC) addresses greenways and trails planning within the DDC in support of facilities owned and operated by the Department of Parks and Recreation. The City's Department of Transportation Services and Department of Planning and Permitting also have an interest in such planning.

Thank you for the opportunity to review and comment. Should there be any questions, please contact Clifford Lau at 768-8483.

Sincerely,

  
Collins D. Lam, P.E.  
Director



## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



September 27, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman  
DENISE M. C. DE COSTA, Vice Chair  
THERESIA C. McMURDO  
DUANE R. MIYASHIRO  
ADAM C. WONG

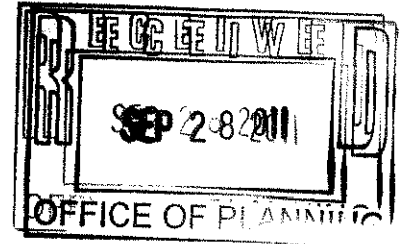
WESTLEY K.C. CHUN, Ex-Officio  
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO  
Acting Manager

Mr. Jesse K. Souki, Director  
Department of Business, Economic  
Development & Tourism  
Office of Planning  
State of Hawaii  
P. O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Souki:

Subject: Your Letter of August 9, 2011 Regarding Assistance in  
Responding to Act 233 (2011) Requesting a Report on the  
Establishment of a Statewide Greenways and Trails Program



Thank you for the opportunity to provide the following comments regarding Act 233, specifically the establishment of a statewide greenways and trails program.

1. Regarding the definition of greenways, we understand the City Department of Planning and Permitting has established greenways in their development plans as large landscaped areas for travel ways, such as roads and sidewalks, which connect open space areas. Regarding water needs for supporting greenways and trails, the developer will be required to install the necessary water system improvements to serve the proposed development. The availability of water should be coordinated with the Board of Water Supply (BWS). Please be advised that the BWS reserves the right to change any position or information stated herein up until the final approval of your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval. When water is made available, the applicant will be required to pay the applicable Water System Facilities Charges.
2. The BWS Rules and Regulations require the use of nonpotable water for the irrigation of large landscaped areas if a suitable supply is available. We recommend the use of drought tolerant/low water use plants and application of xeriscaping principles for all landscaping. We also recommend the installation of an efficient irrigation system such as drip irrigation. The irrigation system should incorporate moisture sensors to avoid the operation of the system during rain and if the ground has adequate moisture.
3. We have concerns regarding the establishment of trails on BWS watershed lands and the potential impacts to important aquifers used by the BWS. An increase in public access may promote the introduction of invasive species tracked in to these areas, which would degrade the natural forest area and reduce recharge of the underlying aquifer. In addition, a proliferation of undesirable watershed activity may result with the lifting of restrictions. The BWS maintains that the designation of restricted watersheds was done for good reason, and it would take compelling arguments to overturn what has been a sound resource protection strategy.

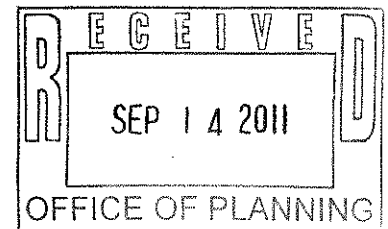
If you have any questions, please contact George Kuo at 748-5941.

Sincerely,

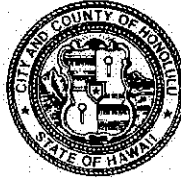
DEAN A. NAKANO  
Acting Manager

DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)



PETER B. CARLISLE  
MAYOR



COLLINS D. LAM, P.E.  
DIRECTOR

LORI M. K. KAHIKINA, P.E.  
DEPUTY DIRECTOR

73380

September 9, 2011

Mr. Jesse Souki  
Department Of Business,  
Economic Development & Tourism  
Office of Planning  
P. O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Souki:

Subject: Assistance to Responding to Act 233 (2011) Requesting a  
Report on the Establishment of a Statewide Greenways and  
Trails Program

The Department of Design and Construction have the following comments to offer: The purposes for establishment of a system of greenways and trails can be many. Greenways often have ecological (wildlife conservation), recreational, or social functions, as well as being circulatory - for the movement of people. Ecologically-oriented greenways can follow rivers and streams; urban greenways can provide an alternative circulation route to motor vehicles for separating pedestrians, bicyclists, and other slower-moving modes of transport. The latter type would be very well-used and beneficial to public safety, as exemplified by the Village Homes subdivision development in Davis, California, and the 1930's era Greenbelt developments, such as Greenbelt, Maryland and Greendale, Wisconsin. It is possible to lay out a network of greenway trails and paths that avoids crossing roads, thus minimizing conflicts between motor vehicles and pedestrians.

1. The areas most appropriate and offering the greatest immediate opportunity for designation as greenways are existing, publicly-owned land parcels and rights-of-way. For reasons of cost and legal complexity, the acquisition of new, privately-owned properties to create a continuous greenway should be minimized as much as possible.

2. In our experience, there are several key issues impeding the creation of more greenways and trails. The issues may be summarized as questions as to who maintains the greenways, how much does it cost, and how are the additional cost borne. New property acquisitions and/or improvements to existing public lands made more accessible to the public imply expansion of government planning, design, construction, and maintenance functions and personnel to meet the increased property inventory. The government authorities that assume ownership responsibility must allocate considerably more resources to properly operate and maintain them. Most State and County agencies that would logically be called upon to maintain and manage greenways are probably already stretched very thin on staff and funds.


Benefits need to be weighed against additional costs, particularly to achieve sustainability. The establishment of greenways could conceivably greatly enhance property valuations and quality of life, or further environmental conservation objectives, which might ultimately equal or exceed the costs.

The State Department of Transportation might facilitate the establishment of a major greenway project by extending the Pearl Harbor Historic Trail to Nanakuli. This is an example of a greenway project that has been substantially delayed due to the scarcity of State funding, although the City's portion of the trail has been largely developed as planned. This potential greenway could take advantage of the existence of the former OR&L railway right-of-way in a similar way that New York City did with its recently opened High Line linear park from an abandoned elevated railroad line.

The Planning Branch of the Facilities Division of the Department of Design and Construction (DDC) addresses greenways and trails planning within the DDC in support of facilities owned and operated by the Department of Parks and Recreation. The City's Department of Transportation Services and Department of Planning and Permitting also have an interest in such planning.

Thank you for the opportunity to review and comment. Should there be any questions, please contact Clifford Lau at 768-8483.

Sincerely,

  
Collins D. Lam, P.E.  
Director



**Re: Act 233 re greenways and trails** 📎

**Jesse K Souki** to: Self, Amy

Cc: "Ashida, Lincoln"

08/08/2011 04:59 PM

Aloha, Amy:

Good to hear from you. Yes, you can certainly help! We are collecting information from the counties to address the legislature's reporting requirements. Please see [http://www.facebook.com/note.php?note\\_id=118047388289104](http://www.facebook.com/note.php?note_id=118047388289104) to learn how you can help with our online data collection of stakeholders and related plans/project.

In addition, we are in the process of sending the below letter to the following people from the County of Hawaii. Please feel free to respond to the letter as well.

Bobby Jean Leithead-Todd	Director	County of Hawaii, Planning Department	Aupuni Center, 101 Pauahi St Ste 3	Hilo	96720	(808) 9
Robert A. Fitzgerald	Director	County of Hawaii, Department of Parks and Recreation	Aupuni Center, 101 Pauahi St Ste 6	Hilo	96720	(808)
Milton Pavao		County of Hawaii, Department of Water Supply	345 Kekuanaoa St., Ste 20	Hilo	96720	(808) 9
Randy Kurohara	Director	Department of Research and Development	25 Aupuni St Ste 1301	Hilo	96720	(808)
Thomas Brown	Administrator	Mass Transit Agency	1266 Kamehameha Avenue, Ste A-2	Hilo	96720	(808)

**Re: Assistance in Responding to Act 233 (2011) Requesting a Report on the Establishment of a Statewide Greenways and Trails Program**

Dear Amy:

Governor Abercrombie signed the subject Act into law on July 12, 2011, recognizing the benefits that greenways and trails can have for our communities. Act 233 requires the Office to submit a written report to the 2012 Legislature outlining how the State might proceed in facilitating the development of a statewide greenways and trails system.

Specifically, Act 233 requires that we seek input from the Counties regarding:

1. The establishment of a system of greenways and trails for each county;
2. The areas in each county that may be appropriate to designate as a greenway or trail; and
3. The various impediments to establishing a system of greenways and trails in each county.

In addition, we would like know, from a county perspective, how the State might facilitate, encourage, or assist with establishing greenways and trails statewide.

As a county stakeholder with knowledge and experience in this area or whose programs interface with greenways and trails programs, your input is particularly valuable. We recognize that a lot of work has already been done in this area through the efforts of community members,

county and state agencies, and non-profits. In our preliminary research, we have found dozens of completed and ongoing plans, studies, and initiatives related to the establishment of trails, greenways, bike routes, parks, and other projects both at the county and state levels. These projects have creatively leveraged public and private funding, community support and advocacy, and cooperation from private landowners.

Related to the above questions, please let us know if there is anyone else in the county who we should be speaking with regarding greenways and trails planning related to your county, and any stakeholder groups that you have been working with who may be able to provide us with information for preparing the Act 233 report.

Documentation of the above findings and recommendations, including any proposed legislation regarding the above activities, must be submitted in a written report to the legislature by our office no later than 20 days prior to the convening of the regular session, which is Thursday, December 29, 2011. An official copy of Act 233 is online at [http://www.capitol.hawaii.gov/session2011/bills/GM1337\\_.PDF](http://www.capitol.hawaii.gov/session2011/bills/GM1337_.PDF).

We would appreciate your assistance in providing the information requested above. You may submit your answers by post or by e-mail to [Jesse.K.Souki@DBEDT.hawaii.gov](mailto:Jesse.K.Souki@DBEDT.hawaii.gov). **Please respond on or before Monday , August 29, 2011.**

Thank you for your time and attention to this matter. If you have any questions please contact me at (808) 587-2846.

Sincerely,  
Jesse K. Souki, Director  
State of Hawaii Office of Planning  
Dept. of Business, Economic Development & Tourism

Ph: (808) 587-2846  
Web: <http://hawaii.gov/dbedt/op/index.htm>  
Twitter: HawOfcPlanning  
Facebook: State of Hawaii Office of Planning

*A goal without a plan is a mere wish. Taking the time to create a project plan is almost always a worthwhile investment.*

*Please consider the environment before printing this e-mail.*

"Self, Amy"	Aloha Jesse,	08/08/2011 04:39:17 PM
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From: "Self, Amy" <[ASELF@co.hawaii.hi.us](mailto:ASELF@co.hawaii.hi.us)>  
To: "Jesse K Souki" <[Jesse.K.Souki@dbedt.hawaii.gov](mailto:Jesse.K.Souki@dbedt.hawaii.gov)>  
Cc: "Ashida, Lincoln" <[lashida@co.hawaii.hi.us](mailto:lashida@co.hawaii.hi.us)>  
Date: 08/08/2011 04:39 PM  
Subject: Act 233 re greenways and trails

Aloha Jesse,

I just noticed that Act 233 was signed into law on July 12 and actually went into effect on July 1, 2011. This will be quite an undertaking for your office, but our County stands ready to assist you. I am in the process of putting together a list of greenways and trails that are undergoing the planning process right

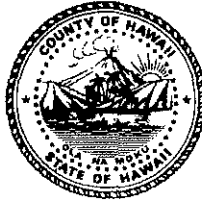
now and a list of public access shoreline trail easements that have already been granted to the County. I am working with a group called the Hilo Bayfront Trails and we are working on a trail that will go from the harbor where the cruise ships dock through Downtown Hilo. Because some segments of the trail are located on State DLNR property, we may need assistance from the State to get permits, rights of entry, etc., so that the process doesn't get bogged down in bureaucratic red tape.

Also, another exciting thing that is happening is that the county purchased two big chunks of ocean front land in North Kohala through which the federal Ala Kahakai trail runs. I just drafted a right of entry agreement for the National Park Service ("NPS") to enter these properties to establish and maintain the segments of the trail. The County will not have to maintain it. I can get information from the NPS, with whom I work very closely, regarding all of the segments of the national trail that are being maintained by NPS, if that will be useful to you.

Let me know if there is specific information you would like included for your report and I will try my best to obtain it for you. I hope you are doing well and enjoying your new position.

Aloha,  
Amy

William P. Kenoi  
Mayor



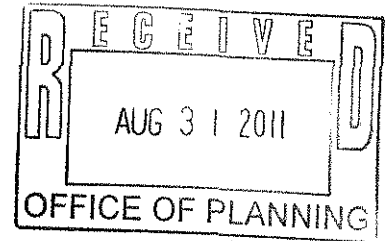
BJ Leithead Todd  
Director

Margaret K. Masunaga  
Deputy Director

## County of Hawai'i

### PLANNING DEPARTMENT

Aupuni Center • 101 Pauahi Street, Suite 3 • Hilo, Hawai'i 96720  
Phone (808) 961-8288 • Fax (808) 961-8742



August 29, 2011

Mr. Jesse K. Souki, Director Office of Planning  
Department of Business, Economic Development & Tourism  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawai'i 96813

Dear Mr. Souki:

**Subject: Act 233 (2011) – Statewide Greenways and Trails Program**

This is in response to your August 9, 2011 letter requesting input from the Planning Department regarding greenways and trails.

It is exciting to hear that Office of Planning, through Act 233, will spearhead a more collaborative effort to protect our open spaces through the establishment of a plan for statewide system of greenways and trails. This is an important and huge task that will require cooperation and partnership with various organizations and groups from each of the counties.

Attached please find two tables that provide you with a starting list of 1) existing greenways and trails and 2) proposed greenways and trails that have been identified on the Island of Hawaii.

Here are some comments and questions as you undertake this task:

1. Citizen voices during our islandwide community development planning efforts have repeatedly articulated that preservation of our natural resources are a priority concern. Green Infrastructure, now more than ever, is a major component of planning processes. It will be helpful to tie Greenways and Trails to this larger infrastructure field.  
Resources: [www.greeninfrastructure.net](http://www.greeninfrastructure.net), [www.gicinc.org](http://www.gicinc.org). See attached APA article.

Mr. Jesse K. Souki, Director Office of Planning  
Department of Business, Economic Development & Tourism  
August 29, 2011  
Page 2

2. Defining Greenways and Trails – this will be a challenge. What is included and why?  
Note: We did not include areas dedicated to only one mode of transportation, ie. bicycle paths and shorelines public access in our initial list.
3. How do Greenways and Trails serve as an important component and link to Destinations, Scenic Byways/Heritage Corridors, and Developed Urban Areas?
4. What are the triple bottom line benefits for Greenways and Trails?
5. In the production of an overarching Greenway and Trails Plan, Office of Planning could assist Counties by including funding for priority projects for each local jurisdiction. This would be a ‘big win’ that stimulates implementation of already identified projects that currently do not have funding.
6. Impediments to establishing a system of greenways and trails:
  - a. Lack of proactive government/community partnerships with initial funding
  - b. Private property or multiple ownerships
  - c. Maintenance issues
  - d. Funding

Please include these two County agencies in any future dialogue on greenways and trails:

Mr. Warren Lee, Director  
Department of Public Works  
101 Pauahi Street Suite 7  
Hilo, Hawai‘i 96720

Mr. Robert Fitzgerald, Director  
Department of Parks and Recreation  
101 Pauahi Street Suite 6  
Hilo, Hawai‘i 96720

Other valuable resource groups are: National Park Service, Na Ala Hele, and PATH. Also, Debbie Chang of Island Transitions, LLC has over 30 years of experience working on public accesses and trails and was instrumental in getting the Na Ale Hele Program, a Statewide Trail and Access System established.



Mr. Jesse K. Souki, Director Office of Planning  
Department of Business, Economic Development & Tourism  
August 29, 2011  
Page 3

Should you need assistance or have further questions, please contact Susan Gagorik of our office at (808) 961-8133.

Sincerely,

A handwritten signature in black ink, appearing to read "BJ Leithead Todd".

BJ LEITHEAD TODD  
Planning Director

SG:cs


P:\wpwin60\Greenways and Trails\Letters\OP Greenways and Trails 8\_29\_11.doc

Attachments:

APA Article --Green Infrastructure Planning: Recent Advantages and Applications  
Hawai'i County Greenways and Trails-Existing/Proposed

cc: Department of Public Works  
Department of Parks and Recreation



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## Green Infrastructure Planning: Recent Advances and Applications

By Ole M. Amundsen, Will Allen, and Kris Hoellen

To have a green, sustainable community, both economic development and land conservation are necessary. Achieving conservation outcomes that are truly meaningful while allowing for balanced growth requires planners to identify and protect an integrated system or "green infrastructure network" for their region. Nine years ago, in a *PAS Memo* article, Mark Benedict described a compelling vision for green infrastructure as an innovative planning framework (Benedict 2000). This article is an excellent introduction to green infrastructure, outlining the reasons why it is a useful planning framework and the steps planners can take to introduce green infrastructure to their communities. In the years since, green infrastructure planning has been applied to a variety of landscapes at different scales across the country.

Increasingly, "gray" infrastructure projects such as highways or natural gas pipelines are undertaken using the results from green infrastructure plans to help complete natural resource inventories, assist with siting decisions, and identify potential mitigation areas. This linkage of green and gray infrastructure has been encouraged by a combination of new regulatory approaches and funding priorities of federal agencies as well as an increased awareness that solutions to problems such as global climate change rest at the landscape level.

This article focuses on how green infrastructure has matured. It highlights the next stage of its evolution as a planning process confronting perennial problems, such as the linking of land conservation with development planning, and it looks at the role of green infrastructure in confronting emerging problems such as global climate change.

### What Is Green Infrastructure Planning?

Webster's dictionary defines "infrastructure" as "the substructure or underlying foundation on which the continuance and growth of a community or state depends." The very existence of our communities depends on the health of infrastructure, which must be viewed at a regional scale, above the individual parcel or project level. This message is clear when planners and the public think of "gray" infrastructure such as highways, utilities, and water lines. However, the definition holds equally true for ecological systems and green infrastructure, which function at a regional scale and provide crucial services such as clear air, drinking water, and local food, while promoting both our physical and mental health.

In recent years the term "green infrastructure" has been used to refer to everything from green roofs to more ecologically friendly stormwater management systems and large networks of natural areas (Wise 2008, Schwartz 2009). What these different usages have in common is a basic recognition that our built environment and our ecological environment are connected and interrelated. When the term is used at a landscape scale such as a watershed, municipality, or region, our definition of "green infrastructure" is an interconnected system of natural areas and open space that conserves ecosystem values, helps sustain clean air and water, and provides benefits to people and wildlife (Benedict and McMahon 2006).

#### Why Is Green Infrastructure Planning Important?

1. Supports working lands (farms and forest) and the landscapes for tourism
2. Prioritizes limited financial resources wisely
3. Helps a community or region visualize its future
4. Provides more information to decision makers to improve outcomes
5. May help with compliance with regulatory review and requirements
6. Provides predictability and a level playing field for both developers and conservationists
7. Supports ecosystem services that provide benefits to communities without additional financial investment
8. Makes communities more disaster resistant by using the landscape to protect communities from flooding and focusing development in appropriate areas
9. Supports biodiversity and facilitates ecotourism
10. Supports a high quality of life, attracting businesses and retirees.



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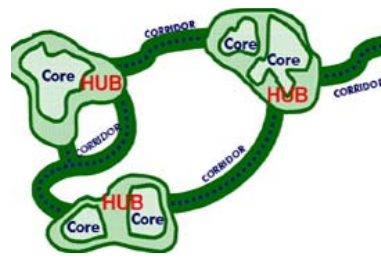
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5/4/2011



A conceptual model of a green infrastructure network.

Image courtesy of the Maryland Department of Natural Resources and The Conservation Fund



Green Infrastructure Transect

Image courtesy of The Conservation Fund and the Center for Applied Transect Studies

Green infrastructure systems are composed of core areas, hubs, and corridors. *Core areas* are the nucleus of the network and provide essential habitat for sensitive species. Buffering the core areas are *hubs*, which are the largest, least fragmented contiguous area of forest, wetlands, stream systems, or other native landscape type. *Corridors* maintain connectivity in the landscape and provide for animal movement, seed and pollen dispersal, and plant migration.

Green infrastructure is both a process and product. The planning framework of green infrastructure is a collaborative process that fosters a strategic approach to land conservation, engages a broad community of both conservation and development interests, and identifies crucial areas and corridors that benefit people and nature in the community. The product of the planning process may be a map, a report, or part of an existing planning effort such as a comprehensive plan or an open space plan. Green infrastructure plans may be led by municipal or county governments, or a nonprofit such as a land trust or private sector organization may serve as the convener of the planning process.

#### Basic Resources for Green Infrastructure Planning

The following books, articles, websites, and courses provide a basic orientation on why green infrastructure is important, how to start a green infrastructure planning process, and how to implement a green infrastructure network. Several green infrastructure training courses with AICP CM credit are offered each year through the Conservation Leadership Network.

Mark A. Benedict and Edward T. McMahon. 2006. *Green Infrastructure*. Washington DC: Island Press.

Mark A Benedict. "Green Infrastructure: A Strategic Approach to Land Conservation." *PAS Memo*, October 2000.

Conservation Leadership Network (courses on Green Infrastructure planning with AICP certificate maintenance credit available)  
[www.conservationfund.org/training\\_education](http://www.conservationfund.org/training_education)

Green Infrastructure Network  
[www.greeninfrastructure.net](http://www.greeninfrastructure.net)

The Conservation Fund Strategic Conservation Planning Program  
[www.conservationfund.org/strategic\\_conservation](http://www.conservationfund.org/strategic_conservation)

### The Evolution of Green Infrastructure Planning

Since the term *green infrastructure* was first proposed in the *PAS Memo* article in 2000, this planning framework has expanded from the East Coast across the country. Green infrastructure methods have been adapted to address both a wider range of ecological landscape types as well as a variety of scales. Over the past decade, green infrastructure planning has evolved from a novel planning practice concentrated in regions with strong regulatory planning traditions into a national planning method that is capturing the public's imagination. It has been accepted by local decision makers in a way that few planning tools have. The following examples illustrate how green infrastructure is used at different scales and has evolved.

#### Maryland

Maryland was one of the first states to apply green infrastructure planning with the release of the *Atlas of Greenways, Water Trails and Green Infrastructure* in 2000. Accompanying the atlas was a Green Infrastructure Assessment (GIA) of the state of Maryland, a detailed mapping exercise that highlighted 33 percent of the state as providing important green infrastructure.

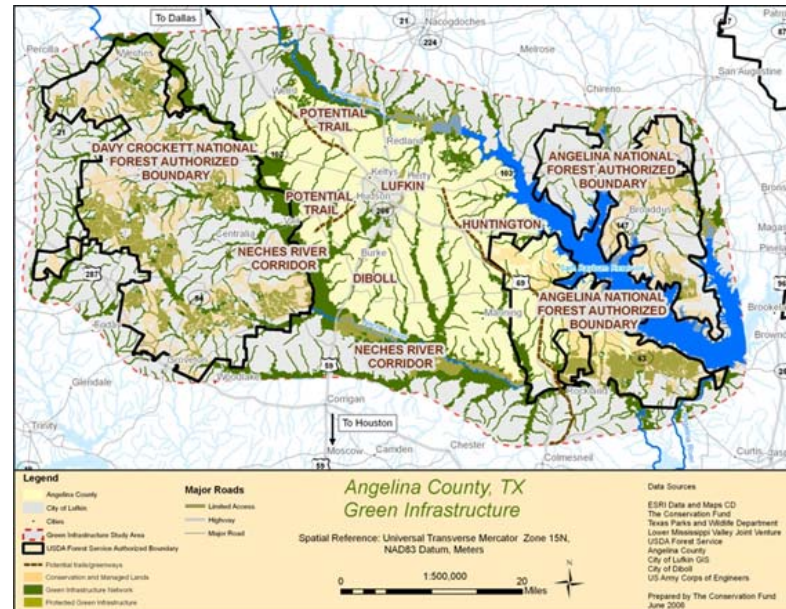
The real value of the GIA, however, was the field work that validated the locations of sensitive landscapes such as wetlands and the presence of important indicator species. State agencies used the GIA to help evaluate potential land acquisition opportunities and spend their limited funding wisely. Recently, the Maryland Department of Natural Resources has updated the plan and launched a user-friendly web version of the mapping effort called Maryland GreenPrint.

Maryland's green infrastructure planning efforts caught the attention of county government officials. Since the release of the state plan, nine counties have launched their own green infrastructure planning efforts. While the state plan is a useful starting point in providing a large-scale ecological framework, the county plans are able to be more refined and detailed, accommodating microhabitats and addressing the connection with local land use planning and zoning. In Prince George's County, the county green infrastructure plan serves as a functional master plan, a policy guide for development and planning decisions. The green infrastructure plan is actively used in the development review process, leading to meaningful changes in proposed subdivision design. As with the state green infrastructure plan, the county plan is used as a tool to help identify conservation lands and prioritize land conservation actions.

The county plans also provide the opportunity to update information on land use and the conservation opportunities remaining in a region. The movement of green infrastructure planning from a state plan template to the county level indicates how flexible, transferable, and scalable the planning methodology of green infrastructure has become.

#### Angelina County, Texas

Municipal officials and stakeholders needed a countywide green infrastructure plan to determine how to best bundle all of the county's resources together to offer both visitors and residents a rewarding experience. The *Angelina County Green Infrastructure Plan* proposes a series of canoe launch sites along the Neches River and highlights corridors for wildlife movement and passive recreation. It also proposes a conservation strategy for the region's forests that balances the ecological health and economic needs of the communities with those of the timber companies that have long been a part of East Texas history and development.



Angelina County Green Infrastructure Map

Image courtesy of The Conservation Fund

### El Paso, Texas

The City of El Paso, Texas, is home to Franklin Mountain State Park, which at 24,248 acres is one of the largest urban parks in the county. However, outside of the state park there is very little preserved land and few corridors providing linkages between the city and Franklin Mountain. With the assistance of Halff Associates, El Paso used a green infrastructure approach to complete its open space plan in 2007. Rather than focusing on individual parcels, the city looked at conserving the system of arroyos (streams and creeks) between Franklin Mountain and the city. An inventory of arroyos and their ownership revealed that roughly 30 percent of intact arroyos could connect the city to Franklin Mountain, and that one arroyo directly connected the mountain to the Rio Grande River.

Most importantly, the city saw its gray infrastructure — drainage channels, detention areas, levees, and utility corridors — as linkages to create a viable green infrastructure network. The plan sets modest goals to restore native vegetation and changes in management practices of gray infrastructure in order to harness the green infrastructure benefits. Focusing on the opportunities that existing gray infrastructure may furnish for parks and ecological systems makes good planning sense.

### Joint Gray–Green Infrastructure Planning

As the El Paso plan demonstrates, existing gray infrastructure can, with a little bit of restoration work, have conservation value. Increasingly, gray and green infrastructure projects are being planned as complementary systems. Gray infrastructure plans can incorporate the results from green infrastructure network designs to help complete natural resource inventories, assist with siting decisions, and identify potential mitigation areas.

The conservation value of gray infrastructure can be greatly improved by incorporating green infrastructure planning as part of the development process for major projects such as highways, pipelines, and water and sewer systems.

One of the main tenets of green infrastructure is to plan for environmentally sensitive areas before developing the gray infrastructure. This is not a new idea: Ian McHarg asserted that the "intrinsic landscape attributes" of a place should be the basis for land use planning, and his approach pioneered the use of map overlays and suitability analysis to assess natural processes (McHarg 1969). Kevin Lynch and Randall Arendt have advocated for similar planning processes at the parcel scale where sensitive lands are set aside and development is planned around those constraints.

#### Benefits of Using a Green Infrastructure Approach on a Gray Infrastructure Project

1. Efficient use of financial resources because of economies of scale of planning and mitigation
2. Leveraging federal, state, and local financial resources in support of mitigation and stewardship
3. Improved risk management and long-term predictability of regulatory outcomes
4. Useful long-term stewardship document
5. Development of solid relationship with the community, public, and regulatory agencies
6. Improved disaster resistance from project design that avoids floodprone or other sensitive areas

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#### 7. Passive policing of infrastructure with passive recreation use

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One of the new uses of green infrastructure plans is to help with planning gray infrastructure projects and mitigating the impact of those projects. When a large public works project, such as a highway or a natural gas line, affects a federally listed rare and endangered species or damages a wetland, those impacts must be compensated for through the protection or restoration of alternative habitat. In the past, this compensatory mitigation was required to be located adjacent to the project site or the community in which the project was taking place. However, this approach often resulted in the protection of marginal habitat that did not serve the best interests of the impacted species. Green infrastructure networks, which are developed at a watershed or ecosystem scale, provide an opportunity to find the best mitigation sites. They can also help to identify mitigation opportunities that at the same time advance community planning objectives outlined in comprehensive plans and other resource assessments. Today, green infrastructure planning is rewriting the process for how to undertake mitigation for gray infrastructure projects.

#### Transportation Planning and Green Infrastructure

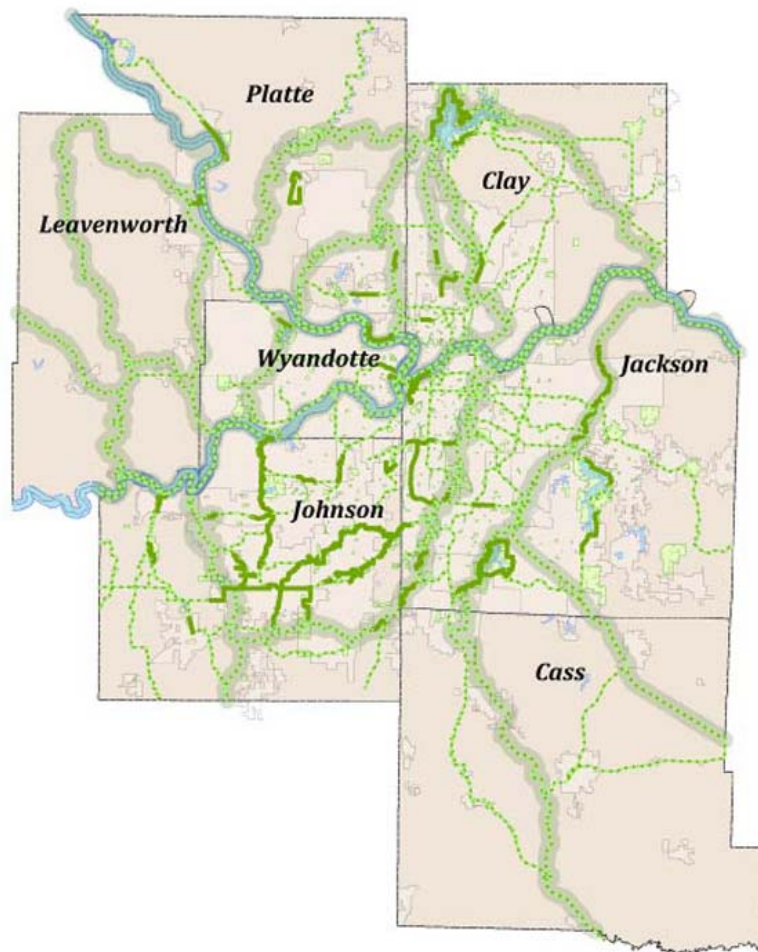
Green infrastructure plans are helping transportation agencies meet federal guidelines for consultation, use of natural resource inventories, and consideration of environmental mitigation as specified in section 6001 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation enacted in 2005. The regional vision proposed by a green infrastructure plan outlining hubs and corridors for the system is exactly the type of information that transportation agencies currently seek as part of their requirements to identify potential mitigation areas as part of the long-range planning process. In addition, the Federal Highway Administration (FHWA) advocates this approach as part of the Planning and Environmental Linkages initiative and as part of the Eco-Logical framework espousing the need for goal-driven, ecosystem-based mitigation.

The evolution of the use of green infrastructure planning with transportation planning can be seen with the MetroGreen Plan that was first released in 2001 by the Mid-America Regional Council (MARC), the regional planning organization for greater Kansas City. The MetroGreen Plan and the subsequent Natural Resource Inventory completed in 2004 produced useful information for identifying mitigation opportunities that offset the impacts of transportation projects.

This analysis was enhanced by MARC staff with the successful award of one of the first Eco-Logical grants from FHWA. The MetroGreen Plan prepared MARC staff to take advantage of the grant opportunity by providing data and information for the grant application. It also contributed to recommendations in a final report, the *Linking Environment and Transportation Action Plan*. The MetroGreen Plan was used beyond the usual confines of open space or park and recreational plans, making it a dynamic tool. The connection between the MetroGreen Plan and highway mitigation was a natural outgrowth of the scale of both types of projects and the common factor that both green and gray infrastructure planning rely on networks to achieve their respective goals.

The plan outlines a 1,144-mile network of public parks, with 16 corridors connecting seven counties in the Kansas City metropolitan area. The corridor network provides residents with bike paths linked to on-road bike lanes, forming an alternative transportation network. This regional planning effort spans two states with the established goal of conserving 42,800 acres by 2020 in priority corridors through a mixture of public and private conservation efforts and helping communities adopt stream buffer ordinances and ecologically friendly stormwater planning. To date, more than 17,000 acres have been protected.





The map produced by the MetroGreen Plan for the greater Kansas City region.

Image courtesy of MARC

In the context of a highway project, the Maryland State Highway Administration used the green infrastructure approach for proposed improvements to US Route 301 near Waldorf. They engaged the Maryland Department of Natural Resources, the U.S. Fish and Wildlife Service, and The Conservation Fund to help to identify green infrastructure conservation and restoration priorities that went well beyond the compensatory mitigation required by law. A series of community meetings obtained input on environmental stewardship priorities of public agencies and local residents. The public input was combined with ecological analysis to create a green infrastructure network including core areas and connecting corridors. This plan will assist an Interagency Work Group in selecting a portfolio of mitigation and environmental stewardship projects based on a selected road alignment and its associated community and environmental impacts.

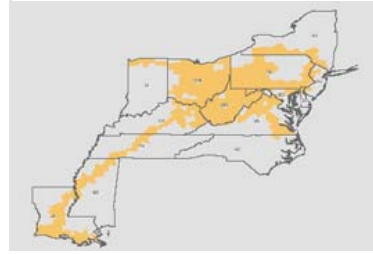
#### Energy Projects

As of February 2009 the Federal Energy Regulatory Commission estimates that there are close to 4,000 miles of new pipeline projects on the horizon nationwide. This marks one of the largest increases in the national pipeline network since the federal government began tracking these projects. Based on figures compiled by the American Petroleum Institute and the Association of Oil Pipe Lines, our current natural gas pipeline network, including both onshore and offshore lines, totals approximately 278,000 miles of transmission lines. As the El Paso Green Infrastructure Plan demonstrated, gray infrastructure networks can serve a valuable role within a green infrastructure network. Future use of green infrastructure planning is focused on expanding the ecological benefits of gray infrastructure networks as well as more accurately offsetting the impacts caused by new construction and maintenance activities.

As pipeline projects tend to cross state lines and impact many different ecoregions, a comprehensive green infrastructure process and plan is needed. Companies with projects that may have impacts on federally listed rare and endangered species typically approach the U.S. Fish and Wildlife Service (FWS) about undertaking a Habitat Conservation Plan (HCP). A HCP addresses how the company will both minimize and mitigate the impact of its activities upon listed species. A HCP can be focused on one species or multiple species. The scale of their study area can vary from an acre to more than 9.3 million acres. While HCPs have been around for many years, applying a green infrastructure approach to help identify potential mitigation areas on a multi-state basis had not been attempted until recently.

In 2005, NiSource, a natural gas distribution company, approached FWS to explore the feasibility of developing a multi-species habitat conservation plan for its 15,414 mile existing pipeline network that passes through 14 states, starting in Louisiana, reaching up to northern Indiana, and over to New York, and ending in North Carolina. In the course of routine pipeline and gas field operation and maintenance, NiSource undertakes over 90 annual consultations with FWS over potential impacts on well over 40 rare and endangered species. Both NiSource and FWS were interested in streamlining

The affected states and the FWS asked The Conservation Fund to design a green infrastructure network as a decision tool to identify potential mitigation sites. Unlike previous mitigation plans that would consider only sites near the actual pipeline, the green infrastructure network extends the mitigation analysis beyond NiSource's pipeline network to look for high-quality mitigation opportunities within adjacent counties, eco-regions, and watershed units in the 14-state area.



NiSource Transmission Network Map

Image courtesy of The Conservation Fund

Using a green infrastructure approach will help NiSource, FWS, and the states to integrate species habitat mitigation within the context of an interconnected network of lands and waterways, providing multiple benefits across the entire range of NiSource's natural gas pipeline transmission activities. In addition, this approach will also ensure that a consistent methodology is used to determine the selection of mitigation sites across the 14-state region.

It is hoped that state officials will use the green infrastructure network prepared for the NiSource project as a general tool in prioritizing conservation resources and assisting with their Wildlife Action Plans. For local and regional planners, the green infrastructure network may provide a large-scale assessment of conservation priorities and connecting corridors, helping with local land use decision making.

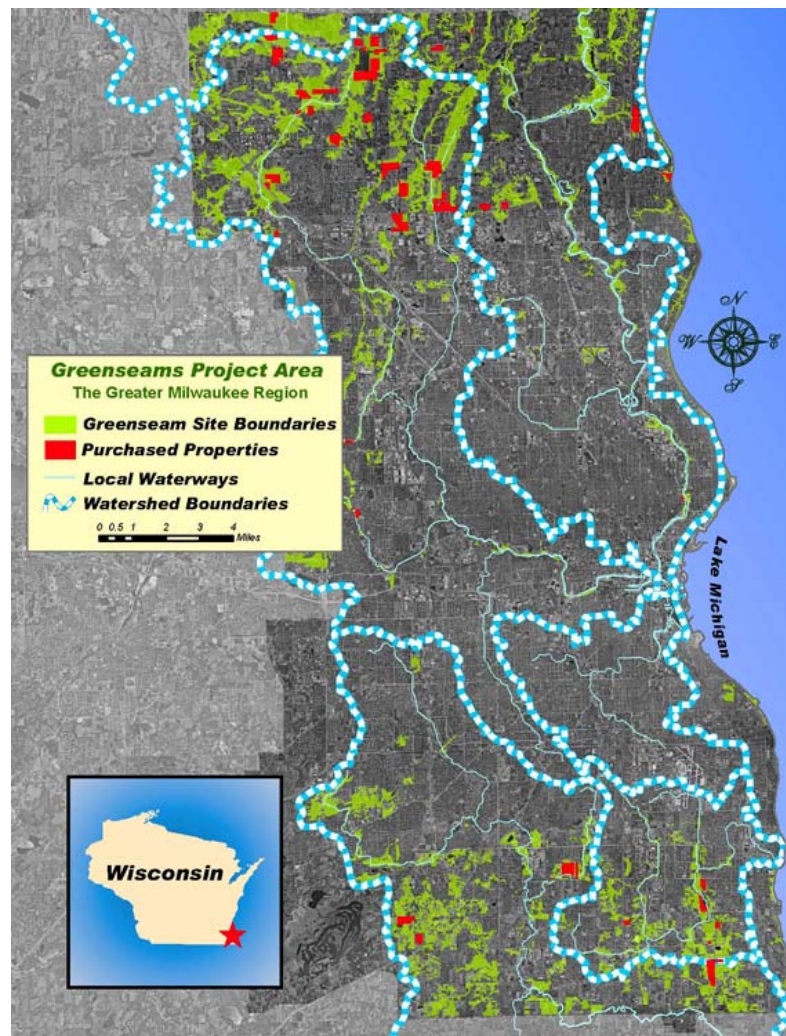
This is the first application of a green infrastructure network method as part of a multiple species HCP. State wildlife agencies can use the green infrastructure network as a mapping tool that complements their State Wildlife Action Plans and their Statewide Comprehensive Outdoor Recreation Plans. The landscape scale of pipeline projects lends itself to a green infrastructure approach because it crosses many political jurisdictions. This pairing of gray and green infrastructure in the realm of energy projects such as pipelines is a new approach that could begin to bridge the longstanding gap between planning for development and planning for conservation.

#### Water Resource Projects

At the municipal scale, gray infrastructure for water resources and stormwater management has been largely focused on replacing natural systems for dealing with flood events. The man-made engineering approach is frequently expensive, adversely affects the environment, and has at times failed to correct the problem of flooding. Increasingly, municipal sewer districts and flood control authorities are using green infrastructure planning to identify undeveloped lands that could provide significant flood prevention benefits if acquired and conserved.

The Greenseams Program was launched by the Milwaukee Metropolitan Sewerage District (MMSD) in 2002 as a green infrastructure approach to address the region's flooding and storm water management issues. Through voluntary transactions, the program purchases land in areas expected to have major growth in the next 20 years as well as open space along streams, shorelines, and wetlands. Each year MMSD authorizes between \$1.5 to \$5 million for land acquisition activities by Greenseams. MMSD hired The Conservation Fund to run the acquisition program.

Greenseams identifies and protects undeveloped, privately owned properties in three types of areas: hydric soils, river corridors, and mature forests. Greenseams planning efforts identified 29,000 acres in four counties and four watersheds as properties that need to be protected to achieve the program goal of reducing flood risk.



The Greenseams Project Area, Wisconsin.

Image courtesy of The Conservation Fund and Greenseams Program

The main focus of the green infrastructure plan has been conserving lands with hydric soils. A hydric soil is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions. These soils have an increased capacity

ty for water storage and have a history of flooding. If development occurs on lands with hydric soils, this capacity to hold floodwaters is reduced. To date, the Greenseams program has conserved over 1,221 acres with hydric soils.







Before and after photographs of farm fields preserved and converted to wetlands and open meadow through the Greenseams program.

Image courtesy of The Conservation Fund and Greenseams Program

The Greenseams team uses the migratory bird flyway corridor plans developed by The Nature Conservancy, the State of Wisconsin's natural areas maps, and the Southeast Wisconsin Greenways plan as guidance documents to identify property acquisitions. At the local level, they work with existing comprehensive plans, respecting their priorities and local land use classifications. Several Greenseams properties have been transferred to the parks and open space programs of local governments. In the City of Oak Creek, the Greenseams team works with local officials to implement the *Oak Creek Environmental Corridor Plan*. To date they have acquired 10 corridor properties totaling 186 acres.

The Greenseams program provides a range of public benefits. All land acquired by the program will remain undeveloped, protecting water quality and providing the ability to store rain and melting snow. Wetlands maintenance and restoration at these sites will provide further water storage. Greenseams also preserves wildlife habitat and creates hiking, bird watching, and other passive recreational opportunities for people living in the region.

#### New Funding Opportunities

Nationally, an additional development that will strengthen the link between green infrastructure and infrastructure for water resources is the potential use of State Revolving Funds (SRF) for land acquisition. A large portion of water-related gray infrastructure projects, such as municipal wastewater facilities are funded by SRF loans to local governments. In recent years, several states including New York, Massachusetts, and Ohio have experimented with making loans to land trusts and local governments for land acquisition to protect drinking water supplies, reduce nonpoint source pollution, and reduce stormwater runoff.

As part of the federal stimulus package, Congress has required 20 percent of SRF set-asides to be used for projects that address "green infrastructure, water or energy efficiency improvements and other environmental innovative activities" (Schwartz, 2009). As these are new funding categories for SRF, the Environmental Protection Agency (EPA) is encouraging states to conduct appropriate planning activity to guide the use of the funding. The EPA guidance memo's definition of green infrastructure ranges from small-scale structures such as green roofs and porous pavements to landscape-scale preservation and restoration. The inclusion of green infrastructure within SRF marks a new level of gray/green infrastructure coordination and collaboration, and signals the maturity of green infrastructure methodology.

### Emerging Issues

While green infrastructure has gained acceptance as a planning framework, it is flexible enough to address new planning challenges. Green infrastructure is at the forefront in the development and application of ecosystem services, a new method for planners to account for impacts and benefits of both development projects and conservation lands. Green infrastructure can help address a region's response to global climate change, the greatest ecological challenge of our time.

#### Ecosystem Services

Ecosystem services represent a new accounting strategy for tracking the impacts of development and the benefits of conservation. Natural systems provide benefits to people and communities. Often these benefits are not paid for and are thus underestimated by the public. For example, wetlands filter pollutants, improving water quality. If these wetlands are degraded, water quality suffers and the public may have to build a facility to improve water quality.

For many years ecosystem services were an abstract concept studied by economists. With green infrastructure planning the benefits and costs of using a green infrastructure template can be documented and then used by planners to guide development patterns. For example, the ecosystem service of filtering pollutants provided by many wetlands can be more effectively measured with a green infrastructure network. With the highest quality wetlands identified in the network, a model can be constructed to predict the cost savings of conserving the wetlands and itemizing the service that these wetlands provide to the surrounding community.

#### Types of Ecosystem Services Provided by Green Infrastructure Networks (Breunig, 2004)

1. Climate regulation
2. Freshwater supply and hydrologic regulation
3. Waste assimilation and water quality
4. Nutrient regulation
5. Soil retention and peat formation
6. Disturbance prevention
7. Pollination
8. Recreation and aesthetic benefits

As part of a green infrastructure plan for Cecil County, Maryland, The Conservation Fund undertook an analysis of the ecosystem services provided to county residents by the forest, wetlands, and aquatic systems. The assessment found that green infrastructure networks provided an estimated \$1.7 billion in ecosystem services per year. The regions highlighted by the green infrastructure

With the prospect of regional, national, and global carbon trading to stem global climate change, the use of ecosystem services will only increase. However, much work remains to make the measure of both the benefits and supplies of these services as accurate and meaningful as possible.

#### Responding to Climate Change

For this century the central challenge to the conservation community and planners is how to address the impacts of climate change. Many conservation models and planning efforts are snapshots in time, using existing information on the presence or absence of species or habitat types. Global climate change will force green infrastructure methods and models to become dynamic, taking into account both current environmental conditions as well as forecasting what the landscape could look like in 70 to 100 years.

Green infrastructure methods rely heavily on using maps of vegetation or landcover to classify a landscape into broad categories such as forests, grasslands, or wetlands. Climate change models over the past several years have started to produce predictive maps of future landcover types, providing planners with a broad view of shifts in landscape types. These models predict the need for migratory corridors to accommodate shifting vegetation patterns as well as animal species. The corridor networks outlined in green infrastructure frameworks will be useful in facilitating the mass migration of many animal and plant species, as the corridors have been sized using ecological parameters that tend to be broader than the requirements for designing corridors solely for human recreation, such as bike paths or rail-to-trail networks.

One constant lesson in ecology is that size matters. The large hub areas outlined by a green infrastructure plan are designed at a scale to be useful to accommodate changes in land cover from climate change. If a green infrastructure network in the Northeast outlined a series of forest hub areas of 25,000 acres for sugar maple forest, these same areas would still make useful forest hubs for new oak-hickory forest. As long as the underlying land ownership is managed in an ecologically sensitive way by either public or private landowners, a forested green infrastructure hub will serve the needs of whatever forest type emerges because of changes in climate.

Another use of green infrastructure plans will be in identifying prime areas to facilitate carbon sequestration through reforestation or restoration of native grassland species. Directing restoration efforts in the area of climate change will be as much about a landscape's ability to hold carbon as well as overall habitat quality for a particular species.

Both green infrastructure network design and climate change forecasts are best used at a regional scale, making the green infrastructure approach a relevant method to address climate change. Unfortunately, there are still many regions of the country without green infrastructure networks in place to help with the expected ecological shift and mass migration.

### Tips for Planners: How Green Infrastructure Can Augment Existing Plans

Planners work on many different types of plans. Green infrastructure can provide value to each type of plan, making it more meaningful and lasting and bringing tangible benefits to both planners and residents.

**Neighborhood or Area Plan:** A plan focused on a specific geography with detailed guidance on design and land use can benefit from a green infrastructure network by highlighting resources such as corridors created by neighborhood creeks, floodplains that require additional setbacks, or vacant wood lots that could form the basis of new urban wildlands. A green infrastructure network helps both residents and planners see the value in their local natural resources and how those assets relate to the surrounding region.

**Comprehensive Plan:** A comprehensive plan creates a vision for both the present and the future of the community in terms of land use and growth. A green infrastructure plan can add value by highlighting the critical ecological systems that need to remain intact to provide services to residents, create a sense of place, and focus development and conservation in appropriate areas. The coordination of zoning, overlay districts, and flood control regulations are all enhanced with the information provided by a green infrastructure network.

**Open Space or Parks and Recreation Plans:** These plans inventory and help manage local lands for passive and active recreation. A green infrastructure network provides a method for linking open spaces together as well as connecting those lands outward to regional and state parks. While rivers and streams can provide important recreational opportunities for the public, their treatment as core areas or corridors in a green infrastructure network articulates additional value for these areas that is often missed by open space plans. A green infrastructure approach can be used to fulfill many of the aspects of a traditional open space plan, provided that it is augmented with sections on active recreation.

**Strategic Plan:** Based on developing goals and objectives to guide an organization's approach to meet specific challenges with concrete actions, strategic plans have often lacked a view of the physical world. A green infrastructure network is a strategic approach for future land use, highlighting key areas where protection is necessary to ensure the vital health of a community. It can be used to illustrate the goals, objectives, and actions articulated in a strategic plan. Green infrastructure networks are action-oriented and compel public officials and residents to follow through on implementation steps.

**Transportation Improvement Program (TIP):** This is a formal planning document that outlines a state or region's major highway construction projects and balances anticipated construction costs against projected revenues. The use of green infrastructure networks can help transportation planners by outlining sensitive lands that should be avoided, highlighting areas for potential mitigation for project impacts, and bringing attention to corridors that could be used for recreation as part of an improvement package. As discussed earlier, green infrastructure plans can help with meeting federal guidelines.

**Capital Improvement Plans:** These plans finance multi-year outlays for fixed assets like facilities and equipment, linking the needs of diverse government departments such as a school district, a department of public works, and a parks department to an annual budget. A green infrastructure network is a region's approach to ensuring that future ecosystem services such as water filtration and flood control are provided by nature and not outlays of public capital. A green infrastructure network can help public officials with complex multi-year projects such as providing municipal services to a new part of a community.

After a solid decade of use, green infrastructure has proven to be a vibrant, flexible, and comprehensive planning methodology. Communities across the country have found the green infrastructure planning process helpful for imagining and building their future. The increasing use of green infrastructure planning in tandem with gray infrastructure projects promises to fulfill the long awaited goal of addressing both environmental issues and economic issues in a holistic manner.

While significant challenges such as global climate change will require modifications to aspects of green infrastructure planning, the basic green infrastructure method holds the key to addressing these vexing problems. Fundamentally, green infrastructure is about community, and understanding the web of interrelated features that make our communities able to support life of all kinds. This is an important tool for planners to learn how to use to its full potential.

#### About the Authors

Ole Amundsen III is the Strategic Conservation Planning Program manager for The Conservation Fund. William L. Allen III is the director of Strategic Conservation Planning for The Conservation Fund. Kris Hoellen is the director of the Conservation Leadership Network for The Conservation Fund.

#### Technical Resources

The Federal Highway Administration  
SAFETEA-LU Environmental Provisions and Related Information  
<http://environment.fhwa.dot.gov/strmlng/es2safetealu.asp>

The Eco-Logical framework  
[http://environment.fhwa.dot.gov/ecological/eco\\_entry.asp](http://environment.fhwa.dot.gov/ecological/eco_entry.asp)

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Environmental Law Institute, 2008. Planner's Guide to Wetland Buffers for Local Government, Washington, D.C.  
[www.elistore.org/reports\\_detail.asp?ID=11272](http://www.elistore.org/reports_detail.asp?ID=11272)

U.S. Fish and Wildlife Service  
Habitat Conservation Plans  
[www.fws.gov/Endangered/hcp/index.html](http://www.fws.gov/Endangered/hcp/index.html)

USDA Forest Service Climate Change Atlas  
Trees and Birds, see [www.nrs.fs.fed.us/atlas/](http://www.nrs.fs.fed.us/atlas/)

U.S. Global Change Research Program  
[www.usgcrp.gov/usgcrp/default.php](http://www.usgcrp.gov/usgcrp/default.php)

#### Case Studies

New Maryland Greenprint Plan  
[www.greenprint.maryland.gov/](http://www.greenprint.maryland.gov/)

Angelina County, Texas, Angelina County GI Plan  
[www.conservationfund.org/strategic\\_conservation/lufkin-angelina](http://www.conservationfund.org/strategic_conservation/lufkin-angelina)

El Paso, Texas, El Paso Open Space Plan  
[www.elpasotexas.gov/development\\_services/green\\_home.asp](http://www.elpasotexas.gov/development_services/green_home.asp)

Mid-America Regional Council MetroGreen Plan. <http://www.marc.org/metrogreen/>  
*Linking Environmental and Transportation Planning*  
<http://marcecologicalwiki.wetpaint.com/>

Milwaukee Metropolitan Sewer District: Greenseams  
<http://v3.mmsd.com/Greenseams.aspx>

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For guidance on EPA stimulus funds see <http://www.epa.gov/recovery/>

SRF Planning Memo. [www.epa.gov/water/eparecovery/docs/2009-0302\\_Final\\_ARRA\\_SRF\\_Guidance.pdf](http://www.epa.gov/water/eparecovery/docs/2009-0302_Final_ARRA_SRF_Guidance.pdf)

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[www.ferc.gov/industries/gas/gen-info/horizon-pipe.pdf](http://www.ferc.gov/industries/gas/gen-info/horizon-pipe.pdf)

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[www.planning.org/planning/2008/aug/greeninfrastructure.htm](http://www.planning.org/planning/2008/aug/greeninfrastructure.htm) (APA members only).



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Hawai'i County Greenways and Trails (Proposed)						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
1	Ala Kahakai National Historic Trail from Upolu Airport to the east boundary of Volcano Nat'l Park in Puna.	Unspecified, Various shoreline parcels within TMK Zones 5, 2 and 1	Unspecified; Possibly Council Districts 9, 1, 2, 4, 5	Unspecified: Possibly Federal, State, Private	Multiple ownership; unknown responsibilities for operations and maintenance	National Park Service has completed a Comprehensive Management Plan and EIS
2	Trail to the Sea, in Kohanaiki ahupuaa	Unspecified, Various in TMK 7-3-9:25, 28, 999	North Kona; Council District 8	None	private property, multiple owners, SHPD site designation, State may have right to claim	
3	Trail to Honokōhau	Unspecified, Various in TMK 7-4-8: 5, 47 por	North Kona; Council District 8	None	private property, multiple owners, SHPD site designation, State may have right to claim, crosses future mid-level road	
4	Various - research to identify historic trails in the coastal zone called for by Action 2.4.3b in the Puna CDP	Unspecified, various shoreline parcels within TMK zone 1.	Puna; Council Districts 3 & 5	To be determined	Funding to research state archives	
5	Kalapana to Pohoiki bike/ped trail	Various- along the Kalapana-Kapho Road (Hwy 137) in TMK Section 1-3	Puna; Council District 5	Unspecified: Possibly State, County or community organization	R-O-W acquisition & development resources	Hui O Puna Makai community group. Contact Mark Hinshaw at 965--2607, 965-7403 or baileysday@hawaiiantel.net.

6	Puna Trail	Various TMKs: 1-6-01	Puna	Na Ala Hele through MOA with WH Shipman	State has claimed ownership of trail but trail entirely surrounded by private land	
7	Volcano Trail	Various TMKs	Puna	Na Ala Hele was asked to help but NAH needed a community partner to help with maintenance, etc.	Trail is an old government road - State jurisdiction? Community partnership is the key. State will not open as a greenway or trail without stable community group(s).	
8	Judd Trail	Various TMKs: 7-7-04 ETC	North Kona; Council District 8	None	State has claimed ownership of trail but trail entirely surrounded by private land. SHPD site designation. Numerous owners surrounding. Lack of State resources to open and manage.	Numerous permits require trail preservation.
9	Old Cart Road and Old Government Roads from Keauhou to Ka`awaloa	Various TMKs: 7-8-10 to 8-1-11	North Kona; Council District 8 & South Kona District	Sections in Hokuli`a Development have management plans but not implemented. Rest unmanaged and unplanned.	State has claimed ownership. SHPD site designations. Multiple landowners. Lack of State resources to open and manage.	Numerous permits require trail preservation.

10	Big Island Country Club and Pu'u Lani Ranch	Various TMKs: 7-1-05, 7-1-06, 7-1-07	North Kona	None	Easements for trail system granted to County in 1993. No County agency assigned to plan, open & manage. Numerous permits & new landowners since original granting.	Trail system required in several permits.
11	Kohala Subdivision Easements in Puakea	Various TMKs: 5-6-01	North Kohala	None	Access easements granted to County in 2002. No County agency assigned to plan, open & manage.	Access easements required by subdivision approval
12	Trail into State Forest Reserve in Kaiwiki	2-6-18:04	South Hilo	State	Trail needs to be surveyed, marked. Limited State resources.	DLNR - DOFAW
13	Trail into State Forest Reserve in Makahanaloa	2-8-01:03	South Hilo	None	County currently reviewing subdivision application. If access required as condition of SUB approval, State would need to assist with implementation.	County Planning and DLNR-DOFAW. Still in planning stage.
14	Trail into State Forest Reserve in Kaiwiki	2-9-05:01 (Top of Kaiwiki Homestead Rd.)	South Hilo	None	County & State cooperation needed to post signs & mark a parking area & trail head.	County Public Works and DLNR-DOFAW
15	Trail into State Forest Reserve in Hakalau	2-9-05:01 (Top of Chin Chuck Rd.)	South Hilo	None	Signs to mark trail and parking & trail markers needed.	DLNR-DOFAW

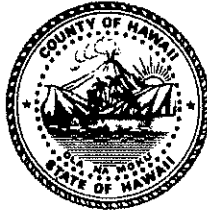
16	Trail into State Forest Reserve in Piha-Kahuku	3-3-01:04	North Hilo	None	County & State cooperation needed to survey road-in-limbo, mark a parking area & trail head, and post signs.	County Public Works and DLNR-DOFAW
17	Trail into State Forest Reserve in Hamakua Forest Reserve	4-3-10:01	Hamakua	None	County & State cooperation needed to survey road-in-limbo, mark a parking area & trail head, and post signs. If state forest reserve is leased, need to negotiate with state and lessee.	County Public Works and DLNR-DOFAW
18	Trail to Kaia`akea Point	3-4-3:14	North Hilo	None	Unencumbered state land. Need manager and management.	DLNR-Land Div.
19	Coastal Trails and Mauka-Makai Access Road in Haina	Various on TMK: 4-5-02	Hamakua	None	Numerous landowners. Required as permit opportunities present themselves.	County Planning
20	Coastal Trails from Haina to Waipi`o	Various on TMKs: 4-6-01 to 4-8-06	Hamakua	None	Numerous landowners. Required as permit opportunities present themselves. Coastal cliffs and existing land uses will affect trail network.	County Planning



					Numerous landowners. Required as permit opportunities present themselves. Coastal cliffs and existing land uses will affect trail network.	
21	Coastal Trails from Haina to Kahawaili`ili`I Gulch	Various on TMKs: 4-5-02 to 4-4-5	Hamakua	None		County Planning
	As of: August 28, 2011					

DOMINIC YAGONG  
*Chairperson*

K. ANGEL PILAGO  
*Vice Chair*

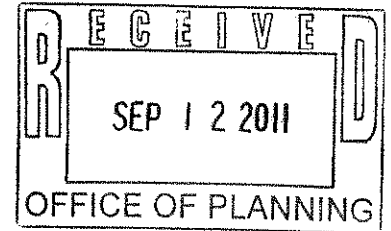


FRED BLAS  
BRENDA FORD  
PETE HOFFMANN  
DONALD IKEDA  
DENNIS "FRESH" ONISHI  
BRITTANY SMART  
J YOSHIMOTO

## HAWAI'I COUNTY COUNCIL

*County of Hawai'i  
Hawai'i County Building  
25 Aupuni Street  
Hilo, Hawai'i 96720*

August 26, 2011



Mr. Jesse K. Souki, Director  
Department of Business, Economic Development & Tourism  
Office of Planning  
P. O. Box 2359  
Honolulu, Hawai'i 96813

Ref. No. P-13374

Dear Mr. Souki,

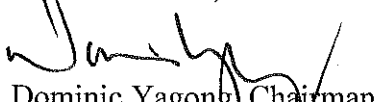
Thank you for your letter dated August 11, 2011 regarding Act 233(2011) that requires your office to put together a written report to the 2012 Legislature in facilitating the development of a statewide greenways and trails system.

The Hawai'i County Council is interested in participating in the effort to create greenways and trails within our county. The greenways and trails system for the County of Hawai'i is handled through the Department of Parks & Recreation. I recommend that you contact Mr. Robert Fitzgerald, who is the director of this department. He may be reached at (808) 961-8311.

Another organization you may contact is the Waimea Trails and Greenways, who currently has a trails project going on. Their contact person is Mr. Clem Lam, and his telephone number is (808) 885-4431.

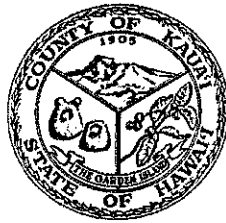
Please feel free to contact my office at (808) 961-8823 should you need further assistance.

Warmest Aloha,

  
Dominic Yagong, Chairman  
Hawai'i County Council

DY/la

**Bernard P. Carvalho, Jr.**  
Mayor

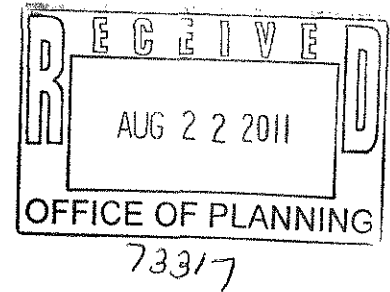


**Celia M. Mahikoa**  
Executive on Transportation

**Gary K. Heu**  
Managing Director

**TRANSPORTATION AGENCY**  
**County of Kaua'i, State of Hawai'i**  
3220 Ho'olako Street, Līhu'e, Hawai'i 96766  
TEL (808) 241-6410 FAX (808) 241-6417

August 17, 2011



TO: Jesse K. Souki, Director, Office of Planning  
FROM: Celia Mahikoa, Executive on Transportation *[Signature]*  
VIA: Jeremy K. Lee, Program Specialist III  
SUBJECT: **Assistance in Responding to Act 233 (2011) Requesting a Report on the Establishment of a Statewide Greenways and Trails Program**

Dear Director Souki:

The Transportation Agency hereby submits responses to the questions raised relating to the request for **Assistance in Responding to Act 233 (2011) Requesting a Report on the Establishment of a Statewide Greenways and Trails Program**, in the letter from your office dated, August 9, 2011.

1. The establishment of a system of greenways and trails for each county

We are all for the creation of a system of greenways and trails for our county. We are actively engaged with other County agencies that are facilitating the Complete Streets Initiative. We also maintain relationships with organizers of groups on Kaua'i like Kaua'i Path, who are working on creating multi-use paths around Kauai.

2. The areas in each county that may be appropriate to designate as a greenway or trail

I have attached a link to the Kauai Path organization <http://www.kauaipath.org/> which has a map of all the current and proposed locations of paths. We have many rivers and water ways that lead from mauka to makai, many of them undeveloped. I think that these are natural paths that can connect communities to natural resources. Our town core in Līhu'e would also be a great area to connect as a greenway. The Kōloa, Po'ipū, Princeville, Hanalei areas are our visitor areas on the island that do not have safe areas for walking and exercise. Access to greenways and trails that would offer the resident and visitors the ability to safely exercise and access the community would be a great asset. The Westside of the island (Kekaha-'Ele'ele) is another area that is ripe for the development of safe access to trails and community connectivity through paths or greenways.

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3. The various impediments to establishing a system of greenways and trails in each county

Funding

4. How the state might facilitate, encourage, or assist with the establishing greenways and trails statewide

Funding

5. Related to the above questions, please let us know if there is anyone else in the county who we should be seeking with regarding greenways and trails planning related to your county, and any stakeholder groups that you have been working with who may be able to provide us with information for preparing the Act 233 report

Kauai Path <http://www.kauaipath.org/>  
Westsidepath@yahoo.com  
<http://getfitkauai.com/>

Should you have further questions, please feel free to contact me.

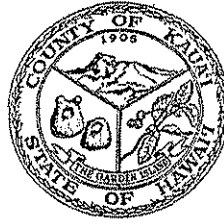
Sincerely,



Celia Mahikoa  
Executive on Transportation

cc: Gary Heu, Managing Director

**Bernard P. Carvalho, Jr.**  
Mayor



**Michael A. Dahilig**  
Interim Director of Planning

**Gary K. Heu**  
Managing Director

**Dee M. Crowell**  
Deputy Director of Planning

**PLANNING DEPARTMENT**  
**County of Kaua'i, State of Hawai'i**  
4444 Rice Street, Suite A-473, Lihue, Hawai'i 96766  
TEL (808) 241-4050 FAX (808) 241-6699

August 26, 2011

Department of Business, Economic Development & Tourism  
Office of Planning  
P O Box 2359  
Honolulu, HI 96804  
Attn: Jesse K. Souki

RE: Assistance in Responding to Act 233 (2011) Requesting a Report on the  
Establishment of a Statewide Greenways and Trails Program

Aloha Jesse,

On behalf of the County of Kaua'i and Interim Director of Planning, Mike Dahilig this letter responds to your inquiry dated August 9, 2011 regarding the above:

1. The establishment of a system of greenways and trails for each county;

The Planning Department, as the supporting agency for the County's Public Access, Open Space and Natural Resources Preservation Fund and its Commission, has facilitated the acquisition of the "Hodge Property" for Black Pot Park Expansion. This acquisition is located on Kaua'i's north shore and adjacent to the Hanalei Beach Park, providing additional shoreline property for the park's master plan and park expansion. This acquisition was the first utilization of this fund and was not possible without the partnership with other County divisions (Department of Parks and Recreation) and a non-profit organization (Kaua'i Public Land Trust now known as Hawai'i Public Land Trust).

This Commission has also introduced an amendment to its original ordinance to the Mayor for introduction to the County Council. The proposal would expand the Commission's role to also serve as an advocate for open space, and establish partnerships with other government entities, private owners, or non-profit organizations. The goal of the amendments is to gain greater authority ensuring lands or entitlements will benefit the public and are protected in perpetuity.

*An Equal Opportunity Employer*

The Ke Ala Hele Makalae a Bike/Pedestrian Path from Nawiliwili to Anahola which is a project that encompasses 5 phases to completion. 2 phases have been completed to date, phase I covering a 2.5 mile path through Lydgate Park, phase II, a 4.3 mile stretch from Lihi Boat Ramp in Kapaa to Ahihi Point at Kuna Bay or Donkey Beach. Phases III a 2 mile stretch from Lydgate Park to Lihi Boat Ramp, IV covers 4 miles from Ahukini to Lydgate Park, and V will be 3 miles from Kuna Bay to Anahola that will be coming on board to total a 16-mile coastal bike and pedestrian trail.

2. The areas in each county that may be appropriate to designate as a greenway or trail;

All of the Kauai County Beach Accesses and Trails currently registered with the Na Ala Hele Trail and Access Inventory and database.

3. The various impediments to establishing a system of greenways and trails in each county;

The greatest impediment to establishment of greenways and trails within Kauai County concerns personal injury liability. Currently, only private landowners and the state, to some degree, enjoy protections from lawsuits arising from injuries on trails. Trails are inherently dangerous, and given the rough terrain of the County, it remains difficult to hold ownership of these accesses and trails as long as the County remains exposed to liability. This liability issue certainly comes as a consequence of inexperienced tourists trekking across an environment they are not familiar with. The County would like to see the Legislature enact a liability exemption for county-owned trails and accesses.

4. From a county perspective on how the State might facilitate, encourage, or assist with establishing greenways and trails statewide.

The State could maintain a more robust Trail and Access Inventory and databases. Managing at a County level would assure information to be current and manageable for use within a State program.

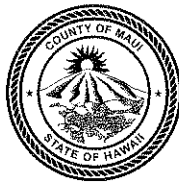
We look forward to the ongoing progress of Act 233 and that you keep us abreast on the potential future partnership of this program.

Sincerely,



Nani Sadora  
Open Space Planner

ALAN M. ARAKAWA  
Mayor



JO ANNE JOHNSON-WINER  
Director

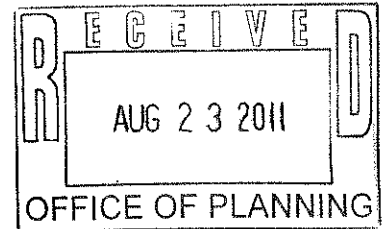
MARC I. TAKAMORI  
Deputy Director

Telephone (808) 270-7511

## DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI  
200 South High Street  
Wailuku, Hawaii, USA 96793-2155

August 17, 2011



73328

Director Jesse K. Souki  
Department of Business, Economic Development and Tourism  
Office of Planning  
P. O. Box 2359  
Honolulu, Hi. 96804

Re: Ltr. Of 8/9/11 Relating to Assistance in Responding to Act 233 (2011) Requesting a Program on the Establishment of a Statewide Greenways and Trails Program

Dear Director Souki-

In addition to the referrals that I have already made in regard to those agencies or individuals who might assist in the implementation portion of Act 233, I offer the following comments:

In my capacity as Director of Transportation and under the Charter of the County of Maui we are responsible for the planning and implementation of all modes of transportation in Maui County, including those in the air and those on water and land. In addition, we are charged with the planning and development of an efficient program to facilitate the rapid, safe and economical movement of people and goods in Maui County. Finally, we are to coordinate Maui County's transportation programs with other county departments and with agencies of the state and federal government.

Having restated what is in the County Charter, we do not presently have a specific directive that addresses greenways or trails within Maui County. We oftentimes are asked to comment on development plans that include such components and how they might impact our current delivery of services (Maui Bus routes/stops, paratransit, park and ride, human services transportation and air ambulance).

We also are asked to take into consideration regional planning issues that include public transportation facilities, related services and their locations. This allows us to promote the use of multi-modal transportation throughout Maui County and especially where it helps to facilitate improvements or enhancements to our existing services.

Director Jesse K. Souki

August 17, 2011

Page 2

Within that context, our department is in a position to suggest possible locations of such trails or greenways as they relate to transportation facilities and/or services. If you believe this would be of value and could hopefully help identify potential sites that would serve the needs of the public, we are happy to include this type of commentary when doing our reviews.

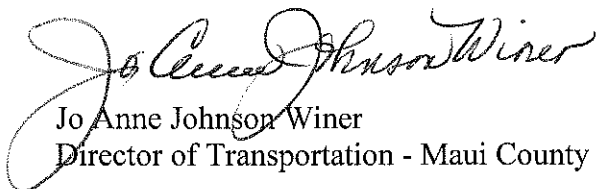
I would also mention that we have many bike riders who use the Maui Bus and we are having a more difficult time accommodating bicycles on bus carriers, since we can only handle two at a time. As more and more trail opportunities arise, I would imagine that this could become an area of concern as people use multi-modal transportation to traverse the islands.

To give a recent example of how we might comment, we met with developers on an 880 unit development in West Maui. It had no planned transit facilities and only had a system of walking and biking paths that connected the various housing centers, commercial centers, parks and open space in their development. It bordered an airport property and also DHHL land and could include a possible extension for rail and a bypass roadway.

My comments to the developer were that if biking and walking paths, air and possible rail transit were firmly incorporated into their development plan, we needed to have them address bus transit and its associated amenities in order to provide connectivity outside of their existing plan area. This is the type of contribution that I believe may be helpful to your efforts in the area of trail and greenway establishment.

Please let us know if such agency commentary (not only from our agency but all other agencies who are involved in granting land use changes or development rights) may be a useful tool in helping to implement the goals and objectives of Act 233. We already are taking into consideration the State's advocacy for "Complete Streets" planning and this might be one more way to educate the public on the importance of connectivity in creating healthy communities. Both State and County agencies should be advocating, wherever possible, or imposing conditions on development that address these issues.

Sincerely,



Jo Anne Johnson Winer  
Director of Transportation - Maui County



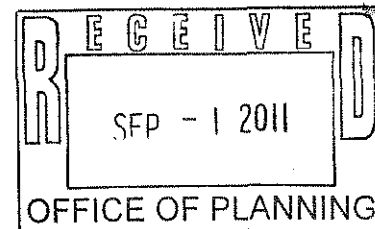
ALAN M. ARAKAWA  
Mayor



DAVID TAYLOR, P. E.  
Director

PAUL J. MEYER  
Deputy Director

**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2155  
www.mauiwater.org



73390

August 25, 2011

Mr. Jesse K. Souki, Director  
Department of Business, Economic Development & Tourism  
Office of Planning  
235 South Beretania Street, 6<sup>th</sup> floor  
Honolulu, Hawaii 96804

Re: Assistance in Responding to Act 233 (2011) Requesting a Report on the Establishment of a  
Statewide Greenways and Trails Program

Dear Mr. Souki,

Thank you for the opportunity to provide input on this report.

We suggest that the Office of Planning consult with the watershed partnerships in Maui County regarding establishment of trails in forested watershed areas. The East Maui Watershed Partnership, the West Maui Mountains Watershed Partnership, the Lanai Forest and Watershed Partnership and the East Molokai Watershed Partnership work to protect our watershed areas. Critical watershed areas are fenced and may not be appropriate for public access. The watershed partnerships could also provide information on mitigation measures to prevent the spread of invasive species from establishment and use of new trails.

We recommend that the trail/greenway general design provides an opportunity to display the richness of the state botanical diversity. This may include native plants that promote water conservation.

Should you have any questions, please contact our Water Resources Planning Division at (808) 244-8550.

Sincerely,

A handwritten signature in black ink, appearing to read "DTaylor".

David Taylor, Director  
emb

*"By Water All Things Find Life"*



## **APPENDIX D**

### **Transportation Enhancement Program Projects Funded by the State Department of Transportation**

Project Name	State Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
Waimea Trails and Greenway	HI 1996	1	Waimea	Hawaii	\$313,644.00	\$0	\$78,412	\$392,056
Queen Kaahumanu Hwy. shoulder improvements	HI 1996	1	Waikoloa	Hawaii	\$1,191,700.00	\$0	\$328,600	\$1,520,300
Akoni Pule Hwy. shoulder improvements	HI 1997	1	Kohala	Hawaii	\$1,641,600.00	\$0	\$517,400	\$2,159,000
Kanoelehua Ave. widening	HI 1997	1	Hilo	Hawaii	\$245,293.00	\$0	\$53,307	\$298,600
Alii Dr. improvements along Oneo Bay	HI 2000	1	Kona	Hawaii	\$240,000.00	\$0	\$60,000	\$300,000
Pearl Harbor bikepath extension	HI 1995	1	Pearl City	Honolulu	\$606,530.00	\$0	\$167,203	\$773,733
Pali Hwy. sidewalks	HI 1995	1	Honolulu	Honolulu	\$255,803.00	\$0	\$112,687	\$368,490
Kalaniana'ole Hwy. shoulder improvements	HI 1996	1	Honolulu	Honolulu	\$715,282.00	\$0	\$277,062	\$992,344
Kailua Rd. shoulder improvements	HI 1996	1	Kailua	Honolulu	\$1,736,750.00	\$0	\$665,209	\$2,401,959
Ala Wai Promenade, phase II	HI 1996	1	Honolulu	Honolulu	\$1,302,800.00	\$0	\$325,700	\$1,628,500
Waikiki Aquarium seawall, repair of pedestrian walkway	HI 1997	1	Honolulu	Honolulu	\$487,637.00	\$0	\$159,022	\$646,659
Kaelepulu Stream bikeway bridge	HI 1997	1	Kailua	Honolulu	\$792,875.00	\$0	\$501,983	\$1,294,858
Kuhio Hwy. shoulder improvements for bicycle route	HI 1997	1	Lihue	Kauai	\$437,321.00	\$0	\$128,179	\$565,500
Kaumualii Hwy. bikeway improvements	HI 1998	1	Koloa	Kauai	\$645,954.00	\$0	\$223,446	\$869,400
Lydgate Park bike & pedestrian path	HI 2000	1	Wailua	Kauai	\$2,959,760.00	\$0	\$108,840	\$3,068,600
Kapaa - Kealia bike & pedestrian path (design-build)	HI 2003	1	Kapaa	Kauai	\$5,000,000.00	\$0	\$0	\$5,000,000
Ahukini Landing to Lydgate Park bike & ped. path	HI 2004	1	Hanamaulu	Kauai	\$625,000.00	\$0	\$156,250	\$781,250
Lydgate Park bike & pedestrian path	HI 2010	1	Wailua	Kauai	\$0.00	\$3,772,391	\$0	\$3,772,391
Bikeways at various locations on Maui, phase I	HI 1992	1	Lahaina	Maui	\$703,721.00	\$0	\$175,930	\$879,651
Bikeways at various locations on Maui, phase II	HI 1994	1	Kahului	Maui	\$720,611.00	\$0	\$509,559	\$1,230,170
Kealia pond, Maui coastal wetlands boardwalk	HI 1995	1	Kihei	Maui	\$798,160.00	\$0	\$199,540	\$997,700
Airport bikeway	HI 1997	1	Kahului	Maui	\$342,767.00	\$0	\$85,691	\$428,458
Honoapiilani Hwy. & Kekaulike Ave. bikeway improve.	HI 1998	1	Lahaina, Kula	Maui	\$883,822.00	\$0	\$246,755	\$1,130,577
Kihei Bikeway at Piilani North	HI 2003	1	Kihei	Maui	\$2,082,052.00	\$0	\$656,299	\$2,738,351
Na Ala Hele statewide trail system	HI 1995	1		Statewide	\$100,000.00	\$0	\$25,000	\$125,000
Na Ala Hele statewide trail system	HI 1996	1		Statewide	\$200,000.00	\$0	\$50,000	\$250,000

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

## Your search returned:

States Searched: HI

Enhancement Categories: 1

Years: All Years

## \*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

**Project Name**      **State Year**      **TE Type\***      **City**      **County**      **Federal ARRA Funds**      **Local Funds**      **Total**

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 2

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State	Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
Waiahole scenic acquisition (78 acres)	HI	1995	3	Kaneohe	Honolulu	\$3,680,780.00	\$0	\$1,172,195	\$4,852,975
Kalaniana'ole Hwy. scenic acquisition (158 acres)	HI	1998	3	Honolulu	Honolulu	\$4,952,800.00	\$0	\$7,457,200	\$12,410,000

This table is best viewed when printed in landscape format

Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 3

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State Year	TE Type*	City	County	Federal ARRA Funds	Local Funds	Total
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This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 4

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State	Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
Elliot St. and Lagoon Dr. landscaping	HI	1995	5	Honolulu	Honolulu	\$436,076.00	\$0	\$244,629	\$680,705
Ft. Weaver Rd. landscaping	HI	1999	5	Ewa	Honolulu	\$1,539,860.00	\$0	\$474,592	\$2,014,452
Kalaniana'ole Hwy., Ka Iwi Scenic Shoreline	HI	2003	5	Honolulu	Honolulu	\$5,159,006.00	\$0	\$394,000	\$5,553,006
Lihue Gateway beautification, Ahukini Rd. & Kapule Hwy	HI	1998	5	Lihue	Kauai	\$6,253,916.00	\$0	\$1,826,128	\$8,080,044
Maunaloa Hwy. beautification	HI	1996	5	Kaunakakai	Maui	\$146,694.00	\$0	\$0	\$146,694
Kaahumanu Ave. landscaping, Lono Ave. to Hana Hwy	HI	1997	5	Wailuku	Maui	\$149,900.00	\$0	\$46,680	\$196,580
Hana Hwy. landscaping, Pulehu Rd. to Haleakala Hwy	HI	1997	5	Kahului	Maui	\$70,728.00	\$0	\$21,882	\$92,610
Hana Hwy. / Kaahumanu Ave. beautification	HI	1998	5	Kahului	Maui	\$116,000.00	\$0	\$33,000	\$149,000

This table is best viewed when printed in landscape format

Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 5

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.



Project Name	State	Year	TE Type*	City	County	Federal ARRA Funds	Local Funds	Total
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This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:  
States Searched: HI  
Enhancement Categories: 6  
Years: All Years

- \*TE Types:
- 1) Bicycle and pedestrian facilities
  - 2) Bicycle and pedestrian education and safety
  - 3) Scenic and historic acquisitions
  - 4) Scenic and historic highway programs and welcome centers
  - 5) Landscaping and scenic beautification
  - 6) Historic preservation
  - 7) Preservation of historic transportation facilities
  - 8) Rail corridor preservation and trail development
  - 9) Billboard removal
  - 10) Archaeological planning and research
  - 11) Highway runoff mitigation and wildlife crossings
  - 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State	Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
Ala Wai Canal, dredging and beautification	HI	1996	7	Honolulu	Honolulu	\$511,200.00	\$0	\$138,800	\$650,000

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 7

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State	Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
Leeward bikeway, Waipahu Depot Rd. to Luualalei	HI	1995	8	Ewa	Honolulu	\$3,211,591.00	\$0	\$1,262,392	\$4,473,983

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 8

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

**Project Name****State Year**  
**TE Type\*****City****County****Federal ARRA Local  
Funds Funds Funds Total**

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 9

Years: All Years

**\*TE Types:**

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

**Project Name**                      **State Year**                      **TE Type\***                      **City**                      **County**                      **Federal ARRA Funds**                      **Local Funds**                      **Total**

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:  
States Searched: HI  
Enhancement Categories: 10  
Years: All Years

- \*TE Types:
- 1) Bicycle and pedestrian facilities
  - 2) Bicycle and pedestrian education and safety
  - 3) Scenic and historic acquisitions
  - 4) Scenic and historic highway programs and welcome centers
  - 5) Landscaping and scenic beautification
  - 6) Historic preservation
  - 7) Preservation of historic transportation facilities
  - 8) Rail corridor preservation and trail development
  - 9) Billboard removal
  - 10) Archaeological planning and research
  - 11) Highway runoff mitigation and wildlife crossings
  - 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name	State	Year	TE Type*	City	County	Federal Funds	ARRA Funds	Local Funds	Total
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This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 11

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

Project Name      State Year      TE Type\*      City      County      Federal ARRA Funds      Local Funds      Total

This table is best viewed when printed in landscape format  
Within the state, the data is sorted first by county, then enhancement type, and then by year.

Your search returned:

States Searched: HI

Enhancement Categories: 12

Years: All Years

\*TE Types:

- 1) Bicycle and pedestrian facilities
- 2) Bicycle and pedestrian education and safety
- 3) Scenic and historic acquisitions
- 4) Scenic and historic highway programs and welcome centers
- 5) Landscaping and scenic beautification
- 6) Historic preservation
- 7) Preservation of historic transportation facilities
- 8) Rail corridor preservation and trail development
- 9) Billboard removal
- 10) Archaeological planning and research
- 11) Highway runoff mitigation and wildlife crossings
- 12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.

## **APPENDIX E**

### **Projects, Plans, and Activities Reported Related to Greenways and Trails in the State of Hawaii**



## Projects, Plans, and Activities Reported Related to Greenways and Trails in the State of Hawaii

Project Name	Lead Agency, Entity, Organization	Lead Contact	Lead Phone	Lead E-mail	Is this document available online?	Web Link to Document	Project Web Site	Consultant	Project Status?
Na Ala Hele, Hawaii Statewide Trail and Access Management Plan (1989)	Dep't of Land and Nat'l Resources, Div. of Forestry and Wildlife	Nelson Ayers	808-587-4175	Nelson.L.Ayers@hawaii.gov	No		<a href="http://hawaii Trails.ehawaii.gov/home.php">http://hawaii Trails.ehawaii.gov/home.php</a>	DesignLab	Plan Complete
Na Ala Hele Program Plan (1991)	Department of Land and Natural Resources, Div. of Forestry & Wildlife	Nelson Ayers	808-587-4175	Nelson.L.Ayers@hawaii.gov	Yes	<a href="http://hawaii.gov/dlnr/dofaw/nah/NAH-Program-Plan-1991.pdf">http://hawaii.gov/dlnr/dofaw/nah/NAH-Program-Plan-1991.pdf</a>	<a href="http://hawaii Trails.ehawaii.gov/home.php">http://hawaii Trails.ehawaii.gov/home.php</a>		Plan Complete, Implementation Phase
Na Ala Hele Program	DOFAW, DLNR	Nelson Ayers			Yes		<a href="http://hawaii Trails.ehawaii.gov/">http://hawaii Trails.ehawaii.gov/</a>		Database of Hawaii's Trails
State Comprehensive Outdoor Recreation Plan & 2008 Update	Department of Land and Natural Resources, Div. of State Parks	Martha Yent	587-0287	Martha.E.Yent@hawaii.gov	Yes	<a href="http://state.hi.us/dlnr/reports/scorp/SCORP08-1.pdf">http://state.hi.us/dlnr/reports/scorp/SCORP08-1.pdf</a>	<a href="http://hawaii.gov/dlnr/scorep">http://hawaii.gov/dlnr/scorep</a>	PBR Hawaii	Plan Complete, Implementation Phase
Bike Plan Hawaii 2003	Department of Transportation		808-692-7678		Yes	<a href="http://hawaii.gov/dot/highways/Bike/bikeplan/index.htm#bikeplan">http://hawaii.gov/dot/highways/Bike/bikeplan/index.htm#bikeplan</a>	<a href="http://hawaii.gov/dot/highways/Bike/bikeplan">http://hawaii.gov/dot/highways/Bike/bikeplan</a>		Plan Complete
Statewide Pedestrian Master Plan	Department of Transportation	Rachel Roper	(808) 587-6395	Rachel.LA.Roper@hawaii.gov	No		<a href="http://www.hawaiipedplan.com/Home.aspx">http://www.hawaiipedplan.com/Home.aspx</a>	CH2M HILL	Planning Phase, Drafting Phase
Nawiliwili to Anahola Bike/Pedestrian Path Draft EA	County of Kauai	Roxanne MacDougall	808-822-5798	rmacd@aloha.net	Yes	<a href="http://www.kauai.gov/LinkClick.aspx?fileticket=6T5kr7E4pFE%3d&amp;tabid=435&amp;mid=1569">http://www.kauai.gov/LinkClick.aspx?fileticket=6T5kr7E4pFE%3d&amp;tabid=435&amp;mid=1569</a>	<a href="http://www.kauai.gov/Government/Departments/PublicWorks/BuildingDivision/Projects/BikePathProject/tabid/335/Default.aspx">http://www.kauai.gov/Government/Departments/PublicWorks/BuildingDivision/Projects/BikePathProject/tabid/335/Default.aspx</a>	Merle D. Grimes, LLC	Implementation Phase, Project proposed in 1994 State of Hawaii Master Plan – Bike Plan Hawaii
Diamond Head Linear Park	DLNR State Parks	Yara Lamadrid-Rose	587-0294	Yara.L.Lamadrid-Rose@hawaii.gov	No			Mitsunaga & Associates - PBR HAWAII	Implementation Phase, Contractor selected
Queens' Lei	PATH - Peoples Advocacy for Trails Hawaii	Laura Dierenfield	808-936-4653	laura@pathhawaii.org	Yes	<a href="http://www.pathhawaii.org/wp-content/uploads/2011/08/Queen-s-Lei-Pathway.pdf">http://www.pathhawaii.org/wp-content/uploads/2011/08/Queen-s-Lei-Pathway.pdf</a>	<a href="http://www.pathhawaii.org">www.pathhawaii.org</a>	PATH (Non-Profit)	Planning Phase, Conceptual
Grand Alii	PATH - Peoples Advocacy for Trails Hawaii	Laura Dierenfield	808-936-4653	laura@pathhawaii.org	Yes	<a href="http://www.pathhawaii.org/wp-content/uploads/2010/06/Grand-Ali-i-6-7.pdf">http://www.pathhawaii.org/wp-content/uploads/2010/06/Grand-Ali-i-6-7.pdf</a>	<a href="http://www.pathhawaii.org">www.pathhawaii.org</a>	PATH (Non-Profit)	Planning Phase, Conceptual
Kona Urban Trails Network	PATH - Peoples Advocacy for Trails Hawaii	Laura Dierenfield	808-936-4653	laura@pathhawaii.org	Yes	<a href="http://www.pathhawaii.org/wp-content/uploads/2010/06/Kona-Urban-6-7.pdf">http://www.pathhawaii.org/wp-content/uploads/2010/06/Kona-Urban-6-7.pdf</a>	<a href="http://www.pathhawaii.org">www.pathhawaii.org</a>	PATH (Non-Profit)	Planning Phase, Con
Waimea Trail and Greenway	Waimea Trail & Greenway Committee / PATH	Clem Lam, Chairperson or Laura Dierenfield, PATH	808-936-4653	laura@pathhawaii.org	Yes	<a href="http://waimeatrails.org/">http://waimeatrails.org/</a>	<a href="http://waimeatrails.org/">http://waimeatrails.org/</a>	EA = Kimura International	Planning Phase, Implementation Phase, Environmental Review
Ala Kahakai National Historic Trail	National Park Service	Aric Arakaki	808.326.6012 x 101	aric_arakaki@nps.gov	Yes	<a href="http://www.nps.gov/alka">www.nps.gov/alka</a>	<a href="http://www.nps.gov/alka">www.nps.gov/alka</a>	none	Implementation Phase

## Projects, Plans, and Activities Reported Related to Greenways and Trails in the State of Hawaii

Project Name	Lead Agency, Entity, Organization	Lead Contact	Lead Phone	Lead E-mail	Is this document available online?	Web Link to Document	Project Web Site	Consultant	Project Status?
Kapaa-Kealia Bike & Pedestrian Path Final EA	Kauai Dept of Public Works				Yes	<a href="http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2000s/2003-09-23-KA-FEA-KAPAA-KEALIA-BIKE-PEDESTRIAN-PATH.pdf">http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2000s/2003-09-23-KA-FEA-KAPAA-KEALIA-BIKE-PEDESTRIAN-PATH.pdf</a>		SSFM International, Inc.	Implementation Phase
Ke Ala Kahawai o Waimea Trails and Greenways	County of Hawai'i Department of Parks and Recreation	James Komata, Park Planner	(808) 961-8311		Yes	<a href="http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Hawaii/2010s/2011-01-23-HA-DEA-Waimea-Trails-Greenways.pdf">http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Hawaii/2010s/2011-01-23-HA-DEA-Waimea-Trails-Greenways.pdf</a>	<a href="http://waimeatrails.org/">http://waimeatrails.org/</a>	Leslie Kurisaki (Kimura International)	Planning Phase
Waimea Trail and Greenway	Waimea Trail & Greenway Committee / PATH	Clem Lam, Chairperson or Laura Dierenfield, PATH	808-936-4653	<a href="mailto:laura@pathhawaii.org">laura@pathhawaii.org</a>	Yes	<a href="http://waimeatrails.org/">http://waimeatrails.org/</a>	<a href="http://waimeatrails.org/">http://waimeatrails.org/</a>	Kimura International	Planning Phase, Implementation Phase, Environmental Review
Haleakala Trail	Public Access Trails Hawaii	David Brown	808 244-5721	<a href="mailto:davidbrown@hawaiiantel.net">davidbrown@hawaiiantel.net</a>	Yes	<a href="http://PATHMAUI.org">PATHMAUI.org</a>	<a href="http://PATHMAUI.org">PATHMAUI.org</a>	Tom Pierce	
West Side Path Alternatives Report	Kauai Path, Inc.	Randy Blake, M.D.	808 635-8823	<a href="mailto:oneislandguy@mac.com">oneislandguy@mac.com</a>	No		<a href="http://www.kauaipath.org/west">www.kauaipath.org/west</a>	Joy Osterhout, MS, CHES	Planning Phase
North Shore Path Alternatives Report	Kauai Path, Inc.	Randy Blake, M.D.	808 635-8823	<a href="mailto:oneislandguy@mac.com">oneislandguy@mac.com</a>	No		<a href="http://www.kauaipath.org/north">http://www.kauaipath.org/north</a>	Landmark Consulting, LLC	Planning Phase
Friends of Kalalau Trail	Kauai Path, Inc.	Mark Hubbard	808 639-4746	<a href="mailto:markhubbard@hawaiiantel.net">markhubbard@hawaiiantel.net</a>	No		<a href="http://www.kauaipath.org/north">http://www.kauaipath.org/north</a>	Mel Drisko	Implementation Phase
Northshore Greenway	Maui Nutrition and Physical Fitness Coalition	Dave DeLeon	808-243-8585	<a href="mailto:gad@ramaui.com">gad@ramaui.com</a>	No				Implementation Phase, 3/4 complete
Kihei Greenway	Maui County	David Goode	808-270-7845	<a href="mailto:david.goode@co.maui.hi.us">david.goode@co.maui.hi.us</a>					Implementation Phase, first phase under construction
Enhancements on the Puna Trail	E Mau Na Ala Hele	Deborah Chang	808-776-1516	<a href="mailto:hkulaiwi@yahoo.com">hkulaiwi@yahoo.com</a>	No		<a href="http://emaunaalalehe.org">emaunaalalehe.org</a>		Permit applications
Malama I Na Wahi Pana o Kohala	Native Hawaiian Researchers Ohana	Fred Cachola	271-0743	<a href="mailto:fredcachola@aol.com">fredcachola@aol.com</a>	No	n/a	n/a	n/a	Implementation Phase
North Kohala CDP Public Access Plan	North Kohala Community Access Group	Ted Matsuda	889-5801	<a href="mailto:ted@hialoha.net">ted@hialoha.net</a>	Yes				Implementation Phase
North Kohala Coastal Preservation	Kamakani O Kohala Ohana -- Kako'o	Toni Withington	884-5476	<a href="mailto:sundownertoni@yahoo.com">sundownertoni@yahoo.com</a>	No		<a href="http://kamakani.org">kamakani.org</a>		Implementation Phase

## **APPENDIX F**

### **County of Hawaii Greenways and Trails Projects, Existing and Proposed**

<b>Hawai'i County Greenways and Trails (Existing)</b>						
	Criteria used for placing on Existing List; Identified in a CDP, Planning Document; CIP. May not be funded					As of: 8/28/11
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
1	Puna Trail: Action 3.5.3.b.6) & 4.5.3.e. calling for the development of a hiking and coastal trail and camp system to provide for pedesrian recreational opportunities.	Various: TMK zone 1	Puna District/ Council Districts 3 & 5	Unspecified	funding for research, planning, acquisition and development	
2	Old Volcano Trail - PCDP Action 3.5.3.d.2) & 4.5.3.e	TMK Sections 1-1, 1-6, 1-9 & 9-9	Puna & Ka'u/Council Districts 3 & 6	Unspecified, Probably County	Planning & development funding	
3	Railroad Trail - PCDP Actions 3.5.3.d.3) & 4) & 4.5.3.e.	TMK Sections 1-4, 1-5, 1-6 & 2-1	Puna & S. Hilo/Council Districts 3 & 5	Unspecified, Probably County	Planning & development funding	
4	Old Government Road - PCDP Action 3.5.3.d.5) & 4.5.3.e. and includes the 3.6 mile long Puna Trail Historic Corridor between Kapoho & Hawaiian Shores	TMK Sections 1-4, 1-5, 1-6 & 2-1	Puna & S. Hilo/Council Districts 3 & 5	Unspecified, State or County	Planning & development funding	
5	Nanawale Forest Reserve Trails	1-4-03:008 & 017	Puna/Council District 5	State or County	Planning & development funding	
6	Hilo Bayfront Trails	2-3-4:1 to 2-1-7:11 to 2-2-31:15	South Hilo/Council District 2, 4	requires Community/gov't - partnership	Monies for acquisition and implementation	Community
7	Wailuku Riverwalk	2-3-4:	South Hilo/2 Ikeda	None	Lack of a lead community partner to champion	Community
8	Waimea Trails and Greenway project.	Unspecified, Various in TMK Zone 6-- possibly in study area of TMKs 6-5-003:005,004,008,004; 6-6-1:038,006	South Kohala; Council District 9	Unspecified	Multiple ownership, unspecified for operations and maintenance responsibilities	

<b>Hawai'i County Greenways and Trails (Proposed)</b>						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
1	<a href="#">Ala Kahakai National Historic Trail from Upolu Airport to the east boundary of Volcano Nat'l Park in Puna.</a>	Unspecified, Various shoreline parcels within TMK Zones 5, 2 and 1	Unspecified; Possibly Council Districts 9, 1, 2, 4, 5	Unspecified: Possibly Federal, State, Private	Multiple ownership; unknown responsibilities for operations and maintenance	National Park Service has completed a Comprehensive Management Plan and EIS
2	<a href="#">Trail to the Sea, in Kohanaiki ahupuaa</a>	Unspecified, Various in TMK 7-3-9:25, 28, 999	North Kona; Council District 8	None	private property, multiple owners, SHPD site designation, State may have right to claim	
3	<a href="#">Trail to Honokōhau</a>	Unspecified, Various in TMK 7-4-8: 5, 47 por	North Kona; Council District 8	None	private property, multiple owners, SHPD site designation, State may have right to claim, crosses future mid-level road	
4	<a href="#">Various - research to identify historic trails in the coastal zone called for by Action 2.4.3b in the Puna CDP</a>	Unspecified, various shoreline parcels within TMK zone 1.	Puna; Council Districts 3 & 5	To be determined	Funding to research state archives	
5	<a href="#">Kalapana to Pohoiki bike/ped trail</a>	Various- along the Kalapana-Kapho Road (Hwy 137) in TMK Section 1-3	Puna; Council District 5	Unspecified: Possibly State, County or community organization	R-O-W acquisition & development resources	Hui O Puna Makai community group. Contact Mark Hinshaw at 965--2607, 965-7403 or <a href="mailto:baileysday@hawaiiantel.net">baileysday@hawaiiantel.net</a> .

### Hawai'i County Greenways and Trails (Proposed)

Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan

#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
6	<a href="#">Puna Trail</a>	Various TMKs: 1-6-01	Puna	Na Ala Hele through MOA with WH Shipman	State has claimed ownership of trail but trail entirely surrounded by private land	
7	<a href="#">Volcano Trail</a>	Various TMKs	Puna	Na Ala Hele was asked to help but NAH needed a community partner to help with maintenance, etc.	Trail is an old government road - State jurisdiction? Community partnership is the key. State will not open as a greenway or trail without stable community group(s).	
8	<a href="#">Judd Trail</a>	Various TMKs: 7-7-04 ETC	North Kona; Council District 8	None	State has claimed ownership of trail but trail entirely surrounded by private land. SHPD site designation. Numerous owners surrounding. Lack of State resources to open and manage.	Numerous permits require trail preservation.

<b>Hawai'i County Greenways and Trails (Proposed)</b>						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
9	Old Cart Road and Old Government Roads from Keauhou to Ka`awaloa	Various TMKs: 7-8-10 to 8-1-11	North Kona; Council District 8 & South Kona District	Sections in Hokuli`a Developmenet have management plans but not implemented. Rest unmanaged and unplanned.	State has claimed ownership. SHPD site designations. Multiple landowners. Lack of State resources to open and manage.	Numerous permits require trail preservation.
10	Big Island Country Club and Pu`u Lani Ranch	Various TMKs: 7-1-05, 7-1-06, 7-1-07	North Kona	None	Easements for trail system granted to County in 1993. No County agency assigned to plan, open & manage. Numerous permits & new landowners since original granting.	Trail system required in several permits.
11	Kohala Subdivision Easements in Puakea	Various TMKs: 5-6-01	North Kohala	None	Access easements granted to County in 2002. No County agency assigned to plan, open & manage.	Access easements required by subdivision approval
12	Trail into State Forest Reserve in Kaiwiki	2-6-18:04	South Hilo	State	Trail needs to be surveyed, marked. Limited State resources.	DLNR - DOFAW

<b>Hawai'i County Greenways and Trails (Proposed)</b>						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
13	<a href="#">Trail into State Forest Reserve in Makahanaloa</a>	2-8-01:03	South Hilo	None	County currently reviewing subdivision application. If access required as condition of SUB approval, State would need to assist with implementation.	County Planning and DLNR-DOFAW. Still in planning stage.
14	<a href="#">Trail into State Forest Reserve in Kaiwiki</a>	2-9-05:01 (Top of Kaiwiki Homestead Rd.)	South Hilo	None	County & State cooperation needed to post signs & mark a parking area & trail head.	County Public Works and DLNR-DOFAW
15	<a href="#">Trail into State Forest Reserve in Hakalau</a>	2-9-05:01 (Top of Chin Chuck Rd.)	South Hilo	None	Signs to mark trail and parking & trail markers needed.	DLNR-DOFAW
16	<a href="#">Trail into State Forest Reserve in Piha-Kahuku</a>	3-3-01:04	North Hilo	None	County & State cooperation needed to survey road-in-limbo, mark a parking area & trail head, and post signs.	County Public Works and DLNR-DOFAW



<b>Hawai'i County Greenways and Trails (Proposed)</b>						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
17	Trail into State Forest Reserve in Hamakua Forest Reserve	4-3-10:01	Hamakua	None	County & State cooperation needed to survey road-in-limbo, mark a parking area & trail head, and post signs. If state forest reserve is leased, need to negotiate with state and lessee.	County Public Works and DLNR-DOFAW
18	Trail to Kaia`akea Point	3-4-3:14	North Hilo	None	Unencumbered state land. Need manager and management.	DLNR-Land Div.
19	Coastal Trails and Mauka-Makai Access Road in Haina	Various on TMK: 4-5-02	Hamakua	None	Numerous landowners. Required as permit opportunities present themselves.	County Planning
20	Coastal Trails from Haina to Waipi`o	Various on TMKs: 4-6-01 to 4-8-06	Hamakua	None	Numerous landowners. Required as permit opportunities present themselves. Coastal cliffs and existing land uses will affect trail network.	County Planning

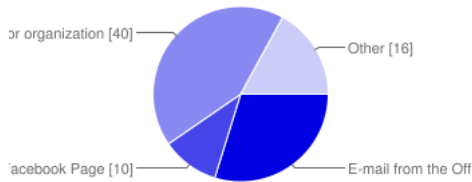
Hawai'i County Greenways and Trails (Proposed)						
Criteria for inclusion on Proposed list: Suggested through a Community Planning Process; not formally adopted or mentioned in a plan						
#	Name of Greenway or Trail	TMK	Judicial/Council District	Managed by: Federal, County, State, Private, Community, etc	Impediments to Establishing	Organizing Entity
21	Coastal Trails from Haina to Kahawaili`ili`i Gulch	Various on TMKs: 4-5-02 to 4-4-5	Hamakua	None	Numerous landowners. Required as permit opportunities present themselves. Coastal cliffs and existing land uses will affect trail network.	County Planning
	As of: August 28, 2011					

## **APPENDIX G**

### **Summary Results of OP Greenways Web Poll**

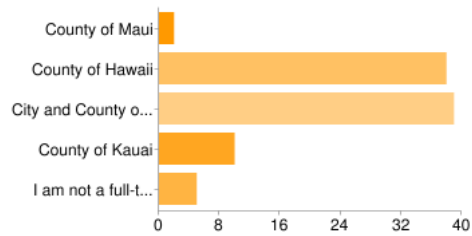
## Summary [See complete responses](#)

### How did you find this survey?



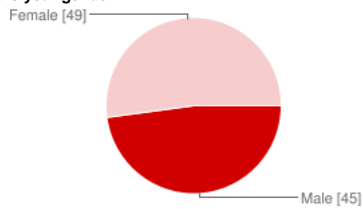
E-mail from the Office of Planning	28	30%
Office of Planning's Facebook Page	10	11%
From a friend or organization	40	43%
Other	16	17%

### Please tell us where you live:



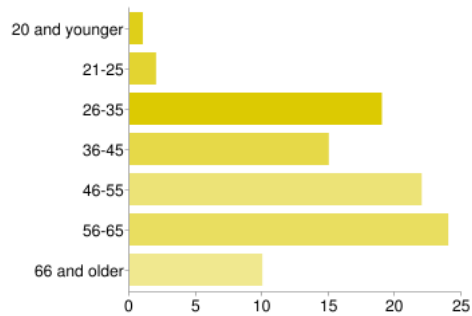
County of Maui	2	2%
County of Hawaii	38	40%
City and County of Honolulu	39	41%
County of Kauai	10	11%
I am not a full-time Hawaii resident (visitor, part-time resident, etc.)	5	5%

### What is your gender:



Male	45	48%
Female	49	52%

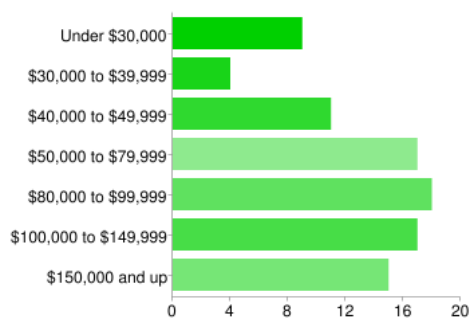
### What age group are you in:



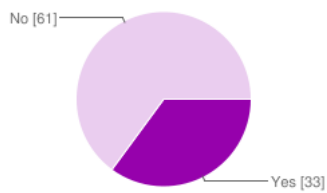
20 and younger	1	1%
21-25	2	2%
26-35	19	20%
36-45	15	16%
46-55	22	23%
56-65	24	26%
66 and older	10	11%

### What is your annual combined household income?

Under \$30,000	9	10%
\$30,000 to \$39,999	4	4%
\$40,000 to \$49,999	11	12%
\$50,000 to \$79,999	17	18%
\$80,000 to \$99,999	18	19%
\$100,000 to \$149,999	17	18%
\$150,000 and up	15	16%

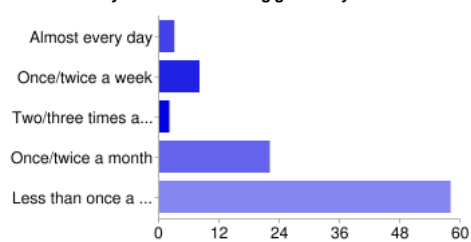


Do you belong to an organization or club that advocates for greenways and trails?



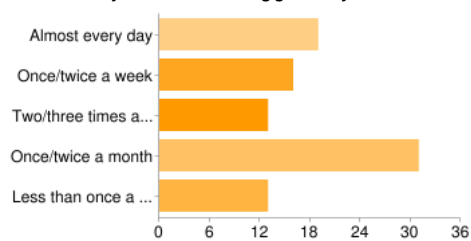
Yes	33	35%
No	61	65%

How often do you use the following greenway and trail related amenities in Hawaii? - Habitat protection areas like natural reserves



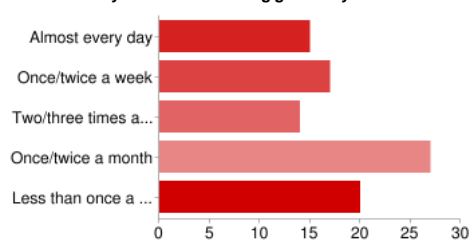
Almost every day	3	3%
Once/twice a week	8	9%
Two/three times a week	2	2%
Once/twice a month	22	23%
Less than once a month	58	62%

How often do you use the following greenway and trail related amenities in Hawaii? - Recreational open space areas like parks



Almost every day	19	20%
Once/twice a week	16	17%
Two/three times a week	13	14%
Once/twice a month	31	33%
Less than once a month	13	14%

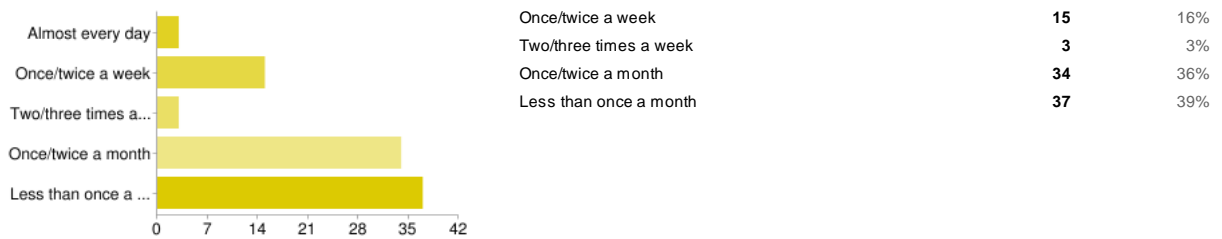
How often do you use the following greenway and trail related amenities in Hawaii? - Beach areas



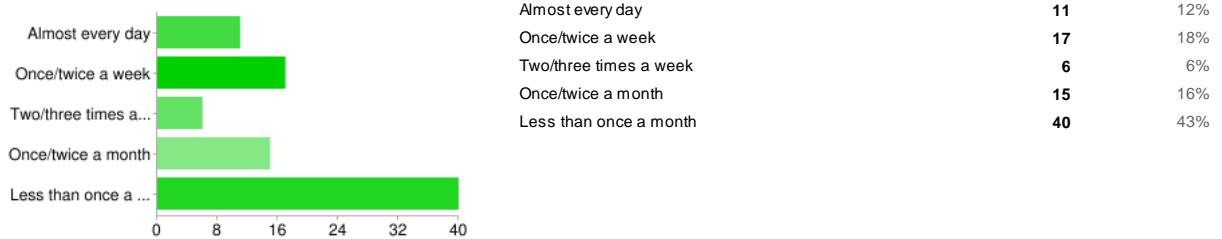
Almost every day	15	16%
Once/twice a week	17	18%
Two/three times a week	14	15%
Once/twice a month	27	29%
Less than once a month	20	21%

How often do you use the following greenway and trail related amenities in Hawaii? - Hiking/backpacking trails

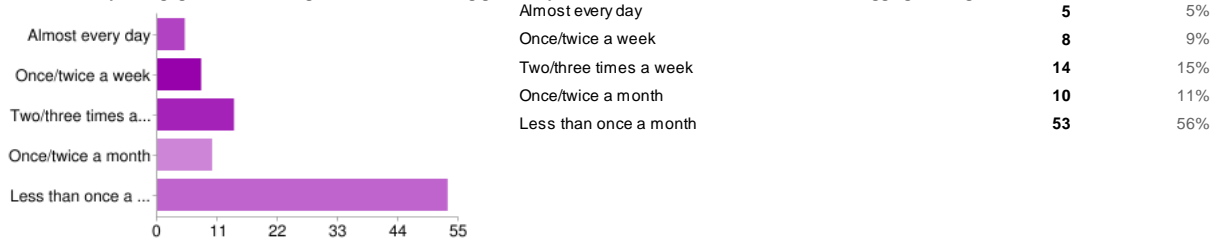
Almost every day	3	3%
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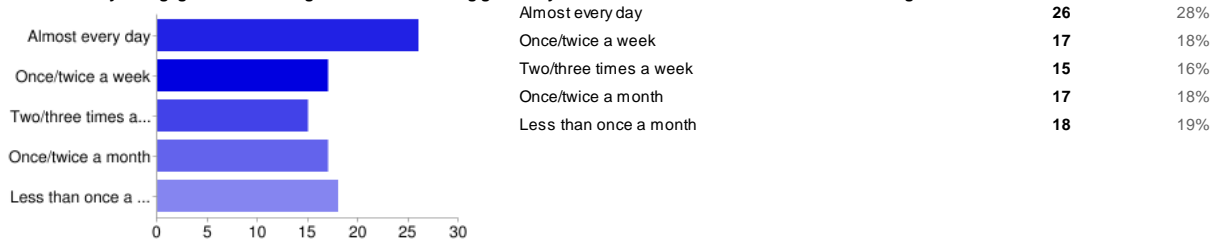
**How often do you use the following greenway and trail related amenities in Hawaii? - Bike lanes/trails**



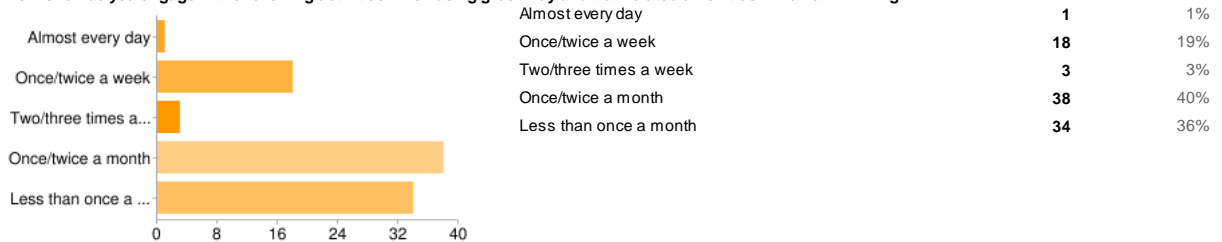
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Jogging/running**



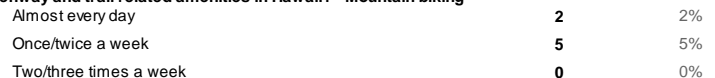
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Walking**

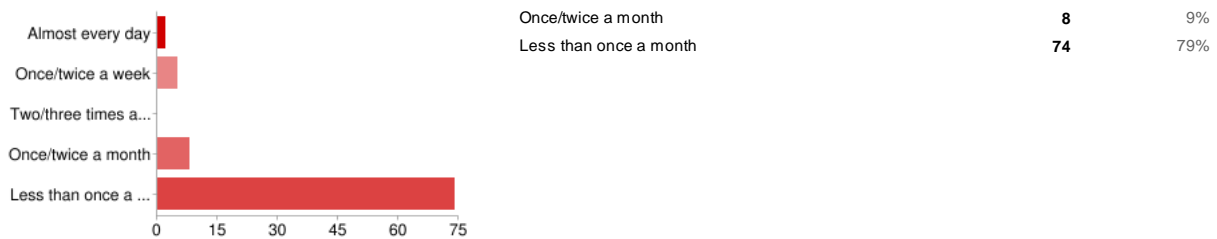


**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Hiking**

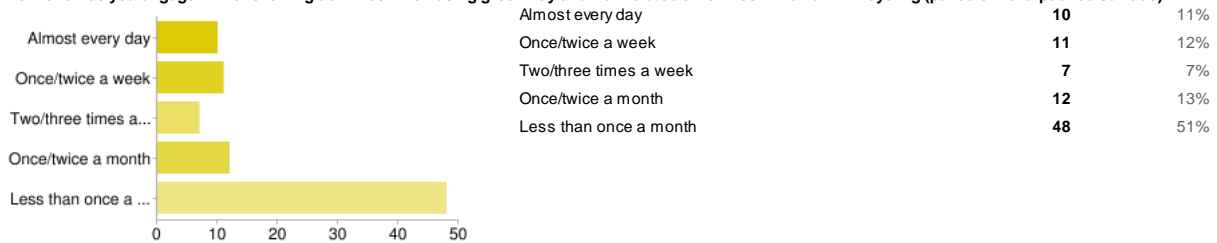


**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Mountain biking**

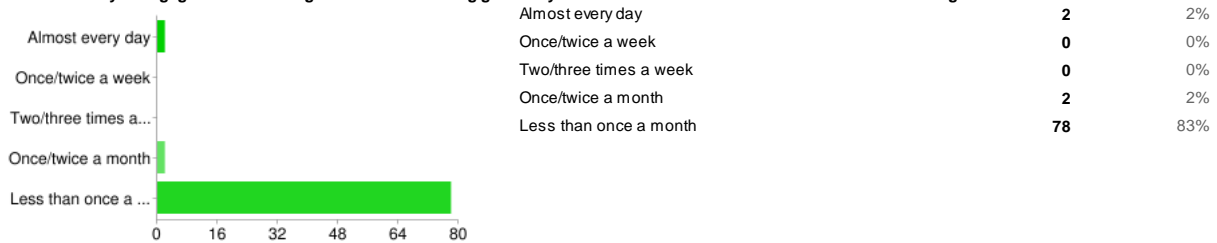




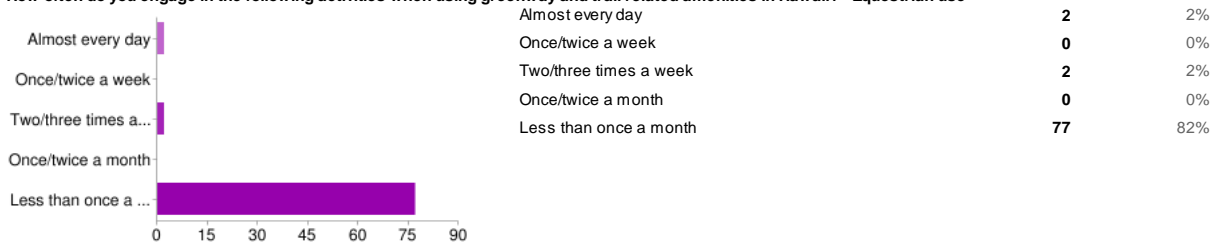
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Bicycling (paved or hard-packed surface)**



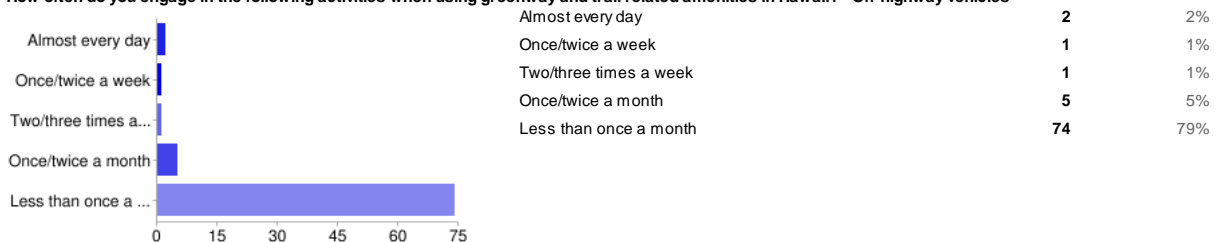
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - In-line skating**



**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Equestrian use**

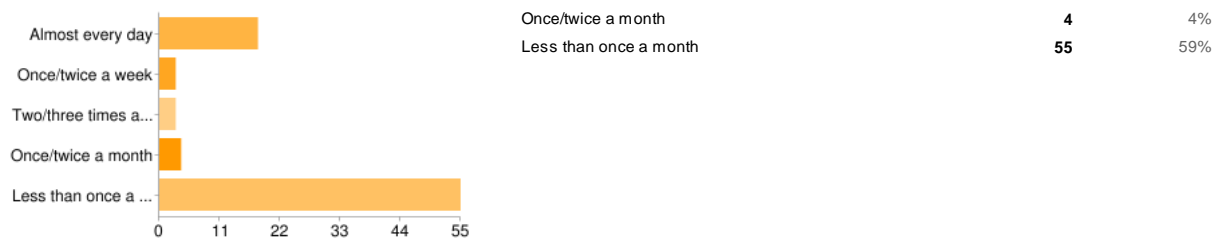


**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Off-highway vehicles**

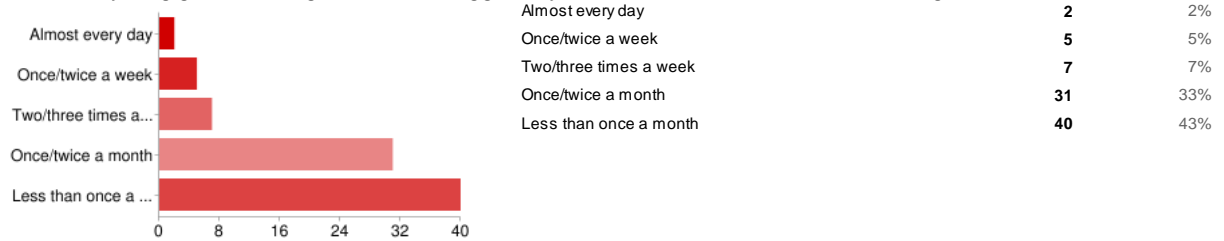


**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Dog walking**

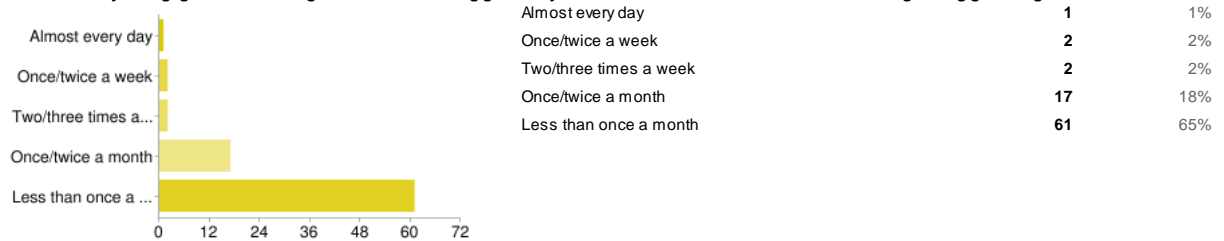
Almost every day	18	19%
Once/twice a week	3	3%
Two/three times a week	3	3%



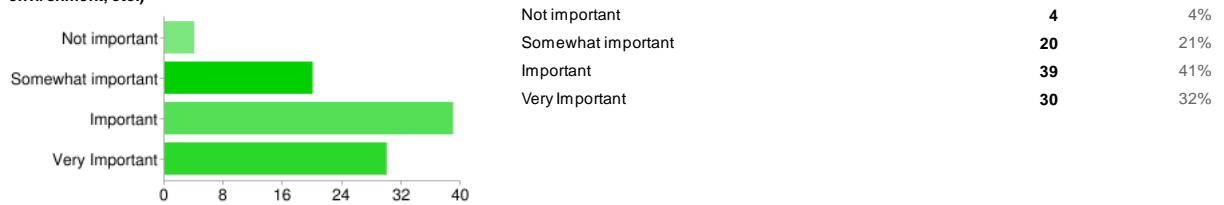
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Picknicking**



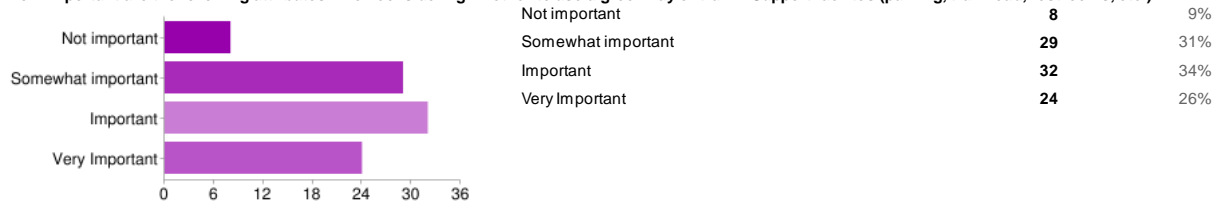
**How often do you engage in the following activities when using greenway and trail related amenities in Hawaii? - Hunting/fishing/gathering**



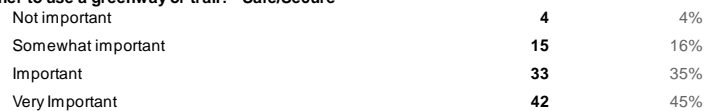
**How important are the following attributes when considering whether to use a greenway or trail? - Quality and maintenance (trail surface, signage, surrounding environment, etc.)**



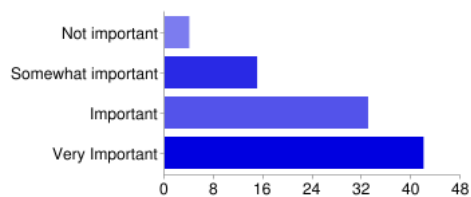
**How important are the following attributes when considering whether to use a greenway or trail? - Support facilities (parking, trail-head, restrooms, etc.)**



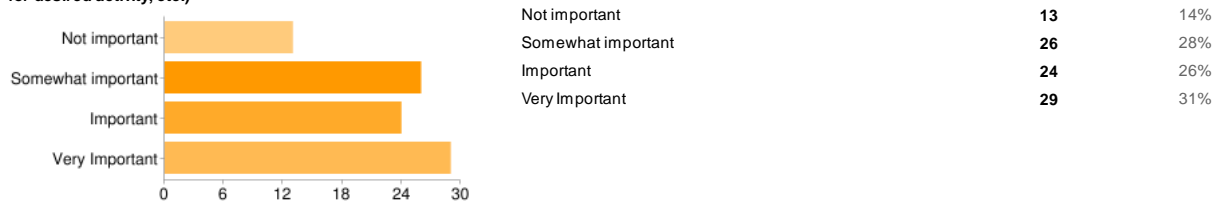
**How important are the following attributes when considering whether to use a greenway or trail? - Safe/Secure**



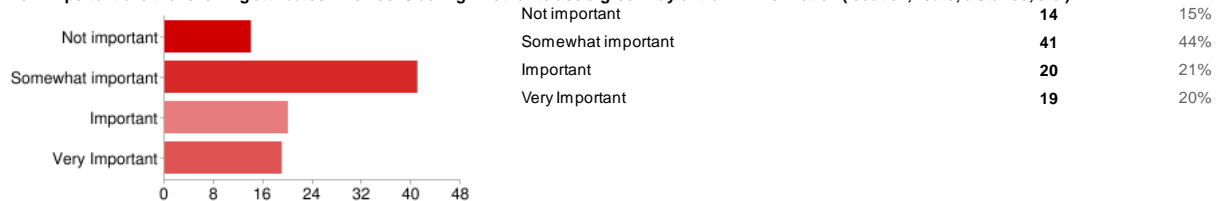




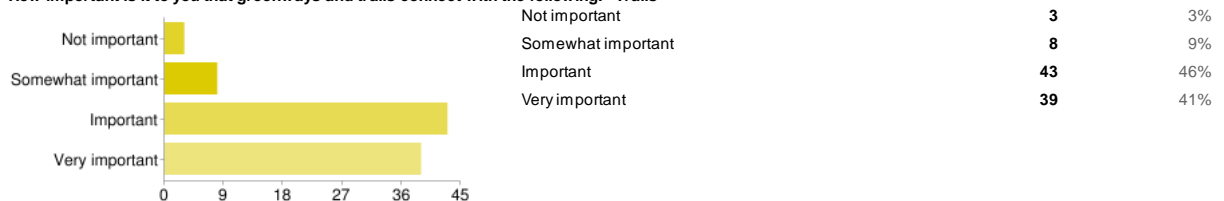
How important are the following attributes when considering whether to use a greenway or trail? - Accessibility (distance from home/work/school, ease of use for desired activity, etc.)



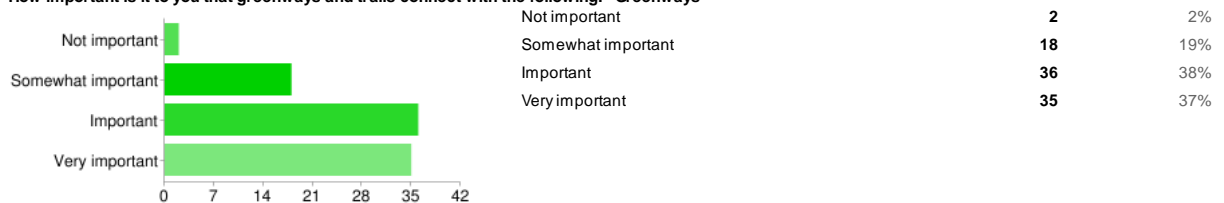
How important are the following attributes when considering whether to use a greenway or trail? - Information (location, route, distance, etc.)



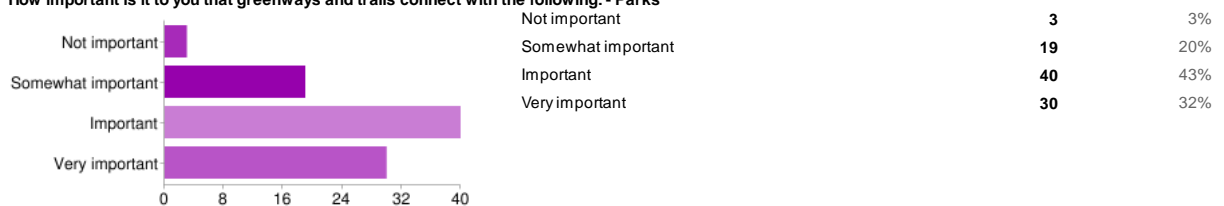
How important is it to you that greenways and trails connect with the following: - Trails



How important is it to you that greenways and trails connect with the following: - Greenways

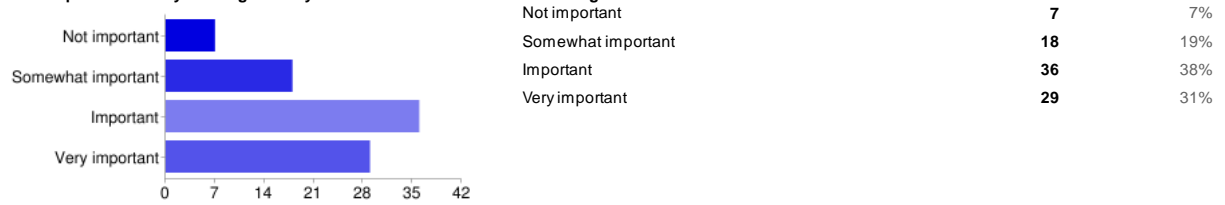


How important is it to you that greenways and trails connect with the following: - Parks

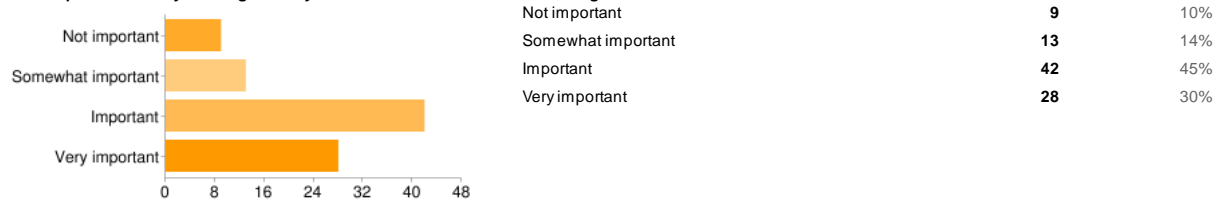


How important is it to you that greenways and trails connect with the following: - Beaches

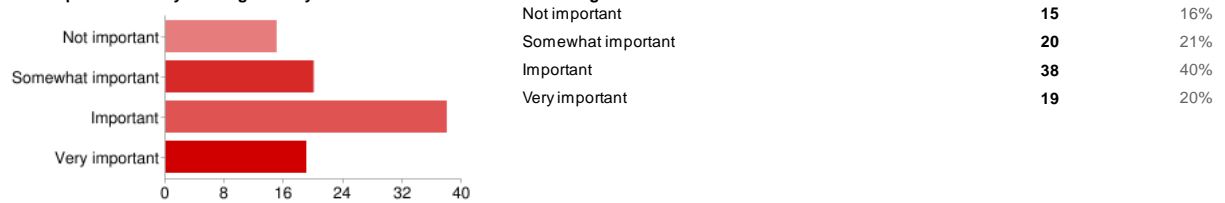
How important is it to you that greenways and trails connect with the following: - Beaches



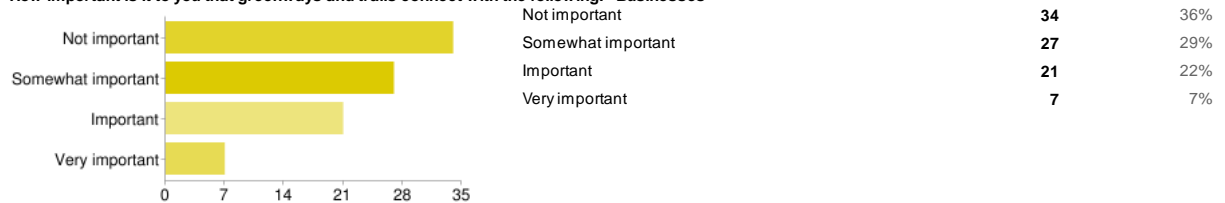
How important is it to you that greenways and trails connect with the following: - Bike Lanes/Trails



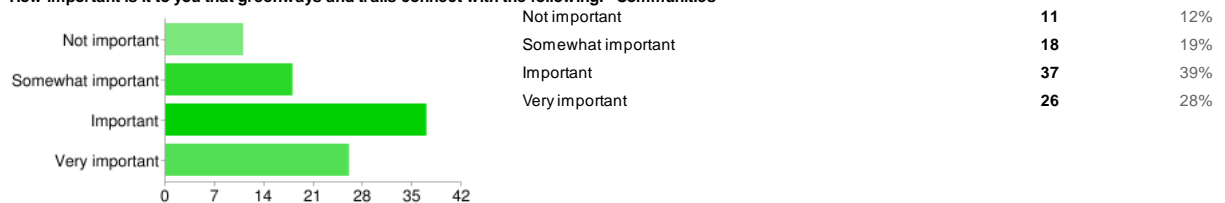
How important is it to you that greenways and trails connect with the following: - Public Transit



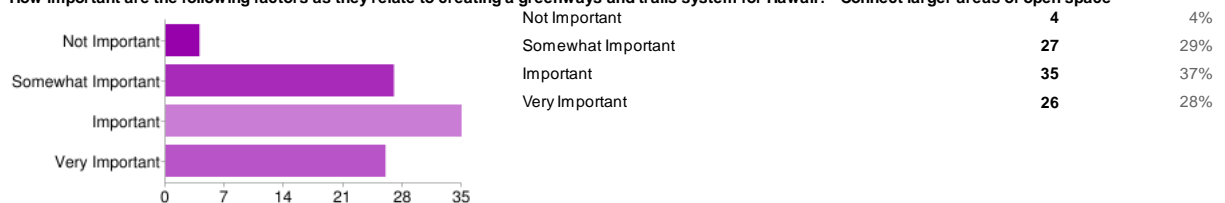
How important is it to you that greenways and trails connect with the following: - Businesses



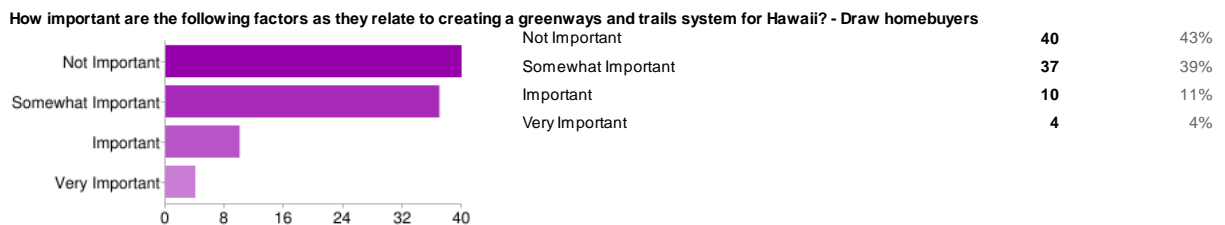
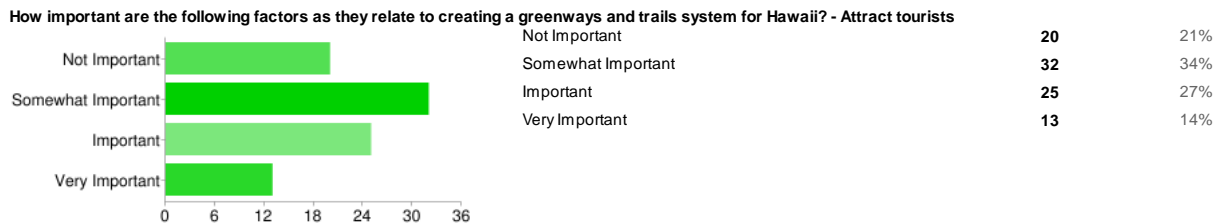
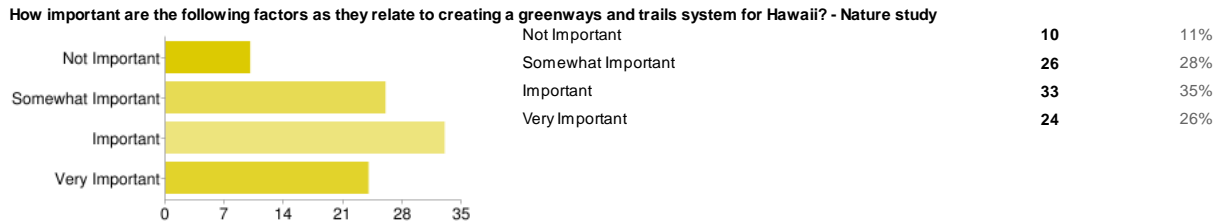
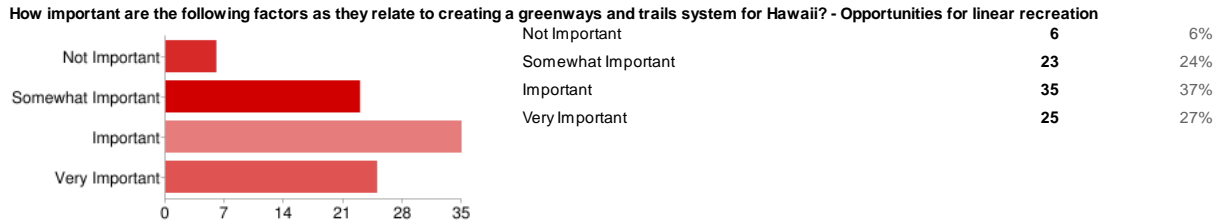
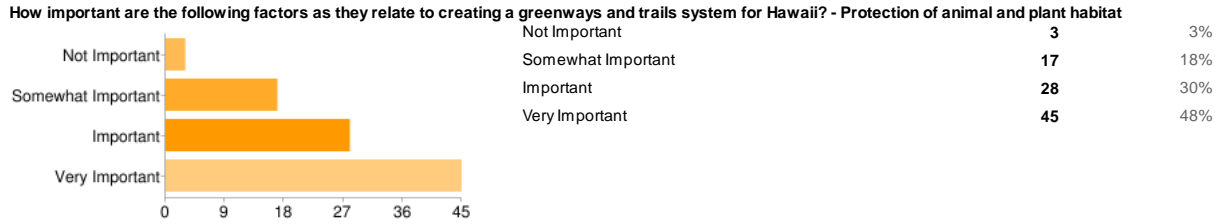
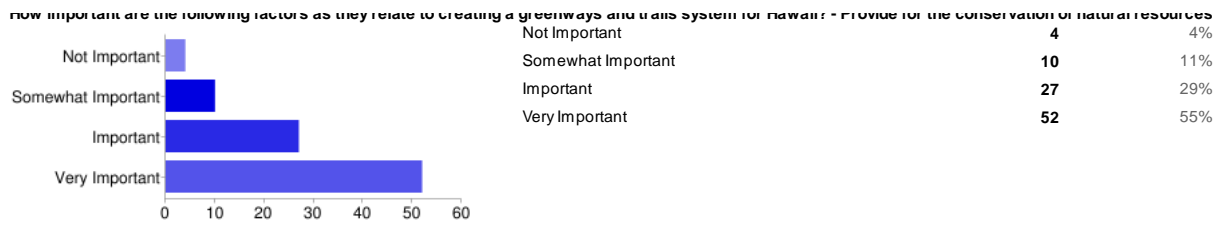
How important is it to you that greenways and trails connect with the following: - Communities



How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Connect larger areas of open space

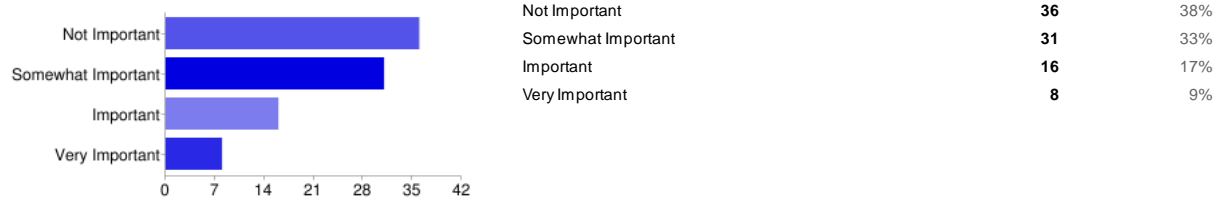


How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Provide for the conservation of natural resources

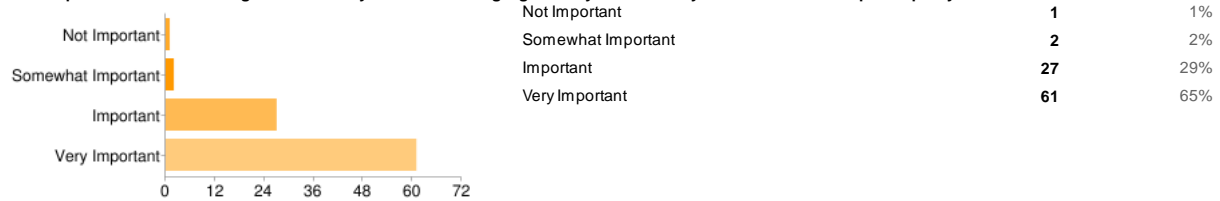


How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Increase property values

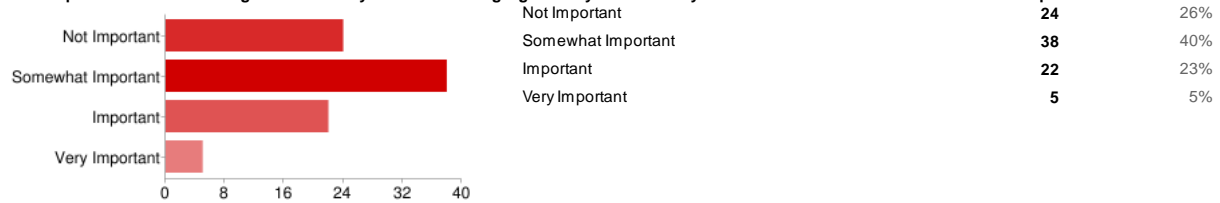
How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Increase property values



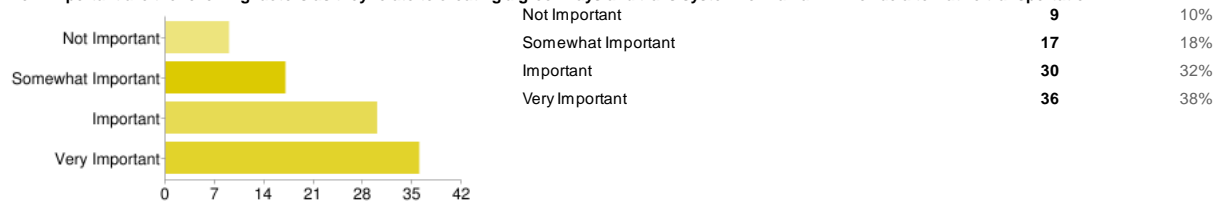
How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Improve quality of life



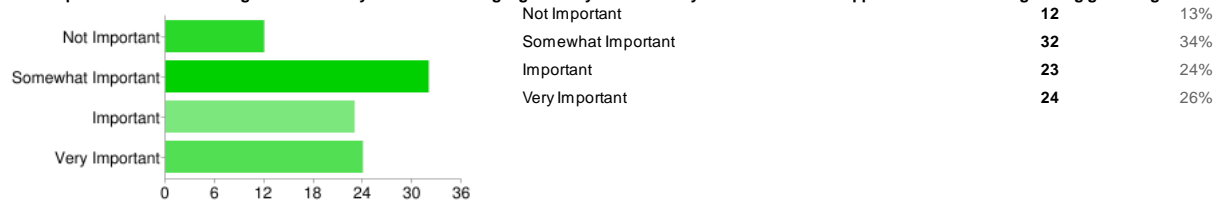
How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Stimulate business development



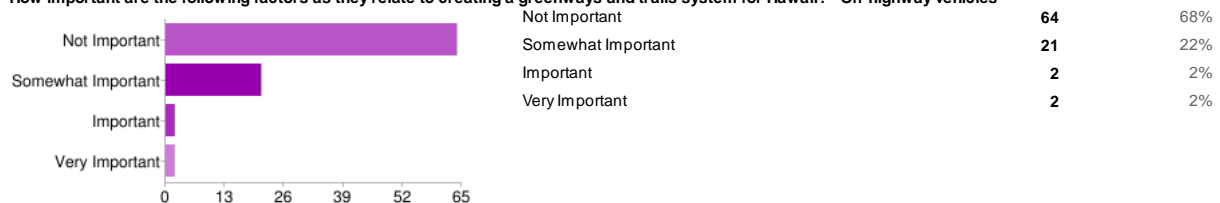
How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Provide alternative transportation



How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Opportunities for hunting/fishing/gathering

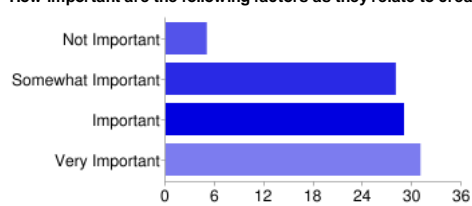


How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Off-highway vehicles



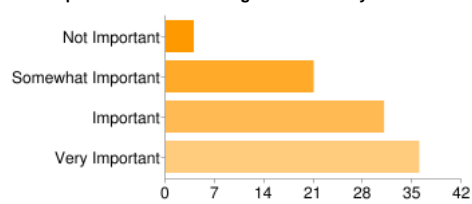
How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Cultural uses

How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - General uses



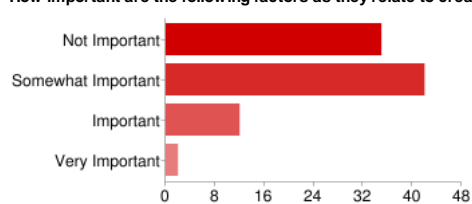
Not Important	5	5%
Somewhat Important	28	30%
Important	29	31%
Very Important	31	33%

How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Historic preservation



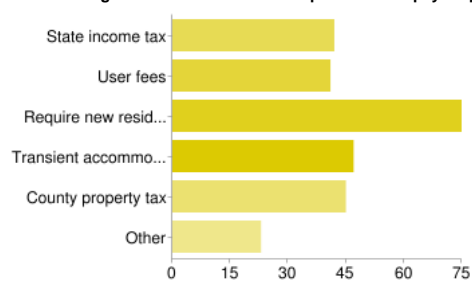
Not Important	4	4%
Somewhat Important	21	22%
Important	31	33%
Very Important	36	38%

How important are the following factors as they relate to creating a greenways and trails system for Hawaii? - Equestrian use



Not Important	35	37%
Somewhat Important	42	45%
Important	12	13%
Very Important	2	2%

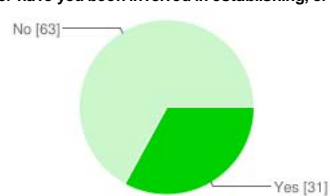
The following should be increased or implemented to pay for planning, designing, and constructing trails and greenways:



State income tax
User fees
Require new residential projects to plan, develop, and maintain portions of greenways/trails that run through their neighborhoods
Transient accommodation tax
County property tax
Other

People may select more than one checkbox, so percentages may add up to more than 100%.

Are you or have you been involved in establishing, or attempting to establish, a greenway or trail in Hawaii?



Yes	31	33%
No	63	67%

## Impediments and opportunities to establishing a system of greenways and trails in Hawaii

What was the name of the project?

Ko'olau Greenbelt System Na Ala Hele Trails and Access Program  
Ravfront Trails Kawai Nui Marsh Limited

Diamond Head Linear Park Two "projects:" Na Ala Hele and the Ala Kahakai National Historic Trail

Hilo

Where was the project located in Hawaii?

Honolulu - O'ahu    Statewide    Honolulu    Statewide and Hawai'i County    Hilo, Hawaii    Honolulu    Waimea, Hawaii    Kailua-Kona, Hawaii    Hilo Hawaii    County of Hawaii - various locations    Hamakua area, Hawaii    Kohala, Hawaii    Hon    ...

What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?

Getting decision-makers to Understand the purposes underlying greenbelts; other issues having higher priorities; lack of funding.    Historic trails that are on private property.    Funding and permitting    I specialize in trail and access projects and issues so my responses to this and other detailed questions reflect a combination of projects spanning 30+ years. Impediments: Liability Concerns; "Not in my backyard" objections which often fear the worst-case scenarios (lowering of property values, loss of privacy, crime, trash, noise, homelessness, drug/alcohol use, etc.); Lack of follow-through by a    ...

How did you overcome or address the impediments that you identified above?

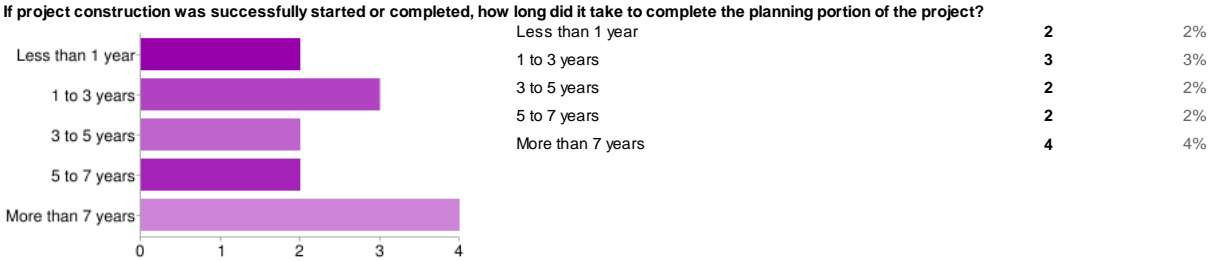
I didn't - instead, we put the broad issues aside until some future date which is now. The Lingle Administration made it clear that there would be no work on the concept while she was in office. NOTE: I first raised the issue in the fall of 1998 and back-brhered it in the spring of 2004.    Landowner rights are difficult to negotiate when public demands that state government open access through private property.    Luckily, HTA decided to fund part of it and DPP decided that the project did not need SMP approval    The impediments continue to exist in every greenway/trail project I have attempted. Ha    ...

In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?

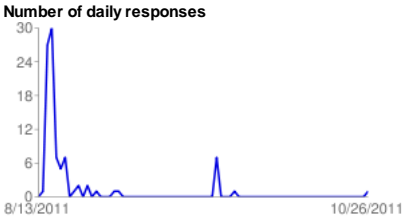
California; St.Louis, MO.    no    No    We need to study what is being done in other states much more!! We need to research what is working elsewhere and apply it to Hawai'i..    No.    no    No    dont know    Attempting to creat    ...

Was any government agency, non-profit, or organization particularly helpful?

Sierra Club, Hawaii Trail & Mountain Club, Friends of Haiku Stairs    no    State Parks, HTA, DPP    E Mau Na Ala Hele, nonprofit organization which I helped to found in 1979, was very active in the lobbying ef    ...



End of Survey – Please Click "Submit"



## Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Upolu to Hilo, Hawaii	Ala Hele Trail around Hawaii	Several such as businesses did not want access on trails through their property, places of historical significance are not being protected, and such.	Still working on it, getting support from community members is important.			1 to 3 years
Honolulu	Diamond Head Linear Park	Funding and permitting	Luckily, HTA decided to fund part of it and DPP decided that the project did not need SMP approval	No	State Parks, HTA, DPP	
Ka'u, Hawaii	Green infrastructure network	Lack of good ecological & archaeological data Uncertain legal/historical status of existing trail alignments Lack of surveys of existing trail alignments Mix of ownership Inability of public agencies to manage natural/cultural resources and access to them (e.g., DHHL, DOCARE)	Collaboration with agencies, UH, community-based organizations Require related research/studies as condition of land use permits		PATH, National Park Service (Ala Kahakai, RTCA)	
Kohala, Hawaii	Hapu'u to Kapania Coastal Corridor	Identifying boundaries for the coastal management zone. . . for the conservation zone. . . determining specific lateral trails for public access. . .preserving pre-contact Hawaiian historic/sacred sites	1. get more detailed maps from the State and County 2. got the County Planning Director to visit the site 3. met with land owners 4. discussed this at the Kohala Access Committee meetings 5 to get more community kokua	am investigating how the Kohala Mountain trail/roadway was established	County Planning office visited the site. .but we need more kokua from them. We must all meet with coastal management folks from the DLNR	
Hilo Hawaii	Hilo Bay Front Trails	none		don't know	County of Hawaii	3 to 5 years

## Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Hilo, Hawaii	Hilo Bayfront Trails	Lack of funding, but we are still going forward with it and plan to ask for private donations.	We haven't yet.	No.	County of Hawaii Planning Department and Department of Parks and Recreation	
Hilo, Hawaii	Hilo Bayfront Trails	Many, many permits. Jurisdictional agencies (e.g., DOT) that are neutral or worse when it comes to bikes and pedestrians. Funding, of course.	We haven't built an inch of trail, but we have a great plan and all our permits. Good leader at the County, good public outreach, good planners helped that happen	Not sure	County of Hawaii, certain State agencies	
East/ North Shores	Kauai path				Kauai Path/ Malama Kauai	5 to 7 years
Honolulu	Kawai Nui Marsh	Not many. The community and planners had difficulty agreeing on the level of development necessary/desired for the Kawainui restoration project.	community meetings, reference to missions/limitations of funding.		DLNR	



### Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Kapaa, Kauai	Ke Ala Hele Makalae	Impediments came from County Council members who, while asserting support for the project, took every action to challenge and complicate actual construction. Individuals repeatedly provided testimony and comment trying to make the case that the expenditure of federal highway enhancement funds was a wasteful use of taxpayer monies. Alignment of the path along a County beach park was decried by others as a cultural desecration, and the project was accused of being insensitive to burials in the area, although archaeological surveys do not support the likelihood of encountering burials within the proposed path alignment.	My involvement has been to disseminate information to supportive individuals, and assure that their opinions are openly expressed. Fortunately, there is firm commitment on the part of the County administration, and a majority of the Council members, to see this major project completed. Kauai has had a series of mayors who believe in the diverse health, social, and economic benefits to the community that Ke Ala Hele Makalae is generating.	The Cherry Creek greenway in Denver was a model.	Federal Highway Administration, County of Kauai Public Works-Building Division	More than 7 years

## Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Honolulu - O'ahu	Ko'olau Greenbelt System	Getting decision-makers to Understand the purposes underlying greenbelts; other issues having higher priorities; lack of funding.	I didn't - instead, we put the broad issues aside until some future date which is now. The Lingle Administration made it clear that there would be no work on the concept while she was in office. NOTE: I first raised the issue in the fall of 1998 and back-burnered it in the spring of 2004.	California; St. Louis, MO.	Sierra Club, Hawaii Trail & Mountain Club, Friends of Haiku Stairs	
Kaua'i	Kōkua Kōke'e	Getting permission from State Parks Division is necessary Getting funding for volunteer support of the work	We built trust with St Pks Div over many years, respecting their kuleana as land managers and seeing how we might kōkua . HTA-NR funding has helped the program get off the ground. We're working on program-related product development in order for the program to continue even if funding dries up.	We were inspired by clean (no weeds) roadways in Hawaii Volcanoes Nat'l Park	State Parks Division and HTA-NR.	Less than 1 year

### Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Oahu	Leeward Bikeway	State DOT takes its time to build it, even though funding was authorized by Legislature in the 90's. Phase 1 construction is scheduled to begin next year, but I've heard that before. It's been 5 years I've been monitoring the progress of this bikeway, but so far no construction.	Construction has not begun. I have not addressed the impediments.	no	One Voice	

## Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Waimea, Hawaii	Limited Access Trails on Waimea State Land	<p>The State ignoring applicable law... see Wille vs. BLNR 11-01-202K; this is how attempting to address [this trail could connect Parker School to Hawaii Preparatory Academy]</p> <p>Also worked on aspects of the Waimea Trails and Greenways Trails -- got Parker Ranch to agree to give additional easement so that trail area would include both sides of stream, so that fence would not need to be on top of bank proximate to residences... instead fence to be on far side of stream; got PR to agree as part of revised settlement in another Settlement (relating to the Parker Ranch Connector Road)</p> <p>Also got Parker School to agree to additional easement areas in phase IV of the WT&amp;G project -- and to add an additional connecting easement (part of settlement of Civ Action 10-1455K)</p> <p>worked on South Kohala CDP -- got additional provisions in for trails -- such as goal to connect communities within South Kohala with each other by way of trails... and bike trail to link Waimea - Hawi - Kawaihae - Waikoloa- Kohala Coast -- eventually hope would be to connect</p>	see above for brief explanation.	no	no	

## Open-Ended Responses to Survey Questions Related to "Impediments and opportunities to establishing a system of greenways and trails in Hawaii"

Where was the project located in Hawaii?	What was the name of the project?	What impediments, if any, did you run into when establishing, or trying to establish, a greenway/trail?	How did you overcome or address the impediments that you identified above?	In implementing, or attempting to implement a greenway/trail for your county, did you model it after any other jurisdiction in particular?	Was any government agency, non-profit, or organization particularly helpful?	If project construction was successfully started or completed, how long did it take to complete the planning portion of the project?
Hilo, Hawaii	Lokoaka Trails				County of Hawaii Council Members and Dept. of Parks & Recreation were and continue to be very helpful. They provide tools and equipment, gravel and mulch and participate in community service and clean up days.	5 to 7 years
Windward Oahu	Maunawili Trail	Cooperation from all neighboring entities	attempting to include all stakeholders (including public) in resolution	no; situation unique to community	DLNR, DPP (then DLU)	1 to 3 years
Windward Oahu	Maunawili trail	Access through private housing development	The state required access			1 to 3 years
Statewide	Na Ala Hele Trails and Access Program	Historic trails that are on private property.	Landowner rights are difficult to negotiate when public demands that state government open access through private property.	no	no	More than 7 years
Maui County	No name yet	Funding and lack of awareness of benefits	Still working on it	Oregon	Several	
Hamakua area, Hawaii	No project name. Have participated in various trail maintenance and building activities.	Landowner concerns.	Have not overcome.			
North Shore of Kauai	North Shore Kauai Path	Land ownership Funding			Kauai Path	

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Kilauea, Princeville & Hanalei	North Shore Path - Kauai	Landowner Participation. See: <a href="http://nspath.kauaistyle.com/">http://nspath.kauaistyle.com/</a>	Time and Communication. Education	Yes Many - Kauai Path	Kauai Path Org	
Honolulu County	Poamoho access improvement	mostly objections & obstacles from the private landowner & their attorneys.	with great patience, determination, flexibility, and finally some funding, we overcame all of these	pretty much had to all be on its own merits & meet site specific demands	it took all of dozens of partners to pull this thing off	3 to 5 years
County of Hawaii - various locations	Shoreline Public Access	Liability concerns, landowner resistance, limited resources for development, public disrespect & abuse of existing trails.	Working with landowners and community groups to institute appropriate use restrictions. Need adoption of permanent legislation providing counties with similar limitations on liability as provided the state under Sec. 198D-7.6, HRS.	Attempting to create a Hawaii County Public Access & Trails Program and looking at Na Ala Hele Program as model.		

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Statewide and Hawai'i County	Two "projects:" Na Ala Hele and the Ala Kahakai National Historic Trail	I specialize in trail and access projects and issues so my responses to this and other detailed questions reflect a combination of projects spanning 30+ years. Impediments: Liability Concerns; "Not in my backyard" objections which often fear the worst-case scenarios (lowering of property values, loss of privacy, crime, trash, noise, homelessness, drug/alcohol use, etc.); Lack of follow-through by agencies with jurisdiction; Reliance on unpaid, already working volunteers; Lack of nonprofit organizational capacity; Misinformation about the project spread through mainstream as well as social media.	The impediments continue to exist in every greenway/trail project I have attempted. Hawaii's liability laws need to be amended. None of the impediments have been overcome or truly addressed. The Na Ala Hele Statewide Trail and Access System and the Ala Kahakai National Historic Trail were established after intense lobbying by citizens and citizen groups over several years. Even now, these programs struggle with the same impediments.	We need to study what is being done in other states much more!! We need to research what is working elsewhere and apply it to Hawai'i..	E Mau Na Ala Hele, nonprofit organization which I helped to found in 1979, was very active in the lobbying effort for both the Na Ala Hele and AKNHT. This organization continues to struggle with a lack of capacity and reliance on unpaid, already busy volunteers.	More than 7 years
Kamuela, Hawaii	Waimea Nature Park	Not enough help.	Encouraged volunteering in the community.			
Kailua-Kona, Hawaii	Walua Road	Landowner claiming title to portion of County right-of-way	County proceeded on its presumption of ownership, leaving it to owner to sue and prove title, which he did not attempt to do.	No	County Dept. of Public Works	Less than 1 year
Waimea and Kekaha, Kauai	West Side Paths Alternative Report	Still in formative research phase, gathering input from community about trail options.		No	Kauai Path, Kauai CPPW	

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Kamuela, Hawaii	Waimea Trail & Greenway	Countless impediments. Inconsistent funding, lack of political will, unreliable/unresponsive county consultants, red tape, bureaucracy, etc.	We didn't overcome them. 15 years later, we still have no trail.	Not certain.	PATH was helpful.	More than 7 years



## **APPENDIX H**

### **Overview of Other State Greenways Programs**

## Other State Greenways Programs

State	Plan	Funding	Contact
Alabama	Various - Regional, county or local level plans		
Alaska	Greenways noted in <u>Alaska Recreational Trails Plan</u> (Oct. 2000)	Primarily federal funds (TEA-21) administered by Alaska DOT; various state funding mechanisms, however funding by state is minimal compared to federal funds	Trails and Recreational Access for Alaska (TRAAK) Citizen Advisory Board (reports to Governor)
Arizona	Greenways noted in <u>Arizona Trails 2010: A Statewide Motorized and Non-Motorized Recreational Trails Plan</u> (July 2009)	Federal, state, grants, and special funds; Approximately \$3 million per year	Arizona State Parks
Arkansas			
California	<u>California Recreational Trails Plan</u> (June 2002) <u>California Recreational Trails Plan Progress Report</u>	Federal DOT funding, CA State Parks, State Conservancies, and Non-profit organizations Recreational Trails Fund - \$8.7 million (2011-12 FY)	Planning Division, California State Parks, California Department of Parks and Recreation
Colorado	<u>2008-2012 Statewide Comprehensive Outdoor Recreation Plan (SCORP)</u> (2008) Various - Regional, county or local level plans		Strategic Planning Program, Colorado State Parks
Connecticut	<u>Statewide Bicycle and Pedestrian Transportation Plan</u> SCORP being updated - <u>Pathways Through Connecticut</u>	Primarily federal funds	CT Department of Transportation and CT Department of Energy and Environmental Protection
Delaware	<u>2009-2011 SCORP</u> Various - Regional, county or local level plans	Delaware Land and Water Conservation Trust Fund -- \$1.5 million trust interest divided equally between parks and greenways (\$750K each)	Division of Parks and Recreation, Department of Natural Resources and Environmental Control
District of Columbia	<u>Metropolitan Greenways and Circulation System</u> (May 2001, FHWA) -- identified 8 regional priority greenways <u>Priorities 2000: Metropolitan Washington Greenways</u> (National Capital Region Transportation Planning Board) Part of the "East Coast Greenway"	Estimate for 8 regional priority greenways to be implemented -- \$100 - 150 million (funding source not identified)	Transportation, Community and System Preservation Program, Federal Highways Administration (FHWA)
Florida	Various - Regional, county or local level plans State administers major greenways that span across regions or counties	Multi-million capital budget, including federal transportation enhancement grants and state fixed capital funds (approximately \$20 million per year)	Office of Greenways and Trails (OGT), Parks Service, FL Department of Environmental Protection
Georgia	<u>GA SCORP (2008-2013)</u> Various - Regional, county or local level plans Georgia Coastal Greenway is part of "East Coast Greenway"	Through Recreational Trails Program Grants (FHWA funding administered by GA Division of Parks, Recreation and Historic Preservation) \$1.7 million (2010 FY)	GA Division of Parks, Recreation and Historic Preservation
Hawaii			
Idaho	Various - Regional, county or local level plans	Federal grants and state general funds; sources of general funds include -- user fees, license registration fees, and fuel taxes	
Illinois	Various - Regional, county or local level plans	Illinois Department of Natural Resources (ILDNR) grants to regions, counties or municipalities ILDNR budget -- \$279 million (FY 2011)	IL Greenways and Trails Division, Department of Natural Resources

## Other State Greenways Programs

State	Plan	Funding	Contact
Indiana	<u>Indiana State Trails, Greenways and Bikeways Plan: Hoosiers on the Move (2006)</u>	IN Division of Outdoor Recreation budget -- \$600K (2011-2012 FY)	Division of Outdoor Recreation, IL Department of Natural Resources
Iowa	Various - Regional, county or local level plans <u>Iowa Trails 2010</u> (Iowa Department of Transportation)	\$0 funding in 2011 FY; \$2 million proposed for 2012-2013 FY	IA Department of Transportation
Kansas	<u>Metrogreen</u> (Regional greenway plan for Kansas City region (Kansas and Missouri)) Various - Regional, county or local level plans	Primarily from federal funds: USEPA (Region VII) Sec. 604(b) (Clean Water Act), and ARRA stimulus funds	Mid-America Regional Council
Kentucky	Various - Regional, county or local level plans		
Louisiana	Various - Regional, county or local level plans	2009 - recent state funding of \$2.5 million for Lafitte Corridor Revitalization Plan and Greenway Trail Design and Construction	
Maine	Part of "East Coast Greenway" Part of New England Greenway Vision Plan (2007) that links CT, MA, ME, NH, RI, and VT		
Maryland	Various - Regional, county or local level plans	FY 2009 - \$25.7 million FY 2010 - \$9.9 million	Boating Services Unit, MD Department of Natural Resources
Massachusetts	<u>Commonwealth Connections</u> (2008-2013)	FY 2011 - \$42.67 million FY 2012 - \$42.17 million	State Parks and Recreation Division, Department of Conservation and Recreation
Michigan	Various - Regional, county or local level plans		Michigan Trails and Greenways Alliance
Minnesota	Various - Regional, county or local level plans	Metro Greenway Planning Grants: \$200K annually; average grant \$25K MN Division of Parks and Trails - Parks and Trails Fund - \$36.6 million (FY 2010-11)	MN Division of Parks and Trails
Mississippi	Various - Regional, county or local level plans	FY 2012 - \$73 million	MS Department of Conservation, Wildlife, Fisheries, and Parks
Missouri	Various - Regional, county or local level plans	Various funding sources: Great Rivers Greenway District (0.1 cent sales tax earmarked for greenways)	Various organizations
Montana	Various - Regional, county or local level plans		
Nebraska	Various - Regional, county or local level plans	FY 2011 - \$24.76 million Funding sources: General Funds, State Park Cash Reserve Fund, Nebraska Outdoor Recreation Development Cash Fund	NE Game and Parks Commission
Nevada	Various - Regional, county or local level plans		
New Hampshire	Various - Regional, county or local level plans		NH State Parks
New Jersey	Various - Regional, county or local level plans Part of Garden State Greenways New Jersey State Trail Plan (2009)		NJ Division of Parks and Forestry
New Mexico	Various - Regional, county or local level plans State focuses on "Rio Grande Trail" a multi use trail approximately 1,800 miles		NM State Parks
New York	Various - Regional, county or local level plans <u>2011 NYC Cycling Map</u> identifies greenways Greenway Plan for NYC (1993)		Department of City Planning, New York City

## Other State Greenways Programs

State	Plan	Funding	Contact
North Carolina	Various - Regional, county or local level plans All projects are included in Statewide Transportation Improvement Program (STIP)	Approximately \$1 million in funding for greenway improvement and acquisition	NC Division of Parks and Recreation NC DOT
North Dakota	Various - Regional, county or local level plans		ND State Parks
Ohio	Various - Regional, county or local level plans		Ohio Greenways (non-profit organization)
Oklahoma	Various - Regional, county or local level plans		
Oregon	Various - Regional, county or local level plans Willamette Greenway - planned across various State Park Master Plans; established in 1967		Oregon Parks and Recreation, Department of Land Conservation and Development
Pennsylvania	Various - Regional, county or local level plans <u>PA Statewide Greenway Plan (2001)</u> <u>PA Greenways: An Action Plan for Creating Connections</u>	PA Parks and Forests Division - \$755K (FY 2010-2011)	PA Department of Conservation and Natural Resources PA Greenways Network
Rhode Island	Various - Regional, county or local level plans Part of both <u>New England Greenway Vision Plan</u> and <u>East Coast Greenway</u> RI Greenway Act (1995) - Element No. 155 of State Guide Plan - Greenspace and Greenways	\$21.7 million (entire Division's budget)	RI Statewide Planning Program, RI Division of Planning
South Carolina	Various - Regional, county or local level plans Part of Carolina Thread Trail (2008) Part of East Coast Greenway		
South Dakota	Various - Regional, county or local level plans City of Sioux Falls has greatest number of greenways in state		
Tennessee	Various - Regional, county or local level plans <u>Tennessee Greenways and Trails Plan</u>	FY 2011-12 - \$5.25 million	Recreation and Educational Services Division, Department of Environment and Conservation
Texas	Various - Regional, county or local level plans		
Utah	Various - Regional, county or local level plans		
Vermont	Various - Regional, county or local level plans Vermont Trails and Greenways Plan 2005) [Part of <u>Vermont Outdoor Recreation Plan 2005-2009</u> ]	\$12.4 million (FY 2010) for forest and parks administration	VT Department of Forests, Parks and Recreation
Virginia	Various - Regional, county or local level plans <u>Virginia Outdoors Plan (2007)</u> ; Part 7 of Outdoors Plan covers greenways Part of East Coast Greenway		Recreational Planning Branch, VA Department of Conservation and Recreation
Washington	Various - Regional, county or local level plans		WA Department of Transportation
West Virginia	Various - Regional, county or local level plans Greenways are a part of <u>Pathways to the Future: The West Virginia Statewide Trail Plan (2002-2010)</u>		State Trails Program, WV Department of Transportation WV State Parks, Department of Natural Resources
Wisconsin	Various - Regional, county or local level plans		WI Department of Natural Resources
Wyoming	Various - Regional, county or local level plans Greenways are a part of <u>Wyoming Statewide Trails Plan (2004)</u>	Funding from WY-DOT Transportation Enhancement Activities Local (TEAL) Grants	WY Trails Program, Department of State Parks and Cultural Resources
American Samoa		Possible funding from U.S. National Park Service Land and Water Conservation Fund	

## Other State Greenways Programs

State	Plan	Funding	Contact
Guam	Greenways are mentioned in <u>Guam Statewide Forest Resource Assessment and Resource Strategy 2010-2015</u> (June 2010) Greenways also mentioned in <u>North and Central Guam Draft Land Use Plan</u> (2009) to promote sustainable community development		
Northern Mariana Islands	Saipan Beach Road Pathway (27 mile coastal greenway system) Current HB17-170 - Calls for establishment of a Greenway Strategy Steering Committee to design transportation system management which seeks alternatives to cars for a more environment-friendly CNMI		
Puerto Rico			
Virgin Islands			

## **APPENDIX I**

### **Links to State, Regional, and Local Greenways Plans**

## Links to State, Regional, and Local Greenways Plans

FHWA Recreational Trails Program Apportionments, Rescissions and Obligations,  
<http://www.fhwa.dot.gov/environment/rectrails/recfunds.htm>

Iowa Trails 2000 Plan, <http://www.iowadot.gov/iowabikes/trails/CHPT03.HTML>

New England Greenway Vision Plan (2007), <http://www.umass.edu/greenway/>

Maryland Greenways Atlas, <http://dnr.maryland.gov/greenways/introduction.html>

Massachusetts “Commonwealth Connections”,  
<http://www.mass.gov/dcr/stewardship/greenway/connections.htm>

**Commonwealth Connections** is a vision for a coordinated network of greenways and trails in Massachusetts, and includes specific steps for making this vision a reality. It was developed by DCR in partnership with the Appalachian Mountain Club, the National Park service and a broad group of stakeholders from across Massachusetts.

Michigan’s “Connecting Michigan”, <http://michigantrails.org/connectingmichigan/>

Nebraska Trails Plan (2004), <http://outdoornebraska.ne.gov/trails/programs/programs.asp>

Nevada State Trails Plan (2005), <http://www.parks.nv.gov/trail/plan.htm>

New Hampshire Parks Plans, <http://www.nhstateparks.org/who-we-are/division/reports.aspx>

NYC 2011 Cycling Map that show Greenway,  
<http://www.nyc.gov/html/dcp/html/bike/cwbm.shtml>

A Greenway Plan for NYC, <http://www.nyc.gov/html/dcp/html/bike/gp.shtml>

New York Hudson River Greenway,  
<http://www.hudsongreenway.state.ny.us/AbouttheGreenway/OverviewandMission.aspx>

North Carolina Steps to Construct a Greenway or Shared-Use Trail,  
[http://www.ncdot.gov/bikeped/projectdevelopment/construction\\_greenway/default.html](http://www.ncdot.gov/bikeped/projectdevelopment/construction_greenway/default.html)

Pennsylvania – County Greenway Plans,  
<http://www.dcnr.state.pa.us/brc/conservation/greenways/countygreenwayplans/index.htm>

Rhode Island Greenway Plan, <http://www.planning.ri.gov/greenways/greencouncil/default.htm>

Virginia Outdoors Plan (2007), [http://www.dcr.virginia.gov/recreational\\_planning/vop.shtml](http://www.dcr.virginia.gov/recreational_planning/vop.shtml)